

Lower Blacktail Creek Restoration

Construction Cost Estimate

Prepared by Matt Daniels (RDG) and Amy Sacry (Geum) 01-15-2015

Reach BTC-11-01 Stream Length: 1500 \$ per lf: \$ 218

Item	Quantity	Units	Unit Cost	Cost
1 Mobilization and Demobilization	1	Lump Sum	\$ 32,435	\$ 32,435
2 Water Management	1	Lump Sum	\$ 5,000	\$ 5,000
3 Acquire and Furnish Trees and Brush for Banks and Floodplain	241	Trees	\$ 300	\$ 72,207
4 Acquire and Furnish Gravel for Streambed Material	133	Cubic Yards	\$ 40	\$ 5,333
5 Vegetation Salvage and Transplant	0.5	Acres	\$ 3,000	\$ 1,500
6 Floodplain Excavation	16,800	Cubic Yards	\$ 6.00	\$ 100,800
7 Streambed Construction	1,500	Linear Feet	\$ 5.00	\$ 7,500
8 Bioengineering Streambank Structures	900	Linear Feet	\$ 45	\$ 40,500
9 Vegetated Wood and Brush Fascine Streambank Structures	900	Linear Feet	\$ 15	\$ 13,500
10 Woody Debris Jam Streambank Structures	21	Structures	\$ 500	\$ 10,345
11 Acquire Vegetative Cuttings for Streambank Structures	9,000	Cuttings	\$ 1.00	\$ 9,000
12 Floodplain Surface Roughness Treatments	2.6	Acres	\$ 2,500	\$ 6,500
13 Install Containerized Plants and Individual Plant Protectors	885	Each	\$ 15	\$ 13,272
14 Wetland Plant Installation	2,831	Each	\$ 3	\$ 8,494
15 Seeding	2.6	Acres	\$ 350	\$ 910
REACH BTC-11-01 TOTAL				\$ 327,296

Reach BTC-11-02 Stream Length: 3500 \$ per lf: \$ 238

Item	Quantity	Units	Unit Cost	Cost
1 Mobilization and Demobilization	1	Lump Sum	\$ 81,781	\$ 81,781
2 Water Management	1	Lump Sum	\$ 10,000	\$ 10,000
3 Acquire and Furnish Trees and Brush for Banks and Floodplain	573	Trees	\$ 300	\$ 171,983
4 Acquire and Furnish Gravel for Streambed Material	311	Cubic Yards	\$ 40	\$ 12,444
5 Vegetation Salvage and Transplant	1.6	Acres	\$ 3,000	\$ 4,800
6 Floodplain Excavation	40,700	Cubic Yards	\$ 7.00	\$ 284,900
7 Streambed Construction	3,500	Linear Feet	\$ 5.00	\$ 17,500
8 Bioengineering Streambank Structures	2,100	Linear Feet	\$ 45	\$ 94,500
9 Vegetated Wood and Brush Fascine Streambank Structures	2,100	Linear Feet	\$ 15	\$ 31,500
10 Woody Debris Jam Streambank Structures	48	Structures	\$ 500	\$ 24,138
11 Acquire Vegetative Cuttings for Streambank Structures	21,000	Cuttings	\$ 1.00	\$ 21,000
12 Floodplain Surface Roughness Treatments	6.3	Acres	\$ 2,500	\$ 15,750
13 Install Containerized Plants and Individual Plant Protectors	2,144	Each	\$ 15	\$ 32,160
14 Wetland Plant Installation	6,861	Each	\$ 3	\$ 20,582
15 Seeding	6.3	Acres	\$ 350	\$ 2,205
16 Bridge Installation	350	Linear Feet	\$ 2,500	\$ 875,000
17 Slope Treatments	0.7	Acres	\$ 10,000	\$ 6,887
REACH BTC-11-02 TOTAL				\$ 1,707,130

Reach BTC-11-03 Stream Length: 2200 \$ per lf: \$ 48

Item	Quantity	Units	Unit Cost	Cost
1 Mobilization and Demobilization	1	Lump Sum	\$ 10,534	\$ 10,534
2 Pond Improvements	1	Lump Sum	\$ 60,000	\$ 60,000
3 Bioengineering Streambank Structures	200	Linear Feet	\$ 45	\$ 9,000
4 Install Containerized Plants and Individual Plant Protectors	871	Each	\$ 15	\$ 13,068
5 Wetland Plant Installation	3,485	Each	\$ 3	\$ 10,454
6 Seeding	6.4	Acres	\$ 350	\$ 2,240
7 Acquire Vegetative Cuttings for Streambank Structures	1,000	Cuttings	\$ 1.00	\$ 1,000
REACH BTC-11-03 TOTAL				\$ 106,296

Reach BTC-12-04 Stream Length: 1200 \$ per lf: \$ 222

Item	Quantity	Units	Unit Cost	Cost
1 Mobilization and Demobilization	1	Lump Sum	\$ 26,345	\$ 26,345
2 Water Management	1	Lump Sum	\$ 5,000	\$ 5,000
3 Acquire and Furnish Trees and Brush for Banks and Floodplain	175	Trees	\$ 300	\$ 52,366
4 Acquire and Furnish Gravel for Streambed Material	107	Cubic Yards	\$ 40	\$ 4,267
5 Vegetation Salvage and Transplant	0.5	Acres	\$ 3,000	\$ 1,500
6 Floodplain Excavation	15,000	Cubic Yards	\$ 7.00	\$ 105,000
7 Streambed Construction	1,200	Linear Feet	\$ 5.00	\$ 6,000
8 Bioengineering Streambank Structures	480	Linear Feet	\$ 45	\$ 21,600
9 Vegetated Wood and Brush Fascine Streambank Structures	480	Linear Feet	\$ 15	\$ 7,200
10 Woody Debris Jam Streambank Structures	17	Structures	\$ 500	\$ 8,276
11 Acquire Vegetative Cuttings for Streambank Structures	4,800	Cuttings	\$ 1.50	\$ 7,200
12 Floodplain Surface Roughness Treatments	2.2	Acres	\$ 2,500	\$ 5,500
13 Install Containerized Plants and Individual Plant Protectors	749	Each	\$ 15	\$ 11,230
14 Wetland Plant Installation	1,198	Each	\$ 3	\$ 3,594
15 Seeding	2.2	Acres	\$ 350	\$ 770
16 Bridge Installation	50	Linear Feet	\$ 2,500	\$ 125,000
REACH BTC-12-04 TOTAL				\$ 390,847

Summary of All Reaches

CONSTRUCTION SUBTOTAL WITHOUT BRIDGES	\$ 1,531,569
CONSTRUCTION SUBTOTAL WITH BRIDGES	\$ 2,531,569

Other Costs		
1	Design (data collection, analysis, plans and permitting)	15% of Construction Cost [^] \$ 229,735
2	Construction Oversight (staking and compliance)	10% of Construction Cost [^] \$ 153,157
3	Monitoring and Maintenance	15% of Construction Cost [^] \$ 229,735
4	Contingency	15% of Subtotal \$ 471,630
		GRAND TOTAL WITHOUT BRIDGES \$ 2,615,827
		GRAND TOTAL WITH BRIDGES \$ 3,615,827

Assumptions for Construction Cost Estimates

1. Costs are based on Conceptual Restoration designs dated December 2014.
2. Mobilization and demobilization assumed to be 10% of total and includes site preparation, development of access and staging, site facilities, site reclamation and other miscellaneous administrative costs.
3. Water management includes dewatering using trash pumps, new channel activation, ditches, settling ponds.
4. Materials salvage includes acquisition of trees, soil and transplants from on-site sources at a cost of \$3000-\$3500 per acre.
5. A 15 percent contingency is included to address uncertainty.

[^] Percent of construction costs without bridges