GreenLinks: A Tool to Better Integrate Transportation and Landscape-level Conservation in Northwest Florida

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What is GreenLinks?

- **A landscape-level ecological framework**
- **A shared vision among partners**
- **Objective, science-based process**
- **Identifies conservation priorities**
- **A tool for better planning roads and other development**


Photo by Carlton Ward

Built on Partnership

- **Funded by US Fish and Wildlife Service**
- **Conducted by Dr. Hoctor, University of Florida, with support of Jon Oetting, FNAI**
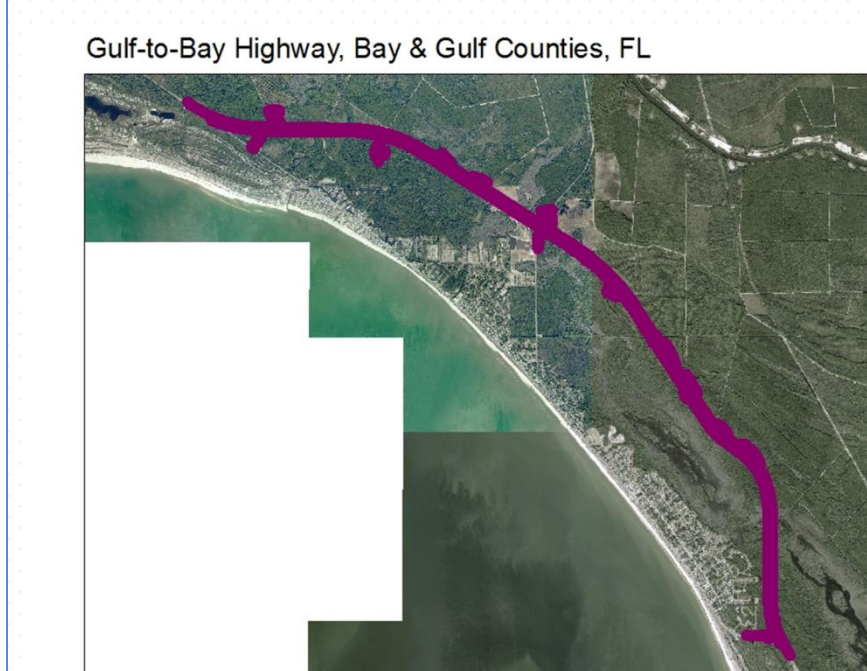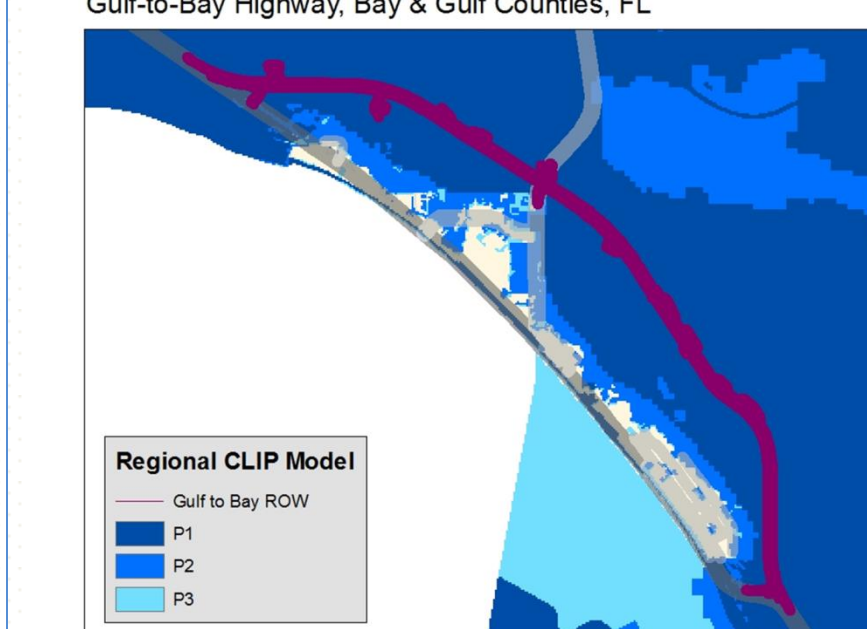- **Multi-agency technical advisory team**

Project Background

- 2006 – Inspired by federal release of *Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects*
- 2010 – USFWS hosts local training for partners (*Strategic Conservation Planning Using A Green Infrastructure Approach*)
- 2011 – USFWS partners with Dr. Hoctor, UF Center for Conservation Planning, to develop regional green infrastructure plan
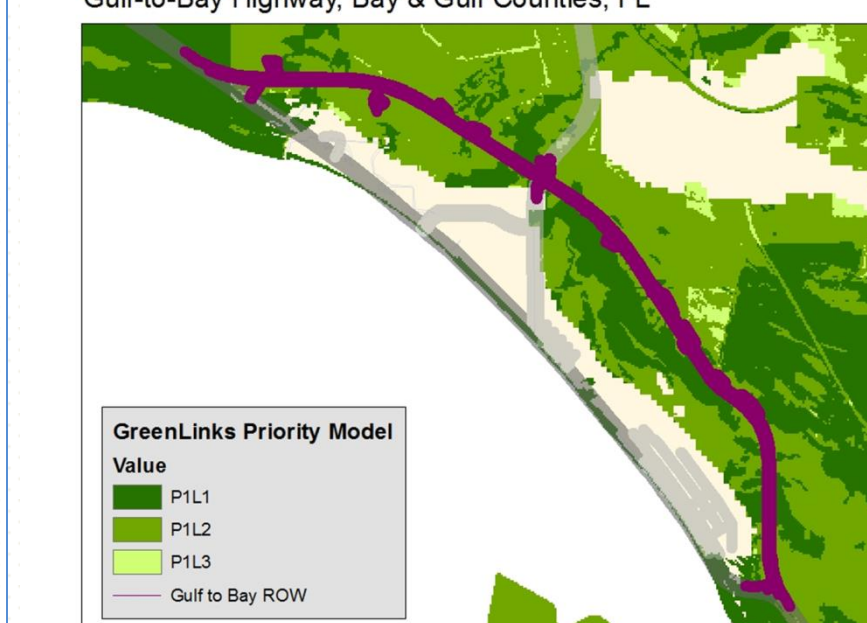- 2013 – GreenLinks project completed. Further information at:

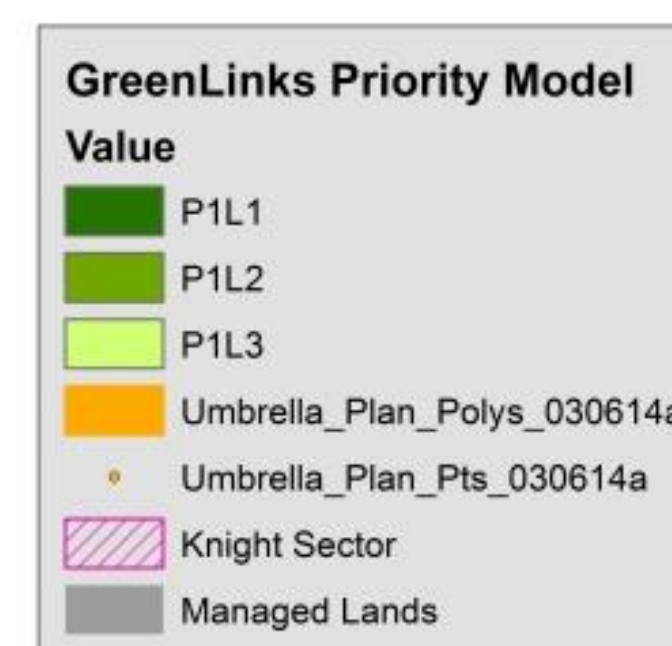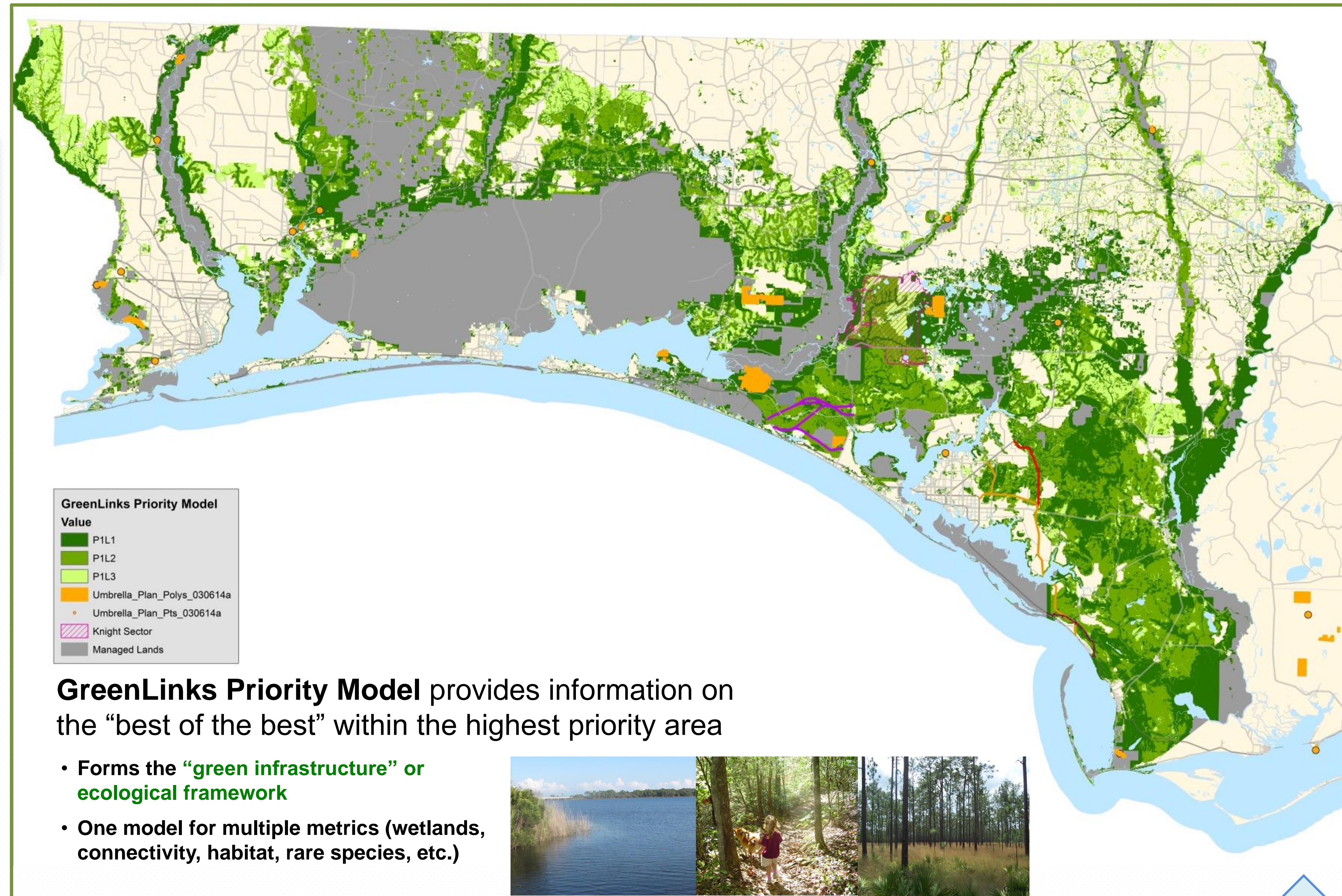 http://www.fws.gov/PanamaCity/greenlinks.html

Photo by
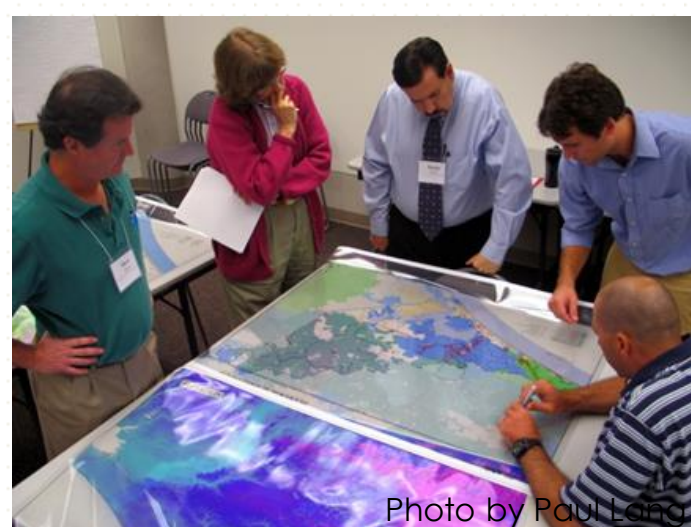
Potential Applications

Gulf-to-Bay Highway, Bay & Gulf Counties, FL

Fine-tune placement of road alignments to avoid highest conservation priority areas.

Regional CLIP Model

Gulf-to-Bay Highway, Bay & Gulf Counties, FL

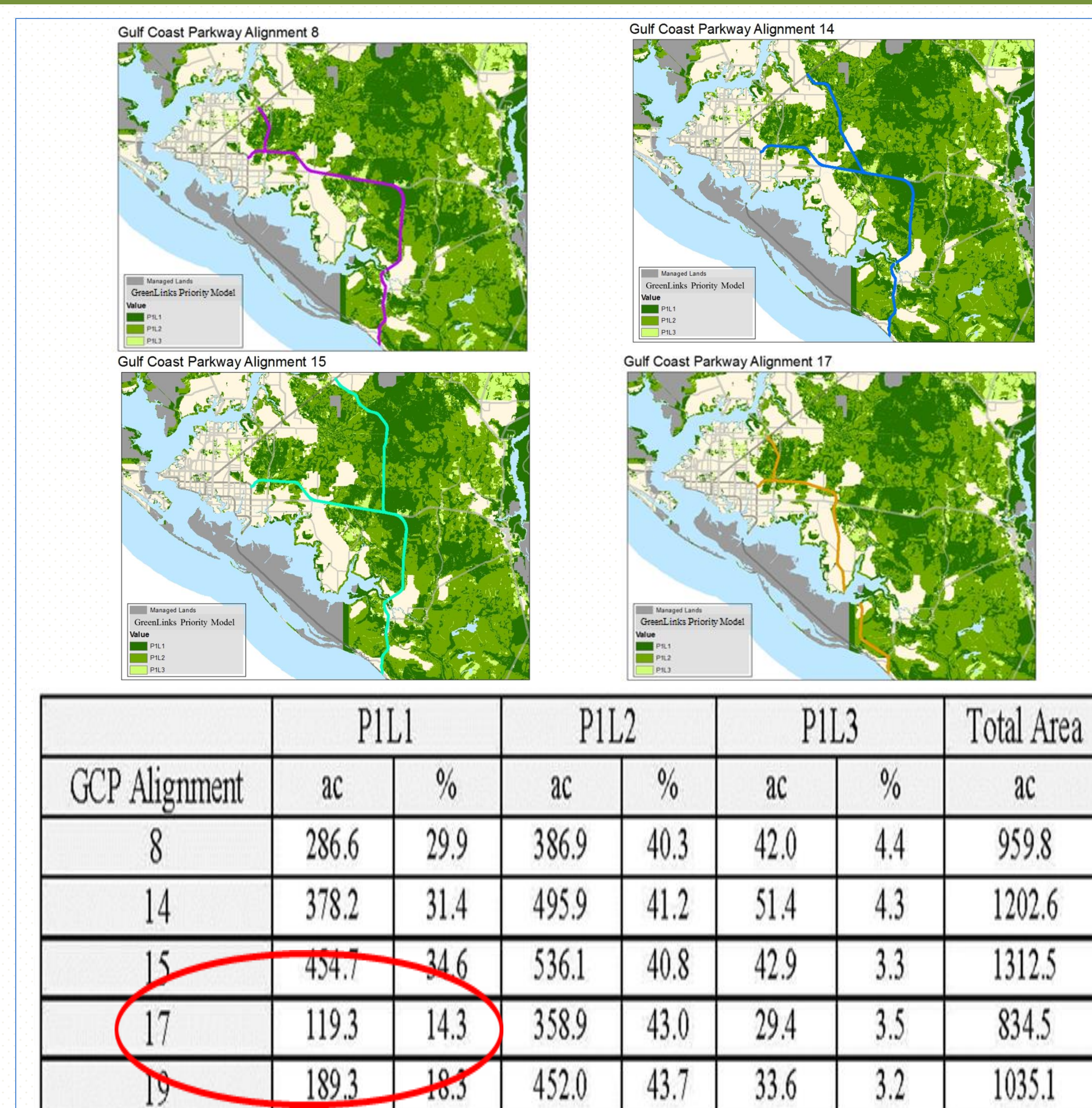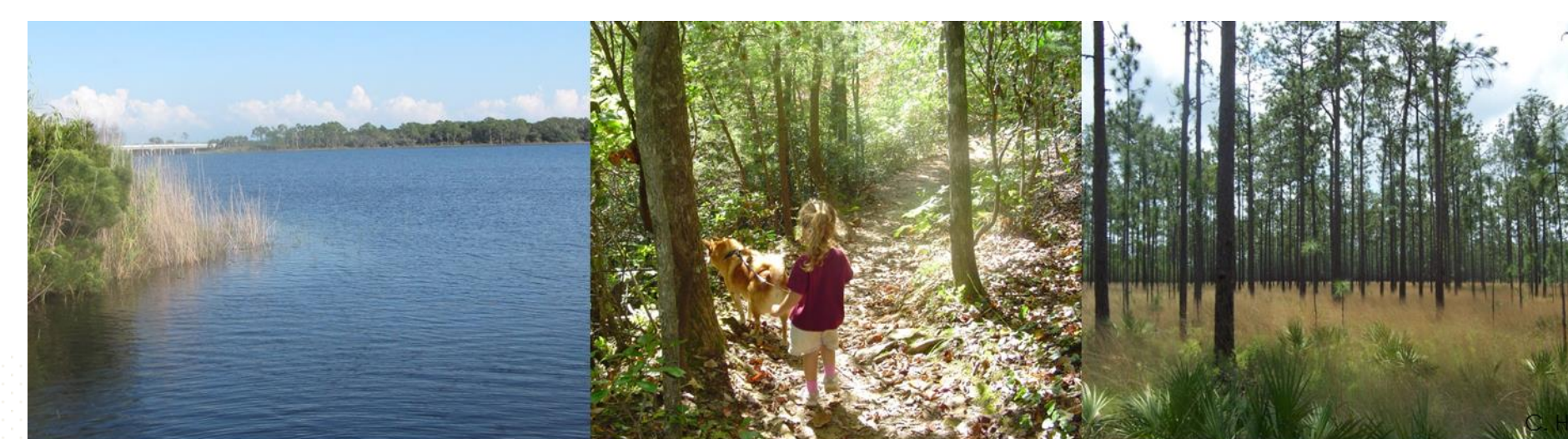*Can alignment avoid priority areas? If not...*

Gulf-to-Bay Highway, Bay & Gulf Counties, FL

...use GreenLinks Priority Model to avoid the "highest of the high" conservation priorities.

GreenLinks Priority Model Value

GreenLinks Priority Model Value

- P1L1
- P1L2
- P1L3
- Umbrella_Plan_Polys_030614a
- Umbrella_Plan_Pts_030614a
- Knight Sector
- Managed Lands

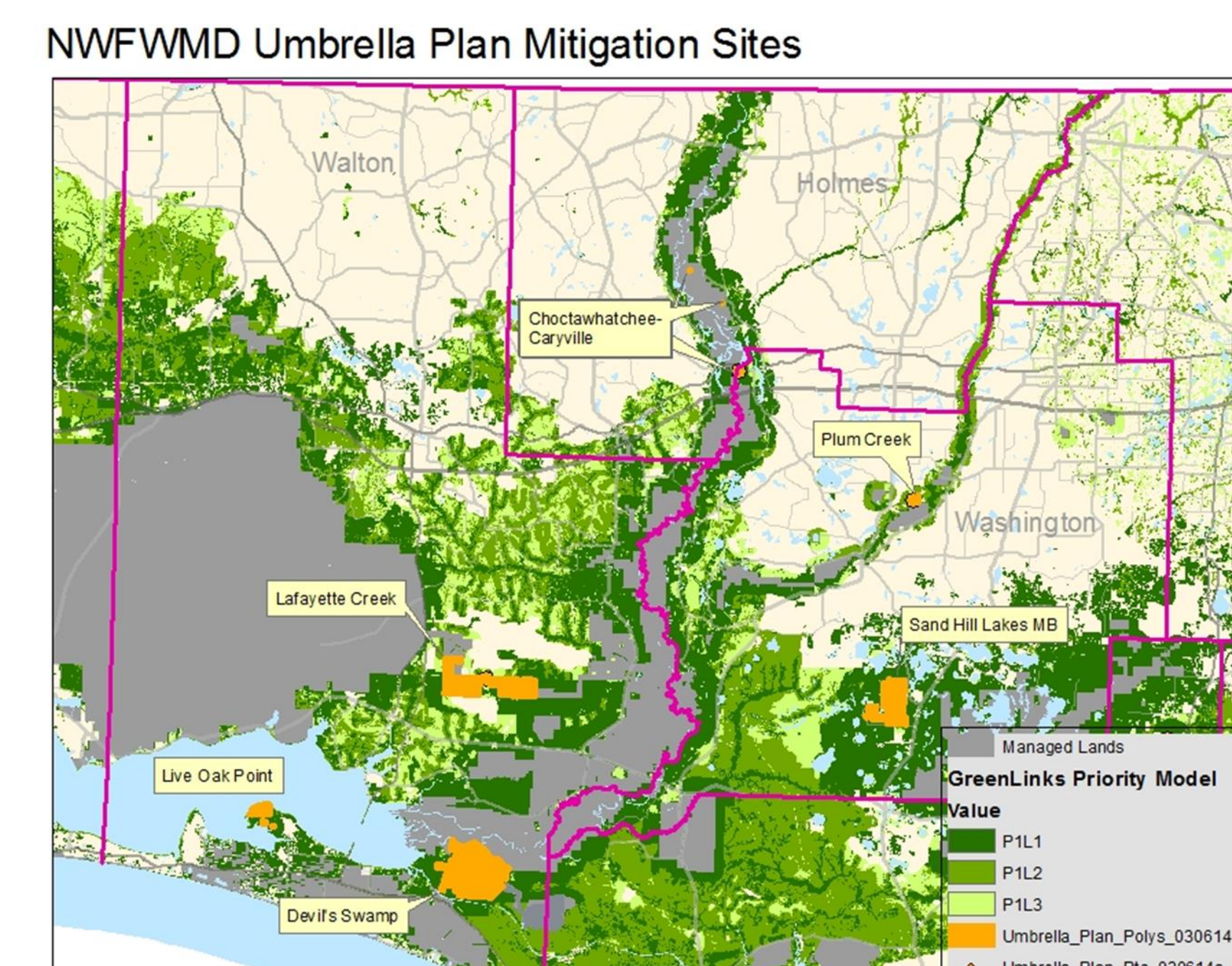**GreenLinks Priority Model** provides information on the "best of the best" within the highest priority area

- **Forms the "green infrastructure" or ecological framework**
- **One model for multiple metrics (wetlands, connectivity, habitat, rare species, etc.)**

Gulf Coast Parkway Alignment 8

Gulf Coast Parkway Alignment 14

Gulf Coast Parkway Alignment 15

Gulf Coast Parkway Alignment 17

GCP Alignment	P1L1 ac	P1L1 %	P1L2 ac	P1L2 %	P1L3 ac	P1L3 %	Total Area ac
8	286.6	29.9	386.9	40.3	42.0	4.4	959.8
14	378.2	31.4	495.9	41.2	51.4	4.3	1202.6
15	454.7	34.6	536.1	40.8	42.9	3.3	1312.5
17	119.3	14.3	358.9	43.0	29.4	3.5	834.5
19	189.3	18.3	452.0	43.7	33.6	3.2	1035.1

Scientific support tool for evaluating alternative alignments. Example: Gulf Coast Parkway.

Identify regionally significant target areas for conservation land acquisition, restoration, and/or enhancement. Example: FDOT wetland mitigation sites.

NWFWMD Umbrella Plan Mitigation Sites

Walton | Holmes

Choctawhatchee-Caryville

Plum Creek

Washington

Lafayette Creek

Sand Hill Lakes MB

Live Oak Point

Devil's Swamp

Managed Lands
GreenLinks Priority Model Value
- P1L1
- P1L2
- P1L3
- Umbrella_Plan_Polys_030614a
- Umbrella_Plan_Pts_030614a

GreenLinks Products

- **Conservation Priority Database**
  - 3 sub-databases
  - 50 data layers
- **Models**
  - Regional Ecological Network (REN)
  - CLIP[1] & Regional Ecological Data Synthesis (CRES)
  - Regional CLIP Model (REN + CRES)
  - Regional Overlay Model
  - ✓ GreenLinks Priority Model (Regional CLIP P1 Overlay Model)

[1]CLIP = statewide critical land and water identification project
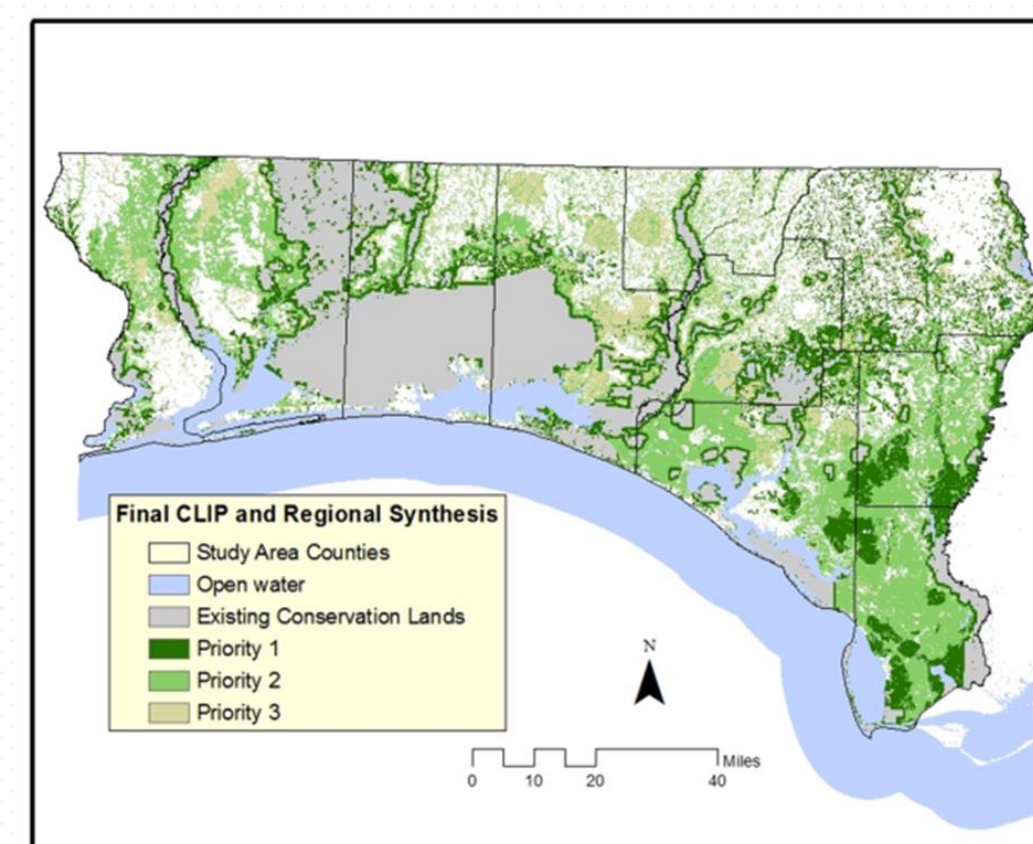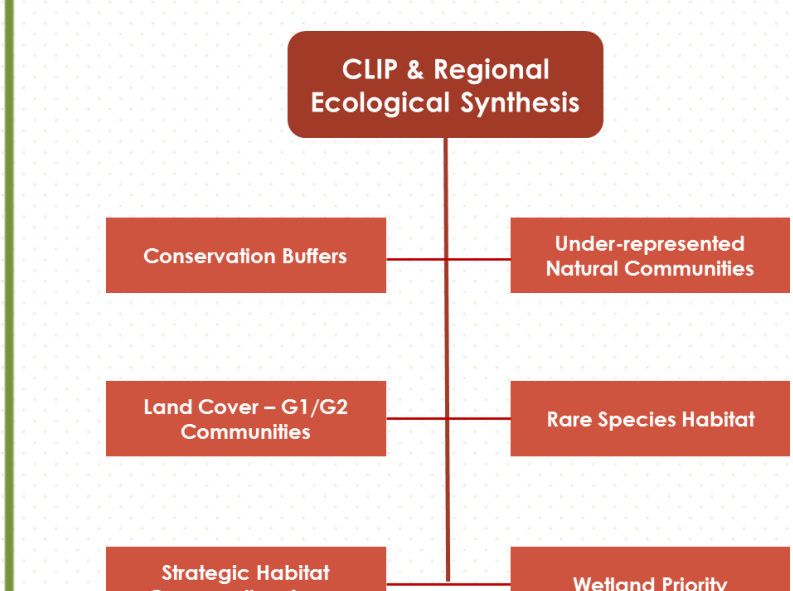
REGIONAL ECOLOGICAL NETWORK (REN)

- Identifies important large, intact and functionally connected landscapes
- Rules-based model
- Aggregated prioritization
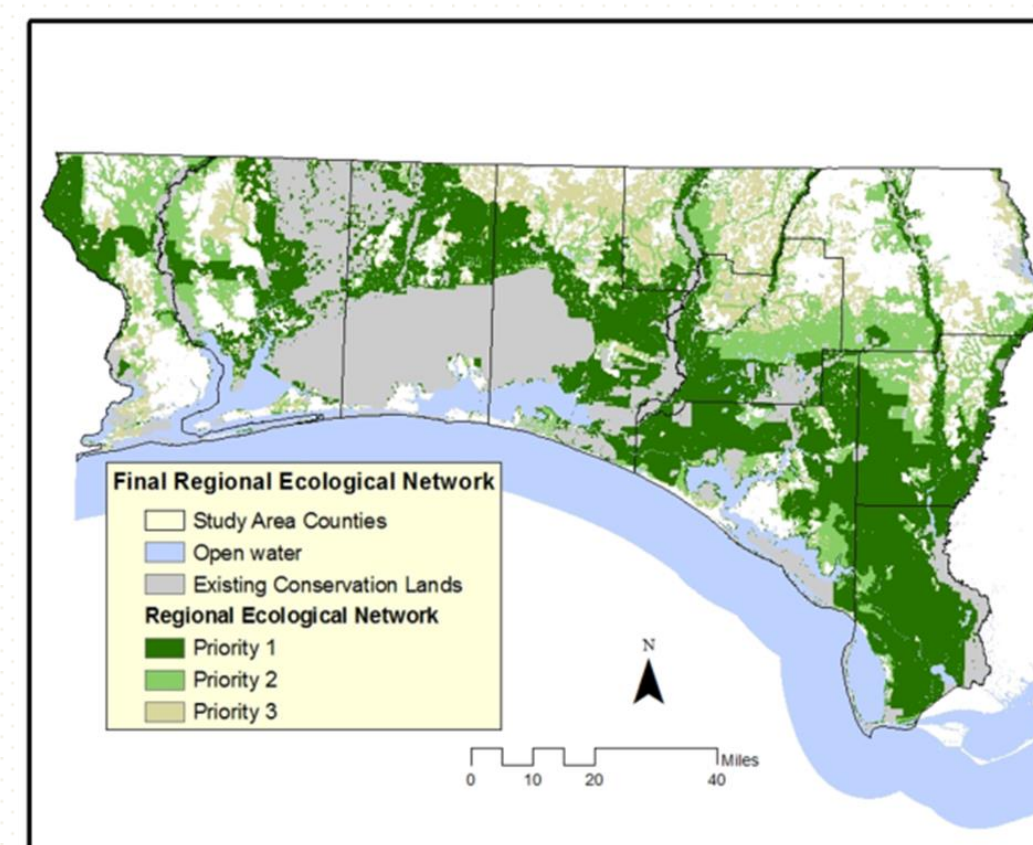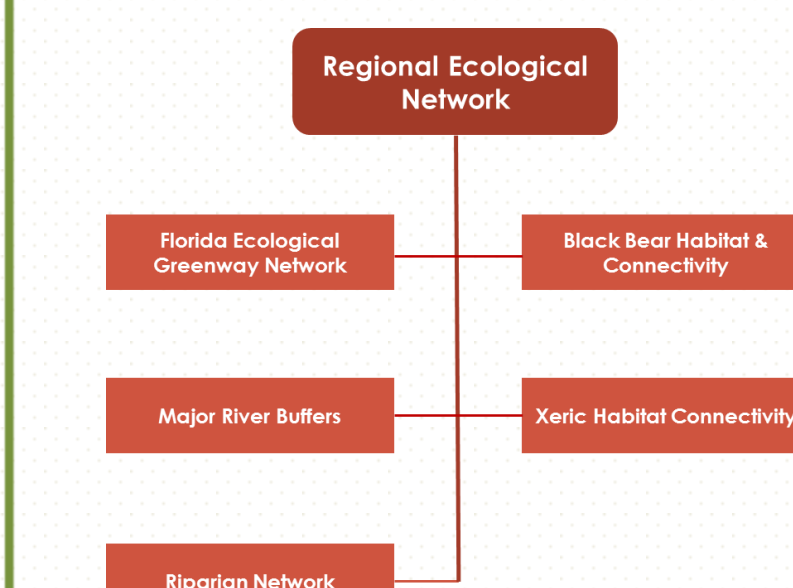
CLIP & REGIONAL ECOLOGICAL DATA SYNTHESIS (CRES)

- Combines other biodiversity and ecosystem service priorities
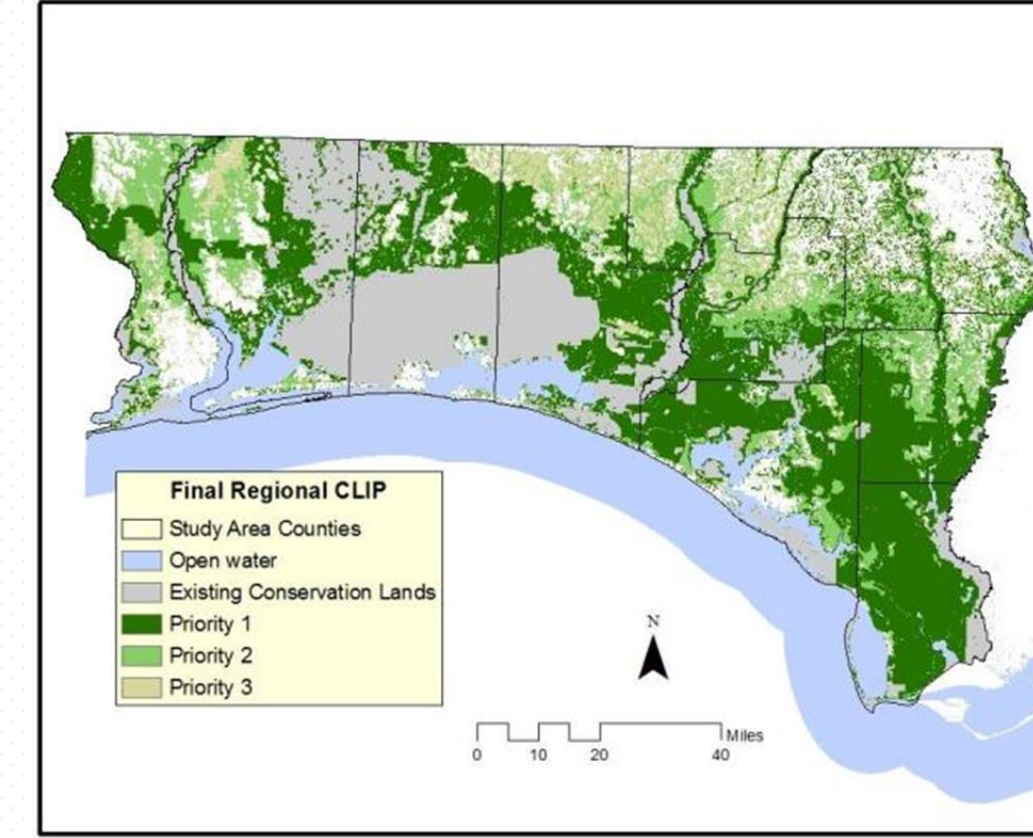- Rules-based model
- Aggregated prioritization

REGIONAL CLIP

- Focus on regional priorities
- Combines REN and CRES
- Rules-based, maximum
- Aggregate model

REGIONAL OVERLAY MODEL

- To define finer classes within basic priorities
- Hybrid prioritization
  - Rules-based; Additive
- Three sub-models