

**TABLE 9
COST ESTIMATE FOR ALTERNATIVE 1 (MINIMUM COST AND BENEFIT)**

This alternative includes the following tasks:

1. Hydraulic dredging of 455,306 cubic yards of sediment
2. Storage and dewatering in eight 11.2-acre holding basins (gravel base only)
3. Cover banks with geotextile and rip rap from land. Cover to be 16 feet wide per bank over 23.8 miles.
4. Disposal of sediments at the BFI Carbon Limestone Landfill
5. Discharge of supernatant water to Mahoning River after passing through oil-water separator
6. Remove no dams
7. Remove 6,693 cubic yards of sediment from between RM 41 and RM 42.9.
8. Lands and Damages cost less than for other alternatives since there would not be any dredging of the banks.

Item Description	Quantity	Unit	Unit Price	Amount	Contingencies (25%)	Total
1. Construction features						
1.1 Mobilization	1	JOB	\$200,000	\$200,000	\$50,000	\$250,000
1.2 Site Development	8	JOB	55,000	440,000	110,000	550,000
1.3 Hydraulic Dredging of Sediments	455,306	CY	11	5,008,000	1,252,000	6,260,000
1.4 Clearing and grubbing from land	34.5	ACRES	6,000	207,000	51,750	258,750
1.5 Install Geotextile from land	440,000	SY	3	1,100,000	275,000	1,375,000
1.6 Install Rip Rap from land	220,000	CY	43	9,350,000	2,337,500	11,687,500
1.7 Construct 8 Holding Basins	577,500	CY	11	6,353,000	1,588,000	7,941,000
1.8 Construct Water Treatment Systems	8	SITES	40,000	320,000	80,000	400,000
1.9 Remove dams	0	SITES	372,900	0	0	0
2. Landfilling*	682,958	TONS	25	17,074,000	4,268,500	21,342,500
3. Lands and damages	1	JOB	720,000	720,000	180,000	900,000
4. Relocations	NONE REQUIRED					
5. Environmental compliance and required mitigation	1	JOB	250,000	250,000	62,500	312,500
6. Engineering and design**	1	JOB	2,298,000	2,298,000	574,500	2,872,500
7. Construction management***	1	JOB	1,953,000	1,953,000	488,250	2,441,250
8. Utility Relocation	7200	FT	1,000	7,200,000	1,800,000	9,000,000
9. Hydraulic Dredging and Disposal of Sediments from RM 41 to RM 42.9	1	JOB		<u>735,000</u>	<u>184,000</u>	<u>919,000</u>
TOTAL				\$53,208,000	\$13,302,000	\$66,510,000

* Assumed 1.5 tons per cubic yard of sediment after dewatering

** Assumed 10% of construction cost

*** Assumed 8.5% of construction cost