Habitat Restoration of Tidally Influenced Wetlands
What Didn’t Work and Why

Presented by:
Thomas F. Ries
More than 85 restoration projects in SW Florida.
Altered Lands

Cockroach Bay Habitat Restoration Project
(Unrestored 1993)

A cooperative project with Hillsborough County and the Cockroach Bay Restoration Alliance (COBRA)
Altered Lands

Figure 1 - THOMAS TRACT LOCATION MAP

THOMAS TRACT
Hillsborough County, Florida

1 in = 400 ft

Legend
- Property Boundary (25.0 Ac.)
First Things First

- **Know your site**
- Map existing native vegetation
- **Seek out opportunities to tie into the existing natural habitat**
- Topo, archaeology, geotechnical investigations
- Work with the adjacent lands owners (public)
Don’t re-invent the wheel

- Mimic natural systems
- Habitat Mosaics concept
- Lots of complexity
Habitat Mosaic

Try to include a multitude of landscapes:

- Deep water channels
- Artificial reefs/substrate
- Intertidal zones
- High & low marsh
- Salterns
- Transitional zones
- Fresh water wetland
- Uplands
Consider Sea Level Rise

Estimates range from 0.1 to 0.4’ annually
Incorporate Existing Native Vegetation

Newman Branch Creek
Transplanting Sabal Palms at Lost River Preserve
Historic Perspectives

Southeast Tampa Bay 1938
Southeast Tampa Bay 1938
Port Redwing Peninsula Pre-restoration with Non-native Plants August 2003

Future Schultz Preserve

Tampa Port Authority Parcel

Port Redwing Peninsula Pre-restoration with Non-native Plants August 2003)
Port Redwing Peninsula  (looking east to west, March 2005)

Tampa Port Authority Parcel

Restored Schultz Preserve
Recycled Material – Mulch
Mulch as a Soil Amendment
Post Restoration Maintenance
Upland Islands & Tidal Passes

Schultz Nature Preserve
Self Sustaining Tidal Pass

CLAM BAYOU ECOSYSTEM RESTORATION PROJECT

This two acre coastal restoration project is helping restore valuable estuarine habitats important for the wildlife and public of Tampa Bay: tidal channels, marshes, mangrove forests, and improvements for the bays' water quality through cleansing of stormwater runoff. This cooperative project was developed, constructed and funded by the Surface Water Improvement and Management (SWIM) Program of the Southwest Florida Water Management District and the City of St. Petersburg. Supplementary funding was provided by the U.S. Fish and Wildlife Service.
Cockroach Bay, Florida
Design Lots of Edge
Plant the Pioneer Species
Natural Succession

Lancaster Site
Restoration in Sensitive Areas
High Pressure Water to Remove Spoil Mounds in Sensitive Areas
Cockroach Bay
Hydro-Blasting

Spoil Mound Removed – Very Limited Impacts to Surrounding Habitats
Lost River Preserve
Control Structure - Geoweb with Sod

Lost River Preserve
Softer Applications

Lost River Preserve
Use Non-Structural Options
Living Shoreline

Rivercrest Park Shoreline Enhancement Project
SUMMARY

- Mimic Mother Nature
- Restore in place if possible
- Incorporate native vegetation
- Less structural components = less maintenance
- Design habitat mosaics concept into every site
- Utilize natural succession; pioneer species
- Incorporate lots of edge & micro-topography
- Design for sea level rise
- Limit upland islands & number of passes
- CEI by an ecologist is paramount
Habitat Restoration only Performed on Public Lands

- Sites of Opportunity
- Sites which may have potential matching funding sources
- Politically driven sites
These restoration sites are still critically important

- Meeting restoration goals
- Public awareness of restoration practices and their importance to the environment
- Utilizing potential matching funds
- Politically driven projects also can provide significant public exposure
- Educational opportunities
- Scientific research opportunities
Options Other than Public Land?

- Private land holdings
- Institutional landowners (schools, Audubon, universities, NPOs, etc.)
- Corporate lands
Perceived Problems:

- Public perception!
- Public taxpayer funds used on private land!
- Perpetual conservation of restored areas?
- Public access?
P3  Public/Private/Partnership

- Perpetual Conservation Easements
- Allowing controlled public access
- Public awareness of ecological benefits
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QUESTIONS?

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