



PENINSULAR FLORIDA

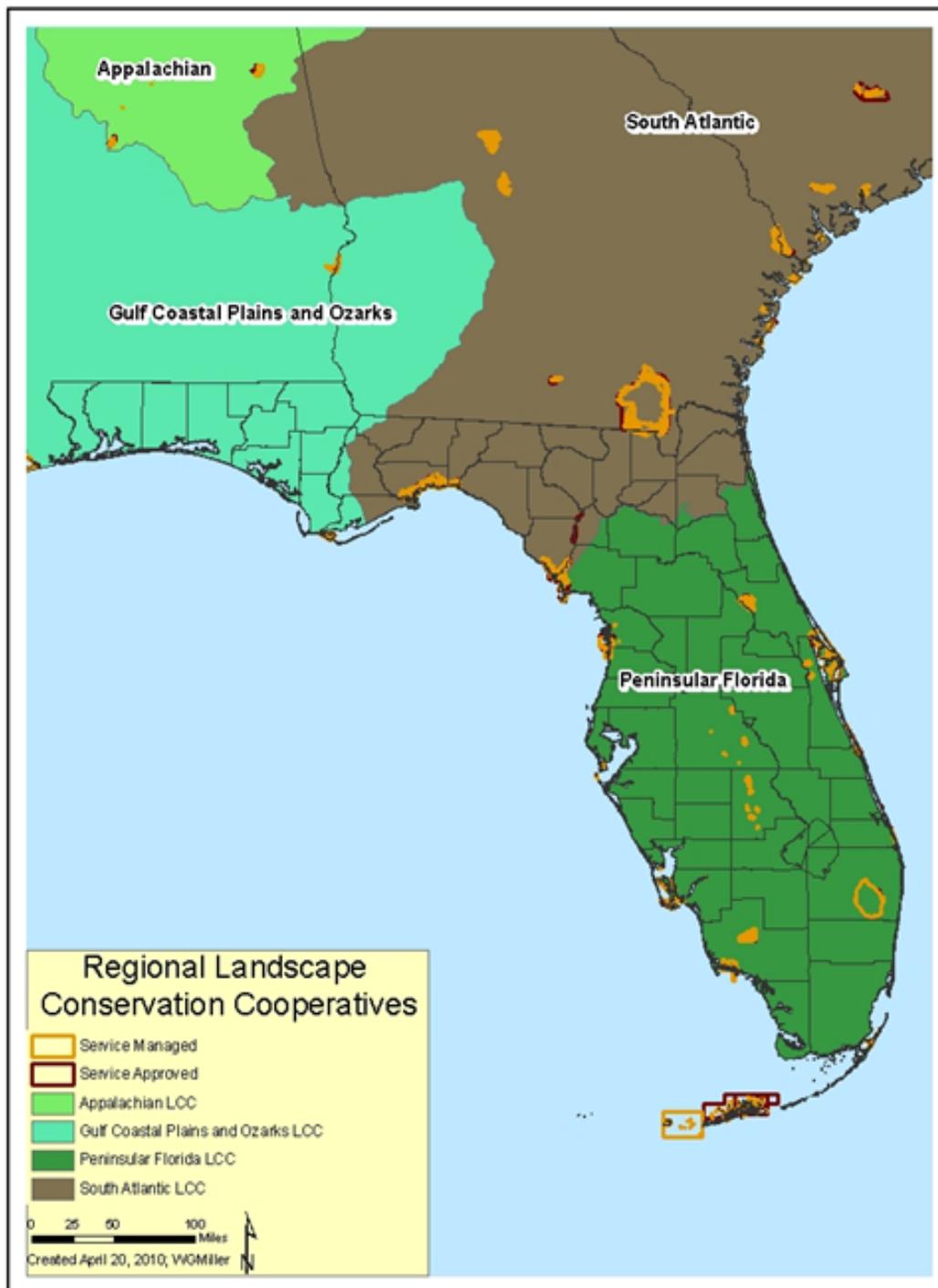
LANDSCAPE CONSERVATION COOPERATIVE

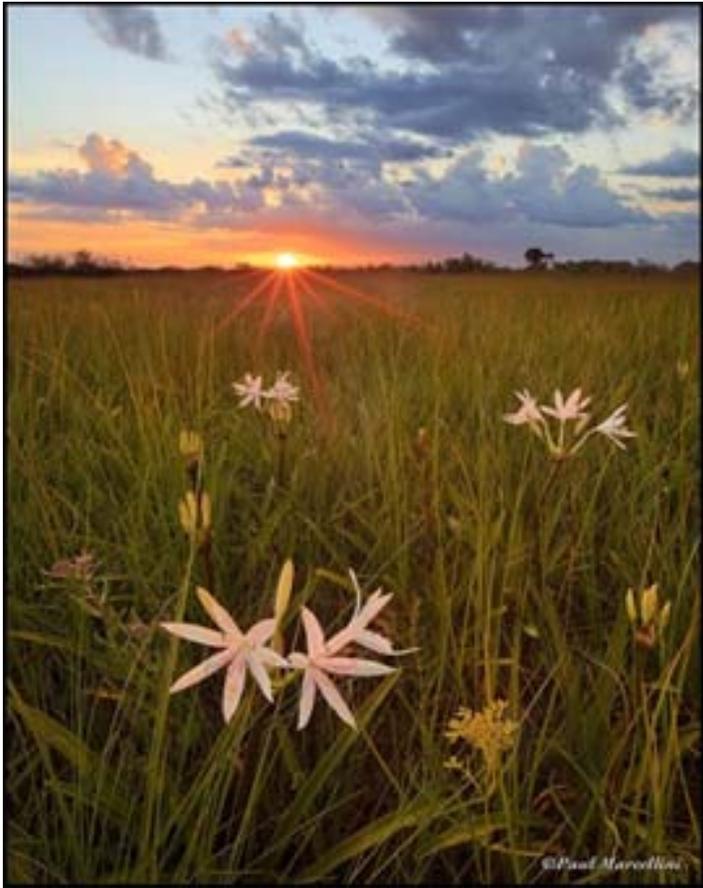
2013 Annual Report



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Peninsular Florida Geography





Description

The Peninsular Florida Landscape Conservation Cooperative (PFLCC) is in a transitional zone where the pine and bottomland hardwood elements of the Coastal Plain begin to merge with the tropical elements of south Florida. The peninsula of Florida supports unique habitats including the scrub habitats of the Lake Wales Ridge, the Big Cypress Swamp, the coral reefs and tropical hardwood hammocks of the Florida Keys, mangroves, interior dry prairie, cypress domes and the Everglades.

Florida has abundant surface water in lakes, rivers, streams, marshes and springs. The underlying karst geology supports more first magnitude springs than any other state (33). Florida has 10,000 miles of rivers and streams and 7,800 lakes. The Everglades and Big Cypress Swamp cover almost 25% of the peninsula. The peninsula of Florida is also home to an endemic subspecies of black bass, the Florida bass, which is much prized by anglers and, species like Alligator gar, American shad and Gulf sturgeon.

The central Florida Lake Wales Ridge is a center of plant and animal endemism and an international biodiversity hotspot that includes all of the world's Florida scrub-jays. Also found are sand skinks, numerous threatened and endangered scrub plant species and some of the largest meta-populations of gopher tortoises in Florida. This landscape also includes some of the highest elevations in the peninsula which were formed from ancient dunes during glacial epochs that involved global warming.

The peninsula of Florida is literally a sand spit surrounded on three sides by ocean. The peninsula is abutted on the east and south by the Atlantic and Caribbean; respectively, and on the west by the Gulf of Mexico. Coastal habitats in Florida range from barrier islands to sandy beaches and dunes, to coastal marsh, mud flats, and mangroves, to sea grass flats, oyster bars and to near shore coral reefs. These near shore and inter-tidal habitats are very important for wildlife including birds, turtles, juvenile saltwater fish, mollusks and invertebrates.

Breeding colonies of Wood stork, Glossy ibis, and 19 other herons and egrets occur in freshwater wetlands. Snail kite, Short-tailed hawk, and Limpkin also breed in the interior wetlands. One of the greatest wading-bird nesting concentrations in the world is found in the Everglades.

White-crowned pigeons and the American crocodile inhabit the Florida Keys along with other endangered species including Key deer, Key Largo wood rat, Miami Blue butterfly and Keys marsh rabbit. The only breeding site for Brown noddy, Sooty tern, and Magnificent frigate bird in the US is on the Dry Tortugas which are at the extreme end of the Florida Keys archipelago.

Wintering waterfowl abound in inland waters, including large numbers of Scaup, Ring-necked duck, and to a lesser extent Blue- and Green-winged teal. Coastal bays support Canvasbacks, Buffleheads and Redhead ducks in small to large aggregations where submerged grass flats occur. The peninsula of Florida is home to endemic subspecies of the Florida mottled duck, Florida Wood duck, and Fulvous whistling duck.

Many other species of reptiles, amphibians and mammals occur, including iconic species like Florida panther, American alligator, Florida black bear and Florida manatee. The transition from temperate to tropical climatic zones contributes to the high diversity of fish and wildlife including over 400 species of nonnative animals that have been introduced to the native landscape. Most of these introduced species are fish and reptiles and approximately 10% are considered invasive. Many more are invasive plant species that are considered injurious or invasive or both.

Five species of marine turtles, including loggerhead, green, leatherback, Kemp's Ridley and hawksbill routinely nest on the sand beaches of Florida, which also provide nesting habitat and important foraging areas for shorebirds. Most of the remaining nesting Snowy Plovers in the southeast occur along Florida's Gulf Coast. Extraordinary numbers of wintering and transitory shorebirds also use the region particularly; Short-billed dowitchers, Piping plover, Dunlin and Red knot. These important near shore habitats support important continental breeding populations of Brown pelicans, Black skimmers, and various terns.





The Partnership

The PFLCC partnership is directed through a Steering Committee currently comprised of 22 members representing diverse conservation interests. The PFLCC Steering Committee has representation from:

US Fish & Wildlife Service

US Geological Survey

National Park Service

National Oceanic and Atmospheric Administration

Department of Defense

USDA/Forest Service

Natural Resources Conservation Service
Florida Fish & Wildlife Conservation Commission
Florida Department of Agriculture and Consumer Services
Florida Department of Transportation
Southwest Florida Water Management District
The Nature Conservancy
Florida Forestry Association
Florida Farm Bureau Federation
Wildlands Conservation
Plum Creek
Breedlove, Dennis & Associates, Inc. (Florida Land Council)
Family Lands Remembered, LLC
Florida State University, Florida Natural Areas Inventory
University of Florida, Center for Landscape Conservation
The Land Trust
Miccosukee Tribe of Indians of Florida

Perhaps most noticeable is the representation from private landowner interests. The current Steering Committee Chair is Tom H. Logan, retired Vice-President of Breedlove, Dennis & Associates, Inc., representing large landowners in conservation efforts. Thomas Eason is Vice-chair and is affiliated with the Florida Fish and Wildlife Conservation Commission.





Vision

Our conservation cooperative is a valued resource for conservation design and delivery that supports a Florida landscape comprised of functional and interconnected ecosystems, valued by citizens, that contribute to regional and national conservation landscape connectivity.

Mission

The mission of the PFLCC is to foster landscape scale conservation to sustain natural and cultural resources for future generations.

Guiding Principles

The primary focus for achieving participation across all landowner, organizational and agency groups shall be through incentive-based methods that provide and maintain social, economic and ecological value of natural systems for future generations.

Habitat conservation is a means to attain our ultimate goal... the conservation of fish and wildlife populations and ecological functions that sustain them for the benefit of people.

Defining measurable population objectives is a key component of landscape scale conservation.

Biological planning must use the best scientific information available, both as a body of knowledge and a method of learning.

Our understanding of ecological conditions is never perfect. An essential element of the Conservation Cooperative is managing uncertainty through an iterative cycle of planning, doing, and evaluating.

Management actions, decisions, and recommendations must be transparent, defensible, and explicit about the nature and magnitude of potential errors and uncertainties.

Conservation strategies consist of dynamic suites of objectives, tactics, and tools that change as new information enters the conservation cycle.

Partnerships are essential, both for developing conservation strategies and implementing actions to achieve them.

Consider and respect each participating organizations unique mandates and jurisdictions.

Seek to add value to landscape scale conservation by integrating across partnerships and organizations through identifying and filling knowledge gaps and leveraging resources.

Conduct open and frequent communications within the partnership network and be transparent in deliberations and decision-making.

Focus on developing shared landscape level priorities that will lead to implementable action.

Develop and use peer reviewed science in an adaptive management context.

Develop explicit linkages and approaches to ensure products are available in a form that is usable by partners in delivering conservation.

Staff

The staff of the PFLCC is comprised of a Coordinator (1.0), Tim Breault (FWS); an Adaptive Science Coordinator (0.25) Steve Traxler (FWS); Florida's Wildlife Legacy Initiative/LCC Science Coordinator (0.75) Kate Haley Parsons (FWC); Landowner Incentives Coordinator (0.50) Dave Hankla (contractor) and volunteer website design and support from William G. Miller (FWS). The Wildlife Legacy/LCC Science Coordinator is a cost shared position with Florida Fish and Wildlife Conservation Commission (FWC). FWC is also providing office space, telephone, and access to copiers for the Coordinator and for the Wildlife Legacy/LCC Science Coordinator.

Plans are to hire a cost-shared communications and outreach coordinator (0.50) in 2014 who will be an FWC employee.

Accomplishments

The PFLCC hosted a monthly coordination call on the first Thursday of each month. The Coordinator provided updates, solicited input on national LCC efforts and provided opportunities for partner updates and news.

The Steering Committee approved dedicating a significant portion of the 2013 FWS PFLCC budget allocation for

contracts to integrate existing statewide science with scenario planning and decision support tools. Contracts were developed with the University of Florida (GeoPlan), Florida State University (Florida Natural Areas Inventory), GeoAdaptive, Inc. and the UGGS National Wetlands Center to develop a new version of CLIP (ver 3.0). The objective was to incorporate ecological data and conservation priorities into statewide urbanization and climate change scenarios, and to use these data to develop a visualization tool for end users. These tools and data will ultimately be used to design conservation plans and to develop conservation targets that will result in functional landscapes into the future.

The Coordinator initiated a contract through the Udall Institute for Environmental Conflict Resolution to develop a strategic plan and a 3-5 year business plan for the PFLCC.

The Coordinator provided monthly and bi-monthly progress reports to the Regional Office and Washington Office respectively.

Coordination was facilitated with adjacent LCCs via monthly staff calls, conference calls on ad hoc issues affecting LCCs, Gulf of Mexico/NOAA coordination with the ½ time NOAA liaison to the Gulf Coast LCCs and interactions on Southeast Conservation Adaptation Strategy (SECAS) planning and coordination efforts.

Guidance and input was routinely solicited from other LCC Coordinators to assist in developing best practices for coordination and to achieve integration across the LCC geographies.

The Coordinator volunteered to assist in the development of a national LCC network. Specific accomplishments include:

serving on a national workgroup to develop performance metrics, participating in developing a strategic plan to guide interactions between LCCs and USGS Climate Science Centers and serving on a team that developed science themes and process for awarding multi-LCC science grants. The Coordinator also volunteered to serve on the national LCC executive leadership team starting in January 2013.

The Coordinator attended a variety of partnership meetings to discuss LCCs and areas for future collaboration. Specific interactions included the following:

- Met with representatives from FWC, USFWS and NRCS to discuss creating conservation delivery networks.
- Attended a workshop conducted by the Florida Climate Change Consortium to provide an update on PFLCC.
- Attended the Gulf of Mexico Alliance meeting to discuss LCC roles in RESTORE and science coordination.
- Attended the annual FWS/FWC coordination meeting to provide a LCC update.
- Met with staff from NMFs to discuss marine habitat programs and future areas for collaboration.
- Provided a presentation to the Florida Chapter of TWS on PFLCC.
- Attended the annual University of Florida Fish and Wildlife Cooperative meeting.
- Made a presentation on LCCs at the Florida Waterfowl Summit IV technical session.
- Attended a GCPLCC steering committee meeting.

- Hosted a focus group of selected private landowners to assess willingness to participate in a Landowner Incentives Work Group.
- Attended a coordination meeting for the Everglades Headwaters National Wildlife Refuge.
- Attended a meeting of the Florida Wildlife Legacy Initiative staff to discuss integration of the Florida Wildlife Action Plan with LCC priorities.
- Attended a SALCC conservation design workshop.
- Attended a planning meeting with the state and federal agency points of contact for the Southeast Conservation Adaptation Strategy.

The Coordinator also successfully recruited 4 new steering committee members representing the Southwest Florida Water Management District, The Land Trust, Florida Department of Transportation and the Miccosukee Tribe of Indians of Florida

Science Support

The science focus of the Peninsular Florida LCC has been to enhance conservation planning in Florida by investigating a number of possible trajectories of future landscape transformation through development of scenarios. The scenarios will include four main drivers of change: climate change, shifts in planning approaches and regulations, population change, and variations in financial resources, while incorporating the latest updates to

statewide conservation priorities via the Critical Lands and Water Identification Project (CLIP) dataset. Through a systematic exploration at the landscape-scale, this research will identify some of the major challenges to future conservation efforts. Scenarios are conceived not as blueprints for the future, but rather as learning tools for management of uncertainty. The scenarios are internally-consistent bundles of assumptions with a number of dimensions. Three future time horizons were simulated for each scenario: 2020, 2040 and 2060. Each alternative future visualizes land use patterns and landscape transformations such as coastal inundation, urbanization, and infrastructure changes. Future changes in conservation lands are modeled and/or designed based on the input from local experts and managers and using the best available ecological information and data.

Florida has a rich history of landscape level science that generally began in the 1990s. The Century Commission for a Sustainable Florida called for an identification of those lands and waters in the state that are critical to the conservation of Florida's natural resources. In response, the Florida Natural Areas Inventory, University of Florida Center of Landscape Conservation, and Florida Fish & Wildlife Conservation Commission collaborated to produce CLIP - the Critical Lands and Waters Identification Project. CLIP is a GIS database of statewide conservation priorities for a broad range of natural resources, including biodiversity, landscape function, surface water, groundwater, and marine resources. The CLIP database was used by the Florida Conservation Cooperative Blueprint to develop an acquisition map and strategy for Florida.

The Peninsular Florida LCC has been updating and expanding the CLIP databases to develop a conservation blueprint or design. CLIP is comprised of five resource categories that include multiple databases. The core elements include: biodiversity (4 databases), landscapes (2 databases), surface water (3 databases), groundwater (1 database) and marine (10 databases). The databases are peer-reviewed by technical review committees for scientific rigor. The CLIP also contains a prioritization feature with 6 priority levels. CLIP priorities 1 and 2 are being used in the development of the scenarios.

The USFWS and USGS collaborated with urban planners from Massachusetts Institute of Technology (now GeoAdaptive, Inc.) in 2008 to develop scenarios for south Florida that included climate change variables, urbanization, conservation funding, and policies and assumptions. The scenarios were extended to the PFLCC boundary with PFLCC funding in 2012 and were extended to include all of Florida in 2013.

The CLIP database was updated with new information related to climate change as well as having some new data layers developed. The scenarios and CLIP database will then be integrated to develop statewide conservation plans for each of the scenarios. Data from two other landscape level projects, being developed by USGS, USFWS, and UF that include climate envelope modeling for 26 terrestrial vertebrates and a southeastern habitat connectivity project will also be linked with the scenarios. Professors from University of Florida ran fine scale inundation

modeling for 3 pilot counties to provide some refined scale resolution of the tool. Programmers from the USGS National Wetlands Center, working with the steering committee members and guided by the PFLCC strategic plan, developed decision support tools that incorporate the scenarios and CLIP data into a useful conservation tools. These decision support tools will also be used to help identify continuous landscapes of high conservation value, conservation targets, surrogate species and where to focus monitoring.

The scenarios are currently being used in the following projects:

- Identifying climate and urbanization for candidate species listing packages (Bonneted bat).
- Developing a habitat conservation plan statewide (HCP) for Florida's beaches and providing a method of quantifying take for 17 species that are primarily sea turtles and shorebirds.
- Providing climate change and urbanization information for the proposed new Fisheating Creek National Wildlife Refuge PPP.
- Developing a decision support tool for each of these projects to use for conservation design elements.

Future projects include:

- Developing and evaluating the economic feasibility of private landowner incentives programs.

- Setting conservation targets and/or selecting surrogate species.
- Providing a framework to help promote conservation delivery.
- Continued support for the Gulf of Mexico Vulnerability Assessment

