

# **Savannah Harbor Deepening Tier II Overview**

***Presented to the Stakeholders  
Evaluation Group***

***June 6, 2000***

# Purpose

***To provide information requested by the SEG about the full range of project activities***

# Overview

- **SEG**
- **Engineering**
- **Economics**
- **Authorization Compliance**
- **Legal Compliance**
- **Cultural and Historic Resources**

# SEG

- **Model development**
- **Chloride studies**
- **Dissolved oxygen studies**
- **Marsh succession**
- **Salinity**
- **Striped Bass**
- **Shortnose sturgeon**
- **Beach erosion**
- **Beneficial uses**
- **Mitigation**
- **Any others on the matrix**

# **Studies Under SEG Auspices**

- **See Report of committee chairs for full listing of studies**
- **All recommended studies have been approved**
- **Schedule and funding will be provided ASAP**
- **Other issues to be addressed**
  - Tidal Amplitude
  - Floridan Aquifer
  - Hurricane Surge
  - Mitigation Options
  - Post-project verification

# Engineering

- **Stability/Structural Integrity**
- **Hydraulic Modeling**
- **Sedimentation Modeling**
- **Sediment Quality**
- **Ship Simulation**
- **Dredged Material Disposal**
- **HTRW Screening**
- **Cost Estimating**

# Stability/Structural Integrity

- ***Bank***

**Purpose: evaluation of the potential for riverside structural failures due to a deeper channel**

- Survey plan for geotechnical work to be developed and made available for review.
- Will cover the length of the channel wherever the potential exists for the channel to impact structures.
- Examples include: Rousakis Plaza, Hutchinson Island, Peeples Industries docks, Blue Circle Cement

- ***Channel Slope***

**Purpose: evaluation of the potential for the channel banks to slough into the channel**

- Channel designed to avoid changes in the existing slope and avoid environmental impact

- ***Bend widening***

- a unique situation encompassing both situations

# Hydraulic Modeling

***Purpose: Computer model that represents the currents, water levels, and flows to determine effects of changes in the modified river.***

**Model will be developed from the basic 3D hydrodynamic model**

- **May provide indication of potential for changes in erosion patterns**

# Sedimentation Modeling

*Purpose: Computer model to determine changes in the sedimentation patterns in the modified river*

- **Model will be developed from the basic 3D hydrodynamic model**
- **Will reflect all project design features**
- **Will be used to analyze inclusion of existing advanced maintenance practices in the deepening project**

# Sediment Quality

*Purpose: evaluation of the potential effects of the chemical constituents of the dredged material*

- **Determination of chemical content of the material dredged for project construction**
- **Evaluation of the effects on the water column**
- **Evaluation of the effect of placement of project dredged material on discharges from the CDF in which it is placed**
- **Evaluation of the effect of placement of project dredged material on the Ocean Dredged Material Disposal Site**
- **Evaluation of the effect of placement of project dredged material for beneficial uses**

# Ship Simulation

*Purpose: computer simulation of ship handling to determine channel adequacy and safety for ship operations*

- Existing ship simulation models are available
- Will use existing design vessel

# Dredged Material Disposal

*Purpose: validation and modification (as required) of dredged material disposal plans from Tier I efforts*

- **Corps is taking separate action to update LTMS and determine new CDF needs**
- **Validate the need for long term capacity requirements**
- **Advancement of existing CDF maintenance will be revised**

# HTRW Screening

*Purpose: evaluation of material for Hazardous, Toxic, and Radioactive Waste.*

- **Procedures are well established in Corps Regulations**

# Cost Estimating

***Purpose: estimation of each item of construction, including (but not limited to) dredging costs, construction costs, mitigation action costs, and land acquisition costs.***

- **Feeds back into the benefit-to-cost analysis**

# Economics

***Purpose: evaluation of project's economic justification and determination of the NED plan***

- **Including:**
  - **Issues developed by the EWG**
  - **Detailed construction costs**
  - **Benefits developed in compliance with USACE regulations**
  - **NED plan is the project alternative which produces the maximum net benefits consistent with environmental requirements**
  - **Design vessel not the same as economic vessel**

# Authorization Compliance

*Purpose: procedural matters related to producing the documents required in the project authorization*

- **Including:**
  - **NEPA compliance**
  - **Chief of Engineers Report compliance**
  - **WRDA 1999 compliance**

# NEPA Compliance

*Purpose: adherence to the regulations published by the CEQ and the Corps of Engineers*

- Scoping
- Agency coordination
- Public involvement
- Effects disclosure
- Public review and comment on draft Tier II EIS
- Final Tier II EIS

# Compliance with Chief of Engineers Report

*Purpose: adherence to the requirements in the report of the Chief of Engineers dated Oct. 21, 1999*

- **GRR/Tier II EIS documents must meet all USACE requirements**

# WRDA 99 Compliance

***Purpose: adherence to the requirements of the federal authorization***

- **Report of the Chief of Engineers**
- **Approval of a Tier II EIS by the Secretary of the Army in consultation with:**
  - **The Secretary of the Interior**
  - **The Secretary of Commerce**
  - **The Administrator of the EPA**
- **Approval of the selected plan by:**
  - **The Secretary of the Interior**
  - **The Secretary of Commerce**
  - **The Administrator of the EPA**

# Legal Compliance

- **Water Quality certification, GA & SC**
- **Coastal Zone consistency, GA & SC**
- **Endangered Species Act**
- **National Historic Preservation Act**
- **Clean Water Act, Section 404(b)(1) compliance**
- **Ocean Dumping Act compliance**
- **National Wildlife Refuge Improvement Act**
- **Coordination requirements:**
  - **Magnuson-Stevens Fishery Conservation and Management Act**
  - **Fish and Wildlife Coordination Act**

# Cultural & Historic

- **Must deal with known and newly discovered cultural and historic entities in the way of the project**
- **Will include participation from GA and SC State Historic Preservation Officers, USACE, Dept of Interior, U.S. Navy, General Services Administration, Coastal Heritage Society**
- **Known entities:**
  - **CSS Georgia**
  - **Old Ft. Jackson**
  - **Fort Pulaski**