# GIWW (O&M) BENEFICIAL USES PROGRAM

## Lessons Learned and Future Priorities

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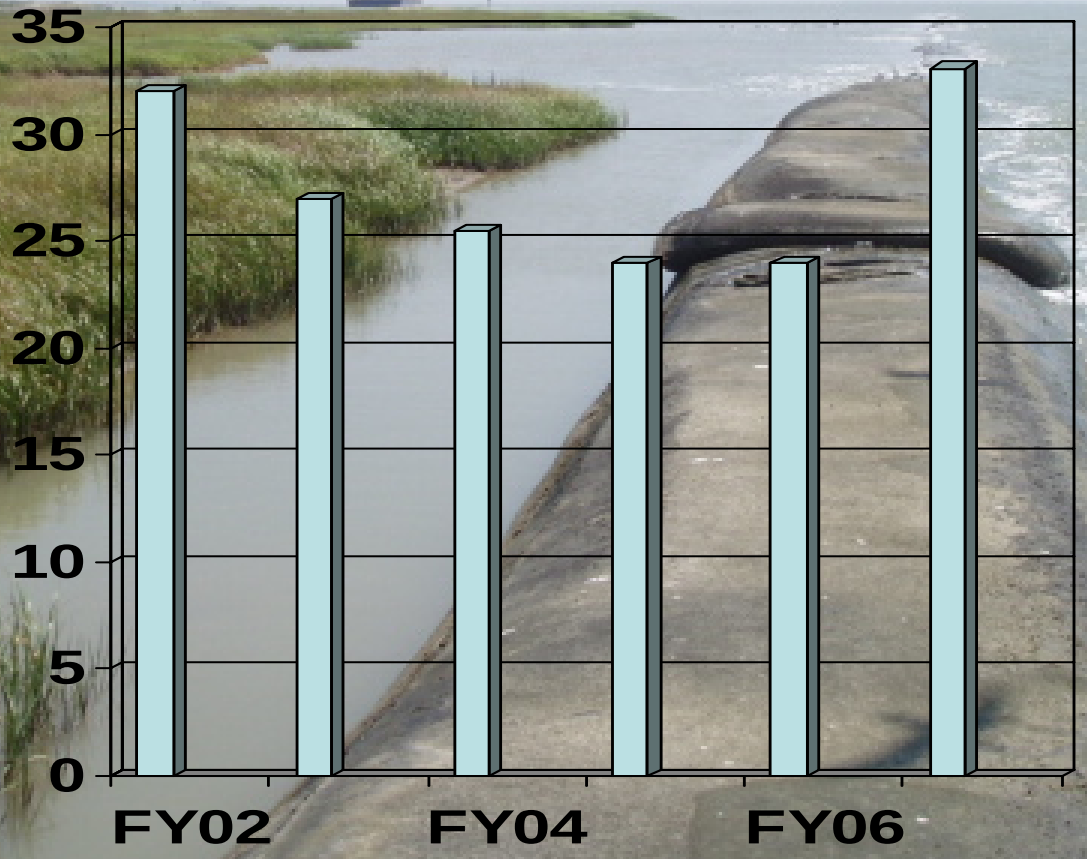
# BIGGEST CURRENT PROBLEM
# $$$ FY 08 – 09 BUDGET $$$



# RECENT (since 2000) GIWW, O&M, HABITAT PROJECTS

- **West Bay Mooring**
- 64 ac., linear
- Geotube (15 ft. circum.) confinement
- “Washover” construction
- 15 - 30% sand material

# RECENT PROJECTS

- **McFaddin NWR Marsh Nourishment**
- Completed in 2004
- Approx. 150 ac. of “drowning” brackish marsh
- Marsh elevation (slightly) raised, growth, vitality improved
- Cost to COE, cheaper than building or repairing confinement levees

# RECENT PROJECTS

- **Smith Point Marsh creation and Bird Island Protection**
- FY 2002, special one-time appropriation for Channel to Smith Point (Liberty)
- Bird island protection – altered shoaling but protection working
- 160-ac. marsh creation – failure to achieve geotube grade and emergent marsh
- Significant protection of Smith Point itself

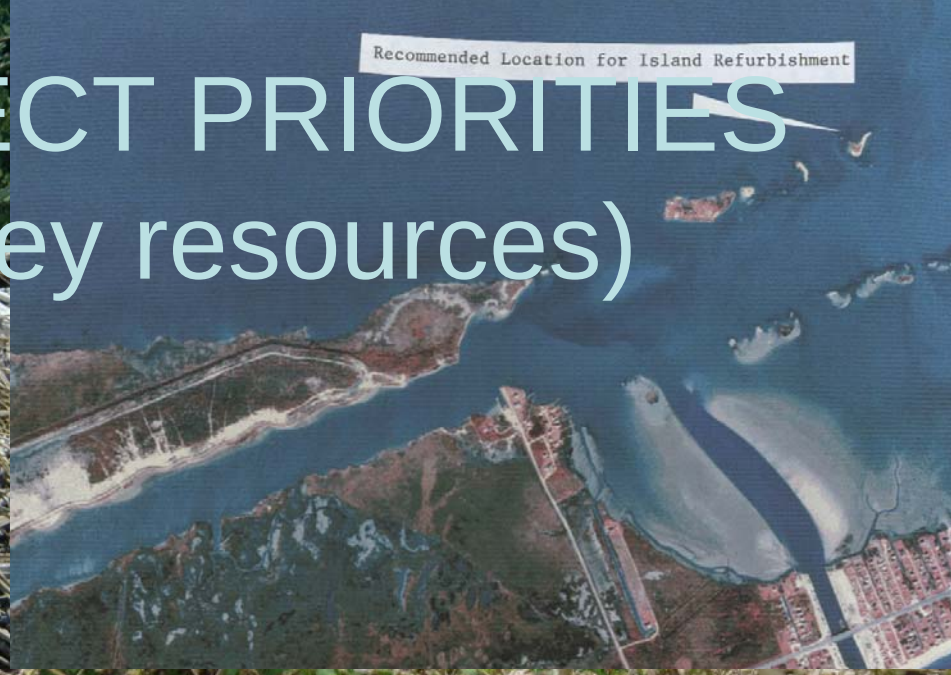
# O&M, BU PROJECTS UNDERWAY

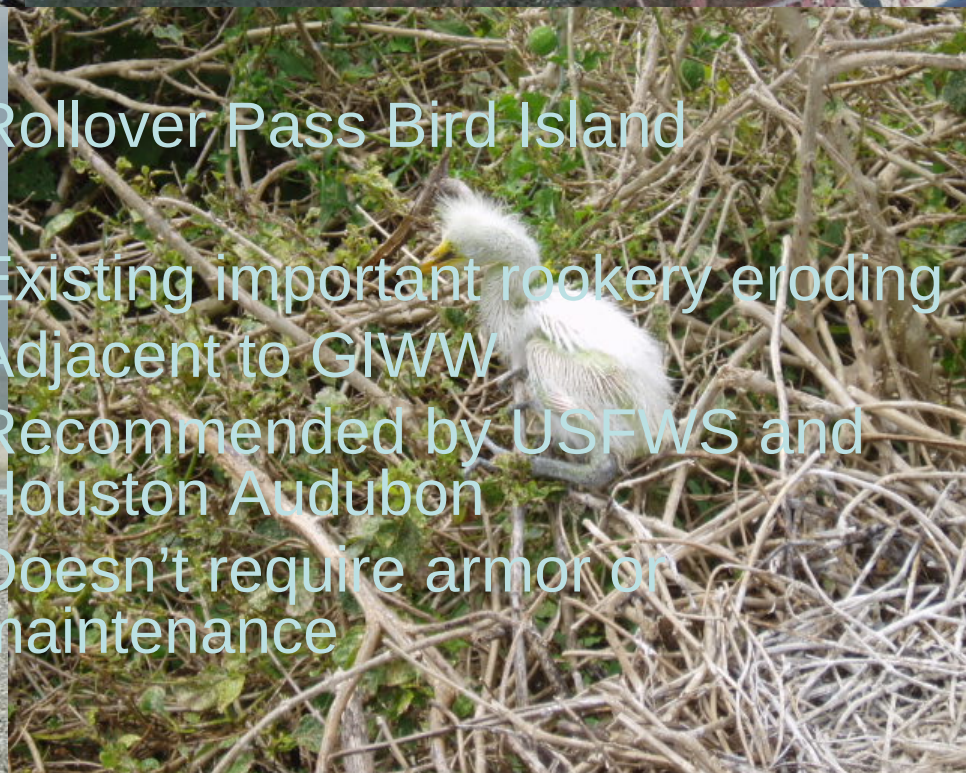
- **Green's Lake GIWW Marsh Nourishment**
- 8,000 l.f. of eroding GIWW shoreline
- Est. 240,000 c.y.
- Unconfined at max. 12 discharge points
- Designed to raise elevations and delay marsh "drowning"

# BU PROJECTS UNDERWAY

- **Chocolate Bayou DMMP BU**
- Construction started 2006, maintenance material
- 64-ac. earthen levee, overflow spillway, single outflow point
- 94-ac. geotube, no overflow, single outflow point
- *Spartina* plantings on levee and 3,500 l.f. of protected shoreline, seeded interior
- PROCESS problems in contracting dewatering structures before winter (low) tides

# FUTURE PROJECT PRIORITIES (addressing key resources)





- Rollover Pass Bird Island
- Existing important rookery eroding
- Adjacent to GIWW
- Recommended by USFWS and Houston Audubon
- Doesn’t require armor or maintenance

# FUTURE PROJECT PRIORITIES

- **Green's Lake Barrier Island Repair Shoreline Restoration**
  - Existing erosion rate of 6-8 ft./yr., increasing as breach widens
  - Affects interior hydrology (salinity intrusion)
  - Existing PA 62.now contains seagrasses

# FUTURE PROJECT PRIORITIES

## Mad Island Shoreline Protection

Proposed in 2002 CAP Sec. 206)

7.2 mi. shoreline protection

50+ ac. rare (most northerly) Tamaulipan thornscrub

4,000 + ac. Fresh to brackish marsh and native prairie at Mad Island N.C. and Mad Island WMA

# OTHER “PRIORITY” GIWW BU PROJECTS

- Star Lake Erosion Control (McFaddin NWR)
- Big Boggy Disposal (barrier) Island Repair
- San Antonio Bay Bird Island

# “LESSONS LEARNED” SUMMARY

- 15% or greater sand best (W. Bay Mooring)
- Linear (long and thin) shape better than thick
- Contract process needs streamlining for “fine-tuning” type jobs (Chocolate Bay)
- Follow-through and COE/Resource Agency “ownership” when problems arise (Smith Point)
- Need local sponsor $$$ up front (TXDOT)

# ERODING GIWW SHORELINE (Still) Our biggest native habitat problem

- Direct loss at 3 – 8 ft./yr.
- Salinity intrusion into native freshwater habitats
- Opening up and “drowning” of former fresh and upland habitats