I. Introduction

This attachment presents detailed budget information and supporting documentation for the Proposal for the Greater Los Angeles County Region (Region). The Proposal for the Region offers a tremendous investment value to the State for a number of reasons including:

The Proposal provides over 70 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.

90 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.

92 percent of the grant funding request will be used directly for construction or construction-related activities. The State will realize the benefits of this Proposal quickly, avoiding delays from any further planning and engineering studies.

Less than one percent of grant funds requested are for project administration costs.

Table 4.1 provides a budget summary for the entire Proposal by budget category while Table 4-2 provides a breakdown of budget totals for each project by budget category. Detailed budget tables and supporting documentation for each project are provided below. As noted above, the requested grants funds would primarily be used for construction, as planning and engineering studies are mostly complete for the projects and detailed design ranges from 30 to 100 percent complete. Thus, the cost estimates included in the budgets for each project reflect the results of already completed planning and engineering studies and the partial completion of detailed design documents. Based on review of the budgets, all costs are reasonable.

The cost breakdown for each budget is provided for each of the budget categories included in the sample budget provided in Exhibit B of the Proposition 84 IRWM Proposal Solicitation Package and are consistent with the categories included in the Work Plan (provided in Attachment 3) and Schedule (provided in Attachment 5).

Table 4.1: Proposed Budget, GLAC IRWM Implementation Grant

Budget Category		Non-State Share (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$2,199,572	$78,468	$30,657	$2,308,697	95%
(b)	Land Purchase/Easement	$65,862	$0	$0	$65,862	100%
(c)	Planning/Design/Engineering/ Environmental Documentation	$10,829,096	$940,566	$227,660	$11,997,322	90%
(d)	Construction/Implementation	$64,899,296	$29,432,180	$930,934	$95,262,264	68%
(e)	Environmental Compliance/ Mitigation/Enhancement	$123,074	$419,278	$105,427	$647,779	19%
(f)	Construction Administration	$4,677,664	$454,988	$67,750	$5,200,402	90%
(g)	Other Costs	$437,901	$262,400	$3,004	$703,305	62%
(h)	Construction/Implementation Contingency	$5,327,822	$412,120	$78,650	$5,818,592	92%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$88,560,287**	**$32,000,000**	**$1,444,082**	**$122,004,223**	**73%**

Note: all costs are in 2009 dollars and are rounded to the nearest dollar

Table 4.2: Summary Budget, GLAC IRWM Implementation Grant

Individual Project Title	Non-State Share (Funding Match)	Requested Grant Funding (DWR Grant Amount)	Other State Funds Being Used	Total	% Funding Match
Hahamonga Basin Multi-Use Project – Arroyo Seco Foundation	$1,479,376	$4,341,281	$1,444,082	$7,264,739	20%
Citywide Smart Irrigation Control System and Recycled Water Improvements – City of Calabasas	$193,320	$620,000	$0	$813,320	24%
Storm Drain Improvements and Installation of Infiltration Chambers – City of Hawthorne	$4,700,141	$1,461,219	$0	$6,161,360	76%
Penmar Water Quality and Runoff Reuse Project – City of Los Angeles, Bureau of Sanitation	$21,659,338	$2,922,437	$0	$24,581,775	88%

Table 4.2: Summary Budget, GLAC IRWM Implementation Grant

Individual Project Title	Non-State Share (Funding Match)	Requested Grant Funding (DWR Grant Amount)	Other State Funds Being Used	Total	% Funding Match
Model Equestrian Center – City of Rolling Hills Estates	$665,163	$1,315,097	$0	$1,980,260	34%
16th Street Watershed Runoff Use Project – City of Santa Monica	$1,049,707	$1,315,243	$0	$2,364,950	44%
Surface Water Treatment Plant Improvements – Covina Irrigating Company	$3,743,225	$3,068,559	$0	$6,811,784	55%
Central Los Angeles County Regional Water Recycling Program Phase 1a – Los Angeles Department of Water and Power	$7,489,247	$2,800,000	$0	$10,289,247	73%
Tujunga Spreading Grounds Enhancement Project – Los Angeles Department of Water and Power	$20,920,465	$4,383,656	$0	$25,304,121	83%
San Antonio Spreading Grounds Improvements – Three Valleys Municipal Water District	$1,200,631	$3,799,169	$0	$4,999,800	37%
Leo J. Vander Lans Advanced Water Treatment Plant Expansion – Water Replenishment District	$24,220,803	$4,944,459	$0	$29,165,262	83%
Whittier Narrows Conservation Pool Project – Water Replenishment District	$1,125,505	$576,000	$0	$1,701,505	66%
Water and Energy Efficiency in the School and Hotel/Motel Sectors – West Basin Municipal Water District	$113,220	$452,880	$0	$566,100	20%
Grand Total	**$88,560,141**	**$32,000,000**	**$1,444,082**	**$122,004,223**	**73%**

Note: all costs are in 2009 dollars and are rounded to the nearest dollar

II. Hahamongna Basin Multi-Use Project

Table 4.3: Detailed Hahamongna Basin Multi-Use Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$120,895	$22,919	$30,657	$174,471	69%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$945,253	$229,424	$227,660	$1,402,337	67%
(d)	Construction/Implementation	$144,149	$3,142,031	$930,934	$4,217,114	3%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$398,917	$105,427	$504,344	0%
(f)	Construction Administration	$22,853	$235,870	$67,750	$326,473	7%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$136,996	$100,000	$3,004	$240,000	57%
(h)	Construction/Implementation Contingency	$109,230	$212,120	$78,650	$400,000	27%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$1,479,376**	**$4,341,281**	**$1,444,082**	**$7,264,739**	**20%**

**Sources of funding:*

Non-State Funds: Arroyo Seco Foundation; Pasadena Water & Power Dept.; Pasadena Public Works Dept.; LA County 1992 & 1996 Prop A

State Funds: Prop. 50 River Parkways; Prop 12 Riparian Habitat Fund; Youth Recreation Development Program

The sections below detail each budget category, and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget, and may include a table which further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $174,471 were calculated based on the task break down shown below. Overall, Direct Project Administration costs are equal to 2 percent of the total project budget. This allocation is based on past experience on similar projects.

Task 1: Administration

Administration Costs of $138,983 were calculated based on labor costs shown in Table 4-4.

Table 4.4: Administration Labor Costs

Component	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Basin	Lead Project Supervisor	$65/hr	374	$24,310
Basin	Program Coordinator II	$57/hr	1279	$72,903
Canyon	Project Manager	$90/hr	139	$12,510
Canyon	Assistant Project Manager	$70/hr	418	$29,260
			Total	**$138,983**

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $18,000 were calculated based on 0.25 percent of the total project cost for the use of a Department of Industrial Relations third party LCP provider. This percentage is based on the SBX2-9 requirements for bond-funded or design-build public works projects, Section 16453 of the California Labor Code.

Task 3: Reporting

Reporting Costs of $17,445 were calculated based on labor costs shown in Table 4.5.

Table 4.5: Reporting Costs for Basin Component

Component	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Basin	Program Coordinator II	$57/hr	184	$10,488
Canyon	Assistant Project Manager	$70/hr	100	$7,000
			Total	**$17,488**

(b) Land Purchase/Easement

This Project does not require acquisitions of land or easements as the land in question is owned in fee simple by the City of Pasadena, while the Los Angeles County Flood Control District (LACFCD) has a flood control easement over 80 percent of the project area.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $1,402,337 were calculated based on the task breakdown shown below.

Task 4: Assessment and Evaluation

Assessment and Evaluation costs are estimated to be $85,000. This work will be done by a consultant, and is divided into two components: $40,000 for environmental analysis, and $45,000 for dam assessment and feasibility.

Task 5: Final Design

Final Design costs are estimated to be $1,017,337. Detailed information by component and stage is shown in Table 4.6. Work will be completed by a consultant.

Table 4-6: Final Design Cost

Component	Discipline	Total
Basin	Planning, Design & Engineering	$642,817
Canyon	Planning, Design & Engineering	$374,520
	Total	**$1,017,337**

Task 6: Environmental Documentation

Environmental Documentation is allocated $270,000 in order to complete environmental documentation. Detailed information by Component can be found in Table 4.7. Work will be completed by a consultant.

Table 1.7: Environmental Documentation Cost

Component	Discipline	Total
Basin	Environmental Planning Team	$154,800
Canyon	Environmental Planning Team	$115,200
	Total	**$270,000**

Task 7: Permitting

Permitting is allocated $30,000. Detailed information by Component can be found in Table 4.8. Work will be completed by a consultant.

Table 4.8: Permitting Cost

Component	Discipline	Total
Basin	Permitting	$17,200
Canyon	Permitting	$12,800
	Total	**$30,000**

(d) Construction/Implementation

Construction/Implementation Costs of $4,217,114 were calculated based on the task break down shown below.

Task 8: Construction Contracting

Construction contracting is allocated $36,238 based on the detailed labor cost below in Table 4.9. The hourly wages below are the City of Pasadena's hourly rates. Hours are based on previous experience with similar projects.

Table 4.9: Construction Administration Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Pasadena Public Works Project Manager	$70	52	$3,640
Program Coordinator II	$57	159	$9,063
Support Staff	$45	121	$5,445
PW Engineer	$88	21	$1,848
Pasadena Water and Power Assistant Engineer	$78	139	$10,842
Support Staff	$45	120	$5,400
		Total	**$36,238**

Task 9: Construction

Construction is allocated $4,180,876. Costs are based on previous experience with similar work, and will be refined after completion of design.

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation are allocated $186,530 for site preparation to include disposal, clearing, chip and mulch. This cost is based on previous experience with similar work.

Subtask 9.2: Project Construction

The Project Construction estimate of $3,981,346 is based on the detailed costs for the items shown in Table 4.10.

Table 4.10: Construction Costs

Component	Cost Item	Total ($)
Basin	Grading - Place, Spread, Compact, & Fine Grade	$1,656,000
Basin	Construct 3000 lineal feet Westside Perimeter Trail	$135,240
Basin	Construct Parking Lot and Road Improvements	$94,760
Basin	Develop Water - Domestic and Restoration Irrigation	$97,106
Basin	Park Amenities and Interpretive Signage	$63,020

Table 4.10: Construction Costs

Component	Cost Item	Total ($)
Canyon	Temporary High Capacity; Existing Bridges 1 & 3	$165,600
Canyon	Sediment Removal and Coffer Dam Bypass	$79,120
Canyon	Remove & Recycle Concrete Dam and Intake Structure	$51,520
Canyon	Construct Inflatable Dam and Modified Intake Structure	$920,000
Canyon	Habitat Restoration - Soil Prep, Hydroseed &/or Plantings	$9,200
Canyon	Inflatable Dam Operation & Control Equipment, and Infrastructure	$101,200
Canyon	Benches 6 at $250 ea; Interpretive Signage 2 at $2,500 ea.	$5,980
Canyon	Develop Water & Power for Restroom Building	$13,800
Canyon	Construct Fish Ladder with Low Flow Intake	$36,800
Canyon	Install Intake Fish Protection Screens	$322,000
Canyon	Construct Precast Concrete Restroom with Holding Tank	$230,000
	Total	**$3,981,346**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization is allocated $13,000. These costs are based on previous experience with similar projects, as presented in Table 4.11.

Table 4.11: Demobilization Costs

Cost Item	Unit Costs ($)	Total ($)
Demobilization (Basin)	Lump sum	$4,500
Demobilization (Canyon)	Lump sum	$8,500
	Total	**$13,000**

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement activities are allocated $504,344, broken down by tasks shown in Table 4.12.

Table 4.12: Environmental Compliance/Mitigation/Enhancement Costs

Cost Item	Total ($)
Habitat Restoration - Soil Prep, Hydroseed & Plantings	$313,720
Construct - BMP Storm Drainage Improvements	$190,624
Total	**$504,344**

(f) Construction Administration

Task 11: Construction Administration

Construction Administration costs is estimated to be $326,473, and is detailed in The hours estimated for Construction Administration are based on historic time charges by the Project Coordination and Administration Office in similar previous projects. A large amount of the Construction Administration will be done by the Project Manager, but the Project Manager's hours during construction are accounted for in Project Administration Row (a) and are not included in the hours noted in Row (f). Only hours for the Construction Manager during construction and post-construction are noted below.

The cost breakdown in The hours estimated for Construction Administration are based on historic time charges by the Project Coordination and Administration Office in similar previous projects. A large amount of the Construction Administration will be done by the Project Manager, but the Project Manager's hours during construction are accounted for in Project Administration Row (a) and are not included in the hours noted in Row (f). Only hours for the Construction Manager during construction and post-construction are noted below.

Table 4.13: Construction Administration Costs

Component	Discipline	Hourly Wage ($/hr)	Number of Hours	Total Costs ($)
Basin	Pasadena Public Works Project Manager	$70	402	$28,140
Basin	Pasadena Public Works Assistant Proj. Mgr.	$58	678	$39,324
Basin	Pasadena Public Works Inspector	$65	1953	$126,945
Canyon	Pasadena Water and Power Assistant Engineer	$78	203	$15,834
Canyon	Pasadena Water and Power Project Manager	$90	388	$34,920
Canyon	Pasadena Water and Power Assistant Project Manager	$70	155	$10,850
Canyon	Pasadena Water and Power Inspector	$65	1084	$70,460
			Total	**$326,473**

(g) Other Costs

Other Costs not included above are community outreach and writing of the Project Monitoring Plan. This cost is estimated to be $240,000, as presented in Table 4.14.

Table 4.14: Other Costs

Component	Item and Brief Detailed Information	Cost ($)
Basin	Community Outreach	$100,000
Canyon	Community Outreach	$130,000
	Project Monitoring Plan	$10,000
	Total	**$240,000**

(h) Construction/Implementation Contingency

The construction/implementation contingency percentage applied is approximately 9.5 percent of the total anticipated construction costs of $4,217,114 to equal a contingency of $400,000. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the Project.

III. Citywide Smart Irrigation Control System and Recycled Water Improvements

Table 4.15: Detailed Citywide Smart Irrigation Control System and Recycled Water Improvements Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$25,310	$0	$0	$25,310	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$52,331	$0	$0	$52,331	100%
(d)	Construction/Implementation	$23,874	$620,000	$0	$643,874	4%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$31,805	$0	$0	$31,805	100%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$10,000	$0	$0	$10,000	100%
(h)	Construction/Implementation Contingency	$50,000	$0	$0	$50,000	100%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$193,320**	**$620,000**	**$0**	**$813,320**	**24%**

***Sources of funding:** *City of Calabasas in kind match*

(a) Direct Project Administration Costs

Direct Project Administration Costs of $25,310 were calculated based on the task break down shown below. Overall, Direct Project Administration costs are equal to 3 percent of the total project budget.

Task 1: Administration

Administration Costs of $20,213 were calculated based on labor costs shown in Table 4.16.

Table 4.16: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$52.50	185	$9,712
Asst. Project Manager	$33.91	125	$4,239
Grant Administrator	$38.18	164	$6,262
		Total	**$20,213**

Task 2: Labor Compliance Program

Labor Compliance Program Costs $1,641 were calculated based on labor costs shown in Table 4.17.

Table 4.17: Direct Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$52.50	19	$997.50
Asst. Project Manager	$33.91	19	$644
		Total	**$1,641**

Task 3: Reporting

Reporting Costs of $3,456 were calculated based on labor costs shown in Table 4.18.

Table 4.18: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$52.50	40	$2,100
Asst. Project Manager	$33.91	40	$1,356
		Total	**$3,456**

(b) Land Purchase/Easement

This Project does not require acquisitions of land or easements since all work takes place within City rights-of-way.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $52,331 were calculated based on the task breakdown shown below.

Task 4: Assessment and Evaluation

The cost of producing the Feasibility study and Irrigation Master Plan are rolled up as part of the final design costs of the Project. See Table 4.19: Final Design Costs below.

Task 5: Final Design

Final Design costs are estimated to be $51,206. Detailed information on hourly wage by discipline and number of hours by Stage can be found in Table 4.19.

Table 4.19: Final Design Costs

Design Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
20%	Environmental Engineer	$98.50	100	$9,850
30%	Environmental Engineer	$98.50	50	$4,925
60%	Landscape Design Architect	$90.00	120	$10,800
80%	Landscape Design Architect	$90.00	125	$11,250
100%	Environmental Engineer	$98.50	146	$14,381
			Total	**$51,206**

Task 6: Environmental Documentation

Environmental documentation is allocated $1,125 in order to prepare the environmental checklist and required documents needed for CEQA, which is detailed in Table 4.20.

Table 4.20: Environmental Documentation Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Environmental Consultant	$75.00	15	$1,125
		Total	**$1,125**

Task 7: Permitting

No permitting is required for this Project; therefore, no budget is allocated under this task.

(d) Construction/Implementation

Construction/Implementation Costs of $643,874 were calculated based on the task breakdown shown below.

Task 8: Construction Contracting

Construction contracting is allocated $2,100 based on the detailed labor cost below in Table 4-21.

Table 4.21: Construction Contraction Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$52.50	40	$2,100
		Total	**$2,100**

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation is allocated $9,656 required for clearing of lands for installation of pedestals for installation of the weather tracking stations. The detailed site preparation costs are shown in Table 4.22.

Table 4.22: Mobilization and Site Preparation Costs

System	Hourly Wage by discipline ($)	Number of hours	Total ($)
Site Preparation	$568.00	17	$9,656
		Total	**$9,656**

Subtask 9.2: Project Construction

The Project Construction estimate of $632,118 is based on the detailed cost areas for materials as shown in Table 8 and labor as shown in Table 4.23.

Table 4.23: Construction Materials Cost

Materials Used	Unit Costs ($)	Number of Units	Total ($)
Smart Irrigation Controllers	$3,808.00	66	$251,328
Weather Stations	$7,886.00	2	$15,772
Wireless Solutions	$37,649.00	1	$37,649
Remote Equipment	$855.00	66	$56,430
Flow Sensors	$1,637.00	12	$19,644
New Power Supply Poles and Meters	$1,900.00	3	$5,700
Improvement to Existing Irrigation System with Recycled Water	$70,725.00	1	$70,725
Public Education Materials	$3,800.00	Lump Sum	$3,800
		Total	**$461,048**

Table 4.24: Construction Labor Cost

Discipline	Hourly Wage by Discipline ($)	Number of Hours	Total ($)
Controller Installation	$568.00	48	$27,264
Wireless Installation	$121.00	66	$7,986
Installation of Flow Sensors	$1,625.00	12	$19,500
Installation of Weather Stations	$1,750.00	2	$3,500
Installation of New Power Supply Poles and Meters	$940.00	3	$2,820
Service Plan	$49,500.00	Lump Sum	$49,500
Improvement to Existing Irrigation System with Recycled Water	$60,000.00	Lump Sum	$60,000
Public Education Campaign	$50.00	10	$500
		Total	**$171,070**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization costs are included in the construction costs shown in Subtask 9.2.

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement activities are not required for this Project and, therefore, no budget is allocated.

(f) Construction Administration

Task 11: Construction Administration

Construction Administration cost is estimated to be $31,803 and is detailed in Table 4.25.

Table 4.25: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Total Costs ($)
Construction Management	130	$75.00	$9,750
Construction Inspection	90	$75.00	$6,750
Landscape Manager	$64.99	130	$8,449
Asst. Landscape Manager	$35.15	195	$6,854
		Total	**$31,803**

(g) Other Costs

Other costs are allocated $10,000, for developing the project monitoring plan based on prior experience with similar projects.

Table 4.26: Final Design Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Other Costs (Monitoring Plan)	Lump Sum Estimate	n/a	$10,000
		Total	**$10,000**

(h) Construction/Implementation Contingency

The construction/implementation contingency is allocated $50,000. The project design, specifications and estimates are not yet complete. The present cost estimates are based on the initial evaluation and feasibility study. A $50,000 contingency is budgeted for unexpected and unforeseen conditions.

IV. Storm Drain Improvements and Installation of Infiltration Chambers on Hawthorne Blvd

Table 4.27: Detailed Storm Drain Improvements and Installation of Infiltration Chambers Project Budget

	Budget Category	Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$100,000	$25,000	$0	$125,000	80%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/ Engineering/ Environmental Documentation	$386,000	$100,000	$0	$486,000	79%
(d)	Construction/ Implementation	$3,663,781	$1,261,219	$0	$4,925,000	0%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$425,360	$75,000	$0	$500,360	0%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$0	$0	$0	$0	0%
(h)	Construction/ Implementation Contingency	$125,000	$0	$0	$125,000	0%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$4,700,141**	**$1,461,219**	**$0**	**$6,161,360**	**76%**

***Sources of funding:** Prop 25, Prop C, Measure R and Local City Funds*

The sections below detail each budget category and break down the budget by the tasks described in the Work Plan. Each task's budget details the cost basis used in estimating the budget and may include a table which further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $125,000 were calculated based on the task break down shown below. Overall, Direct Project Administration costs are equal to 2 percent of the total project budget. Administrative costs are estimated based on prior experience with similar projects.

Task 1: Administration

Administration Costs of $108,760 were calculated based on labor costs shown in Table 1 and equipment/supply costs shown in Table 4.28**.**

Table 4.28: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Engineer	$106.25	370	$39,383
Technical Supporter	$48.19	300	$14,457
Project Coordinator	$62.00	360	$22,320
		Total	**$76,160**

Table 4.29: Administration Equipment/Supplies Costs

Equipment/Supplies	Cost ($)
Communications	$6,000
Motor vehicles	$10,000
Automatic data processing	$7,000
Office equipment	$6,600
Publication costs	$3,000
Total	$32,600

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $15,000 were calculated based on 0.25 percent of the total project cost for the use of a Department of Industrial Relations third party LCP provider. This percentage is based on the SBX2-9 requirements for bond-funded or design-build public works projects, Section 16453.

Task 3: Reporting

Reporting Costs of $1,240 were calculated based on labor costs shown in Table 4.30.

Table 4.30: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Coordinator	$62.00	20	$1,240
		Total	**$1,240**

(b) Land Purchase/Easement

This project does not require acquisitions of land or easements because the land is already owned by the City of Hawthorne; therefore, no budget is allocated to this task.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $485,997 were calculated based on the task breakdown shown below.

Task 4: Assessment and Evaluation

No further Assessment and Evaluation studies are planned as part of this project and therefore are not allocated budget.

Task 5: Final Design

Final Design costs are estimated to be $481,000. Detailed information on hourly wage by discipline and number of hours can be found in Table 4.31. Hourly wage rates are for City of Hawthorne employees.

Table 4.31: Final Design Cost

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Engineer	$106.25	700	$74,375
Environmental Inspector	$50.68	400	$20,272
Resident Engineer	$58.94	2500	$147,350
Traffic Engineer	$84.77	950	$80,532
DBE Liaison Officer	$32.56	433	$14,098
Technical Supporter	$50.78	1500	$76,170
Project Coordinator	$62.00	1100	$68,200
		Total	**$481,000**

Task 6: Environmental Documentation.

This project is categorically exempt under CEQA and will require a Notice of Exemption be filed, but costs are considered to be negligible. Therefore no budget is allocated to this task.

Task 7: Permitting

Permitting is allocated $5,000 for traffic control permits from the public works department

(d) Construction/Implementation

Construction/Implementation Costs of $4,925,000 were calculated based on the task break down shown below.

Task 8: Construction Contracting

Bid advertisement, a pre-bid contractors meeting, evaluation of bids, award of contract, and a pre-construction meeting are estimated to cost $45,000, based on experience with similar projects.

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation are allocated $80,000, based on experience with similar projects.

Subtask 9.2: Project Construction

The Project Construction estimate of $4,800,000 is based on the detailed cost areas for materials as shown in Table 4.32, equipment as shown in Table 4.33, and labor as shown in Table 4.34. Additional costs that do not fall under these categories are listed in Table 4.35.

Table 4.32: Construction Materials Cost

Materials Used	Unit Costs ($)	Number of Units	Total ($)
18"-60" RCP	$140/LF	3,000 LF	$420,000
Junction Structure w/Manhole	$10,000/EA	20 units	$200,000
Catch Basins 3.5"- 7" w/Inserts	$9,000/EA	30 units	$270,000
Chamber	$7/EA	30,000 units	$210,000
		Total	**$1,100,000**

Table 4.33: Construction Equipment Cost

Equipment Used	Daily Costs ($)	Number of Units	Total ($)
Hydraulic Excavator	$87	2,240 days	$194,880
Loading Tractors	$76	2,240 days	$170,240
Truck	$3,768	70 days	$263,760
Compactor	$171	70 days	$11,970
		Total	**$640,850**

Table 4.34: Construction Labor Cost

Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Skilled Worker	$44.00	3,920	$172,480
Dump Truck Driver	$60.00	2,240	$134,400
Foreman	$41.00	3,920	$160,720
Labor	$34.00	11,200	$380,800
		Total	$848,400

Table 4.35: Other Construction Costs

Cost Item	Unit Cost	Number of Units	Total ($)
Upgrade signals	$700,000	Lump Sum	$700,000
Reduce medians	$20	10,000 LF	$200,000
Rehabilitate Street	$80	14,000 tons asphalt	$1,120,000
Add bike lane	$190,750	Lump Sum	$190,750
		Total	**$2,210,750**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization is allocated $0 as demobilization is included in the construction equipment cost above (Subtask 9.2), and performance testing is included in Construction Administration Costs (Task 11).

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement will not be necessary and therefore is not allocated budget.

(f) Construction Administration

Task 11: Construction Administration

Construction Administration costs is estimated to be $500,360. Costs are broken down by discipline as detailed in Table 4.36. Unit costs are the City of Hawthorne's staff rates. Equipment costs are the estimated cost to the City of Hawthorne.

Table 4.36: Construction Administration Costs

Discipline	Hours	Unit Labor Cost ($)	Unit Equipment Costs ($)	Total Costs ($)
Project Engineer	800	$106.25	$20	$101,000
Project Coordinator	1800	$62.00	$30	$165,600
Resident Engineer	1800	$58.94	$20	$142,092
Traffic Engineer	586	$84.77	$20	$61,395
Inspector	400	$50.68	$0	$20,272
			Total	**$490,360**

Materials Used	Unit Costs ($)	Number of Units	Total ($)
Final Report	$10,000 lump sum	n/a	$10,000
		Total	**$10,000**

(g) Other Costs

Other Costs will include the writing of the monitoring plan, but costs are expected to be absorbed in other tasks.

(h) Construction/Implementation Contingency

The construction/implementation contingency percentage applied is 2.5 percent of the total anticipated project cost of $4,925,000 to equal a contingency of $125,000. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

V. Penmar Water Quality and Runoff Reuse

Table 3.37: Detailed Penmar Water Quality Improvement Project (Phases I and II) Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$783,750	$0	$0	$783,750	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$1,892,625	$0	$0	$1,892,625	100%
(d)	Construction/Implementation	$15,237,263	$2,922,437	$0	$18,159,700	84%
(e)	Environmental Compliance/ Mitigation/Enhancement	$29,800	$0	$0	$29,800	100%
(f)	Construction Administration	$1,864,000	$0	$0	$1,864,000	100%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$85,800	$0	$0	$85,800	100%
(h)	Construction/Implementation Contingency	$1,766,100	$0	$0	$1,766,100	100%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$21,659,338**	**$2,922,437**	**$0**	**$24,581,775**	**88%**

***Sources of funding:** *City of Los Angeles Proposition O "Clean Water" Bond Measure*

The sections below detail each budget category, and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget, and may include a table which further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs are estimated to be $783,750. This figure includes the cost of the Labor Compliance Program and all reporting to the State. Overall, Direct Project Administration costs are equal to 3 percent of the total project budget. Administration costs

are broken down by average hourly wage and task as shown below. Hourly rates below are the City of Los Angeles' hourly staff rates.

Task 1: Administration

Administration Costs of $627,000 were calculated based on labor costs shown in Table 4.38.

Table 4.39: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Management/Project Support for Phase I (City Staff)	$125.00	4,120	$515,000
Project Management/Project Support for Phase II (City Staff)	$125.00	896	$112,000
		Total	**$627,000**

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $78,375 were calculated based on labor costs shown in Table 4.40.

Table 4.40: Direct Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Management/Project Support for Phase I (City Staff)	$125.00	515	$64,375
Project Management/Project Support for Phase II (City Staff)	$125.00	112	$14,000
		Total	**$78,375**

Task 3: Reporting

Reporting Costs of $78,375 were calculated based on labor costs shown in Table 4.40.

Table 4.40: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Management/Project Support for Phase I (City Staff)	$125.00	515	$64,375
Project Management/Project Support for Phase II (City Staff)	$125.00	112	$14,000
		Total	**$78,375**

(b) Land Purchase/Easement

This project does not require acquisitions of land or easements since an existing facility owned by the City of Los Angeles is being utilized.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $1,892,625 were calculated based on the task breakdown shown below.

Task 4: Assessment and Evaluation

Assessment and Evaluation costs are estimated to be $420,000. This work will be completed by a consultant for the rate and hours shown below in Table 4.41.

Table 4.41: Assessment and Evaluation Cost

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Pre-Design	$100.00	3,550	$355,000
Geotechnical and Survey Investigations	$100.00	650	$65,000
		Total	**$420,000**

Task 5: Final Design

Final Design costs are estimated to be $1,119,000. Detailed information on hourly wage by discipline and number of hours by Stage can be found in Table 4.42. The hourly wages below are based on City of Los Angeles staff hourly rates. Hours are based on previous experience with similar projects.

Table 4.42: Final Design Cost

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
50% Design Submittal	Design	$100.00	6625	$662,500
90% Design Submittal	Design	$100.00	3205	$320,500
Constructability Review	Design	$100.00	135	$13,500
100% Design Submittal	Design	$100.00	1225	$122,500
			Total	**$1,119,000**

Task 6: Environmental Documentation

Environmental Documentation is allocated $268,625 in order to complete environmental reports and file the CEQA Mitigated Negative Declaration. Detailed information on hourly wage by discipline and number of hours by Stage can be found in Table 4.43.

Table 4.43: Environmental Documentation Cost

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Environmental Reports (Noise, Air, Traffic, Cultural Resource Studies)	Environmental Documentation	$100.00	1,155	$115,500
Filing of CEQA Mitigated Negative Declaration	Environmental Documentation	$125.00	1,225	$153,125
			Total	**$268,625**

Task 7: Permitting

Permitting is allocated $85,000. Detailed information on hourly wage by discipline and number of hours can be found in Table 8. The hourly wages below are the City of Los

Angeles' staff hourly rates. Hours are based on previous experience with similar projects. As noted in the work plan, the costs associated with final issue of the permits is included as part of the construction cost in Task 4.44.

Table 4.44: Permitting Cost

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Construction Permits	$100.00	850	$85,000
		Total	**$85,000**

(d) Construction/Implementation

Construction/Implementation Costs of $18,159,700 were calculated based on the task break down shown below.

Task 8: Construction Contracting

Construction contracting is allocated $498,700 based on the detailed labor cost below in Table 4.45. The hourly wages below are the City of Los Angeles's staff hourly rates. Hours are based on previous experience with similar projects.

Table 4.45: Construction Administration Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Bid and Award Phase I	$100	1790	$179,000
Bid and Award Phase II	$100	3197	$319,700
		Total	**$498,700**

Task 9: Construction

Construction is allocated $17,661,000 This estimate is based on the Construction Estimate from the Phase I 100 percent Design Plans and the Concept Report for Phase II .

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation are allocated $550,000, based on the detailed costs shown in Table 4.46.

Table 4.46: Mobilization and Site Preparation Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
Mobilization-Phase I	$400,000	1	$400,000
Mobilization-Phase II	$150,000	1	$150,000
		Total	**$550,000**

Subtask 9.2: Project Construction

The Project Construction estimate of $17,104,000 is based on the detailed cost estimate shown in Table 4.47.

Table 4.47: Construction Costs

Cost Item	Lump Sum Cost ($)	Quantity	Total ($)
Stormwater Pump Station	$1,215,000	1	$1,215,000
Maintenance Holes/Access Vaults	$122,000	3	$366,000
Reservoir Pump Station	$1,200,000	1	$1,200,000
Diversion Structure	$791,000	1	$791,000
Underground Detention Tank	$3,640,000	1	$3,640,000
Sewer Upgrades	$3,100,000	1	$3,100,000
Landscaping	$250,000	1	$250,000
Shoring/Dewatering	$2,300,000	1	$2,300,000
Traffic Control	$200,000	1	$200,000
Instrumentation and Control, Electrical Cabinets	$1,750,000	1	$1,750,000
Disinfection, irrigation pumps and upgrades (Phase II)	$2,292,000	1	$2,292,000
		Total	**$17,104,000**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization is allocated $7,000.

Table4.48: Demobilization Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
Performance Testing	$7,000.00	1	$7,000.00
		Total	**$7,000.00**

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement activities are allocated $29,800. This is based on estimate from similar projects that required mitigation for cultural resources, noise and traffic in the Mitigated Negative Declaration.

Table 4.49: Environmental Compliance/Mitigation/Enhancement Costs

Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Cultural Resource Monitoring (General Requirement Section 01562)	$100	298	$29,800
		Total	**$29,800**

(f) Construction Administration

Task 11: Construction Administration

Construction Administration costs are estimated to be 10 percent of the construction cost or $1,864,000, based on the City of Los Angeles' experience with similar projects. The administration costs of $1,864,000 are broken up by the disciplines shown in Table 4.50 below.

Table 4.50: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Total Costs ($)
Project Management (City Staff)	5,490	$100.00	$549,000
Design Support During Construction (Consultant)	4,350	$125.00	$543,750
Construction Management	6,170	$125.00	$771,250
		Total	**$1,864,000**

(g) Other Costs

Other Costs not included above include permit fees paid by the contractor and writing of the Project Monitoring Plan as described in the Work Plan are estimated to be $85,800.

(h) Construction/Implementation Contingency

The construction/implementation contingency percentage applied is approximately 10 percent of the total anticipated construction cost of $17,104,000 to equal a contingency of $1,766,100). These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

VI. Model Equestrian Center

Table 4.51: Detailed Model Equestrian Center Project Budget

	Budget Category	Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$29,500	$0	$0	$29,500	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/ Engineering/ Environmental Documentation	$263,364	$0	$0	$263,364	100%
(d)	Construction/ Implementation	$0	$1,032,800	$0	$1,032,800	0%
(e)	Environmental Compliance/ Mitigation/Enhancement	$15,983	$19,017	$0	$35,000	0%
(f)	Construction Administration	$0	$103,280	$0	$103,280	0%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$46,476	$160,000	$0	$206,476	23%
(h)	Construction/ Implementation Contingency	$309,840	$0	$0	$309,840	100%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$665,163**	**$1,315,097**	**$0**	**$1,980,260**	**34%**

***Sources of funding:** *Proposition A*

The sections below detail each budget category and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget, and may include a table which further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $29,500 were estimated to assist City staff with grant administration to respond to information requests by the funding agency, to prepare grant reimbursement requests and quarterly progress reports, and are calculated based on the task breakdown shown below based on previous experience with SWRCB grant funded projects. Additional project administration will be provided by City staff as in-kind services and are not included in these costs. Overall, Direct Project Administration costs are equal to 1.5 percent of the total project budget.

Task 1: Administration

Grant Administration Costs of $10,030 were calculated based on labor costs shown in Table 5.52**.** The grant administration activities of this Project will be overseen by a consultant. Other aspects of project administration will be provided as in-kind services by City staff.

Table 5.52: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Consultant	$118	85	$10,030
	Total		$10,030

Task 2: Labor Compliance Program

Labor Compliance Program Costs are included in the allocation for construction administration.

Task 3: Reporting

Reporting Costs, including quarterly reporting and final report, of $19,470 were calculated based on labor costs shown in Table 5.53.

Table 5.53: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Consultant	$118	165	$19,470
		Total	**$19,470**

(b) Land Purchase/Easement

This Project does not require acquisitions of land or easements as the land is under existing lease by the City of Rolling Hills Estates.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $263,364 were calculated based on 30 percent of the total construction cost due to challenges of designing adjacent to a municipal landfill and the additional review and consultation required by outside agencies as well as the likelihood of unforeseen challenges during construction that may necessitate additional engineering services during construction beyond the norm for a construction project. This effort is divided among the below tasks.

Task 4: Assessment and Evaluation

No additional work is expected to be completed under Task 4, therefore no budget is allocated.

Task 5: Final Design

Final Design is allocated $216,888 or 70 percent of the total Planning/Design/Engineering/ Environmental Documentation budget based on 1,549 hours of engineering time at an hourly wage of $140.

Task 6: Environmental Documentation

Environmental Documentation is allocated $30,984 or 10 percent of the total Planning/Design/ Engineering/Environmental Documentation budget for completion of CEQA process based on 263 hours of a consultant's time at an hourly wage of $118.

Task 7: Permitting

Permitting is allocated $15,492 or 5 percent of the total Planning/Design/ Engineering/Environmental Documentation budget for securing coverage and required documentation and monitoring for compliance with the statewide General Stormwater Permit for Construction Activities based on 129 hours of at an average rate of $120.

(d) Construction/Implementation

Construction/Implementation Costs of $1,032,800 were calculated based on the task breakdown shown below.

Task 8: Construction Contracting

Construction contracting will be conducted by City staff as in-kind services.

Task 9: Construction

Total construction costs are budgeted at $1,032,800. These construction costs have been estimated based on previous engineer's estimate (2008) for a similar project. The quantities have been adjusted to account for anticipated differences in scope of the two projects; however, the unit costs are the same, which is probably a reasonable estimate since construction rates have been steady or have decreased during the recent recession. Nevertheless, the costs above are not equivalent to an engineer's estimate because the current Project has not yet been designed. These costs are for budgetary purposes only.

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation is estimated to cost $30,000, detailed in Table 5.54. These costs include mobilization for both Phase A and Phase B.

Table 5.54: Mobilization Cost

Cost Item	Cost ($)	Number of Units	Total ($)
Mobilization/Staking/Testing	$15,000 lump sum	1	$15,000
Demolition	$15,000 lump sum	1	$15,000
		Total	**$30,000**

Subtask 9.2: Project Construction

The Project Construction estimate of $987,800 is based on the detailed costs shown in Table 4.55**.**

Table 4.55: Construction Cost

Phase	Cost Item	Cost ($)	Number of Units	Total ($)
Part A - Retrofit	Drainage and water quality retrofit	$150,000.00 lump sum	1	$150,000
Part B – New Facilities	Temporary stall facilities	$2,500.00 lump sum	35	$87,500
Part B – New Facilities	Barn structure and amenities	$250,000.00 lump sum	1	$250,000
Part B – New Facilities	Earthwork per Geotechnical report	$16.00/cubic yard (CY)	4,800 CY	$76,800
Part B – New Facilities	Building foundation	$9.00/SF	15,000 SF	$135,000
Part B – New Facilities	Fencing and railing	$25.00/linear foot (LF)	1,000 LF	$25,000
Part B – New Facilities	Interpretive signage	$7,500.00 lump sum	1	$7,500
Part B – New Facilities	Arena footing material	$3.00/SF	10,000 SF	$30,000
Part B – New Facilities	Drive areas 6" AC	$10.00/LF	100 LF	$1,000
Part B – New Facilities	Electrical allowance	$85,000.00 lump sum	1	$85,000
Part B – New Facilities	Solar panels	$25,000.00 lump sum	1	$25,000
Part B – New Facilities	Water and sewer	$25,000.00 lump sum	1	$25,000
Part B – New Facilities	Planting and irrigation	$50,000.00 lump sum	1	$50,000
Part B – New Facilities	Cistern 15,000 gallons with appurtenances	$25,000.00 lump sum	1	$25,000
Part B – New Facilities	Cistern for wash area w/treatment system	$15,000.00 lump sum	1	$15,000
			Total	**$987,800**

Subtask 9.3: Performance Testing and Demobilization

The Performance testing and demobilization estimate of $15,000 is based on the detailed costs shown in Table 4.53. These costs include demobilization and testing for both Phase A and Phase B.

Table 2: Mobilization Cost

Cost Item	Cost ($)	Number of Units	Total ($)
Demobilization/Testing	$15,000 lump sum	1	$15,000
		Total	**$15,000**

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement costs are budgeted at $35,000 in order to install methane membrane and monitoring wells. This cost was calculated as a lump sum in the 2010 Geotechnical Investigation Report.

(f) Construction Administration

Task 11: Construction Administration

Construction Administration costs is calculated based on 10 percent of total construction costs, and is estimated to be $103,280. The 10 percent is based on prior City of Rolling Hills Estates' construction experience. The LCP program costs will be included under this allocation.

(g) Other Costs

Costs for coordination of project review by the DTSC, Los Angeles County Sanitation Districts, and Los Angeles County Building and Safety are estimated to be $160,000, based on the detailed costs shown in Table 6 and is the fee required by DTSC for project review. The Los Angeles County Sanitation Districts review cost is a general estimate. The Los Angeles County Building and Safety review cost is based on approximately 5 percent of the construction cost, which is a percentage based on previous experience.

Assessment and Evaluation is allocated $46,476 or 15 percent of the total Planning/Design/ Engineering/Environmental Documentation budget for completion of the Monitoring Plan.

These costs calculated using 263 hours at an average hourly wage of $118, include field technician time, contract laboratory time, and consulting or engineering time to develop and ensure quality for the implementation of the plan.

Table 4.57: Other Costs

Item and Brief Detailed Information	Cost ($)
Dept. of Toxic Substances Review	$80,000
LA County Sanitation Districts Review	$30,000
LA County Building & Safety	$50,000
Monitoring Plan	$46,476
Total	**$206,476**

(h) Construction/Implementation Contingency

The construction/implementation contingency percentage applied is 30 percent of the total anticipated construction cost of $1,032,800 to equal a contingency of $309,840. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project, in particular those conditions associated with building on a landfill.

VII. 16th Street Watershed Runoff Use Project

Table 4.58: Detailed 16th Street Watershed Runoff Use Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$6,737	$0	$0	$6,737	100%
(b)	Land Purchase/Easement	$65,862	$0	$0	$65,862	100%
(c)	Planning/Design/Engineering/ Environmental Documentation	$87,915	$0	$0	$87,915	100%
(d)	Construction/Implementation	$608,627	$1,315,243	$0	$1,923,870	32%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$85,212	$0	$0	$85,212	100%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$2,967	$0	$0	$2,967	100%
(h)	Construction/Implementation Contingency	$192,387	$0	$0	$192,387	100%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	$1,049,707	$1,315,243	$0	$2,364,950	44%

***Sources of funding:** *Measure V - Clean Beaches and Ocean Parcel Tax (City Fund 06)*

The sections below detail each budget category, and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget, and may include a table that further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $6,737 were calculated based on the task breakdown shown below. Overall, Direct Project Administration costs are equal to 0.3 percent of the total project budget.

Task 1: Administration

Administration Costs of $3,719 were calculated based on labor costs shown in Table 4.59 and the equipment/supply costs shown in Table 4.60**.** Direct Project Administration Labor cost estimates were estimated based on previous City of Santa Monica projects. Equipment/supply cost estimates were based on supply/equipment charged by a previous City of Santa Monica consultant on previous projects where a flat fee per labor hour ($8.75 per hour) was used regardless of classification. When the rate of $8.75 per hour is applied to the total estimate of labor hours (39), the estimated supply/equipment cost is equal to $341.

Table 4.59: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Program Manager	$99.57	5	$498
Watershed Coordinator	$72.01	5	$360
Consultant	$210.00	12	$2,520
		Total	**$3,378**

Table 4.60: Equipment/Supply Cost

Equipment/Supplies	Cost ($)
Total Estimated Equipment/Supply Cost	$341
Total	**$341**

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $2,520 were calculated based on labor costs shown for a consultant in Table 4.61 below.

Table 4.61: Direct Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Consultant	$210.00	12	$2,520
		Total	**$2,520**

Task 3: Reporting

Reporting Costs of $498 were calculated based on labor costs shown in Table 4.62.

Table 4.62: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Program Manager	$99.57	5	$498

(b) Land Purchase/Easement

$65,862 is allocated for easement acquisition to use land for the installation of a water pipe running across the Penmar Golf Course. This cost is based on the City of Santa Monica's cost for developers to use the public right of way. The published rate is $1.16 per square foot for 60 days. It is estimated that the area required to install 700 feet of 4-inch pipe is approximately 233 ⅓ square feet. The duration of the easement will be 40 years. (700 ft. x 4 inches x 1 foot per 12 inches = 233 ⅓ square feet).

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $87,915 were calculated based on the task breakdown shown below.

Task 4: Assessment and Evaluation

Assessment and Evaluation Studies are not planned to be a part of future work, nor are they being included as part of the funding match. Therefore, there is no budget allocated under this task.

Task 5: Final Design

Final Design costs are estimated to be $87,915. Detailed information on hourly wage by discipline and number of hours by Stage can be found in Table 4.63. A ten percent (10 percent) contingency is typically added to all City of Santa Monica contracts to cover any

unforeseen costs. Supplies and equipment consumed during the design phase are calculated at the rate of $8.75 per labor hour.

Table 4.63: Final Design Cost

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
10% Design	City Engineer	$158.05	10	$1,580
	Program Manager	$109.53	20	$2,191
	Principal Civil Engineer	$109.53	5	$548
	Watershed Coordinator	$79.21	10	$792
	Consultant	$231.00	20	$4,620
	Admin Assistant	$52.68	2	$105
30% Design	City Engineer	$158.05	10	$1,580
	Program Manager	$109.53	30	$3,286
	Principal Civil Engineer	$109.53	5	$548
	Watershed Coordinator	$79.21	10	$792
	Consultant	$231.00	30	$6,930
	Admin Assistant	$52.68	2	$105
60% Design	City Engineer	$158.05	10	$1,580
	Program Manager	$109.53	50	$5,476
	Principal Civil Engineer	$109.53	5	$548
	Watershed Coordinator	$79.21	10	$792
	Consultant	$231.00	50	$11,550
	Admin Assistant	$52.68	2	$105
90% Design	City Engineer	$158.05	10	$1,580
	Program Manager	$109.53	50	$5,476
	Principal Civil Engineer	$109.53	5	$548
	Watershed Coordinator	$79.21	10	$792
	Consultant	$231.00	50	$11,550
	Admin Assistant	$52.68	2	$105

Table 4.63: Final Design Cost

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
100% Design	City Engineer	$158.05	10	$1,580
	Program Manager	$109.53	50	$5,476
	Principal Civil Engineer	$109.53	5	$548
	Watershed Coordinator	$79.21	10	$792
	Consultant	$231.00	50	$11,550
	Admin Assistant	$52.68	2	$105
Other	Supplies / Equipment	$8.75 / hour	535	$4,681
			Total	**$87,915**

Task 6: Environmental Documentation

A Notice of Exemption was filed in June of 2004; therefore, no budget is allocated under this task.

Task 7: Permitting

The fee for the City of Santa Monica Building and Safety permit required for this Project is expected to be waived, as is typical for all City projects.

(d) Construction/Implementation

Construction/Implementation Costs of $1,923,870 were calculated based on the task break down shown below.

Task 8: Construction Contracting

Construction contracting is allocated $1,087 based on the detailed labor cost below in Table 4.64.

Table 4.64: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Equipment Costs ($)	Total Costs ($)
Program Manager	8	$109.53	$2,100.00	$876
Administrative Assistant	4	$52.68	$437.50	$211
			Total	**$1,087**

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation is estimated to cost $90,760 detailed in Table 4.65. These costs are based on previous City of Santa Monica experience.

Table 4.65: Construction Labor Cost

Discipline[e]	Lump Sum Costs ($)	Total ($)
Mobilization	$50,000.00	$50,760
Clear/Grub/Demo	$40,000.00	$40,000
	Total	**$90,760**

Subtask 9.2: Project Construction

The Project Construction estimate of $1,830,475 is based on the detailed cost areas for materials as shown in Table 4.66, equipment as shown in Table 4.67, and labor as shown in Table 4.68. . General assumptions used for the construction estimate include:

- 22 work days per month;
- 1 year of construction;
- 3 months pump station construction;
- 3 months of treated stormwater conveyance pipe installation (3,100 L.F.);
- 2 months cistern excavation (100'x100'x6') and installation; and
- 4 months irrigation system, landscaping, punchlist and project closeout.

Specific sources and assumptions related to each cost area are shown below each Table.

Table 4.66: Construction Materials Cost

Materials Used	Unit Costs ($)	Number of Units	Total ($)
Below Ground Pump Station[a]	$90,000.00	1	$90,000
PVC Pipe installed complete[b]	$120.00	3,100	$372,000
90o elbow[b]	$300.00	5	$1,500
Gate Valve[b]	$1,200.00	2	$2,400
Pothole for Utilities[b]	$500.00	10	$5,000
Irrigation & Landscaping[b]	$75,000.00	1	$75,000
Survey Staking[b]	$15,000.00	1	$15,000
Irrigation pump	$15,000.00	1	$15,000
Cistern ($/C.F. installed)[c]	$10.00	60,000	$600,000
		Total	**$1,175,900**

Sources/Assumptions:

[a]1/25/10 estimate by Cortech Engineering for below ground pump station installation

[b]Based on Borderline project bids as a baseline to estimate unit costs and includes backhoe and excavator costs

[c]10/27/10 estimate by Brentwood Industries for installation of Storm Tank.

Table 4.67: Construction Equipment Cost

Length of Time Required (if applicable)	Equipment Used	Daily Costs ($)	Number of Units	Total ($)
5 months	Skip Loader ($/day)d	$290.00	110	$31,900
1 year	Bobcat ($/day)d	$250.00	264	$66,000
2 months	Water Truck ($/day)d	$220.00	44	$9,680
1 month	Dump Truck ($/load)e	$300.00	133f	$39,900
			Total	**$147,480**

Sources/Assumptions:

Equipment rental based on 10/25/2010 estimate from PSC Environmental

Dump truck load rate based on 10/26/2010 estimate from PSC Environmental

100'x100'x6' = 60000 C.F. = 2222 C.Y. = 3333 Tons = 133 Truck loads

Table 4.68: Construction Labor Cost

Length of Time Required (if applicable)	Discipline[g]	Hourly Wage by discipline ($)	Number of hours	Total ($)
1 year	Superintendent	$60.00	2096	$125,760
2 months	Plumbing Foreman	$57.13	336	$19,196
5 months	Loader operator	$55.00	880	$48,400
1 year	Bobcat operator	$55.29	2112	$116,772
2 months	Water truck driver	$19.47	352	$6,853
1 month	Dump truck driver	$19.47	176	$3,426
1 year	Construction Labor	$42.67	2112	$90,119
1 year	Construction Labor	$42.67	2112	$90,119
1 month	Electrician	$36.65	176	$6,450
			Total	**$507,095**

Sources/Assumptions: *Labor rates based on current California Prevailing Wage Determinations*

Subtask 9.3: Performance Testing and Demobilization

The Performance testing and demobilization estimate of $2,635 is based on the detailed cost areas for equipment as shown in Table 4.69, and labor as shown in Table 4.70. Note that if the daily cost below is shown as $0.00, the cost of demobilization is included in another cost area indicated in the table's footnotes.

Table 4.69: Construction Equipment Cost

Length of Time Required (if applicable)	Equipment Used	Daily Costs ($)	Number of Units[d]	Total ($)
3 months	Backhoe ($/day)[a]	$0.00[b]	1	$0
5 months	Skip Loader ($/day)[a]	$290.00	1	$290
1 year	Bobcat ($/day)[a]	$250.00	1	$250
2 months	Excavator ($/day)[a]	$0.00[c]	1	$0
2 months	Water Truck ($/day)[a]	$220.00	1	$220
			Total	**$760**

Sources/Assumptions:

Equipment rental based on 10/25/2010 estimate from PSC Environmental

Cost included in PVC pipe unit cost

Cost included in Cistern system

1 day assumed for mobilization, except dump trucks

Table 4.70: Construction Labor Cost

Length of Time Required (if applicable)	Discipline[e]	Hourly Wage by discipline ($)	Number of hours	Total ($)
1 year	Superintendent	$60.00	16	$960
2 months	Plumbing Foreman	$57.13	16	$915
			Total	**$1,875**
Sources/Assumptions: *Labor rates based on current California Prevailing Wage Determinations*				

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

No Environmental Compliance activities are necessary, as this project will have no significant adverse impact on the environment.

(f) Construction Administration

Task 11: Construction Administration

Construction Administration costs is estimated to be $85,212, and is detailed in The hours estimated for Construction Administration are based on historic time charges by the Project Coordination and Administration Office in similar previous projects. A large amount of the Construction Administration will be done by the Project Manager, but the Project Manager's hours during construction are accounted for in Project Administration Row (a) and are not included in the hours noted in Row (f). Only hours for the Construction Manager during construction and post-construction are noted below.

Table 4.102: Construction Administration Costs

Costs were determined based on the following assumptions:

- 12 months construction;
- City engineer 2hr/month;
- Program Manager 20hrs/month;
- Watershed Coordinator 3-4hrs/month;
- Construction Manager 20hrs/month;
- Inspector 20hrs/month;
- Administrative Assistant 4-5hrs/month; and
- Supplies and equipment are based on $8.75/labor hour.

Table 4.71: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Equipment Costs ($)	Total Costs ($)
City Engineer	24	$158.05	$210.00	$4,003
Program Manager	240	$109.53	$2,100.00	$28,386
Watershed Coordinator	40	$79.21	$350.00	$3,518
Construction Manager	120	$231.00	$1,050.00	$28,770
Inspector	240	$64.01	$2,100.00	$17,462
Administrative Assistant	50	$52.68	$437.50	$3,071
			Total	**$85,212**

(g) Other Costs

Legal support will be required for preparation of easement documentation. This cost is estimated to be $2,967, based on the detailed costs shown in Table 4.72. Costs associated with writing of the Project Monitoring Plan are expected to be absorbed under other tasks.

Table 4.72: Other Costs

Item and Brief Detailed Information	Cost ($)
Legal Support / City Attorney (5hrs)	$865
Legal Support / Deputy City Attorney (15hrs)	$2,102
Total	**$2,967**

(h) Construction/Implementation Contingency

The construction/implementation contingency percentage applied is 10 percent of the total anticipated construction cost of $1,923,870 to equal a contingency of $192,387. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

VIII. Surface Water Treatment Plant Improvements

Table 4.73: Detailed Surface Water Treatment Plant Improvements Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$90,475	$0	$0	$90,475	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/ Engineering/ Environmental Documentation	$498,411	$0	$0	$498,411	100%
(d)	Construction/ Implementation	$1,879,725	$3,068,559	$0	$4,948,284	38%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$33,000	$0	$0	$33,000	100%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$10,000	$0	$0	$10,000	100%
(h)	Construction/ Implementation Contingency	$1,231,614	$0	$0	$1,231,614	100%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$3,743,225**	**$3,068,559**	**$0**	**$6,811,784**	**55%**

Sources of funding: *Company's Credit line of $3 Million with American Security Bank, Revenue to Company through water sales and shareholder assessments*

The sections below detail each budget category and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget, and may include a table which further breaks down budgets into labor disciplines, equipment, and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $90,475 were calculated based on the task breakdown shown below. Overall, Direct Project Administration costs are equal to 1 percent of the total project budget. The number of hours is based on experience with administering similar projects.

Task 1: Administration

Administration Costs of $45,265 were calculated based on labor costs shown in Table 4.74**.**

Table 4.74: Administration Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$55.00	823	$45,265
		Total	**$45,265**

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $22,605 were calculated based on labor costs shown in Table 4.75**.**

Table 4.75: Labor Compliance Program Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Third Party Consultant	$55.00	411	$22,605
		Total	**$22,605**

Task 3: Reporting

Reporting Costs of $22,605 were calculated based on labor costs shown in Table 4.76.

Table 4.76: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Construction Project Manager	$55.00	411	$22,605
		Total	**$22,605**

(b) Land Purchase/Easement

This project does not require acquisitions of land or easements; therefore, no budget is allocated.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation have been allocated $498,411 as detailed in the below tasks.

Task 4: Assessment and Evaluation

No further Assessment and Evaluation studies are planned as a direct part of this project and therefore are not allocated budget.

Task 5: Final Design

The 100 percent design has been completed. Below are the actual paid to-date charges for this task totaling $492,911.

Table 4.77: Final Design Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Officer	$250.00	52	$13,000
Associate	$217.00	228	$49,476
Sr. Project Engineer	$153.00	965	$147,645
Project Engineer	$119.00	1614	$192,066
CADD	$124.00	651	$80,724
		Total	**$482,911**

Task 6: Environmental Documentation

Environmental Documentation is allocated $500 for the filing of a Negative Declaration.

Table 4.78: Environmental Documentation Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
City of Covina, City Attorney	$250.00	2	$500
		Total	**$500**

Task 7: Permitting

Permitting is allocated $15,000 for obtaining a DPH Operating Permit Amendment. This cost was estimated by the DPH.

Table 4.79: Permitting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
DPH Engineer	$120.00	125	$15,000
		Total	**$15,000**

(d) Construction/Implementation

Construction/Implementation Costs are allocated $4,948,284. Following is a breakdown of this allocation by Construction task.

Task 8: Construction Contracting

Construction contracting is allocated $12,000 based on the detailed labor cost below in Table 4.80.

Table 4.80: Construction Contracting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Construction contracting	Lump Sum Estimate	N/A	$12,000
		Total	**$12,000**

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation are allocated $65,000 based on the Capital Cost Opinion dated October 2009 shown in Appendix G of Attachment 3. See Table 4.81 for a detailed breakdown of the costs.

Table 4.81: Mobilization and Site Preparation Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
General Requirements	Lump Sum Estimate	N/A	$25,000
Demolition Costs	Lump Sum Estimate	N/A	$40,000
		Total	**$65,000**

Subtask 9.2: Project Construction

The Project Construction estimate of $4,816,284 is based on the Capital Cost Opinion dated October 2009 shown in Appendix G of Attachment 3, created using the 100 percent design. The detailed cost areas for project construction are broken into materials as shown in Table 4.82, equipment as shown in Table 4.83 and labor as shown in Table 4.84. Each lump sum estimate is detailed in the Capital Cost Opinion.

Table 4.82: Construction Materials Cost

Materials Used	Unit Costs ($)	Number of Units	Total ($)
Concrete	Lump Sum Estimate	n/a	$551,460
Masonry	Lump Sum Estimate	n/a	$53,760
Metals	Lump Sum Estimate	n/a	$72,370
Wood/Plastics	Lump Sum Estimate	n/a	$8,177
Thermal/Moist.	Lump Sum Estimate	n/a	$36,685
		Total	**$722,452**

Table 4.83: Construction Equipment Cost

Materials Used	Unit Costs ($)	Number of Units	Total ($)
UV Reactors	Lump Sum Estimate	n/a	$719,060
Chem Feed	Lump Sum Estimate	n/a	$69,600
Service pumps	Lump Sum Estimate	n/a	$457,475
		Total	**$1,246,135**

Table 4.84: Construction Labor Cost

Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
General Requirements	Lump Sum Estimate	n/a	$108,000
Site Construction	Lump Sum Estimate	n/a	$480,061
Special Construction	Lump Sum Estimate	n/a	$520,444
Mechanical	Lump Sum Estimate	n/a	$830,267
Electrical	Lump Sum Estimate	n/a	$908,925
		Total	**$2,847,697**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization is allocated $55,000.

Table 4.85: Performance Testing and Demobilization Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
General Requirements	Lump Sum Estimate	n/a	$25,000
Operations Plan Development for DPH	Lump Sum Estimate	n/a	$30,000
		Total	**$55,000**

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement activities are not required as part of this project, therefore no budget is allocated.

(f) Construction Administration

Task 11: Construction Administration

Construction administration labor costs are allocated $33,000. The cost breakdown is shown in Table 4.86. The additional estimated construction costs are to account for insurance, bonding, overhead, and profit based on experience with prior projects.

Table 4.86: Construction Administration Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Construction Project Manager	$55.00	600	$33,000
		Total	**$33,000**

(g) Other Costs

The costs of producing a Monitoring Plan were allocated $10,000 based on prior experience from similar projects.

Table 4.87: Final Design Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Monitoring Plan	Lump Sum Estimate	n/a	$10,000
		Total	**$10,000**

(h) Construction/Implementation Contingency

The construction/implementation contingency costs were allocated $1,231,614, 26 percent of the Construction/Implementation costs, based on experience from prior projects.

Table 4.88: Construction/Implementation Contingency Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Additional Construction Costs	Lump Sum Estimate	n/a	$1,231,614
		Total	**$1,231,614**

IX. Central LA County Regional Water Recycling Program

Table 4.89: Detailed Central Los Angeles County Regional Water Recycling Program Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$441,056	$0	$0	$441,056	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$1,386,918	$7,000	$0	$1,393,918	100%
(d)	Construction/Implementation	$4,468,782	$2,793,000	$0	$7,261,782	62%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$158,790	$0	$0	$158,790	100%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$10,050	$0	$0	$10,050	100%
(h)	Construction/Implementation Contingency	$1,023,651	$0	$0	$1,023,651	100%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$7,489,247**	**$2,800,000**	**$0**	**$10,289,247**	**73%**

&Sources of funding: *LADWP Water Revenue Fund*

(a) Direct Project Administration Costs

Direct Project Administration Costs of $441,056 were calculated based on the task break down shown below. Overall, Direct Project Administration costs are equal to 4 percent of the total project budget. The number of hours is based on experience with administering similar projects.

Task 1: Administration

Administration Costs of $432,856 were calculated based on labor costs shown in Table 4.90**.**

Table 4.90: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$138.00	2052	$283,176
Water Recycling Project Manager	$144.00	965	$138,960
Project Coordination & Admin	$134.00	80	$10,720
		Total	**$432,856**

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $2,680 were calculated based on labor costs shown in Table 4.91.

Table 4.91: Labor Compliance Program Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Coordination & Admin	$134.00	20	$2,680
		Total	**$2,680**

Task 3: Reporting

Reporting Costs of $5,520 were calculated based on labor costs shown in Table 4.92.

Table 4.92: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$138.00	40	$5,520
		Total	**$5,520**

(b) Land Purchase/Easement

This project does not require acquisitions of land or easements; therefore, no budget is allocated.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation have been allocated $1,393,918 as detailed in the below tasks.

Task 4: Assessment and Evaluation

Assessment and Evaluation is allocated $250,000 for the GWR Facilities Planning Study as shown in Table 4.93. This cost is based on previous experience with assessment and evaluation work for similar projects.

Table 4.93: Assessment and Evaluation Cost

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
By consultant contract	Lump Sum	n/a	$250,000
		Total	**$250,000**

Task 5: Final Design

Final Design costs are estimated to be $1,117,662. Detailed information on hourly wage by discipline and number of hours can be found in Table 4.94.

Table 4.94: Final Design Cost

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
10% Design	Water Recycling Planning Group	$138.00	392	$54,096.00
10% Design	Civil & Structural Design	$128.00	428	$54,784.00
10% Design	Electrical Design	$124.00	138	$17,112.00
10% Design	Mechanical Design	$124.00	138	$17,112.00
10% Design	Distribution Engineering	$138.00	170	$23,460.00
10% Design	Geotechnical Engineering	$130.00	131	$17,030.00
30% Design	Water Recycling Planning Group	$138.00	392	$54,096.00
30% Design	Civil & Structural Design	$128.00	428	$54,784.00
30% Design	Electrical Design	$124.00	138	$17,112.00
30% Design	Mechanical Design	$124.00	138	$17,112.00
30% Design	Distribution Engineering	$138.00	170	$23,460.00

Table 4.94: Final Design Cost

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
30% Design	Geotechnical Engineering	$130.00	131	$17,030.00
60% Design	Water Recycling Planning Group	$138.00	762	$105,156.00
60% Design	Civil & Structural Design	$128.00	832	$106,496.00
60% Design	Electrical Design	$124.00	267	$33,108.00
60% Design	Mechanical Design	$124.00	267	$33,108.00
60% Design	Distribution Engineering	$138.00	330	$45,540.00
60% Design	Geotechnical Engineering	$130.00	254	$33,020.00
90% Design	Water Recycling Planning Group	$138.00	577	$79,626.00
90% Design	Civil & Structural Design	$128.00	630	$80,640.00
90% Design	Electrical Design	$124.00	203	$25,172.00
90% Design	Mechanical Design	$124.00	203	$25,172.00
90% Design	Distribution Engineering	$138.00	250	$34,500.00
90% Design	Geotechnical Engineering	$130.00	193	$25,090.00
100% Design	Water Recycling Planning	$138.00	185	$25,530.00
100% Design	Civil & Structural Design	$128.00	100	$12,800.00
100% Design	Electrical Design	$124.00	32	$3,968.00
100% Design	Mechanical Design	$124.00	32	$3,968.00
100% Design	Distribution Engineering	$138.00	40	$5,520.00
100% Design	Geotechnical Engineering	$130.00	62	$8,060.00
Engineering Field Investigations	Surveys & Right-of-Way	$124.00	200	$24,800.00
Engineering Field Investigations	Geology	$146.00	200	$29,200.00
Engineering Field Investigations	Central District	$100.00	100	$10,000.00
			Total	**$1,117,662**

Task 6: Environmental Documentation

No further environmental documentation is required beyond the Categorical Exemption already filed, therefore this task is not allocated budget.

Task 7: Permitting

Permitting is allocated $26,256, as shown in Table 4.95.

Table 4.95: Permitting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Civil & Structural Design	$128.00	100	$12,800.00
Electrical Design	$124.00	32	$3,968.00
Mechanical Design	$124.00	32	$3,968.00
Distribution Engineering	$138.00	40	$5,520.00
		Total	**$26,256.00**

(d) Construction/Implementation

Construction/Implementation Costs of $7,261,782 were calculated based on the task break down shown below.

Task 8: Construction Contracting

Construction contracting is allocated $30,800 based on the detailed labor cost below in Table 4.96.

Table 4.96: Construction Contracting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Specifications Office	$154.00	200	$30,800
		Total	**$30,800**

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation are allocated $1,497,180, based on the detailed costs shown in Table 9.97.

Table 9.97: Mobilization and Site Preparation Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
Freight for 1MG Storage Tank	$5,392.45	6	$32,355
6" thick concrete Roadway paving for 1MG Storage Tank	$16,931.75	1	$16,932
6' Avg height retaining Wall for 1MG Storage Tank	$109,055.00	1	$109,055
36" Concrete Mat Foundation for 1MG Storage Tank	$226,321.20	1	$226,321
LADWP ISS Crew (for grading and foundation of 1MG Storage Tank)	$710.42	1566	$1,112,518
		Total	**$1,497,180**

Subtask 9.2: Project Construction

Project Construction is allocated $5,715,202. This is based on cost estimates provided by the design team for each segment of the project, and are detailed in Table 9.98, Table 9.99, and Table 9.100.

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Pump Station	700gpm, 310 ft, 150 hp Centrifugal Pump	$46,000.00	3	$138,000
Pump Station	12" valve, swing check	$4,025.00	3	$12,075
Pump Station	16" valve, butterfly (pump suction)	$5,750.00	3	$17,250
Pump Station	12" Valve, butterfly (pump discharge	$4,600.00	3	$13,800
Pump Station	12" Valve, Pressure Relief	$14,442.85	1	$14,443
Pump Station	12" Valve, Gate (PRV isolation)	$4,600.00	2	$9,200

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Pump Station	1" Valve, Air Release	$287.50	4	$1,150
Pump Station	16" Flow Meter, Magnetic (Discharge Header)	$8,855.00	1	$8,855
Pump Station	30" Valve, butterfly class 150 (suction header)	$27,600.00	1	$27,600
Pump Station	16" Valve, butterfly class 250 (discharge header)	$5,750.00	1	$5,750
Pump Station	16" Stl Pipe sch 40 (pump suction)	$131.10	20	$2,622
Pump Station	12" Stl pipe sch 40 (pump discharge)	$140.30	20	$2,806
Pump Station	12" Stl pipe sch 40 (Relief)	$140.30	40	$5,612
Pump Station	30" Stl Pipe sch 40 (suction header)	$431.25	50	$21,563
Pump Station	30" Stl Tee (suction header)	$5,232.50	3	$15,698
Pump Station	30"X16" Stl reducer, concentric (pump suction)	$540.50	3	$1,622
Pump Station	30" Stl Cap (suction header)	$437.00	1	$437
Pump Station	16" Stl Elbow, 90-Deg, LR (pump suction)	$908.50	3	$2,726
Pump Station	16" Stl Flange, WN, 150# (pump suction)	$477.25	12	$5,727
Pump Station	8" Stl Flange, WN, 150# (pump suction)	$97.18	3	$292
Pump Station	16"X8" Stl Reducer, eccentric (pump suction)	$977.50	3	$2,933
Pump Station	16" Stl pipe sch 40 (discharge header)	$131.10	50	$6,555
Pump Station	16" Stl cap (discharge header)	$280.60	1	$281
Pump Station	16"X12" Stl tee, reducing (pump discharge)	$1,437.50	4	$5,750
Pump Station	12" Stl elbow, 90-deg, LR (pump discharge)	$483.00	3	$1,449
Pump Station	12" Stl flange, WN,300# (pump discharge)	$379.50	6	$2,277
Pump Station	12" Stl flange, SO, 300# (pump discharge)	$284.05	18	$5,113

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Pump Station	12"X6" Stl reducer, eccentric (pump discharge)	$273.70	3	$821
Pump Station	12" Stl Elbow, 90-deg, LR (pressure relief line)	$483.00	2	$966
Pump Station	12" Stl Flange, CO, 300# (pressure relief line)	$284.05	6	$1,704
Pump Station	Stl Pipe sch 40 grooved (fire sprinkler)	$4.53	300	$1,359
Pump Station	4" Stl pipe sch 40 (fire sprinkler riser)	$20.64	20	$413
Pump Station	Pressure Transmitters	$2,300.00	2	$4,600
Pump Station	Pressure gauges	$60.38	12	$725
Pump Station	1" Sprinkler Heads	$32.89	15	$493
Pump Station	4" Alarm check valve (fire sprinkler riser)	$2,415.00	1	$2,415
Pump Station	4" check valve (fire sprinkler riser)	$488.75	1	$489
Pump Station	4" Gate Valve (fire sprinkler Riser)	$632.50	2	$1,265
Pump Station	3/4" Copper piping (domestic water)	$5.87	100	$587
Pump Station	2" Backflow Preventer, reduced pressure principle	$747.50	1	$748
Pump Station	Water closet	$230.00	1	$230
Pump Station	Lavatory	$345.00	1	$345
Pump Station	Instantaneous Water Heater	$460.00	1	$460
Pump Station	Drinking Fountain	$690.00	1	$690
Pump Station	5 HP, 460V Air Handling Unit	$23,000.00	1	$23,000
Pump Station	Air Conditioning Unit, Split Type	$3,450.00	1	$3,450
Pump Station	24"X24" Duct, Galvanized (material cost included in labor cost)	$2.97	30	$89
Pump Station	2000 cfm Exhaust Fan	$299.00	4	$1,196
Pump Station	Air compressor	$2,875.00	1	$2,875
Pump Station	2-ton Manual hoist	$920.00	1	$920
Storage Tank	1MG Bolted Steel Tank	$302,788.00	1	$302,788

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Horizontal Directional Drilling	18" Steel pipe coated	$100.00	2550	$255,000
Install 200' 30" pipe by Trenching	30" Tee	$9,000.00	1	$9,000
Install 200' 30" pipe by Trenching	30" Full face flange tyte gasket	$50.00	2	$100
Install 200' 30" pipe by Trenching	30" I.J.	$12,000.00	1	$12,000
Install 200' 30" pipe by Trenching	30" PIPE DI AWWA C/L B&S	$54.24	200	$10,848
Install 200' 30" pipe by Trenching	TUBE PE LAYFLAT PUPPLE 67"X180' 300" PIPE	$1.47	220	$323
Install 200' 30" pipe by Trenching	GSKT RUB TYTON-JT FIELD-LOK 30	$1,440.16	10	$14,402
Install 200' 30" pipe by Trenching	30" 45DEG BEND	$6,220.80	2	$12,442
Install 200' 30" pipe by Trenching	30" 221/2 DEG BEND	$5,680.80	2	$11,362
Install 200' 30" pipe by Trenching	SCR CAP STL GR-8 NC8 HH 1-1/4X6	$9.56	84	$803
Install 200' 30" pipe by Trenching	NUT STL HEX A 194 2H NC8 1-1/4	$1.90	84	$160
Install 200' 30" pipe by Trenching	30" BUTTERFLY VALVE CLASS 150 W/ OPERATING NUT	$8,750.00	1	$8,750
Install 200' 30" pipe by Trenching	MANHOLE RING CI 24-44 DWG C626	$269.72	1	$270
Install 200' 30" pipe by Trenching	MANHOLE FRAME CI 44 DWG C626	$202.84	1	$203
Install 200' 30" pipe by Trenching	COV MH CI 24 SPEC W159 WATER	$153.01	1	$153
Install 200' 30" pipe by Trenching	PIPE STL A 53 SPL/WLD PE 49ID X.375	$180.83	10	$1,808
Install 200' 30" pipe by Trenching	SPEPS INSIDE CAN	$50.00	10	$500

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Install 200' 30" pipe by Trenching	1 CY CONCRETE FOOTING AND GROUT	$69.84	5	$349
Install 200' 30" pipe by Trenching	#4 GRADE 60 R4EBAR	$5.78	20	$116
Install 200' 30" pipe by Trenching	SPEC MIX MORTAR	$5.97	15	$90
Install 200' 30" pipe by Trenching	30" WELD NECK FLANGE CONTRACT 127 ITEM #15	$5,000.00	1	$5,000
Install 200' 30" pipe by Trenching	30" BELL-FLANGE ADAPTOR (CONNECTION) CONTRACT 127 ITEM #15	$2,478.75	1	$2,479
Install 200' 30" pipe by Trenching	ASPHALT RESURFACING	$6,540.00	1	$6,540
Install 200' 30" pipe by Trenching	SHORING EQUIPMENT	$5,000.00	1	$5,000
Install 200' 30" pipe by Trenching	GOLF COURSE RESTORATION	$10,000.00	1	$10,000
Install 200' 30" pipe by Trenching	SLURRY	$68.00	141	$9,588
Install 200' 30" pipe by Trenching	MISCELLANEOUS MATERIAL	$12,323.37	1	$12,323
Install 4000'-16" Pipe by Trenching	16" PIPE DI AWWA C/L B&S	$31.82	4000	$127,280
Install 4000'-16" Pipe by Trenching	TUBE PE LAYFLAT PUPPLE 37"X340' 14"&18" PIPE	$0.77	4025	$3,099
Install 4000'-16" Pipe by Trenching	16" BEND DI 11-1/4 AWWA C/L RG BELL	$622.05	4	$2,488
Install 4000'-16" Pipe by Trenching	16" BEND DI 22-1/2 AWWA C/L RG BELL	$638.28	8	$5,106
Install 4000'-16" Pipe by Trenching	16" BEND DI 45 AWWA C/L RG BELL	$646.46	10	$6,465
Install 4000'-16" Pipe by Trenching	FLG STL WN FF A105 150 16 C/L	$365.26	2	$731
Install 4000'-16" Pipe by Trenching	BOLT MACH STL NC 1X4-1/2	$0.61	32	$20

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Install 4000'-16" Pipe by Trenching	NUT STL HEX A194-2H NC 1	$1.04	32	$33
Install 4000'-16" Pipe by Trenching	16" BUTT STRAP 9" WIDE	$300.00	2	$600
Install 4000'-16" Pipe by Trenching	16" RUB GSKT TYTON-JT FIELD-LOK	$203.83	54	$11,007
Install 4000'-16" Pipe by Trenching	16" I.J.	$8,000.00	2	$16,000
Install 4000'-16" Pipe by Trenching	6" AIR VALVE	$1,750.00	1	$1,750
Install 4000'-16" Pipe by Trenching	16"X16" TEE DI AWWA C/L RG BELL	$896.25	1	$896
Install 4000'-16" Pipe by Trenching	6" PIPE DI AWWA C/L B&S	$15.39	4	$62
Install 4000'-16" Pipe by Trenching	6" BEND DI 90 AWWA C/L RG BELL	$67.75	3	$203
Install 4000'-16" Pipe by Trenching	6" YOKE BELL (DI) YELLOW	$37.43	2	$75
Install 4000'-16" Pipe by Trenching	7/8" X 11" STUD ROD SST (YOKE ROD)	$27.78	2	$56
Install 4000'-16" Pipe by Trenching	NUT STL HEX A 194-2H NC 7/8	$0.27	4	$1
Install 4000'-16" Pipe by Trenching	6" PIPE DI AWWA C/L B&S	$15.39	12	$185
Install 4000'-16" Pipe by Trenching	6" CONN DI AWWA C/L F&B	$69.51	1	$70
Install 4000'-16" Pipe by Trenching	6" X 18" SPOOL CI FLG	$102.53	1	$103
Install 4000'-16" Pipe by Trenching	6" X 32" SPOOL CI FLG	$90.87	1	$91
Install 4000'-16" Pipe by Trenching	6" FLG GATE VALVE CI 250# RW	$269.54	1	$270
Install 4000'-16" Pipe by Trenching	6" GSKT FLG NEO FULL FACE STD	$1.37	2	$3

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Install 4000'-16" Pipe by Trenching	SCR CAP STL GR-8 NC HH 3/4X3-1/2	$1.21	16	$19
Install 4000'-16" Pipe by Trenching	NUT HEX A194- 2H NC 3/4	$0.33	16	$5
Install 4000'-16" Pipe by Trenching	6" X 12" STANDPIPE STL UNWLD 16GA	$6.88	1	$7
Install 4000'-16" Pipe by Trenching	6" X 36" STANDPIPE STL WELD 16GA	$26.21	1	$26
Install 4000'-16" Pipe by Trenching	6" GATE CAP CI VERT DWG A9034-1	$7.16	1	$7
Install 4000'-16" Pipe by Trenching	16" CONN DI AWWA RG F&B C/L	$443.02	4	$1,772
Install 4000'-16" Pipe by Trenching	16" FLG GATE VLV CI 150# HOR D/D 3BYP	$7,029.75	2	$14,060
Install 4000'-16" Pipe by Trenching	GASKETS FLAT FACE	$16.00	4	$64
Install 4000'-16" Pipe by Trenching	BOLT MACH STL NC 1X4-1/2	$0.61	64	$39
Install 4000'-16" Pipe by Trenching	NUT STL HEX A194-2H NC 1	$1.04	64	$67
Install 4000'-16" Pipe by Trenching	MANHOLE RING CI 24-44 DWG C626	$269.72	2	$539
Install 4000'-16" Pipe by Trenching	MANHOLE FRAME CI 44 DWG C626	$202.84	2	$406
Install 4000'-16" Pipe by Trenching	COV MH CI 24 SPEC W159 WATER	$153.01	2	$306
Install 4000'-16" Pipe by Trenching	PIPE STL A 53 SPL/WLD PE 49ID X.375	$180.83	20	$3,617
Install 4000'-16" Pipe by Trenching	SPEPS INSIDE CAN	$50.00	20	$1,000
Install 4000'-16" Pipe by Trenching	1 CY CONCRETE FOOTING AND GROUT	$69.84	5	$349
Install 4000'-16" Pipe by Trenching	#4 GRADE 60 R4EBAR	$5.78	30	$173

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Install 4000'-16" Pipe by Trenching	SPEC MIX MORTAR	$5.97	20	$119
Install 4000'-16" Pipe by Trenching	ASPHALT RESURFACING	$67,603.00	1	$67,603
Install 4000'-16" Pipe by Trenching	SHORING EQUIPMENT	$10,000.00	1	$10,000
Install 4000'-16" Pipe by Trenching	GOLF COURSE RESTORATION	$15,000.00	1	$15,000
Install 4000'-16" Pipe by Trenching	SLURRY	$68.00	1731	$117,708
Install 4000'-16" Pipe by Trenching	MISCELLANEOUS MATERIAL	$39,833.34	1	$39,833
Install 700'-16" Pipe by Trenching	16" BUTT STRAP 9" WIDE	$300.00	1	$300
Install 700'-16" Pipe by Trenching	FLG STL WN FF A105 150 16 C/L	$365.26	1	$365
Install 700'-16" Pipe by Trenching	16" I.J.	$8,000.00	1	$8,000
Install 700'-16" Pipe by Trenching	BOLT MACH STL NC 1X4-1/2	$0.61	20	$12
Install 700'-16" Pipe by Trenching	NUT STL HEX A 194-2H NC 1	$1.04	20	$21
Install 700'-16" Pipe by Trenching	16" PIPE DI AWWA C/L B&S	$31.82	700	$22,274
Install 700'-16" Pipe by Trenching	TUBE PE LAYFLAT PUPPLE 37"X340' 14"&18" PIPE	$0.77	720	$554
Install 700'-16" Pipe by Trenching	16" RUB GSKT TYTON-JT FIELD-LOK	$203.83	10	$2,038
Install 700'-16" Pipe by Trenching	GSKT FLG NEO FULL FACE 16"	$5.50	1	$6
Install 700'-16" Pipe by Trenching	12X10 DI REDUCER	$180.00	1	$180
Install 700'-16" Pipe by Trenching	10" PIPE DI AWWA C/L B&S	$13.59	5	$68

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Install 700'-16" Pipe by Trenching	10" RUB GSKT TYTON-JT FIELD-LOK	$85.54	1	$86
Install 700'-16" Pipe by Trenching	10" COUPLIN TO CONNECT 10" CONCRETE PIPE	$120.00	1	$120
Install 700'-16" Pipe by Trenching	16" FLG GATE VLV CI 150# HOR D/D 3BYP	$7,029.75	1	$7,030
Install 700'-16" Pipe by Trenching	GASKETS FLAT FACE	$16.00	2	$32
Install 700'-16" Pipe by Trenching	BOLT MACH STL NC 1X4-1/2	$0.61	32	$20
Install 700'-16" Pipe by Trenching	NUT STL HEX A194-2H NC 1	$1.04	32	$33
Install 700'-16" Pipe by Trenching	MANHOLE RING CI 24-44 DWG C626	$269.72	1	$270
Install 700'-16" Pipe by Trenching	MANHOLE FRAME CI 44 DWG C626	$202.84	1	$203
Install 700'-16" Pipe by Trenching	COV MH CI 24 SPEC W159 WATER	$153.01	1	$153
Install 700'-16" Pipe by Trenching	PIPE STL A 53 SPL/WLD PE 49ID X.375	$180.83	10	$1,808
Install 700'-16" Pipe by Trenching	SPEPS INSIDE CAN	$50.00	10	$500
Install 700'-16" Pipe by Trenching	1 CY CONCRETE FOOTING AND GROUT	$69.84	5	$349
Install 700'-16" Pipe by Trenching	#4 GRADE 60 R4EBAR	$5.78	20	$116
Install 700'-16" Pipe by Trenching	SPEC MIX MORTAR	$5.97	20	$119
Install 700'-16" Pipe by Trenching	SHORING EQUIPMENT	$2,500.00	1	$2,500
Install 700'-16" Pipe by Trenching	SLURRY	$21,243.00	1	$21,243
Install 700'-16" Pipe by Trenching	MISCELLANEOUS MATERIAL	$6,698.49	1	$6,698

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Install 700'-12" Pipe by Trenching	12" BUTT STRAP 9" WIDE	$150.00	1	$150
Install 700'-12" Pipe by Trenching	12" WELD-NECK FLG ASSY DIP 150# 12NIP	$2,471.63	1	$2,472
Install 700'-12" Pipe by Trenching	GSKT FLG NEO FULL FACE STD 12	$8,000.00	1	$8,000
Install 700'-12" Pipe by Trenching	SCR CAP STL GR-8 NC HH 7/8X3-1/2	$2.33	20	$47
Install 700'-12" Pipe by Trenching	NUT STL HEX A 194-2H NC 7/8	$0.27	20	$5
Install 700'-12" Pipe by Trenching	12" PIPE DI AWWA C/L B&S	$32.38	700	$22,666
Install 700'-12" Pipe by Trenching	TUBE PE LAYFLAT PUPPLE 27"X340' 10"&12" PIPE	$0.60	720	$432
Install 700'-12" Pipe by Trenching	12" RUB GSKT TYTON-JT FIELD-LOK	$118.45	10	$1,185
Install 700'-12" Pipe by Trenching	12" RG GATE VALVE CI 250# BELL/TYT RW	$5.50	1	$6
Install 700'-12" Pipe by Trenching	6" X 12" STANDPIPE STL UNWLD 16GA	$180.00	1	$180
Install 700'-12" Pipe by Trenching	6" X 18" STANDPIPE STL WELD 16GA	$12.26	5	$61
Install 700'-12" Pipe by Trenching	6" GATE CAP CI VERT DWG A9034-1	$7.16	1	$7
Install 700'-12" Pipe by Trenching	12X10 DI REDUCER	$180.00	1	$180
Install 700'-12" Pipe by Trenching	10" PIPE DI AWWA C/L B&S	$13.59	5	$68
Install 700'-12" Pipe by Trenching	10" RUB GSKT TYTON-JT FIELD-LOK	$85.54	1	$86
Install 700'-12" Pipe by Trenching	10" MECHANICAL COUPLING	$120.00	1	$120
Install 700'-12" Pipe by Trenching	SHORING EQUIPMENT	$2,500.00	1	$2,500

Table 9.98: Construction Material Costs

Phase	Materials	Unit Cost	Number of Units	Total ($)
Install 700'-12" Pipe by Trenching	SLURRY	$21,243.00	1	$21,243
Install 700'-12" Pipe by Trenching	MISCELLANEOUS MATERIAL	$5,349.54	1	$5,350
			Total	**$1,662,982**

Table 4.99: Construction Equipment Costs

Phase	Equipment Used	Costs ($)	Number of Units	Total ($)
Pump Station	1 Hyd Excavator, 5/8 CY	$40.89	6	$245
Pump Station	Aluminum Shoring	$115.00	9	$1,035
Pump Station	1 Welder, electric, 300 amp	$71.09	244	$17,346
Pump Station	Aerial Lift, Scissor type	$15.12	52	$786
Horizontal Directional Drilling	Directional Drilling rig to drill, ream and install 18" pipe, a closed mud system, mud pumps, vacuum trucks, dump trucks, wire-line steering system and all other equipment necessary to support work			$1,168,000
Install 200' 30" pipe by Trenching	TRUCK: PICKUP 3/4 TON & GANG TRUCK	$2,774.25	1	$2,774
Install 200' 30" pipe by Trenching	DUMP TRUCK 2-AXLE	$1,905.75	1	$1,906
Install 200' 30" pipe by Trenching	PITTMAN HOIST	$4,506.75	2	$9,014
Install 200' 30" pipe by Trenching	BACKHOE WITH CARRIER	$1,019.25	1	$1,019
Install 200' 30" pipe by Trenching	10 TON PIPE TRUCK	$346.05	1	$346
Install 200' 30" pipe by Trenching	WELDING TRUCK	$239.04	1	$239
Install 200' 30" pipe by Trenching	ENAMELER TRUCK	$315.40	1	$315

Table 4.99: Construction Equipment Costs

Phase	Equipment Used	Costs ($)	Number of Units	Total ($)
Install 200' 30" pipe by Trenching	CEMENT FINISHING TRUCK	$340.20	1	$340
Install 200' 30" pipe by Trenching	DUMP TRUCK 3-AXLE & Operator	$15,330.00	1	$15,330
Install 200' 30" pipe by Trenching	DUMP TRUCK 5-AXLE & Operator	$17,520.00	1	$17,520
Install 200' 30" pipe by Trenching	ASPHALT SAWING	$896.00	1	$896
Install 200' 30" pipe by Trenching	TRANSPORTATION	$11,967.00	1	$11,967
Install 4000'-16" Pipe by Trenching	TRUCK: PICKUP 3/4 TON & GANG TRUCK	$11,097.00	1	$11,097
Install 4000'-16" Pipe by Trenching	DUMP TRUCK 2-AXLE	$7,623.00	1	$7,623
Install 4000'-16" Pipe by Trenching	PITTMAN HOIST	$18,027.00	1	$18,027
Install 4000'-16" Pipe by Trenching	BACKHOE WITH CARRIER	$8,154.00	1	$8,154
Install 4000'-16" Pipe by Trenching	10 TON PIPE TRUCK	$2,304.69	1	$2,305
Install 4000'-16" Pipe by Trenching	WELDING TRUCK	$2,880.00	1	$2,880
Install 4000'-16" Pipe by Trenching	ENAMELER TRUCK	$190.00	1	$190
Install 4000'-16" Pipe by Trenching	CEMENT FINISHING TRUCK	$340.20	1	$340
Install 4000'-16" Pipe by Trenching	DUMP TRUCK 3-AXLE & Operator	$61,250.00	1	$61,250
Install 4000'-16" Pipe by Trenching	DUMP TRUCK 5-AXLE & Operator	$70,000.00	1	$70,000
Install 4000'-16" Pipe by Trenching	ASPHALT SAWING	$16,096.00	1	$16,096
Install 4000'-16" Pipe by Trenching	TRANSPORTATION	$37,964.00	1	$37,964

Table 4.99: Construction Equipment Costs

Phase	Equipment Used	Costs ($)	Number of Units	Total ($)
Install 700'-16" Pipe by Trenching	TRUCK: PICKUP 3/4 TON & GANG TRUCK	$2,219.40	1	$2,219
Install 700'-16" Pipe by Trenching	DUMP TRUCK 2-AXLE	$1,524.60	1	$1,525
Install 700'-16" Pipe by Trenching	PITTMAN HOIST	$3,605.40	1	$3,605
Install 700'-16" Pipe by Trenching	BACKHOE WITH CARRIER	$815.40	1	$815
Install 700'-16" Pipe by Trenching	10 TON PIPE TRUCK	$276.84	1	$277
Install 700'-16" Pipe by Trenching	WELDING TRUCK	$43.20	1	$43
Install 700'-16" Pipe by Trenching	ENAMELER TRUCK	$38.00	1	$38
Install 700'-16" Pipe by Trenching	DUMP TRUCK 3-AXLE & Operator	$12,250.00	1	$12,250
Install 700'-16" Pipe by Trenching	DUMP TRUCK 5-AXLE & Operator	$14,000.00	1	$14,000
Install 700'-16" Pipe by Trenching	TRANSPORTATION	$6,392.00	1	$6,392
Install 700'-12" Pipe by Trenching	TRUCK: PICKUP 3/4 TON & GANG TRUCK	$1,664.55	1	$1,665
Install 700'-12" Pipe by Trenching	DUMP TRUCK 2-AXLE	$1,143.45	1	$1,143
Install 700'-12" Pipe by Trenching	PITTMAN HOIST	$2,704.05	1	$2,704
Install 700'-12" Pipe by Trenching	BACKHOE WITH CARRIER	$611.55	1	$612
Install 700'-12" Pipe by Trenching	10 TON PIPE TRUCK	$276.84	1	$277
Install 700'-12" Pipe by Trenching	WELDING TRUCK	$43.20	1	$43
Install 700'-12" Pipe by Trenching	ENAMELER TRUCK	$38.00	1	$38

Table 4.99: Construction Equipment Costs

Phase	Equipment Used	Costs ($)	Number of Units	Total ($)
Install 700'-12" Pipe by Trenching	DUMP TRUCK 3-AXLE & Operator	$9,170.00	1	$9,170
Install 700'-12" Pipe by Trenching	DUMP TRUCK 5-AXLE & Operator	$10,480.00	1	$10,480
Install 700'-12" Pipe by Trenching	TRANSPORTATION	$4,861.00	1	$4,861
			Total	**$1,557,162**

Table 4.100: Construction Labor Cost

Phase	Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Construction Support	Civil & Structural Design	$128.00	840	$107,520
Construction Support	Electrical Design	$124.00	75	$9,300
Construction Support	Mechanical Design	$124.00	75	$9,300
Construction Support	Surveys & Right of ways	$124.00	300	$37,200
Construction Support	geotechnical engineering	$130.00	200	$26,000
Construction Support	Distribution Engineering	$138.00	500	$69,000
Pump Station	Crew No. Q-3	$321.18	14	$4,497
Pump Station	Crew No. Q-2	$235.98	83	$19,586
Pump Station	Crew No. B-12Q	$67.78	6	$407
Pump Station	Carpenter	$47.94	4	$192
Pump Station	Crew No. Q-16	$235.98	411	$96,988
Pump Station	Plumber	$84.30	68	$5,732
Pump Station	Crew No. Q-1	$151.68	8	$1,213
Pump Station	Crew No. B-20	$190.20	4	$761
Pump Station	Crew No. Q-6	$238.08	11	$2,619
Pump Station	Crew No. Q-10	$234.72	10	$2,347
Storage Tank	Vendor Installation Crew	$683.22	600	$409,932
Horizontal Directional Drilling	Welder and material handler	Lump Sum	n/a	$379,000

Table 4.100: Construction Labor Cost

Phase	Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Horizontal Directional Drilling	Labor to Clear and Restore pipe lay down area	Lump Sum	n/a	$100,000
Install 200' 30" pipe by Trenching	WATER UTILITY SUPERVISOR	$158.80	100	$15,880
Install 200' 30" pipe by Trenching	SENIOR WATER UTILITY WORKER/SPCLST	$125.63	200	$25,126
Install 200' 30" pipe by Trenching	WATER UTILITY WORKER	$110.53	400	$44,212
Install 200' 30" pipe by Trenching	M&C HELPER	$91.70	400	$36,680
Install 200' 30" pipe by Trenching	EQUIPMENT OPERATOR	$126.05	200	$25,210
Install 200' 30" pipe by Trenching	HEAVY DUTY TRUCK OPERATOR	$103.65	200	$20,730
Install 200' 30" pipe by Trenching	WELDER	$137.93	66	$9,103
Install 200' 30" pipe by Trenching	PROTECTIVE COATING WORKER	$119.12	133	$15,843
Install 200' 30" pipe by Trenching	CEMENT FINISHER	$116.42	80	$9,314
Install 200' 30" pipe by Trenching	MATERIAL HANDLING	$94,479.00	0.12	$11,337
Install 4000'-16" Pipe by Trenching	WATER UTILITY SUPERVISOR	$158.80	800.00	$127,040
Install 4000'-16" Pipe by Trenching	SENIOR WATER UTILITY WORKER/SPCLST	$125.63	800.00	$100,504
Install 4000'-16" Pipe by Trenching	WATER UTILITY WORKER	$110.53	1600.00	$176,848
Install 4000'-16" Pipe by Trenching	M&C HELPER	$91.70	1600.00	$146,720
Install 4000'-16" Pipe by Trenching	EQUIPMENT OPERATOR	$126.05	800.00	$100,840
Install 4000'-16" Pipe by Trenching	HEAVY DUTY TRUCK OPERATOR	$103.65	800.00	$82,920

Table 4.100: Construction Labor Cost

Phase	Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Install 4000'-16" Pipe by Trenching	WELDER	$137.93	40.00	$5,517
Install 4000'-16" Pipe by Trenching	PROTECTIVE COATING WORKER	$119.12	40.00	$4,765
Install 4000'-16" Pipe by Trenching	M&C FOR WELDER	$91.70	40.00	$3,668
Install 4000'-16" Pipe by Trenching	MATERIAL HANDLING	$239,000.00	0.12	$28,680
Install 700'-16" Pipe by Trenching	WATER UTILITY SUPERVISOR	$158.80	80.00	$12,704
Install 700'-16" Pipe by Trenching	SENIOR WATER UTILITY WORKER/SPCLST	$125.63	160.00	$20,101
Install 700'-16" Pipe by Trenching	WATER UTILITY WORKER	$110.53	160.00	$17,685
Install 700'-16" Pipe by Trenching	M&C HELPER	$91.70	320.00	$29,344
Install 700'-16" Pipe by Trenching	EQUIPMENT OPERATOR	$126.05	160.00	$20,168
Install 700'-16" Pipe by Trenching	HEAVY DUTY TRUCK OPERATOR	$103.65	160.00	$16,584
Install 700'-16" Pipe by Trenching	WELDER	$137.93	12.00	$1,655
Install 700'-16" Pipe by Trenching	PROTECTIVE COATING WORKER	$119.12	8.00	$953
Install 700'-16" Pipe by Trenching	M&C FOR WELDER	$91.70	12.00	$1,100
Install 700'-16" Pipe by Trenching	MATERIAL HANDLING	$6,163.00	1.00	$6,163
Install 700'-12" Pipe by Trenching	WATER UTILITY SUPERVISOR	$158.80	60.00	$9,528
Install 700'-12" Pipe by Trenching	SENIOR WATER UTILITY WORKER/SPCLST	$125.63	120.00	$15,076
Install 700'-12" Pipe by Trenching	WATER UTILITY WORKER	$110.53	120.00	$13,264

Table 4.100: Construction Labor Cost

Phase	Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Install 700'-12" Pipe by Trenching	M&C HELPER	$91.70	240.00	$22,008
Install 700'-12" Pipe by Trenching	EQUIPMENT OPERATOR	$126.05	120.00	$15,126
Install 700'-12" Pipe by Trenching	HEAVY DUTY TRUCK OPERATOR	$103.65	120.00	$12,438
Install 700'-12" Pipe by Trenching	WELDER	$137.93	12.00	$1,655
Install 700'-12" Pipe by Trenching	PROTECTIVE COATING WORKER	$119.12	8.00	$953
Install 700'-12" Pipe by Trenching	M&C FOR WELDER	$91.70	12.00	$1,100
Install 700'-12" Pipe by Trenching	MATERIAL HANDLING	$4,922.00	1.00	$4,922
			Total	**$ 2,495,058**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization is allocated $18,600, see Table 4.101 for cost breakdown.

Table 4.101: Performance Testing and Demobilization Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
Electrical Design	$124.00	75	$9,300
Mechanical Design	$124.00	75	$9,300
		Total	**$18,600**

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement activities are not required as part of this project; therefore, no budget is allocated.

(f) Construction Administration

Task 11: Construction Administration

The cost for Construction Administration is $158,790, and is detailed in Table 4.102. The hours estimated for Construction Administration are based on historic time charges by the Project Coordination and Administration Office in similar previous projects. A large amount of the Construction Administration will be done by the Project Manager, but the Project Manager's hours during construction are accounted for in Project Administration Row (a) and are not included in the hours noted in Row (f). Only hours for the Construction Manager during construction and post-construction are noted below.

Table 4.102: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Total Costs ($)
Construction Manager	1185	$134.00	$158,790
		Total	**$158,790**

(g) Other Costs

The costs of producing a Monitoring Plan were allocated $10,050 based on prior experience from similar projects.

Table 4.103: Final Design Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Monitoring Plan	Lump Sum Estimate	n/a	$10,050
		Total	**$10,050**

(h) Construction/Implementation Contingency

Construction Contingency is allocated $1,023,651. This is based on 20 percent of the estimate for installation of the Bolted Steel Tank ($743,653), which equals $148,731, 40 percent of the estimate for horizontal directional drilling (HDD) contractor ($1,902,000), which equals $760,800, and an additional 15 percent contingency on the HDD contingency equaling $114,120. A high contingency is used for HDD since it is a highly specialized construction method and depends on soil conditions which haven't been fully identified at this time.

X. Tujunga Spreading Grounds Enhancement Project – Los Angeles Department of Water and Power

Table 4.104: Detailed Tujunga Spreading Grounds Enhancement Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$26,776	$0	$0	$26,776	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$1,249,911	$0	$0	$1,249,911	100%
(d)	Construction/Implementation	$18,783,592	$4,383,656	$0	$23,167,248	81%
(e)	Environmental Compliance/ Mitigation/Enhancement	$60,000	$0	$0	$60,000	100%
(f)	Construction Administration	$570,186	$0	$0	$570,186	100%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$10,000	$0	$0	$10,000	100%
(h)	Construction/Implementation Contingency	$220,000	$0	$0	$220,000	100%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$20,920,465**	**$4,383,656**	**$0**	**$25,304,121**	**83%**

***Sources of funding:** LADWP General Fund – Water System*

The sections below detail each budget category and break down the budget by the tasks described in the Work Plan. Each task's budget details the cost basis used in estimating the budget and may include a table which further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $26,776 were calculated based on the task break down shown below. The Direct Project Administration costs are based on previous experience with similar projects.

Task 1: Administration

Administration Costs of $8,649 were calculated based on labor costs shown in Table 4.105.

Table 4.105: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Civil Engineering Associate II	$37.91	125	$4,739
Civil Engineering Associate III	$49.33	50	$2,466
Waterwork Engineer	$57.76	25	$1,444
		Total	**$8,649**

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $4,739 were calculated based on labor costs shown in Table 4.106.

Table 4.106: Direct Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Civil Engineering Associate II	$37.91	125	$4,739
		Total	**$4,739**

Task 3: Reporting

Reporting Costs of $13,388 were calculated based on labor costs shown in Table 4.107.

Table 4.107: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Civil Engineering Associate II	$37.91	250	$9,478
Civil Engineering Associate III	$49.33	50	$2,467
Waterworks Engineer	$57.76	25	$1,444
		Total	**$13,388**

(b) Land Purchase/Easement

This project does not require purchase of land or easements; therefore, no budget is allocated.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $1,249,911 were calculated based on the task breakdown shown below.

Task 4: Assessment and Evaluation

No further assessment and evaluation studies are planned as part of this Project; therefore, no budget is allocated.

Task 5: Final Design

The cost allocated for Final Design costs is $1,000,000 based on the design contract with LACFCD to complete the Project's design. The cooperative agreement with a design cost breakdown can be found in appendix x. Detailed information on the cost breakdown can be found in Table 4.108.

Table 4.108: Final Design Cost

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
10%	Lump Sum Estimate	n/a	n/a	$225,000
30%	Lump Sum Estimate	n/a	n/a	$225,000
60%	Lump Sum Estimate	n/a	n/a	$150,000
90%	Lump Sum Estimate	n/a	n/a	$150,000
100%	Lump Sum Estimate	n/a	n/a	$150,000
Construction Support (RFIs, Change Orders, etc)	Lump Sum Estimate	n/a	n/a	$100,000
			Total	**$1,000,000**

Task 6: Environmental Documentation

The cost allocated for Environmental Documentation is $240,000 based on a contract with MWH Environmental Services to complete the Project's environmental documentation.

Task 7: Permitting

The cost allocated for Permitting is $ 9,911 based on the detailed labor cost below in Table 4.109.

Table 4.109: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Units	Total Costs ($)
Permit Fees	n/a	$1,000	8	$8,000
Civil Engineering Assoc II	40	$37.91	n/a	$1,516
Civil Engineering Assoc III	8	$49.33	n/a	$395
			Total	**$9,911**

(d) Construction/Implementation

The cost allocated for Construction/Implementation is $23,167,248 based on the task break down shown below.

Task 8: Construction Contracting

Construction contracting is allocated $565,298 based on the detailed labor cost below in Table 4.110.

Table 4.110: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Equipment Costs ($)	Total Costs ($)
Civil Engineering Assoc II, Inspector	1,000	$37.91	n/a	$37,910
Civil Engineering Assoc II	500	$38.91	n/a	$19,455
Civil Engineering Assoc III	100	$49.33	n/a	$4,933
LA County Construction Management Agreement	Lump Sum	Estimate only	n/a	$500,000
			Total	**$562,298**

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation is estimated to cost $89,950, detailed in Table 4.111 and Table 4.112.

Table 4.111: Construction Equipment Cost

Length of Time Required (if applicable)	Equipment Used	Daily Costs ($)	Number of Units	Total ($)
10 days	Backhoe	$300	2	$6,000
5 days	Grader	$350	1	$1,750
10 days	Pick-up Trucks	$165	3	$4,950
n/a	Steel Plates	Lump Sum Estimate	n/a	$8,000
n/a	Sandbags	$65	50	$3,250
n/a	Fencing & Cover	Lump Sum Estimate	n/a	$17,000
n/a	Filter Fabric	Lump Sum Estimate	n/a	$6,000
n/a	Construction trailer	Lump Sum Estimate	n/a	$20,000

Table 4.111: Construction Equipment Cost

Length of Time Required (if applicable)	Equipment Used	Daily Costs ($)	Number of Units	Total ($)
n/a	Trailer utilities	Lump Sum Estimate	n/a	$5,000
			Total	**$71,950**

Table 4.112: Construction Labor Cost

Length of Time Required (if applicable)	Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
n/a	Superintendent	$110	20	$2,200
n/a	Operator	$85	80	$6,800
n/a	Laborer	$50	90	$4,500
n/a	Laborer	$50	90	$4,500
			Total	**$18,000**

Subtask 9.2: Project Construction

The Project Construction estimate of $21,965,000 is based on the detailed cost areas for materials as shown in Table 4.113, equipment as shown in Table 4.114

, and labor as shown in Table 4.115. The labor costs for were based on a 15 percent estimate ($2,865,000) of the materials and equipment total costs of $19,100,000. The 15 percent estimate for construction labor costs is based on previous experience with similar projects.

Table 4.113: Construction Materials Cost

Materials Used	Unit Costs ($)	Number of Units	Total ($)
Intakes	Lump Sum Estimate	3	$3,000,000
Basin	Lump Sum Estimate	10	$9,000,000
Landscaping	Lump Sum Estimate	n/a	$5,000,000
		Total	**$17,000,000**

Table 4.114: Construction Equipment Cost

Length of Time Required (if applicable)	Equipment Used	Daily Costs ($)	Number of Units	Total ($)
	Data/Instrumentation	Lump Sum Estimate	n/a	$2,100,000
			Total	**$2,100,000**

Table 4.115: Construction Labor Cost

Length of Time Required (if applicable)	Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
	Labor	15% of Materials & Equipment total	n/a	$2,865,000
			Total	**$2,865,000**

Subtask 9.3: Performance Testing and Demobilization

The Performance testing and demobilization estimate of $550,000 is based on the detailed cost for labor as shown in Table 4.116. The demobilization and testing costs were determined based on previous experience with similar projects.

Table 4.116: Construction Labor Cost

Length of Time Required (if applicable)	Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
n/a	Demobilization	Lump Sum Estimate	n/a	$440,000
n/a	Testing	Lump Sum Estimate	n/a	$110,000
			Total	**$550,000**

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement is allocated $60,000. MWH Environmental Services will be tasked with associated mitigation and compliance parameters as mentioned in the once adopted EIR.

(f) Construction Administration

Task 11: Construction Administration

The cost allocated for Construction Administration is $570,186 and is detailed in Table 4.117. The project documentation cost is based on previous experience with similar projects.

Table 4.117: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Equipment Costs ($)	Total Costs ($)
Civil Engineering Associate II (Construction Inspector)	1000	$37.91	n/a	$37,910
Civil Engineering Associate II	500	$38.91	n/a	$19,455
Civil Engineering Associate III	100	$49.33	n/a	$4,933
Waterwork Engineer	50	$57.76	n/a	$2,888
LACFCD Construction Management Agreement	Lump Sum	$500,000	n/a	$500,000
Project Documentation Support	Lump Sum	$5,000	n/a	$5,000
			Total	**$570,186**

(g) Other Costs

The costs of producing a Monitoring Plan were allocated $10,000 based on prior experience from similar projects.

Table 4.118: Other Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Monitoring Plan	Lump Sum Estimate	n/a	$10,000
		Total	**$10,000**

(h) Construction/Implementation Contingency

The construction/implementation contingency percentage applied is 0.9 percent of the total anticipated construction cost of $23,167,248 to equal a contingency of $220,000. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the Project.

XI. San Antonio Spreading Grounds Improvements

Table 4.119: Detailed San Antonio Spreading Grounds Improvements Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$45,823	$30,549	$0	$76,372	60%
(b)	Land Purchase/ Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/ Engineering/ Environmental Documentation	$61,063	$28,142	$0	$89,205	68%
(d)	Construction/ Implementation	$738,596	$3,513,896	$0	$4,252,492	33%
(e)	Environmental Compliance/ Mitigation/Enhancement	$17,291	$1,344	$0	$18,635	93%
(f)	Construction Administration	$34,258	$22,838	$0	$57,096	60%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$3,600	$2,400	$0	$6,000	60%
(h)	Construction/ Implementation Contingency	$300,000	$200,000	$0	$500,000	60%
(i)	Grand Total (Sum rows (a) through (h) for each column)	$1,200,631	$3,799,169	$0	$4,999,800	37%

***Sources of funding:** *TVMWD funding*

The sections below detail each budget category, and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget, and may include a table that further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $76,372 were calculated based on the task break down shown below. Overall, Direct Project Administration costs are equal to 1.5% of the total project budget. The hourly wages below are TVMWD's hourly rates. Hours are based on previous experience with similar projects.

Task 1: Administration

Administration Costs of $44,780 were calculated based on labor costs shown in Table 4.120**.**

Table 4.120: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Assist General Mgr	$120.62	183	$22,114
Project Engineer	$62.08	365	$22,666
		Total	**$44,780**

Task 2: Labor Compliance Program

Labor Compliance Program Costs of $12,500 were calculated based on 0.25 percent of the total project cost for the use of a Department of Industrial Relations third party LCP provider. This percentage is based on the SBX2-9 requirements for bond-funded or design-build public works projects, Section 16453.

Task 3: Reporting

Reporting Costs of $19,092 were calculated based on labor costs shown in Table 4.121.

Table 4.121: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Assist General Mgr	$120.62	78	$9,408
Project Engineer	$62.08	156	$9,684
		Total	**$19,092**

(b) Land Purchase/Easement

This project does not require acquisitions of land or easements since an existing facility is being utilized.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $89,205 were calculated based on the task breakdown shown below.

Task 4: Assessment and Evaluation

No further Assessment and Evaluation studies are planned as part of this project and therefore are not allocated budget.

Task 5: Final Design

Final Design costs are estimated to be $88,725. Detailed information on hourly wage by discipline and number of hours by Stage can be found in Table 4.123. The hourly wages below are TVMWD's hourly rate totals for four staff members. The Design Engineering will be completed by a consultant, with total hours to be allocated between a CAD designer, project engineer and project manager. The Project Management Engineering hours are for TVMWD staff. Hours are based on previous experience with similar projects.

Table 4.122: Final Design Cost

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Design Engineering	$325.00	250	$81,250
Project Management Engineering	$325.00	23	$7,475
		Total	**$88,725**

Task 6: Environmental Documentation

Environmental Documentation is allocated $480 in order to complete environmental reports associated with mitigation monitoring. Detailed information on hourly wage by discipline and number of hours by Stage can be found in Table 4.123.

Table 4.123: Environmental Documentation Cost

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Environmental Scientist	$120.00	4	$480
		Total	**$480**

Task 7: Permitting

Not applicable.

(d) Construction/Implementation

Construction/Implementation Costs of $4,252,692 were calculated based on the task break down shown below.

Task 8: Construction Contracting

Construction contracting is allocated $35,750 based on the detailed labor cost below in Table 4.124. The hourly wages below are TVMWD's hourly rate totals for four staff members. Hours are based on previous experience with similar projects.

Table 4.124: Construction Administration Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
Project Management Engineering	$325.00	110	$35,750
		Total	**$35,750**

Task 9: Construction

Construction is allocated $4,216,742. This cost is based on the 2005 Feasibility Study's Annual Operating Cost, Table 8-5 & 8-6. Costs for this phase (1b) were extrapolated based on percent length of the previous (4,771-LF, 45 percent of total estimated costs) and proposed (5,800-LF, 55 percent of total estimated costs) spreading pipelines.

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation are allocated $210,000, based on the detailed costs shown in Table 4.125.

Table 4.125: Mobilization and Site Preparation Costs

Cost Item	Unit Costs ($)	Number of Units	Total ($)
Mobilization	$150,000 Lump Sum	1	$150,000
Clear & Grub	$60,000 Lump Sum	1	$60,000
		Total	**$210,000**

Subtask 9.2: Project Construction

The Project Construction estimate of $3,956,742 is based on the detailed cost areas for materials as shown in Table 7, equipment as shown in Table 8, and labor as shown in Table 4.126.

Specific sources and assumptions related to each cost area are shown below each Table.

Table 4.126: Construction Materials Cost

Cost Item	Unit Costs ($)	Number of Units	Total ($)
Wildlife fencing	$20,000 Lump sum	n/a	$20,000
30-in pipe, 20 ft sections	$3200/section	290 sections	$928,000 (installed price)
Flow structures (including valves)	$8,000 each	5	$40,000
Pipe Tees	$8,000 each	5	$40,000
		Total	**$1,028,000**

Table 4.127: Construction Equipment Cost

Equipment Used	Unit Costs ($/unit)	Number of Units (units)	Total ($)
Various earthmoving	$10,000	8 pieces of equipment	$80,000
		Total	**$80,000**

Table 4.128: Construction Labor Cost

Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Spreading basins	$450,000 Lump Sum	n/a	$450,000
Construction labor crew	$720/hour	3,332	$2,398,742
		Total	**$2,848,742**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization is allocated $50,000.

Table 4.128: Construction Labor Cost

Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Demobilization	$50,000 Lump Sum	1	$50,000
		Total	**$50,000**

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement activities are allocated $18,635 for mitigation monitoring during construction as shown in Table 4.130 below. This budget is to include monitoring of the site during construction activities, in particular during the installation of wildlife fencing, and during grading. The hourly wages below are TVMWD's hourly rates.

Table 4.130: Environmental Compliance/Mitigation/Enhancement Costs

Discipline	Hourly Wage by discipline ($)	Number of hours	Total ($)
Environmental Scientist	$120.00	28	$3,360

Project Management Engineering	$325.00	47	$15,275
		Total	**$18,635**

(f) Construction Administration

Task 11: Construction Administration

Construction Administration costs are estimated to be $57,096, and are detailed in Table 4.131. Costs are based on the average hourly rate for the Assistant General Manager & Project Engineer.

Table 4.131: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Equipment Costs ($)	Total Costs ($)
Construction Administration	312	$183	$0	$57,096
			Total	**$57,096**

(g) Other Costs

Other Costs not included above include legal review and writing of the Monitoring Plan. This cost is estimated to be $6,000.

(h) Construction/Implementation Contingency

The construction/implementation contingency percentage applied is approximately 10 percent of the total anticipated construction cost of $5,260,742 to equal a contingency of $500,000. These costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

XII. Leo J. Vander Lans Advanced Water Treatment Plant Expansion

Table 4.132: Detailed Leo J. Vander Lans Advanced Water Treatment Plant Expansion Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$484,050	$0	$0	$484,050	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$2,905,000	$0	$0	$2,905,000	100%
(d)	Construction/Implementation	$19,258,541	$4,944,459	$0	$24,203,000	80%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$1,452,200	$0	$0	$1,452,200	100%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$121,012	$0	$0	$121,012	100%
(h)	Construction/Implementation Contingency	$0	$0	$0	$0	0%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$24,220,803**	**$4,944,459**	**$0**	**$29,165,262**	**83%**

***Sources of funding:** WRD would provide bonds for matching funds Bureau of Reclamation: 25% match of Row (c)*

The sections below detail each budget category, and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget. This may include a table that further breaks down the budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs are estimated at $484,050. Overall, Direct Project Administration costs are equal to 1.7 percent of the total construction costs.

Task 1: Administration

Administration Costs of $421,550 were calculated based on previous project experience with similar construction projects. These costs account for all project administrative activities and reporting tasks. The estimate cost breakdown is shown in Table 4.133.

Table 4.133: Direct Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Project Manager	$100.00	2740	$274,000
Grant Manager	$100.00	916	$91,600
Administrative Analyst	$50.00	1119	$55,950
		Total	**$421,550**

Task 2: Labor Compliance Program

Labor Compliance Program costs were allocated $62,500, as presented in Table 4.134. The cost was calculated based on an estimated 0.26 percent fee of the project construction/implementation costs.

Table 4.134: Direct Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Third Party Consultant	Lump Sum Estimate	n/a	$62,500
		Total	**$62,500**

Task 3: Reporting

Reporting costs are included under Task 1: Administration.

(b) Land Purchase/Easement

This Project does not require acquisitions of land or easements, since an existing facility is being utilized.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $2,905,000 were calculated based on the breakdown by task below.

Task 4: Assessment and Evaluation

No further Assessment and Evaluation studies are planned as a direct part of this project and therefore are not allocated budget.

Task 5: Final Design

The Final design is allocated $2,592,550. See below for a breakdown by design stage, presented in Table 4.135.

Table 4.135: Final Design Costs

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
10-30%	Design Engineer (Preliminary Design)	$150	2,950	$442,500
60%	Design Engineer	$140	6,143	860,020
90%	Design Engineer	$140	6,143	860,020
100%	Design Engineer	$140	3,071.5	430,010
			Total	**$2,592,550**

Task 6: Environmental Documentation

Environmental Documentation is allocated at $100,050 as presented in Table 4.136 below.

Table 4.136: Environmental Documentation Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Design Engineer – CEQA/NEPA Compliance	$150	667	$100,050
		Total	**$100,050**

Task 7: Permitting

Permitting is allocated at $212,400, presented in Table 4.137. Budget under this task includes groundwater modeling and analyses for the barrier injection permit (RWQCB). Construction permitting will also be a small portion of the allocated budget.

Table 4.137: Permitting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Design Engineer (Regulatory/Permitting)	$150	1,416	$212,400
		Total	**$212,400**

(d) Construction/Implementation

Construction/Implementation Costs are allocated $24,203,000. Following is a breakdown of this allocation by Construction task.

Task 8: Construction Contracting

Construction contracting is included in the construction administration budget under Task 11.

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation are allocated $196,396 based on previous experience with similar projects.

Subtask 9.2: Project Construction

The Project Construction estimate of $23,810,208 is based on the Capital Cost Opinion dated November 2010 shown in Appendix K in Attachment 3. Each lump sum estimate is detailed in the Capital Cost Opinion. The detailed cost areas for project construction are broken into materials as shown in Table 4.138, equipment as shown in Table 4.139, and labor as shown in Table 4.140.

Table 4.138: Construction Materials Cost

System	Unit Costs ($)	Number of Units	Total ($)
Reverse Osmosis	lump sum	n/a	$902,130
Microfiltration	lump sum	n/a	$876,064
Pump Station	lump sum	n/a	$174,091
Chemical Facility	lump sum	n/a	$511,815
		Total	**$2,464,100**

Table 4.139: Construction Equipment Cost

System	Unit Costs ($)	Number of Units	Total ($)
Reverse Osmosis	lump sum	n/a	$6,749,090
Microfiltration	lump sum	n/a	$7,767,601
Pump Station	lump sum	n/a	$315,264
Chemical Facility	lump sum	n/a	$806,617
UV System	lump sum	n/a	$3,697,836
		Total	**$19,336,408**

Table 4.140: Construction Labor Cost

System	Hourly Wage by discipline ($)	Number of hours	Total ($)
Reverse Osmosis	$90.00	9,811	$882,990
Microfiltration	$90.00	6,783	$610,470
Pump Station	$90.00	1,322	$118,980
Chemical Facility	$90.00	1,641	$147,690
UV System	$90.00	2,773	$249,570
		Total	**$2,009,700**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization costs are allocated $196,396 based on previous experience with similar projects.

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Mitigation measures, if any are required, will be identified as planning and design are completed. Currently, no unusual conditions that would require mitigation are evident; therefore, no budget is allocated to this task.

(f) Construction Administration

Task 11: Construction Administration

Construction Administration is allocated $1,452,200, as presented in Table 4.141, based on previous project experience with similar construction projects.

Table 4.141: Direct Administration Labor Costs

Discipline	Hours	Unit Cost ($)	Total Costs ($)
Construction Manager	2740	353	$967,220
Field Inspector	2740	177	$484,980
		Total	**$1,452,200**

(g) Other Costs

Other costs are allocated $121,012, based on 0.4 percent of total project budget costs, as presented in Table 4.142. These costs may include the cost for developing a monitoring plan, assessments during construction, any legal services, and licenses that might be required for the project.

Table 4.142: Final Design Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Other Costs	Lump Sum Estimate	n/a	$121,012
		Total	**$121,012**

(h) Construction/Implementation Contingency

The preliminary project contingency estimate is $0.

XIII. Whittier Narrows Conservation Pool Project

Table 4.143: Detailed Whittier Narrows Conservation Pool Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$25,200	$0	$0	$25,200	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$1,100,305	$576,000	$0	$1,676,305	66%
(d)	Construction/Implementation	$0	$0	$0	$0	0%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$0	$0	$0	$0	0%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$0	$0	$0	$0	0%
(h)	Construction/Implementation Contingency	$0	$0	$0	$0	0%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$1,125,505**	**$576,000**	**$0**	**$1,701,505**	**66%**

Sources of funding:

WRD

US Army Corps of Engineers

The sections below detail each budget category, and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget, and may include a table that further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs are estimated at $25,200. Overall, Direct Project Administration costs are equal to 1.5 percent of the total project budget. The hourly wages

below are WRD's hourly rates. Hours are based on previous experience with similar projects.

Task 1: Administration

Grant Administration Costs of $21,840 were calculated based on labor costs shown in Table 4.144**.**

Table 4.144: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Civil Engineer	$56.00	390	$21,840
		Total	**$21,840**

Task 2: Labor Compliance Program

A Labor Compliance Program is not included in this project, therefore no budget is allocated.

Task 3: Reporting

Quarterly and final reporting is allocated $3,360 based on the hours presented in Table 4.145.

Table 4.145: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Civil Engineer	$56.00	60	$3,360
		Total	**$3,360**

(b) Land Purchase/Easement

This project does not require acquisitions of land or easements since an existing facility is being utilized.

(c) Planning/Design/Engineering/Environmental Documentation

Planning/Design/Engineering/Environmental Documentation Costs of $1,676,305 were calculated based on the breakdown by task below.

Task 4: Assessment and Evaluation

Assessment and Evaluation is allocated $972,330 for revision of the Los Angeles County Drainage Area (LACDA) Water Conservation and Supply Santa Fe – Whittier Narrows Dams Feasibility Study. A detailed breakdown by discipline is listed in Table 4.146. These costs are based on estimates provided by the U.S. Army Corps of Engineers, and can be found in Appendix L in Attachment 3.

Table 4.146: Assessment and Evaluation Costs

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Planning	Programs / Project Management	$125.00	993	$124,125
Planning	Plan Formulation	$115.00	1300	$149,500
Planning	Real Estate	$144.00	360	$51,840
Engineering	Geology	$139.00	715	$99,385
Engineering	Economics	$125.00	2040	$255,000
Engineering	Cost Engineering	$175.00	832	$145,600
Engineering	Design Engineering	$130.00	576	$74,880
Engineering	Hydraulic & Hydrology	$150.00	480	$72,000
			Total	**$972,330**

Task 5: Final Design

Final Design is not included as a part of this Project, and therefore is not allocated budget.

Task 6: Environmental Documentation

Environmental Documentation is allocated $703,975 (Table 4.147), and are based on estimates provided by the U.S. Army Corps of Engineers, and can be found in Appendix L in Attachment 3.

Table 4.147: Assessment and Evaluation Costs

Stage	Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Environmental	Environmental Documentation	$130.00	1954	$254,020
Environmental	Environmental Impacts	$135.00	3333	$449,955
			Total	**$703,975**

Task 7: Permitting

Permitting is not included as a part of this Project, and therefore is not budgeted.

(d) Construction/Implementation

Construction/Implementation is not included as a part of this Project, and therefore is not budgeted.

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement costs are not included as a part of this Project, and therefore are not budgeted.

(f) Construction Administration

Task 11: Construction Administration

Construction Administration costs are not included as a part of this Project, and therefore are not budgeted.

(g) Other Costs

Not applicable.

(h) Construction/Implementation Contingency

The construction/implementation contingency is not included as a part of this Project, and therefore is not budgeted.

XIV. Water and Energy Efficiency in the Schools and Hotel/Motel Sectors

Table 4.148: Detailed Water and Energy Efficiency in the School and Hotel/Motel Sectors Project Budget

Budget Category		Non-State Share* (Funding Match)	Requested Grant Funding	Other State Funds Being Used	Total	% Funding Match
(a)	Direct Project Administration Costs	$20,000	$0	$0	$20,000	100%
(b)	Land Purchase/Easement	$0	$0	$0	$0	0%
(c)	Planning/Design/Engineering/ Environmental Documentation	$0	$0	$0	$0	0%
(d)	Construction/Implementation	$92,220	$434,880	$0	$527,100	17%
(e)	Environmental Compliance/ Mitigation/Enhancement	$0	$0	$0	$0	0%
(f)	Construction Administration	$0	$18,000	$0	$18,000	0%
(g)	Other Costs (Including Legal Costs, Permitting and Licenses)	$1,000	$0	$0	$1,000	100%
(h)	Construction/Implementation Contingency	$0	$0	$0	$0	0%
(i)	**Grand Total** (Sum rows (a) through (h) for each column)	**$113,220**	**$452,880**	**$0**	**$566,100**	**20%**

Sources of funding: *West Basin ($15,000 In-Kind Services); Southern California Gas Company ($6,000); Los Angeles County Waterworks District #29 (LACWWD No. 29) and Metropolitan Water District of Southern California (MWD) combined will contribute $92,220. However, MWD funding will be in the form of rebates (see appendix x for supporting documentation*), thus West Basin may use more LACWWD No. 29 money than MWD funding. LACWWD No. 29 can contribute up to $108,000 if the awarded funding is less than the requested amount (See Appendix x-x for Waterworks letter of support).*

**These documents serve as an example in procedure implemented last year by MWD on how they administer incentive funding throughout the service area and to member agencies. While these documents are representative of what is available now, West Basin anticipates similar funding levels as stated in the document will be available. The amounts that can be invoiced to MWD (page A-1) and Exhibit J-1 shows how a member agency requests approval for device-based projects.*

The sections below detail each budget category and break down the budget by the tasks described in the Work Plans. Each task's budget details the cost basis used in estimating the budget and may include a table that further breaks down budgets into labor disciplines, equipment and/or material costs.

(a) Direct Project Administration Costs

Direct Project Administration Costs of $20,000 were calculated based on the task break down shown below. Overall, Direct Project Administration costs are equal to 3.5 percent of the total project budget. The number of hours is based on experience with administering similar projects.

Task 1: Project Administration

Administration Costs of $17,500 were calculated based on labor costs shown in Table 4.149.

Table 4.149: Administration Labor Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Program Manager - Administration	$125.00	84	$10,500
Program Manager - Marketing	$125.00	56	$7,000
		Total	**$17,500**

Task 2: Labor Compliance Program

This Program does not require a Labor Compliance Program since it does not involve any construction; therefore, no budget is allocated.

Task 3: Reporting

Reporting Costs of $2,500 were calculated based on labor costs shown in Table 4.150.

Table 4.150: Reporting Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Program Manager - Administration	$125.00	20	$2,500
		Total	**$2,500**

(b) Land Purchase/Easement

This Program does not require acquisitions of land or easements; therefore, no budget is allocated.

(c) Planning/Design/Engineering/Environmental Documentation

No further Planning/Design/Engineering/Environmental Documentation Costs are needed as a part of this Program; therefore, no budget is allocated.

Task 4: Assessment and Evaluation

Assessment and evaluation activities are not required as part of this Program; therefore no budget is allocated.

Task 5: Final Design

Final Design activities are not required as part of this Program; therefore no budget is allocated.

Task 6: Environmental Documentation

Environmental Documentation activities are not required as part of this Program; therefore no budget is allocated.

Task 7: Permitting

Permitting activities are not required as part of this Program; therefore no budget is allocated.

(d) Construction/Implementation

Construction/Implementation Costs of $527,100 were calculated based on the task breakdown shown below.

Task 8: Construction Contracting

Construction contracting costs will be incorporated in the Contractor Administration costs.

See Task 11: Construction Administration.

Task 9: Construction

Subtask 9.1: Mobilization and Site Preparation

Mobilization and Site Preparation costs will be incorporated in the Contractor Administration costs. See Task 11: Construction Administration.

Subtask 9.2: Project Construction

The Project Construction estimate of $527,100 is based on the detailed cost areas for materials as shown in Table 4.151 and labor as shown in Table 4.152. The "Hourly Wage by Discipline" is a unit cost ($85 per High-Efficiency Toilet installation, $22 per device for recycling). All of the estimates below are based on current contractor fees associated with existing ongoing projects. These are conservative estimates and a contingency has been added to account for increasing costs or variability between contractors.

Table 4.151: Construction Materials Cost

Materials Used	Unit Costs ($)	Number of Units	Total ($)
Smart Irrigation Controllers	$1,250.00	10	$12,500
High-Efficiency Toilets	$215.00	1500	$322,500
High-Efficiency Urinals	$400.00	50	$20,000
Showerheads	$11.00	200	$2,200
Aerators	$1.00	1800	$1,800
		Total	**$359,000**

Table 4.152: Construction Labor Cost

Discipline	Hourly Wage by Discipline ($)	Number of Hours	Total ($)
Contractor (Installation of High-Efficiency Toilets)	$85.00	1500	$127,500
Contractor (Installation of High-Efficiency Urinals)	$90.00	50	$4,500
Contractor (Installation of Showerheads and Aerators)	$1.00	2000	$2,000
Contractor (Recycling of porcelain fixtures)	$22.00	1550	$34,100
		Total	**$168,100**

Subtask 9.3: Performance Testing and Demobilization

Performance testing and demobilization costs will be incorporated in the Contractor Administration costs. See Task 11: Construction Administration.

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

Environmental Compliance/Mitigation/Enhancement activities are not required as part of this Program; therefore, no budget is allocated.

(f) Construction Administration

Task 11: Construction Administration

The cost for Construction Administration is $18,000 based on previous contracts for similar types of work, presented in Table 4.153. The costs are estimated at 3 percent of the total cost of the Program. Costs associated with Construction Administration include contracting, mobilization, and site preparation as well as performance testing and demobilization.

Table 4.153: Construction Administration Costs

Discipline	Hours	Unit Cost ($)	Total Costs ($)
Contractor Project Manager	300	$60.00	$18,000
		Total	**$18,000**

(g) Other Costs

Costs of producing a Monitoring Plan were allocated $1,000 based on prior experience from similar projects.

Table 10: Other Costs

Discipline	Hourly Wage ($/hr)	Number of Hours	Total
Monitoring Plan	Lump Sum Estimate	n/a	$1,000
		Total	**$1,000**

(h) Construction/Implementation Contingency

No construction/implementation contingency costs are anticipated as part of this Program.