



US Army Corps  
of Engineers®  
Savannah District

**COST ESTIMATE**  
for  
**SUPPLEMENTAL WATER SUPPLY TO**  
**CITY OF SAVANNAH INTAKE AT ABERCORN CREEK**

April 15, 2011



**SAVANNAH, GEORGIA**

**Cost Estimate  
SUPPLEMENTAL WATER SUPPLY TO  
CITY OF SAVANNAH INTAKE AT ABERCORN CREEK**

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**Cost Estimate**  
**SUPPLEMENTAL WATER SUPPLY TO**  
**CITY OF SAVANNAH INTAKE AT ABERCORN CREEK**

## **1. Introduction**

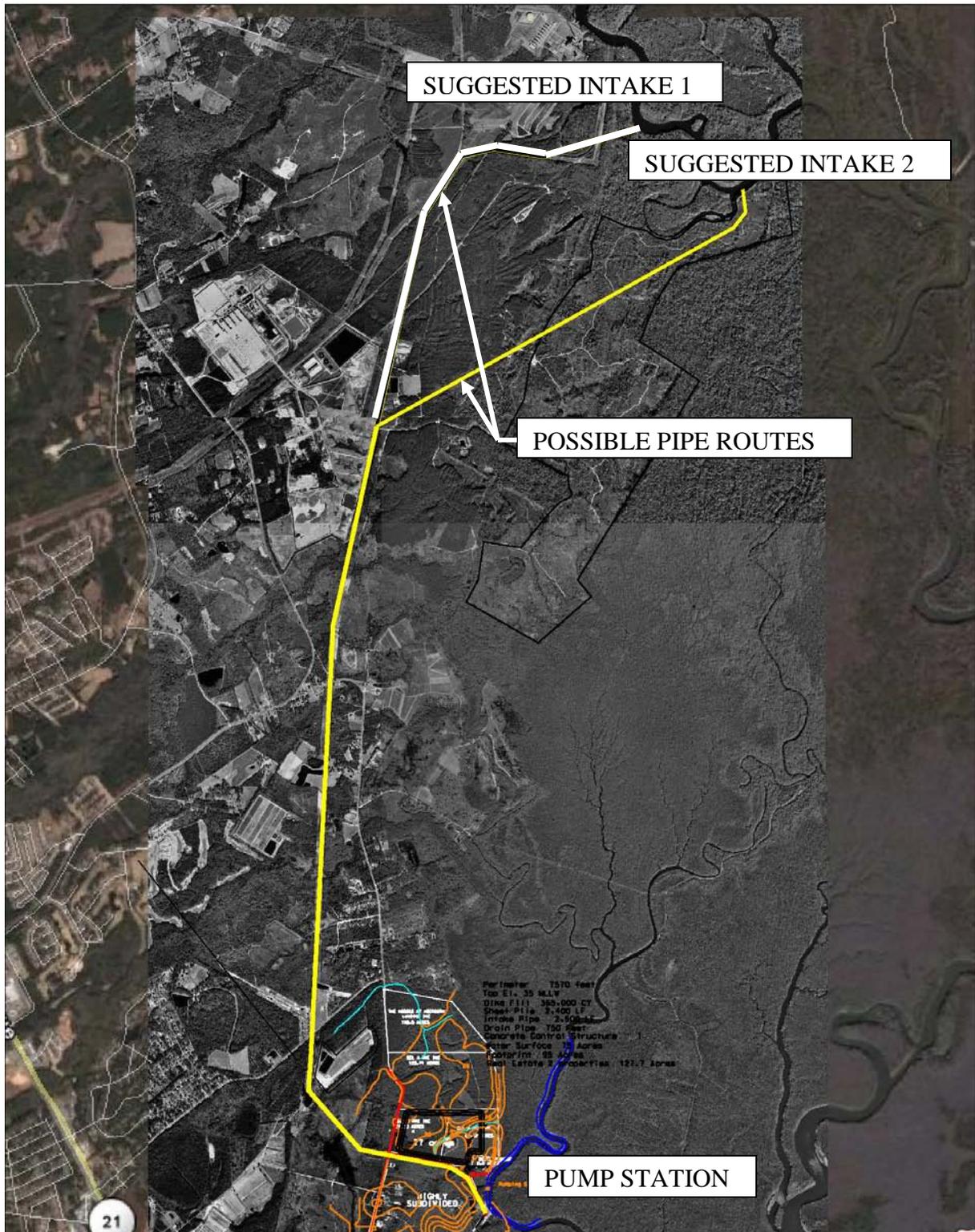
The City of Savannah expressed concerns that the Savannah Harbor Deepening Project may impact the salinity level at the Abercorn Creek intake structure. The Corps of Engineers (COE) is currently sampling and performing model studies to determine present chloride levels and the expected chloride levels at the Abercorn Creek Intake Site due to deepening of the Savannah River. In the event these studies indicate that deepening causes an unacceptable increase in chloride levels, various plans to mitigate for excess chlorides using supplemental water were investigated. The general requirements and costs contained herein are considered the best choice at a reasonable cost to accomplish a satisfactory reduction of chlorides in the present water system. Meetings were held with the City to determine their needs and a hardware list with associated costs was completed for various scenarios and water volumes. Actual design and pipe routes are not finalized and require additional work. This estimate provides a general overview of real estate impacts and costs for implementation. Finalization is expected to occur sometime after chloride studies are complete and a definite need established. Addressed herein are the latest planning level estimates prepared by HGBD for the City of Savannah and by USACE, Savannah District.

## **2. General Requirements**

### **2.1 Summary of Major Components**

- A. Provide a new intake structure and Pump House at or near Plant McIntosh located about 10 miles upstream.
- B. Provide a new guard house with sleeping quarters, a kitchen, and parking.
- C. Provide an emergency power supply sufficient to power water supply pumps and ancillary devices.
- D. Provide remote operational controls.
- E. Provide redundant pump and supply pipe to ensure availability of water under all conditions.
- F. Provide all related plumbing, valves, and hardware.
- G. Acquire needed lands, easements, access roads, perform all required clearing and construction.
- H. Provide required support utilities.

## 2.2 Pipeline Routing and Suggested Intake Locations -TBD



2.3 City of Savannah Cost Estimate (For Information Only)

Hussey, Gay, Bell, and DeYoung (HGBD) completed a cost estimate for the proposed work and furnished Mr. John Sawyer, City of Savannah a copy on January 20, 2009. The HGBD estimate is \$38,532,238.

SAVANNAH HARBOR EXPANSION PROJECT		MOST PROBABLE COST		36" PIPE		April 11, 2008	
01	LANDS and Damages-Real Estate	Quantity	UOM	Unit Price	Contract	Contingency	Total Cost
		1	JOB		1,180,000	295,000	1,475,000
TOTAL QUANTITIES FOR WATER INTAKE AND PIPELINE							
a.	Hardware & Earthwork	1	JOB	\$605,000	\$605,000	\$151,000	\$756,000
b.	36" DIP Water Lines	87,250	LF	31.5	\$27,483,750	\$549,700	\$28,033,450
c.	24" DIP Water Lines	200	LF	\$272	\$54,400	\$20,000	\$74,400
d.	18" Water Lines	200	LF	\$228	\$45,600	\$12,000	\$57,600
e.	12" Water Lines	100	LF	\$164	\$16,400	\$8,000	\$24,400
f.	24" Gate Valves	2	LF	\$17,000	\$34,000	\$6,800	\$40,800
g.	18" Gate Valves	8	EA	\$17,400	\$139,200	\$27,840	\$167,040
h.	12" Gate Valves	4	EA	\$4,500	\$18,000	\$3,600	\$21,600
i.	18" Check Valve	4	EA	\$17,400	\$69,600	\$13,920	\$83,520
j.	12" Check Valve	2	EA	\$4,500	\$9,000	\$1,800	\$10,800
k.	Valve Pit	1	EA	\$60,000	\$60,000	\$12,000	\$72,000
l.	PPC Model 8x6M-LV	4	EA	\$56,000	\$224,000	\$46,400	\$270,400
m.	Diesel Generator 350 kw	1	EA	\$120,000	\$120,000	\$24,000	\$144,000
n.	Intake structure	1	EA	\$300,000	\$300,000	\$60,000	\$360,000
o.	Power Requirement	1	LS	\$1,000,000	\$1,000,000	\$20,000	\$1,020,000
p.	60x60x24 Tee	1	EA	\$46,000	\$46,000	\$9,200	\$55,200
q.	48x48x24 Tee	1	EA	\$29,440	\$29,440	\$5,888	\$35,328
r.	Pump House	800	SF	\$100	\$60,000	\$12,000	\$72,000
s.	Guard House	1,000	SF	\$100	\$100,000	\$20,000	\$120,000
t.	Riprap GA Type I	9,600	TON	\$88	\$844,800	\$168,960	\$1,013,760
u.	Geotextile	700	SY	\$30	\$21,000	\$4,200	\$25,200
v.	Pipeline Access Road, 35 FT Width	14,000	LF	\$24	\$336,000	\$67,200	\$403,200
w.	Clear and Grub 10 MILES x 35 FT	50	ACR	\$6,060	\$303,000	\$60,600	\$363,600
x.	Remote Control to Plant	1	EA	\$756,000	\$756,000	\$189,000	\$945,000
TOTAL LAND & HARDWARE							
30	PLANNING, ENGINEERING AND DESIG	1	JOB	\$1,300,000	\$1,300,000	\$260,000	\$1,560,000
31	SUPERVISION, ADMIN & CONST-MGMT	1	JOB	\$1,100,000	\$1,100,000	\$220,000	\$1,320,000
TOTAL							\$38,532,238



## 2.5 Cost Summary

COE costs are based on October 2010 prices and are considered good for today pricing.

A. The City of Savannah Estimate	\$38,532,238
B. The COE Estimate	\$35,807,403

## 3. Conclusions and Recommendations

The COE cost summarized in Item 2.5 B. is considered the minimum necessary to meet the City of Savannah requirements for supplemental water supply in the event supplemental water is required.

It is recommended that the COE estimate included herein be adopted into the project documents as the final estimate regarding supplemental water supply if deemed appropriate for the project to mitigate for chloride reduction.