



# CSOP and Water Quality

NOAA's Florida Keys National  
Marine Sanctuary Connection

1/29/2004

# NOAA's Strategic Plan Goals

To achieve its mission, NOAA's focus through 2008 will be on four overarching goals:

1. Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management approaches.

2. Understand climate variability and change to enhance society's ability to plan and respond.

3. Serve society's needs for weather and water information.

4. Support the Nation's commerce with information for safe and efficient transportation.





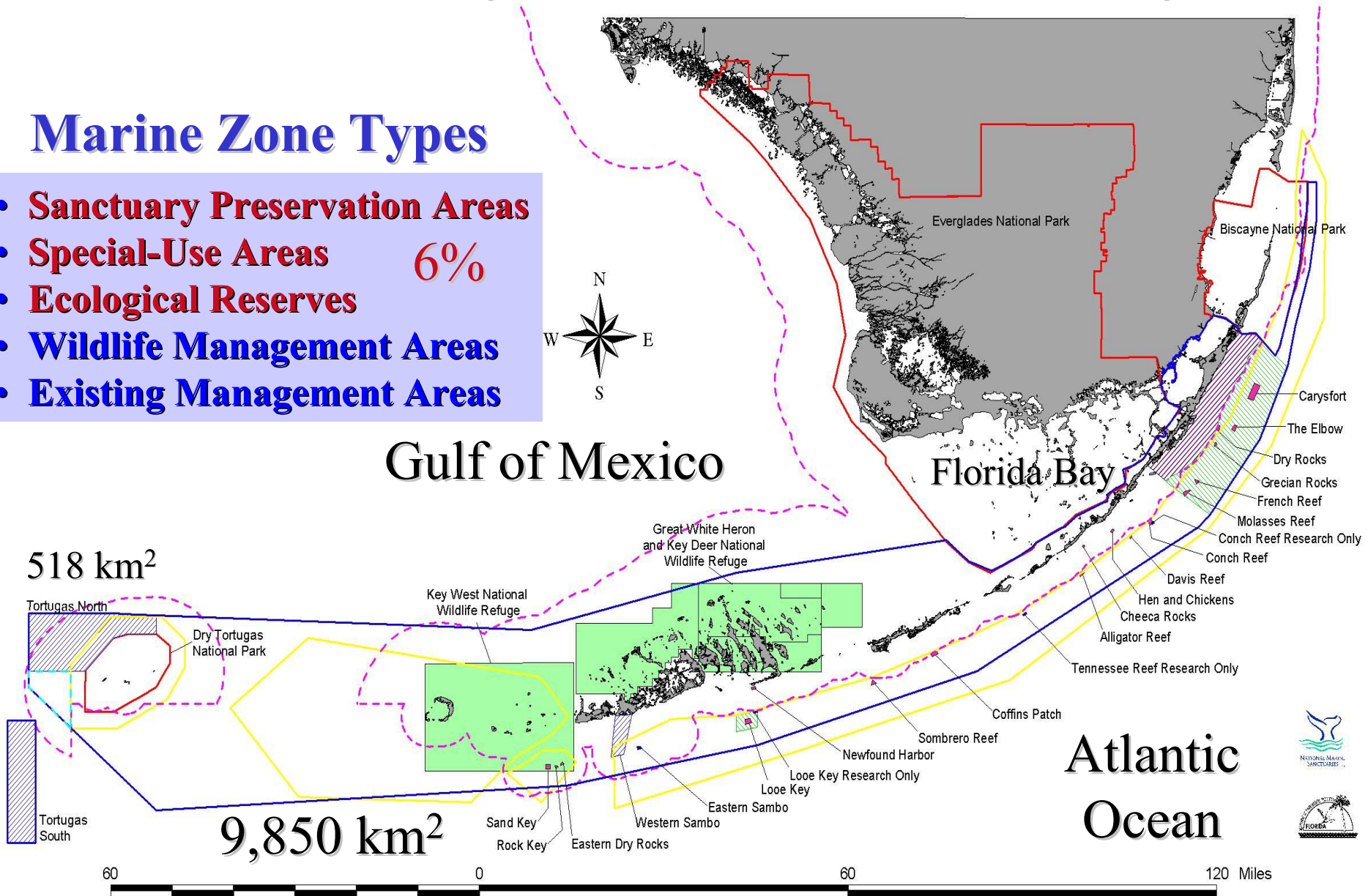
# NOAA's Trusteeships and Responsibilities

- NOAA Fisheries
  - Fish and Wildlife Coordination Act (FWCA) 1934
  - Magnuson-Stevens Fishery Conservation and Management Act (FMCA) for conservation and management of living marine resources and critical habitats- 1976
  - Endangered Species Act (ESA) for the protection of endangered and threatened marine species- 1973
  - The Marine Mammal Protection Act (MMPA) for protection of marine mammals- 1972
- NOAA National Ocean Service
  - Florida Keys National Marine Sanctuary and Protection Act (FKNMSA)-1990
  - National Marine Sanctuaries Act (NMPA)-1972
  - Coastal Zone Management Act (CZMA) -1972

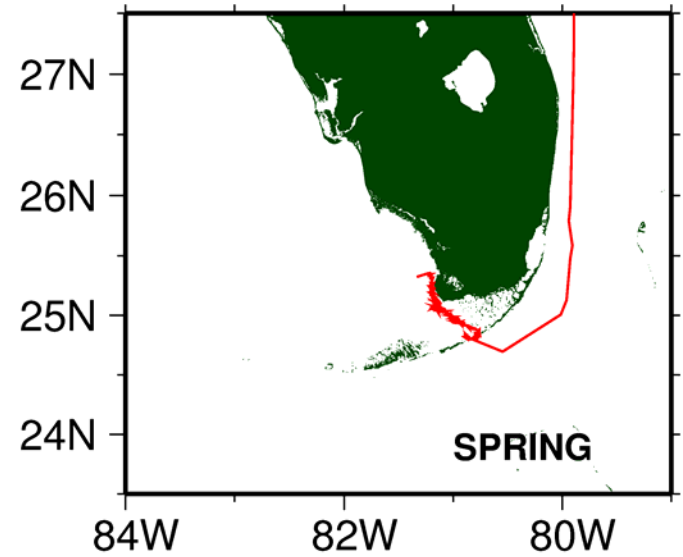
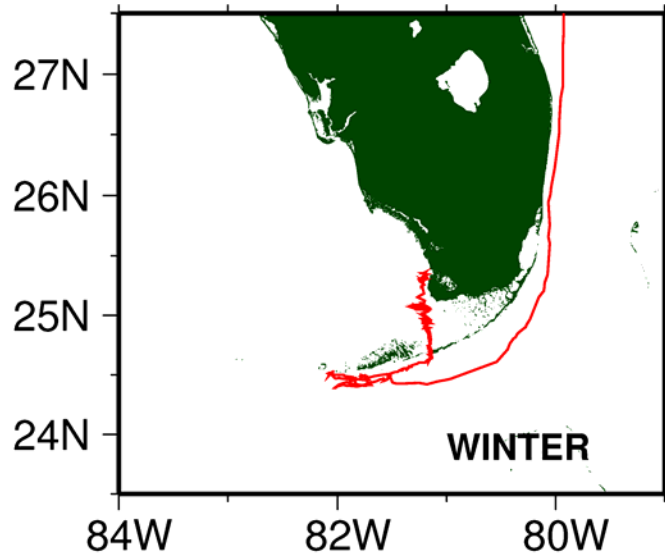
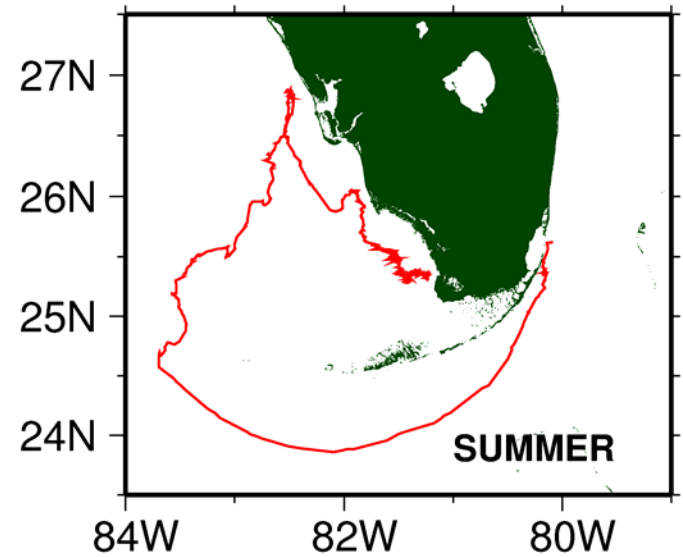
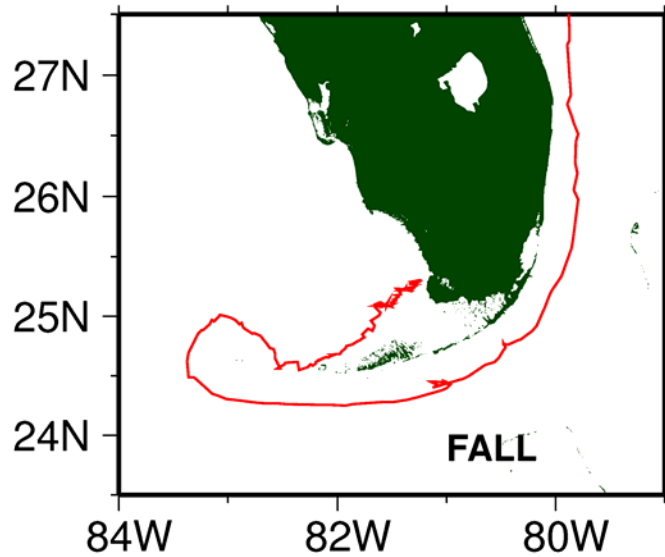
# Florida Keys National Marine Sanctuary

## Marine Zone Types

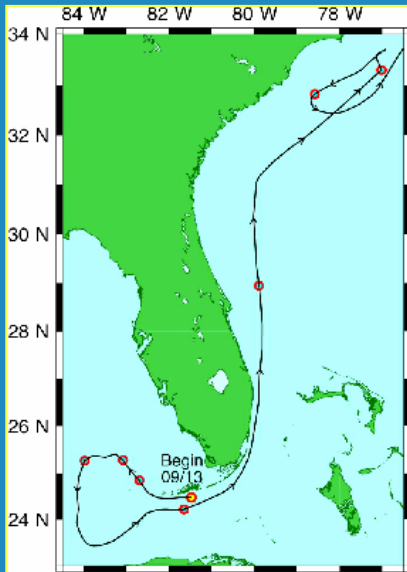
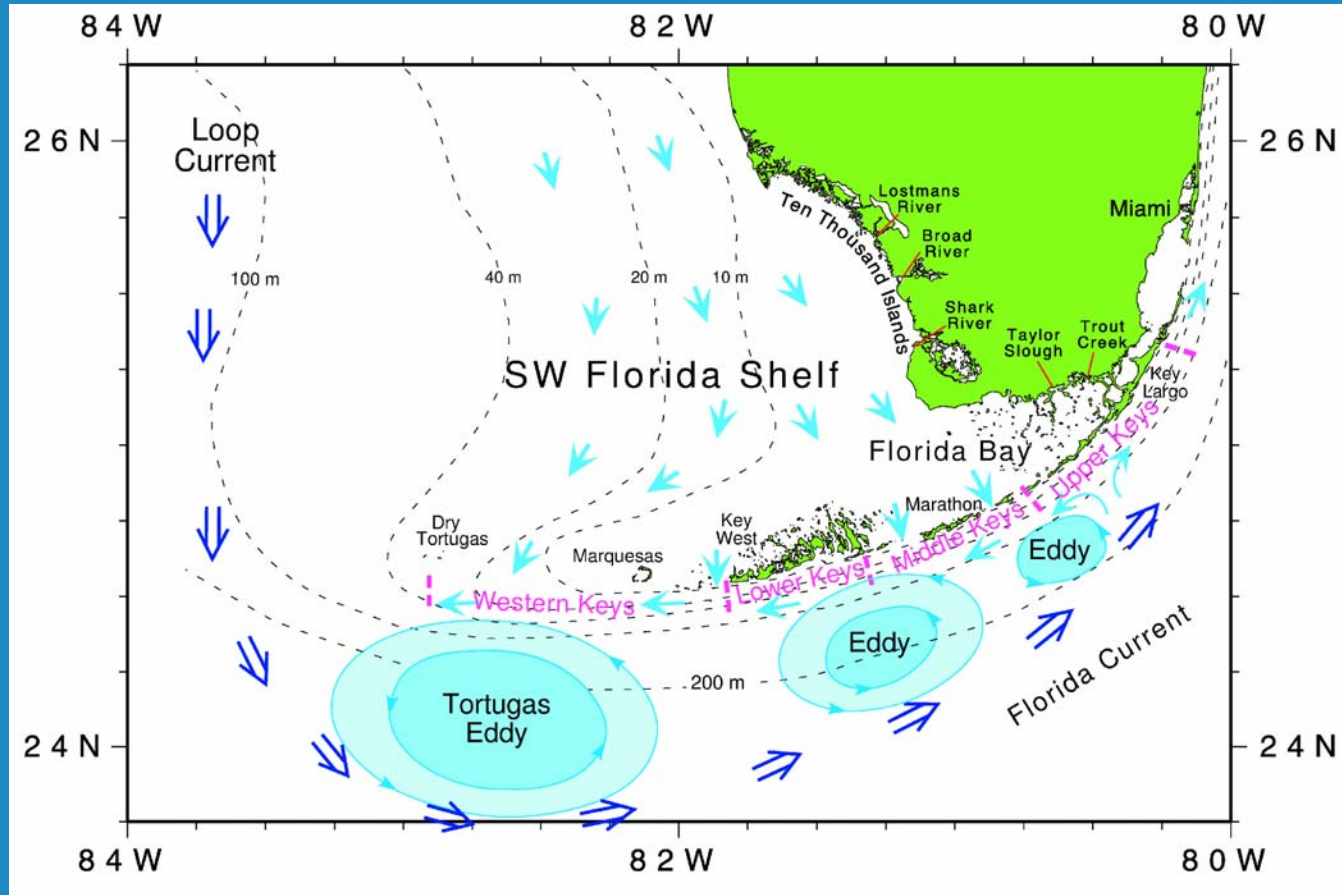
- **Sanctuary Preservation Areas**
- **Special-Use Areas** 6%
- **Ecological Reserves**
- **Wildlife Management Areas**
- **Existing Management Areas**



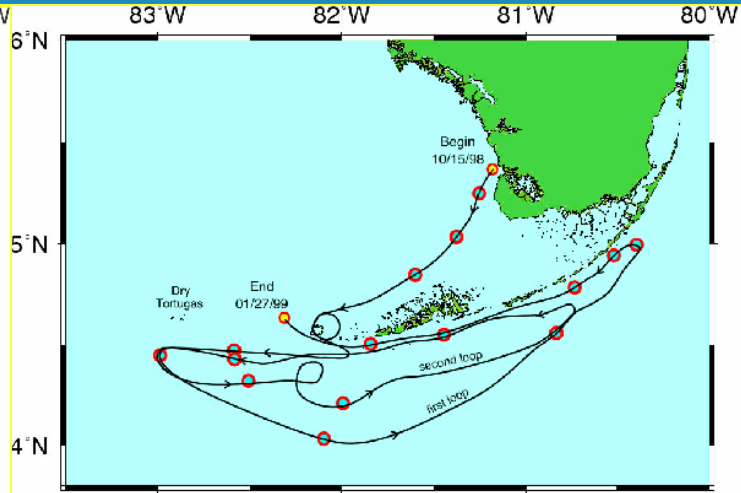
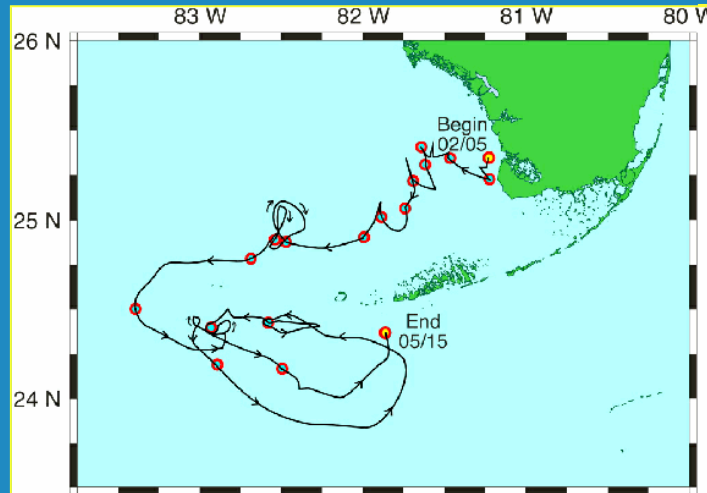
# Satellite-Tracked Surface Drifter Trajectories



Physical processes closely couple the entire S FL ecosystem.



Schematic circulation and satellite-tracked surface drifters



# Getting the Water Right is essential to Restoring the Coastal Ecosystem

Quantity



Quality



Timing



Distribution

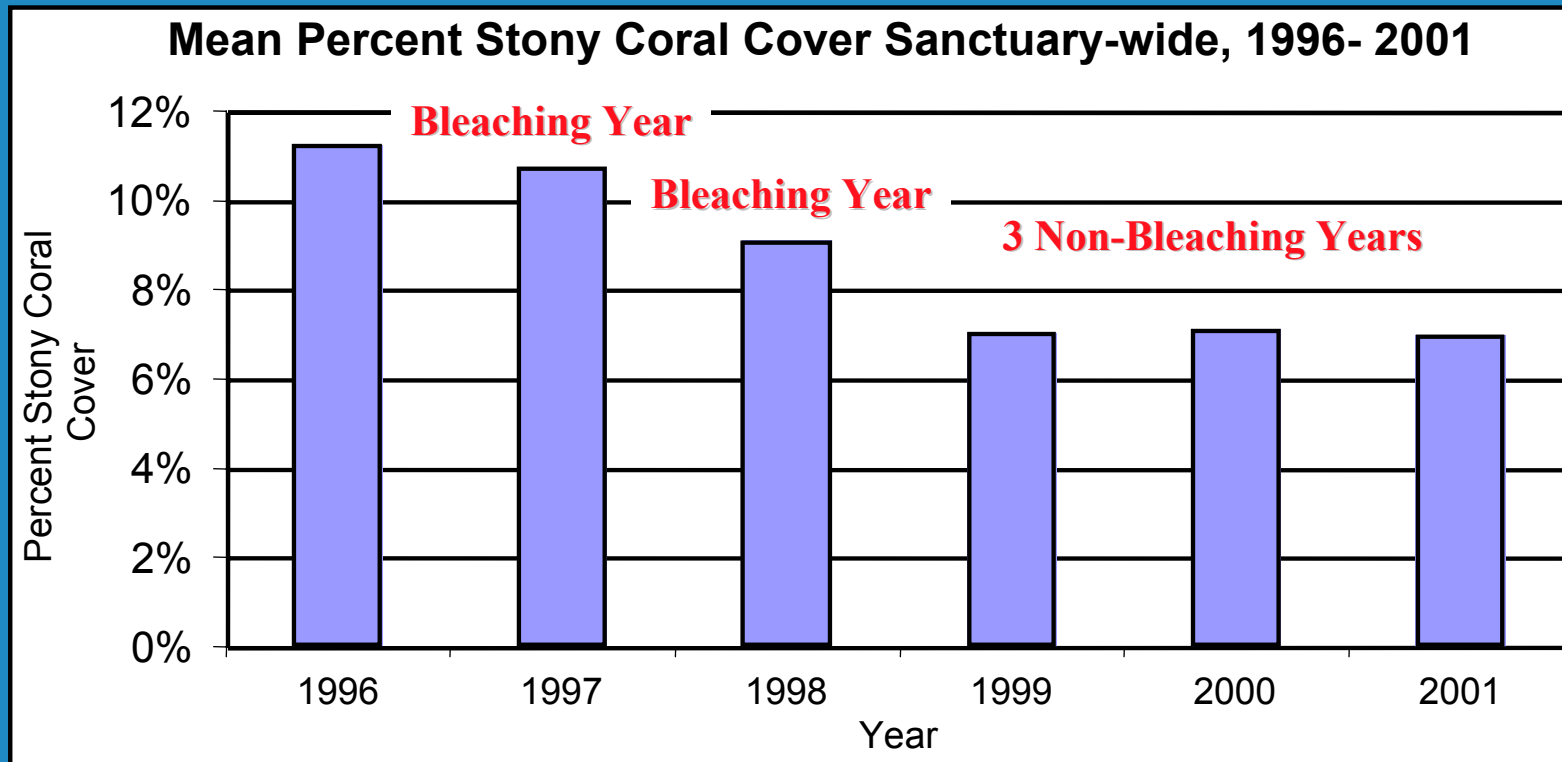
# Issues of NOAA Concern

- **Water Quality**
  - Nitrogen Stimulated Eutrophication
  - Mercury Concentrations in fish
  - Endosulfan (pesticides)
  - Changes within the FKNMS
- **Living Marine Resources**
  - Pink shrimp recruitment and freshwater inflow
  - Populations of reef fishes, spiny lobster, queen conch etc...
- **Critical Habitats**
  - Seagrass Beds
  - Coral Reefs
- **Public Misconceptions**
  - Florida Bay's Murky Past

# FKNMS Monitoring Projects

## Water Quality Protection Program: Long-Term Status and Trends Projects

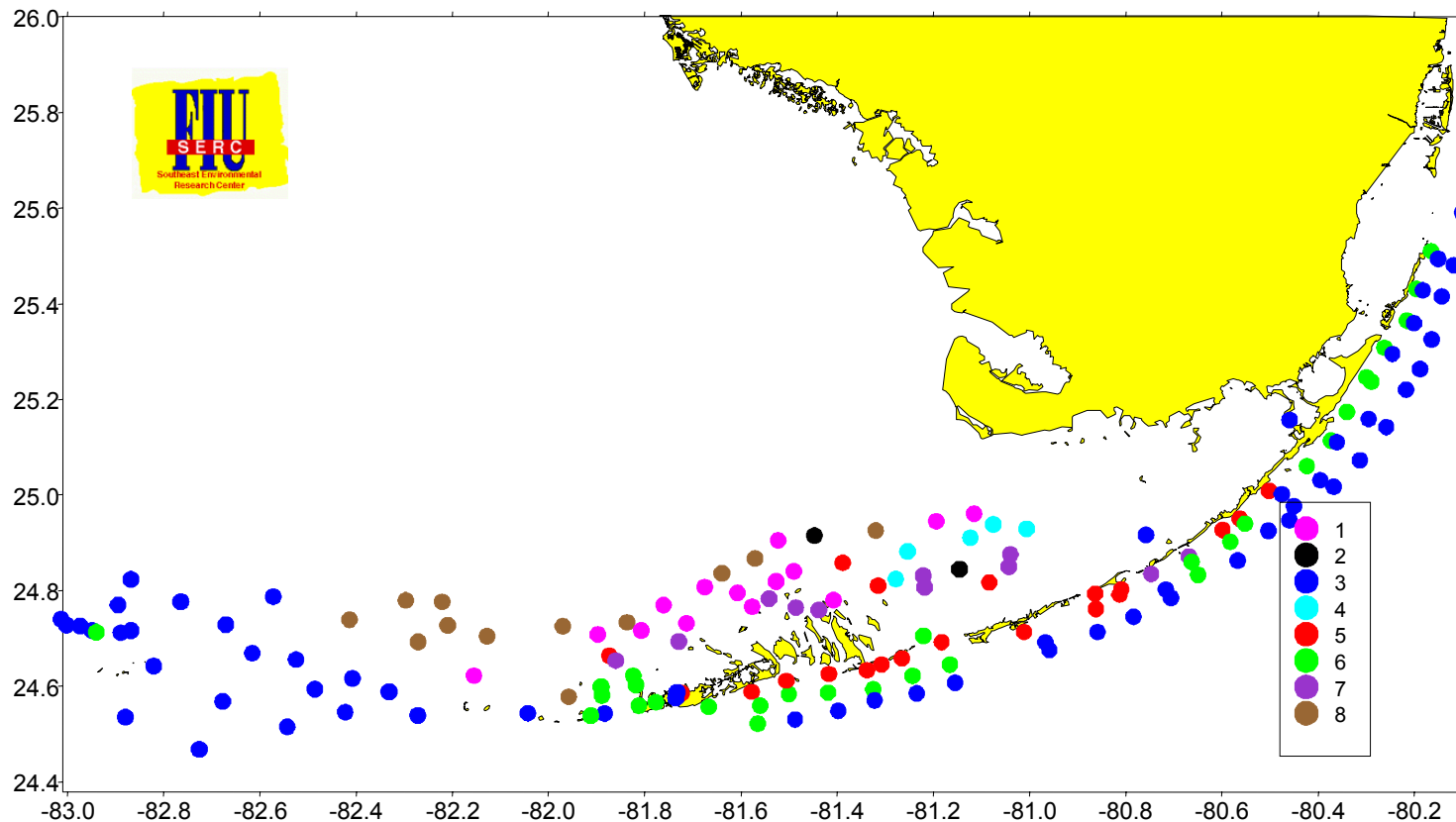
- Coral Reef and Hardbottom Monitoring Project (1995):  
Florida Marine Research Institute; Jaap et al.
  - [www.floridamarine.org](http://www.floridamarine.org)



# FKNMS Monitoring Projects

## Water Quality Protection Program: Long-Term Status and Trends Projects

- Water Quality Monitoring Project (1995): Florida International University, Southeast Environmental Research Center; Jones and Boyer



# FKNMS Monitoring Projects

## Water Quality Protection Program: Long-Term Status and Trends Projects

–Seagrass Monitoring Project (1996): Florida International University, Southeast Environmental Research Center; Fourqurean et al.

- [www.fiu.edu/~seagrass/](http://www.fiu.edu/~seagrass/)
- [serc.fiu.edu/wqmnetwork/](http://serc.fiu.edu/wqmnetwork/)

• **80% of Sanctuary**

• **Seagrasses relatively stable**

• **But ... loss of 3 of 30 permanent stations after two hurricanes**

