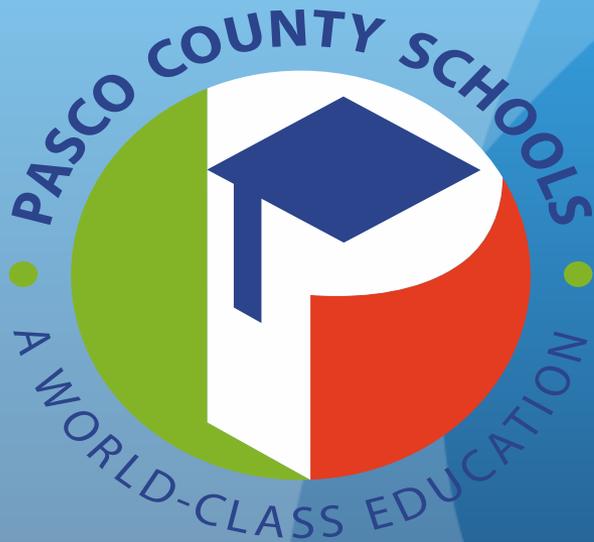


# Coastal Environmental Research Network

*Connecting resources to make better decisions for Florida's environment!*



District School Board of Pasco County

Kurt Browning - Superintendent of Schools

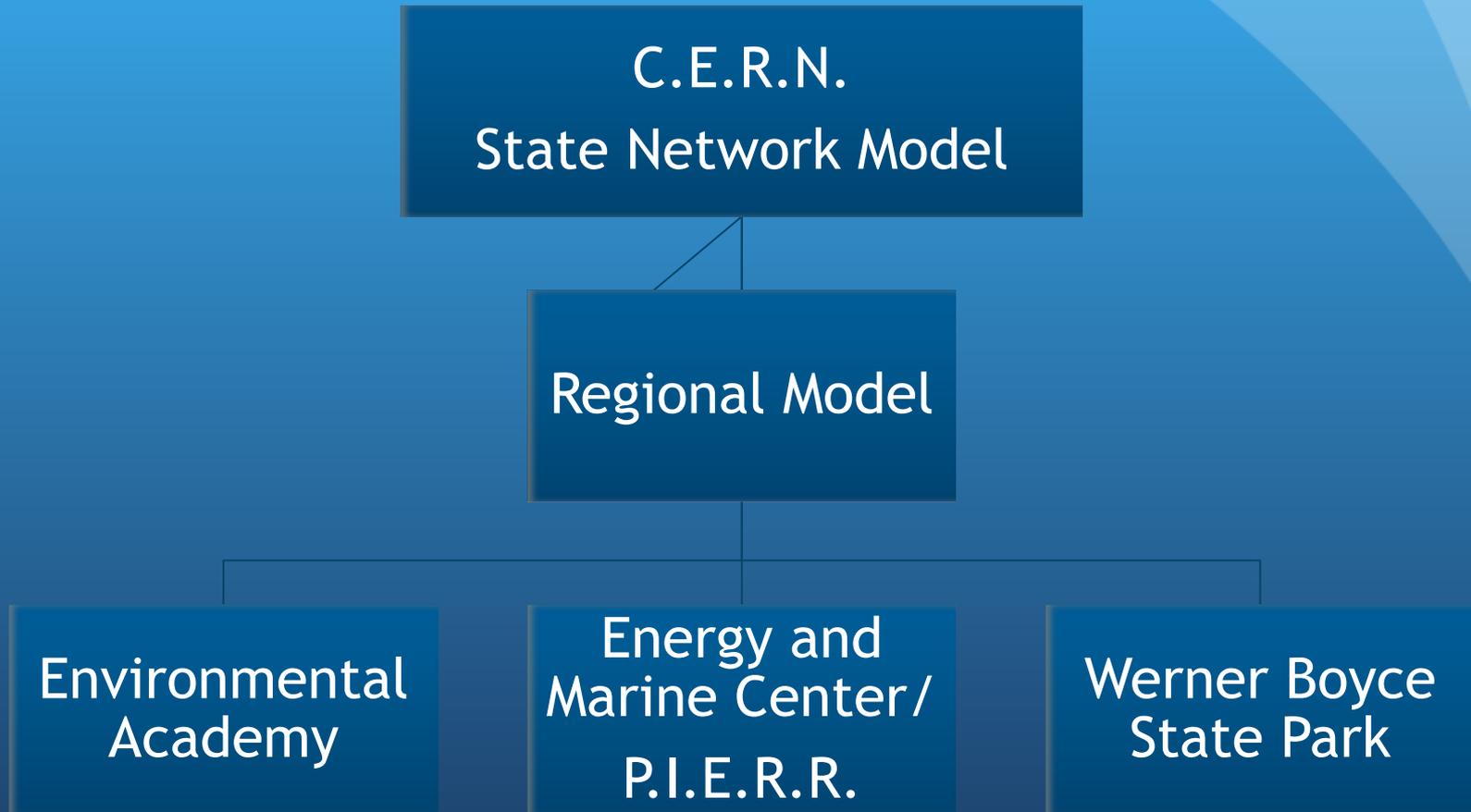
**Rob Aguis - Principal - Marchman Technical College**

**Laura Rulison-Lange - Program Coordinator Environmental Education**

**Josh McCart - Environmental Resource Educator**



# RESEARCH NETWORK



# P.I.E.R.R. Components

## TIER 1

- Pontoon Research Vessel with lift  
Allocated: \$120,000

## TIER 2

- Aquaponic Research
- Student Transportation
- Wet/Dry Laboratory
- **EMC RENOVATION**  
\$500,000

## TIER 3

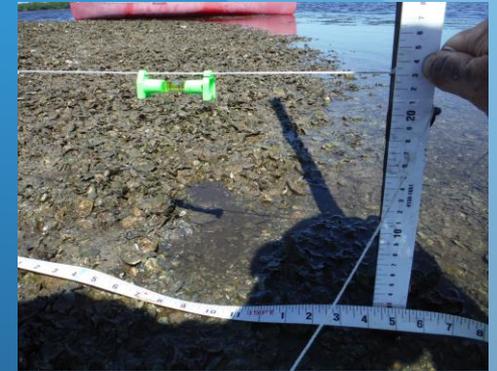
- Environmental Academy-**800K**
- Werner-Boyce Welcome Center-**800K**

## TIER 4

- PIERR Research Facility
- **\$9 million**

# Student-led Monitoring, Cultivation, Restoration

Conduct **innovative** and interdisciplinary upland, coastal, estuarine, and marine ecosystems research focused on habitat monitoring and restoration.



Oyster Repopulation Study:  
Energy Marine Center



# Restoration and Protection of Natural Resources

## Monitoring, Cultivation, Restoration Projects

- Seagrass
- Oyster
- Spartina
- Red and Black Mangrove
- Durney Key Mitigation
- Aquaculture-
  - Redfish, Snook, trout

## Ongoing Data Sampling Immediate and Long -term (daily, quarterly, annually)

- Water quality
- Biodiversity Surveying
- Stone Crab Survey
- Invasive Species Removal

# Monitoring and Restoration

 **Spartina harvesting**

 **Oyster monitoring/  
restoration**

 **Durney Key**

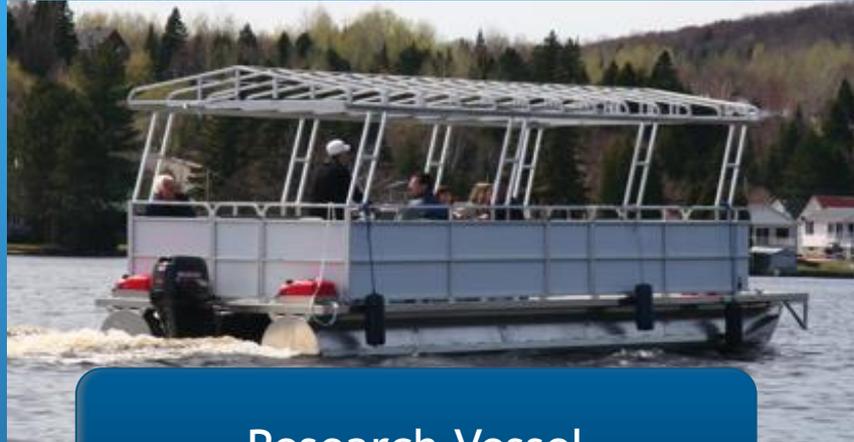
 **Seagrass monitoring and  
restoration**



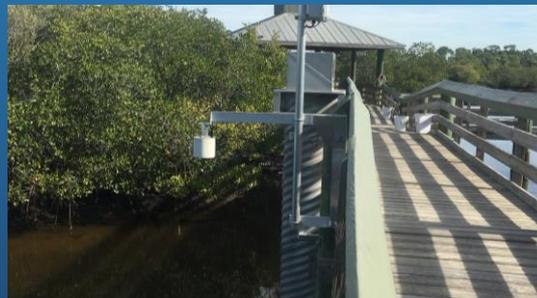
# DATA COLLECTION STATIONS



WeatherStem



Research Vessel



Mosquito Control Tidal Gauge



FDOT- GNSS  
Reference Station

# Partnership with Werner Boyce State Park



## Monitoring & Restoration

Along 4000 acre border to support state conservation plan

## Increased Ecotourism

Welcome Center will be gateway to ecotourism

## Community Involvement

Coastal Cleanup of marine debris

# BENEFITS

## Economical

- Workforce Development
- Increasing student interest in Science, Technology, Engineering and Mathematics through research opportunities and Academy
- Increase of Commercial fishery jobs
- Local Cultivation Epicenter

## Ecological

- Restorative benefit to shoreline
  - erosion protection
  - habitat restoration
- Increased populations of fish, grasses, oysters
- Stormwater mitigation through seagrass and spartina
- Habitat protection for Endangered marine species

# Local/Regional Economics

## Workforce Development and Job Creation

- Environmental Scientists
- Wetland Mitigation
- Renewable Energy
- Water Quality Specialist
- Natural Resource Manager
- Hydrologist
- GIS
- Forestry/Forest and Conservation
- Ecotourism
- Water Management
- Code Enforcement Officer
- Environmental Specialist
- Environmental Engineer

# Aquaponic Greenhouse



Mangrove cultivation nutrient fed via adjacent Tilapia tank

# Environmental Academy

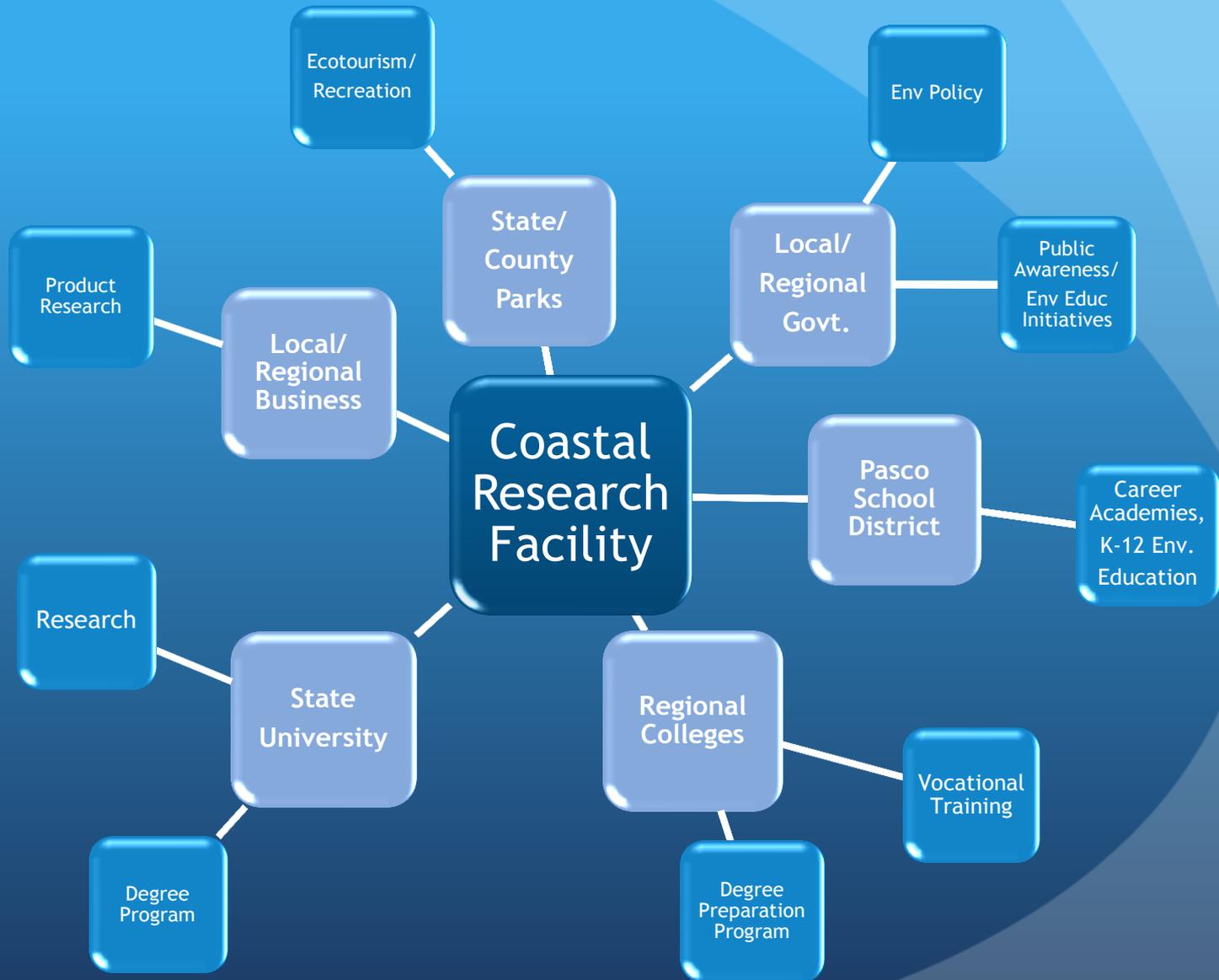
- Students from Grades 9-14
- PHSC, USF, St.Leo Environmental Degree Program
- Partnered with other Coastal Environmental Research Institutes
- Connects with other Pasco Career Academies
- Business Partnerships
- Ecotourism

# Partnership Development

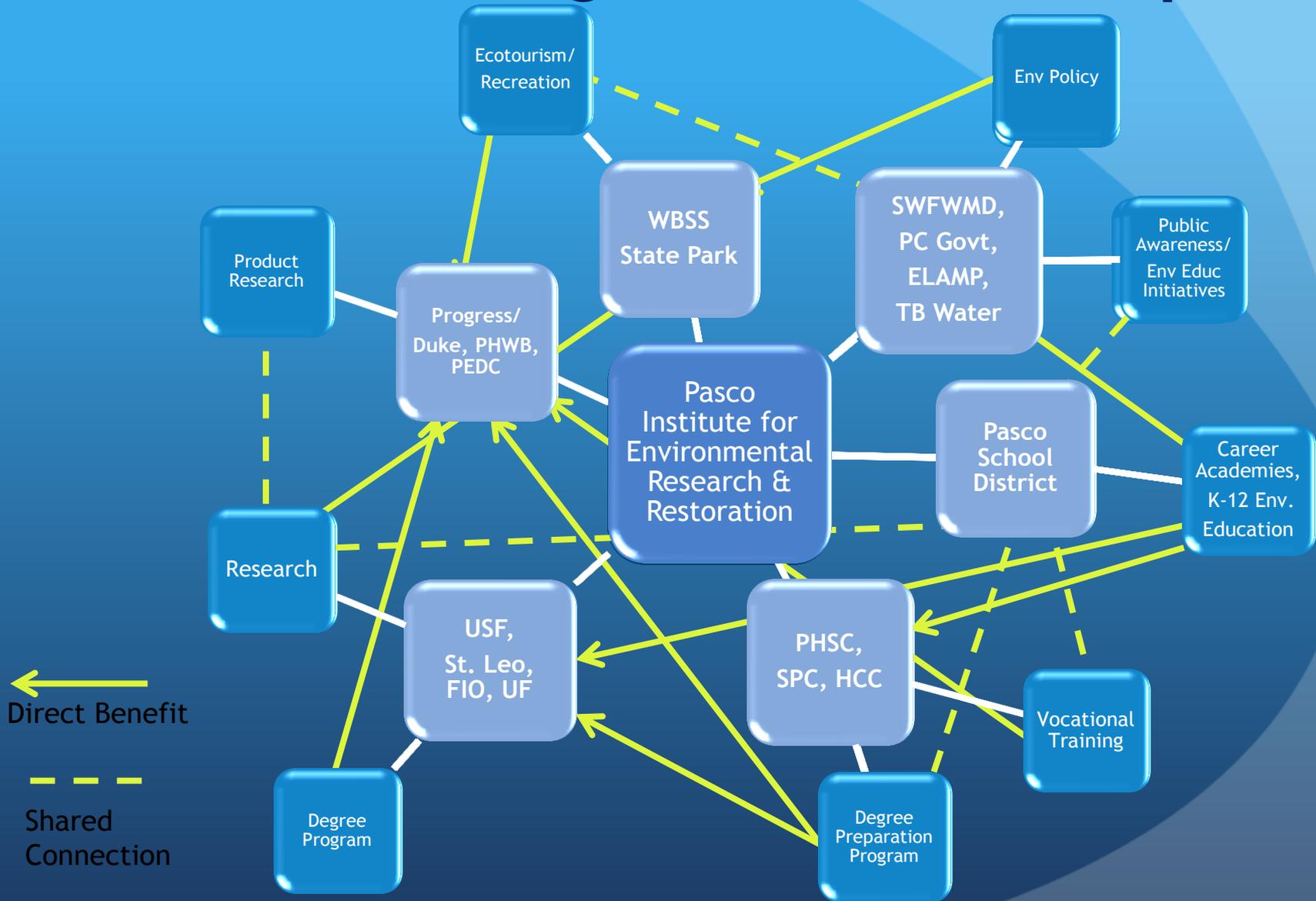
- Tallahassee Community College-Wakulla Environmental Institute
- Florida State University Marine Lab at Turkey Point
- Pasco Hernando State College
- University of South Florida-Florida Institute of Oceanography
- University of West Florida
- St. Leo University
- Citrus Marine Science Station
- St. Petersburg College and Pasco Hernando State College
- Gaydos Hydrologic Services-GHS Environmental

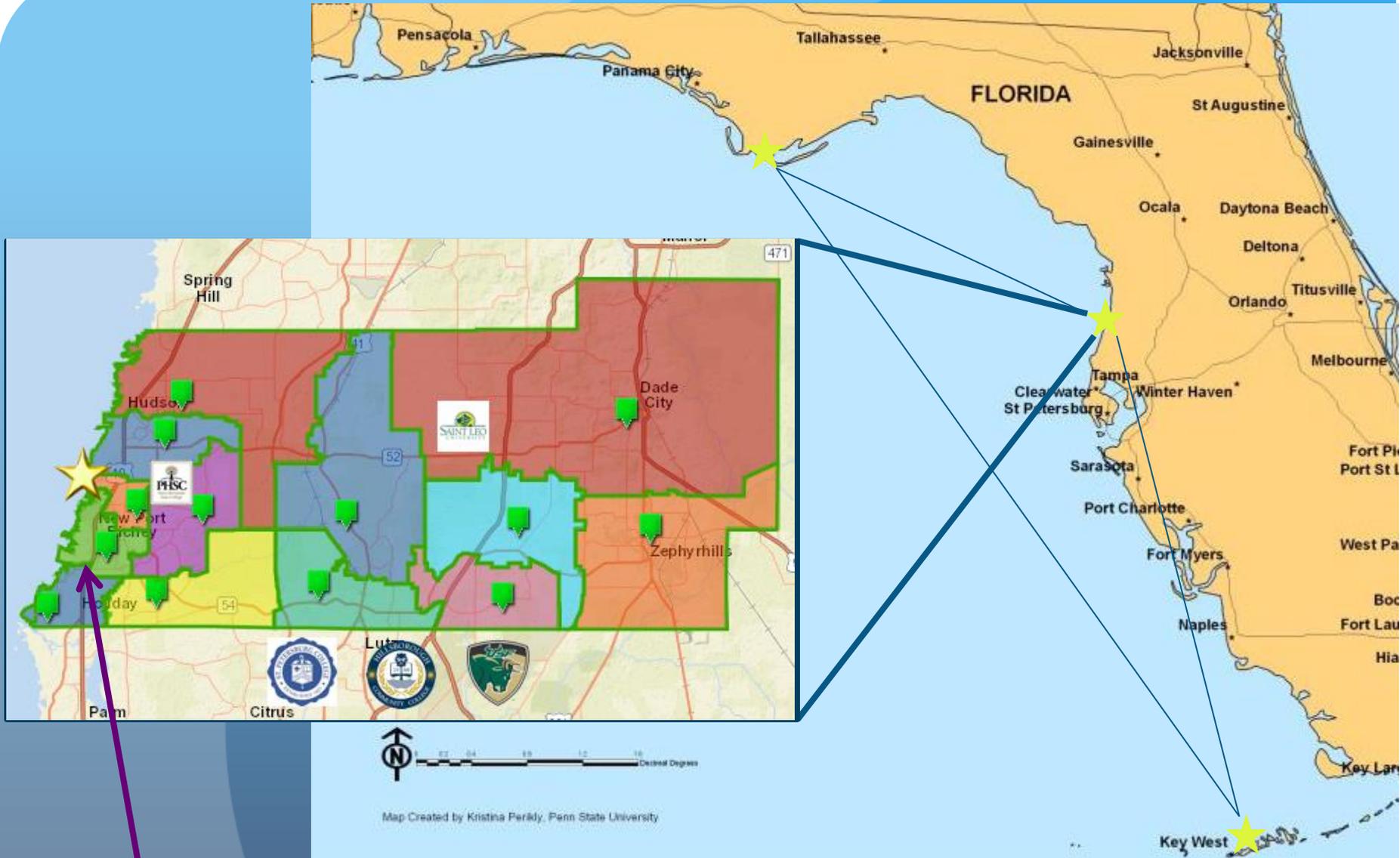
..... And many more

# C.E.R.N. The Connections Model



# Central FL Regional & Local Impact





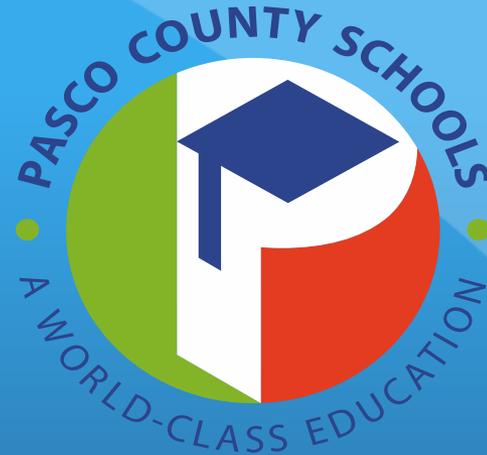
# Pasco Institute for Environmental Research & Restoration



# Coastal Environmental Research Network



# Thank you



Please Contact:

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[raguis@pasco.k12.fl.us](mailto:raguis@pasco.k12.fl.us)

**Environmental Programs Website:**

<http://connectplus.pasco.k12.fl.us/do/eec>