

Cost Opinion for the Lower San Sevaive Basin -- PID 17

Description	Quantity	Unit	Unit Cost	Total Cost ¹
Direct Construction Costs				
1 <u>Mobilization @ 5% Other Direct Construction Cost</u>	1	Job	Lump Sum	\$1,201,000
2 <u>Compacted Embankment</u>				
Foundation Excavation	30,000	Cu. Yds.	\$3.36	\$100,887
Compacted Embankment	46,000	Cu. Yds.	\$6.73	\$309,387
3 <u>Reservoir Excavation</u>				
Excavate & Haul Offsite	1,542,000	Cu. Yds.	\$14	\$2,160,665
4 <u>Existing Channel Demolition</u>				
Channel Demolition	5,800	Cu. Yds.	\$27	\$156,039
5 <u>Basin Outlet to Etiwanda Channel</u>				
60" Dia. RCP Outlet Conduit	300	Lin. Ft.	\$673	\$201,774
Gates and Controls	1	Job	\$50,000	\$50,000
6 <u>Basin Outlet to San Sevaive Channel</u>				
60" Dia. RCP Outlet Conduit	300	Lin. Ft.	\$673	\$201,774
Gates and Controls	1	Job	\$50,000	\$50,000
7 <u>Basin Spillway/Discharge Structure</u>				
Concrete Structure	650	Cu. Yds.	\$1,345	\$874,355
8 <u>Basin Inlet Structure</u>				
Concrete Structure	350	Cu. Yds.	\$1,345	\$470,806
9 <u>Land Acquisition Cost</u>				
Land Costs	40	\$/acre-ft	\$230,000	\$9,200,000
Subtotal Direct Construction Costs				\$14,980,000
<u>Contingency > \$2 million@ 10%</u>	1	LS	10%	<u>\$3,442,000</u>
<u>Construction Management > \$2 million@ 10%</u>	1	LS	10%	<u>\$3,442,000</u>
Total Construction Cost				\$18,422,000
<u>Engineering and Admin > \$2 million@ 10%</u>	1	LS	10%	<u>\$4,130,000</u>
Total Engineering and Administration				\$4,130,000
Total Estimated Project Cost				\$22,550,000
Annual Cost - 30 Years @ 5% Interest				\$1,467,000
CBWMs Share of Annual Project Cost			100%	\$1,467,000
<u>Annual Operations and Maintenance</u>	1,221	AF	\$37	\$45,165
Total Operational Costs				\$45,165
Total CBWMs Share of Annual Cost				\$1,512,165
Total CBWMs Share of Annual Unit Cost				\$1,239

¹ The capital cost shown assumes that the project's excavation costs would be reduced by 90%. The material excavated could be used for another construction site or leased to a mining operator.

Cost Opinion for the East Declez Basin - Alternative 2b

Description	Quantity	Unit	Unit Cost	Total Cost ¹
Direct Construction Costs				
1 <u>Mobilization @ 5% Other Direct Construction Cost</u>	1	Job	Lump Sum	\$1,454,000
2 <u>Spreading Basin Excavation</u>				
Excavate & Haul Offsite	1,030,000	Cu. Yds.	\$18	\$1,871,510
3 <u>Diversion from Declez Channel and Basin Inlet Structure</u>				
Drop Inlet Structure	80	Cu. Yds.	\$1,200	\$96,000
Sluice Gate for 54" Pipe	54	in.-dia.	\$595	\$32,130
54" RCP to Basin	2,700	Lin. Ft.	\$515	\$1,390,500
Excavation	25,000	Cu. Yds.	\$5.60	\$140,121
Replace Compacted Fill	24,000	Cu. Yds.	\$17	\$403,548.39
Basin Inlet Structure	350	Cu. Yds.	\$1,345	\$470,806
4 <u>Basin Spillway Structure and Outlet to Declez Basin</u>				
Concrete Spillway Structure (Accommodating up to 150 cfs)	150	Cu. Yds.	\$1,345	\$201,750
Excavation for Outlet Pipe	450	Cu. Yds.	\$5.60	\$2,522
Replace Compacted Fill	225	Cu. Yds.	\$16.81	\$3,783
60" Dia. RCP Outlet	200	Lin. Ft.	\$673	\$134,600
Gates and Controls	1	Job	\$50,000	\$50,000
5 <u>Land Acquisition Cost</u>				
Land Costs	85	\$/acre	\$35,300	\$3,000,500
6 <u>Rubber Dam for San Sevaine Channel Diversion to Jurupa</u>				
Rubber Dam Capturing up to 100 cfs	1	Job	\$100,000	\$100,000
7 <u>Pump expansion to 100 cfs</u>				
60 cfs pump capacity increase	600	\$/HP	\$5,000	\$3,000,000
8 <u>Conveyance to Declez Channel</u>				
42" Diameter CMLC to existing storm drain	2,800	Lin. Ft.	\$480	\$1,344,000
Subtotal Direct Construction Costs				\$13,700,000
<u>Contingency > \$2 million @ 10%</u>	1	LS	10%	<u>\$1,370,000</u>
<u>Construction Management > \$2 million @ 10%</u>	1	LS	10%	<u>\$1,370,000</u>
Total Construction Cost				\$16,440,000
<u>Engineering and Admin > \$2 million @ 10%</u>	1	LS	10%	<u>\$1,644,000</u>
Total Engineering and Administration				\$1,644,000
Total Estimated Project Cost				\$18,080,000
Annual Cost - 30 Years @ 5% Interest				\$1,176,400
CBWMs Share of Annual Project Cost			100%	\$1,176,400
<u>Annual Operations and Maintenance</u>	913	AF	\$37	\$33,781
<u>Annual Energy Cost</u>	10,315	kW-hr	\$0.15	\$1,547
Total Operational Costs				\$35,328
Total CBWMs Share of Annual Cost				\$1,211,728
Total CBWMs Share of Annual Unit Cost				\$1,327

¹The capital cost shown assumes that the project's excavation costs would be reduced by 90%. The material excavated could be used for another construction site or leased to a mining operator.

Cost Opinion for the San Sevaine Basins -- PID 7

	Description	Quantity	Unit	Unit Cost	Total Cost
Direct Construction Costs					
1	<u>Mobilization @ 5% Other Direct Construction Cost</u>	1	LS	5%	\$95,344
2	<u>StormWater Pipeline and Pump Station</u>				
	Basin Discharge Concrete Structure	15	Cu. Yds.	\$1,345	\$20,177
	18" Diameter CMLC Steel	3700	Lin. Ft.	\$279	\$1,032,748
	18" Gate Valve	1	EA	\$5,670	\$5,670
	Booster Pump Station	60	\$/HP	\$5,000	\$300,000
	CMU Building	300	Sq. Ft.	\$300	\$90,000
	Concrete Structure	45	Cu. Yds.	\$1,345	\$60,532
	Excavation	3600	Cu. Yds.	\$5.60	\$20,177
	Fine Grading	280	Cu. Yds.	\$17	\$4,708
	Backfill and Compaction (Native)	2800	Cu. Yds.	\$5.60	\$15,694
	Import Pipe Bedding Material	600	Cu. Yds.	\$15	\$9,000
	Basin Discharge Concrete Structure	10	Cu. Yds.	\$1,345	\$13,452
	Sluice Gate	20	\$/in-dia	\$595	\$11,900
	Surface Rehabilitation	1500	Sq. Ft.	\$25	\$37,500
	Habitat Area Mitigation	1	LS	\$155,871	\$155,871
	Electrical @ 25%	1	LS	\$117,677	\$117,677
	Instrumentation and Controls @ 10% of Electrical	1	LS	\$11,768	\$11,768
	Interior Berm Excavation	300	Cu. Yds.	\$3.36	\$1,009
	Excavation	1500	Cu. Yds.	\$5.60	\$8,407
	Material Haul Onsite	1500	Cu. Yds.	\$3.00	\$4,500
	Interior Berm Compacted Fill	1500	Cu. Yds.	\$6.73	\$10,089
	Fine Grading	150	Cu. Yds.	\$17	\$2,522
	Basin Discharge Concrete Structure	5	Cu. Yds.	\$1,345	\$6,726
Subtotal Direct Construction Costs					\$2,040,000
	<u>Contingency > \$2 million@ 10%</u>	1	LS	10%	<u>\$204,000</u>
	<u>Construction Management > \$2 million@ 10%</u>	1	LS	10%	<u>\$204,000</u>
Total Construction Cost					\$2,448,000
	<u>Engineering and Admin > \$2 million@ 10%</u>	1	LS	10%	<u>\$244,800</u>
Total Engineering and Administration					\$245,000
Total Estimated Project Cost					\$2,690,000
Annual Cost - 30 Years @ 5% Interest					\$175,000
CBWMs Share of Annual Project Cost				50%	\$87,500
	<u>Annual Operations and Maintenance</u>	304	AF	\$37	\$11,248
	<u>Annual Energy Cost</u>	17,994	kW-hr	\$0.15	\$2,699
Total Operational Costs					\$13,900
Total CBWMs Share of Annual Cost					\$101,400
Total CBWMs Share of Annual Unit Cost					\$334

Cost Opinion for the San Sevaine Basins -- PID 7 Pumping Into San Sevaine 1 instead of San Sevaine 3

	Description	Quantity	Unit	Unit Cost	Total Cost
Direct Construction Costs					
1	<u>Mobilization @ 5% Other Direct Construction Cost</u>	1	LS	5%	\$256,923
2	<u>StormWater Pipeline and Pump Station</u>				
	Basin Discharge Concrete Structure	15	Cu. Yds.	\$1,345	\$20,177
	24" Diameter CMLC Steel	5,600	Lin. Ft.	\$330	\$1,845,561
	18" Gate Valve	1	EA	\$5,670	\$5,670
	Booster Pump Station	400	\$/HP	\$5,000	\$2,000,000
	CMU Building	300	Sq. Ft.	\$300	\$90,000
	Concrete Structure	45	Cu. Yds.	\$1,345	\$60,532
	Excavation	3,600	Cu. Yds.	\$5.60	\$20,177
	Fine Grading	280	Cu. Yds.	\$17	\$4,708
	Backfill and Compaction (Native)	2,800	Cu. Yds.	\$5.60	\$15,694
	Import Pipe Bedding Material	600	Cu. Yds.	\$15	\$9,000
	Basin Discharge Concrete Structure	10	Cu. Yds.	\$1,345	\$13,452
	Sluice Gate	20	\$/in-dia	\$595	\$11,900
	Surface Rehabilitation	1,500	Sq. Ft.	\$25	\$37,500
	Habitat Area Mitigation	1	LS	\$407,152	\$407,152
	Electrical @ 25%	1	LS	\$542,677	\$542,677
	Instrumentation and Controls @ 10% of Electrical	1	LS	\$54,268	\$54,268
	Interior Berm Excavation	300	Cu. Yds.	\$3.36	\$1,009
	Excavation	1,500	Cu. Yds.	\$5.60	\$8,407
	Material Haul Onsite	1,500	Cu. Yds.	\$3.00	\$4,500
	Interior Berm Compacted Fill	1,500	Cu. Yds.	\$6.73	\$10,089
	Fine Grading	150	Cu. Yds.	\$17	\$2,522
	Basin Discharge Concrete Structure	5	Cu. Yds.	\$1,345	\$6,726
Subtotal Direct Construction Costs					\$5,430,000
	<u>Contingency > \$2 million@ 10%</u>	1	LS	10%	<u>\$543,000</u>
	<u>Construction Management > \$2 million@ 10%</u>	1	LS	10%	<u>\$543,000</u>
Total Construction Cost					\$6,516,000
	<u>Engineering and Admin > \$2 million@ 10%</u>	1	LS	10%	<u>\$651,600</u>
Total Engineering and Administration					\$652,000
Total Estimated Project Cost					\$7,170,000
Annual Cost - 30 Years @ 5% Interest					\$466,400
CBWMs Share of Annual Project Cost				50%	\$233,200
	<u>Annual Operations and Maintenance</u>	642	AF	\$37	\$23,754
	<u>Annual Energy Cost</u>	125,731	kW-hr	\$0.15	\$18,860
Total Operational Costs					\$42,600
Total CBWMs Share of Annual Cost					\$275,800
Total CBWMs Share of Annual Unit Cost					\$430