



# Savannah Harbor Expansion Project Economics

U.S. ARMY CORPS OF ENGINEERS

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## Overview

A proposal to deepen the Savannah Harbor to 47 feet will bring **\$174 million** in annual net benefits to the United States. The U.S. Army Corps of Engineers came to this conclusion following years of extensive research.

A final General Re-Evaluation Report (GRR) and a Environmental Impact Statement (EIS) describe the details of the numerous studies the Corps of Engineers conducted to determine the most beneficial depth for the Savannah Harbor. These studies, authorized by Congress, reflect an extensive analysis of the engineering alternatives, environmental impacts, and economic costs and benefits of deepening the

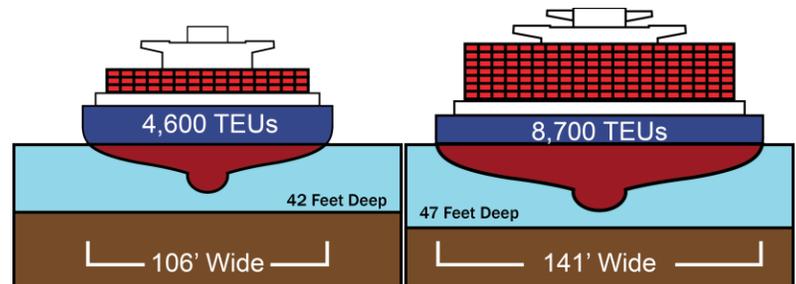
Savannah Harbor and shipping channel. Funded by the federal government and the state of Georgia, the economic portion of the studies examined the characteristics of the future international shipping fleet, harbor commerce, current and future trade routes, and the capacity of the Garden City terminal on the Savannah River.

## The Savannah Harbor

Savannah has the fastest growing container port in the nation but has the shallowest depth of its major worldwide trading partners. The harbor's current 42-foot depth limits efficiencies and increases transportation costs.

Deepening the harbor will lower transportation costs, according to the report. Lower transportation costs can translate into lower consumer product costs.

A deeper shipping channel allows larger and fewer ships to move the same amount of goods at a lower transportation cost. Unloading and reloading fewer ships would be faster allowing goods to move in and out of the port more quickly. Fewer, larger ships also lessen congestion in the harbor, according to the report. A deeper channel also means larger ships can enter and leave with less delay waiting for high tides.



\*TEUs (Twenty-foot Equivalent Units) - The international standard unit for measuring cargo containers.

Deepening to 47 feet provides the greatest net benefits to the nation. Projections in the report indicate that the number of 20-foot equivalent units (the standard measure for cargo containers) passing through Savannah Harbor will rise from 2.9 million in 2011 to 6.5 million by 2030. The estimated annual transportation cost savings are \$213 million per year. **For every \$1 invested in the project, the nation will see nearly \$6 in return.**

*(Regional economic benefits are not used for project economic justification by the Corps of Engineers since they would not affect the entire nation.)*

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## Complex issues

As the Corps' economic team studied the economics of a possible deepening, experts discovered that the standard methodology no longer fit the changing world of international shipping as it applies to container trade. The Corps also discovered that the shipping industry, international trade routes, and consumer demand has rapidly changed. These issues all meant that the Corps needed to create a new model to predict the national economic impact of deepening to various depths at Savannah. The economic team, which included experts in navigation at the Corps' Institute for Water Resources and the Deep Draft Navigation Planning Center of Expertise, received input from industry experts to evaluate the sophisticated nature of container ship operations. Although creating this new model added study time, the sophistication of the model provides higher quality and more refined information to be used in the decision-making process.

## Costs, Benefits and Funding

On Nov. 26, 2010, the draft EIS and draft GRR were published in the federal register and circulated for review and comment. Changes between the draft and final EIS and GRR were made as a result of various Corps reviews, an independent external peer review, and reviews by state and federal cooperating agencies and other stakeholders, including the public and additional analysis. These changes resulted in some project features being modified, removed or added, and an update of project costs and benefits.

The final GRR and EIS identify the 47-foot "National Economic Development" Plan as the Selected Plan.

Costs of the studies and construction are shared between the U.S. government and the state of Georgia. If the harbor is deepened, those costs would also be shared for dredging to 47 feet.

The project's "first cost" for construction of the selected plan is \$652 million. This includes preconstruction engineering and design costs, construction costs, and the real estate necessary for the project. The Corps of Engineers calculates the nation will receive benefits of \$213 million annually or more at the selected depth, with a payback in net benefits in three years. The economic study evaluated benefit years 2017 through 2066.

Read the Final Report online at: <http://www.sas.usace.army.mil/shexpan/Home.html>

<b>Costs and Benefits</b>		
<b>Item</b>	<b>November 2010 Draft (2011 Price Levels)</b>	<b>January 2012 Final (2012 Price Levels)</b>
<b>Selected Plan</b>	- 47' Plan	- 47' Plan
<b>Project First Cost</b>	\$560M	\$652M
<b>Annualized Benefits</b>	\$149M	\$213M
<b>Annualized Costs</b>	\$33M	\$39M
<b>Annualized Net Benefits</b> (Annualized Benefits minus Annualized Costs)	\$116M	\$174M
<b>Benefit to Cost Ratio</b> * Budget Rate	4.5:1 (at 4.125%)	5.5:1 (at 4.0%)
	2.7:1 (at 7.0%)*	3.9:1 (at 7.0%)*