

**WaterSMART Grants**

**Turner Basin Recharge Improvements Project**

**Archibald Avenue  
and 4<sup>th</sup> Street  
Ontario, California**

**Final Project Report**



**Agreement # R11AP35315  
Inland Empire Utilities Agency  
6075 Kimball Avenue, Chino CA 91708  
July 28, 2015**

<b>1. Recipient Information:</b>	
Recipient Name: (Name, contact person, address and phone number)	Inland Empire Utilities Agency. M r. Jason Gu. 6075 Kimball Avenue, Chino CA 91708. 909-993-1600
Project Name:	Turner Basin Recharge Improvements
Assistance Agreement No:	R11AP35315
Date of Award: (Month, Year)	September, 2011
Estimated Completion Date (Month, Year)	September, 2013
Actual Completion Date: (Month, Year)	March, 2015

<b>2. Final Funding Information</b>	<b>Funding Amount</b>
<b>Non-Federal Entities</b>	
1. Inland Empire Utilities Agency	\$907,917
2. Inland Empire Utilities Agency*	\$274,966 *
(* Denotes an in-kind contribution)	
3. Chino Basin Watermaster	\$434,144
<i>Non-Federal Subtotal:</i>	\$1,617,027
<b>Other Federal Entities</b>	
1.	
2.	
3.	
<i>Other Federal Subtotal:</i>	
<i>Requested Reclamation Funding:</i>	\$406,712
<i>Total Project Funding:</i>	\$2,023,739

### **3. One Paragraph Project Summary**

The proposed Turner Basin Recharge Improvements (TBRI) Project is part of an integrated strategy to increase local water supplies and minimize purchases of water from the Bay-Delta. Existing facilities at the Turner Basin recharge site were expanded and improved to more efficiently be able to capture and recharge local rainfall runoff and recycled water. The water savings was expected to be 2,400 acre feet per year (afy) as a long-term average of 20 years or more. The water will be recharged into the Chino Basin groundwater aquifer and managed for conjunctive use. Conjunctive use provides flexibility to manage and minimize imported surface water supplies by “banking” water in the subsurface or otherwise drawing on groundwater supplies to offset surface deliveries.

### **4. Final Project Description:** *Briefly describe components of the project and the work completed, including each element of the scope of work and the work completed at each stage of the project. Please include maps, sketches, and/or drawing of the features of the completed project, as appropriate. In addition, please describe any changes in the project scope.*

The project had 3 main components: (1) expand the area of recharge basins by 10 acres; (2) construction of a new recycled water turnout to provide recycled water on a year-round basis; and (3) construction of new inlet facilities to increase the maximum operational water depth in the basins. The increase in basin size and depth has provided more storage volume, which allows for more recharge to occur. The increased recycled water deliveries will allow the basins to be filled year-round, instead of only with stormwater. The TBRI Project has provided the capability of being able to put into effect a sustainable reduction in imported water demand from the Bay-Delta and preserves in-stream flows, especially during critical dry periods.

The CEQA and NEPA Categorical Exclusions for the three tasks were approved on 9/22/2011. There was no change in the project scope, all three components were completed.

The project involved grading and hauling activities, the design and installation of new pipes, gates, and controls for two new recharge basins east of Turner Basin No. 4. This project also connected an existing flood control retention facility, Basin No. 5, to capture additional stormwater and recycled water for groundwater recharge by constructing new stormwater piping from Deer Creek Channel into Basin No. 8 which feeds into Basin No. 5. The completion of this project allows the Turner Basin site to receive and capture channel flow further upstream and increase recharge potential. The goal of the project over a long-term average of 20 years or more was to bring in an additional 2,400 acre-feet of annual recharge through stormwater and recycled water.

Please see Attachments A through D, which include a vicinity map, as-builts for each component, before and after images and photographs of each component with a map showing the components location.

**5. Accomplishment of Project Goals:** *Describe the goals and objectives of the project and whether each of these was met. Where appropriate, state the reasons why goals and objectives were not met, and describe any problems or delays encountered in completing the project. Please include whether or not the project was completed within cost.*

The main goal for this project was for the increased recharge and capture of stormwater and recycled water. The water savings was expected to be 2,400 acre feet per year (afy) as a long-term average of 20 years or more. Enough time has not passed to evaluate whether this objective will be met during the 20 year average. In the short term, this objective was not met for the year since there was a short rain period after project completion. These limited rain events resulted in a lower than anticipated stormwater capture. Additionally, the amount of recycled water recharge has been lower due to public complaints with the spawning of midge flies with stagnant water present at the basins.

There were several problems that were encountered during this project that delayed the project end date:

- San Bernardino Flood Control District requested an additional five weeks to review the final plans and specs. Due to the additional review period, the scheduled construction bid date was moved back. This re-scheduled the bidding period and moved the final construction completion date back.
- The grading/hauling contractor, who was responsible for providing the two new recharge basins under Task 1, asked for an extension to complete all grading activities. This delayed the construction under Task 2, which was unable to start until the grading was completed under Task 1. The hauler stopped all work due to his inability to find a location to haul the remaining export material; this resulted in additional delays which pushed the project completion date to February, 2015.
- Multiple construction areas at the Turner Basin Sites experienced vandalism and theft of electrical wiring. Immediate efforts to secure the site and replace the material extended the project completion. This also caused IEUA to need to negotiate change orders with the General Contractor to replace the stolen wire, install, terminate and re-test the complete startup related activities that were in the preliminary stages of development when the thefts occurred. This also increased the overall cost of the project.

The project was not completed within the original projected budget. The total costs were originally projected to be \$1,355,708 and the actual cost was \$2,023,739.

**6. Discussion of Amount of Water Conserved, Marketed or Better Managed:** *In responding to the questions set forth below, Recipients should rely on the best data or information available. Actual field measurements should be used whenever possible (e.g., baseline data or post-project data derived from measuring devices, diversion records, seepage tests, etc.) Where actual field measurements are not available, water savings (or amounts marketed or better managed) may be estimated based on studies, other similar improvement projects, or anecdotal evidence.*

**A. Recipient's total water supply (average, annual, available water supply in acre-feet per year):**

IEUA serves a 242-square mile area in western San Bernardino County with a population of 850,000. Total annual water consumption in IEUA's service area averaged 264,669 afy over the past 5 years. Overall, 70% of the water was from local supplies and 30% was from the Bay-Delta. Local supplies include local groundwater pumping, recycled water, and local surface runoff from the San Gabriel Mountains. Groundwater is the major source of water used in the IEUA service area-approximately 60%. Chino Basin is the largest groundwater basin in the IEUA service area and supplies 71% of the groundwater used. Other adjoining groundwater basins supply 29%.

**B. Amount of water conserved, marketed or better managed as a result of the project (in acre-feet per year):**

The water savings was expected to be 2,400 acre feet per year (afy) as a long-term average of 20 years or more. The three components that were to allow the project to be capable of reaching this water savings have been built. The project components are capable of collecting and recharging an approximate total of 2,400 afy of recycled water. The implementation of this project was expected to have a total recharge increase from the prior construction value of 2,100 afy to a total of 4,500 afy post construction. This increase utilized the anticipated 2,400 afy of recycled water recharged which would not have been possible otherwise without the implementation of this project. The total recharge for the lifespan of the project is expected to be a total of 48,000 afy of recycled water

**C. Describe how the amounts stated in response to 6.B were calculated or estimated:**

*In responding to this question, please address (1) – (3) below.*

**(1) Describe the information/data being relied on to calculate/estimate the project benefits. State how that data/information was obtained, if appropriate. Provide any other information necessary to explain how the final calculation/estimate of project benefits was made.**

Based on historical data, the average amount of water recharged at the Turner Basins was 2,100 afy, of which 90% is due to stormwater recharge. The amount varied from 1,542 in a dry year to 2,920 in a wet year. Calculations based on data prior to construction for basin sizes and infiltration rates showed that the maximum recharge capacity of the existing 22.6 acres of basins was 3,000 afy. This calculation assumed there was enough water available to fill the basins for eight months out of the year. Previously there were two reasons why there was not enough water to fill the basins: (1) not enough stormwater during dry years; (2) lack of a sufficiently-sized recycled water turnout. The new recycled water turnout was sized to deliver up to 8 cfs. The existing basins 1-4 (excluding the new basins) can now be filled with recycled water during dry periods, and could therefore reach the maximum recharge capacity of 3000 afy instead of the existing 2,100 afy recharge. Thereby increasing the total amount of constant recharge by 900 afy.

The water recharge benefit was calculated through the desired expansion of the recharge basin area by 10 acres and through the assumption of a 0.5 ft/day infiltration rate. Therefore, there can be a total of 150 acre-ft of additional recharge per month with the newly constructed basins. Assuming a recharge operation of 8 months of the year, the total annual recharge would increase by 1,200 acre feet. Additionally, the incorporation of basin five for groundwater recharged added an additional 300 acre feet of recharge annually, based on a 0.5 ft/day

infiltration rate and eight month operation. Adding together the 900, 1,200, and 300 afy of water recharge, a total benefit of 2,400 afy.

**(2) As appropriate, please include an explanation of any concerns or factors affecting the reliability of the data/information relied on.**

The reliability of the amount of stormwater captured is highly dependent on the dryness of the year. Some years will have significant stormwater recharge, whereas other years may not have significant recharge. In addition, the total available recycled water is also dependent on the demands of water recharge at other basin sites. Therefore, some months may have a lower discharge of recycled water into the basin due to higher demand in higher performance basins. These are the two factors that may impact the accuracy of the actual annual recharge based on the predicted recharge.

Additionally, the first monitoring time period is lower than expected due to the drainage of the basins for the mitigation of the midge fly problem reported by neighbors to the recharge basins. The total amount of water conserved before the recharge basins were emptied for midge fly control was 2,199 afy. The water will be recharged into the Chino Basin groundwater aquifer and managed for conjunctive use. Conjunctive use provides flexibility to manage and minimize imported surface water supplies by “banking” water in the subsurface or otherwise drawing on groundwater supplies to offset surface deliveries. This water is better managed than if it had been allowed to be transported by the Santa Ana River to the Pacific Ocean.

**(3) Attach any relevant data, reports or other support relied on in the calculation/estimate of project benefits, if available. Please briefly describe the data/information attached, if any.**

	SW/LR	MWD	Recycled	Total
<b>FY 05/06</b>	2,575	346	0	2,921
<b>FY 06/07</b>	405	315	1,232	1,952
<b>FY 07/08</b>	1,542	0	0	1,542
<b>FY 08/09</b>	1,391	0	171	1,562
<b>FY 09/10</b>	2,223	0	397	2,620
<b>FY 10/11</b>	2,632	0	53	2,685
<b>FY 11/12</b>	1,879	199	1,034	3,112
<b>FY 12/13</b>	1,120	0	176	1,296
<b>FY 13/14</b>	608	0	1,565	2,173
<b>FY 14/15</b>	1,332	0	867	2,199
<b>Average</b>	1,571	86	549	2,206

The table above summarizes the recharged stormwater, imported water from Metropolitan Water District, and the recycled water which was collected over the span of ten years. It is anticipated the total amount of recycled water recharged into the Turner Basins will increase to the average value of 2,400 afy, which will bring the total amount of water recharged into the basins to approximately 4,500 afy. Unfortunately, the current 867 afy of recycled

water recharged is far below the anticipated value due to an increase in the midge fly population and as a result, all recycled water recharge has been halted. Fortunately however, due to the installed improvements from the TBRI project, IEUA was able to meet the typical ten year average recharge of 2,200 afy of water. Without these improvements, FY 14/15 would have been below 2,000 afy of water, thereby not providing a positive contribution to California's severe drought situation. The Turner Basins shall begin recharging recycled water once the midge fly issue has been resolved.

**7. Discussion of Amount of Renewable Energy Added:**

This project did not involve the installation of a renewable component. However, a portion of the TRBI Project will utilize recycled water for recharging the groundwater in lieu of imported water from the Sacramento Bay Delta. The use of recycled water represents an energy savings due to the relatively high amount of embedded energy involved in importing water from the Sacramento Bay-Delta to southern California. That energy savings is "leveraged" even further by the fact that a portion of the energy that the Agency uses to produce and distribute recycled water is from renewable energy local sources. The Agency utilizes solar power, methane gas, and wind power in this process.

**8. Describe how the project demonstrates collaboration, stakeholder involvement or the formation of partnerships, if applicable:** *Please describe the collaboration involved in the project, and the role of any cost-share or other types of partners. If there were any additional entities that provided support (financial or otherwise) please list them.*

After we received the grant, the Chino Basin Watermaster (CBWM) decided to partner with IEUA for the construction of the TBRI Project. In this partnership, CBWM and IEUA have split the non USBR share of the total cost 26%/74% respectively. Additionally, IEUA worked with San Bernardino Flood Control District for design review and review of plans for any permitting required for construction.

**9. Describe any other pertinent issues regarding the project:**

The pertinent issue that occurred in this project was the coordination efforts for the excavation of dirt from the project site. To keep excavation and disposal costs at a minimum, IEUA utilized a private contractor. During construction, the demand for dirt unfortunately was not as high as anticipated and caused numerous delays for the start of construction work. Additionally, this delay led to the later utilization of the completed basins, resulting in a lower than anticipated recharge for the first operation year.

**10. Feedback to Reclamation regarding the WaterSMART Program:** *Please let us know if there is anything we can do to improve the WaterSMART program in general, including the process for applying for or completing a WaterSMART project. Your feedback is important to us.*

We appreciated the semi-annual reporting cycle since due to the nature of this type of project; there may not be enough material to report on a quarterly basis that does not seem like a repeat of the previous report. We would like to recommend that the reports be marked as received when the e-mail copy is received instead of the hard copy. The reason for this recommendation is due to the fact that delivery personnel thought that the Temecula office was closed since there was construction and a construction fence surrounding much of the building. This made the hard copy late even though the electronic copy was received on time.

**11. Attachments:** *Please attach the following*

- Any available data or information relied on in responding to paragraph 7, above; N/A
- A map or illustration showing the location of the recipient's facilities (see paragraph 4, above); Refer to Attachment A
- Maps, sketches, and/or drawings of the features of the completed project, as appropriate (see paragraph 5, above); Refer to Attachment B-1, B-2, and B-3
- Representative before and after photographs, if available; Refer to Attachment C and D
- A table showing the total expenditures for the completed project (please see sample Final Project Costs Table, below).

**USBR Turner Basin Recharge Improvements Project**  
**Agreement No. R11AP35315**  
**Cost Incurred from Period September 22, 2011 to March 31, 2015**

Budget Item Description	Computation		Recipient Funding	Reclamation Funding	Total Cost
	\$/Unit and Unit	Quantity (Hours)			
<b>SALARIES AND WAGES</b>			70%	30%	
Accountant - 817	\$ 27.52	4.50	86.69	37.15	123.84
Acting Supervisor of Engineering - 775	\$ 39.65	4.50	124.90	53.53	178.43
Acting Supervisor of Engineering - 775	\$ 40.84	50.00	1,429.40	612.60	2,042.00
Administrative Assistant - 843	\$ 31.14	8.00	174.38	74.74	249.12
Administrative Assistant - 843	\$ 32.07	26.50	594.91	254.96	849.87
Administrative Assistant - 1232	\$ 24.49	1.75	30.00	12.86	42.86
Administrative Assistant - 1265	\$ 22.76	0.50	7.97	3.41	11.38
Administrative Coordinator - 824	\$ 43.82	11.00	337.42	144.61	482.03
Administrative Secretary - 712	\$ 26.96	221.75	4,184.87	1,793.51	5,978.38
Administrative Secretary - 712	\$ 26.97	8.00	151.03	64.73	215.76
Administrative Secretary - 712	\$ 27.77	27.50	534.63	229.13	763.75
Administrative Secretary - 895	\$ 26.97	5.00	94.40	40.46	134.85
Administrative Secretary - 895	\$ 27.78	1.00	19.45	8.33	27.78
Administrative Secretary - 1113	\$ 25.61	59.00	1,057.69	453.30	1,510.99
Administrative Secretary - 1202	\$ 22.13	11.00	170.40	73.03	243.43
Administrative Secretary - 1232	\$ 22.08	16.50	255.02	109.30	364.32
Administrative Secretary - 1232	\$ 23.78	1.50	24.97	10.70	35.67
Administrative Secretary - 1232	\$ 24.49	3.00	51.44	22.04	73.48
Administrative Secretary - 1265	\$ 22.08	2.25	34.78	14.90	49.68
Administrative Secretary - 1265	\$ 22.75	12.25	195.07	83.60	278.67
CAD Designer - 1231	\$ 36.05	26.50	668.73	286.60	955.33
CAD Designer - 1231	\$ 37.13	8.00	207.93	89.11	297.04
CAD Designer - 1264	\$ 30.33	91.50	1,942.70	832.59	2,775.29
CAD Designer - 1264	\$ 31.24	63.50	1,388.62	595.12	1,983.74
CIP Coordinator - 1132	\$ 41.73	6.00	175.27	75.12	250.39
CIP Coordinator - 1132	\$ 42.98	2.50	75.22	32.24	107.45
Collection Systems Operator - 729	\$ 28.32	8.00	158.59	67.97	226.56
Compliance Accountant - 817	\$ 27.52	159.85	3,079.35	1,319.72	4,399.07
Compliance Accountant - 817	\$ 27.53	202.24	3,897.51	1,670.36	5,567.87

Budget Item Description	Computation		Recipient Funding	Reclamation Funding	Total Cost
	\$/Unit and Unit	Quantity (Hours)			
Compliance Accountant - 1144	\$ 28.22	0.50	9.88	4.23	14.11
Compliance Accountant - 1144	\$ 29.64	4.00	82.99	35.57	118.56
Compliance Accountant - 1252	\$ 25.56	26.00	465.19	199.37	664.56
Compliance Accountant - 1252	\$ 26.32	3.00	55.27	23.69	78.96
Construction Inspector - 1253	\$ 36.00	117.00	2,948.40	1,263.60	4,212.00
Construction Inspector - 1253	\$ 37.08	5.00	129.78	55.62	185.40
Construction Inspector - 1254	\$ 37.08	3.00	77.87	33.37	111.24
Construction Management A - 775	\$ 34.33	3.00	72.09	30.90	102.99
Construction Project Coordinator - 973	\$ 37.83	16.00	423.70	181.58	605.28
Construction Project Manager - 515	\$ 55.93	10.25	401.30	171.98	573.28
Construction Project Manager - 708	\$ 48.31	15.00	507.26	217.40	724.65
Construction Project Manager - 1099	\$ 48.31	90.00	3,043.53	1,304.37	4,347.90
Construction Project Manager - 1099	\$ 49.76	96.00	3,343.87	1,433.09	4,776.96
Construction Project Manager - 1211	\$ 48.31	401.00	13,560.62	5,811.69	19,372.31
Control Systems Administrator - 847	\$ 46.09	7.17	231.33	99.14	330.47
Deputy Manager of Construction - 667	\$ 50.66	2.50	88.66	38.00	126.65
Deputy Manager of Construction - 667	\$ 50.67	3.00	106.41	45.60	152.01
Deputy Manager of Construction - 667	\$ 53.24	9.50	354.03	151.73	505.76
Deputy Manager of Construction - 667	\$ 54.82	5.50	211.06	90.45	301.51
Deputy Manager of Engineering - 679	\$ 58.72	11.00	452.14	193.78	645.92
Electrical Technician II - 699	\$ 36.13	3.00	75.87	32.52	108.39
Engineering Technician - 851	\$ 28.32	29.75	589.76	252.76	842.52
Engineering Technician - 851	\$ 29.16	27.50	561.33	240.57	801.90
Engineering Technician - 1154	\$ 26.89	240.00	4,517.53	1,936.08	6,453.61
External Affairs Specialist - 1132	\$ 42.98	43.00	1,293.70	554.44	1,848.14
Grants Administrator - 722	\$ 39.73	30.70	853.90	365.96	1,219.86
Grants Administrator - 722	\$ 39.76	43.90	1,221.70	523.58	1,745.28
Grants Administrator - 722	\$ 40.93	18.70	535.79	229.62	765.41

Budget Item Description	Computation		Recipient Funding	Reclamation Funding	Total Cost
	\$/Unit and Unit	Quantity (Hours)			
Grants Officer - 755	\$ 50.72	15.20	539.62	231.26	770.88
Grants Officer - 755	\$ 50.73	57.35	2,036.69	872.87	2,909.56
Grants Officer - 755	\$ 51.96	12.25	445.56	190.95	636.51
Grants Officer - 755	\$ 53.28	0.75	27.97	11.99	39.96
Instrument Technician II - 961	\$ 37.94	13.00	345.25	147.97	493.22
Instrument Technician II - 1161	\$ 37.94	10.00	265.58	113.82	379.40
Intern Staff - 1180	\$ 12.00	16.00	134.40	57.60	192.00
Intern Staff - 1180	\$ 13.00	23.00	209.30	89.70	299.00
Intern Staff - 1180	\$ 14.00	128.00	1,254.40	537.60	1,792.00
Intern Staff - 1180	\$ 15.00	331.50	3,480.75	1,491.75	4,972.50
Intern Staff - 1223	\$ 10.00	6.50	45.50	19.50	65.00
Intern Staff - 1255	\$ 13.00	30.83	280.55	120.24	400.79
Management Analyst - Primavera - 997	\$ 45.98	8.00	257.49	110.35	367.84
Management Analyst - Primavera - 997	\$ 47.36	0.50	16.58	7.10	23.68
Manager of Planning and Environmental Compliance - 627	\$ 71.38	2.00	99.93	42.83	142.76
Manager of Technical Services - 664	\$ 67.98	36.30	1,727.37	740.30	2,467.67
Senior Accountant - 1054	\$ 36.06	31.20	787.49	337.49	1,124.98
Senior Associate Engineer - 806	\$ 48.31	284.00	9,604.03	4,116.01	13,720.04
Senior Associate Engineer - 806	\$ 51.96	1.00	36.37	15.59	51.96
Senior Associate Engineer - 806	\$ 51.97	230.00	8,367.17	3,585.93	11,953.10
Senior Engineer - 705	\$ 53.26	271.50	10,122.06	4,338.03	14,460.09
Senior Engineer - 806	\$ 51.96	161.00	5,855.89	2,509.67	8,365.56
Senior Engineer - 806	\$ 53.26	53.00	1,975.95	846.83	2,822.78
Senior Engineer - 806	\$ 54.86	157.25	6,038.72	2,588.02	8,626.74
Senior Engineer - 992	\$ 53.26	260.50	9,711.96	4,162.27	13,874.23
Senior Operations Assistant - 951	\$ 48.31	85.50	2,891.39	1,239.17	4,130.56
Senior Operations Assistant - 951	\$ 49.76	19.50	679.22	291.10	970.32
Supervising Management A - 1173	\$ 38.69	3.00	81.25	34.82	116.07
Supervising Management A - 1173	\$ 40.65	1.00	28.46	12.20	40.65
Supervisor of Contracts - 670	\$ 45.99	4.00	128.77	55.19	183.96
Supervisor of Engineering - 804	\$ 48.31	7.00	236.72	101.45	338.17

Budget Item Description	Computation		Recipient Funding	Reclamation Funding	Total Cost
	\$/Unit and Unit	Quantity (Hours)			
<b>SALARIES AND WAGES SUBTOTAL</b>			<b>125,080.65</b>	<b>53,605.99</b>	<b>178,686.64</b>
<b>FRINGE BENEFITS</b>					
Full-time employees 71% - 75%			88,248.99	37,821.00	126,069.99
Part-time employees 0 %			-	-	-
<b>FRINGE BENEFITS SUBTOTAL</b>			<b>88,248.99</b>	<b>37,821.00</b>	<b>126,069.99</b>
<b>CONTRACTUAL/ CONSTRUCTION</b>					
Advanced Survey Concepts, Inc.			1,650.60	707.40	2,358.00
Alliant Consulting			1,159.38	496.88	1,656.25
Butier Engineering			4,396.76	1,884.33	6,281.09
Calvada Surveying Inc.			14,038.15	6,016.35	20,054.50
CASC Consulting			16,990.93	7,281.83	24,272.75
Environmental Science Associates			10,703.19	4,587.08	15,290.27
GK & Associates			52,047.91	22,306.25	74,354.16
Golden State Labor Compliance			4,326.00	1,854.00	6,180.00
Graphic Details			331.11	141.91	473.02
Integrated Design Services Inc.			16,565.50	7,099.50	23,665.00
KIP Incorporated			810,968.26	347,557.82	1,158,526.08
Michelle O'Brien			52.84	22.64	75.48
Mike Bubalo Construction Inc.			59,389.73	25,452.74	84,842.47
Mission Reprographics			921.05	394.73	1,315.78
Ninyo & Moore			27,591.32	11,824.85	39,416.17
Postage			(87.06)	(37.31)	(124.37)
Randstad Engineering			4,489.45	1,924.05	6,413.50
RMA Group			17,341.63	7,432.13	24,773.75
RMS Engineering & Design			7,353.50	3,151.50	10,505.00
SAF-R-DIG			8,884.40	3,807.60	12,692.00
San Bernardino County			497.70	213.30	711.00
Scheevel Engineering LLC			1,540.00	660.00	2,200.00
Stantec Consulting			107,981.46	46,277.77	154,259.23
State of California			1,882.65	806.85	2,689.50
State Water Resources Control Board			678.30	290.70	969.00

Budget Item Description	Computation		Recipient Funding	Reclamation Funding	Total Cost
	\$/Unit and Unit	Quantity (Hours)			
Tom Dodson & Associate			2,757.97	1,181.99	3,939.95
Worldwide Express			697.30	298.84	996.14
York Employment			2,584.36	1,107.58	3,691.94
<b>CONTRACTUAL/ CONSTRUCTION SUBTOTAL</b>			<b>1,177,734.36</b>	<b>504,743.30</b>	<b>1,682,477.66</b>
<b>ENVIRONMENTAL AND REGULATORY COMPLIANCE</b>					-
Tom Dodson & Associate			22,479.39	9,634.03	32,113.42
San Bernardino County			6,783.00	2,907.00	9,690.00
California Dept of Fish and Game			3,530.10	1,512.90	5,043.00
Environmental Science Associates			2,721.03	1,166.15	3,887.18
<b>ENVIRONMENTAL AND REGULATORY COMPLIANCE SUBTOTAL</b>			<b>35,513.52</b>	<b>15,220.08</b>	<b>50,733.60</b>
<b>OTHER</b>					
CASC Consulting Accrual			3,303.00	-	3,303.00
GK & Associates Accrual			1,408.00	-	1,408.00
CBB IEUA Receipts			(2,129.25)	-	(2,129.25)
CWIP *			5,791.95	-	5,791.95
Interest Expense – Bonds *			9,382.11	-	9,382.11
<b>OTHER SUBTOTAL</b>			<b>17,755.81</b>	<b>-</b>	<b>17,755.81</b>
<b>TOTAL DIRECT COSTS</b>			<b>1,444,333.33</b>	<b>611,390.37</b>	<b>2,055,723.70</b>
<b>INDIRECT COSTS 21.42%</b>			<b>26,794.25</b>	<b>11,483.25</b>	<b>38,277.50</b>
<b>ADJUSTMENTS</b>					
Personnel - Charged to Match			34,842.34	(34,842.34)	-
Contractual/Construction - Charged to Match			160,240.75	(160,240.75)	-
KIP Retention			(32,124.67)	(13,767.71)	(45,892.38)
Unallowable			(17,501.86)	(7,500.80)	(25,002.66)

Budget Item Description	Computation		Recipient Funding	Reclamation Funding	Total Cost
	\$/Unit and Unit	Quantity (Hours)			
Allowable			443.30	189.98	633.28
<b>TOTAL PROJECT COSTS</b>			<b>1,617,027.44</b>	<b>406,712.00</b>	<b>2,023,739.44</b>

\*CWIP, Interest Expense Bonds - Capitalized interest and interest expense is unallowable for project.