

Budget Overview

This attachment presents detailed budget information and supporting documentation for the Proposal. Table 6-1 provides a Proposal budget summary by budget category while Table 6-2 lists budget grand totals for each project as well as design basis of each budget.

The Proposal for the Greater Los Angeles County Region offers a tremendous investment value to the State for a number of reasons including:

- The Proposal provides over 75 percent of funding from non-State sources, demonstrating that this set of projects has the strong commitment of local agencies as well as other outside grant providers.
- Ninety-six percent of the planning, design and engineering costs either have been or will be borne by the agencies implementing the projects, again demonstrating the strong commitment of the local agencies.
- Ninety-seven percent of the grant funding request will be used directly for construction or construction-related activities. This means that the State will realize the benefits of this Proposal sooner than other Proposals seeking grant funds for further planning and engineering.
- Less than 1 percent of grant funds requested are for project administration costs.

Detailed budget tables and supporting documentation for each project are provided below. Based on review of the budgets, all costs included are reasonable. Note that all costs are in 2005 dollars.

Table 6-1: Summary Budget for Greater Los Angeles County Region Projects

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total	% Match
(a)	Direct Project Administration Costs	\$49,340	\$2,034,687	\$139,666	\$2,223,693	
(b)	Land Purchase/ Easement	-	-	-	-	
(c)	Planning/ Design/ Engineering/ Environmental Doc	\$55,000	\$10,739,215	\$453,000	\$11,247,215	
(d)	Construction/ Implementation	\$468,800	\$54,502,846	\$23,318,934	\$78,290,580	
(e)	Environmental Compliance/ Mitigation/ Enhancement	\$63,500	\$928,320	\$20,000	\$1,011,820	
(f)	Construction Administration	\$103,200	\$6,230,035	\$351,400	\$6,684,635	
(g)	Other Costs	\$0	\$1,096,970	\$140,000	\$1,236,970	
(h)	Construction/ Implementation contingency	\$81,260	\$11,271,720	\$577,000	\$11,929,980	
(i)	Grand Total	\$821,100	\$86,803,793	\$25,000,000	\$112,624,893	
	Calculation of Funding Match %		\$86,803,793		\$112,624,893	77.0%

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-2: Grand Totals & Design Basis by Project

Project Short Name	Design Basis	Other State Funds	Non-State Share	Requested Grant Funding	Total
1. Central Basin SWRP	10%	-	\$50,621,000	\$3,530,000	\$54,151,000
2. JWPCP Marshland Enhancement	100%	-	\$2,237,065	\$400,000	\$2,637,065
3. Large Landscape Conservation	90%	-	\$3,191,360	\$2,100,000	\$5,291,360
4. Las Virgenes Creek Restoration	100%	\$514,600	\$33,490	\$515,000	\$1,063,090
5. Malibu Creek Watershed Conservation	60%	-	\$541,360	\$426,000	\$967,360
6. Morris Dam Conjunctive Use	60%	-	\$8,122,541	\$5,135,634	\$13,258,175
7. North Atwater Creek Restoration	10%	-	\$3,643,000	\$2,250,000	\$5,893,000
8. Pacoima Wash / 8th Street Park	30%	\$306,500	\$435,150	\$587,000	\$1,328,650
9. San Gabriel Valley Arundo Removal	100%	-	\$19,500	\$178,000	\$197,500
10. Solstice Creek Restoration	30%	-	\$157,367	\$78,366	\$235,733
11. South Los Angeles Wetlands Park	10%	-	\$3,620,000	\$3,300,000	\$6,920,000
12. Whittier Narrows WRP UV	30%	-	\$5,741,960	\$2,000,000	\$7,741,960
13. Wilmington Drain Restoration	10%	-	\$8,440,000	\$4,500,000	\$12,940,000
Grand Total		\$821,100	\$86,803,793	\$25,000,000	\$112,624,893

Note: All costs are in 2005 dollars and rounded to the nearest dollar.

1. Central Basin Southeast Water Reliability Project

Budget

Table 6-3: Detailed Central Basin SWRP Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$775,500	\$110,000	\$885,500
(b)	Land Purchase/ Easement	-	-	-	\$525,000
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$4,491,800	\$400,000	\$4,891,800
(d)	Construction/ Implementation	-	\$36,308,400	\$2,191,600	\$38,500,000
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	\$108,200	-	\$108,200
(f)	Construction Administration	-	\$2,833,600	\$246,400	\$3,080,000
(g)	Other Costs	-	\$790,500	\$120,000	\$910,500
(h)	Construction/ Implementation Contingency	-	\$5,313,000	\$462,000	\$5,775,000
(i)	Grand Total	-	\$50,621,000	\$3,530,000	\$54,151,000
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$983,100 Expended to date \$50,162,900 CBMWD Recycled Water Rates and City of Vernon Public Works ¹			

Note: All costs are in 2005 dollars and rounded to the nearest dollar

1. Percentage share between two entities is currently under negotiations.

Table 6-4: Central Basin SWRP Budget Documentation

Budget Category		Basis of Cost Estimate
(a)	Project Admin	2% of construction cost based on agency experience
(b)	Land	Actual payments
(c)	Planning, Design, etc.	- Design: Contract value - Environmental Documentation: Contract Value
(d)	Construction	See Table 6-5 (Preliminary (10%) Design construction cost estimate)
(e)	Environmental Comp.	Contract value
(f)	Construction Admin	8% of construction cost based on agency experience
(g)	Other Costs	- Legal Services: 2% of construction cost based on agency experience - PAEP & LCP: \$25,000 for preparation
(h)	Const. Contingency	15% of construction cost; Appropriate contingency for design basis of cost estimate

1. Central Basin Southeast Water Reliability Project

(a) Direct Project Administration Costs

Direct project administration costs were calculated as 2 percent of the construction cost estimate based on previous agency projects and professional experience.

(b) Land Purchase/ Easement

\$525,000 is allocated for easement acquisition for pipeline right-of-way. However, the purchase costs are not included in the budget since the funding match eligibility is not clear at this time.

(c) Planning / Design / Engineering / Environmental Documentation

CBMWD has contracted HDR to complete the design for a fee of \$3,583,159 (see Appendix 5-1). The fee includes a 10 percent contingency for changes during design. The design contract includes the following tasks:

- Preliminary (10%) Design
- 30% Design
- 60% Design
- 90% Design
- 100% Design

HDR is also contracted to complete the permitting process for a fee of \$108,200 (see Appendix 5-1). The fee includes a 10 percent contingency for changes during design. The following permits need to be obtained:

- Encroachment permits for Cities of Pico Rivera, Montebello, Vernon, Los Angeles
- California Department of Transportation Encroachment Permit
- Encroachment permit from Railroads
- Encroachment permit from LACFCD

(d) Construction/ Implementation

The construction cost estimate, which is detailed in **Table 6-5**, is from the Preliminary Design (Appendix 5-1). The table is located after Section (h).

(e) Environmental Compliance/ Mitigation/ Enhancement

Environmental compliance, mitigation, & enhancement activities are not necessary for this project as stated in the environmental documentation.

(f) Construction Administration

Construction administration costs were calculated as 8 percent of the construction cost estimate based on previous agency projects and a 12 month period of construction.

(g) Other costs

Legal services are calculated as 2 percent of the construction cost estimate, based on previous agency projects and professional experience. The preparation of the Project Assessment and Evaluation Plan (PAEP) and Labor Compliance Plan (LCP) are estimated to cost \$25,000. Contents of the PAEP are discussed in detail in Attachment 9.

1. Central Basin Southeast Water Reliability Project

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage applied in this project is 15 percent based on agency project and professional experience. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

Table 6-5: Central Basin SWRP Detailed Construction Cost Estimate

Cost Item	Total
Mobilization and Setup	\$ 500,000
Excavation Safety Measures	\$ 500,000
Cleanup, Punchlist, and Demobilization	\$ 750,000
Install Valves	\$ 2,000,000
Install Pipeline (Stl/DIP)	\$28,500,000
Bore& Jack	\$ 1,000,000
Install Re-chlorination Stations	\$ 1,000,000
Install Sample Taps	\$ 100,000
Tie-ins	\$ 850,000
Traffic Control	\$ 250,000
Excavate Soil and Replace with Imported Backfill	\$ 80,000
Relocate Work heading to accommodate contaminated soil remediation work	\$ 20,000
Upgrade and expand existing pump station capacity by 21,600 gpm, install backup generation, upgrade SCADA capability, install new sodium hypochlorite system	\$ 2,750,000
All other Work	\$ 200,000
Subtotal	\$38,500,000
Contingency (15 percent of Subtotal)	\$5,775,000
Total	\$44,275,000

2. JWPCP Marshland Enhancement Project

Budget

Table 6-6: Detailed JWPCP Marshland Enhancement Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$30,820	-	\$30,820
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$469,700	-	\$469,700
(d)	Construction/ Implementation	-	\$1,162,840	\$380,000	\$1,542,840
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	\$2,000	-	\$2,000
(f)	Construction Administration	-	\$172,855	\$20,000	\$192,855
(g)	Other Costs	-	\$13,140	-	\$13,140
(h)	Construction/ Implementation Contingency	-	\$385,710	-	\$385,710
(i)	Grand Total	-	\$2,237,065	\$400,000	\$2,637,065
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$429,000 \$1,808,065	Expended to date LACSD user fees		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-7: JWPCP Marshland Enhancement Project Budget Documentation

Budget Category	Basis of Cost Estimate
(a) Project Admin	2% of total construction cost based on LACSD experience
(b) Land	Not applicable because land is already owned by LACSD
(c) Planning, Design, etc.	-Planning / Design / Environmental Documentation: Actual costs
(d) Construction	See Table 6-8 (100% Design construction cost estimate)
(e) Environmental Comp.	Based on LACSD experience and consultant estimate
(f) Construction Admin	10% of total construction cost based on LACSD experience
(g) Other Costs	PAEP, LCP, QAPP, MP: \$10,000 for preparation; Permit Fees: \$3,140
(h) Const. Contingency	25% of construction cost based on LACSD experience

2. JWPCP Marshland Enhancement Project

(a) Direct Project Administration Costs

Direct project administration costs were calculated as 2 percent of the total construction cost estimate (includes contingency) based on LACSD projects.

(b) Land Purchase/ Easement

No land or easement will need to be purchased in 1965 as part of this project. The land dedicated to the marshland was purchased as part of a larger parcel of land. Because the LACSD already own the land, no costs were included for this budget line item.

(c) Planning / Design / Engineering / Environmental Documentation

All planning, design, and environmental documentation tasks are complete and, therefore, costs are based on actual expenditures. Planning costs were \$37,818 for stakeholder outreach and preparation of the Hydrological Analysis and habitat assessments. Design costs were \$413,012, based on consultant (WRA) design contract and LACSD staff time. Permit acquisition is complete and costs are included in costs for design. Environmental documentation costs were \$18,870 to complete the Negative Declaration.

(d) Construction/ Implementation

The detailed construction cost estimate in **Table 6-8** [located after Section (h)] is from the 100% Final Construction Document Set and actual expenditures for clearing and grubbing. Labor, equipment, and materials were estimated together.

(e) Environmental Compliance/ Mitigation/ Enhancement

The project is itself a mitigation measure as documented in the JOS 2010 Master Facilities Plan EIR and consists of enhancing the JWPCP marshland. A Negative Declaration was prepared for the project, showing that sufficient replacement ratios (2:1 or greater) were in place for project impacts; therefore, no additional mitigation was required. An estimate for environmental compliance/mitigation/enhancement of \$2,000, based on past experience, was included.

(f) Construction Administration

Construction administration costs were calculated as 10 percent of the total construction cost estimate based on LACSD experience and 2 year construction period.

(g) Other costs

Permit fees total \$3,140 based on actual costs. Preparation of a PAEP, and Labor Compliance Plan was estimated at \$10,000 based on past experience. Contents of the PAEP are discussed in detail in Attachment 9. Also, a Monitoring Plan (MP) and Quality Assurance Project Plan (QAPP) will be prepared as part of the design consultant scope of work, discussed in Section (c). No legal services were required.

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage applied in this project is 25 percent, based on LACSD experience and professional judgement. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project. The contingency is on the high end of LACSD general range of 10 to 30 percent because of the uniqueness of this project for LACSD. This contract also includes large amounts of PVC piping for the irrigation system. PVC piping costs have increased substantially in the past year and LACSD anticipate that the

2. JWPCP Marshland Enhancement Project

cost may continue to rise. In addition, all transportation costs have increased and tend to be volatile at this time.

Table 6-8: JWPCP Marshland Enhancement Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Clearing & Grubbing*	1	Lot	\$150,660	\$150,660
Mobilization	3	Ea	\$26,438/time	\$79,315
Site Preparation	1	Lot	\$92,189	\$92,189
Earthwork				
Strip & Stockpile Upland/Wetland Topsoil	8,530	CY	\$5	\$42,650
Excavation & Grading	12,206	CY	\$8	\$97,648
Excess Material Excavation & Off-Site Haul	2,049	CY	\$12	\$24,588
Prepare Upland/Wetland Subgrade	4,132	CY	\$4	\$16,528
Prepare Meadow Subgrade	712	CY	\$10	\$7,118
Place Upland Topsoil	5,564	CY	\$6	\$33,385
Place Wetland Topsoil	1,435	CY	\$8	\$11,478
Place Meadow Topsoil	498	CY	\$6	\$2,990
Drainage	1	Lot	\$10,000	\$10,000
Water Control Structures				
Replace Outlet Slide Gate	1	Lot	\$5,000	\$5,000
Trash Rack	1	Lot	\$5,000	\$5,000
Utilities (Electrical Connection for (Irrigation Controller)	1	Lot	\$2,000	\$2,000
Irrigation System				
Automatic Controller	1	Lot	\$400	\$400
Drip System	2,032	Ea Plant	\$50	\$80,480
Spray System	22,719	SF	\$0.81	\$26,067
Erosion Control & Hydro-seeding				
Hydro-seed Meadow Seed	0.44	Ac	\$3,500	\$1,544
Hydro-seed Native Grasses	4.84	Ac	\$3,500	\$16,940
Maintenance & Guarantee (1 year)	1	Lot	\$10,000	\$10,000
Silt Fence	3,042	Ft	\$1	\$3,042
Trees & Shrubs				
Trees—24" box	21	Ea	\$500	\$10,500
Trees—15 gal.	196	Ea	\$250	\$49,000
Trees—5 gal.	218	Ea	\$85	\$18,530
Trees—1 gal.	178	Ea	\$18	\$3,204
Shrubs—5 gal.	156	Ea	\$85	\$13,260
Shrubs—1 gal.	1,229	Ea	\$18	\$22,122

2. JWPCP Marshland Enhancement Project

Cost Item	Quantity	Unit	Unit Price	Total
Ground Cover—1 gal.	183	Ea	\$18	\$3,294
Ground Cover—4" pots	589	Ea	\$3.50	\$2,062
Maintenance & Guarantee @ 8% (120 days)	8% of base		\$73,699 base	\$5,896
Emergent Marsh Plants				
Emergent Plants—1 gal.	4,801	Ea	\$15	\$72,015
Emergent Plants—1 quart	838	Ea	\$10	\$8,380
Emergent Plants—4" pot	1,694	Ea	\$6	\$10,164
Emergent Plants—bare root	5,655	Ea	\$3.50	\$19,793
Maintenance & Guarantee @ 5% (90 days)	5% of base		\$110,352 base	\$5,518
Seasonal Wetland Plants				
Herbaceous Plants—4" pot	3,312		\$6	\$19,872
Herbaceous Plants—bare root	4,075		\$3.50	\$14,263
Maintenance & Guarantee @ 5% (90 days)	5% of base		\$34,135 base	\$1,707
Habitat Structures				
Bat Nesting Boxes	4	Ea	\$750	\$3,000
Kestrel Nesting Platform	1	Ea	\$750	\$750
Vehicular Paving Surfaces				
Compacted Road Base @ Driveway & Parking	16,957	SF	\$2.41	\$40,866
Resin Pavement	16,957	SF	\$2.22	\$37,645
Concrete Curb	601	Ft	\$30.	\$18,030
Metal Edge Restraint @ Parking Island	532	Ft	\$3.50	\$1,862
Car Stops	10	Ea	\$50	\$500
Handicap Parking Signs & Paint	1	Lot	\$1,000	\$1,000
Pedestrian Paving Surfaces				
Resin Pavement Pathway @ Entrance & Main Path	5,399	SF	\$2.22	\$11,986
Resin Pavement Pathway @ Teaching Area	1,257	SF	\$2.22	\$2,791
Resin Pavement Pathway @ Wildlife Viewing Areas #1 & 2	1,953	SF	\$2.22.	\$4,336
Resin Pavement Pathway @ Wildlife Viewing Area #3	563	SF	\$2.22.	\$1,250
Boardwalks & Bridges				
Bridge to Wildlife Viewing Areas #1 & 2	1	Lot	\$35,000	\$35,000
Boardwalk to Wildlife Viewing Areas #1 & 2	125	Ft	\$130	\$16,250
Boardwalk to Wildlife Viewing Area #3	58	Ft	\$130	\$7,540
Pedestrian Access Control				
Wood Rail Fence @ Wildlife Viewing Areas #1 & 2	408	Ft	\$15	\$6,120
Wood Rail Fence @ Wildlife Viewing Area #3 & Parking	403	Ft	\$15	\$6,045
Wood Bollards w/Chain	537	Ft	\$4	\$2,148

2. JWPCP Marshland Enhancement Project

Cost Item	Quantity	Unit	Unit Price	Total
Site Furnishings & Signs				
Benches	4	Ea	\$900	\$3,600
Trash Receptacles	3	Ea	\$300	\$900
Pedestrian Information Placards	10	Ea	\$90	\$900
Vehicular Access Control Signs	5	Ea	\$90	\$450
Educational Displays				
Display Structures	3	Ea	\$900	\$2,700
Graphic Layout & Production	3	Ea	\$3,300	\$9,900
Pavilions & Pergolas				
Overlook Pergola @ Education Area	1	Ea	\$24,000	\$24,000
Shade Pavilion @ Wildlife Viewing Area #1	1	Lot	\$50,000	\$50,000
Subtotal				\$1,262,740
Adjustment for Inflation (various years to 2005 dollars)	5% of Subtotal			\$63,137
Subtotal (2005\$)				\$1,352,880
Bonds & Insurance	5% of Subtotal (2005\$)			\$66,294
Construction Subtotal				\$1,542,840
Construction Contingency	25% of Construction Subtotal			\$385,710
Construction Total with Contingency				\$1,928,550

* Work Completed; Actual Cost (remainder of \$429,000 spent-to-date was for planning, administration, and consultant fees, but those costs appear on multiple line items above)

3. Large Landscape Conservation, Runoff Reduction and Educational Program

Budget

Table 6-9: Detailed Large Landscape Conservation Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$152,000	-	\$152,000
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$31,880	\$21,000	\$52,880
(d)	Construction/ Implementation	-	\$2,888,140	\$2,079,000	\$4,967,140
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	-	-	-
(f)	Construction Administration	-	-	-	-
(g)	Other Costs	-	\$20,000	-	\$20,000
(h)	Construction/ Implementation Contingency	-	\$99,340	-	\$99,340
(i)	Grand Total	-	\$3,191,360	\$2,100,000	\$5,291,360
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$5,000	CB/WBMWD Expended to Date		
		\$59,100	CB/WBMWD Staff		
		\$1,879,260	CB/WBMWD Conservation Budget		
		\$1,248,000	MWD Conservation / Landscape Incentive		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-10: Large Landscape Conservation Project Budget Documentation

Budget Category		Basis of Cost Estimate
(a)	Project Admin	3% of implementation cost based on agency experience
(b)	Land	No land purchase necessary
(c)	Planning, Design, etc.	- Staff time for meeting attendance and design management - Consultant estimates
(d)	Construction	See Table 6-11 (Construction cost estimate)
(e)	Environmental Comp.	Not applicable
(f)	Construction Admin	No construction administration required because no construction will occur
(g)	Other Costs	PAEP, QAPP, MP, and LCP: \$5,000 each for preparation
(h)	Const. Contingency	2% of implementation cost; For irrigation component price fluctuations

3. Large Landscape Conservation, Runoff Reduction and Educational Program

(a) Direct Project Administration Costs

Direct project administration costs are estimated as 3 percent of the implementation cost estimate based on previous agency projects. The costs include WBMWD and CBMWD staff time and fees for the following entities:

- Hydroearth Inc.
- Surfrider Foundation
- CBMWD vendor (to be selected)

(b) Land Purchase/ Easement

As discussed in Attachment 5, no land or easement will need to be purchased as part of this project.

(c) Planning / Design / Engineering / Environmental Documentation

Approximately 1 percent of the detailed implementation cost estimate is allocated to assist with efforts to identify large landscape sites to install the controllers.

As discussed in Attachment 5, no environmental documentation or permit acquisition is required for the project.

(d) Construction/ Implementation

The cost estimate for implementation of the project is itemized in **Table 6-11** [located after Section (h)].

(e) Environmental Compliance/ Mitigation/ Enhancement

As discussed in Attachment 5, no environmental compliance, mitigation or enhancement is required for the project.

(f) Construction Administration

There are no costs for construction administration because all project implementation costs are included in Section (a).

(g) Other costs

The cost for the preparation of a PAEP, QAPP, MP, and LCP (\$20,000) is based on level of effort. Contents of the PAEP are discussed in detail in Attachment 9.

(h) Construction/ Implementation Contingency

A 2 percent contingency is embedded within the detailed implementation cost estimate. These figures were vendor estimates, therefore, it allows for some flexibility.

3. Large Landscape Conservation, Runoff Reduction and Educational Program

Table 6-11: Large Landscape Conservation Detailed Implementation Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
2-way faceless 12 station controllers	100	Ea	\$ 650	\$ 65,000
Installation	100	Ea	\$ 100	\$ 10,000
controller configuration/audit	100	Ea	\$ 150	\$ 15,000
Two-way radio (server)	100	Ea	\$ 150	\$ 15,000
Et & rain & flow sensor ready	100	Ea	\$ 50	\$ 5,000
2-way faceless 24 station controllers	100	Ea	\$ 900	\$ 90,000
Installation	100	Ea	\$ 150	\$ 15,000
controller configuration/audit	100	Ea	\$ 150	\$ 15,000
Two-way radio (server)	100	Ea	\$ 150	\$ 15,000
Et & rain & flow sensor ready	100	Ea	\$ 50	\$ 5,000
Normal 12 station controllers	850	Ea	\$ 450	\$ 382,500
Installation	850	Ea	\$ 100	\$ 85,000
controller configuration/audit	850	Ea	\$ 150	\$ 127,500
Two-way radio (server)	850	Ea	\$ 150	\$ 127,500
Et & rain & flow sensor ready	850	Ea	\$ 50	\$ 42,500
Normal 24 station	900	Ea	\$ 1,300	\$ 1,170,000
Installation	900	Ea	\$ 150	\$ 135,000
controller configuration/audit	900	Ea	\$ 150	\$ 135,000
Two-way radio (server)	900	Ea	\$ 150	\$ 135,000
Et & rain & flow sensor ready	900	Ea	\$ 50	\$ 45,000
"Ocean Friendly" Landscape Classes	61	Ea	\$ 9,166	\$ 559,126
Regular Landscape Classes	20	Ea	\$ 9,166	\$ 183,320
Database Management	1	LS	\$ 22,8534	\$ 228,534
Rebates for Residential Controllers	2700	Ea	\$ 235	\$ 634,500
Demonstration Gardens	17	Ea	\$ 35,300	\$ 600,000
Marketing & Outreach	1	LS	\$ 90,000	\$ 90,000
Run-off Devices	1	LS	\$ 136,000	\$ 136,000
Total	-	-	-	\$5,066,480

Note: Implementation contingency of 2 percent is already included in unit prices. The construction cost estimate without a contingency is \$4,967,140.

4. Las Virgenes Creek Restoration Project

Budget

Table 6-12: Detailed Las Virgenes Creek Restoration Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	\$39,340	\$1,090	-	\$40,430
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$12,400	-	\$12,400
(d)	Construction/ Implementation	\$303,800	-	\$370,000	\$673,800
(e)	Environmental Compliance/ Mitigation/ Enhancement	\$28,500	-	\$20,000	\$48,500
(f)	Construction Administration	\$78,200	\$0	\$35,000	\$113,200
(g)	Other Costs	-	\$20,000	\$20,000	\$40,000
(h)	Construction/ Implementation Contingency	\$64,760	\$0	\$70,000	\$134,760
(i)	Grand Total	\$514,600	\$33,490	\$515,000	\$1,062,340
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$326,850 Santa Monica Bay Restoration Commission \$187,750 DWR Urban Stream Restoration Grant No. P13-047 \$33,490 City of Calabasas General Fund			

Note: All costs are in 2005 dollars and rounded to the nearest dollar.

Table 6-13: Las Virgenes Creek Restoration Project Budget Documentation

Budget Category	Basis of Cost Estimate
(a) Project Admin	5% of total project cost based on Calabasas experience
(b) Land	No cost for Quit Claim deed agreement
(c) Planning, Design, etc.	Stakeholder Meetings - 1% of total construction cost; Design - Most costs were prior to November 2002
(d) Construction	See Table 6-14 (Final Design, Engineer's Cost Estimate)
(e) Environmental Comp.	6% of construction cost based on MND mitigation measures and Calabasas experience
(f) Construction Admin	14% of construction cost based on Calabasas experience
(g) Other Costs	PAEP, QAPP, MP, & LCP: \$10,000 each for preparation based on level of effort
(h) Const. Contingency	20% of construction cost; Appropriate for Final Design

4. Las Virgenes Creek Restoration Project

(a) Direct Project Administration Costs

Direct project administration costs were calculated as 5 percent of the total project cost based on previous LVMWD projects.

(b) Land Purchase/ Easement

No exchange of monies was included with the Quit Claim deed and land purchase is not necessary for the implementation of this project.

(c) Planning / Design / Engineering / Environmental Documentation

Much of the planning and design phase occurred prior to November 2002 and therefore costs are not included in the budget.

The costs for stakeholder meetings are estimated as 1 percent of the construction cost estimate.

(d) Construction / Implementation

The detailed construction cost estimate in **Table 6-14** [located after Section (h)] was completed in 2005 as part of the Final Plans, Specifications, and Estimates.

(e) Environmental Compliance / Mitigation/ Enhancement

The cost of implementing environmental measures is estimated to be 6 percent of the construction cost estimate based on environmental compliance measures identified in the MND and agency experience.

(f) Construction Administration

Construction administration costs were calculated as 14 percent of the construction cost estimate based on previous LVWMD projects and professional experience.

(g) Other Costs

The budget includes costs to prepare a PAEP, QAPP, MP, and LCP for \$10,000. Contents of the PAEP are discussed in Attachment 9

(h) Construction / Implementation Contingency

The project construction contingency percentage applied is 20 percent of the construction cost estimate, which is based on similar agency projects at the final design stage and professional experience. These costs include funds to handle unknown and unspecified conditions encountered during project construction.

4. Las Virgenes Creek Restoration Project

Table 6-14: Las Virgenes Creek Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Mobilization	1	L.S.	\$30,000.00	\$ 30,000
Clearing and Grubbing; Channel Demolition & Removal	1,500	Ton	\$75.00	\$112,500
Earthwork (side slopes, terraces, low-flow channel, rock groin, willow trenches)	3,000	C.Y.	\$12.50	\$37,500
Planted Rock Toe Revetment	750	Ton	\$100.00	\$75,000
Planted Rock Groin	60	Ton	\$100.00	\$6,000
Planted Rock Weirs and Pool	1,400	Ton	\$100.00	\$140,000
Willow Trench Staking	1	L.S.	\$2,200.00	\$2,200
Rootwads	4	Each	\$2,000.00	\$8,000
Planted Coir Bio D Blocks	1,100	L.F.	\$12.00	\$13,200
Hydroseeding	1.00	L.S.	\$2,500.00	\$2,500
Erosion Control Blankets: Terrace	1,300	S.Y.	\$10.00	\$13,000
Erosion Control Blankets: Slopes	800	S.Y.	\$8.00	\$6,400
Irrigation	1	L.S.	\$25,000.00	\$25,000
Planting	0.75	Acre	\$30,000.00	\$22,500
Retaining Walls (4-ft high)	2,200	S.F.	\$25.00	\$55,000
Concrete Masonry Floodwalls	200	L.F.	\$100.00	\$20,000
Concrete cut-off walls retrofit/outfalls/utility concrete cap	120	yds	\$500.00	\$60,000
Viewing Platform Pilings/ foundation	1	L.S.	\$18,000.00	\$18,000
Viewing Platform	1	L.S.	\$15,000.00	\$15,000
Prefabricated Gazebo	1	L.S.	\$12,000.00	\$12,000
			Subtotal	\$ 673,800
			Contingency (20%)	\$ 134,760
			TOTAL	\$808,560

5. Malibu Creek Watershed Water Conservation, Runoff Reduction and Native Flow Restoration Project

Budget

Table 6-15: Detailed Malibu Creek Watershed Water Conservation Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$20,000	-	\$20,000
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$23,760	-	\$23,760
(d)	Construction/ Implementation	-	\$376,000	\$426,000	\$792,000
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	-	-	-
(f)	Construction Administration	-	\$39,600	-	\$39,600
(g)	Other Costs	-	\$2,000	-	\$2,000
(h)	Construction/ Implementation Contingency	-	\$80,000	-	\$80,000
(i)	Grand Total	-	\$541,360	\$426,000	\$967,360
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$541,360 City of Westlake Capital Improvement budget; LVMWD Revenue Funds			

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-16: Malibu Creek Watershed Water Conservation Project Budget Documentation

Budget Category	Basis of Cost Estimate
(a) Project Admin	5% of total project cost based on LVWMD experience
(b) Land	Not applicable
(c) Planning, Design, etc.	Planning - 3% of total construction cost;
(d) Construction	See Table 6-17 (Final Design, Engineer's Cost Estimate)
(e) Environmental Comp.	Not applicable
(f) Construction Admin	10% of construction cost based on LVWMD experience
(g) Other Costs	PAEP, LCP, QAPP: \$2,000 for preparation
(h) Const. Contingency	10% of construction cost; Appropriate for Final Design

5. Malibu Creek Watershed Water Conservation, Runoff
Reduction and Native Flow Restoration Project

(a) Direct Project Administration Costs

Direct project administration costs were estimated as 5 percent of the implementation (construction) cost estimate. The 5 percent estimate is based on previous agency experience with similar projects (i.e. irrigation controller, toilet and washer retrofit programs), and entail the tracking of capital expenditures (i.e. material costs such as irrigation controllers, ULFT and HECW), verification of installation of retrofitted water- efficient devices, and post-installation tracking of water use (using billing records) and irrigation runoff in the field.

(b) Land Purchase/ Easement

This project does not require land purchases or easements.

(c) Planning / Design / Engineering / Environmental Documentation

Planning costs were estimated at 3 percent of the construction cost estimate. Planning costs include the identification and mapping of residential parcels having persistent high runoff and/or high water use and the review and selection of an appropriate weather-based irrigation controller technology for city-owned landscaping. Mapping of high runoff residential parcels is a necessary planning task because it drives the scope and magnitude of the residential runoff reduction tasks. No design or engineering costs are included as the project involves the retrofitting of existing irrigation controllers and indoor water-using appliances. No environmental documentation is required for the project (See Attachment 5).

(d) Construction/ Implementation

Project implementation (construction) costs are broken-out in **Table 6-17**. This project integrates a runoff reduction project on lands owned and managed by the City of Westlake Village and a runoff reduction and indoor water conservation project proposed by the LVWMD.

The costs for the ULFT retrofit and irrigation system upgrades and improvement include both material and labor. The HECW retrofit program assumes that the units will be self installed and only includes the cost of the HECW units.

All costs are based on agency experience with previously documented pilot project costs. The Final Report Urban Water Conservation Capital Outlay Grant Contract E67011 (submitted 9/05 to DWR) provides cost documentation for the ULFT and HECW programs. Quarterly progress reports submitted to Los Angeles RWQCB for Prop. 13 Grant Contract # 03-167-554 contain documentation for the ULFT and Irrigation system upgrades programs.

Table 6-17: Malibu Creek Watershed Water Conservation Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
High efficiency clothes washer retrofit	500	Per HECW	\$300	\$150,000
Ultra low flush toilet retrofit	500	Per ULFT	\$150	\$75,000
Irrigation system upgrades	46	Per system	\$1,000	\$46,000
Total	-	-	-	\$792,000

5. Malibu Creek Watershed Water Conservation, Runoff
Reduction and Native Flow Restoration Project

(e) Environmental Compliance/ Mitigation/ Enhancement

As discussed in Attachment 5, no environmental compliance, mitigation or enhancement is required for project implementation.

(f) Construction Administration

Direct implementation administration costs were calculated as 5 percent of the construction cost estimate based on previous agency projects and professional experience.

(g) Other costs

Staff time to complete a PAEP, LCP, and QAPP based on approximately 40 hrs @ \$90 /hr professional engineer rate.

(h) Construction/ Implementation Contingency

Construction/ implementation contingency is 10 percent to account for any increased costs (above inflation) between the cost estimate and time of implementation.

6. Morris Dam Water Supply Enhancement Project

Budget

Table 6-18: Detailed Morris Dam Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$509,100	-	\$509,100
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$1,938,975	-	\$1,938,975
(d)	Construction/ Implementation	-	\$3,718,366	\$5,135,634	\$8,854,000
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	\$154,500	-	\$154,500
(f)	Construction Administration	-	\$463,500	-	\$463,500
(g)	Other Costs	-	\$10,000	-	\$10,000
(h)	Construction/ Implementation Contingency	-	\$1,328,100	-	\$1,328,100
(i)	Grand Total	-	\$8,122,541	\$5,135,634	\$13,258,175
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$8,112,241	LACFCD user fees		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-19: Morris Dam Project Budget Documentation

Budget Category		Basis of Cost Estimate
(a)	Project Admin	5% of total construction cost based on LACFCD experience
(b)	Land	No applicable because project is within current LACFCD facilities
(c)	Planning, Design, etc.	- Planning: Consultant contract for facility inspection - Design: Consultant contract for Valve Rehab design and Intake Structure 30% Design; Estimate for Intake Structure Final Design - Environmental Documentation: Consultant contract for documentation completion
(d)	Construction	See Table 6-20 (Valve Rehab 100% Design and Intake Structure 30% Design)
(e)	Environmental Comp.	Based on LACFCD experience
(f)	Construction Admin	Based on level of effort; 2 years for Inspector
(g)	Other Costs	PAEP & LCP: \$5,000 each for preparation
(h)	Const. Contingency	15% of construction cost based level of design (100%)

6. Morris Dam Conjunctive Use Enhancement Project

(a) Direct Project Administration Costs

Direct project administration costs were calculated as 5 percent of the construction cost estimate based on previous LACFCD projects.

(b) Land Purchase/ Easement

As discussed in Attachment 5, no land or easement will need to be purchased as part of this project.

(c) Planning / Design / Engineering / Environmental Documentation

The cost to complete the Final Design of the valve rehabilitation, control system upgrade, and electrical system upgrade are actual costs from the consultant (Black and Veatch) contract. The costs to complete the Intake Structure Modification Concept Design are actual costs from the consultant (Black and Veatch) contract (see Appendix 5-6) and design completion is based on staff estimates and consultant input. In addition, costs for facility and infrastructure inspection and reporting are actual costs from the consultant (UBR) contract (See Appendix 5-6).

Costs to complete CEQA documentation process (\$70,000) are based on the consultant (EDAW) contract (see Appendix 5-6). Costs to obtain permits from local resource agencies are included in the direct project administration costs.

(d) Construction/ Implementation

The construction cost estimates (**Table 6-20**) include an Engineer's Opinion for Probable Cost from the Valve Rehabilitation Final Design (**Table 6-21**) and Concept Alternative B Cost Estimate from the Intake Structure 30% Design (**Table 6-22**). Tables 6-18 and 6-19 are located after Section (h).

Table 6-20: Morris Dam Construction Cost Estimate

Cost Item	Total
Valve Rehab, etc Detailed Construction Cost Estimate (see Table 6-21)	\$7,293,000
Intake Structure Detailed Construction Cost Estimate (see Table 6-22)	\$1,561,000
Morris Dam Project Construction Cost Estimate Subtotal	\$8,854,000
Construction Contingency (15%)	\$1,328,100
Morris Dam Project Construction Cost Estimate Total	\$10,182,100

(e) Environmental Compliance/ Mitigation/ Enhancement

Environmental compliance cost is estimated at \$154,500 for a biological contract with a qualified firm based on LACFCD experience with contracts to perform environmental compliance reports for existing mitigation bank requirements and additional monitoring one mile downstream of the dam during construction.

(f) Construction Administration

Construction administration costs were calculated as \$213,500 for a consultant contract for technical review with in-house staff management and 2 years for construction oversight by an inspector (2 years at 126,600/person-year).

6. Morris Dam Conjunctive Use Enhancement Project

(g) Other costs

Preparation of a PAEP and LCP are estimated to cost \$10,000. Contents of the PAEP are discussed in Attachment 9.

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage applied in this project is 15 percent. The contingency is based on the 100% design costs of valve, control system and electrical upgrade costs and 30% design for intake structure modification. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

Table 6-21: Valve Rehab, etc. Construction Cost Estimate

Cost Item	Total
Control House	\$338,000
River Demo	\$1,337,000
River Gate Rehab	\$231,000
Valves	\$550,000
Jet Flow Gate	\$149,000
Power	\$3,109,000
Diesel	\$117,000
Construction Equipment	\$979,000
Contractor Mobilization	\$481,000
Valve Rehabilitation, Control House, and Electrical Upgrades Total	\$7,290,223\$

Note: See full cost estimate in Valve Rehab Final Design in Appendix 5-6.

Table 6-22: Intake Modification Structure Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Demolition				
Scaffolding	1		\$15,450	\$15,450
Pipe Demo and Removal	45		\$361	\$16,223
Concrete Demo and Removal	10		\$515	\$5,150
Building Demo and Removal	1		\$2,575	\$2,575
Sawcutting	73		\$10	\$752
roof Demolition	5		\$515	\$2,575
Concrete Demo and Removal	32		\$515	\$16,480
MWD Tower Modification				
Scaffolding	1		\$51,500	\$51,500
Sawcut New Opening	360		\$330	\$118,656
Remove demo concrete	32		\$155	\$4,944

6. Morris Dam Conjunctive Use Enhancement Project

Steel Support Structure	29000		\$2	\$44,805
Steel Trashrack	72500		\$2	\$149,350
Inspection of gate	1		\$5,150	\$5,150
Rehab of gate	1		\$51,500	\$51,500
Evaluation of gates	12		\$3,090	\$37,080
Sandblasting and Painting	3800		\$31	\$117,420
Bulkhead Existing Line	1350		\$2	\$2,781
Bulkhead Installation	1		\$1,030	\$1,030
New Piping and Installation	1		\$65	\$65
Piping				
New Piping and Installation	32340		\$2	\$66,620
Concrete Support Block	110		\$541	\$59,483
Replace Conduit Control House Roof Slab	6		\$2,704	\$16,223
Valve Procurement	1		\$364,620	\$364,620
Valve Installation	2		\$31,930	\$63,860
Electrical Raceway and Conductor Conduit	300		\$36	\$10,815
Cable	300		\$6	\$1,854
Grated Platform	250		\$55	\$13,648
Guardrail	90		\$33	\$2,966
Misc Metal Installation	1		\$5,150	\$5,150
Subtotal				\$1,248,724
Indirect Costs (fees, permits, insurance, etc.)	25% of Subtotal			\$312,181
Intake Modification Structure Total				\$1,560,904

7. North Atwater Creek Restoration Project

Budget

Table 6-23: Detailed North Atwater Creek Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$60,000	-	\$60,000
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$800,000	-	\$800,000
(d)	Construction/ Implementation	-	\$1,215,000	\$2,250,000	\$3,465,000
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	\$35,000	-	\$35,000
(f)	Construction Administration	-	\$800,000	-	\$800,000
(g)	Other Costs	-	\$40,000	-	\$40,000
(h)	Construction/ Implementation Contingency	-	\$693,000	-	\$400,000
(i)	Grand Total	-	\$3,643,000	\$2,250,000	\$5,893,000
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$3,643,000	City of LA, Wastewater Capital Improvement Program		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-24: North Atwater Creek Project Summary of Budget Documentation

Budget Category		Basis of Cost Estimate
(a)	Project Admin	1.5% of construction cost based on City of LA experience
(b)	Land	No applicable because project site already owned by City of LA
(c)	Planning, Design, etc.	- Planning: 2% of construction cost - Design: 20% of construction cost - Environmental Documentation: 1% of construction cost Based on City of LA experience
(d)	Construction	See Table 6-25 (Preliminary Design Construction Cost Estimate)
(e)	Environmental Comp.	\$35,000 for SWPPP preparation
(f)	Construction Admin	23% of construction cost based on City of LA experience
(g)	Other Costs	- PAEP, LCP, QAPP, MP: \$30,000 - Legal Services: \$10,000
(h)	Const. Contingency	20% of construction cost

(a) Direct Project Administration Costs

Direct project administration costs were estimated as 1.5 percent of the construction cost estimate, based on previous City of LA projects.

(b) Land Purchase/ Easement

No land acquisition will be needed in this project because the land used in this project is owned by the City of LA.

(c) Planning / Design / Engineering / Environmental Documentation

Planning cost was estimated at 2 percent of the construction cost, design cost is estimated at 20 percent of the construction cost and environmental documentation estimation is at 1 percent of construction cost. Permit acquisition is included with design costs. This estimation is based on previous and ongoing City of LA projects and professional experience. Improved cost estimated will be prepared during the various design phases such as at 10%, 50%, 90% and Final Design.

(d) Construction/ Implementation

The detail construction cost table (**Table 6-25**) shows the cost for this project component. The table is located after Section (h).

(e) Environmental Compliance/ Mitigation/ Enhancement

The main item for this project component involves the preparation of a construction SWPPP. This item is executed by the construction contractor and is estimated as \$35,000.

(f) Construction Administration

Construction administration costs were calculated as 23 percent of the construction cost estimate based on previous agency projects and professional experience.

(g) Other costs

Other costs include legal services (\$10,000) and for the preparation of PAEP, LCP, QAPP, and MP documents (\$30,000).

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage applied in this project is 20 percent, based on construction cost. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

7. North Atwater Creek Restoration Project

Table 6-25: North Atwater Creek Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Traffic Control	1	ea	\$20,000	\$20,000
Construction mobilization	1	L.S.	\$100,000	\$100,000
Earthwork (Grading)	6,000	cy	\$120	\$720,000
Pavement Removal	4,000	sf	\$10	\$40,000
Decomposed Granite Paths (445 l.f.)	5,000	sf	\$10	\$50,000
Boulders	1	L.S.	\$400,000	\$400,000
1- Gal Shrubs & 15 Gal. Trees	1	L.S.	\$100,000	\$100,000
Groundcover	1	L.S.	\$50,000	\$50,000
Berm	1	L.S.	\$25,000	\$25,000
Educational Signage	1	L.S.	\$10,000	\$10,000
River Water Conveyance (w/pump)	1	L.S.	\$1,400,000	\$1,400,000
Structural Trash Pre-Treatment	1	L.S.	\$180,000	\$180,000
Equestrian Facility BMPs	1	L.S.	\$70,000	\$70,000
Yearlong Creek and Plant Establishment	1	L.S.	\$100,000	\$100,000
Subtotal	-	-	-	\$3,465,000
Construction Contingency	20% of Subtotal			\$693,000
Total	-	-	-	\$10,395,000

8. Pacoima Wash Greenway Project: 8th Street Park

Budget

Table 6-26: Detailed Pacoima Wash / 8th Street Park Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	\$10,000	\$5,000	\$20,000	\$35,000
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	\$55,000	\$18,000	\$32,000	\$105,000
(d)	Construction/ Implementation	\$165,000	\$321,900	\$450,000	\$936,900
(e)	Environmental Compliance/ Mitigation/ Enhancement	\$35,000	-	-	\$35,000
(f)	Construction Administration	\$25,000	\$38,060	\$40,000	\$103,060
(g)	Other Costs	-	\$20,000	-	\$20,000
(h)	Construction/ Implementation contingency	\$16,500	\$32,190	\$45,000	\$93,690
(i)	Grand Total	\$306,500	\$435,150	\$587,000	\$1,328,650
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$435,150 Los Angeles County Prop A \$306,500 Santa Monica Mountains Conservancy Prop 50			

Note: All costs are in 2005 dollars and rounded to the nearest dollar.

Table 6-27: Pacoima Wash / 8th Street Park Project Budget Documentation

Budget Category	Basis of Cost Estimate
(a) Project Admin	Level of Effort: 8 hr/week for 70 weeks at \$62.50 per hour
(b) Land	Not applicable
(c) Planning, Design, etc.	MRCA Staff: \$62.50 hr/rate for an average of 20 hours a week for 15 months
(d) Construction	See Table 6-28 (30% Design construction cost estimate)
(e) Environmental Comp.	Level of effort based on list allowance
(f) Construction Admin	10% of construction cost based on MRCA experience
(g) Other Costs	PAEP, QAPP, MP, and LCP: \$5,000 each for preparation
(h) Const. Contingency	10% of construction cost based on MRCA experience

(a) Direct Project Administration Costs

Direct project administration costs were calculated based on 8 hours per week for 70 weeks at \$62.50 per hour for agency staff.

(b) Land Purchase/ Easement

The land purchase was for \$561,858 and included appraisal, appraisal review, relocation, title fees, and land purchase. However, the purchase costs are not included in the budget since the funding match eligibility is not clear at this time.

(c) Planning / Design / Engineering / Environmental Documentation

Agency staff costs for planning efforts were estimated using a \$62.50 hr/rate for an average of 20 hours a week for 15 months. The estimated design cost of \$30,000 is based on consultant's proposal for design and engineering services (see Appendix 5-8). Environmental documentation was completed by at a cost of \$3,000.

(d) Construction/ Implementation

The detailed construction cost estimate in **Table 6-28** [located after Section (h)] is based on the Preliminary (30%) Design. Subsequent stages of design will be update this estimate and may use value engineering, as necessary.

(e) Environmental Compliance/ Mitigation/ Enhancement

An allowance of \$35,000 is included in case conditions are encountered during construction that require mitigation measures per the MND. Because the site has already been heavily disturbed it is unlikely that such conditions will be encountered. MRCA staff costs for permit acquisition are included in the planning estimate.

(f) Construction Administration

Construction administration costs were calculated as 10 percent of the construction cost estimate, based on previous agency projects and professional experience.

(g) Other costs

Preparation of a PAEP, QAPP, MP, and LCP are anticipated to cost \$20,000. Contents of the PAEP are discussed in detail in Attachment 9. No legal services are anticipated. City of San Fernando has agreed to waive permit fees.

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage applied is 10 percent based on MRCA experience with park construction. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

Table 6-28: Pacoima Wash / 8th Street Park Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Minor clearing and grubbing	1,500	LS	\$1500	\$1,500
Asphalt removal 15' x 1300'	2400	sq.yd.	\$4.35	\$10,440
Asphalt disposal	200	cu.yd	\$7	\$1400
Asphalt hauling	200	cu.yd	\$35	\$7,000
Remove fencing & store	1300	lf	\$1.70	\$2,210
Excavation and Grading	10,000	cy	\$9	\$90,000
Track Walk 500 feet	10,000	cy	\$2	\$20,000
Sheep's foot compact 90% - 1/2 ft lifts	10,000	cy	\$4	\$40,000
Jute mesh slope stabilization	10,000	sf	\$4	\$40,000
Fine grading and soil preparation	12,162	sq.yd.	\$2.25	\$27,365
Filter (material+placement)	300	cy	\$60	\$18,000
4-6" cobble for streambed	120	cy	\$120	\$9,600
Boulders	80	ea.	\$80	\$6000
Placement of boulders and cobble	16	hr	\$16	\$2400
Grouted cobble overflows - 4" rein. Concrete base	3000	sf	\$3000	\$36000
Bridge and grade control	1	LS	\$1	\$10000
Stone Bank Walls	160	Lin.ft.	\$160	\$8000
Planter/seating wall with tile 18" high - 15' dia	1	ea	\$7,000	\$7,000
Vault 6'x12'	1	ea	\$6,000	\$6,000
Grate - 6' Cast Iron Neenah w/ frames	2	ea	\$1,500	\$3,000
6" thick Concrete Paving Reinforced 5000 psi	3,600	sf	\$4.35	\$15,660
Common brick on concrete	1,820	sf	\$8.50	\$15,470
Concrete or Brick curb	180	lin.ft.	\$10	\$1,800
Curb inlet with fine grate	1	LS	\$625	\$625
Storm drain pipe, PVC sch 80, 12" dia	50	lin.ft.	\$45	\$2,250
Pavement Transition to Street (concrete)	200	sf	\$4.35	\$870
Formed Concrete Bench at Bromont	50	lin.ft.	\$180	\$9,000
Planter/seating wall with tile 18" high - 15' dia	1	ea	\$7,000	\$7,000
Vault 6'x12'	1	ea	\$6,000	\$6,000
Grate - 6' Cast Iron Neenah w/ frames	2	ea	\$1,500	\$3,000
6" thick Concrete Paving Reinforced 5000 psi	3600	sf	\$4.35	\$15,660
Common brick on concrete	1820	sf	\$8.50	\$15,470
Concrete or Brick curb	180	lin.ft.	\$10	\$1,800

8. Pacoima Wash Greenway Project 8th Street Park

Curb inlet with fine grate	1	LS	\$625	\$625
Storm drain pipe, PVC sch 80, 12" dia	50	lin.ft.	\$45	\$2,250
Pavement Transition to Street (concrete)	200	sf	\$4.35	\$870
Water meter	1	ea	\$5,000	\$5,000
Automatic landscape irrigation	109,455	sf	\$1.25	\$141,819
4" Stabilized DG on aggregate base	17,585	sf	\$4.00	\$70,340
Generic wood edge/header	4,396	lin.ft.	\$4.50	\$19,782
Brick edge/header	0	lin.ft.	\$8.00	0
Wrought iron picket (6 'tubular steel)	230	lin.ft.	\$60.00	\$13,800
Ornamental gates	2	ea	\$7,500	\$15,000
8' Chain link fence (HD posts)	400	lin.ft.	\$32	\$12,800
Wooden guard rail (alley)	300	lin.ft.	\$25	\$7,500
Cast Concrete Bollards with Chain	1300	lin.ft.	\$35	\$45,500
Trees (3x stake backfill) 15 gal.	160	ea	\$200	\$32,000
Shrubs (75% 1gal., 25% 5gal.)	800	ea	\$45	\$36,000
Shrubs	15	ea	\$100	\$15,000
Hydoseed	12,162	sy	\$0.69	\$8,392
Mulch	12,162	sy	\$3.18	\$38,675
Trash can	5	ea	\$600	\$3,000
Fitness stations	6	ea	\$1,000	\$6,000
Arbor	1	ea	\$16,000	\$16,000
Statue	1	ea	\$2,000	\$2,000
Tile Bench/seat wall	0	lin.ft.	\$450	0
Metal Bench	6	ea	\$1,500	\$9,000
SubTOTAL				\$936,900
Construction Contingency (10%)				\$93,690
TOTAL				\$1,030,590

9. San Gabriel Valley Riparian Habitat Arundo Removal Project

Budget

Table 6-29: San Gabriel Valley Arundo Removal Detailed Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	-	\$8,400	\$8,400
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$5,100	-	\$5,100
(d)	Construction/ Implementation	-	\$8,400	\$159,600	\$168,000
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	-	-	-
(f)	Construction Administration	-	-	\$10,000	\$10,000
(g)	Other Costs	-	\$6,000	-	\$6,000
(h)	Construction/ Implementation contingency	-	-	-	\$0
(i)	Grand Total	-	\$19,500	\$178,000	\$197,500
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$19,500	Mitigation funds from LACSD and Gold Key Builders (private developer)		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-30: San Gabriel Valley Arundo Removal Summary of Budget Documentation

Budget Category		Basis of Cost Estimate
(a)	Project Admin	5% of implementation cost based on LASGRWC experience
(b)	Land	Not applicable
(c)	Planning, Design, etc.	Additional <i>Arundo</i> mapping
(d)	Construction	See Table 6-31 (\$7,000 per net acre based on recent projects)
(e)	Environmental Comp.	Not applicable
(f)	Construction Admin	6% of implementation cost based on LASGRWC experience
(g)	Other Costs	PAEP & LCP: \$3,000 each for preparation
(h)	Const. Contingency	Included in \$7,000 per net acre [Section (d)]

(a) Direct Project Administration Costs

Direct project administration costs were calculated as 5 percent of implementation cost estimate based on previous experience with large acreage Arundo removal projects at Whittier Narrows.

(b) Land Purchase/ Easement

No land purchase is necessary as the project will take place on lands owned by USACE, who is a project partner.

(c) Planning / Design / Engineering / Environmental Documentation

The cost here is for additional *Arundo* mapping described in Attachment 5 and is based on previous LA.

(d) Construction/ Implementation

Implementation costs were calculated using an average of \$7000 per net acre based on experience with previous Arundo removal projects at Whittier Narrows that used similar biomass reduction and herbicide treatment methods (most recently in 2004 with a 17 net acre project). The average implementation cost of \$7,000 per net acre includes the following components:

- Hydro Ax hammer-flail mower operation: approx. \$3000 to \$5000 per net acre for biomass reduction on open level terrain.
- Ammbusher rotary mower operation: approx. \$6000 to \$9000 per net acre for biomass reduction adjacent to trees and on steep slopes.
- Cleanup by chainsaw crew: Approx. \$800 per day for 5-worker crew plus supervisor from Los Angeles Conservation Corps (LACC).
- Herbicide application: Approx. \$1000 to \$1500 per acre for foliar treatment of Arundo resprouts plus 2 years follow-up, including spraying other undesirable non-native weeds that invade project areas cleared of Arundo.

Table 6-31: San Gabriel Valley Arundo Removal Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Hydro Ax hammer-flail mower operation	20	Net acre of open level terrain	\$4,000	\$80,000
Ammbusher rotary mower operation	4	Net acre of steep ground or adjacent to trees	\$7,500	\$30,000
Chain-saw crew	35	Days	\$800	\$28,000
Herbicide Application	24	Net acres	\$1,250	\$30,000
Total	-	-	-	\$168,000

As on-site project manager, Riparian Repairs will be responsible for mower supervision, LACC crew supervision and herbicide application. Contractors for biomass reduction will be selected based on past performance and availability of tractor mowers on a low-cost basis and LACC will be employed for chainsaw work, as needed.

(e) Environmental Compliance/ Mitigation/ Enhancement

Mitigation measures are necessary for this as included in the CDFG Streambed Alteration Agreement. The costs for environmental compliance are included in the construction cost estimate

(f) Construction Administration

Implementation administration costs were calculated as 6 percent of implementation cost estimate, based on experience with previous large acreage Arundo removal projects at Whittier Narrows which employed similar methods.

(g) Other costs

Preparation of a PAEP and LCP are anticipated to cost \$3,000 each. Contents of the PAEP are discussed in detail in Attachment 9.

(h) Construction/ Implementation Contingency

Contingency costs are included in the average cost per acre of implementation.

10. Solstice Creek Southern Steelhead Habitat Restoration Project

Budget

Table 6-32: Detailed Solstice Creek Restoration Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$4,967	\$1,266	\$6,233
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$150,000	-	\$150,000
(d)	Construction/ Implementation	-	\$0	\$77,100	\$77,100
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	-	-	-
(f)	Construction Administration	-	-	-	-
(g)	Other Costs	-	\$2,400	-	\$2,400
(h)	Construction/ Implementation contingency	-	-	-	-
(i)	Grand Total	-	\$157,367	\$78,366	\$235,733
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$150,000	USNPS Grant (already expended) for design & environmental documentation		
		\$7,367	USNPS staff time		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-33: Solstice Creek Restoration Project Budget Documentation

Budget Category		Basis of Cost Estimate
(a)	Project Admin	10% time of Administrative Assistant; 5% time of Restoration Ecologist; Based on USNPS experience with similar projects
(b)	Land	No applicable because land already owned by USNPS
(c)	Planning, Design, etc.	Actual expenditures
(d)	Construction	See We anticipate a 20% time commitment from the Restoration Ecologist to assist in writing the detailed implementation plan, selecting the plant palette and overseeing the implementation of the project (\$62,000/year x .20 time = \$12,400). Table 6-34 Table 6-34; Level of effort based on USNPS rates and similar experience
(e)	Environmental Comp.	Level of effort based on USNPS rates and similar experience
(f)	Construction Admin	Not applicable
(g)	Other Costs	PAEP & LCP: 40 hrs per plan
(h)	Const. Contingency	Not applicable

(a) Direct Project Administration Costs

Direct project administration costs were calculated as 10 percent of an Administrative Assistant (\$31,035 x 0.1) plus 5 percent time of a Restoration Ecologist (\$62,000 x 0.05) for one year.

(b) Land Purchase/ Easement

There are no land purchases involved in this project.

(c) Planning / Design / Engineering / Environmental Documentation

\$100,000 in federal funds were provided to the Resource Conservation District of the Santa Monica Mountains to provide the design work and technical specifications for the barrier removals and two bridge replacement projects.

\$50,000 in federal grant funds were provided to the Resource Conservation District of the Santa Monica Mountains to perform NEPA compliance for the entire Solstice Creek Restoration Plan. These funds included obtaining permit for the barrier and bridge portions of the project. In addition, USNPS Restoration Ecologist spent 20 hours performing NEPA compliance for the planting portion of this project (20 hours x \$30/hour = \$600).

There are no costs to obtain permits.

(d) Construction/ Implementation

We anticipate a 20% time commitment from the Restoration Ecologist to assist in writing the detailed implementation plan, selecting the plant palette and overseeing the implementation of the project (\$62,000/year x .20 time = \$12,400).

Table 6-34: Solstice Creek Restoration Project Implementation Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Project Manager Labor	4,160 (Full-time for 2 years)	Hour	\$15	\$62,400
Restoration Field Supplies (shovels, hoes, augers)	Lump Sum			\$3,000
Native Plant Material	2,000	Per plant	\$2	\$4,000
Native Plant Material Production Labor	416 (10% time over 2 years)	Hour	\$18.50	\$7,700
Total				\$77,100

Labor and equipment needs are based on prior experience with similar sized ecological restoration projects. Equipment costs are low because USNPS already has most of the required equipment. Native plant costs are low because plant production is subsidized by volunteer labor that is directed by the USNPS Nursery Biotechnician.

(e) Environmental Compliance/ Mitigation/ Enhancement

Environmental mitigation is not required based on environmental documentation.

(f) Construction Administration

Administration of implementation is included in Section (a).

(g) Other costs

The PAEP will be prepared by USNPS Restoration Ecologist and the LCP will be prepared by USNPS staff. It is anticipated that each plan preparation will take 40 hours x \$30/hour = \$1,200. Contents of the PAEP are discussed in detail in Attachment 9.

(h) Construction/ Implementation Contingency

Contingencies are built into line items for materials and no contingency is required for labor because rates are set for the project period.

11. South Los Angeles Wetlands Park Project

Budget

Table 6-35: Detailed South Los Angeles Wetlands Park Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$60,000	-	\$60,000
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$800,000	-	\$800,000
(d)	Construction/ Implementation	-	\$700,000	\$3,300,000	\$4,000,000
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	\$600,000	-	\$600,000
(f)	Construction Administration	-	\$400,000	-	\$400,000
(g)	Other Costs	-	\$60,000	-	\$60,000
(h)	Construction/ Implementation contingency	-	\$1,000,000	-	\$1,000,000
(i)	Grand Total	-	\$3,620,000	\$3,300,000	\$6,920,000
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$700,000	Public Works Trust Fund		
		\$1,000,000	Proposition K		
		\$2,000,000	SEP		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-36: South Los Angeles Wetlands Park Budget Documentation

Budget Category	Basis of Cost Estimate
(a) Project Admin	5% of construction cost based on City of LA experience
(b) Land	No applicable because project site already owned by City of LA
(c) Planning, Design, etc.	- Planning/Design/Env Doc: 20% of construction cost; Based on City of LA experience
(d) Construction	See Error! Reference source not found. (Preliminary Design Construction Cost Estimate)
(e) Environmental Comp.	Clarifier abandonment: \$583,000; SWPPP preparation: \$17,000
(f) Construction Admin	10% of construction cost based on City of LA experience
(g) Other Costs	- PAEP, LCP, QAPP, MP: \$30,000 - Legal Services: \$30,000
(h) Const. Contingency	25% of construction cost

Note: All costs are in 2005 dollars, unless otherwise indicated.

(a) Direct Project Administration Costs

Direct project administration costs were estimated as 1.5 percent of the construction cost estimate, based on previous City of LA projects.

(b) Land Purchase/ Easement

The MTA property is considered surplus land and makes them a willing seller. Negotiations are currently in process for the property. The estimated value of \$4.9M is based on local real estate prices. However, the purchase costs are not included in the budget since the funding match eligibility is not clear at this time.

(c) Planning / Design / Engineering / Environmental Documentation

Planning, design, and environmental documentation cost was estimated at 20 percent of the construction. Permit acquisition is included with design costs. This estimation is based on previous and ongoing City of LA projects and professional experience. Improved cost estimated will be prepared during the various design phases such as at 10%, 50%, 90% and Final Design.

(d) Construction/ Implementation

The detail construction cost table (**Table 6-37**) shows the cost for this project component. The table is located after Section (h).

(e) Environmental Compliance/ Mitigation/ Enhancement

This project involves the abandonment of remediation clarifiers. The estimated cost for this work is estimated at \$583,000. Other environmental compliance items include preparation of a construction SWPPP and bring the total to \$600,000

(f) Construction Administration

Construction administration costs were calculated as 10 percent of the construction cost estimate based on previous agency projects and professional experience.

(g) Other costs

Other costs include legal services (\$30,000) and for the preparation of PAEP, LCP, QAPP, and MP documents (\$30,000).

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage applied in this project is 25 percent, based on construction cost. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

11. South Los Angeles Wetlands Park Project

Table 6-37: South Los Angeles Wetlands Park Project Detailed Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Mobilization - Permits, Insurance, etc.	1	L.S.	\$200,000	\$200,000
Site SWPPP Preparation and Execution	1			\$40,000
Creation of Wetlands and Riparian Areas				
Clear and Grub Site	4	acres	\$5050	\$20,200
Excavate and Remove soil	26,000	CY	\$15	\$390,000
Disposal of spoils offsite	26,000	CY	\$10	\$260,000
Purchase & Install Liner	4	acre	\$13,068	\$52,272
Purchase & Place Topsoil	6,500	CY	\$35	\$227,500
Purchase herbaceous plant plugs	8200	plugs	\$0.75	\$6,150
Install Cat-Tail Plugs	140	hours	\$45	\$6,300
Purchase and plant trees	220	trees	\$150	\$33,000
Purchase and install shrubs	870	shrubs	\$105	\$91,350
Clear and Grub Site	4	acres	\$5,050	\$20,200
Stormwater Pumping and Conveyance Facilities	1	EA		
Pump Station (62 cfs, 20' of head)	1	EA		\$510,000
Trenching and Piping	1420	lf	\$200	\$284,000
Stormwater Pre-treatment System				
Traffic Control	30	Day	\$1,000	\$30,000
Pavement Removal (Breakup & Disposal)	1500	S.F	\$2.88	\$4,320
Excavation, Backfill, & Miscellaneous Earthwork	1	L.S.	\$25,000	\$25,000
Install & Remove Excavation Shield	1	S.F	\$60,000	\$60,000
Set Sump & CDS Unit, Backfill	1	L.S.	\$3,000	\$3,000
Breakout Storm Drain	1	L.S.	\$6,000	\$6,000
Concrete Structures	30	C.Y.	\$1,253	\$37,590
Screen Installation	1	L.S.	\$1,800	\$1,800
Stainless Steel Basket	2	L.S.	\$8,000	\$16,000
CDS Unit Cost, incl. 2 baskets	1	L.S.	\$170,000	\$170,000
Furnish Lid & Install	1	L.S.	\$15,000	\$15,000
Pavement Restoration, Including Curb & Sidewalk	1	L.S.	\$10,000	\$10,000
Striping	1	L.S.	\$1,000	\$1,000
Monolithic Connection	2	L.S.	\$1,000	\$2,000
Concrete Collar	2	Each	\$1,000	\$2,000
36" S.D. Manhole Cover	2	Each	\$2,000	\$4,000
Traffic Bearing Slab H20	1	L.S.	\$10,000	\$10,000
Access Hatch	1	L.S.	\$4,000	\$4,000
Temporary S.D. Bypass	1	L.S.	\$10,000	\$10,000
Wetlands Flow Recirculation System		EA		\$320,000
Wetlands Area Peripheral Landscaping		EA		\$220,000
Clarifier abandonment and soil removal	3	clarifiers	\$107,000	\$321,000
Perimeter Fencing	4100	lf	\$15	\$59,450
Subtotal				\$3,473,132

11. South Los Angeles Wetlands Park Project

Cost Item	Quantity	Unit	Unit Price	Total
General Conditions	1%			\$34,731
Liability Insurance	2%			\$69,463
Contractors Fees	10%			\$347,313
Performance Bond	2%			\$69,463
Gross Receipts Tax	0.13%			\$11,831
Subtotal				\$532,801
Total				\$4,005,933
Total Construction Cost	\$4,005,933		Rounded:	\$4,000,000

12. Whittier Narrows Water Reclamation Plant UV Disinfection Facilities Project

Table 6-38: Whittier Narrows WRP UV Project Detailed Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$286,210	-	\$286,210
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$1,087,600	-	\$1,087,600
(d)	Construction/ Implementation	-	\$3,203,800	\$2,000,000	\$5,203,800
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	\$28,620	-	\$28,620
(f)	Construction Administration	-	\$572,420	-	\$572,420
(g)	Other Costs	-	\$42,930	-	\$42,930
(h)	Construction/ Implementation contingency	-	\$520,380	-	\$520,380
(i)	Grand Total	-	\$5,741,960	\$2,000,000	\$7,741,960
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$350,000 \$5,208,520	Expended by agency already System user fees		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-39: Whittier Narrows WRP UV Project Budget Documentation

Budget Category		Basis of Cost Estimate
(a)	Project Admin	5% of construction cost estimate based on LACSD experience
(b)	Land	Not applicable because project site is already leased by LACSD from Federal Government
(c)	Planning, Design, etc.	- Planning: 1% of construction cost - Design: 15% of construction cost - Env. Documentation: 1% of construction cost - Permits: 2% of construction cost estimate based on LACSD experience
(d)	Construction	See Table 6-40 (10% Design Detailed Construction Cost Estimate)
(e)	Environmental Comp.	0.5% of construction cost estimate based on LACSD experience
(f)	Construction Admin	10% of construction cost estimate based on LACSD experience
(g)	Other Costs	0.75% of construction cost estimate based on LACSD experience
(h)	Const. Contingency	10% of construction cost estimate based on LACSD experience

(a) Direct Project Administration Costs

Direct project administration costs were calculated as 5 percent of the construction cost estimate, based on agency projects and professional experience. Within the 5 percent, 4.8 percent are for staff salary and benefits and the remaining 0.2 percent is for incidental costs such as document reproduction and handling.

(b) Land Purchase/ Easement

As described in Attachment 5, the land associated with this project is already being leased by LACSD. The land is owned by the Federal Government and operated by USACE. Therefore, no costs have been included for this line item.

(c) Planning / Design / Engineering / Environmental Documentation

Planning costs are 1 percent of the construction cost estimate based on previous LACSD projects. Design costs are 15 percent of the construction cost estimate based on previous LACSD projects. The design costs include the cost to complete the Preliminary (30%) Design, 75% Design, and 100% Design. Environmental documentation costs are 1 percent of the construction cost estimate based on previous LACSD projects. Permit acquisition costs are 3 percent of the construction cost estimate based on previous LACSD projects and professional experience.

(d) Construction/ Implementation

The construction cost estimate in **Table 6-40** [located after Section (h)] is from the Preliminary (30%) Design.

(e) Environmental Compliance/ Mitigation/ Enhancement

Environmental compliance, mitigation, and enhancement costs for tasks such as dust control and sediment control are calculated as 0.5 percent of the construction cost estimate based on previous LACSD projects and professional experience.

(f) Construction Administration

Construction administration costs were calculated as 10 percent of the construction cost estimate based on agency projects and professional experience.

(g) Other costs

Other costs include legal services and monitoring and assessment plan preparation. There are no charges for permits because permit acquisition costs are included in Section (c). Legal services are estimated to be 0.25 percent of the construction cost estimate; QAPP and MP preparation costs are estimated to be a total of 0.25 percent of the construction cost estimate; and PAEP and LCP preparation are estimated to be a total of 0.25 percent of the construction cost estimate based on previous LACSD projects and professional experience.

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage is 10 percent. The relatively low contingency for a cost estimate at the Preliminary (30%) Design stage is based on the fact that a large percentage of the total project cost is for equipment (UV lamp systems, etc.) whose price is relatively stable and well known. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

Table 6-40: Whittier Narrows WRP UV Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
UV Equipment	1	Lump Sum	\$2,500,000	\$2,500,000
UV Channels	4	ea.	\$75,000	\$300,000
Receiving Water Channels	2	ea.	\$150,000	\$300,000
ES/CCT Channels	2	ea.	\$18,750	\$37,500
Raise Reactor Deck	1	Lump Sum	\$300,000	\$300,000
Revise Contact Tank Covers	1	Lump Sum	\$100,000	\$100,000
Slide gates				
Reactor Influent Gates	4	ea.	\$20,000	\$80,000
Reactor Level Control Gates	4	ea.	\$25,000	\$100,000
Outlet Channel Gates	2	ea.	\$20,000	\$40,000
Receiving Water Channel Gates	2	ea.	\$25,000	\$50,000
Piping & Valves for UV System	1	Lump Sum	\$6,000	\$6,000
Lamp Bank Hoist	1	ea.	\$10,000	\$10,000
Chlorination Systems (Piping, Valves, Etc.)				
Adenovirus Control	1	Lump Sum	\$7,500	\$7,500
Filter Cleaning	1	Lump Sum	\$6,000	\$6,000
Recycled Water Pump Station	1	Lump Sum	\$6,000	\$6,000
Metering Pumps	3	ea.	\$2,500	\$7,500
Chlorine Residual Analyzers	2	ea.	\$10,000	\$20,000
Ammonia Analyzers	2	ea.	\$10,000	\$20,000
Washwater System				
Piping & Valves	1	Lump Sum	\$15,000	\$15,000
Washwater Pumps for Polymer System	2	ea.	\$2,000	\$4,000
Pump Primer	1	ea.	\$10,000	\$10,000
Effluent Pump Station Modifications				
Piping & Valves	1	Lump Sum	\$15,000	\$15,000
Magmeter	1	ea.	\$10,000	\$10,000
Air Release System	1	Lump Sum	\$5,000	\$5,000
Backwash System				
Pump	1	ea.	\$70,000	\$70,000
Piping & Valves	1	Lump Sum	\$30,000	\$30,000
Sampling System				
Automatic Samplers	2	ea.	\$15,000	\$30,000
Miscellaneous Piping and Valves	1	Lump Sum	\$7,500	\$7,500
Sampling Shed	1	ea.	\$15,000	\$15,000
Slab Modifications	1	Lump Sum	\$1,000	\$1,000
Sunshades	3	ea.	\$20,000	\$60,000
Electrical/Instrumentation	1	Lump Sum	\$1,040,800	\$1,040,800
Subtotal				\$5,203,800
Construction Contingency (10%)				\$520,380
Total				\$5,714,180

13. Wilmington Drain Restoration Multiuse Project

Budget

Table 6-41: Detailed Wilmington Drain Restoration Multiuse Project Budget

Budget Category		Other State Funds	Non-State Share	Requested Grant Funding	Total
(a)	Direct Project Administration Costs	-	\$130,000	-	\$130,000
(b)	Land Purchase/ Easement	-	-	-	-
(c)	Planning/ Design/ Engineering/ Environmental Doc	-	\$910,000	-	\$910,000
(d)	Construction/ Implementation	-	\$4,600,000	\$4,500,000	\$9,100,000
(e)	Environmental Compliance/ Mitigation/ Enhancement	-	-	-	-
(f)	Construction Administration	-	\$910,000	-	\$910,000
(g)	Other Costs	-	\$70,000	-	\$70,000
(h)	Construction/ Implementation contingency	-	\$1,820,000	-	\$910,000
(i)	Grand Total	-	\$8,440,000	\$4,500,000	\$12,940,000
Sources of Funds for Non-State Share (Funding Match) and Other State Funds		\$8,440,000	City of LA, Proposition O		

Note: All costs are in 2005 dollars and rounded to the nearest dollar

Table 6-42: Wilmington Drain Multiuse Project Budget Documentation

Budget Category	Basis of Cost Estimate
(a) Project Admin	1.5% of construction cost based on City of LA experience
(b) Land	No applicable because project site already owned by County of LA
(c) Planning, Design, etc.	- Planning/Design/Env Doc: 10% of construction cost; Based on City of LA experience
(d) Construction	See Table 6-43 (Preliminary Design Construction Cost Estimate)
(e) Environmental Comp.	Included in Section (c)
(f) Construction Admin	10% of construction cost based on City of LA experience
(g) Other Costs	- PAEP, LCP, QAPP, MP: \$20,000 - Legal Services: \$50,000
(h) Const. Contingency	20% of construction cost

Note: All costs are in 2005 dollars, unless otherwise indicated.

(a) Direct Project Administration Costs

Direct project administration costs were estimated as 1.5 percent of the construction cost estimate, based on previous City of LA projects.

(b) Land Purchase/ Easement

The project site is within by Los Angeles County property and easement so no land purchase is necessary.

(c) Planning / Design / Engineering / Environmental Documentation

Planning, design and permitting costs are based on City of LA experience. These costs typically are estimated as a percent of the construction cost such as project management (2 percent), engineering (2-percent), structural design (1 percent), geotechnical (3-percent), survey (1 percent), and bid and award (1 percent) of construction costs for a total of 10-percent of the construction cost. The cost for obtaining the required permits for this project is included as part of project management.

(d) Construction/ Implementation

The detail construction cost table (**Table 6-43**) shows the cost for this project component. The table is located after Section (h).

(e) Environmental Compliance/ Mitigation/ Enhancement

Environmental compliance is an integral part of this project since any construction activity may have an impact on the Wilmington Drain. The cost for this item is embedded as part of the planning, design engineering, construction and construction management. A main item for this project component involves the preparation of a construction SWPPP. This item is executed by the construction contractor and is shown as part of the construction component.

(f) Construction Administration

Construction administration costs were calculated as 10 percent of the construction cost estimate based on previous agency projects and professional experience.

(g) Other costs

Other costs include legal services (\$20,000) and for the preparation of PAEP, LCP, QAPP, and MP documents (\$50,000).

(h) Construction/ Implementation Contingency

The construction/implementation contingency percentage applied in this project is 20 percent, based on construction cost. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

Table 6-43: Wilmington Drain Project Detailed Construction Cost Estimate

Cost Item	Quantity	Unit	Unit Price	Total
Demolition/Removals				
Invasive/Exotic Plant Removal Budget	1	L.S.	\$148,000	\$148,000
Willow Stake Harvesting	1	L.S.	\$3,500	\$3,500
Hardscape Removals (C.L. Fencing/Paving/Gabions)	1	L.S.	\$15,000	\$15,000

13. Wilmington Drain Restoration Multiuse Project

Sediment and Debris Removal	1	L.S.	\$150,000	\$150,000
Restrooms (meeting ADA standards)				\$2,000,000
New Electrical Service				\$ 15,000
ADA Parking Area (2HCP/9 STD=11Stalls)	4,700	sf	\$50	\$235,000
Landscape Improvements				
Grading (Cut/Fill)	3000	cy	\$15	\$45,000
Gabion Installation (streamside)	300	cy	\$5000	\$150,000
Boulder Installation	2,500	ton	\$3000	\$750,000
Irrigation system (solar controller & 2" water meter)	23,000	sf	\$11	\$258,000
ADA Drinking Fountain/dog water	2	ea	\$3,500	\$7,000
Planting: Hydro-seed	23,500	sf	\$11	\$258,000
Planting: 1, 5 & 15 gallon containers	1	L.S.	\$150,000	\$150,000
Planting: 24" Box Trees	22	ea	\$350	\$7,700
Mulching: Locating and spreading 3"	2,500	cy	\$3.75	\$9,375
3" DG paving w/headers (parking/trails)	70,000	sf	\$6	\$420,000
Channel Trash/Sediment filters (\$2.0M+\$0.75M)	1	L.S.	\$2,750,000	\$2,750,000
Fencing: 6ft. Tube Steel	2,700	Lf	\$90	\$243,000
Fencing: Entry Gate (double: 24'vehicle)	2	ea	\$22,000	\$44,000
Fencing: Entry Gate (single: 5'ped)	4	ea	\$3,500	\$38,000
Fencing: Sim. wood/2-rail concrete	980	Lf	\$22	\$21,560
Site Furnishings: Picnic Tables	1	L.S.	\$65,000	\$65,000
Site Furnishings: Kiosk	2	ea	\$11,000	\$22,000
Site Furnishings: Signage (Monument)	2	ea	\$4,500	\$9,000
Site Furnishings: Signage (Regs/Safety)	1	L.S.	\$22,000	\$22,000
Site Furnishings: Benches	22	ea	\$1,200	\$26,400
Site Furnishings: Waste Receptacles	9	ea	\$800	\$7,200
Site Furnishings: Dumpster	1	ea	\$3,000	\$3,000
Total Direct Cost				\$7,873,735
General Conditions	1%			\$78,737
Liability Insurance	2%			\$159,049
Contractors Fees	10%			\$811,152
Performance Bond	2%			\$178,453
Gross Receipts Tax	0.13%			\$11,831
Total Indirect Cost				\$1,239,224
Total Construction Cost				\$9,100,000
Construction Contingency				1,820,000
Total Construction Cost w- Contingency				\$10,920,000