



Actions to Abate Critical Threats, such as Encroachment and Invasive Species, Using GIS and Conservation Planning Across the Gulf Coastal Plain Ecosystem Partnership (GCPEP) Landscape Phase II

Project #
06-280

Background:

The GCPEP is a model partnership among the Departments of Defense, Florida Department of Environmental Protection, Florida Division of Forestry, Florida Fish and Wildlife Conservation Commission, International Paper, National Park Service, Nokuse Plantation, Northwest Florida Water Management District, The Nature Conservancy, and United States Forest Service, who together operate under a 1996 Memorandum of Understanding. The strength of the partnership is the respect among 10 partners of differing missions and objectives while acting cooperatively and sharing significant challenges.

Contained within the GCPEP landscape is a vast amount of the remaining longleaf pine ecosystem and a majority of the remaining old-growth stands of longleaf pine. These connected lands also include portions of five major watersheds. Of 87 watersheds identified by The Nature Conservancy as United States “hotspots” for at-risk freshwater fish and mussels, four of them are found within the GCPEP region. Together, these wetlands, bays, and rivers support numerous globally rare or imperiled species. Despite being a small percentage of the land and water area within the 47 million-acre East Gulf Coastal Plain Ecoregion, GCPEP lands and waters contain many of the Ecoregion’s target species and natural communities as shown in the GCPEP Conservation Area Plan. The Florida Fish and Wildlife Conservation Commission rates this region as having the greatest concentration of rare and imperiled fish species in Florida, with two federally listed species.

In 2000, GCPEP developed the first iteration of a Conservation Area Plan. The plan outlined consensual conservation targets, threats to these targets, strategies with associated actions to abate these threats, and measures needed to evaluate the success of these actions. Several threats to both terrestrial and aquatic systems were outlined in the CAP including landscape-level fragmentation of natural communities and invasive exotic species on all partner lands. During FY 03-05 GCPEP focused on aquatic resources and compiled the GCPEP Aquatic Management Plan, which provides thorough guidance on priorities for projects for the extensive waterways in the region.

Encroaching incompatible development, which is occurring at a rapid pace across the GCPEP lands, was identified by the Steering Committee as a “killer threat” in

the GCPEP area. Encroachment issues are continually impacting both Air Force and Navy military mission capacity by limiting airspace and increasing noise complaints. Development surrounding GCPEP partners’ lands can also lead to other management impacts such as limiting necessary prescribed burning.

Invasive non-native species were also identified in the CAP by all of the partners as a threat, both ecologically and economically, to the natural communities and native species that they manage.

One of the top GCPEP action items developed was for Invasive Species-

1. to determine which invasive non-native species are present in the GCPEP area;
2. to identify the extent on partners’ lands, and the effects that they are having on GCPEP targets;
3. to establish protocol for the necessary documentation across the partnership including GPS coordinates; species, aerial extent, and the natural community where found; and
4. to develop priorities for control and eradication, especially in areas that impact the GCPEP conservation targets listed below.

GCPEP conservation targets identified in the current Conservation Area Plan include-

- Alluvial rivers/floodplains
- Barrier island complex
- Blackwater rivers/floodplains
- Depression wetlands
- Estuarine systems
- Fish/mussel complex
- Flatwoods salamander (T)
- Florida black bear (t)
- Florida bog frog (e)
- Gulf sturgeon (T)
- Longleaf pine sandhill matrix
- Mainland sand pine scrub
- Okaloosa darter (E, e)
- Pine flatwoods matrix
- Red-cockaded woodpecker (E)
- Seepage slopes
- Steephead stream/slope systems
- Upland game birds

T = federally threatened
t = state threatened
E = federally endangered
e = Endemic to GCPEP lands

Objective:

Incorporating habitat restoration with Conservation Area Planning using a GIS Database for abating threats, including encroaching incompatible development and invasive species will strengthen Eglin, Navy, and other GCPEP partner management plans, and the GCPEP Conservation Area Plan, Phase II.

Summary of Approach:

This proposed collaborative project is modeled on previous successful terrestrial and aquatic GCPEP projects, and will address several issues that will have an impact on one or more GCPEP conservation targets. These issues include- encroaching incompatible development, information gaps such as identification of important natural habitats partnership-wide, and persistent threats such as invasive exotic species. Additional issues to be addressed through research, improved management, and cooperative projects include, but are not limited to, native seed collection, native plant propagation, habitat restoration, prescribed fire, best management practices, recreation management, and public education.

A GCPEP-wide GIS database that emphasizes conservation targets, important habitats, and abating threats, as well as addressing and preventing encroachment issues will enhance individual partner natural resource management as well as the collective partnership. Such an effort can prevent future state or federal listings and will focus efforts on site-specific restoration management for imperiled species and natural communities at a landscape-scale (regional) approach. A phased approach will be used to successfully achieve the outlined goals and objectives of the overall project. Phase I will be conducted during Legacy Program's funding period FY 2005 and Phase II will be conducted during Legacy's FY 2006 funding period.

A primary objective of Phase II will be to complete the development of the GIS database, which will contain a comprehensive coverage of various existing geographic and scientific data from across the entire GCPEP landscape including important habitat areas for all GCPEP conservation targets. Many of these habitat areas to be identified will also serve as important buffers protecting Eglin, Navy, and partnership lands from incompatible development and encroachment.

This GIS database will provide information useful to the newly formed GCPEP Invasive and Native Species

Subcommittee. During Phase I a GCPEP Invasive and Native Species Subcommittee Workshop is being conducted for the purpose of developing a Strategic Work Plan. During Phase II the Subcommittee will conduct a Working Group where the Work Plan will be implemented, including the goals and objectives to identify and prioritize partnership actions and on-the-ground projects to abate the persistent threat of invasive species and for expansion of native species management.

Benefit:

This proposed project will increase the implementation potential of the GCPEP Conservation Area Plan and will further improve the management plan process for all of the GCPEP partners. The project will also increase flexibility and options available to Eglin and Navy military operations by providing information and support to protect additional lands and waters that both buffer and link military areas, and by providing additional management guidance associated with needed habitat for GCPEP conservation targets across the region.

The project addresses both threats and solutions on and surrounding GCPEP partner lands leading to a more effective landscape-scale conservation effort. In particular, the project will address the increasing threat of invasive species adversely affecting sensitive natural resources on the military base lands, as well as on adjacent partners lands.

In addition, by improving the conservation status of imperiled species and natural communities regionally through project implementation, the project will serve as a regional and national model of how effective partnerships both manage and restore conservation resources at a landscape-scale level, and buffer military bases from encroachment.

Phase II Products-

The products to be delivered for Phase II will implement the strategies and actions for projects and management guided by the GIS Database, Target Maps, and Work Plan initiated during Phase I for abating threats such as invasive exotic species and encroaching development impacting military missions. Fulfillment of Phase II objectives will involve use of Phase I deliverables and collaboration with GCPEP partners. Primary objectives of Phase II include-

1. development of a GCPEP Invasive and Native Strategic Work Plan using the GIS Database and Target Maps;
2. facilitation of a GCPEP Invasive and Native Species Subcommittee Working Group

(for implementation of high priority invasive species and encroachment actions);

3. final GCPEP Comprehensive Database and Conservation Target Maps for Invasive Species, Threatened and Endangered Species, and Encroachment Buffers; and

4. revision of the GCPEP Conservation Area Plan (to include new partners and address escalating threats to partners' land management).

Accomplishments:

1. Geographic Information Systems (GIS) / Target Mapping

- Finalized spatial data acquisition from remaining GCPEP partners for whom data is currently lacking;
- Migrated all GCPEP partner data into usable ArcGIS GCPEP geodatabase;
- Finalized Webtool interface for partners to view, access, and update spatial data.

2. GCPEP Internal Website

- Continued to populate the website with GCPEP relevant information;
- Continued to collect data gaps from GCPEP Partnership and provide the information on the website; and
- Provided useful information via the website as an 'At a Glance Tool' for the partnership and its landscape.

3. Invasive/Native Species

- Facilitated discussions on adopting Minimum Data Standards for collecting invasive species data across partnership lands at next subcommittee meeting;
- Provided a list of invasive species treatment funding sources at next subcommittee meeting;
- Invited Florida Department of Transportation representatives to next subcommittee meeting;

4. Land Protection/Encroachment

- Assisted with items related to the transfer of the Yellow River Ravines Florida Forever project from The Nature Conservancy to the Florida Division of Forestry and Blackwater River State Forest in 2007.
- Assisted State of Florida with purchase of remaining lands within the Clear Creek/

Whiting Field Florida Forever project boundary. Assistance to include needed site assessments and documentation.

- Increased efforts on remaining GCPEP priority land acquisitions including Escribano Point, Garcon Point, and the Perdido Pitcher Plant Prairie.
- Worked with GCPEP partners to identify new land acquisition priorities using updated GCPEP conservation target maps. Priorities to include remaining key inholdings and buffers. Complete needed funding proposals, including Florida Forever, to allow for purchase of properties.
- Updated the land protection section of the GCPEP Conservation Area Plan.
- Continued to work with and educate area citizens interested in starting a regional land trust to increase protection of small and unconnected but important conservation parcels.
- Served on planning and transportation related committees and working groups that might impact or influence GCPEP land protection priorities or partner lands.

5. Conservation Area Plan (CAP) Update

- Finalized nested targets per focal conservation target;
- Became familiar and have a working knowledge of the new CAP workbook;
- Completed viability assessment per focal conservation target;
- Identified and ranked threats to each focal conservation target;
- Developed strategies and action items to address threats; and
- Presented the draft CAP to the GCPEP Steering Committee, receive and incorporate input.

Contact Information:

Name: Barbara Albrecht
Title: GCPEP Program Manager
Org: The Nature Conservancy
Address: 8831 Whiting Field Circle
Phone: 850-982-0944
Fax: 850-9815425
Email: Balbrecht@tnc.org