## Monitoring and Adaptive Management (MAMP)

April 12, 2019 Swan Island Model Workshop





#### Monitoring Objectives

Determine Success

- Adaptive Management Decisions
- Advance the Science Pool and Compare Results
- Refine Restoration Techniques
- Reduce Restoration Costs

Communication to Agencies/Public





#### Time/Budget

 Site Specifics (All Projects are Different)



## Monitoring Challenges

None/Few Standard Protocols

Personal Biases

Differences Spatial/Temporal scales



# Monitoring and Adaptive Management Plan - Living Document

#### **TABLE of CONTENTS**

- Project Objectives/Monitoring Objectives
- System Model
- Metrics
- Data collection protocols
- Data interpretation (evaluate/assess project/system model)
- Reporting
- Data management
- Roles and Responsibilities

#### Northerly Island Section 506 Great Lakes Fishery & Ecosystem Restoration

Appendix E - Monitoring & Adaptive Management Plan

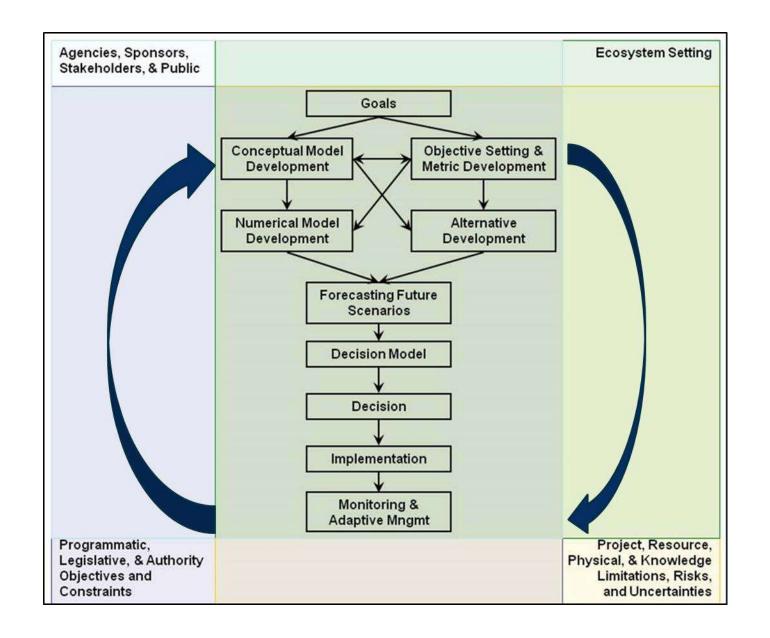






What do you want out of the monitoring data?

Set Monitoring Objectives.



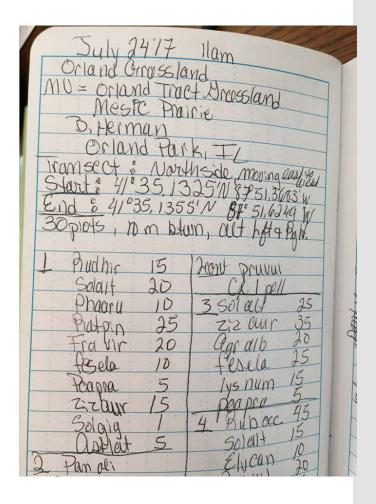
#### Protocols:

 Detailed enough that someone could pick up plan and collect data for project (personnel turnover)

 Seasonality (timing) and Frequency (1x yr)

#### Data Records

Information	Notes
Date	day, month, year
Name(s) of Monitor	Even though it may be your notebook, and you will know who recorded the data, the person that takes over for you once you leave or retire from the position may need to know this information.
Site	Project name.
Management Unit or Locale	Specific type of vegetation or unique management unit name.
Transect Number and Description	Unique name or label of transect, start location of the transect (GPS coordinates), how far the start is from the edge of management unit, compass bearing/direction toward end, length of transect, location of end (GPS coordinates), rules of plot placement, etc.
	Expected number of plots to be sampled from
No. of Plots	transect.



#### Data Management/

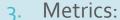
### Roles & Responsibilities

- Electronic Files (e.g., Excel spreadsheet)
- Manage Folders/Files
- A. Orland Tract Grassland sect 206
  - a. Monitoring
    - i. 2010
      - 1. Wet Prairie
        - a. Transects
          - Orland\_WetPraire\_2010\_T2.exl
  - Data collection, per parameter
  - Data management/storage
  - Reporting factsheets, rare data, journal articles

#### Marsh Vegetation Restoration <u>Project</u>

1. a)To track establishment of marsh vegetation b)To test the role of sediment marsh vegetation establishment

Critical Drivers: biomass, sediment transport



- 1. a) <u>stem density</u>: number of stems per plot
- 2. b) <u>depth</u>: average depth of plot at low tide

#### 4. Predictions:

- 1. Stem density will increase over time (Years 1-5) to reach a maximum of 50 stems (over predefined area)
- 2. Depth will be maintained at an average of 0.05 meters after sediment placement (Years 1-5)

#### **Placement Areas**

#### Revised – 24 September 2015



