

ENGINEER'S OPINION OF PROBABLE COST

100% Design



Project Name: Asotin Creek PA-06 Fish Habitat Restoration Project

Project #: 20038

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Reviewed by: Susan Firor, P.E.

Date: 11/18/2022

ITEM NO.	DESCRIPTION	EST. QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Mobilization and Demobilization	1	LS	\$17,690	\$17,690
2	Provide Water (during Construction)	1	LS	\$5,412	\$5,412
	Compaction and Conditioning	20	HR	\$132	\$2,640
	Live Stakes Watering for Brush Fascine	21	HR	\$132	\$2,772
3	Stormwater Best Management Practices	1	LS	\$4,114	\$4,114
	Straw Wattles, 100% biodegradable, (12")	600	LF	\$1	\$768
	Wood Stakes, 36"	400	EA	\$1	\$366
	Install Straw Wattles	4	HR	\$120	\$480
	Oil-absorbing floating boom	1	LS	\$1,500	\$1,500
	Spill Containment Kits	1	LS	\$1,000	\$1,000
4	Temporary Construction Access Road	1	LS	\$2,000	\$2,000
	Temporary Construction Access Road Decompanction	3000	LF	\$1	\$1,500
5	Remove Concrete Barricades	70	LF	\$24	\$1,650
	Pick up and load on to Dump Truck	4	HR	\$222	\$888
	Transport on site	2	HR	\$126	\$252
	Transport to waste facility	4	HR	\$126	\$504
	Waste facility disposal fee	16.5	Ton	\$50	\$821
6	Remove Rock Crossing	60	LF	\$9	\$540
	Excavation	90	BCY	\$3	\$270
	Transport to waste facility	2	HR	\$126	\$252
7	Side Channel Entrance Reshaping	50	LF	\$18	\$900
	Excavate to Design Grade	20	BCY	\$30	\$600
	Transport on site to spoil area	2	HR	\$126	\$252
8	Brush Fascine	180	LF	\$128	\$22,980
	Excavation	0.8	CY/LF	\$3	\$2
	Haul & Spoil On Site	0.4	CY/LF	\$6	\$3
	Procure Logs	0.4	EA/LF	\$125	\$50
	Load & Haul Logs to site	0.4	EA/LF	\$44	\$18
	Haul On Site and Place Logs	0.4	EA/LF	\$21	\$9
	Purchase Slash	0.1	CY/LF	\$65	\$7
	Load and Haul slash to site	0.1	CY/LF	\$36	\$4
	Haul On Site and Place Slash	0.1	CY/LF	\$14	\$1
	Purchase Live Stakes	3	EA/LF	\$7	\$21
	Place Live Stakes	3	EA/LF	\$2	\$6
	Backfill and Compact	0.8	CY/LF	\$10	\$8
9	Habitat Structures	16	EA	\$2,510	\$40,160
	Purchase Anchor Logs	1	EA	\$250	\$250
	Load and Haul Anchor Logs to site	1	EA	\$89	\$89
	Purchase Small Logs	3	EA	\$125	\$375
	Load and Haul Small Logs to site	3	EA	\$44	\$133
	Structural Fill (Purchase & Delivery)	6	LCY	\$11	\$66
	Haul & Spoil On Site	0.6	10 CY	\$63	\$38
	Haul Logs On Site	0.5	HR	\$288	\$144
	Purchase Log Posts	3	EA	\$63	\$188
	Load and Haul Log Posts to site	3	EA	\$22	\$67
	Compaction Equipment	1	HR	\$44	\$44
	Installation	5	HR	\$222	\$1,110

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10	Key Structures	9	EA	\$5,240	\$47,160
	<i>Purchase Anchor Logs</i>	4	EA	\$250	\$1,000
	<i>Load and Haul AnchorLogs to site</i>	4	EA	\$89	\$356
	<i>Structural Fill (Purchase & Delivery)</i>	9	LCY	\$11	\$99
	<i>Haul & Spoil On Site</i>	0.9	10 CY	\$63	\$57
	<i>Purchase Small Logs</i>	4	EA	\$125	\$500
	<i>Load and Haul Small Logs to site</i>	4	EA	\$44	\$178
	<i>Purchase Slash</i>	0.5	10 CY	\$65	\$33
	<i>Load and Haul slash to site</i>	0.5	10 CY	\$356	\$178
	<i>Haul Logs and Slash On Site</i>	0.25	HR	\$288	\$72
	<i>Purchase Log Posts</i>	10	EA	\$63	\$625
	<i>Load and Haul Log Posts to site</i>	10	EA	\$22	\$222
	<i>Purchase and Haul 30" Boulders</i>	2	EA	\$50	\$100
	<i>Compaction Equipment</i>	1	HR	\$44	\$44
	<i>Installation</i>	8	HR	\$222	\$1,776
11	Livestock Fence with Removable Cattle Panels	355	LF	\$25	\$8,875
	<i>New Livestock Fence</i>	275	LF		
	<i>Removable Fence Sections</i>	80	LF		
12	Livestock Crossings & Rock Ford Installation	260	LF	\$19	\$4,940.00
	Livestock Crossings	190	LF	\$17	\$3,177
	<i>Excavation</i>	90	BCY	\$5	\$450
	<i>Haul & Spoil On Site</i>	9	10 CY	\$63	\$567
	<i>6" minus rock purchase and haul</i>	40	LCY	\$17	\$680
	<i>12" minus rock purchase and haul</i>	80	LCY	\$11	\$880
	<i>Place materials</i>	120	LCY	\$5	\$600
	Rock Ford	70	LF	\$24	\$1,645
	<i>Excavation</i>	50	BCY	\$5	\$250
	<i>Haul & Spoil On Site</i>	5	10 CY	\$63	\$315
	<i>6" minus rock purchase and haul</i>	20	LCY	\$17	\$340
	<i>12" minus rock purchase and haul</i>	40	LCY	\$11	\$440
	<i>Place materials</i>	60	LCY	\$5	\$300
13	Rock/Soil Berm	165	LF	\$19	\$3,181
	<i>Structural Fill Purchase and Haul</i>	43	LCY	\$11	\$473
	<i>Rock Armor Purchase and Haul</i>	20	BCY	\$30	\$600
	<i>Watering</i>	1	LS	\$528	\$528
	<i>Compaction Equipment</i>	1	Day	\$350	\$350
	<i>Place and Compact structural Fill</i>	43	BCY	\$10	\$430
	<i>Place Rock Armor</i>	20	BCY	\$5	\$100
	<i>Topsoil Purchase and Haul</i>	20	LCY	\$30	\$600
	<i>Topsoil Installation</i>	20	BCY	\$5	\$100
14	Post Assisted Log Structures	11	EA	\$900	\$9,900
	<i>Purchase Posts</i>	15	EA	\$11	\$170
	<i>Purchase Slash</i>	0.5	10 CY	\$65	\$33
	<i>Load and Haul Slash to site</i>	0.5	10 CY	\$356	\$178
	<i>Transport On Site and Place Slash</i>	0.25	HR	\$294	\$74
	<i>Installation</i>	2	HR	\$222	\$444
15	Off Channel Habitat Area	2500	SF	\$0.60	\$1,500
	<i>Purchase Small Logs</i>	6	EA	\$125	\$750
	<i>Load and Haul Small Logs to site</i>	6	EA	\$44	\$267
	<i>Excavate to Design Grade</i>	50	BCY	\$20	\$1,000
	<i>Haul & Spoil Material on Site</i>	5	10 CY	\$63	\$315
16	Floodplain Roughness & Microtopography	40400	SF	\$0.31	\$12,410
	<i>Purchase Slash</i>	21	10 CY	\$65	\$1,365
	<i>Load and Haul slash to site</i>	21	10 CY	\$356	\$7,466
	<i>Transport on site and Place Slash</i>	21	10 CY	\$170	\$3,570

ITEM NO.	DESCRIPTION	EST. QUANTITY	UNITS	UNIT PRICE	TOTAL
17	Hydroseeding and Mulching	94000	SF	\$0.12	\$11,280
	<i>Hydroseeding, including Seed, Mulch, and Fertilizer</i>	<i>94</i>	<i>MSF</i>	<i>\$120</i>	<i>\$11,280</i>
18	Engineering Construction Oversight	1	LS	\$37,000	\$37,000
	<i>Construction Staking</i>	<i>16</i>	<i>HR</i>	<i>\$149</i>	<i>\$2,384</i>
	<i>Engineer 3 Onsite</i>	<i>168</i>	<i>HR</i>	<i>\$149</i>	<i>\$25,032</i>
	<i>Travel Time</i>	<i>48</i>	<i>HR</i>	<i>\$149</i>	<i>\$7,152</i>
	<i>Mileage</i>	<i>2400</i>	<i>MI</i>	<i>\$1</i>	<i>\$1,440</i>
	<i>Principal</i>	<i>4</i>	<i>HR</i>	<i>\$195</i>	<i>\$780</i>
				Construction Subtotal	\$231,580
				Contingency (10%)	\$23,160
				TOTAL	\$254,740

* Estimate does not include costs for permitting, O&M, or monitoring.

**Costs for engineering Services during construction to be determined.

Acronyms: LS=Lump Sum; LF=Linear Foot; EA=Each; SF=Square Foot; BCY=Bank Cubic Yard

Assumed Hourly Rates

Excavator	\$162
Dozer	\$132
Dump Truck	\$126
Laborer	\$60
Skid Steer	\$114
Water Truck	\$132