

2019 NHCPC Annual Meeting

Florida Panthers,
Climate Change, and
the Conservation Role
for HCPs



Florida Physical Geography



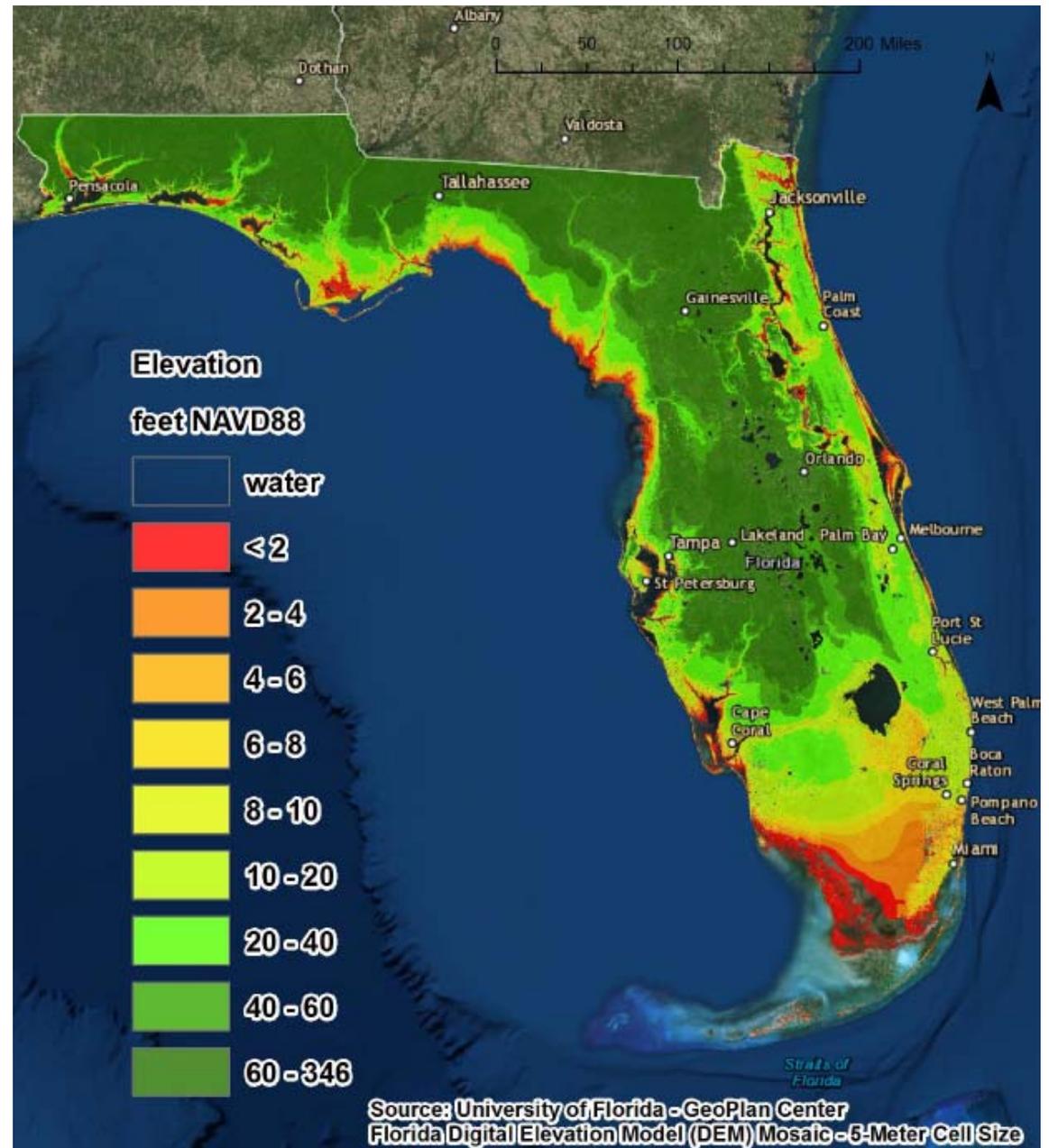
- 447 miles from northern boundary to Key West
- 361 miles from the northeast corner to the Florida-Alabama state line
- Ranked 26th in land area out of the 50 states (between Wisconsin and Arkansas) at 53,625 square miles
- BUT...ranked 2nd in length of coastline at 8,436 miles
- AND Florida's coastal areas possess two things:
 - Low elevation
 - Many, many people

Elevation

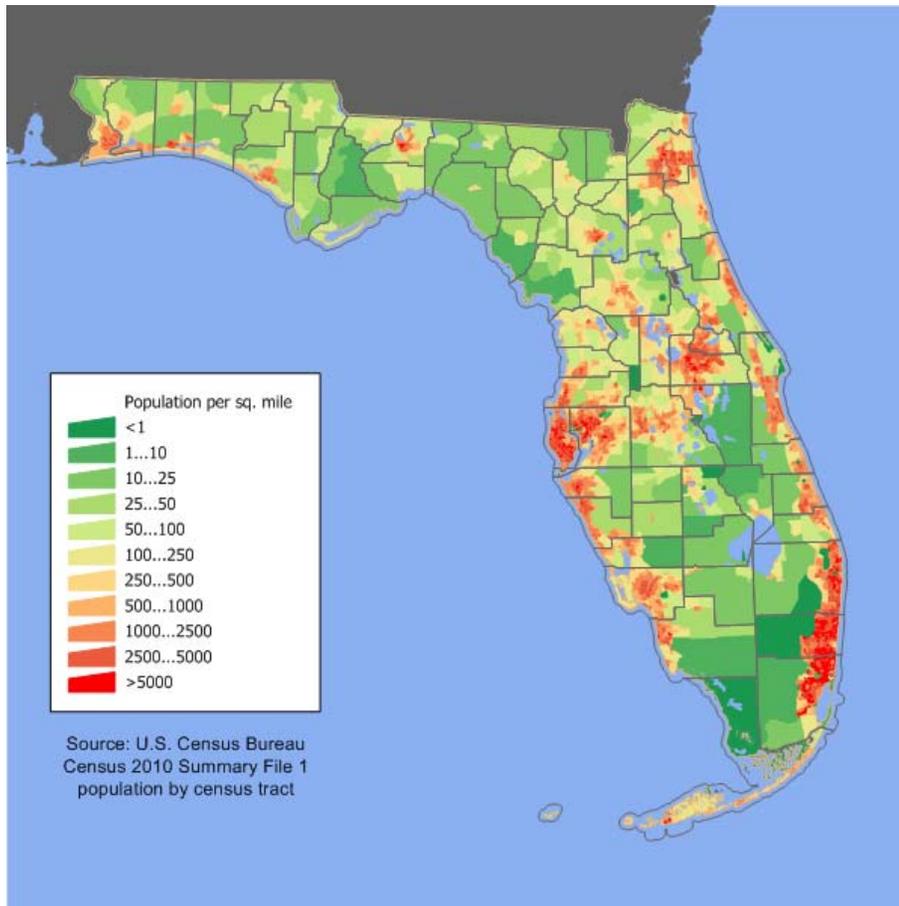
Much of Florida's coastal areas and South Florida occur at elevations below 5 feet (NAVD 88)

The IPCC predicts 1-2 feet of sea level rise (SLR) by 2100 *with rapid cuts in GHG emissions*

IPCC prediction is 2-3 feet SLR by 2100 with higher emissions



Florida: Human Geography



Fun fact: humans like living near the beach

Not-so-fun fact: beaches are at sea level; *current sea level*

Where will everyone go when sea levels rise?

Who needs sea level rise? We have hurricanes!

Florida Panthers

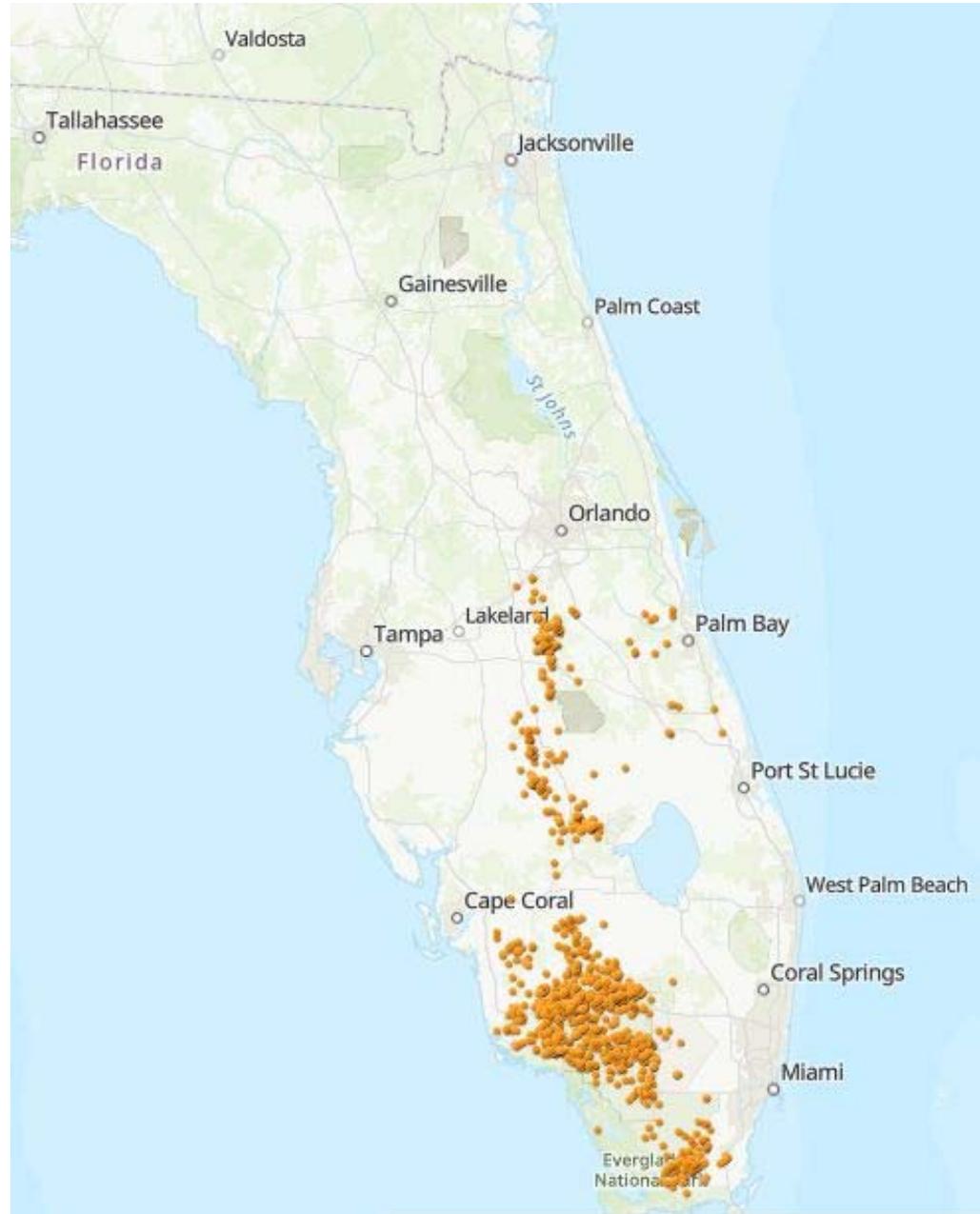
Breeding range generally restricted to South Florida

Require large contiguous habitat areas to fulfill life requirements

Preferentially select forested cover where available

Avoid humans

Recovery goal: 2 other stable meta-populations in southeastern US



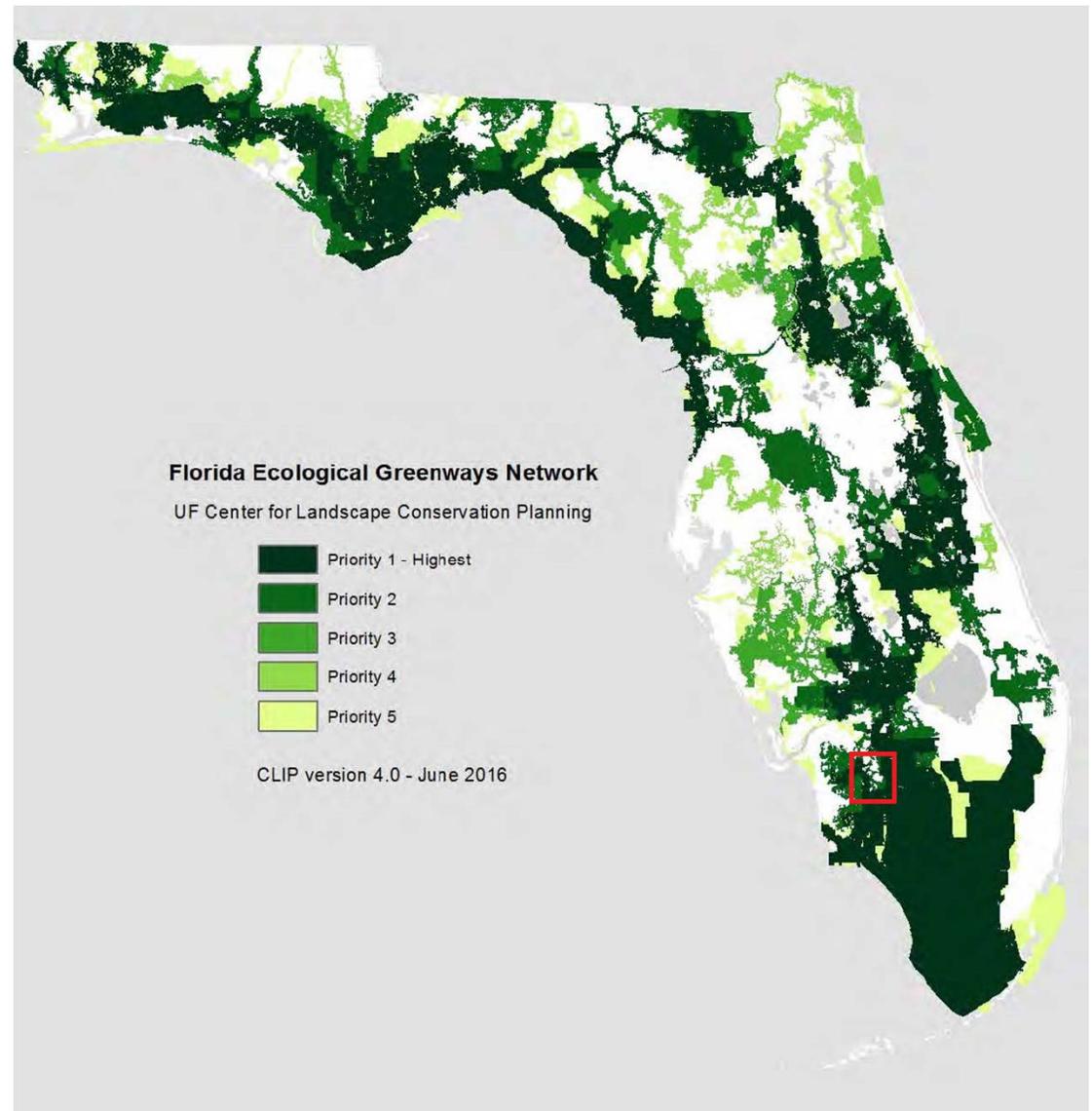
Habitat Connectivity

For panthers, *connectivity* of habitats is on par with *extent* of habitats

Standard mitigation for habitat impacts cannot easily preserve landscape-scale connectivity

Public funding inadequate to acquire enough land

HCPs offer one solution



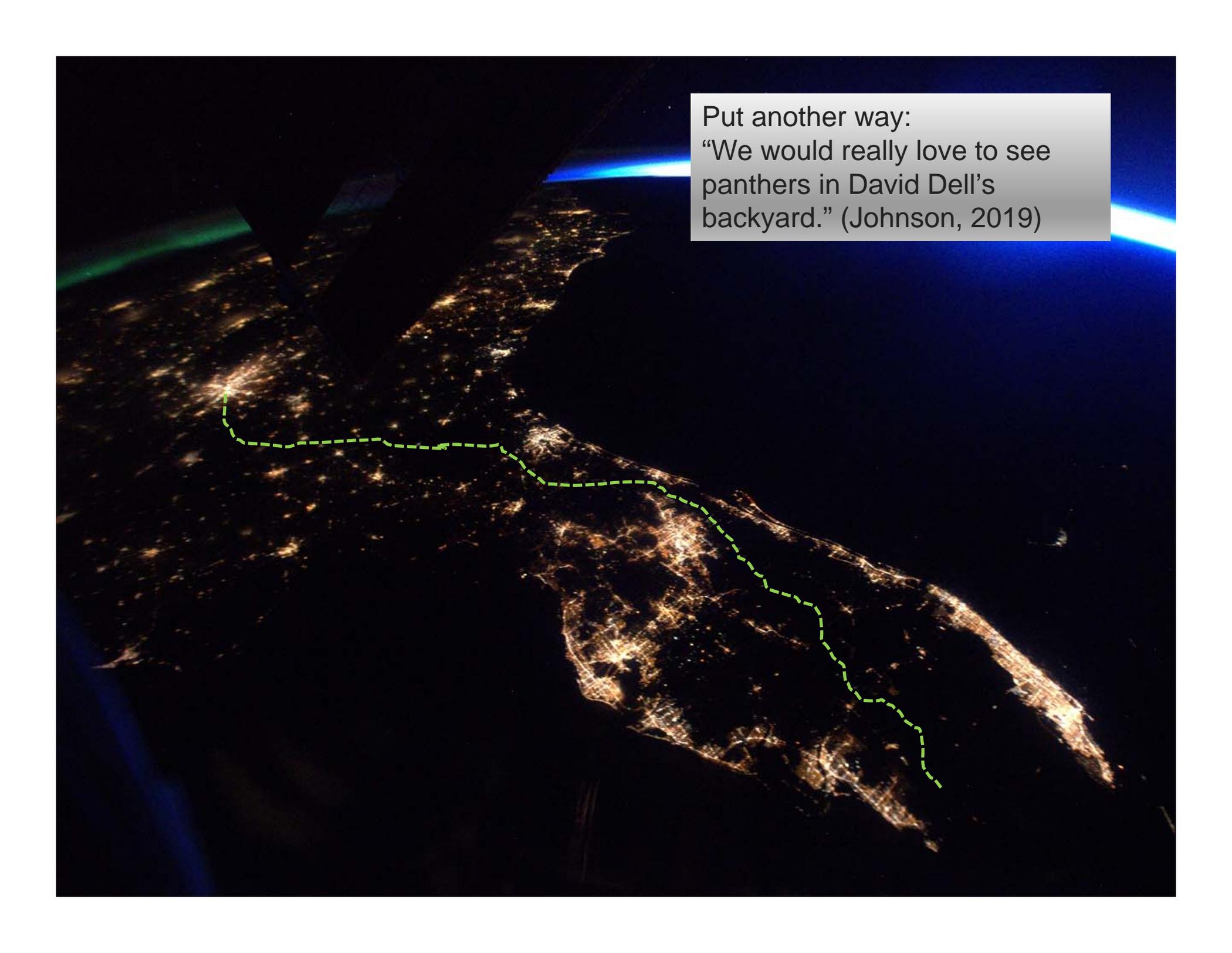
Eastern Collier MSHCP

- 151,000 acres of private lands (agriculture; range; native habitats)
- 106,000 acres permanently preserved and managed; economic value ~\$1 Billion
- Preserves landscape-scale linkages to maintain panther dispersal to the north
- Preserves linkages before SLR and inland migration can fragment corridors
- Other large landowners in Florida are intrigued



A satellite night view of Earth showing city lights and a coastline. The image is dark, with the Earth's surface illuminated by city lights, creating a glowing pattern of yellow and orange. A prominent coastline is visible, curving from the top right towards the bottom right. The background is black, with a thin blue and green glow representing the atmosphere or aurora. A semi-transparent white box with black text is overlaid on the right side of the image.

“Recognize that human displacement from sea level rise will impinge on inland natural communities unless managed carefully. Biologically important inland areas, which might serve as sea level rise refugia, should be identified and protected as soon as possible, before development for human uses occurs.” (Noss 2011)

A satellite photograph of Earth at night, showing the illuminated landmasses of North and South America. A dashed green line is drawn across the continent, starting from the western coast of North America and extending eastward across the continent. The text is overlaid on the top right of the image.

Put another way:
“We would really love to see
panthers in David Dell’s
backyard.” (Johnson, 2019)