Red Bug Slough Restoration Project

2014 Conference on Ecological and Ecosystem Restoration
New Orleans, Louisiana
July 29, 2014

Kathryn L. Meaux
Sarasota County Florida
Public Utilities - Stormwater
Topics of Presentation

- Project Background
- Project Areas
- Project Goals
- Project Construction
- Project Challenges
Background

- West Clark Lake TMDL
- Red Bug Slough Basin
- Mirror Lake Bird Colony
- Study for Water Quality Improvement and Nutrient Reduction
- Red Bug Slough Preserve
- 4 Restoration Areas Identified
Red Bug Slough Preserve – Project Areas

Area 1

Area 2

Area 3

W. Clark Lake
Project Goals

- Provide Water Quality Treatment
- Preserve Existing Native Habitat
- Restore and Enhance Historical Marsh System
- Increase Aquatic Habitat
- Restructure Shoreline to Create Littoral Shelf
- Enhance Recreational Use

July 29, 2014
Area 1 – West Wetlands

- About One Acre
- Exotic Vegetation Removal
- Connect 3 Wetlands
- 2 Foot Bridges
- Direct Water Flow Through the Wetland System
- Flow Returned to Slough at North End
Area 1 – West Wetlands Continued

- **Exotic Invasives Removed**
  - Primrose Willow
  - Brazilian Pepper
  - Surinam Cherry
  - Wedelia
  - Cogon Grass
  - Guinea Grass
  - Taro
  - Air Potato
Restoration Area 1 – East Wetland

- About 0.35 Acres
- Removed Exotic Vegetation
- Re-Graded Area
- Planted 195 Trees
  - Sugarberry
  - Swamp Tupelo
  - Laurel Oak
  - Button Bush
- Planted Bank
  - Marsh Hay Cordgrass

July 29, 2014
Area 2 – Littoral Shelf

- Reduced Slope
- Created 2000 LF Littoral Shelf (About 0.88 Acres)
- Coconut Fiber Mats to Stabilize Bank
- About 10,000 Plants
- Upland Shelf (Bank):
  - Marsh Hay Cord Grass
  - Muhly Grass
- Littoral Shelf:
  - Arrowhead
  - Spikerush
  - Pickerelweed
  - Golden Canna
Area 2 – Forested Wetland

- Historical Wetland
- About One Acre
- Taken Over by Exotics
- Removed Vegetation
- Re-graded Area
- Planted 250 Trees
  - Florida Elm
  - Pop Ash
  - Swamp Tupelo
- Hydroseeded Banks
- Planting
Area 3 – Drainage Canal

- Created 900 LF Littoral Shelf (About 0.67 Acres)
- Removed Invasives
- Reduced Slope
- Coconut Fiber Mats to Stabilize Bank
- Create Littoral Shelf
- About 3200 Plants
  - Spikerush
  - Marsh Hay
  - Cordgrass
  - Sand Cordgrass
  - Muhly Grass

July 29, 2014
Area 3 – Vegetation Collectors

- Installed 2 vegetation collectors
- Invasive Duckweed Problem
- Routine maintenance for removal of floating invasive vegetation and garbage

July 29, 2014
Challenges

- **Weather**
  - *Rainfall Delays*
  - *Erosion of Graded Banks*
- **Soil Issues**
  - *Heavy clay content not suitable for littoral shelf*
- **Exotic/Invasives**
  - *Invasive vegetation began to intrude*
  - *Management Plan to comply with grant requirements*
Questions?

Kathryn L. Meaux
Sarasota County Public Utilities
kmeaux@scgov.net
941-650-1640

July 29, 2014