

# **A Briefing to the Stakeholder Evaluation Group SHEP Economic Study 10 February 2009**

Bernard Moseby  
Economic Analysis Chief, Deputy  
Director Deep Draft Navigation  
Planning Center of Expertise -  
Mobile Savannah Planning Center

## BRIEFING PURPOSE (SEG)

- To present and explain the Economic Scope of Work
- To present and explain the Corps approach to it's economic evaluation
- To explain the open comments and what is being done to address those comments

# SHEP Tentative Recommended Plan Alternative Formulation Briefing

- Deepen the Savannah Harbor to Garden City Terminal to a depth of 48 feet MLLW, and entrance channel deepening to 50 feet.
- Widen three bends to a depth of 48 feet MLLW in accordance with ship simulation studies.
- Expansion of the Kings Island Turning Basin to a diameter of 1,600 feet and deepening to a controlling depth of 48 feet MLLW.
- Preparation of DMCA 14A so that the disposal area can be used to isolate Cadmium enriched sediments.
- Provide mitigation by constructing and operating features to reduce salinity effects to tidal freshwater marshes, acquiring wetlands to compensate for salinity impacts, constructing and operating a dissolved oxygen system to mitigate effects, constructing and operating a fish passage channel to mitigate for impacts to Shortnose sturgeon, funding a striped bass stocking program and various other features as needed for adaptive management based on the results of project monitoring.

# **Savannah Harbor Expansion Alternative Formulation Briefing (AFB)**

- **SHE Alternative Formulation Briefing (AFB) held in Savannah, GA on 26-28 August 2008**
- **Office of Water Projects Review (OWPR) raises economic evaluation concerns**
- **Post AFB Economic Issue Resolution (IRC) Conference held 9 – 11 September 2008 in Mobile District, Alabama**

# **Savannah Harbor Expansion Issue Resolution Conference (IRC)**

- **Participants at the IRC included representatives from HQUSACE OWPR, IWR, SAD SAM and Georgia Ports Authority (participation of the latter limited to the first morning of the meeting for presentation of port operational information needed for IRC discussion)**

# Savannah Harbor Expansion (IRC) Economic Concerns Identified

- a. The Savannah Harbor economic model, developed more than 6 years ago does not have the flexibility to adjust key variables that would reflect current day operations and changes in the container shipping industry.
- b. Simplified assumptions contained in the economic analysis related to the Panama Canal expansion are insufficient in reflecting the Canals potential impacts to the container shipping industry.
- c. The container industry is rapidly evolving and its evolution is not adequately reflected in the existing analysis. Specifically how empty containers and unused container slots on vessels affect vessel drafts and loading practices.

# Savannah Harbor Expansion (IRC) Economic Concerns Identified (cont'd)

- d. How vessels use the tide in the Savannah Harbor must be more integrated in the economic analysis.
- e. The commodity forecast was developed in 2003. Recent trends indicate more robust growth in container traffic coming directly to the east coast and specifically, Savannah Harbor which is growing at a faster rate. This information needs to be better factored into the analysis. The current commodity forecast does not accurately represent the Savannah Harbor's South Atlantic Region market share. Accordingly, this market share needs to be adjusted to reflect recent trends and ultimately reforecast container growth.

# Savannah Harbor Expansion (IRC) Path Forward

- a. Model flexibility will be addressed through a series of spreadsheets developed and coordinated with Corps container industry expertise at IWR. The spreadsheets will enable the evaluation of risk and uncertainty through sensitivity analysis of key variables. The spreadsheets will also incorporate tide delay benefits into the main line benefit analysis.
- b. Vessel loadings will be reevaluated by updating container weight assumptions (i.e., by vessel class and itinerary).
- c. The revised analysis will evaluate project assumptions related to tonnage and loading practices and transition from smaller inefficient vessels to more diverse efficient vessels over time.

# Savannah Harbor Expansion (PGM) Project Guidance Memorandum

- 3 November 2008 PGM issued
- The PGM summarizes the HQ policy review comments, district responses, discussions at the AFB and subsequent economic meetings and actions required prior to release of the draft report and DEIS for public review.
- Also included in the PGM are the discussions and required actions on issues raised by the Savannah District in advance of the PGM.

# Savannah Harbor Expansion

## Project Guidance Memorandum (cont'd)

- To satisfactorily complete the Washington level review revised analysis should be coordinated with HQ at key in progress review checkpoints and the draft report must address outstanding concerns on the future without project conditions, economic, plan formulation, mitigation plans, disposal and other project costs, environmental compliance and others.

# PGM Charge

- The base year for commodity forecasts was revised from 2003 to 2007 tonnage levels.
- Rather than relying on one peak year tonnage level, the base year should reflect an average of recently observed tonnage levels.
- How much of Savannah's double-digit growth is likely as result of transfers of container tonnage forecast at other Atlantic ports to the new distribution centers.

# PGM Response

- A revised forecast for Savannah Harbor and the U.S. East Coast, obtained from Global Insights circa May 2008 has been acquired and processed and assigned to Savannah's World Region Services.
- A revised weighted base year tonnage for 2007 has been developed for the base year from which forecasts will project from.
- The forecasts for the other East Coast ports will under go analysis to answer the container traffic transfer concern.

## PGM Charge

- The methodology for forecasting future vessel calls should be revised to account not only for the growth in tonnage, but also the future fleet's vessel loading capacities and characteristics (by vessel size, number, and type)

## PGM Charge (cont'd)

- The revised analysis should account for empty containers and empty slots based on empirical analysis of Savannah's current practices and that of other US ports.

## PGM (Charge)

- **Additional analysis need to be accomplished in order to more finitely identify the constrained and unconstrained vessel fleets for Savannah Harbor. Additional data will be gathered and analyzed to determine future without and with project condition vessel operations for both the constrained and unconstrained vessels fleet.**

## PGM Response

- Additional economic evaluations will be performed to assess the impacts of without and with project conditions on vessel operations (i.e., loading). This analysis will be both developed and coordinated with Corps navigation experts at IWR. The report will be revised to reflect both the analysis and results.

## PGM (Charge)

- **The revised analysis should confirm that all vessels in the future fleet can be accommodated under the bridge and exclude vessels with air drafts exceeding the allowable clearance of the Talmadge Bridge.**

## PGM (Charge)

- “Under future without project conditions, the channel depth at Savannah Harbor will be shallower than the depths of those harbors occurring immediately before or after Savannah Harbor on each of the benefiting services’ vessel rotations.
- Accordingly, channel depths at Savannah Harbor will limit the total amount of cargo that can be carried on the vessel before and after Savannah Harbor as it will be the port that constrains draft.”
- The resultant “without project” condition vessel fleet distribution for Savannah Harbor is not consistent with observed practices of efficient loading for the existing Panama Canal

## PGM (Response)

- Additional analysis will be performed and documented in the revised draft report. The future fleet assumptions will be informed by empirical analysis of actual/similar practices and expert judgment

## PGM (Directive)

- During the subsequent Economic Issue Resolution Conference (IRC) it was concluded that additional analyses are needed to support plan optimization and selection. Once the analyses are revised, if it can be shown that a plan maximizes net benefits it should be identified as the NED plan. If optimization cannot bracket the NED plan, the tentatively recommended plan could also be referred to as the most economical plan analyzed or “Federally supported” plan.
- Concur

# Economic Study Schedule SHEP

TASK ID	TASK	REVISED DATES
1	Data collection and analysis	12 Sep - 10 Oct
2	Prototype spreadsheet development	13-17 Oct
3	IWR/Econ meeting	20-24 Oct
4	IRC # 1 for Economics Vertical Team: Commodity forecast IPR	13-Nov
5	Analysis of new economic data	27 Oct -15 Jan
6	Fleet Forecast for EN and Environmental Use Critical for Final Plans to be formulated	31-Dec
7	Plan evaluation	14 Nov - 28 Feb
8	IRC #2 for Economics Vertical Team : Plan evaluation IPR	12-Jan
9	Final Mitigation Plans	15-Feb-09
10	Calculate Economic Benefits	20-Feb
11	Passing lane analysis	8 Oct - 27 Feb
12	Jasper County update	5 Dec - 26 Feb
13	Documentation of analysis	12 Nov - 3 Mar
14	Review of documentation by economics vertical team and ATR	4 - 17 Mar
15	Incorporate review comments from vertical team and ATR	22 - 31 Mar
16	Plan Selection	15-Mar
17	Draft Economics Appendix	31-Mar-09