

# Savannah Harbor Expansion Project

## SHEP

### Presentation to the State Transportation Board

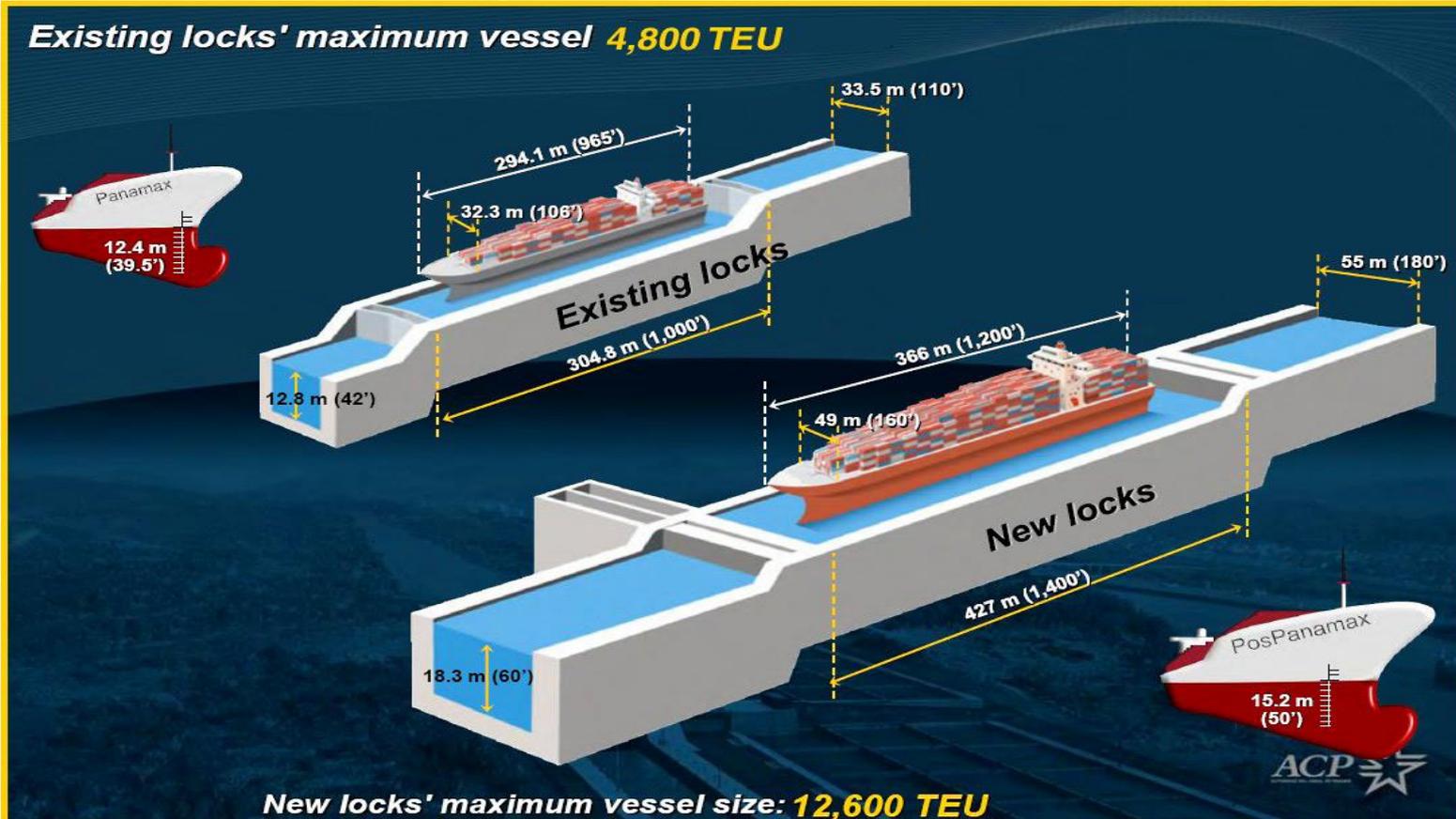
Claude R. Jackson, P.E.

Waterways Program Manager

November 19, 2014



# Savannah Harbor Expansion Project



**Panama Canal Expansion**  
**Anticipated completion in 2016**

# Savannah Harbor Expansion Project

**SHEP has been a long time coming...**

- 1994 – Construction completed to deepen channel to its current depth of -42 ft.**
- 1996 – Reconnaissance Report by the USACE recommended study for deepening**
- 1998 – Feasibility Study and Environmental Impact Statement completed.**
- 1999 – Water Resources Development Act (WRDA) authorized project, but project stalled for years due to a funding cap in WRDA**
- 2012 - USACE Record of Decision signed**
- 2014 – Water Resources Reform and Development Act (WRRDA) of 2014**

**Overwhelmingly Passed by Congress**

**Signed into law by President Obama  
on June 10, 2014**



# Savannah Harbor Expansion Project

**One last hurdle...**



## **Project Partnership Agreement (PPA)**

PPA is the link between USACE, GDOT, and GPA

Defines Costs Share

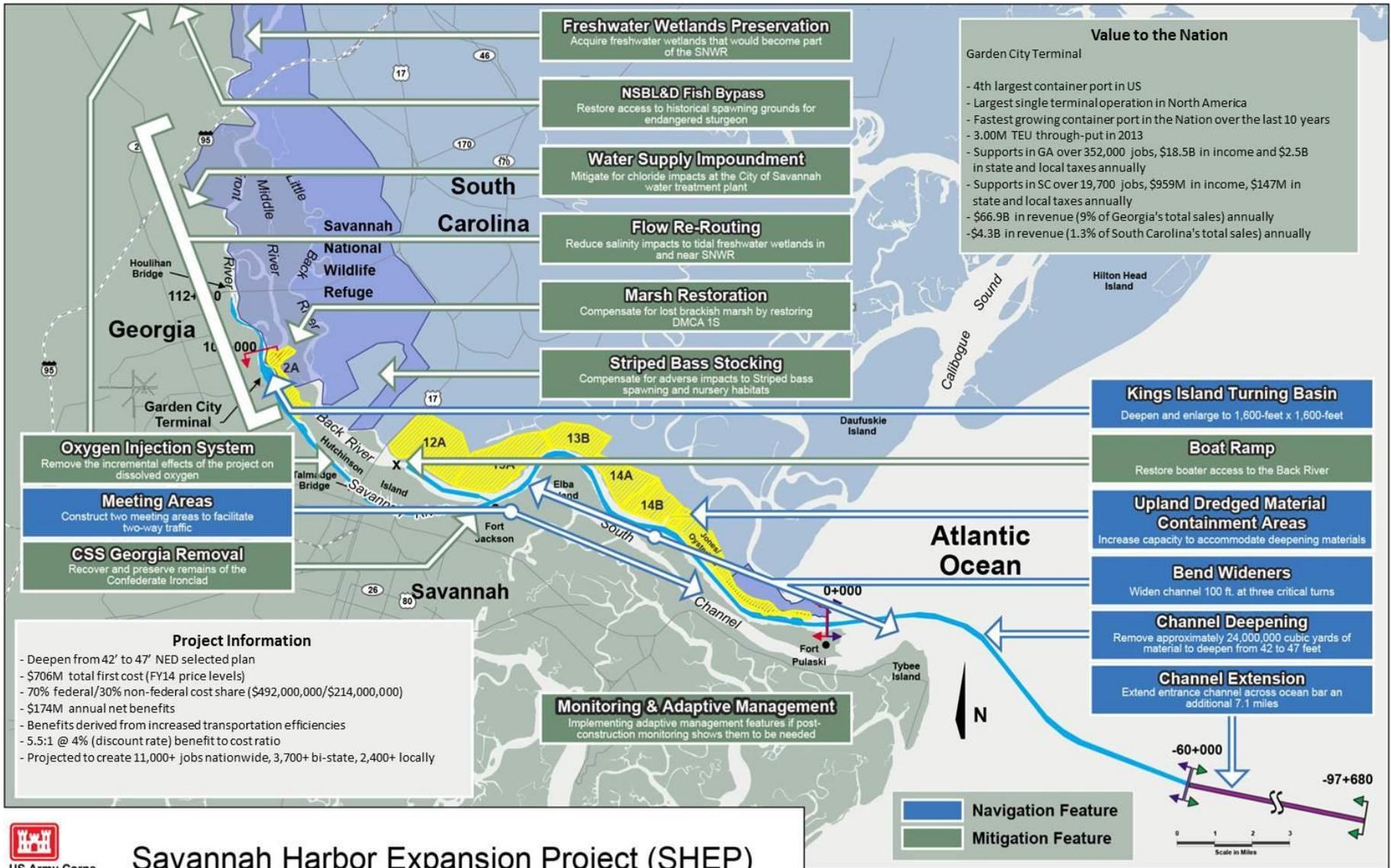
PPA must be executed prior to construction.

Allows Construction to begin with non-Federal Sponsor Funding

# Savannah Harbor Expansion Project

## Signing of the PPA October 8, 2014





- Freshwater Wetlands Preservation**  
Acquire freshwater wetlands that would become part of the SNWR
- NSBL&D Fish Bypass**  
Restore access to historical spawning grounds for endangered sturgeon
- Water Supply Impoundment**  
Mitigate for chloride impacts at the City of Savannah water treatment plant
- Flow Re-Routing**  
Reduce salinity impacts to tidal freshwater wetlands in and near SNWR
- Marsh Restoration**  
Compensate for lost brackish marsh by restoring DMCA 1S
- Striped Bass Stocking**  
Compensate for adverse impacts to Striped bass spawning and nursery habitats

**Value to the Nation**

Garden City Terminal

- 4th largest container port in US
- Largest single terminal operation in North America
- Fastest growing container port in the Nation over the last 10 years
- 3.00M TEU through-put in 2013
- Supports in GA over 352,000 jobs, \$18.5B in income and \$2.5B in state and local taxes annually
- Supports in SC over 19,700 jobs, \$959M in income, \$147M in state and local taxes annually
- \$66.9B in revenue (9% of Georgia's total sales) annually
- \$4.3B in revenue (1.3% of South Carolina's total sales) annually

- Oxygen Injection System**  
Remove the incremental effects of the project on dissolved oxygen
- Meeting Areas**  
Construct two meeting areas to facilitate two-way traffic
- CSS Georgia Removal**  
Recover and preserve remains of the Confederate Ironclad

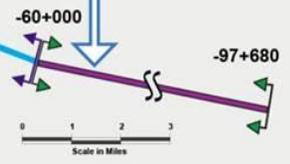
- Kings Island Turning Basin**  
Deepen and enlarge to 1,600-feet x 1,600-feet
- Boat Ramp**  
Restore boater access to the Back River
- Upland Dredged Material Containment Areas**  
Increase capacity to accommodate deepening materials
- Bend Wideners**  
Widen channel 100 ft. at three critical turns
- Channel Deepening**  
Remove approximately 24,000,000 cubic yards of material to deepen from 42 to 47 feet
- Channel Extension**  
Extend entrance channel across ocean bar an additional 7.1 miles

**Project Information**

- Deepen from 42' to 47' NED selected plan
- \$706M total first cost (FY14 price levels)
- 70% federal/30% non-federal cost share (\$492,000,000/\$214,000,000)
- \$174M annual net benefits
- Benefits derived from increased transportation efficiencies
- 5.5:1 @ 4% (discount rate) benefit to cost ratio
- Projected to create 11,000+ jobs nationwide, 3,700+ bi-state, 2,400+ locally

**Monitoring & Adaptive Management**  
Implementing adaptive management features if post-construction monitoring shows them to be needed

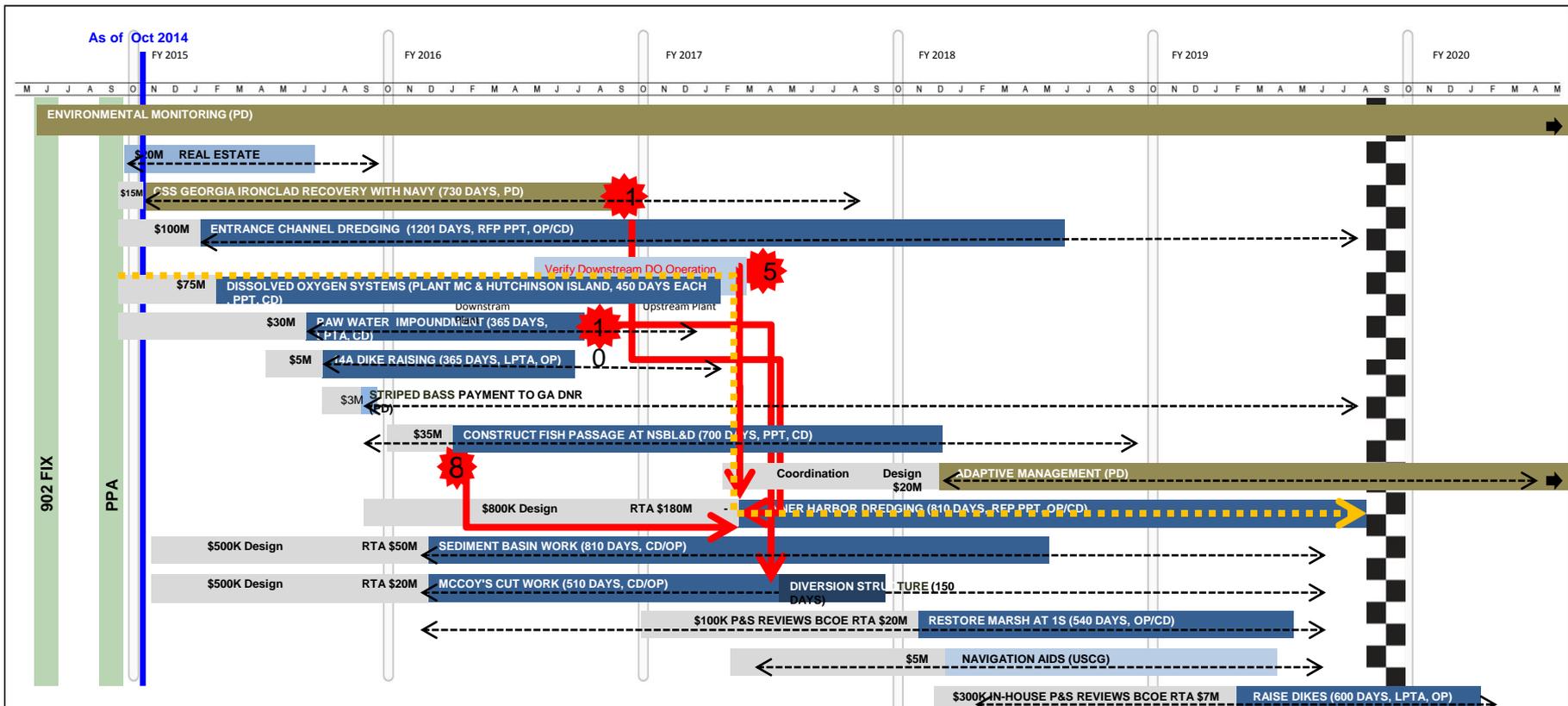
Navigation Feature  
Mitigation Feature



# Savannah Harbor Expansion Project (SHEP)

**BUILDING STRONG.**





**Feature Sequencing Requirements**

- 1. CSS Georgia must be removed prior to dredging in that area (Stations 58+500 to 59+000)
- 2. Mechanical or hydraulic dredge less than 14-inch can be used to construct broad berm at mouth of sediment basin
- 3. Mechanical dredge must be used for deepening the McCoy Cut/Middle/Little Back River areas
- 4. Cadmium-laden sediments should be distributed evenly across the CDF (14A and or 14B). Sediments must be maintained in a wet condition until capped and tested
- 5. Hutchinson Island oxygen injection system must be operational prior to commencement of dredging in the inner harbor
- 6. Plant McIntosh oxygen injection system must be operational no later than one year after commencement of dredging in the inner harbor
- 7. Real estate acquisition process for fish bypass must commence prior to/concurrent with start of entrance channel dredging
- 8. Construction of fish bypass must start prior to/concurrent with start on inner harbor dredging and be operational within two years after construction start date
- 9. Striped bass payment made prior to commencement of dredging
- 10. Construction of raw water storage impoundment prior to construction of the McCoy Cut diversion structure and the completion of inner harbor deepening
- 11. Construction of sediment basin sill prior to broad berm and removal of Tidegate
- 12. Construction of plug at the lower arm near McCoy Cut prior to construction of diversion structure
- 13. Construction of boat ramp should occur prior to closure of Rifle Cut (optional)
- 14. All mitigation complete prior to or concurrent with the completion of channel deepening

**Environmental Windows**

1. Construction of McCoy Cut diversion structure must occur between May 15 and Nov 1
2. No hopper dredging conducted in the entrance channel between Apr 1 and 14Dec
3. No inner harbor dredging conducted upstream of Station +63 between April 1 and May 15
4. No downstream in-water work conducted near fish bypass between February 1 and May 31
5. No hopper dredging upstream of Station +4

	FUTURE MILESTONES
	PRE-CONSTRUCTION ACTIONS
	IDIQ TASK ORDERS
	CONSTRUCTION CONTRACT
	OTHER
	FEATURE START/FINISH
	FLEXIBILITY
	CRITICAL PATH



**SHEP Construction**

**BUILDING STRONG®**

# Savannah Harbor Expansion Project

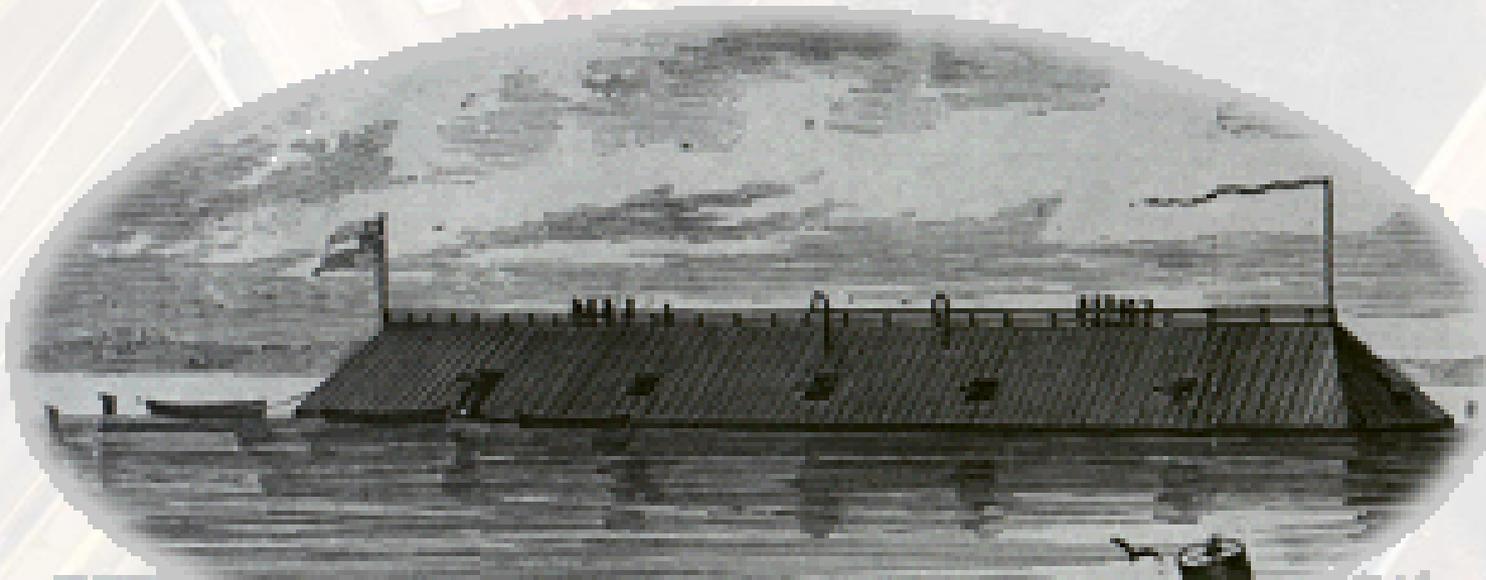
- Entrance Channel Dredging was Advertised in September
- Proposals were received November 12, 2014
- Contract Award and Notice to Proceed expected in January 2015



# Savannah Harbor Expansion Project

## Removal of CSS Georgia

- Currently no dredging is allowed in the area of the wreckage
- Project will raise what remains of the ship
- Proposals are currently under review by the Corps



The Rebel Iron-clad "Georgia."

Construction - January 2015

# Savannah Harbor Expansion Project

## Dissolved Oxygen Injection System

- SPEECE Cones will pump oxygen into the Savannah River to replace the oxygen in the river lost to SHEP
- **Critical Path Feature** - DO System has to pass testing prior to Inner Harbor Dredging
- Proposals Due  
Dec. 15, 2014

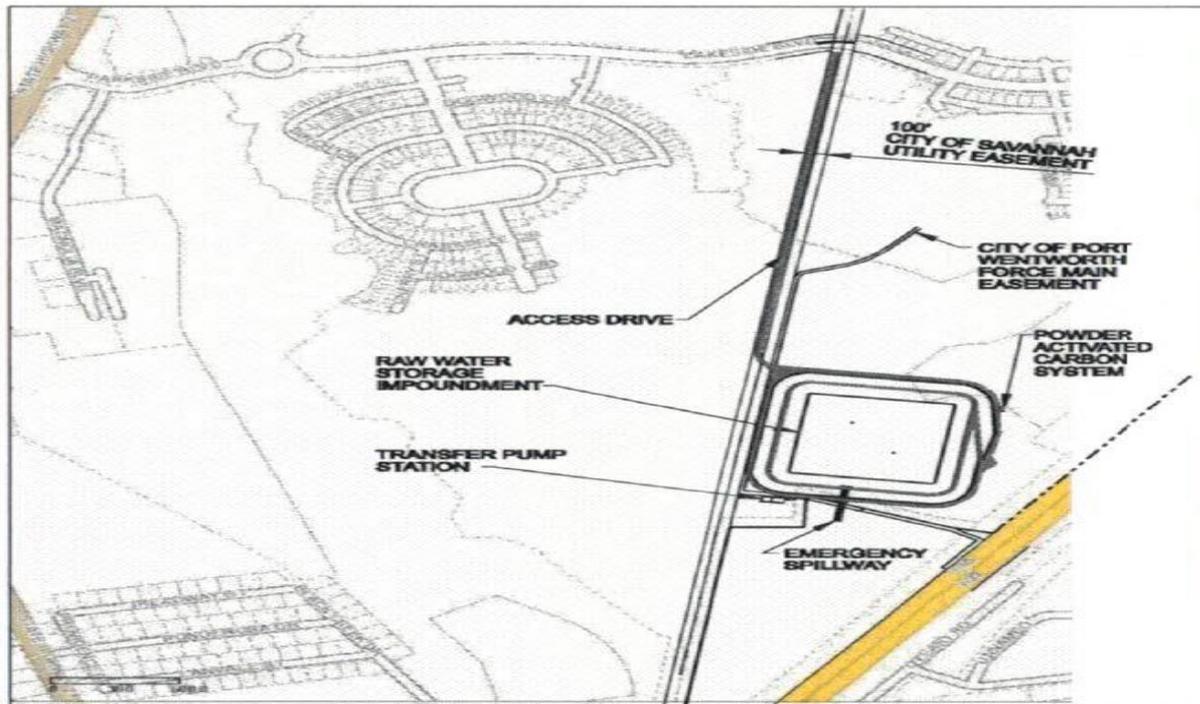


Construction - Spring 2015

# Savannah Harbor Expansion Project

## Raw Water Storage Impoundment (RWSI)

- City of Savannah pulls water from Abercorn Creek
- May experience High Chloride levels during High Tide / Low Flow events
- Construction of a 30 Acre / 97 Million Gallon Impoundment Area



SITE LOCATION MAP

Construction - Summer 2015

# Savannah Harbor Expansion Project

## Fish Bypass at New Savannah Bluff Lock & Dam

- Located South of Augusta
- Will allow Atlantic and Short Nosed Sturgeon (both endangered) access to 20 miles of historic spawning grounds

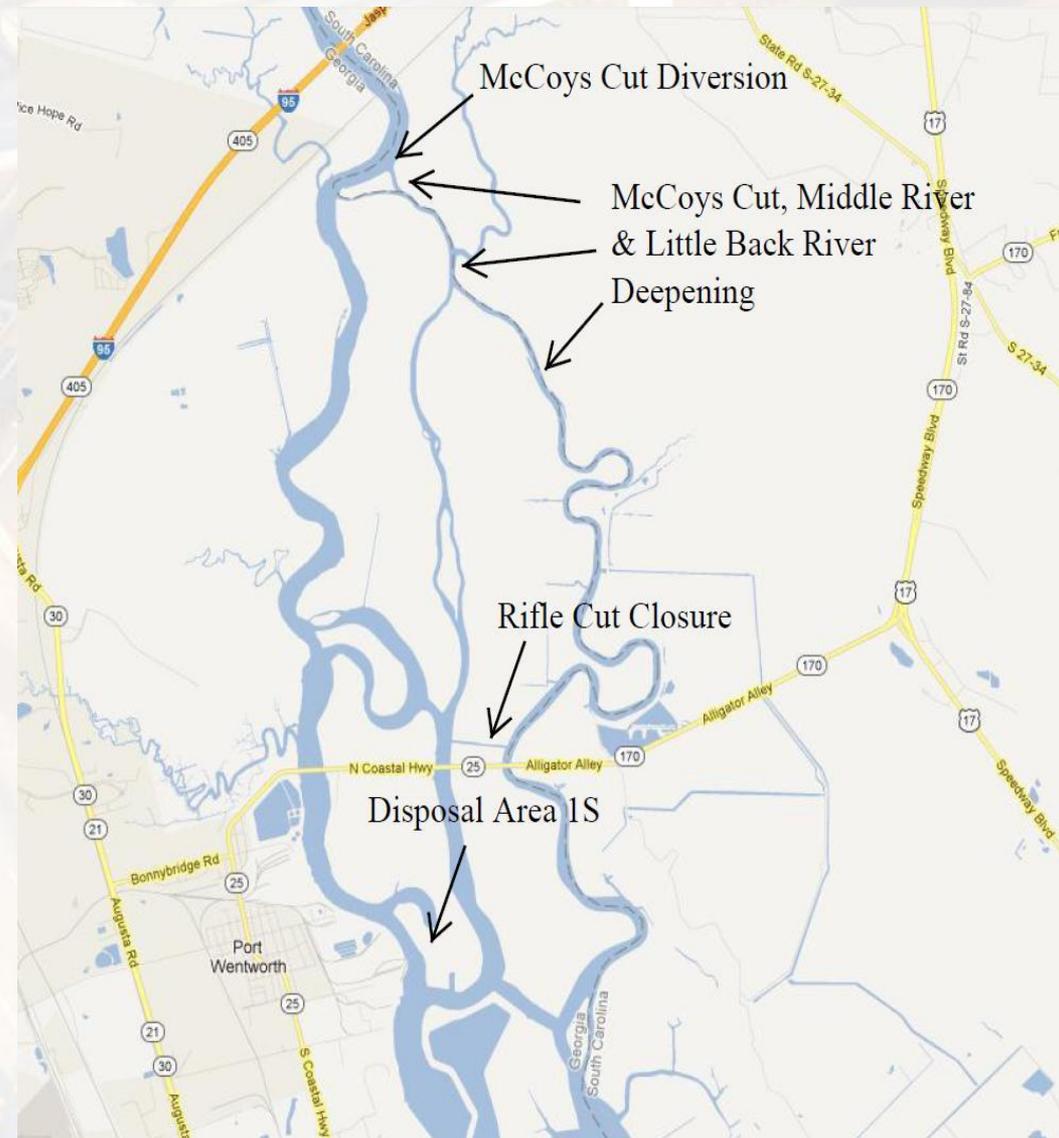


Construction - Winter 2016

# Savannah Harbor Expansion Project

## Flow Re-Routing

- Divert freshwater from the Front River into the Middle and Back Rivers for Savannah National Wildlife Refuge
- Closure of Rifle Cut
- Construction of a Boat Ramp on Hutchinson Island



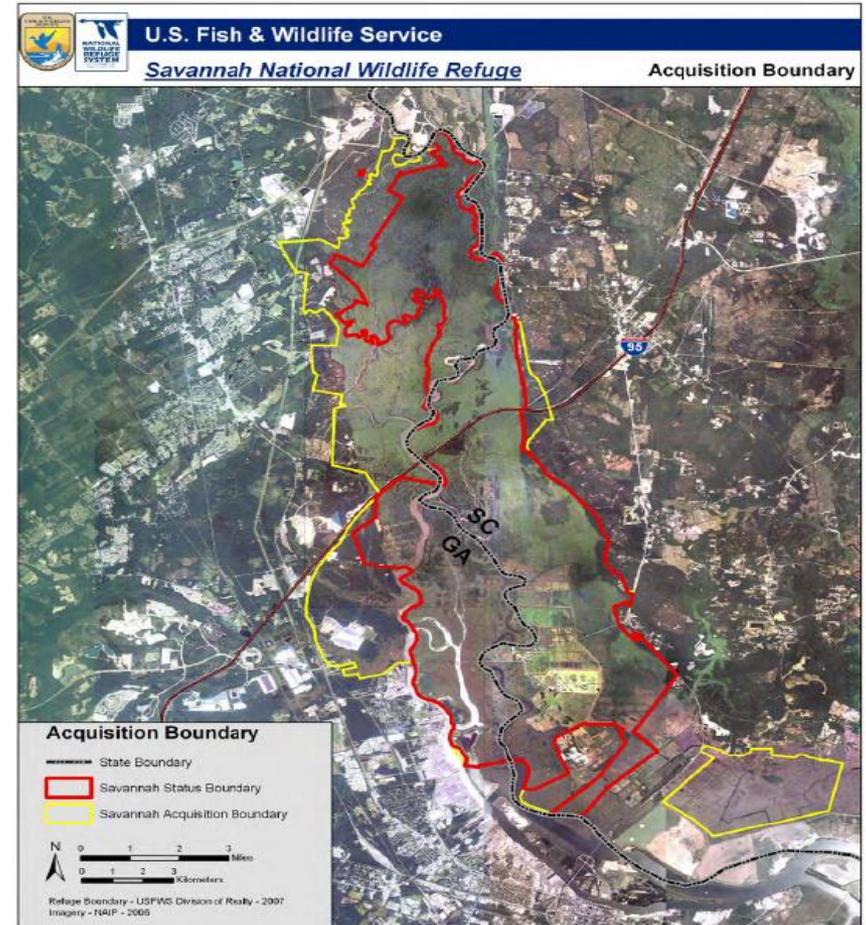
Construction - Fall 2016

# Savannah Harbor Expansion Project

## Wetland Restoration and Preservation

Restoration of Area 1S to Salt Marsh

2,245 Acres for USFWS



# Savannah Harbor Expansion Project

## Striped Bass Stocking

- Georgia DNR has an active Striped Bass Stocking Program
- SHEP will provide funding to DNR's stocking program to mitigate for impacts to spawning and nursery areas



# Savannah Harbor Expansion Project

## Inner Harbor Dredging

- Once all Mitigation Features are Completed or In Progress the Inner Harbor Dredging can commence



Construction - Spring 2017

# Savannah Harbor Expansion Project

## Questions?

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