Suez 1869
-6,000 km

Prior Shortest Route

Panama 1914
-13,000 km

New Shortest Route

PANAMA CANAL EXPANSION

THE CATALYST
Panamax Capacity
4,400 TEU

Post-Panamax Capacity
12,000 TEU
Savannah Hilton Head International Airport provides more than 38 daily direct flights.
2 on-terminal class 1 rail providers, Norfolk Southern and CSX, allow direct delivery of cargo to distribution centers.
Savannah’s central location and extensive highway system enables 24 hour delivery to 44% of the country.

9 daily truck turnarounds is the highest of any US port city.
200 Distribution Centers within 5 hours

20+ Savannah-Area Import Distribution Centers

<table>
<thead>
<tr>
<th>Company</th>
<th>Sq. Ft</th>
<th>Sq. M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Sports</td>
<td>1,000,000</td>
<td>92,903</td>
</tr>
<tr>
<td>Advance Auto Parts</td>
<td>380,000</td>
<td>35,303</td>
</tr>
<tr>
<td>Bass Pro Shops</td>
<td>600,000</td>
<td>55,742</td>
</tr>
<tr>
<td>Best Buy</td>
<td>748,000</td>
<td>69,491</td>
</tr>
<tr>
<td>Citi Trends Fashion</td>
<td>155,000</td>
<td>14,400</td>
</tr>
<tr>
<td>Dollar Tree</td>
<td>800,000</td>
<td>74,322</td>
</tr>
<tr>
<td>Farmer’s Furniture</td>
<td>250,000</td>
<td>23,226</td>
</tr>
<tr>
<td>Fred’s</td>
<td>600,000</td>
<td>55,742</td>
</tr>
<tr>
<td>Hugo Boss</td>
<td>165,000</td>
<td>15,329</td>
</tr>
<tr>
<td>Icon H&amp;F</td>
<td>600,000</td>
<td>55,742</td>
</tr>
<tr>
<td>Ikea</td>
<td>1,700,000</td>
<td>157,935</td>
</tr>
<tr>
<td>Kmart-Sears</td>
<td>2,200,000</td>
<td>204,387</td>
</tr>
<tr>
<td>Kohl’s</td>
<td>600,000</td>
<td>55,742</td>
</tr>
<tr>
<td>Lowe’s</td>
<td>1,250,000</td>
<td>116,129</td>
</tr>
<tr>
<td>Midwest Air Technologies</td>
<td>150,000</td>
<td>13,935</td>
</tr>
<tr>
<td>Noritake</td>
<td>105,000</td>
<td>9,754</td>
</tr>
<tr>
<td>Oneida</td>
<td>500,000</td>
<td>46,452</td>
</tr>
<tr>
<td>Paper Tigers</td>
<td>115,000</td>
<td>10,684</td>
</tr>
<tr>
<td>Pier One Imports</td>
<td>783,000</td>
<td>72,743</td>
</tr>
<tr>
<td>Target</td>
<td>2,100,000</td>
<td>195,096</td>
</tr>
<tr>
<td>The Home Depot</td>
<td>1,400,000</td>
<td>130,064</td>
</tr>
<tr>
<td>Tire Rack</td>
<td>250,000</td>
<td>23,226</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>3,300,000</td>
<td>306,580</td>
</tr>
</tbody>
</table>

Note: This list is not intended to be definitive of Georgia’s extensive list of port-dependent DC’s.
List of major retail import distribution centers, the largest concentration along the East Coast

1 IKEA
2 Target
3 Heineken
4 Whirlpool
5 Electrolux
6 Wal-Mart
7 Icon H&F
8 The Home Depot
9 Lowe’s
10 Dollar Tree
11 Pier 1 Imports
PORT GROWTH
RANKING by TEU

Top 10 U.S. Ports by TEUs 2014

<table>
<thead>
<tr>
<th>TOP 10 U.S. PORTS</th>
<th>Q1-Q3 2014 by TEUs</th>
<th>% Change Q1-Q3 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles, CA</td>
<td>3,213,907</td>
<td>9%</td>
</tr>
<tr>
<td>Long Beach, CA</td>
<td>2,643,583</td>
<td>3%</td>
</tr>
<tr>
<td>Newark, NJ/New York, NY</td>
<td>2,204,287</td>
<td>12%</td>
</tr>
<tr>
<td>Savannah, GA</td>
<td>992,371</td>
<td>16%</td>
</tr>
<tr>
<td>Norfolk, VA</td>
<td>786,108</td>
<td>9%</td>
</tr>
<tr>
<td>Oakland, CA</td>
<td>610,147</td>
<td>3%</td>
</tr>
<tr>
<td>Tacoma, WA</td>
<td>609,066</td>
<td>12%</td>
</tr>
<tr>
<td>Houston, TX</td>
<td>572,619</td>
<td>12%</td>
</tr>
<tr>
<td>Charleston, SC</td>
<td>555,759</td>
<td>15%</td>
</tr>
<tr>
<td>Seattle, WA</td>
<td>347,957</td>
<td>-23%</td>
</tr>
<tr>
<td>Other</td>
<td>2,015,651</td>
<td>4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>13,662,459</strong></td>
<td><strong>6%</strong></td>
</tr>
</tbody>
</table>
$706 million cost, payback in net benefits in only 3 years.

$174 million/yr more to United States

Supports 352,146 full- and part-time jobs (8.3% of Georgia’s total employment)

No significant local economic gain other than maintaining $1.1 million in local taxes

TEU increase 2.9 million/yr in 2013 to 6.5 million/yr by 2030

Largest benefit comes with estimated annual transportation cost savings of $213 million/yr, due to local infrastructure advantages
Dangerously low dissolved oxygen levels = dead fish

14 million cubic yards of sediment = 5.5 Great Pyramids

Saltwater Intrusion into Savannah National Wildlife Refuge
Sediment Filling

Berm Raising

Dredge Dispersion Process

Sediment Dewatering Process

| Table 1-4: Savannah Harbor Navigation Project Dredged Material Containment Areas |
|-----------------------------------|---------------------------------|----------|
| Containment Area | Location (Station) | Acreage |
| 1N                | 107+500 to 112+500     | 120      |
| 2A                | 94+000 to 103+000      | 240      |
| 12A               | 6+000RR to 10+000RR    | 1040     |
| 13A               | 47+800 to 6+000RR      | 1307     |
| 13B               | 43+000 to 47+000       | 540      |
| 14A               | 37+000 to 37+000       | 642      |
| 14D               | 28+000 to 37+000       | 703      |
| Jones/O'</span>astbed | 10+000 to 27+000     | 850      |
Habitat Restoration and Development:
Using dredged material to build and restore wildlife habitat, especially wetlands or other water-based habitat (e.g., nesting islands and offshore reefs).

Beach Nourishment:
Using dredged material (primarily sandy material) to restore beaches subject to erosion.

Parks and Recreation:
Using dredged material as the foundation for parks and recreational facilities; for example, waterside parks providing such amenities as swimming, picnicking, camping, or boating.

Agri/Aquaculture:
Using dredged material to replace eroded topsoil, elevate the soil surface, or improve the physical and chemical characteristics of soils. Also creating new fishery habitats.

Infill
Using dredged material to support commercial or industrial activities (including brownfields redevelopment), primarily near waterways; for example, expanding or raising the height of the land base, or providing bank stabilization.

Construction Material
Using sediment as a base material for brick to be used for infrastructure, paths, building construction, etc.
HALF OF $700 million SHEP budget is dedicated to mitigation proposals

#1 WATER IMPOUNDMENT
Water impoundment, and pipeline to Abercorn Creek for extreme levels of chloride after SHEP.
Cost: $30,000,000

#2 MCCOY+RIFLE CUTS
Closure of McCoy's cut with rock diversion and sheet pile walls. This will attempt to prevent saltwater intrusion into the SNWR
Cost:

#3 ONSLow ISLAND
Wetland created at south end of island to compensate for removal of tide gate habitat destruction.
Cost:

#4 SPEECE CONES
12 Sets of 6 Speece Cones for Dissolved Oxygen Compensation, upriver and downriver locations/
Cost

#5 Fish Bypass
Fish Bypass needed due to dead zone created by removal of tide gate.
Cost:

#6 CSS Georgia
Civil War Ironclad CSS Georgia being exhumed for public display.
Cost: $15,000,000

HALF OF $700 million SHEP budget is dedicated to mitigation proposals.
NEW PROPOSALS

SALT HARVESTING
The former rice fields of the National Wildlife Refuge will be retrofitted for salt harvesting to prevent further saline intrusion into the wetlands.

BRICK PRODUCTION
A study proved that high quality brick can be made from Savannah River dredge.

McQUEEN’S TRAIL
Final connection made to former rails to trails project

HUTCHINSON AS THE HUB
The underutilized Island, originally a dredge containment area itself, becomes the core of all dredge-related operations.

CSS GEORGIA MEMORIAL
Civil War Ironclad being recovered from river’s bottom is restored and displayed in a walk of relics.

SPOILS TRAIL
The DMCF’s can become a natural extension of the SNWR, as it will no longer be needed to house dredge.
THE POST-DREDGE AGE: EXPLORING BENEFICIAL REUSE OF DREDGE MATERIAL

SITE PLAN SCALE: 1" = 3,500'

Conceptual Development: Designing for Dredge

Highlighting Bredgescapes

Dredge Dispersion Plan

Existing 2015

Proposed 2020

Dredged Shipping Channel

Beneficial Reuse Strategies

- Wetland Creation and Enhancement
- Living Shoreline Construction
- Habitat Restoration
- Beach Rebuilding
- Parks and Recreation
- Wildlife Habitat
- Shoreline Stabilization
- Commercial/Industrial Use
- Industrial/Commercial Use
- Residential Use
- Commercial Use

Measuring Dredge

The volume of material removed from the Port of Seattle since 1940 is estimated to be over 240 million cubic yards, or about 14 million cubic yards each year.

Dredge Brick Housing

The bricks made from the dregs of the city's industrial past could be used to build new homes.

DCD Equipment

Dredging Equipment

Dredge Capacity

2,000 cubic yards

5,000 cubic yards

10,000 cubic yards

20,000 cubic yards

Dredge Output

Year 2020

Year 2025

Year 2030

Year 2035

Year 2040

Year 2045

Year 2050

Estimated Dredge Output

0.5 million cubic yards

1.0 million cubic yards

1.5 million cubic yards

2.0 million cubic yards

HATCHINSON AS THE HUB

SPOILS TRAIL

CSS GEORGIA MEMORIAL
THE POST-DREDGE AGE

EXPLORING BENEFICIAL REUSE OF DREDGE MATERIAL

SITE PLAN SCALE: 1'"=3,500'"
SPOILS TRAIL
FORMER CONTAINMENT AREAS

The Spoils Trail and its new bird islands are a great addition to the Refuge.
DREDGE BRICKWORKS
SAVANNAH RIVER LANDINGS

Some days you just can’t get rid of 14 million cubic yards of dredge.

Dredge House X 1 = 120 cubic yards
X 40 (1 street) = 4,800 cubic yards
X 7,000 (Hutchinson + River Landings) = 800,000 cubic yards
This island is only a stone’s throw from my SCAD building.
The top of the CSS Georgia memorial is a great place to relax after studio.
THE MARCH TO THE SEA

On Nov 13, 1864, after capturing Atlanta and wanting communication with the north. The G.O. M. ordered the Union forces to cross the Savannah River and to march to the coast. After a series of battles, the troops reached the sea and continued their journey. The Georgia Historical Society marker is located near the site of the event. The historical marker commemorates the march to the sea.