

**APPENDIX 7.9. PHASE I PLANNING LEVEL COST  
ESTIMATE**



**Table 5.3-1: Phase I Planning Level Cost Estimate**

Project Element	Description	Capital Costs	
		Minimum	Maximum
1	Construction of a new 0.8 MGD nutrient removal and tertiary treatment system, including influent pumps, screening equipment, grit removal, aerated sludge treatment system, dewatering system, dry solids storage, tertiary filtration, disinfection, operations building, maintenance yard, electrical building, emergency power generation system and landscaping	\$ 7,810,000	\$ 10,160,000
2	Elimination of Ponds 1 through 4 and filling of the northern edge of Ponds 5 and 6	\$ 810,000	\$ 1,050,000
3	Construction of a new effluent pump station and pipeline crossing Sutter Creek for connection to the existing City tertiary WWTP effluent pump station	\$ 910,000	\$ 1,180,000
4	Construction of Percolation Pond 8	\$ 720,000	\$ 930,000
	<b>Total Project Cost</b>	<b>\$ 10,250,000</b>	<b>\$ 13,320,000</b>

**Project Element 1 - Construction of 0.8 MGD Nutrient Removal and Tertiary Treatment Plant**

Description	Qty	Unit	Mat'l Cost	Labor Cost	Total
<b>Influent Pump Station (3 pumps)</b>					
Submersible Pumps	1	LS	\$ 60,000	\$ 20,000	\$ 80,000
Mechanical Screen and Washer Compactor	1	LS	\$ 110,000	\$ 37,000	\$ 147,000
Grit Removal System	1	LS	\$ 75,000	\$ 50,000	\$ 125,000
Earthwork and Concrete	1	LS	\$ 50,000	\$ 17,000	\$ 67,000
Misc Piping, Fittings, Stairs, T-Lock, etc.	1	LS	\$ 100,000	\$ 33,000	\$ 133,000
<b>0.8 MGD SBR</b>					
SBR Equipment (Aeration Equipment)	1	LS	\$ 175,000	\$ 78,000	\$ 253,000
Earthwork and Concrete	1	LS	\$ 850,000	\$ 375,000	\$ 1,225,000
Misc Piping, Fittings, T-Lock, Paint, etc.	1	LS	\$ 180,000	\$ 100,000	\$ 280,000
<b>RAS/WAS Pump Station</b>					
Pumping Equipment	1	LS	\$ 42,000	\$ 17,000	\$ 59,000
<b>Digester and Dewatering Equipment</b>					
Dewatering Equipment	1	LS	\$ 185,000	\$ 85,000	\$ 270,000
Earthwork and Concrete	1	LS	\$ 75,000	\$ 25,000	\$ 100,000
Misc Piping, Fittings, Stairs, T-Lock, Paint, Hose Racks and Bib, etc.	1	LS	\$ 75,000	\$ 25,000	\$ 100,000
<b>Tertiary Filtration and UV Disinfection</b>					
Filtration and Disinfection Equipment	1	LS	\$ 250,000	\$ 125,000	\$ 375,000
Earthwork and Concrete	1	LS	\$ 75,000	\$ 35,000	\$ 110,000
Misc Piping, Fittings, etc.	1	LS	\$ 125,000	\$ 42,000	\$ 167,000
Emergency Generator & Diesel Tank	1	LS	\$ 150,000	\$ 50,000	\$ 200,000
Administration Building	1	LS	\$ 350,000	\$ 95,000	\$ 445,000
Sitework and Landscaping	1	LS	\$ 200,000	\$ 100,000	\$ 300,000
Electrical and Instrumentation	1	20%	\$ 585,400	\$ 241,800	\$ 827,200
<b>SUBTOTAL:</b>			\$ 3,712,400	\$ 1,550,800	\$ 5,263,200
<b>General Conditions</b>					
Taxes, Permits, Licensing Agreements	3%				\$ 157,896
Mob/Demo Cost	3%				\$ 157,896
Bond and Insurance	3%				\$ 157,896
Contractor Overhead and Profit	20%				\$ 1,052,640
Engineering and Construction Management	15%				\$ 1,018,429
<b>TOTAL (Minimum)</b>					<b>\$ 7,807,957</b>
Capital Cost Contingency	30%				\$ 2,342,387
<b>TOTAL (Maximum)</b>					<b>\$ 10,150,344</b>

**Assumptions:**

- Plant built at existing site
- No effluent pumping required
- No special Demolition costs

**Project Element 2 - Elimination of Ponds 1 through 4 and  
Filling of Northern Edge of Percolation Pond 5 and 6**

Description	Qty	Unit	Mat'l Cost	Labor Cost	Total
Removal of sludge	1	LS	\$ 350,000	\$ 116,667	\$ 466,700
Earthwork	1	LS	\$ 75,000	\$ 25,000	\$ 100,000
Misc.	1	LS	\$ 25,000	\$ 9,000	\$ 34,000
<b>SUBTOTAL:</b>			\$ 450,000	\$ 150,667	\$ 600,700
<b>General Conditions</b>					
Taxes, Permits, Licensing Agreements	3%				\$ 18,021
Mob/Demo Cost	3%				\$ 18,021
Bond and Insurance	3%				\$ 18,021
Contractor Overhead and Profit	20%				\$ 120,140
Environmental Permitting, Engineering and Construction Management	15%				\$ 26,130
<b>TOTAL (MINIMUM)</b>					<b>\$ 801,033</b>
Capital Cost Contingency	30%				\$ 240,310
<b>TOTAL (MAXIMUM)</b>				<b>TOTAL:</b>	<b>\$ 1,041,343</b>

**Assumptions:**

Earthwork to include excavation, backfill, rehab work, etc.

Labor cost one third of material cost

**Project Element 3 - Construction of Effluent Pump Station and Pipeline Crossing Sutter Creek**

Description	Qty	Unit	Mat'l Cost	Labor Cost	Total
12" Pipe from New Tertiary Plant to COWRP	1500	LF	\$ 100	\$ 30	\$ 195,000
Bridge Crossing	1	LS	\$ 35,000	\$ 11,667	\$ 46,700
Tertiary Effluent Pump Station	1	LS	\$ 260,000	\$ 86,667	\$ 346,700
Misc Pipes, Valves, Fittings, etc.	1	LS	\$ 15,000	\$ 5,000	\$ 20,000
<b>SUBTOTAL:</b>			\$ 310,100	\$ 103,363	\$ 608,400
<b>General Conditions</b>					
Taxes, Permits, Licensing Agreements	3%				\$ 18,252
Mob/Demo Cost	3%				\$ 18,252
Bond and Insurance	3%				\$ 18,252
Contractor Overhead and Profit	20%				\$ 121,680
Environmental Permitting, Engineering and Construction Management	15%				\$ 117,725
<b>TOTAL (MINIMUM)</b>					<b>\$ 902,561</b>
Capital Cost Contingency	30%				\$ 270,768
<b>TOTAL (MAXIMUM)</b>					<b>\$ 1,173,330</b>

**Assumptions:**

No relocation or other interference with existing pipelines

Labor cost one third of material cost

**Project Element 4 - Construction of Percolation Pond 8**

Description	Qty	Unit	Mat'l Cost	Labor Cost	Total
Earthwork	4,000	CY	\$ 15	\$ 5	\$ 80,000
Misc.	1	LS	\$ 300,000	\$ 100,000	\$ 400,000
<b>SUBTOTAL:</b>			\$ 300,015	\$ 100,005	\$ 480,000
<b>General Conditions</b>					
Taxes, Permits, Licensing Agreements	3%				\$ 14,400
Mob/Demo Cost	3%				\$ 14,400
Bond and Insurance	3%				\$ 14,400
Contractor Overhead and Profit	20%				\$ 96,000
Environmental Permitting, Engineering and Construction Management	15%				\$ 92,880
<b>TOTAL (MINIMUM)</b>					<b>\$ 712,080</b>
<b>Capital Cost Contingency</b>	30%				\$ 213,624
<b>TOTAL (MAXIMUM)</b>					<b>\$ 925,704</b>

**Assumptions:**

Earthwork to include excavation, backfill, rehab work, etc.

Labor cost one third of material cost