

Appendix B

Part 2

Economic Cost Estimates



U.S. Army Corps of Engineers
Memphis District

Alt 2.1

St. Johns Bayou Cost Estimate - Authorized Project

Item Description	Amount
01 LANDS AND DAMAGES	
Item 1	\$0
Item 3, St. Johns Abyou (0.0 - 3.0)	\$931,000
Item 4, St. Johns Bayou and Setback Levee Ditch	\$989,000
Item 5, St. Johns Bayou Pumping Sation	\$728,000
Item 6, St. James Ditch	\$1,310,000
waterfowl	\$2,835,000
TOTAL 01 Lands and Damages	\$6,793,000
02 RELOCATIONS	
Item 4 St. Johns Bayou	\$928,000
Item 4, Setback Levee Ditch	\$74,000
Item 5, St. Johns Pumping Station	\$186,000
Item 6, St. James Ditch	\$2,009,000
TOTAL 02 Relocations	\$3,197,000
02 CHANNELS AND CANALS	
Item 1	\$0
Item 3, St. Johns Bayou	\$1,945,000
Item 4, St. Johns and Setback Levee	\$2,118,000
Item 5, St. Johns Bayou Pumping Station	\$1,356,000
Item 6, St. James Ditch	\$947,000
TOTAL 09 Channels and Canals	\$6,366,000
13 Pumping Plants	
Item 5, St. Johns Bayou Pumping Station	\$17,861,000
Seismic	\$1,786,100
TOTAL 13 Pumping Stations	\$19,647,100
30 PLANNING, ENGINEERING, and DESIGN	
Phase 1 PED	\$980,000
VE Study (Items 3, 4, and 6)	\$150,000
VE Study (Items 2 and 5)	\$100,000
TOTAL PED	\$1,230,000
31 CONSTRUCTION MANAGEMENT	
Phase 1, Supervision and Adminstration	\$2,259,000
TOTAL S+A	\$2,259,000
TOTAL PHASE 1 ST. JOHNS BAYOU	\$39,492,100
Mitigation & Monitoring	
Shorebirds	\$1,587,677.50
Borrow Pits	\$72,562.50
Buffer	\$1,218,421.88
Reforestation	\$14,393,266.25
Total Mitigation	\$17,271,928.13
Adaptive Management and Monitoring	\$1,178,000
TOTAL ALTERNATIVE 2.1	\$57,942,028.13

Alt. 2.2

Item Description	SJNM Feature	MRL Feature
01 Lands and Damages		
Levee Closure		\$48,000
Setback Levee Grade Raise		\$630,000
Acquisition		\$210,000
waterfowl		\$2,628,000
TOTAL 01 Lands and Damages		\$3,516,000
11 Levees and Floodwalls		
Item 2, Gravity Outlet and portion of Closure		\$12,093,000
Item 2 New Madrid Floodway Closure		\$2,592,000
Setback Levee Raise		\$8,121,720
TOTAL Levees and Floodwalls		\$22,806,720
13 Pumping Plants		
Item 2, NMF Pumping Station	\$19,647,100	
Seismic	\$1,964,710	
TOTAL 13 Pumping Stations	\$21,611,810	
30 PLANNING, ENGINEERING, and DESIGN		
NMF Pumping Staion PED	\$756,413.35	
Item 2 PED		\$513,975.00
Setback Levee Raise PED		\$284,260.20
VE Study	\$50,000	\$50,000
TOTAL PED	\$806,413.35	\$848,235.20
31 CONSTRUCTION MANAGEMENT		
NMF Pumping Station	\$1,188,650	
Item 2		\$807,675
Setback Levee Grade Raise		\$446,695
TOTAL S+A	\$1,188,650	\$1,254,370
TOTAL PHASE 1	\$23,606,873	\$28,425,325
Mitigation & Monitoring		
Shorebirds		\$10,370,126
Borrow Pits		\$11,250
Buffer		\$0
Reforestation		\$40,773,979
Batture Land Reforestation		\$28,131,760
Big Oak Tree State Park Resoration		\$4,605,743
Floodplain Lake		\$2,087,225
subtotal	\$0	\$85,980,084
SJNM Adjustment (9%)	\$7,738,207.57	\$78,241,876.50
Mitigation & Monitoring Total	\$7,738,207.57	\$78,241,876.50
Adaptive Management and Monitoring	\$1,178,000	\$4,712,000
TOTAL ALTERNATIVE 2.2	\$32,523,080.47	\$111,379,201

Item Description	SJNM Feature		MRL Feature
01 LANDS AND DAMAGES			
Item 1		\$0	
Item 3, St. Johns Abyou (0.0 - 3.0)		\$931,000	01 Lands and Damages
Item 4, St. Johns Bayou and Setback Levee Ditch		\$989,000	Levee Closure
Item 5, St. Johns Bayou Pumping Station		\$728,000	Setback Levee Grade Raise
Item 6, St. James Ditch		\$1,310,000	Acquisition
waterfowl		\$2,835,000	waterfowl
TOTAL 01 Lands and Damages		\$6,793,000	TOTAL 01 Lands and Damages
			\$3,516,000
02 RELOCATIONS			
Item 4 St. Johns Bayou		\$928,000	11 Levees and Floodwalls
Item 4, Setback Levee Ditch		\$74,000	Item 2, Gravity Outlet and portion of Closure
Item 5, St. Johns Pumping Station		\$186,000	Item 2 New Madrid Floodway Closure
Item 6, St. James Ditch		\$2,009,000	Setback Levee Raise
TOTAL 02 Relocations		\$3,197,000	TOTAL Levees and Floodwalls
			\$22,806,720
02 CHANNELS AND CANALS			
Item 1		\$0	
Item 3, St. Johns Bayou		\$1,945,000	30 PLANNING, ENGINEERING, and DESIGN
Item 4, St. Johns and Setback Levee		\$2,118,000	NMF Pumping Station PED
Item 5, St. Johns Bayou Pumping Station		\$1,356,000	Item 2 PED
Item 6, St. James Ditch		\$947,000	Setback Levee Raise PED
TOTAL 09 Channels and Canals		\$6,366,000	VE Study
			TOTAL PED
			\$848,235
13 Pumping Plants			
NMF Pumping Station		\$19,647,100	31 CONSTRUCTION MANAGEMENT
NMF Seismic		\$1,964,710	NMF Pumping Station
Item 5, St. Johns Bayou Pumping Station		\$17,861,000	Item 2
Seismic		\$1,786,100	Setback Levee Grade Raise
TOTAL 13 Pumping Stations		\$41,258,910	TOTAL S+A
			\$1,254,370
30 PLANNING, ENGINEERING, and DESIGN			
NMF PED		\$756,413	
Phase 1 PED		\$980,000	
VE Study (Items 3, 4, and 6)		\$150,000	
VE Study (Items 2 and 5)		\$100,000	
TOTAL PED		\$1,986,413	
31 CONSTRUCTION MANAGEMENT			
NMF S+A		\$1,188,650	
Phase 1, Supervision and Administration		\$2,259,000	
TOTAL S+A		\$3,447,650	
TOTAL PHASE 1 ST. JOHNS BAYOU		\$63,048,973	TOTAL NMF Closure
			\$28,425,324.80
Mitigation & Monitoring			
Shorebirds		\$1,587,677.50	Mitigation & Monitoring
Borrow Pits		\$72,562.50	Shorebirds
Buffer		\$1,218,421.88	Borrow Pits
Reforestation		\$14,393,266.25	Buffer
Batture Land Reforestation		\$0.00	Reforestation
Big Oak Tree State Park Resoration		\$0.00	Batture Land Reforestation
Floodplain Lake		\$0	Big Oak Tree State Park Resoration
subtotal		17,271,928	Floodplain Lake
SJNM Adjustment (9%)		7,738,208	subtotal
Mitigation & Monitoring Total		25,010,136	SJNM Adjustment (9%)
			Mitigation & Monitoring Total
			78,241,876
Adaptive Management and Monitoring		\$1,178,000	Adaptive Management and Monitoring
			\$4,712,000
TOTAL ALTERNATIVE 2.3		\$89,237,108.59	TOTAL ALTERNATIVE 2.3
			\$111,379,201.30

Alt 3.1

Item Description	SJNM Feature		MRL Feature
01 LANDS AND DAMAGES			
Item 1	\$0		
Item 3, St. Johns Abyou (0.0 - 3.0)	\$931,000		
Item 4, St. Johns Bayou and Setback Levee Ditch	\$989,000		
Item 5, St. Johns Bayou Pumping Station	\$728,000		
Item 6, St. James Ditch waterfowl	\$1,310,000 \$2,835,000		
TOTAL 01 Lands and Damages	\$6,793,000		
02 RELOCATIONS			
Item 4 St. Johns Bayou	\$928,000		
Item 4, Setback Levee Ditch	\$74,000		
Item 5, St. Johns Pumping Station	\$186,000		
Item 6, St. James Ditch	\$2,009,000		
TOTAL 02 Relocations	\$3,197,000		
02 CHANNELS AND CANALS			
Item 1	\$0		
Item 3, St. Johns Bayou	\$1,945,000		
Item 4, St. Johns and Setback Levee	\$2,118,000		
Item 5, St. Johns Bayou Pumping Station	\$1,356,000		
Item 6, St. James Ditch	\$947,000		
TOTAL 09 Channels and Canals	\$6,366,000		
13 Pumping Plants			
NMF Pumping Station	\$19,647,100		
NMF Seismic	\$1,964,710		
Item 5, St. Johns Bayou Pumping Station	\$17,861,000		
Seismic	\$1,786,100		
TOTAL 13 Pumping Stations	\$41,258,910		
30 PLANNING, ENGINEERING, and DESIGN			
NMF PED	\$756,413		
Phase 1 PED	\$980,000		
VE Study (Items 3, 4, and 6)	\$150,000		
VE Study (Items 2 and 5)	\$100,000		
TOTAL PED	\$1,986,413		
31 CONSTRUCTION MANAGEMENT			
NMF S+A	\$1,188,650		
Phase 1, Supervision and Administration	\$2,259,000		
TOTAL S+A	\$3,447,650		
TOTAL PHASE 1 ST. JOHNS BAYOU	\$63,048,973		
Mitigation & Monitoring			
Shorebirds	\$1,587,678		
Borrow Pits	\$72,563		
Buffer	\$1,218,422		
Reforestation	\$14,393,266		
Batture Land Reforestation	\$0		
Big Oak Tree State Park Resoration	\$0		
Floodplain Lake	\$0		
subtotal	\$17,271,928		
SJNM Adjustment (9%)	\$4,512,854		
Mitigation & Monitoring Total	\$21,784,782		
Adaptive Management and Monitoring	\$1,178,000		
TOTAL ALTERNATIVE 3.1	\$86,011,755.39		
01 Lands and Damages			
Levee Closure		\$48,000	
Setback Levee Grade Raise		\$630,000	
Acquisition waterfowl		\$210,000 \$2,628,000	
TOTAL 01 Lands and Damages		\$3,516,000	
11 Levees and Floodwalls			
Item 2, Gravity Outlet and portion of Closure		\$12,093,000	
Item 2 New Madrid Floodway Closure		\$2,592,000	
Setback Levee Raise		\$8,121,720	
TOTAL Levees and Floodwalls		\$22,806,720	
30 PLANNING, ENGINEERING, and DESIGN			
NMF Pumping Station PED			
Item 2 PED		\$513,975.00	
Setback Levee Raise PED		\$284,260.20	
VE Study		\$50,000	
TOTAL PED		\$848,235	
31 CONSTRUCTION MANAGEMENT			
NMF Pumping Station			
Item 2		\$807,675	
Setback Levee Grade Raise		\$446,695	
TOTAL S+A		\$1,254,370	
TOTAL NMF Closure		\$28,425,324.80	
Mitigation & Monitoring			
Shorebirds		\$7,483,716	
Borrow Pits		\$11,250	
Buffer		\$0	
Reforestation		\$24,798,454	
Batture Land Reforestation		\$11,156,438	
Big Oak Tree State Park Resoration		\$4,605,743	
Floodplain Lake		\$2,087,225	
subtotal		\$50,142,826	
SJNM Adjustment (9%)		\$45,629,972	
Mitigation & Monitoring Total		\$45,629,972	
Adaptive Management and Monitoring		\$4,712,000	
TOTAL ALTERNATIVE 3.1		\$78,767,296.69	

Alt 3.2

Item Description	SJNM Feature		MRL Feature
01 LANDS AND DAMAGES			
Item 1	\$0		
Item 3, St. Johns Abyou (0.0 - 3.0)	\$931,000	01 Lands and Damages	
Item 4, St. Johns Bayou and Setback Levee Ditch	\$989,000	Levee Closure	\$48,000
Item 5, St. Johns Bayou Pumping Station	\$728,000	Setback Levee Grade Raise	\$630,000
Item 6, St. James Ditch	\$1,310,000	Acquisition	\$210,000
waterfowl	\$2,835,000	waterfowl	\$2,628,000
TOTAL 01 Lands and Damages	\$6,793,000	TOTAL 01 Lands and Damages	\$3,516,000
02 RELOCATIONS			
Item 4 St. Johns Bayou	\$928,000	11 Levees and Floodwalls	
Item 4, Setback Levee Ditch	\$74,000	Item 2, Gravity Outlet and portion of Closure	\$12,093,000
Item 5, St. Johns Pumping Station	\$186,000	Item 2 New Madrid Floodway Closure	\$2,592,000
Item 6, St. James Ditch	\$2,009,000	Setback Levee Raise	\$8,121,720
TOTAL 02 Relocations	\$3,197,000	TOTAL Levees and Floodwalls	\$22,806,720
02 CHANNELS AND CANALS			
Item 1	\$0		
Item 3, St. Johns Bayou	\$1,945,000	30 PLANNING, ENGINEERING, and DESIGN	
Item 4, St. Johns and Setback Levee	\$2,118,000	NMF Pumping Station PED	
Item 5, St. Johns Bayou Pumping Station	\$1,356,000	Item 2 PED	\$513,975.00
Item 6, St. James Ditch	\$947,000	Setback Levee Raise PED	\$284,260.20
TOTAL 09 Channels and Canals	\$6,366,000	VE Study	\$50,000
		TOTAL PED	\$848,235
13 Pumping Plants			
NMF Pumping Station	\$19,647,100	31 CONSTRUCTION MANAGEMENT	
NMF Seismic	\$1,964,710	NMF Pumping Station	
Item 5, St. Johns Bayou Pumping Station	\$17,861,000	Item 2	\$807,675
Seismic	\$1,786,100	Setback Levee Grade Raise	\$446,695
TOTAL 13 Pumping Stations	\$41,258,910	TOTAL S+A	\$1,254,370
30 PLANNING, ENGINEERING, and DESIGN			
NMF PED	\$756,413		
Phase 1 PED	\$980,000		
VE Study (Items 3, 4, and 6)	\$150,000		
VE Study (Items 2 and 5)	\$100,000		
TOTAL PED	\$1,986,413		
31 CONSTRUCTION MANAGEMENT			
NMF S+A	\$1,188,650		
Phase 1, Supervision and Administration	\$2,259,000		
TOTAL S+A	\$3,447,650		
TOTAL PHASE 1 ST. JOHNS BAYOU	\$63,048,973	TOTAL NMF Closure	\$28,425,324.80
Mitigation & Monitoring			
Shorebirds	\$1,587,678	Mitigation & Monitoring	
Borrow Pits	\$72,563	Shorebirds	\$9,031,670
Buffer	\$1,218,422	Borrow Pits	\$11,250
Reforestation	\$14,393,266	Buffer	\$0
Batture Land Reforestation	\$0	Reforestation	\$27,184,641
Big Oak Tree State Park Resoration	\$0	Batture Land Reforestation	\$20,871,759
Floodplain Lake	\$0	Big Oak Tree State Park Resoration	\$4,605,743
subtotal	\$17,271,928	Floodplain Lake	\$2,087,225
SJNM Adjustment (9%)	\$5,741,306	subtotal	\$63,792,289
Mitigation & Monitoring Total	\$23,013,234	SJNM Adjustment (9%)	\$58,050,983
		Mitigation & Monitoring Total	\$58,050,983
Adaptive Management and Monitoring	\$1,178,000	Adaptive Management and Monitoring	\$4,712,000
TOTAL ALTERNATIVE 3.2	\$87,240,207.01	TOTAL ALTERNATIVE 3.2	\$91,188,307.56

Alt 4.1

Item Description	SJNM Feature	MRL Feature
01 LANDS AND DAMAGES		
Item 1	\$0	
Item 3, St. Johns Abyou (0.0 - 3.0)	\$931,000	
Item 4, St. Johns Bayou and Setback Levee Ditch	\$989,000	
Item 5, St. Johns Bayou Pumping Sation	\$728,000	
Item 6, St. James Ditch waterfowl	\$1,310,000 \$2,835,000	
TOTAL 01 Lands and Damages	\$6,793,000	
02 RELOCATIONS		
Item 4 St. Johns Bayou	\$928,000	
Item 4, Setback Levee Ditch	\$74,000	
Item 5, St. Johns Pumping Station	\$186,000	
Item 6, St. James Ditch	\$2,009,000	
TOTAL 02 Relocations	\$3,197,000	
02 CHANNELS AND CANALS		
Item 1	\$0	
Item 3, St. Johns Bayou	\$1,945,000	
Item 4, St. Johns and Setback Levee	\$2,118,000	
Item 5, St. Johns Bayou Pumping Station	\$1,356,000	
Item 6, St. James Ditch	\$947,000	
TOTAL 09 Channels and Canals	\$6,366,000	
13 Pumping Plants		
NMF Pumping Station	\$19,647,100	
NMF Seismic	\$1,964,710	
Item 5, St. Johns Bayou Pumping Station	\$17,861,000	
Seismic	\$1,786,100	
TOTAL 13 Pumping Stations	\$41,258,910	
30 PLANNING, ENGINEERING, and DESIGN		
NMF PED	\$756,413	
Phase 1 PED	\$980,000	
VE Study (Items 3, 4, and 6)	\$150,000	
VE Study (Items 2 and 5)	\$100,000	
TOTAL PED	\$1,986,413	
31 CONSTRUCTION MANAGEMENT		
NMF S+A	\$1,188,650	
Phase 1, Supervision and Administration	\$2,259,000	
TOTAL S+A	\$3,447,650	
TOTAL PHASE 1 ST. JOHNS BAYOU	\$63,048,973	
Mitigation & Monitoring		
Shorebirds	\$1,587,678	
Borrow Pits	\$72,563	
Buffer	\$1,218,422	
Reforestation	\$14,393,266	
Batture Land Reforestation	\$0	
Big Oak Tree State Park Resoration	\$0	
Floodplain Lake	\$0	
subtotal	\$17,271,928	
SJNM Adjustment (9%)	\$3,304,852	
Mitigation & Monitoring Total	\$20,576,780	
Adaptive Management and Monitoring	\$1,178,000	
TOTAL ALTERNATIVE 4.1	\$84,803,752.78	
01 Lands and Damages		
Levee Closure		\$48,000
Setback Levee Grade Raise		\$630,000
Acquisition		\$210,000
waterfowl		\$2,628,000
TOTAL 01 Lands and Damages		\$3,516,000
11 Levees and Floodwalls		
Item 2, Gravity Outlet and portion of Closure		\$12,093,000
Item 2 New Madrid Floodway Closure		\$2,592,000
Setback Levee Raise		\$8,121,720
TOTAL Levees and Floodwalls		\$22,806,720
30 PLANNING, ENGINEERING, and DESIGN		
NMF Pumping Staion PED		
Item 2 PED		\$513,975.00
Setback Levee Raise PED		\$284,260.20
VE Study		\$50,000
TOTAL PED		\$848,235
31 CONSTRUCTION MANAGEMENT		
NMF Pumping Station		
Item 2		\$807,675
Setback Levee Grade Raise		\$446,695
TOTAL S+A		\$1,254,370
TOTAL NMF Closure		\$28,425,324.80
Mitigation & Monitoring		
Shorebirds		\$3,933,898
Borrow Pits		\$11,250
Buffer		\$0
Reforestation		\$24,798,454
Batture Land Reforestation		\$1,284,005
Big Oak Tree State Park Resoration		\$4,605,743
Floodplain Lake		\$2,087,225
subtotal		\$36,720,575
SJNM Adjustment (9%)		\$33,415,723
Mitigation & Monitoring Total		\$33,415,723
Adaptive Management and Monitoring		\$4,712,000
TOTAL ALTERNATIVE 4.1		\$66,553,048.05

Alt 4.2

Item Description	SJNM Feature		MRL Feature
01 LANDS AND DAMAGES			
Item 1		\$0	
Item 3, St. Johns Abyou (0.0 - 3.0)		\$931,000	
Item 4, St. Johns Bayou and Setback Levee Ditch		\$989,000	
Item 5, St. Johns Bayou Pumping Sation		\$728,000	
Item 6, St. James Ditch		\$1,310,000	
waterfowl		\$2,835,000	
TOTAL 01 Lands and Damages		\$6,793,000	
02 RELOCATIONS			
Item 4 St. Johns Bayou		\$928,000	
Item 4, Setback Levee Ditch		\$74,000	
Item 5, St. Johns Pumping Station		\$186,000	
Item 6, St. James Ditch		\$2,009,000	
TOTAL 02 Relocations		\$3,197,000	
02 CHANNELS AND CANALS			
Item 1		\$0	
Item 3, St. Johns Bayou		\$1,945,000	
Item 4, St. Johns and Setback Levee		\$2,118,000	
Item 5, St. Johns Bayou Pumping Station		\$1,356,000	
Item 6, St. James Ditch		\$947,000	
TOTAL 09 Channels and Canals		\$6,366,000	
13 Pumping Plants			
NMF Pumping Station		\$19,647,100	
NMF Seismic		\$1,964,710	
Item 5, St. Johns Bayou Pumping Station		\$17,861,000	
Seismic		\$1,786,100	
TOTAL 13 Pumping Stations		\$41,258,910	
30 PLANNING, ENGINEERING, and DESIGN			
NMF PED		\$756,413	
Phase 1 PED		\$980,000	
VE Study (Items 3, 4, and 6)		\$150,000	
VE Study (Items 2 and 5)		\$100,000	
TOTAL PED		\$1,986,413	
31 CONSTRUCTION MANAGEMENT			
NMF S+A		\$1,188,650	
Phase 1, Supervison and Adminstration		\$2,259,000	
TOTAL S+A		\$3,447,650	
TOTAL PHASE 1 ST. JOHNS BAYOU		\$63,048,973	
Mitigation & Monitoring			
Shorebirds		\$1,587,678	
Borrow Pits		\$72,563	
Buffer		\$1,218,422	
Reforestation		\$14,393,266	
Batture Land Reforestation		\$0	
Big Oak Tree State Park Resoration		\$0	
Floodplain Lake		\$0	
subtotal		\$17,271,928	
SJNM Adjustment (9%)		\$355,063	
Mitigation & Monitoring Total		\$17,626,991	
Adaptive Management and Monitoring		\$1,178,000	
TOTAL ALTERNATIVE 4.2		\$81,853,964.30	
01 Lands and Damages			
Levee Closure			\$48,000
Setback Levee Grade Raise			\$630,000
Acquisition			\$1,343,900
ag land below 289.5			\$62,531,250
TOTAL 01 Lands and Damages			\$64,553,150
11 Levees and Floodwalls			
Item 2, Gravity Outlet and portion of Closure			\$12,093,000
Item 2 New Madrid Floodway Closure			\$2,592,000
Setback Levee Raise			\$8,121,720
TOTAL Levees and Floodwalls			\$22,806,720
30 PLANNING, ENGINEERING, and DESIGN			
NMF Pumping Staion PED			
Item 2 PED			\$513,975.00
Setback Levee Raise PED			\$284,260.20
VE Study			\$50,000
TOTAL PED			\$848,235
31 CONSTRUCTION MANAGEMENT			
NMF Pumping Station			
Item 2			\$807,675
Setback Levee Grade Raise			\$446,695
TOTAL S+A			\$1,254,370
TOTAL NMF Closure			\$89,462,474.80
Mitigation & Monitoring			
Shorebirds			\$3,933,898
Borrow Pits			\$11,250
Buffer			\$0
Reforestation			
Batture Land Reforestation			
Big Oak Tree State Park Resoration			
Floodplain Lake			
subtotal			\$3,945,148
SJNM Adjustment (9%)			\$3,590,084
Mitigation & Monitoring Total			\$3,590,084
Adaptive Management and Monitoring			\$4,712,000
TOTAL ALTERNATIVE 4.2			\$97,764,559.03