

Lower Chiwaukum Creek Habitat Improvement Project

Chiwaukum Creek, Chelan County, Washington

30% Design (updated 3/24/2023)

Type Estimate: Class 2 (-5% to +20%)

Item Description	Quantity	Unit	Unit Cost	Cost	Extended Cost	Quantities Assumptions
General					\$ 77,000	
Mobilization	1	LS	\$ 32,777	\$ 32,777		8% of total (excluding tax and contingency)
Cofferdams	350	LF	\$ 35.00	\$ 12,250		Includes cofferdam plan submittal and implementation
Pumping and Dewatering	1	LS	\$ 15,000	\$ 15,000		Includes pumping plan submittal and implementation
Traffic Control	1	LS	\$ 3,000	\$ 3,000		
Surveying	1	LS	\$ 8,000	\$ 8,000		
Clearing and Grubbing	1.30	AC	\$ 5,000	\$ 6,500		Assumes 50% of ~2.5 acre disturbance area
SPCC Plan and Implementation	1	LS	\$ 3,000	\$ 3,000		
ESC Plan and Implementation	1	LS	\$ 3,000	\$ 3,000		Includes plan submittal
Construction Access						
Temporary Access Routes	1,500	LF	\$ -	\$ -		Incidental cost
Temporary Stabilized Access Route (wood chips or gravel)	225	LF	\$ 50	\$ 11,250		15% of access route length in saturated soils
Temporary Bridge	1	LS	\$ 15,000	\$ 15,000		
Site Work					\$ 81,415	
Demolition						
Asphalt removal and disposal	700	CY	\$ 50	\$ 35,000		56,000 sq. feet of asphalt removal; 4" thickness (assumed)
Culvert Removal	120	LF	\$ 10	\$ 1,200		Removal of (2) 24" culverts and end sections
Channel Excavation and Offsite Haul						
Road Removals	1,000	CY	\$ 25	\$ 25,000		
Gravel Pedestrian Trail						
Gravel Backfill and Compaction	330	CY	\$ 35	\$ 11,550		8' trail width; 6' thickness
Hardened Pedestrian Crossing						
Subsurface Preparation	65	CY	\$ 6	\$ 390		Overexcavation; 10' trail width; 12' thickness
Cobble Backfill and Compaction	65	CY	\$ 35	\$ 2,275		10' trail width; 12' thickness
Boulders	30	EA	\$ 200	\$ 6,000		24-36" boulder spaced 12" between
Wood Habitat Structures					\$ 258,384	
Habitat Structure - 1A (Whole Tree with Piles)					\$ 60,192	
Type 2 Log (14" - 20" DBH x 30' min; wo/ rootwad)	19	EA	\$ 600	\$ 11,400		Includes material acquisition
Type 3 Log (14" - 20" DBH x 30' min; w/ rootwad)	19	EA	\$ 700	\$ 13,300		Includes material acquisition
Racking (4" - 12" DBH x 15' min. length; rootwad optional)	38	EA	\$ 200	\$ 7,600		Includes material acquisition
Slash (1" - 4" DBH x 5' min. length)	38	CY	\$ 125	\$ 4,750		Includes material acquisition
Live Stakes	95	EA	\$ 6	\$ 570		Includes material acquisition
Installation	19	LS	\$ 1,188	\$ 22,572		
Habitat Structure - 1B (Felled Tree)					\$ 6,600	
Felled Tree	22	EA	\$ 300	\$ 6,600		
Habitat Structure - 2 (Bleeder Jam)					\$ 12,752	
Type 1 Log (14" - 20" DBH x 30' min; w/ rootwad)	4	EA	\$ 700	\$ 2,800		Includes material acquisition
Type 2 Log (14" - 20" DBH x 30' min; wo/ rootwad)	1	EA	\$ 600	\$ 600		Includes material acquisition
Type 3 Log (14" - 20" DBH x 40' min; w/ rootwad)	1	EA	\$ 700	\$ 700		Includes material acquisition
Type 5 Log (14" - 20" DBH x 40' min; w/ rootwad)	1	EA	\$ 700	\$ 700		Includes material acquisition
Racking (4" - 12" DBH x 15' min. length; rootwad optional)	9	EA	\$ 200	\$ 1,800		Includes material acquisition
Slash (1" - 4" DBH x 5' min. length)	10	CY	\$ 125	\$ 1,250		Includes material acquisition
Live Stakes	20	EA	\$ 6	\$ 120		Includes material acquisition
Installation	1	LS	\$ 4,782	\$ 4,782		
Habitat Structure - 3 (Six-Log Structure)					\$ 60,760	
Type 1 Log (14" - 20" DBH x 30' min; w/ rootwad)	20	EA	\$ 700	\$ 14,000		Includes material acquisition
Type 2 Log (14" - 20" DBH x 30' min; wo/ rootwad)	10	EA	\$ 600	\$ 6,000		Includes material acquisition
Racking (4" - 12" DBH x 15' min. length; rootwad optional)	40	EA	\$ 200	\$ 8,000		Includes material acquisition
Slash (1" - 4" DBH x 5' min. length)	75	CY	\$ 125	\$ 9,375		Includes material acquisition
Live Stakes	100	EA	\$ 6	\$ 600		Includes material acquisition
Installation	5	LS	\$ 4,557	\$ 22,785		
Habitat Structure - 4 (Bank Jam)					\$ 52,416	
Native Alluvium Fill	30	CY	\$ 35	\$ 1,050		
Type 1 Log (14" - 20" DBH x 30' min; w/ rootwad)	18	EA	\$ 700	\$ 12,600		Includes material acquisition
Type 2 Log (14" - 20" DBH x 30' min; wo/ rootwad)	6	EA	\$ 600	\$ 3,600		Includes material acquisition
Type 4 Log (12" - 14" DBH x 15' min; w/ rootwad)	3	EA	\$ 600	\$ 1,800		Includes material acquisition
Racking (4" - 12" DBH x 15' min. length; rootwad optional)	30	EA	\$ 200	\$ 6,000		Includes material acquisition
Slash (1" - 4" DBH x 5' min. length)	30	CY	\$ 125	\$ 3,750		Includes material acquisition
Boulders	18	EA	\$ 200	\$ 3,600		Includes material acquisition
Live Stakes	60	EA	\$ 6	\$ 360		Includes material acquisition
Installation	3	LS	\$ 6,552	\$ 19,656		
Habitat Structure - 5 (Large Bank Jam)					\$ 65,664	
Native Alluvium Fill	90	CY	\$ 35	\$ 3,150		
Type 1 Log (14" - 20" DBH x 30' min; w/ rootwad)	18	EA	\$ 700	\$ 12,600		Includes material acquisition
Type 2 Log (14" - 20" DBH x 30' min; wo/ rootwad)	6	EA	\$ 600	\$ 3,600		Includes material acquisition
Type 4 Log (12" - 14" DBH x 15' min; w/ rootwad)	3	EA	\$ 600	\$ 1,800		Includes material acquisition
Racking (4" - 12" DBH x 15' min. length; rootwad optional)	30	EA	\$ 200	\$ 6,000		Includes material acquisition
Slash (1" - 4" DBH x 5' min. length)	30	CY	\$ 125	\$ 3,750		Includes material acquisition
Boulders	48	EA	\$ 200	\$ 9,600		Includes material acquisition
Live Stakes	90	EA	\$ 6	\$ 540		Includes material acquisition
Installation	3	LS	\$ 8,208	\$ 24,624		
Soil Decompaction, Planting, and Seeding					\$ 19,160	
Soil Decompaction	0.42	AC	\$ 1,000	\$ 420		Temporary access routes decompacted to 12" depth
Seeding	0.90	AC	\$ 3,600	\$ 3,240		20lbs per acre
Potted Plants	310	EA	\$ 50	\$ 15,500		Average of 10' plants per structure
Subtotal					\$ 435,959	
Markups						
Washington State Tax	8.3%		\$ 36,185			
Subtotal (Including Markups)					\$ 472,144	
Estimating Contingency	20.0%		\$ 94,429			
Estimated Construction Cost (Base)					\$ 567,000	
Low Side (-5%)					\$ 539,000	
High Side (+20%)					\$ 681,000	
Notes						
1. Class 2 estimates are generally prepared to form a detailed control baseline. This class of estimate is often used as the "bid" estimate to establish contract value. Typically, engineering is from 70 to 100 percent complete.						