



ROLE OF LANDSCAPE CONSERVATION COOPERATIVES IN EVERGLADES RESTORATION

GEER
April 2017

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Peninsular Florida Landscape Conservation Cooperative*



Outline of Presentation

1. National and Local LCC
2. Florida Threats
3. Landscape conservation design
 - a) Scenarios and CLIP
 - b) Conservation targets
 - c) Impact assessments
4. Conservation Planning Atlas
5. Incentives



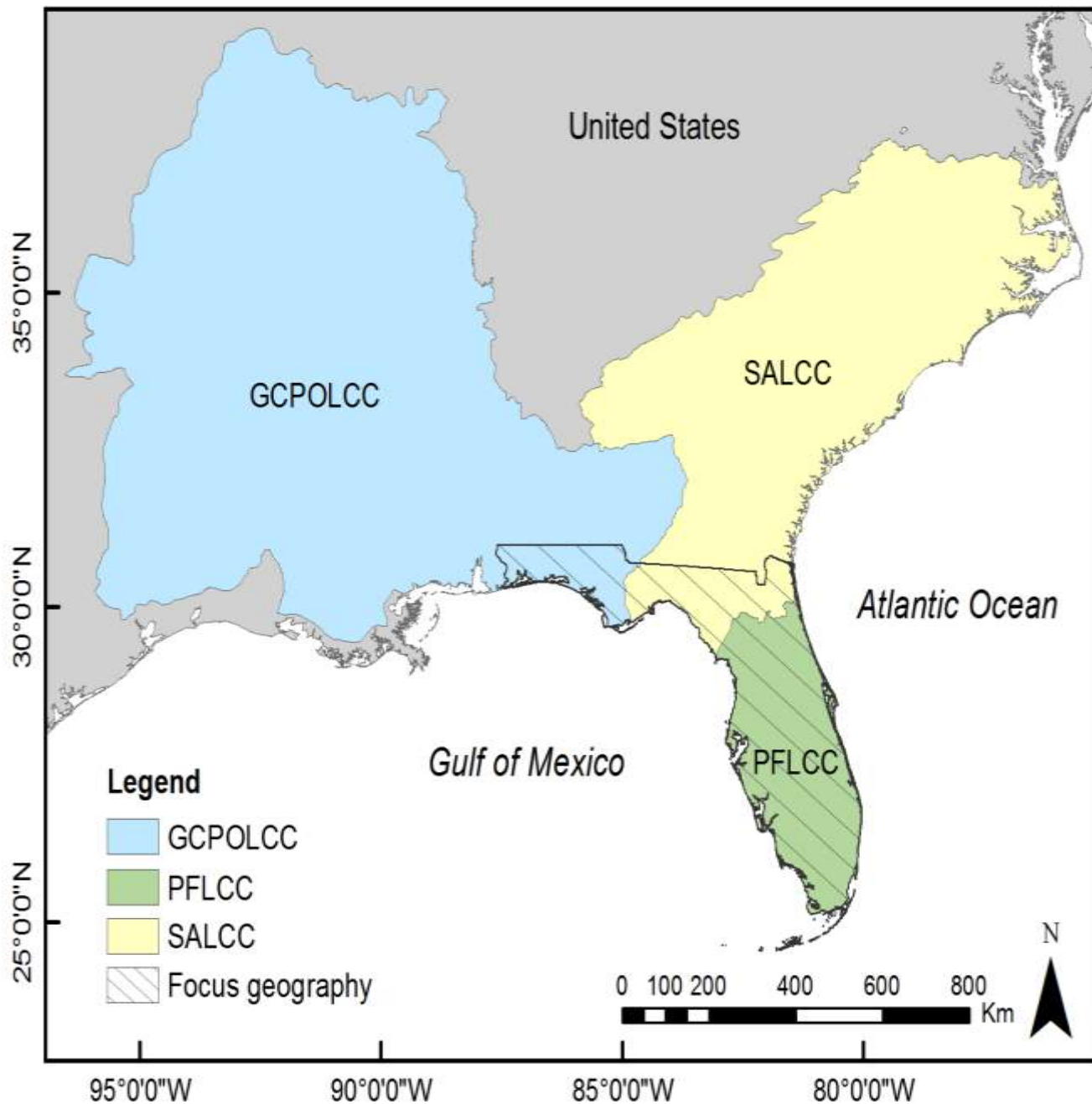
The Landscape Conservation Cooperatives

- 22 individual, self-directed partnerships
 - Steering Committee
 - LCC Staff
- North American continent, Pacific Islands and the Caribbean

Applied conservation science partnerships:

- Federal agencies
- Regional organizations
- State agencies
- Tribes
- NGOs
- Private stakeholders
- Universities
- Other entities





PFLCC: An applied conservation science partnership among local, state, and federal agencies, tribes, non-governmental organizations, universities, and other stakeholders to benefit fish and wildlife and associated habitats.

The function of the PFLCC is to facilitate landscape-level

- 1) planning,
- 2) design, and
- 3) implementation of conservation strategies for fish and wildlife species

PFLCC Steering Committee Organizations

Family Lands Remember, LLC

The Nature Conservancy

FL Fish & Wildlife Conservation
Commission

U.S. Fish & Wildlife Service

National Parks Service (Everglades)

National Wildlife Refuge Association

Florida Natural Areas Inventory

SW FL Water Management District

FL Sea Grant Extension

FL Dept. of Ag. And Consumer
Services

Southeast Aquatic Resources
Partnership

Florida DOT

US Forest Service

Florida Forest Service

Nature Coast Biological
Station

University of Florida

Florida Farm Bureau
Federation

The Conservation Fund

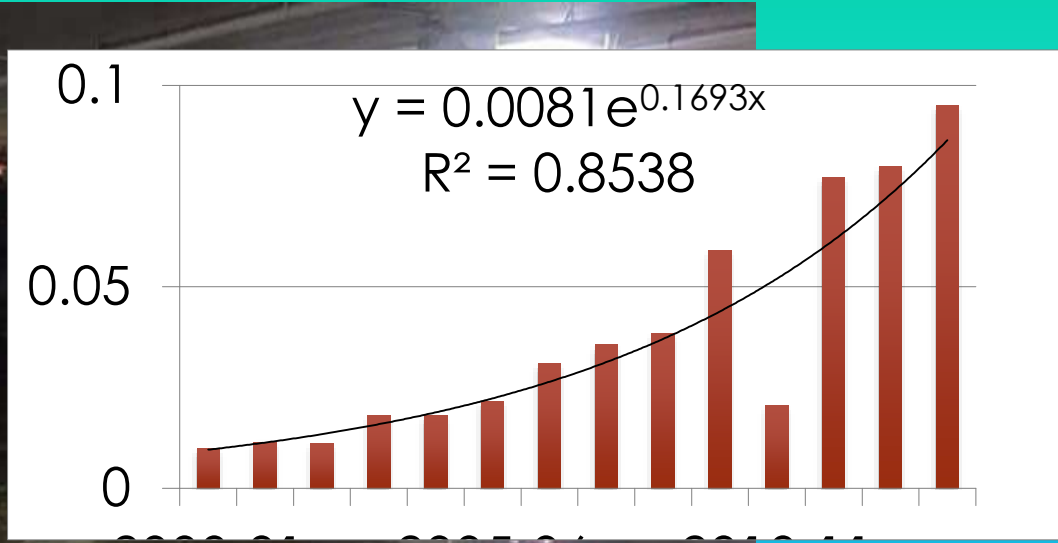
Plum Creek

Florida Forestry Association

NOAA

USGS

USDA NRCS



Sea Level rise scenarios

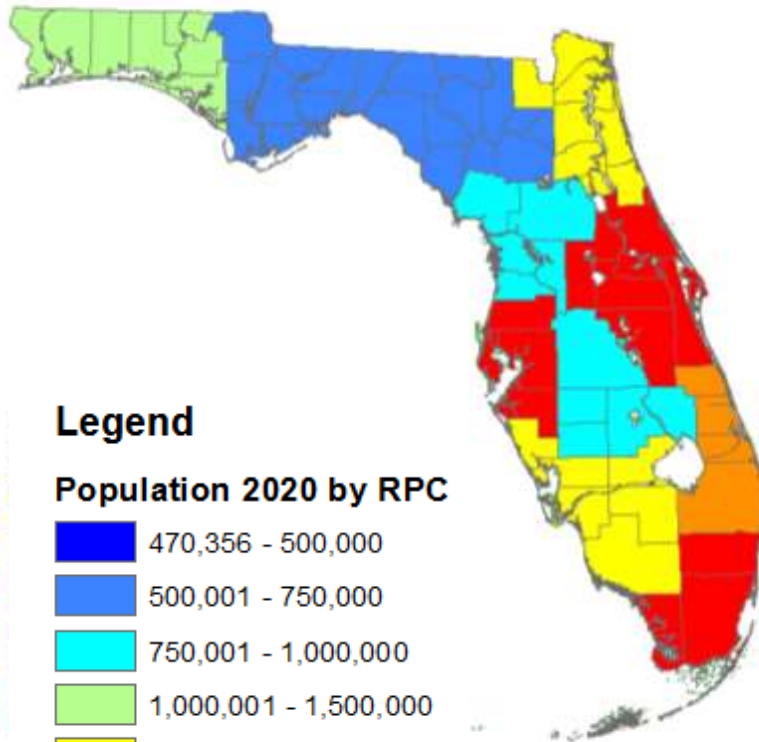
Table 5. GMSL rise scenario heights in meters for 19-year averages centered on decade through 2200 (showing only a subset after 2100) initiating in year 2000. Only median values are shown.

GMSL Scenario (meters)	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2120	2150	2200
Low	0.03	0.06	0.09	0.13	0.16	0.19	0.22	0.25	0.28	0.30	0.34	0.37	0.39
Intermediate-Low	0.04	0.08	0.13	0.18	0.24	0.29	0.35	0.4	0.45	0.50	0.60	0.73	0.95
Intermediate	0.04	0.10	0.16	0.25	0.34	0.45	0.57	0.71	0.85	1.0	1.3	1.8	2.8
Intermediate-High	0.05	0.10	0.19	0.30	0.44	0.60	0.79	1.0	1.2	1.5	2.0	3.1	5.1
High	0.05	0.11	0.21	0.36	0.54	0.77	1.0	1.3	1.7	2.0	2.8	4.3	7.5
Extreme	0.04	0.11	0.24	0.41	0.63	0.90	1.2	1.6	2.0	2.5	3.6	5.5	9.7

NOAA Technical Report NOS CO-OPS 083

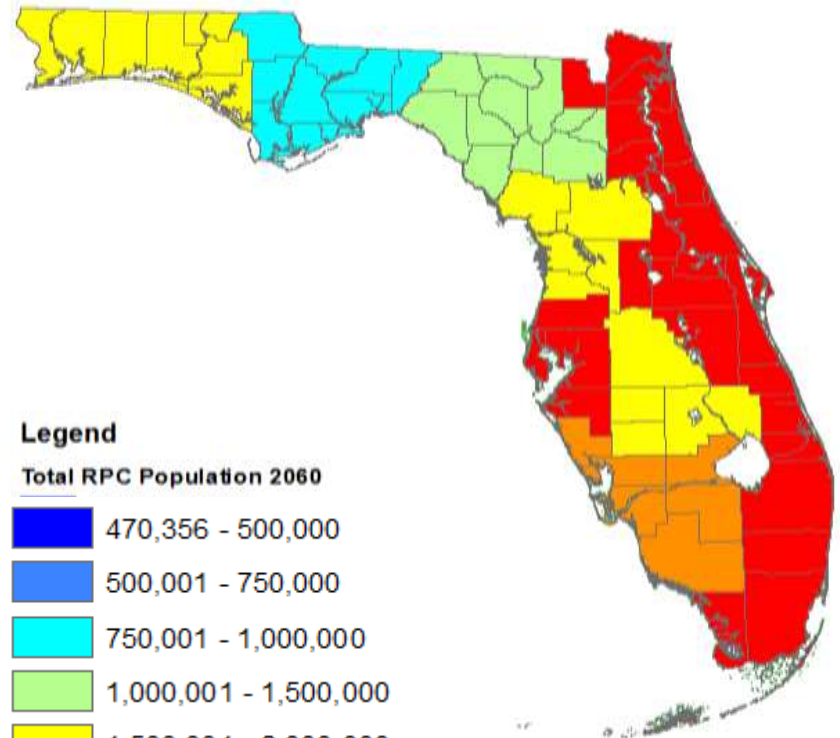
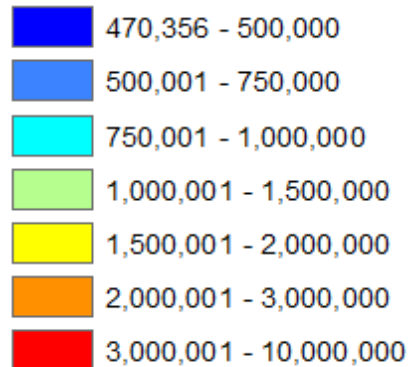
GLOBAL AND REGIONAL SEA LEVEL RISE SCENARIOS FOR THE UNITED STATES

Total Population 2020 and 2060



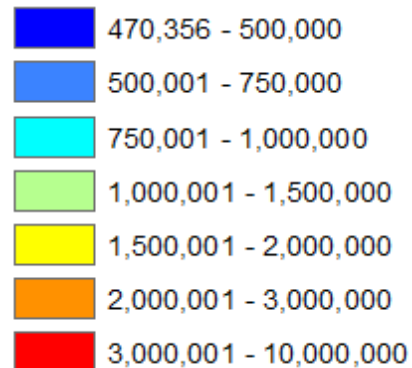
Legend

Population 2020 by RPC



Legend

Total RPC Population 2060





aTOC

Florida 2070 Information



Click Logo to Visit the Florida 2070 site

Water 2070 Information



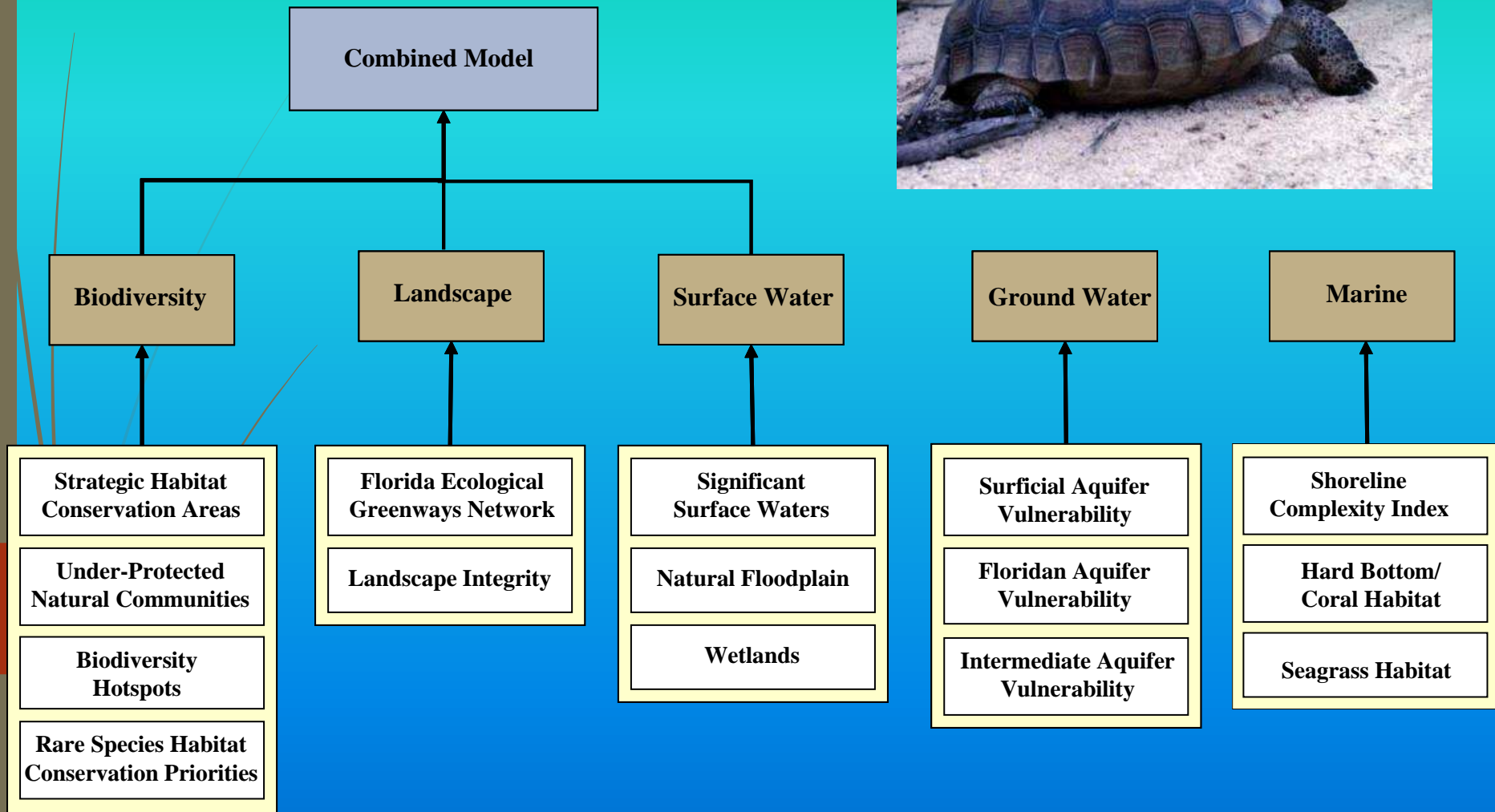
Click Logo to Visit the Water 2070 site

[#florida2070](#)

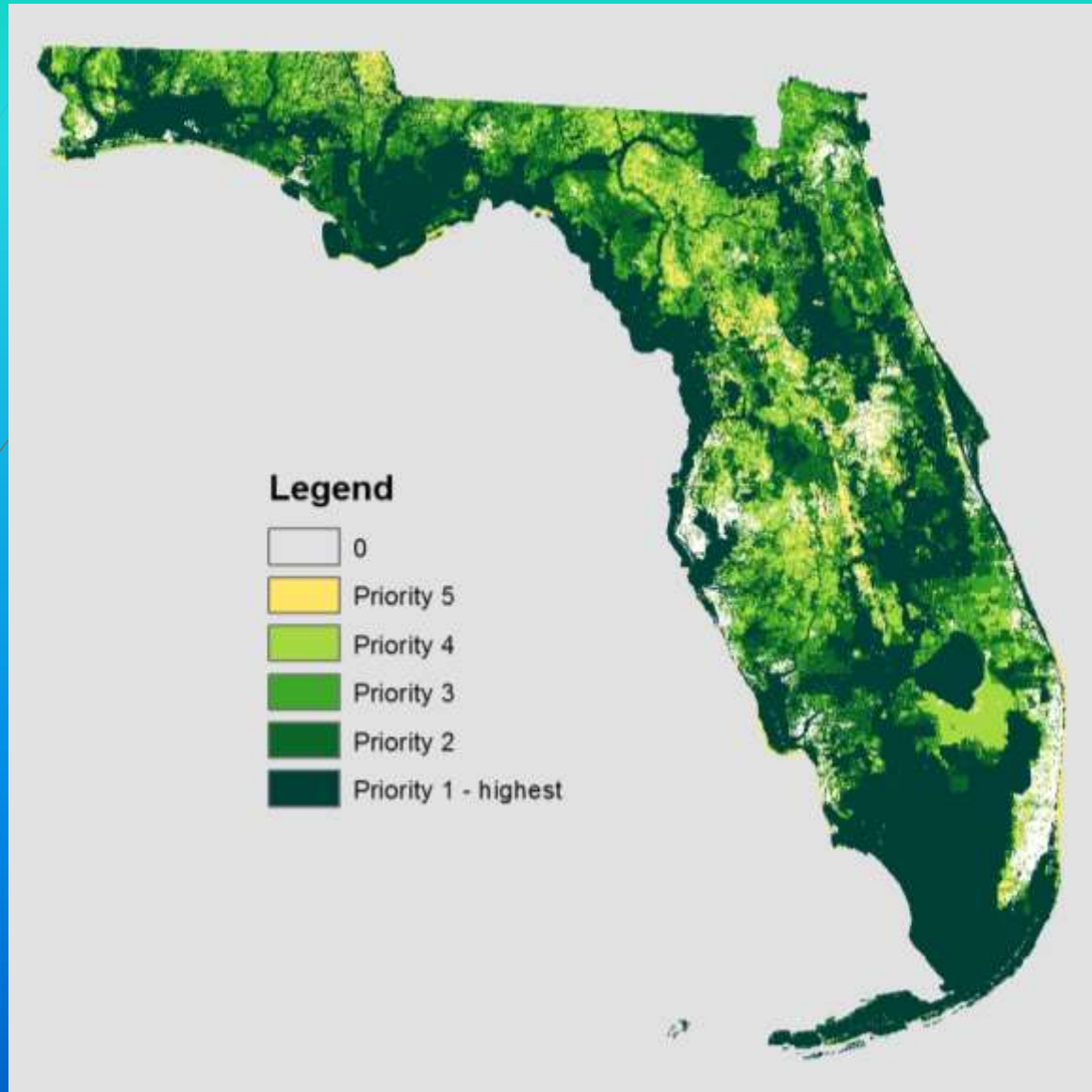
[#water2070](#)

[@floridafriends](#)

CLIP Data Structure



CLIP v3.0 Aggregated Priorities



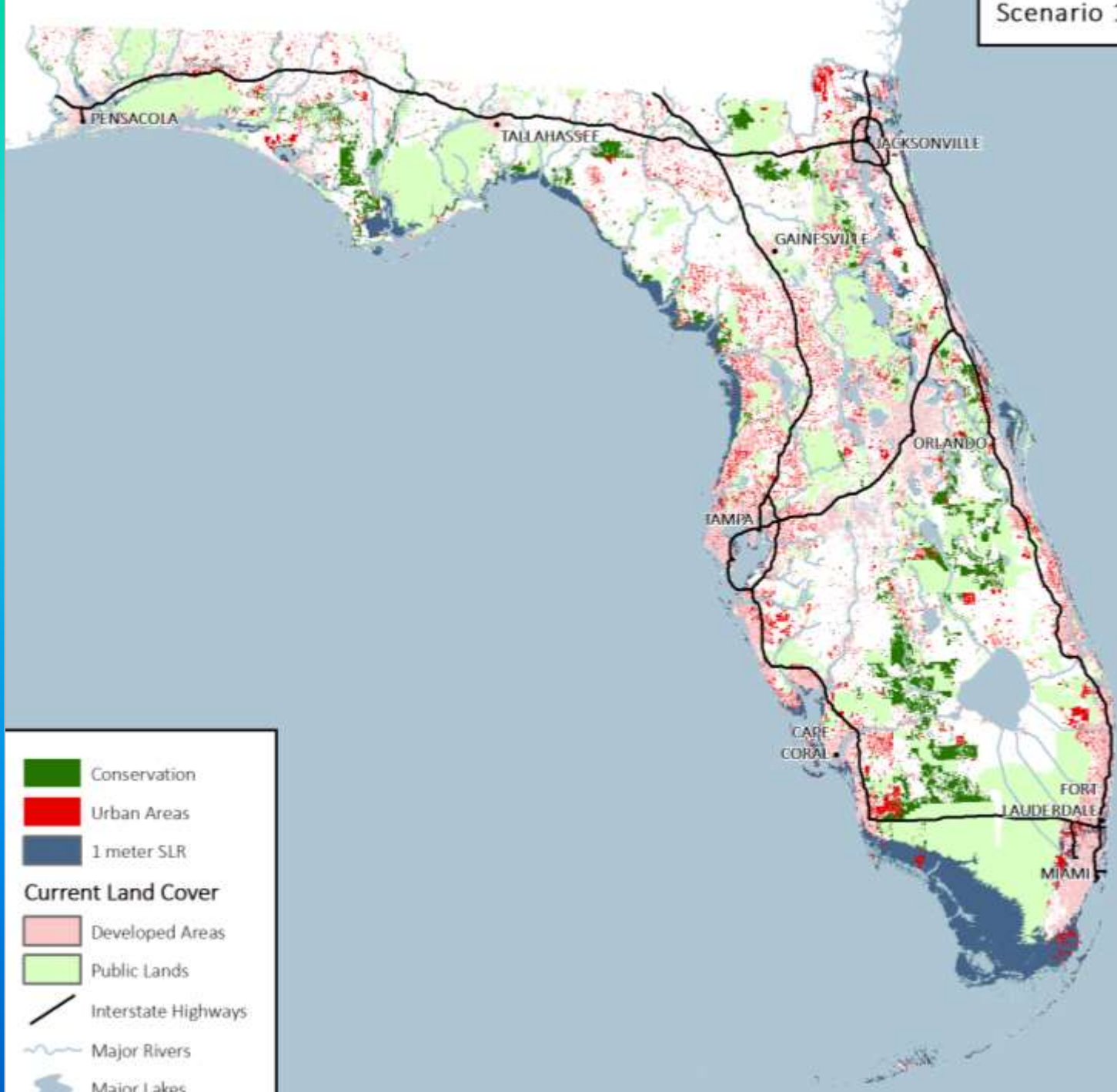
SCENARIO 1

50% Fee Simple 50% Easement + Florida Forever targets Existing distribution of density, county future land use plans

Model:

Highest current development pressure

Florida Ecological Greenways Network 2008 corridors and CLIP priorities used for conservation strategy



Defining Conservation Targets on a Landscape-scale

September 2015



 **USGS**  **UNIVERSITY of FLORIDA**
science for a changing world



Find the report at

<http://peninsularfloridalcc.org/page/conservation-targets>

Priority resources are the set of biological, ecological, and cultural features and ecological processes collaboratively identified as most important, and are the focus of the PFLCC's planning.

Priority resources should represent the most significant resources for the focus geography, embody the key components, and reflect the mission, vision, common interests, and values of the focus geography partners.



PFLCC Priority Resources

Initial Sources: Florida's State Wildlife Action Plan & the Cooperative Land Cover Map

Identified **12 priority resources:**

- 9 habitat based
 - 3 additional PRs, non-habitat based
-
- High Pine and Scrub
 - Coastal Uplands
 - Pine Flatwoods and Dry Prairie
 - Freshwater Forested Wetlands
 - Hardwood Forested Uplands
 - Freshwater Non-Forested Wetland
 - Freshwater Aquatic
 - **Estuarine**
 - **Marine**
 - Cultural and Socio-economic
 - Working Lands
 - Landscape Connectivity

Coastal Uplands



Priority Resource

Measure of Priority Resource "Health"



Conservation Target

3-5/
Priority Resource

of Successful Nests



Implementation - "How"

- Predator control
- Beach barrier management
- Lighting

Actions

Workshop Details:



APR
25

Marine/Estuarine Conservation Target Identification Workshop - St. Petersbu...

by Peninsular Florida Landscape
Conservation Cooperative (PFLCC)

Free



REGISTER

WORKSHOP DATES & LOCATIONS

APRIL 25 – APRIL 27

ST PETERSBURG @ FWRI

MAY 2 – MAY 4

PANAMA CITY @ NOAA SEFSC

MAY 16 – MAY 18

GAINESVILLE @ DPI DOYLE CONNER BUILDING


JUNE 20 – JUNE 22

DAVIE @ UF-IFAS FLREC


State Wildlife Action Plan 2017

2005

**Florida's
Wildlife Legacy
Initiative**




**Keeping Common
Species Common**



Florida Fish and Wildlife
Conservation Commission
Visit: MyFWC.com/wildlifelegacy

2012


**Florida's
State Wildlife Action Plan**



**A comprehensive wildlife
conservation strategy**

2012-2015


**Wildlife
Legacy Initiative**



Florida Fish and Wildlife
Conservation Commission
www.fwc.com

2017


**Florida's
State Wildlife Action Plan**



**Undergoing Revision
Stay Tuned!**

**A comprehensive wildlife
conservation strategy**

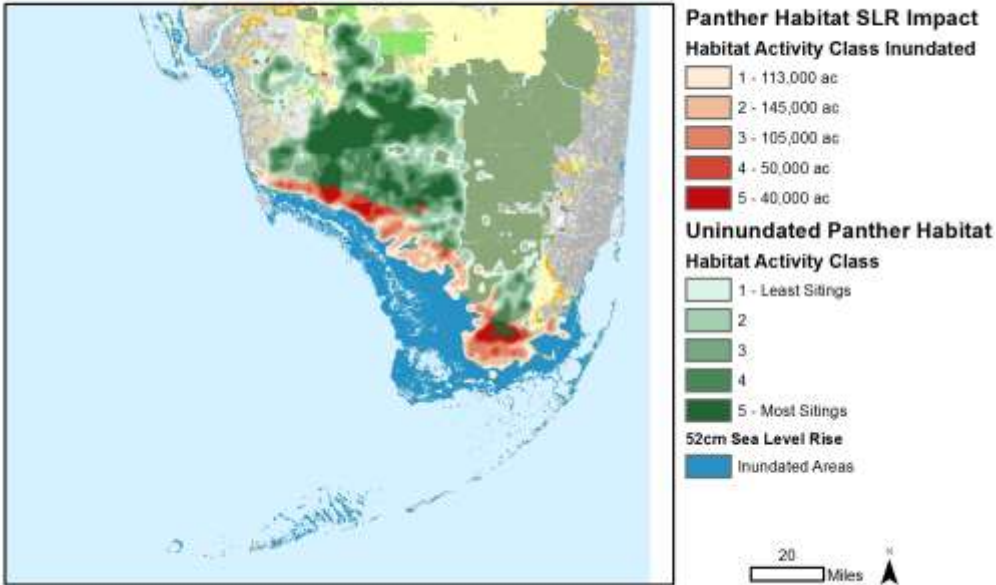
Florida's
**Wildlife
Legacy Initiative**



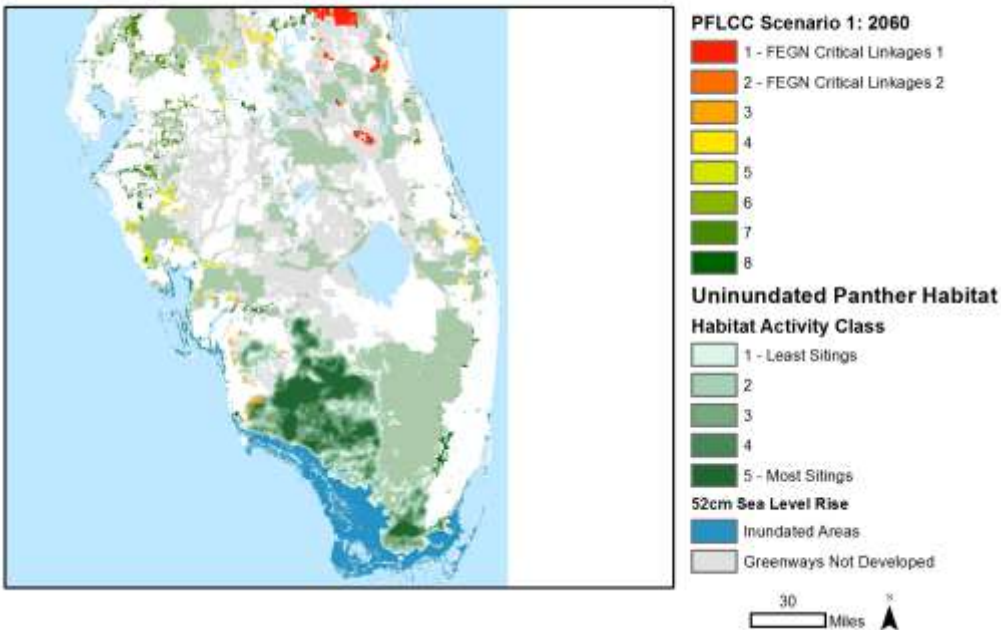
Florida Fish and Wildlife
Conservation Commission
www.fwc.com

State Wildlife Grant Program

Panther Habitat Loss from SLR PFLCC Scenario 1: 2060



Greenways Development Loss PFLCC Scenario 1: 2060

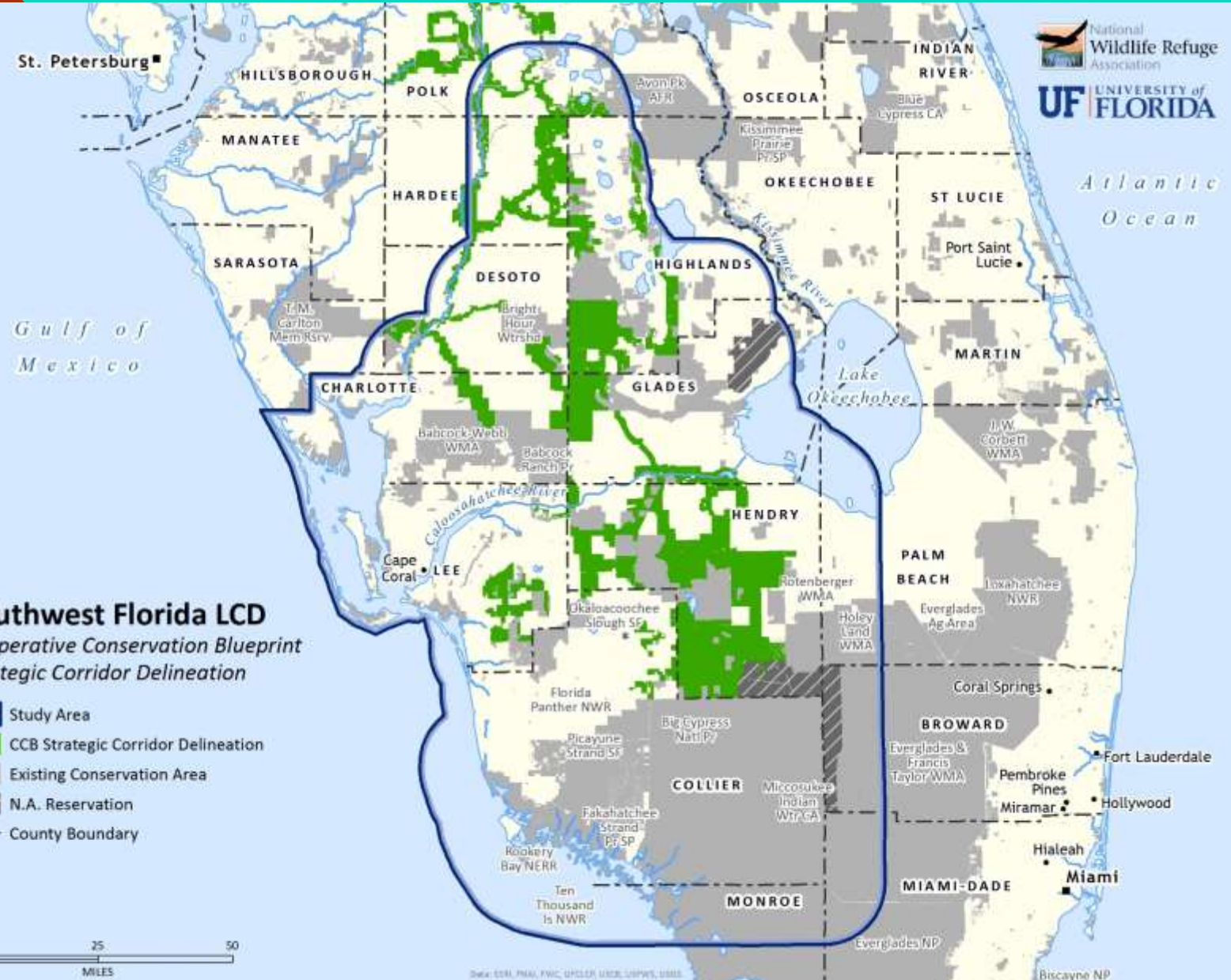


Impact Analysis Examples for Florida Panther

- SLR: Sea Level Rise, 52cm rise in sea surface elevation
- SLR impact (red areas) corresponds directly to the level of sightings in the Habitat Activity Class groupings

- Greenways Development Loss (red through green) are the areas of FEGN-designated critical linkages and undeveloped greenways that would be lost to development

Taking the CCB to LCD



Data: ESR, PMA, FWIC, USFWS, USGS, USFWS, USGS

Expected End Product:



C

State of the South Atlantic 2015

Understanding our living landscapes



ECOSYSTEM estuarine

B

A slightly salty sanctuary

Estuaries are partially enclosed coastal water bodies where freshwater rivers meet the ocean. This system extends upstream into tidal flats and salt marshes, and seaward to the estuary mouth. Nutrient-rich sediment and brackish water make estuaries extremely productive fish and crab nurseries, while salt marshes filter water and buffer coastal storms.



Interpreting the score

Overall, this ecosystem scored a B. The Gulf Coastal Plain scored the highest, mostly driven by better scores on riparian buffers and impervious surface. The Central Coastal Plain scored the lowest, mostly driven by poor scores on riparian buffers, coastal condition, and fresh and saltwater connectivity. This ecosystem has one of the higher scores in this assessment, yet still highlights major opportunities for improving ecosystem health.



- Wetland patch size
- Water-vegetation edge
- Coastal condition
- Riparian buffers
- Impervious surface
- Fresh & saltwater connectivity



Building living shorelines

Coastal developers often stabilize retreating shorelines using seawalls and bulkheads. However, hard structures worsen coastal erosion and degrade estuarine habitat. Instead of concrete, living shorelines use wetland and aquatic plants, oyster reefs, wood, sand, and stone to protect the intertidal environment. This technique restores beautiful, functional estuaries benefiting people and wildlife. Plus, installation can be fun!



PFLCC Projects

SE Conservation Adaptation Strategy (SECAS)



Priority Agenda

Enhancing the Climate Resilience



of America's

Natural Resources

COUNCIL ON CLIMATE PREPAREDNESS AND RESILIENCE

The screenshot shows the homepage of the Peninsular Florida LCC Conservation Planning Atlas. At the top, there are navigation links for 'Sign Up', 'Sign In', and 'Support'. The main header features the logo and name of the organization, a search bar, and the text 'powered by DATA BASIN'. Below the header is a navigation menu with 'GET STARTED', 'EXPLORE', 'CREATE', 'COMMUNITY', and 'MY WORKSPACE'. The main content area includes a large banner titled 'About the PFLCC Conservation Planning Atlas' with a 'Take a Tour' button. Below this is a 'Data Galleries' section with six thumbnails: 'Critical Lands & Waters Identification Project', 'Alternative Futures & Scenarios', 'Base Data & Maps', 'Priority Resources & Conservation Targets - Coming Soon...', 'Supporting Models & Data', and 'Projections of Landscape Change'. At the bottom, there are three sections: 'Simple Map View' with a 'Coming Soon...' placeholder, 'PFLCC CPA News' with a recent update from Nov 20, and 'Advanced PFLCC Mapping' with a map thumbnail.

The Conservation Planning Atlas

- Runs through DataBasin platform
- Designed by: Conservation Biology Institute
- Designed for showcasing spatial datasets, projects, and efforts
- Will be the home for PFLCC Conservation Design and other deliverables

<https://pflcc.databasin.org/>

“We do not inherit the earth we borrow it from
our grandchildren”
Native American Saying

Future Land Programs in Florida

- P2000 1.7 million acres, Florida Forever
707,740 acres of land with \$2.89 billion
- Future potential tools
 - Restore Act
 - Amendment 1 (Water and Land conservation)

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USFWS

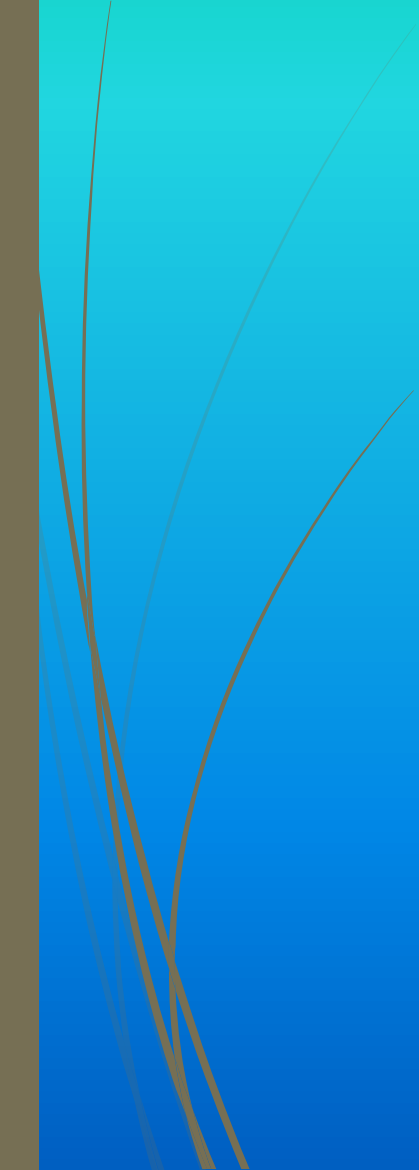
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Peninsular Florida LCC Coordinator

PFLCC CPA: <https://pflcc.databasin.org/>

PFLCC website: <http://peninsularfloridaalcc.org/>

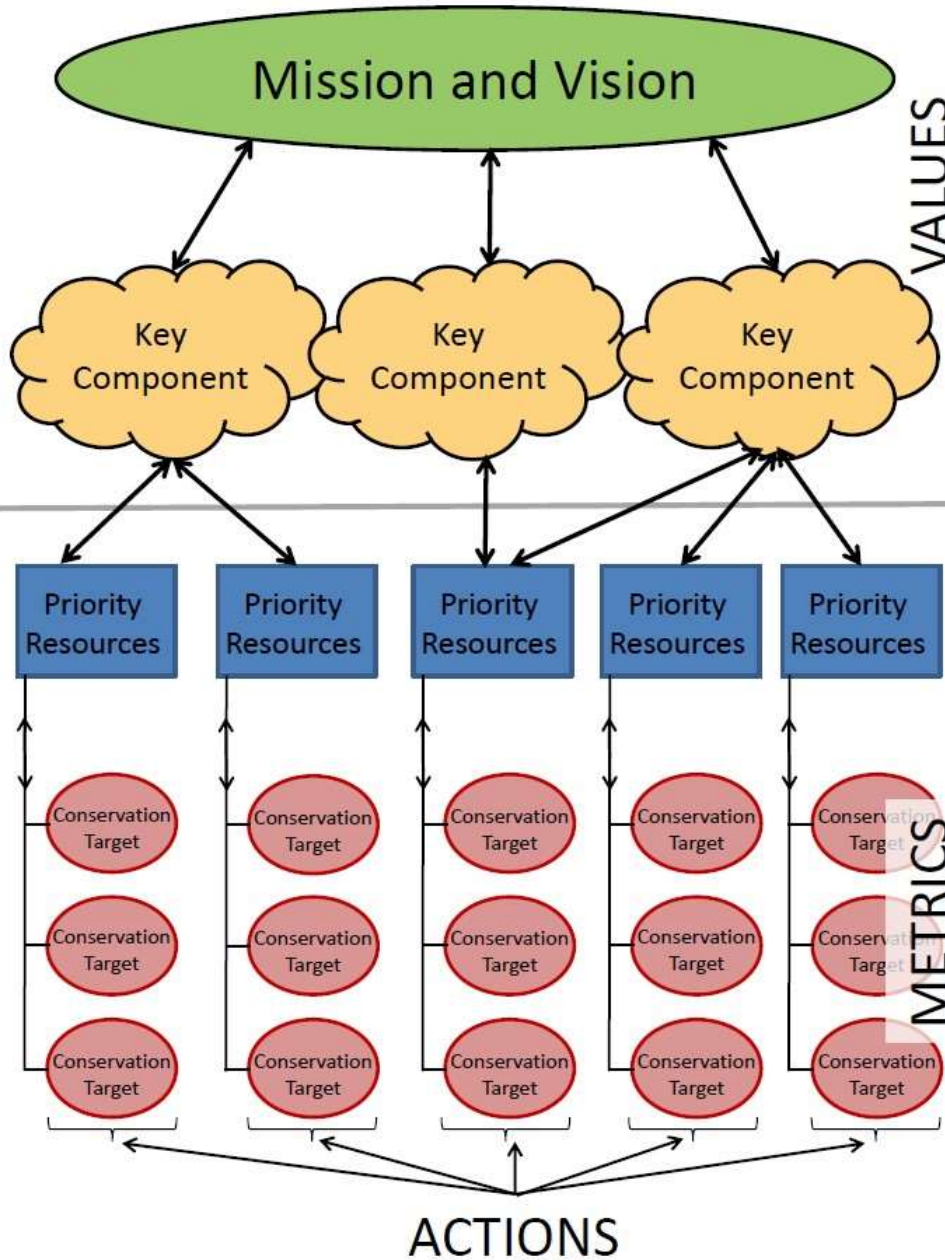


Examples of Conservation Targets

Identify 3-5 Conservation Targets/Priority Resource

- Endpoints may differ regionally
- Existing data and programs ideal (development, expansion an option)
- Data discovery post workshop presented to sub-teams

Priority Resource	MEASURABLE ATTRIBUTE	METRIC	Target
Estuarine	Mangrove Extent	Hectares (ha)	<i>Maintain 230,704 ha</i>
Coastal Uplands	Amount of altered beach	Linear miles	<i>Reduce amount of altered beach by 25% by 2030</i>
Pine Flatwoods and Dry Prairie	Bird habitat suitability	Index of habitat suitability	<i>Achieve and maintain “high” status on 80% of pine flatwoods</i>



Vision:

PFLCC 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:

To foster landscape scale conservation to sustain natural and cultural resources for future generations.