Objective

Use existing information and best professional judgment to identify the likely historical extent of seagrass habitats in the estuarine waters of Sarasota County.
Part 1

Description of Existing Seagrass Habitat
Based on SWFWMD Mapping
Descriptive Statistics for Existing Seagrass Data

- Step 1: Generate a 45m X 45m grid layer for all Sarasota estuarine segments

- Step 2: Assign a depth to each grid cell

- Step 3: Overlay SWIM seagrass coverages on the bathymetry and grid layers

- Step 4: Identify those grids that have seagrass for each SWIM survey year
  - (inclusion criteria = 50% of grid area)
Descriptive Statistics for Existing Seagrass Data

- Using empirical data, we generated statistics on the frequency of occurrence of seagrass for each cell.
- We generated statistics on frequency of occurrence as a function of depth.
- We calculated a cumulative distribution of seagrass as a function of cell depth for each survey year.
Part 2

Identification of the Likely Historical Extent of Seagrasses
Tools

- 1950's digitized aerial photography
- Bathymetry (NOS soundings - 1950's)
- Local Knowledge
Goals

• Based on existing data, identify the likely historical extent of seagrass habitat given appropriate environmental conditions (i.e., light)

• Use professional judgment to identify additional areas where seagrasses were likely found

• Use the 1950’s coverage as a calibration tool to compare against the findings using the above mentioned techniques
Calibration Tool

- Once the likely historical seagrass extent is established using existing data and local knowledge, the 1950's seagrass coverage will be used to compare to the extent derived using the methods above.
Part 3

Seagrass Deep Edge Sampling Design
4 Strata

Random selection of points within stratum

Estimated 6 sites per day

Total of sixty samples

Quantify:
  - Depth
  - Light attenuation
  - Presence
  - Seagrass type
  - Sediment type
Defining Seagrass Target Areas in Sarasota County Estuarine Waters

18 August 2006

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Description of Existing Seagrass Habitat Based on SWFWMD Mapping
Descriptive Statistics for Existing Seagrass Data

- Step 1: Generate a 45m X 45m grid layer for all Sarasota estuarine segments
- Step 2: Assign a depth to each grid cell
- Step 3: Overlay SWIM seagrass coverages on the bathymetry and grid layers
- Step 4: Identify those grids that have seagrass for each SWIM survey year
  - (inclusion criteria = 50% of grid area)

Descriptive Statistics for Existing Seagrass Data

- Using empirical data, we generated statistics on the frequency of occurrence of seagrass for each cell
- We generated statistics on frequency of occurrence as a function of depth
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Part 2

Identification of the Likely Historical Extent of Seagrasses
### Tools

- 1950's digitized aerial photography
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### Goals

- Based on existing data, identify the likely historical extent of seagrass habitat given appropriate environmental conditions (i.e., light)
- Use professional judgment to identify additional areas where seagrasses were likely found
- Use the 1950’s coverage as a calibration tool to compare against the findings using the above mentioned techniques

### Calibration Tool

- Once the likely historical seagrass extent is established using existing data and local knowledge, the 1950’s seagrass coverage will be used to compare to the extent derived using the methods above
Part 3
Seagrass Deep Edge
Sampling Design

4 Strata
Random selection of points within stratum
Estimated 5 sites per day
Total of sixty samples
Quantify:
Depth
Light attenuation
Presence
Seagrass type
Sediment type