COST SUMMARY
SMALL PROJECT DREDGING WITH DISPOSAL AT TIDAL WETLANDS - SCENARIO 2
(21 CY Clamshell Dredge, with Lightly Loaded Scows, 20 N. Miles)

							Dredge	Transport	Placement
Mobilization and Demobilization					$	84,000	37,280	46,720	
Operating Costs									
1 Clamshell Dredge	1.00	Months @ $	268,211	268,211			268,211		
0 Hyd. Unloader	1.00	Months @ $	358,646	0					
2 Towing Tug	1.00	Months @ $	224,232	448,464				448,464	
1 Tending Tug	1.00	Months @ $	80,840	80,840			80,840		
1 Survey/Crewboat	1.00	Months @ $	43,039	43,039			43,039		
4 Dump Scows	1.00	Months @ $	6,250	25,000				25,000	
1 Shore Crew	1.00	Months @ $	140,555	0					
1 Superv/Engrg	1.00	Months @ $	84,540	50,619			22,930	27,689	
		Total Operating Costs			$	916,173	415,020	501,153	
Ownership Costs									
1 Clamshell Dredge	1.00	Months @ $	171,079	171,079			171,079		
0 Hyd. Unloader	1.00	Months @ $	82,280	0					
0 Booster Pump	1.00	Months @ $	16,255	0					
2 Towing Tug	1.00	Months @ $	65,706	131,412				131,412	
1 Tending Tug	1.00	Months @ $	12,248	12,248			12,248		
1 Survey/Crewboat	1.00	Months @ $	8,252	8,252			8,252		
4 Dump Scows	1.00	Months @ $	36,994	147,976				147,976	
		Total Ownership Costs		$ 470,967			191,579	279,388	
Market Factor @	50%					235,484	95,790	139,694	
		Total Direct Costs			$	1,151,657	510,810	640,847	
Overhead @	15%					172,749	76,621	96,127	
		Sub Total			$	1,324,406	587,431	736,974	
Contingency @	10%					132,441	58,743	73,697	
Profit @	15%					198,661	88,115	110,546	
		Sub Total			$	1,655,508	734,289	921,217	
Bond @	0.5%					8,278	3,671	4,606	
		Total Dredge Price			$	1,663,786	737,960	925,824	
							1.69	2.12	

$$\frac{84{,}000 \text{ Mobilization Price \$}}{50{,}000 \text{ Total Pay Cubic Yards}} = 1.68 \text{ \$/CY}$$

COST SUMMARY

SMALL PROJECT DREDGING WITH DISPOSAL AT TIDAL WETLANDS - SCENARIO 2

(21 CY Clamshell Dredge, with Lightly Loaded Scows, 20 N. Miles)

							Dredge	Transport	Placement
Mobilization and Demobilization						$ 84,000	37,280	46,720	
Operating Costs									
1 Clamshell Dredge	1.00	Months @ $	268,211	268,211			268,211		
0 Hyd. Unloader	1.00	Months @ $	358,646	0					
2 Towing Tug	1.00	Months @ $	224,232	448,464				448,464	
1 Tending Tug	1.00	Months @ $	80,840	80,840			80,840		
1 Survey/Crewboat	1.00	Months @ $	43,039	43,039			43,039		
4 Dump Scows	1.00	Months @ $	6,250	25,000				25,000	
1 Shore Crew	1.00	Months @ $	140,555	0					
1 Superv/Engrg	1.00	Months @ $	84,540	50,619			22,930	27,689	
		Total Operating Costs		$	916,173		415,020	501,153	
Ownership Costs									
1 Clamshell Dredge	1.00	Months @ $	171,079	171,079			171,079		
0 Hyd. Unloader	1.00	Months @ $	82,280	0					
0 Booster Pump	1.00	Months @ $	16,255	0					
2 Towing Tug	1.00	Months @ $	65,706	131,412				131,412	
1 Tending Tug	1.00	Months @ $	12,248	12,248			12,248		
1 Survey/Crewboat	1.00	Months @ $	8,252	8,252			8,252		
4 Dump Scows	1.00	Months @ $	36,994	147,976				147,976	
		Total Ownership Costs		$	470,967		191,579	279,388	
Market Factor @	50%				235,484		95,790	139,694	
		Total Direct Costs		$	1,151,657		510,810	640,847	
Overhead @	15%				172,749		76,621	96,127	
		Sub Total		$	1,324,406		587,431	736,974	
Contingency @	10%				132,441		58,743	73,697	
Profit @	15%				198,661		88,115	110,546	
		Sub Total		$	1,655,508		734,289	921,217	
Bond @	0.5%				8,278		3,671	4,606	
		Total Dredge Price				$ 1,663,786	737,960	925,824	
							1.69	2.12	

$$\frac{84{,}000 \text{ Mobilization Price \$}}{50{,}000 \text{ Total Pay Cubic Yards}} = 1.68 \text{ \$/CY}$$

COST SUMMARY

SMALL PROJECT DREDGING WITH DISPOSAL AT LANDFILL REHANDLING FACILITY - SCENARIO 1

(21 CY Clamshell Dredge, with Lightly Loaded Scows, 43 N. Miles)

								Dredge	Transport	Pla
Mobilization and Demobilization						$	84,000	37,280	46,720	
Operating Costs										
1	Clamshell Dredge	1.00	Months @ $	268,211	268,211			268,211		
0	Hyd. Unloader	1.00	Months @ $	434,486	0					
0	Booster Pump	1.00	Months @ $	144,040	0					
5	Towing Tug	1.00	Months @ $	224,232	1,121,160				1,121,160	
1	Tending Tug	1.00	Months @ $	80,840	80,840			80,840		
1	Survey/Crewboat	1.00	Months @ $	43,039	43,039			43,039		
7	Dump Scows	1.00	Months @ $	6,250	43,750				43,750	
0	Shore Crew	1.00	Months @ $	140,555	0					
1	Superv/Engrg	1.00	Months @ $	52,631	52,631			13,254	39,377	
			Total Operating Costs			$	1,609,631	405,344	1,204,287	
Ownership Costs										
1	Clamshell Dredge	1.00	Months @ $	171,079	171,079			171,079		
0	Hyd. Unloader	1.00	Months @ $	82,280	0					
0	Booster Pump	1.00	Months @ $	16,255	0					
5	Towing Tug	1.00	Months @ $	65,706	328,530				328,530	
1	Tending Tug	1.00	Months @ $	12,248	12,248			12,248		
1	Survey/Crewboat	1.00	Months @ $	8,252	8,252			8,252		
7	Dump Scows	1.00	Months @ $	36,994	258,958				258,958	
			Total Ownership Costs		$ 779,067			191,579	587,488	
Market Factor @		50%				389,534		95,790	293,744	
			Total Direct Costs		$	1,999,165		501,133	1,498,031	
Overhead @		15%				299,875		75,170	224,705	
			Sub Total		$	2,299,040		576,303	1,722,736	
Contingency @		10%				229,904		57,630	172,274	
Profit @		15%				344,856		86,445	258,410	
			Sub Total		$	2,873,800		720,379	2,153,420	
Bond @		0.5%				14,369		3,602	10,767	
			Total Dredge Price				$ 2,888,169	723,981	2,164,187	
								1.66	4.96	

$$\frac{84{,}000 \text{ Mobilization Price \$}}{10{,}000 \text{ Total Pay Cubic Yards}} = 8.40 \text{ \$/CY}$$

COST SUMMARY
SMALL PROJECT DREDGING WITH DISPOSAL AT LANDFILL REHANDLING FACILITY - SCENARIO 2
(21 CY Clamshell Dredge, with Lightly Loaded Scows, 20 N. Miles)

								Dredge	Transport	Placement
Mobilization and Demobilization						$	84,000	37,280	46,720	
Operating Costs										
1	Clamshell Dredge	1.00	Months @ $	268,211	268,211			268,211		
0	Hyd. Unloader	1.00	Months @ $	358,646	0					
2	Towing Tug	1.00	Months @ $	224,232	448,464				448,464	
1	Tending Tug	1.00	Months @ $	80,840	80,840			80,840		
1	Survey/Crewboat	1.00	Months @ $	43,039	43,039			43,039		
4	Dump Scows	1.00	Months @ $	6,250	25,000				25,000	
0	Shore Crew	1.00	Months @ $	140,555	0					
1	Superv/Engrg	1.00	Months @ $	50,619	50,619			22,930	27,689	
			Total Operating Costs			$	916,173	415,020	501,153	
Ownership Costs										
1	Clamshell Dredge	1.00	Months @ $	171,079	171,079			171,079		
0	Hyd. Unloader	1.00	Months @ $	82,280	0					
0	Booster Pump	1.00	Months @ $	16,255	0					
2	Towing Tug	1.00	Months @ $	65,706	131,412				131,412	
1	Tending Tug	1.00	Months @ $	12,248	12,248			12,248		
1	Survey/Crewboat	1.00	Months @ $	8,252	8,252			8,252		
4	Dump Scows	1.00	Months @ $	36,994	147,976				147,976	
			Total Ownership Costs		$	470,967		191,579	279,388	
Market Factor @		50%					235,484	95,790	139,694	
			Total Direct Costs			$	1,151,657	510,810	640,847	
Overhead @		15%					172,749	76,621	96,127	
			Sub Total			$	1,324,406	587,431	736,974	
Contingency @		10%					132,441	58,743	73,697	
Profit @		15%					198,661	88,115	110,546	
			Sub Total			$	1,655,508	734,289	921,217	
Bond @		0.5%					8,278	3,671	4,606	
			Total Dredge Price			$	1,663,786	737,960	925,824	
								1.69	2.12	

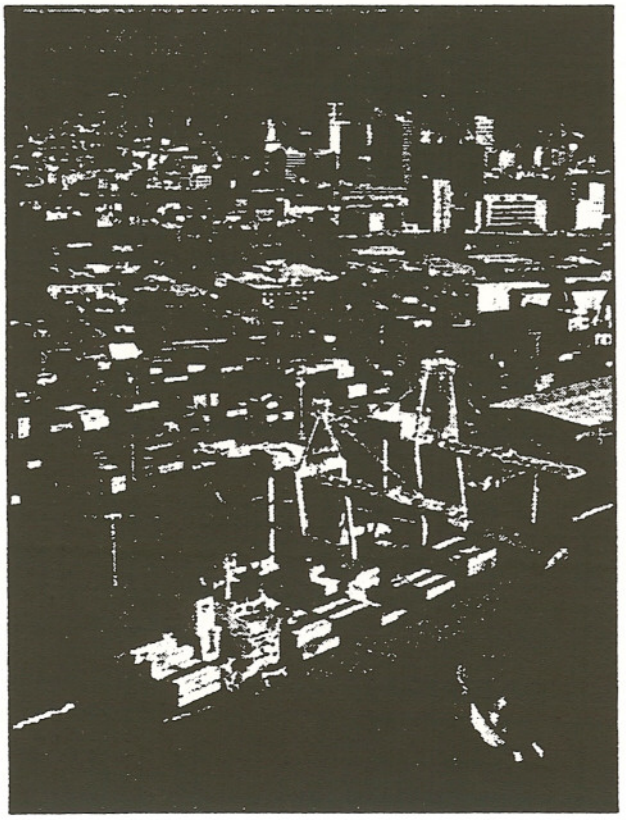
$$\frac{84{,}000 \text{ Mobilization Price \$}}{50{,}000 \text{ Total Pay Cubic Yards}} = 1.68 \text{ \$/CY}$$

APPENDIX Q

Financial Analysis of Implementation Approaches for the Long-Term Management Strategy, Task 3 Report: Alternative Financing Methods and Institutional Issues

Financial Analysis of Implementation Approaches for the Long-Term Management Strategy

Task 3 Report:
Alternative Financing Methods and Institutional Issues



Prepared for:

U.S. Environmental Protection Agency
Region 9
San Francisco, California

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with Technical Assistance from:
A. L. Munson & Co.
San Francisco, California

September 30, 1995

Financial Analysis of Implementation Approaches for the Long-Term Management Strategy

Task 3 Report: Alternative Financing Methods and Institutional Issues

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