Natural Resource System

Report Back #2

Potential Adaptation Strategies

Adaptation Strategy #1

- Increase Timber Health / Intense Precipitation & Drought
  - Timber Inventory & Risk Characterization of Stressed Timber Stands
  - Identify timber stands that are critical to acoustic buffering
  - Identify and replant with resilient species (longleaf)
  - Conservation Easement

Adaptation Strategy #2

- Prevent Bypass & Permit Limits (Lagoons) / Intense Precipitation Events
  - Ensure Current System can accommodate increased precipitation levels
  - Redesign :$$ (Collaboration with MDEQ)

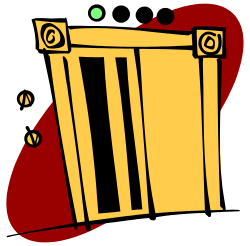
Adaptation Strategy #3

- Wetland Bank / Drought (Healthy Today)
  - Diversion of Water to Wetlands
    - Use Gray Water to Irrigate Fee Area Wetlands
    - Diversion from River or Canal
    - Stormwater
    - Damming of Small Creeks and Branches
  - Increase Water Retention of Wetlands
    - Returning Swales
    - Fill in Existing Ditches
    - Remove Excess Trees

How Adaptation Strategy Development will Continue

- This process step will be part of the asset/climate variable reviews
- Adaptation strategies meriting further development will be tracked in the Center Risk Management System
- COD Reviews

Elevator Speech



- Top 3 primary short-term / long-term climate change impacts to SSC/system

  1. Impact to Health of Acoustic Buffer Timber
  2. Impact to Health of Wetland Mitigation Bank
  3. Operation of Wastewater Lagoons within Permit Values

- Top Opportunities
  - Some Adaptation Strategies May Address Two Impacts at Once (Win-Win: Lagoon Discharge to Wetlands)
  - Potential Increased Growth/Hardiness of Forest Species
  - Increased Harvest Required for Water Hyacinths – Composting

Back Up

Adaptation Strategy #1

- Timber Health / Intense Precipitation & Drought
  - Timber Inventory & Risk Characterization of Stressed Timber Stands
  - Identify timber stands that are critical to acoustic buffering
  - Identify and replant with resilient species (longleaf)
    - Type of Strategy: Maintenance & Operations
    - Primary Implementer/Organization: NASA
    - Other Stakeholders: E&TD
    - Estimated Cost of Strategy: ©
    - Funding Available: Likely
    - Funding Source: TBD
    - Leveraged Partnerships: MS Forestry Commission, DOD/SBT 22, State of Louisiana, Major Land Owners in the Buffer Zone

Adaptation Strategy #2

- Prevent Bypass & Permit Limits (Lagoons) / Intense Precipitation Events
  - Ensure Current System can accommodate increased precipitation levels
    - Type of Strategy: Capital Investment, Maintenance & Operations
    - Primary Implementer/Organization: NASA/Center Ops
    - Other Stakeholders: MDEQ
    - Estimated Cost of Strategy: ©
    - Funding Available: Existing
    - Funding Source: CMO
    - Leveraged Partnerships: Wetlands/Natural Resources
  - Redesign :$$ (Collaboration with MDEQ)

Adaptation Strategy #3

- Wetland Bank / Drought
  - Use Gray Water to Irrigate Fee Area Wetlands
    - Type of Strategy: Capital Investment, Maintenance & Operations
    - Primary Implementer/Organization: NASA/NASA Contractors
    - Other Stakeholders: RA10, RA50, RA02, USACOE, USFWS
    - Estimated Cost of Strategy: $$
    - Funding Available: CoF
    - Funding Source: NASA/CoF
    - Leveraged Partnerships: Hancock County Utilities