ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Brasher Creek Bay and Sand Creek Bay Dredging
Preliminary Estimate - 30 % Stage

Proj. No. 100-ATL-T34225
Est By: R. Czlapinski
Date: 14-Aug-15

Notes for Option M-1:
Dredging of both bays and open water disposal in deep water lake areas

1) Approximately 12,400 cy of material to be mechanically dredged from Brasher Creek and Sand Creek Bays
2) Clean dredged material can be disposed of in deep open water sections of Highland Lake adjacent to each of the dredging areas
3) 25% contingency allowance for 30% design development stage
4) Cost per cubic yard of sediment dredged $27.74

		Totals $US
A) *Additional Costs*		111,998
Mobilization	7.0%	13,517
Bonds	1.00%	1,931
Contingency Allowance	25.0%	48,275
General Conditions	15.0%	28,965
Fee	10.0%	19,310
Taxes	0.0%	0
B) *Additional Owner Costs*		0
		0
Total (A + B)		111,998
Item Total From Below		231,755
Grand Total (rounded)		**$344,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					10,155
Permit Applications					
Pre-application Meeting	1	ea	$2,500.0	$2,500	
US Army Corps of Engineers	1	ea	$6,000.0	$6,000	
Alabama Dept of Environmental Protection	1	ea	$500.0	$500	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit Compliance Monitoring					
Pre-costruction	0	ea	$0.0	$0	
Turbidity, Env. Compliance	0	ea	$0.0	$0	
Engineering Design					24,500
Design					
Final design and specifications	1	ea	$10,000.0	$10,000	
Construction Support					
Bidding	1	ea	$3,000.0	$3,000	
Construction Observations	1	ea	$10,000.0	$10,000	
Certification	1	ea	$1,500.0	$1,500	
Construction					193,100
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	2	ls	$2,000.0	$4,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	2	ls	$2,000.0	$4,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	1	ls	$2,000.0	$2,000	
Site restoration	1	ls	$4,000.0	$4,000	
Site security	50	day	$200.0	$10,000	
Dredging and Dewatering					
Dredging	12,400	cy	$11.0	$136,400	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Turbidity curtains	2	ls	$5,000.0	$10,000	

ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Brasher Creek Bay and Sand Creek Bay Dredging
Preliminary Estimate - 30 % Stage

Proj. No. 100-ATL-T34225
Est By: R. Czlapinski
Date: 14-Aug-15

Notes for Option M-2:
Dredging of both bays and open water disposal in deep water lake areas in two phases

1) Approximately 12,400 cy of material to be mechanically dredged from Brasher Creek and Sand Creek Bays in 2 phases
2) Clean dredged material can be disposed of in deep open water sections of Highland Lake adjacent to each of the dredging areas
3) 25% contingency allowance for 30% design development stage
4) Cost per cubic yard of sediment dredged $30.97

		Totals $US
A) *Additional Costs*		121,278
Mobilization	7.0%	14,637
Bonds	1.00%	2,091
Contingency Allowance	25.0%	52,275
General Conditions	15.0%	31,365
Fee	10.0%	20,910
Taxes	0.0%	0
B) *Additional Owner Costs*		14,637
Second Mobilization		14,637
Total (A + B)		135,915
Item Total From Below		247,755
Grand Total (rounded)		**$384,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					10,155
Permit Applications					
Pre-application Meeting	1	ea	$2,500.0	$2,500	
US Army Corps of Engineers	1	ea	$6,000.0	$6,000	
Alabama Dept of Environmental Protection	1	ea	$500.0	$500	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit Compliance Monitoring					
Pre-costruction	0	ea	$0.0	$0	
Turbidity, Env. Compliance	0	ea	$0.0	$0	
Engineering Design					24,500
Design					
Final design and specifications	1	ea	$10,000.0	$10,000	
Construction Support					
Bidding	1	ea	$3,000.0	$3,000	
Construction Observations	1	ea	$10,000.0	$10,000	
Certification	1	ea	$1,500.0	$1,500	
Construction					209,100
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	2	ls	$2,000.0	$4,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	2	ls	$2,000.0	$4,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	2	ls	$2,000.0	$4,000	
Site restoration	2	ls	$4,000.0	$8,000	
Site security	100	day	$200.0	$20,000	
Dredging and Dewatering					
Dredging	12,400	cy	$11.0	$136,400	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Turbidity curtains	2	ls	$5,000.0	$10,000	

ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Brasher Creek Bay and Sand Creek Bay Dredging
Preliminary Estimate - 30 % Stage

Proj. No. 100-ATL-T34225
Est By: R. Czlapinski
Date: 24-Sep-15

Notes for Option M-3:
Dredging of Brasher Creek Bay and open water disposal in deep water lake areas

1) Approximately 6,400 cy of material to be mechanically dredged from Brasher Creek
2) Clean dredged material can be disposed of in deep open water sections of Highland Lake adjacent to each of the dredging areas
3) 25% contingency allowance for 30% design development stage
4) Cost per cubic yare of sediment dredged $36.56

		Totals $US
A) *Additional Costs*		71,398
Mobilization	7.0%	8,617
Bonds	1.00%	1,231
Contingency Allowance	25.0%	30,775
General Conditions	15.0%	18,465
Fee	10.0%	12,310
Taxes	0.0%	0
B) *Additional Owner Costs*		0
		0
Total (A + B)		71,398
Item Total From Below		161,755
Grand Total (rounded)		**$234,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					10,155
Permit Applications					
Pre-application Meeting	1	ea	$2,500.0	$2,500	
US Army Corps of Engineers	1	ea	$6,000.0	$6,000	
Alabama Dept of Environmental Protection	1	ea	$500.0	$500	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit Compliance Monitoring					
Pre-costruction	0	ea	$0.0	$0	
Turbidity, Env. Compliance	0	ea	$0.0	$0	
Engineering Design					24,500
Design					
Final design and specifications	1	ea	$10,000.0	$10,000	
Construction Support					
Bidding	1	ea	$3,000.0	$3,000	
Construction Observations	1	ea	$10,000.0	$10,000	
Certification	1	ea	$1,500.0	$1,500	
Construction					123,100
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	1	ls	$2,000.0	$2,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	1	ls	$2,000.0	$2,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	1	ls	$2,000.0	$2,000	
Site restoration	1	ls	$4,000.0	$4,000	
Site security	50	day	$200.0	$10,000	
Dredging and Dewatering					
Dredging	6,400	cy	$11.0	$70,400	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Turbidity curtains	2	ls	$5,000.0	$10,000	

ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Brasher Creek Bay and Sand Creek Bay Dredging
Preliminary Estimate - 30 % Stage

Proj. No. 100-ATL-T34225
Est By: R. Czlapinski
Date: 14-Aug-15

Notes for Option M-4:
Dredging of both bays and upland disposal at Sand Creek site with diked containment

1) Approximately 12,400 cy of material to be mechanically dredged from Brasher Creek and Sand Creek Bays
2) Clean dredged material can be disposed of in diked containment at the previously used site near Sand Creek
3) 25% contingency allowance for 30% design development stage
4) Cost per cubic yard of sediment dredged $39.11

		Totals $US
A) *Additional Costs*		163,618
Mobilization	7.0%	19,747
Bonds	1.00%	2,821
Contingency Allowance	25.0%	70,525
General Conditions	15.0%	42,315
Fee	10.0%	28,210
Taxes	0.0%	0
B) *Additional Owner Costs*		0
		0
Total (A + B)		163,618
Item Total From Below		320,755
Grand Total (rounded)		**$485,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					10,155
Permit Applications					
Pre-application Meeting	1	ea	$2,500.0	$2,500	
US Army Corps of Engineers	1	ea	$6,000.0	$6,000	
Alabama Dept of Environmental Protection	1	ea	$500.0	$500	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit Compliance Monitoring					
Pre-costruction	0	ea	$0.0	$0	
Turbidity, Env. Compliance	0	ea	$0.0	$0	
Engineering Design					24,500
Design					
Final design and specifications	1	ea	$10,000.0	$10,000	
Construction Support					
Bidding	1	ea	$3,000.0	$3,000	
Construction Observations	1	ea	$10,000.0	$10,000	
Certification	1	ea	$1,500.0	$1,500	
Construction					282,100
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	2	ls	$2,000.0	$4,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	2	ls	$2,000.0	$4,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	1	ls	$5,000.0	$5,000	
Site restoration	1	ls	$15,000.0	$15,000	
Diking	1,500	lf	$50.0	$75,000	
Site security	50	day	$200.0	$10,000	
Dredging and Dewatering					
Dredging	12,400	cy	$11.0	$136,400	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Turbidity curtains	2	ls	$5,000.0	$10,000	

ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Sand Creek Bay | **Proj. No.** 100-ATL-T34225
Dredging with Upland Placement | **Est By:** R. Czlapinski
Preliminary Estimate - 30 % Stage | **Date:** 24-Sep-15

Notes for Option M-5:

Dredging of Sand Creek Bay and upland disposal at Sand Creek site with diked containment

1) Approximately 6,000 cy of material to be mechanically dredged from Sand Creek Bays

2) Clean dredged material can be disposed of in diked containment at the previously used site near Sand Creek

3) 25% contingency allowance for 30% design development stage

4) Cost per cubic yard of sediment dredged $61.17

		Totals $US
A) *Additional Costs*		120,466
Mobilization	7.0%	14,539
Bonds	1.00%	2,077
Contingency Allowance	25.0%	51,925
General Conditions	15.0%	31,155
Fee	10.0%	20,770
Taxes	0.0%	0
B) *Additional Owner Costs*		0
		0
Total (A + B)		120,466
Item Total From Below		246,355
Grand Total (rounded)		**$367,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					10,155
Permit Applications					
Pre-application Meeting	1	ea	$2,500.0	$2,500	
US Army Corps of Engineers	1	ea	$6,000.0	$6,000	
Alabama Dept of Environmental Protection	1	ea	$500.0	$500	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit Compliance Monitoring					
Pre-costruction	0	ea	$0.0	$0	
Turbidity, Env. Compliance	0	ea	$0.0	$0	
Engineering Design					24,500
Design					
Final design and specifications	1	ea	$10,000.0	$10,000	
Construction Support					
Bidding	1	ea	$3,000.0	$3,000	
Construction Observations	1	ea	$10,000.0	$10,000	
Certification	1	ea	$1,500.0	$1,500	
Construction					207,700
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	1	ls	$2,000.0	$2,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	1	ls	$2,000.0	$2,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	1	ls	$5,000.0	$5,000	
Site restoration	1	ls	$15,000.0	$15,000	
Diking	1,500	lf	$50.0	$75,000	
Site security	50	day	$200.0	$10,000	
Dredging and Dewatering					
Dredging	6,000	cy	$11.0	$66,000	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Turbidity curtains	2	ls	$5,000.0	$10,000	

ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Brasher Creek Bay and Sand Creek Bay Dredging
Preliminary Estimate - 30 % Stage

Proj. No. 100-ATL-T34225
Est By: R. Czlapinski
Date: 17-Aug-15

Notes for Option H-1

Dredging of both bays and upland disposal at Sand Creek site with geotextile tubes

1) Approximately 12,400 cy of material to be hydraulically dredged from Brasher Creek and Sand Creek Bays
2) Dredged material to be treated with polymer and placed into geotextile tubes at Sand Creek
3) 25% contingency allowance for 30% design development stage
4) Full site including apparent isolated wetland can be used
5) Cost per cubic yard of sediment dredged $51.53

		Totals $US
A) *Additional Costs*		213,962
Mobilization	7.0%	25,823
Bonds	1.00%	3,689
Contingency Allowance	25.0%	92,225
General Conditions	15.0%	55,335
Fee	10.0%	36,890
Taxes	0.0%	0
B) *Additional Owner Costs*		0
		0
Total (A + B)		213,962
Item Total From Below		424,555
Grand Total (rounded)		**$639,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					9,655
Permit Applications					
US Army Corps of Engineers	1	ea	$2,500.0	$2,500	
Alabama Dept of Environmental Protection	1	ea	$6,000.0	$6,000	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit compliance Monitoring					
Pre-costruction	0	ea	$660.0	$0	
Turbidity, Env. Compliance	0	ea	$660.0	$0	
Engineering Design					42,000
Design					
Final design and specifications	1	ea	$15,000.0	$15,000	
Construction Support					
Bidding	1	ea	$4,000.0	$4,000	
Construction Observations	1	ea	$20,000.0	$20,000	
Certification	1	ea	$3,000.0	$3,000	
Construction					368,900
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	2	ls	$2,000.0	$4,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	2	ls	$2,000.0	$4,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	1.4	ac	$4,000.0	$5,600	
Site restoration	1.4	ac	$4,000.0	$5,600	
Site security	60	day	$200.0	$12,000	
Dredging and Dewatering					
Dredging	12,400	cy	$11.0	$136,400	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Polymer additive	12,400	cy	$2.5	$31,000	
Polymer emulsion feeder	2	mo	$1,300.0	$2,600	
Geotextile tubes (60 ft circumference)	2,000	lin ft	$35.0	$70,000	
Placing and filling geotextile tubes	2,000	lin ft	$35.0	$70,000	
turbidity curtains	1	ls	$5,000.0	$5,000	

ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Brasher Creek Bay and Sand Creek Bay Dredging
Preliminary Estimate - 30 % Stage

Proj. No. 100-ATL-T34225
Est By: R. Czlapinski
Date: 14-Aug-15

Notes for Option H-3
Dredging of both bays and In lake land creation (peninsula fill)

1) Approximately 12,400 cy of material to be hydraulically dredged from Brasher Creek and Sand Creek Bays
2) Dredged material to be treated with polymer and placed into geotextile tubes in Brasher Creek Bay to create a new peninsula
3) 25% contingency allowance for 30% design development stage
4) Shoreline armored and fill on tubes for UV and wear protection
5) Cost per cubic yard of sediment dredged $79.19

		Totals $US
A) *Additional Costs*		339,961
Mobilization	7.0%	41,030
Bonds	1.00%	5,861
Contingency Allowance	25.0%	146,535
General Conditions	15.0%	87,921
Fee	10.0%	58,614
Taxes	0.0%	0
B) *Additional Owner Costs*		0
		0
Total (A + B)		339,961
Item Total From Below		641,795
Grand Total (rounded)		**$982,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					9,655
Permit Applications					
US Army Corps of Engineers	1	ea	$2,500.0	$2,500	
Alabama Dept of Environmental Protection	1	ea	$6,000.0	$6,000	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit compliance Monitoring					
Pre-costruction	0	ea	$660.0	$0	
Turbidity, Env. Compliance	0	ea	$660.0	$0	
Engineering Design					42,000
Design					
Final design and specifications	1	ea	$15,000.0	$15,000	
Construction Support					
Bidding	1	ea	$4,000.0	$4,000	
Construction Observations	1	ea	$20,000.0	$20,000	
Certification	1	ea	$3,000.0	$3,000	
Construction					586,140
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	2	ls	$2,000.0	$4,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	2	ls	$2,000.0	$4,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	1	ac	$2,000.0	$2,000	
Site restoration	1	ac	$4,000.0	$4,000	
Site security	60	day	$200.0	$12,000	
Dredging and Dewatering					
Dredging	12,400	cy	$11.0	$136,400	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Polymer additive	12,400	cy	$2.5	$31,000	
Polymer emulsion feeder	2	mo	$1,300.0	$2,600	
Geotextile tubes (60 ft circumference)	2,000	lin ft	$35.0	$70,000	
Placing and filling geotextile tubes	2,000	lin ft	$50.0	$100,000	
turbidity curtains	1	ls	$5,000.0	$5,000	
Shoreline Stabilization and Landscaping					
Marine mattress (6 inch thick)	12,400	sq ft	$5.6	$69,440	
Aquatic vegetative planting	12,400	sq ft	$2.5	$31,000	
Seeding/landscaping	12,400	sq ft	$5.0	$62,000	
Water access/bulkhead	100	lin ft	$300.0	$30,000	

ENGINEER'S OPINION OF PROBABLE COST OF DESIGN/CONSTRUCTION

Project: Highland Lake - Brasher Creek Bay and Sand Creek Bay Dredging
Preliminary Estimate - 30 % Stage

Proj. No. 100-ATL-T34225
Est By: R. Czlapinski
Date: 25-Sep-15

Notes for Option H-4:
Dredging of Brasher Creek Bay and in lake land creation (peninsula fill)

1) Approximately 6,400 cy of material to be hydraulically dredged from Brasher Creek
2) Dredged material to be treated with polymer and placed into geotextile tubes in Brasher Creek Bay to create a new peninsula
3) 25% contingency allowance for 30% design development stage
4) Shoreline armored and fill on tubes for UV and wear protection
5) Cost per cubic yard of sediment dredged $90.78

		Totals $US
A) *Additional Costs*		192,734
Mobilization	7.0%	23,261
Bonds	1.00%	3,323
Contingency Allowance	25.0%	83,075
General Conditions	15.0%	49,845
Fee	10.0%	33,230
Taxes	0.0%	0
B) *Additional Owner Costs*		0
		0
Total (A + B)		192,734
Item Total From Below		387,955
Grand Total (rounded)		**$581,000**

Budget Items & Descriptions	Unit Costs			Totals $US	
	No. Units	Units Meas.	Per Unit	Item Totals	Sub-Totals
Field Data Collection Programs					4,000
Bathymetric Survey	1	ea	$4,000.0	$4,000	
Regulatory requirements					9,655
Permit Applications					
US Army Corps of Engineers	1	ea	$2,500.0	$2,500	
Alabama Dept of Environmental Protection	1	ea	$6,000.0	$6,000	
Construction General Permit	1	ea	$1,155.0	$1,155	
Permit compliance Monitoring					
Pre-costruction	0	ea	$660.0	$0	
Turbidity, Env. Compliance	0	ea	$660.0	$0	
Engineering Design					42,000
Design					
Final design and specifications	1	ea	$15,000.0	$15,000	
Construction Support					
Bidding	1	ea	$4,000.0	$4,000	
Construction Observations	1	ea	$20,000.0	$20,000	
Certification	1	ea	$3,000.0	$3,000	
Construction					332,300
Project Organization and Control					
Environmental protection plan	1	ls	$5,000.0	$5,000	
Project layout survey	1	ls	$2,000.0	$2,000	
Progress surveys	3	ls	$2,000.0	$6,000	
As-built survey	1	ls	$2,000.0	$2,000	
Project schedule	3	ls	$1,000.0	$3,000	
Dredging Operations Staging Area					
Site preparation	1	ac	$2,000.0	$2,000	
Site restoration	1	ac	$4,000.0	$4,000	
Site security	60	day	$200.0	$12,000	
Dredging and Dewatering					
Dredging	6,400	cy	$11.0	$70,400	
Debris removal and disposal	1	ton	$8,700.0	$8,700	
Polymer additive	6,400	cy	$2.5	$16,000	
Polymer emulsion feeder	2	mo	$1,300.0	$2,600	
Geotextile tubes (60 ft circumference)	1,000	lin ft	$35.0	$35,000	
Placing and filling geotextile tubes	1,000	lin ft	$50.0	$50,000	
turbidity curtains	1	ls	$5,000.0	$5,000	
Shoreline Stabilization and Landscaping					
Marine mattress (6 inch thick)	6,000	sq ft	$5.6	$33,600	
Aquatic vegetative planting	6,000	sq ft	$2.5	$15,000	
Seeding/landscaping	6,000	sq ft	$5.0	$30,000	
Water access/bulkhead	100	lin ft	$300.0	$30,000	