Implementing the **Tampa Bay Dredged Material Management Strategy**
Background

Implementing the
Tampa Bay Dredged Material Management Strategy (DMMS)

1972
Clean Water Act (CWA) Passed

1987
CWA Amended

1991
Tampa Bay Estuary Program (TBEP) Founded

1997
TBEP Management Plan Developed

2000
DMMS Prepared

2002-2005
DMMS Implemented Dredge Hole Assessment Project
Presentation Format

Implementing the
Tampa Bay Dredged Material Management Strategy (DMMS)

- DMMS - Development
- DMMS - Conclusions
- DMMS - Recommendations
- Dredge Hole Assessment Project
- Project objectives/ tasks
- Project results to date
- Next steps
Tampa Bay Estuary Program Management Plan

Action Plan 1
Action Plan 2
Action Plan 3
Action Plan 5
Action Plan 6

Action Plan 4
Dredging & Dredged Material Management

1. Committee
2. Report - Strategy (DMMS)
Conclusions

Dredged material can be a resource

- Place material on beaches
- **Use dredged material beneficially**
- Manage aggressively existing upland areas
- Share placement areas
Recommendations

- Additional study
- Data collection
- Computer model
- Analysis
- **Beneficial use investigation**
- Environmental inventory
- Economics
- Regulations
- Regional Sediment Management

- Commercial applications
- Habitat restoration

Resource Management Community Needs
Recommendations

Resource Management Community Needs
52 habitat restoration sites / fill material

Dredge Hole Assessment Project

General Community Needs
Additional space for dredged material
Project Objectives/ Tasks

- Estimate the current habitat value of the selected holes
- Develop implementation plans for the ten selected holes
### Project Objectives/Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Complete</th>
<th>Ongoing</th>
<th>Upcoming</th>
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</thead>
<tbody>
<tr>
<td>Write Quality Assurance Plan</td>
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<tr>
<td>Evaluate 28 holes</td>
<td>X</td>
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<td>Select 10 holes</td>
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<tr>
<td>Conduct field sampling:</td>
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<td>- Water quality</td>
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<td>- Fisheries</td>
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<td>- Benthos</td>
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<tr>
<td>Analyze field data</td>
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</table>
Project Objectives/ Tasks

Tampa Bay

Old Tampa Bay

Hillsborough Bay

Borrow Type
- Blue: Subtidal Borrow Area
- Red: Upland Borrow Area

Nautical Miles

0 0.5 1 2 3 4
Water/ Sediment Quality
Results to Date – Water/ Sediment Quality

Methodology

Water Quality
(Temperature, salinity, DO)

Sediment Quality
(Metals, PAHs, Pesticides, PCBs)
Results to Date - Water/Sediment Quality

General Overview

Water Quality
- Stratification only evident in McKay Bay hole
- DO $\geq 4$ at all sites except McKay Bay hole

Sediment Quality
- Organic contaminants $<$ threshold effects level (TEL) or near maximum daily load (MDL)
Water Quality

- Salinity: Polyhaline (21-25 ppt)
- No Stratification
- Dissolved Oxygen: >5 ppm

Sediment Quality

- Trace Metals: analysis ongoing
- Pesticides: <TEL
- PAHs: <TEL
- PCBs: <MDL
Results to Date - Benthos

Methodology

Benthos
(Taxa identification and counts)
Results to Date - Benthos

General Overview

Fall 2002

- Dredge holes group by patterns of abundance, species richness, and diversity

Multidimensional-scaling plot
Results to Date - Benthos
Details - Whiskey Stump Key Hole #1

Fall 2002
- 2 of 3 samples “empty”
- Mean number of taxa: 2
- Low mean abundance (50 m$^{-2}$)

Spring 2003
- Abundance, numbers of taxa, diversity much higher than Fall (>12,000 m$^{-2}$)
- Numerical dominants include: *Ampelisca vadorum* (Amphipoda) >80% and *Mysella planulata* (Bivalvia) 1%
Fisheries
Results to Date - Fisheries

Objectives
Estimate faunal composition
Estimate angler utilization

Methodology
Fisheries-independent
Fisheries-dependent
Results to Date - Fisheries
General Overview

Number of Species Captured

- **Total**
- **Unique**
- **Selected**

Anglers Catch Inside Hole

- **15**
- **1**
- **11**
Results to Date - Fisheries
Details - Whiskey Stump Key Hole #1

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<th>Location</th>
<th>Total</th>
<th>Unique</th>
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<tr>
<td>Outside hole</td>
<td>28</td>
<td>3</td>
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</table>
Results to Date - Fisheries
Details – Whiskey Stump Key Hole #1

Incidence of Anglers

Month

Nov. 2002
Dec. 2002
Jan. 2003
Feb. 2003
Mar. 2003
Apr. 2003
May 2003
Jun. 2003
Jul. 2003

0
1
2
3
4
5
## Next Steps

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The implementation of the DMMS is a community effort that balances the needs of resource managers and the general community and establishes a decisionmaking framework for prioritizing projects.