



TURNER BASIN IMPROVEMENTS PROJECT NO. WR11017.00 STATUS UPDATE: FEBRUARY 25, 2015

The project involves grading and hauling activities and the design and installation of new pipes, gates, and controls for two new recharge basins east of Turner Basin No. 4. This project also connects 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. This will allow the Turner Basin site to receive and capture channel flow further upstream and increase recharge potential. The goal of the project is to bring in an additional 600 acre-feet of annual recharge through stormwater and recycled water.

Schedule:

1 , 2,23		1 / / -			
<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost	
03/01/11	02/22/12	Completed	\$32,622	\$35,380	
02/22/12	04/01/12	Completed	\$13,419	\$75,548	
03/01/11	12/20/12	Completed	\$72,892	\$74,197	
04/02/12	02/22/13	Completed	\$120,772	\$122,203	
03/30/12	12/20/12	Completed	\$9,927	\$9,927	
12/21/12	02/20/13	Completed	\$2,736	\$2,747	
02/20/13	02/27/15	Completed	\$1,022,632	\$951,463	
			\$1,275,000	\$1,271,465	
	\$1,275,000 \$1,275,000	03/01/11 02/22/12 02/22/12 04/01/12 03/01/11 12/20/12 04/02/12 02/22/13 03/30/12 12/20/12 12/21/12 02/20/13	\$1,275,000 \$1,271,46 Start Finish Status 03/01/11 02/22/12 Completed 02/22/12 04/01/12 Completed 03/01/11 12/20/12 Completed 04/02/12 02/22/13 Completed 03/30/12 12/20/12 Completed 12/21/12 02/20/13 Completed	\$1,275,000 \$1,271,465 Start Finish Status Projected Cost 03/01/11 02/22/12 Completed \$32,622 02/22/12 04/01/12 Completed \$13,419 03/01/11 12/20/12 Completed \$72,892 04/02/12 02/22/13 Completed \$120,772 03/30/12 12/20/12 Completed \$9,927 12/21/12 02/20/13 Completed \$2,736 02/20/13 02/27/15 Completed \$1,022,632	

This project is partially funded by the Bureau of Reclamation with a grant of \$406,712.

Cost Sharing Document: 2014 Amendment to the Turner/Gausti Cost Sharing Agreement 2012

Project Update:

The project will be substantially completed before the end of February with the exception of any remaining stock piles that the grader has requested to leave in order to allow more time to remove. They plan to be off-site by the end of March. In the meantime, the project will begin close-out procedures and finalize cost-sharing invoices with Watermaster.

Project Photos:



Completed junction structure



Completed valve and structure



Completed new south basin (Turner 4c)



Completed new outlet basin north of Gausti Park (Turner 8)



New north basin (Turner 4b) – grading/hauling in progress





JURUPA PUMP STATION HVAC IMPROVEMENTS PROJECT NO. EN14040 STATUS UPDATE: FEBRUARY 25, 2015

The Jurupa Pump Station (PS) is a key recharge facility that directly conveys storm water runoff, local runoff, imported and recycled water to Cell 1A at the RP-3 Basin. The PS is located on the north-east corner of Jurupa Basin which acts as a pass through basin for flows intercepted at the nearby San Sevaine Channel. The PS' electrical equipment, such as the motor control center, variable frequency drives (VFDs) and communication equipment, is critical to the operation of the pump station. With high temperatures experienced at the PS, vital controls and switches have been experiencing temperature related failures and shutdowns. The HVAC improvements will address these critical failures by installing a permanent air conditioning system, roof thermal insulation, controls, etc. for the electrical equipment at the Jurupa PS.

Schedule:

			ost to Date 7,584			
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost	
Project Development	09/02/13	10/30/13	Completed	\$3,000	\$3,031	
Pre-design	10/31/13	03/03/14	Completed	\$5,000	\$2,731	
Proposal	03/04/14	05/14/14	Completed	\$12,000	\$7,257	
Design/Build	05/14/14	10/06/14	Completed	\$186,000	\$64,565	
			•	\$206,000	\$77,584	

Cost Sharing Document: Task Order No. 5 of the Master Agreement of 2014

Project Update:

This project is completed. Final invoicing for Watermaster's share is in progress.

Project Photos:



Existing MCC control panel



Existing pumping system



Installed AC unit



Installed ceiling insulation and AC air ducting





SAN SEVAINE IMPROVEMENTS PROJECT PROJECT NO. EN13001 STATUS UPDATE: FEBRUARY 25, 2015

As part of the 2013 Amendment to the 2010 Recharge Master Plan Update (RMPU), this Project will evaluate, design and construct basin improvements needed to maximize infiltration and recharge capture at the San Sevaine Basins. The final recommendation from the preliminary development report proposes to implement: (1) a new stormwater/recycled water pump station in Basin 5, (2) directly tie into an existing RW pipeline, (3) place new pipelines and headwalls into Basins 1, 2, and 3, and (4) install monitoring wells and lysimeters. The purposed improvements will meet the RMPU goal to add 642 acre-feet per year of stormwater and 4,100 acre-feet per year of recycled water for groundwater recharge.

Schedule:

	Project Bud \$6,460,000		Actual Cost to Date \$159,728				
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost		
Pre-design	10/01/12	04/15/15	In Progress	\$200,000	\$140,688		
Environmental Impact	06/26/13	05/23/15	In Progress	\$32,200	\$0		
Design	4/19/15	11/24/15	Not Started	\$206,200	\$0		
Permits	05/15/13	11/24/15	In Progress	\$100,000	\$19,040		
Bid and Award	11/25/15	01/20/16	Not Started	\$11,600	\$0		
Construction	01/21/16	04/25/17	Not Started	\$5,910,000	\$0		
				\$6,460,000	\$159,728		

^{*}The project budget is proposed to be raised to the expected design and construction cost as detailed in completed Preliminary Development Report. This new cost is pending approval by the Watermaster Board.

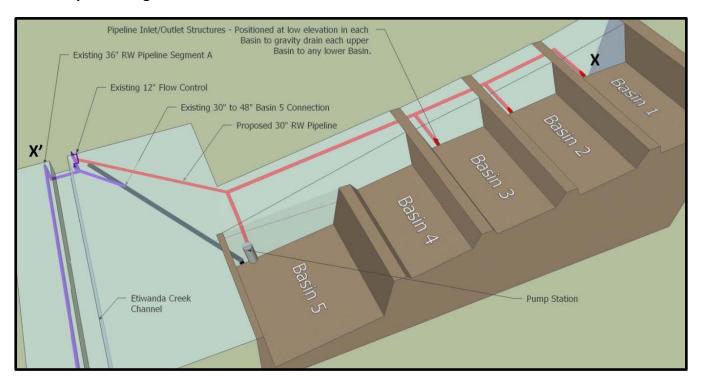
The project was approved for a \$750,000 grant from the Department of Water Resources through the Santa Ana Watershed Project authority as part of Proposition 84.

Cost Sharing Document: Task Order No. 8 of the Master Agreement of 2014

Project Update:

Staff is forwarding to the Pools and Board its request to begin a basin design based on the final recommendation from the Preliminary Development Report which was reviewed, discussed, commented and accepted by CBWM/IEUA staff and CBWM's engineers, WEI. In the meantime, staff is currently soliciting for design consulting services that will prepare construction plans and specifications based on the final recommendation and provide engineering support services during the scheduled construction phase. Staff is also currently applying for additional grant funding of \$250,000 on this project under the Bay-Delta Restoration Program.

Conceptual Design:



Isometric View of the Recommended Basin Improvement
Pump Station in Basin 5 and Extension of the Recycled Water Pipeline to Basins 1, 2, and 3





GWR SCADA UPGRADES PROJECT NO. EN14047 STATUS UPDATE: FEBRUARY 25, 2015

The Inland Empire Utilities Agency's existing Supervisory Control & Data Acquisition (SCADA) system is comprised of a wide range of equipment that is located at various remote sites and facilities throughout the IEUA's RW and GWR facilities. During IEUA's master planning process, a thorough and comprehensive review and evaluation of the recycled water and groundwater recharge SCADA system was conducted. The Master Plan recommended SCADA upgrades to the RW and GWR SCADA systems. The purpose of these upgrades will provide the foundation of a robust, reliable and seamless control system that will sustain and support the continued growth of the RW and GWR programs. Under this project, five recharge basins which also operate a rubber dam system will be replaced with newer, reliable and fully supported programmable logic controllers (PLC). The current PLCs are out dated and lack critical replacement support. The upgrade will extend the system's reliable use by 10 years and provide the initial development model when transitioning the other controllers in the future.

Schedule:

	Project Bud \$892,00			tual Cost to Date \$80,147		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost	
Project Development	11/11/11	02/24/14	Completed	\$927	\$422	
Design	02/26/14	03/24/15	In Progress	\$129,900	\$79,725	
Permits	09/12/14	03/24/15	In Progress	\$10,000	\$0	
Bid and Award	03/25/15	06/17/15	Not Started	\$428	\$0	
Construction	06/18/15	06/30/16	Not Started	\$750,745	\$0	
			-	\$892,000	\$80,147	

This project qualified for a \$139,650 grant and a 1% interest 30-year loan at \$740,145 from the Santa Ana Project Water Authority and Clean Water State Revolving Fund loan program respectively.

Cost Sharing Document: Task Order No. 4 of the Master Agreement of 2014

Project Update:

The design consultant, MSO Technologies, provided final design plans. Staff will be reviewing and finalizing all comments before March 25, 2015. Construction bidding is pushed out to April 2015 and construction will start in June 2015.

Project Photo:



San Sevaine turnout control panel





COMMUNICATION UPGRADES PROJECT NO. EN12019 STATUS UPDATE: FEBRUARY 25, 2015

This project will transition the communication equipment within the remote GWR and RW sites (totaling over 20 sites) onto the new, faster and more reliable communication network. The upgrade will replace the radio equipment for each site and add several new communication towers to send all communication onto the Agency's new 18GHz Motorola network back-haul. The Communication System Upgrades proposes to upgrade all GRW remote sites to the new communication radio systems. Each site will be equipped with new antennas and radios. The proposed plan to include new towers at select sites will be deferred and planned for later capital projects because these sites do not require immediate remote communication and control.

Schedule:

	Project Budge	<u>et</u>	Actual Cost to	<u>Date</u>	
	\$1,245,000		\$182,029		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost
Project Development	11/11/11	01/17/14	Completed	\$5,771	\$5,771
Pre-Design	01/20/14	11/27/14	In Progress	\$130,000	\$130,000
RFP/Solicitation	11/30/15	03/18/15	In Progress	\$44,000	\$46,258
Design/Construction	03/19/15	12/31/15	Not Started	\$1,065,229	\$0
				\$1,245,000	\$182,029

This project qualified for a \$192,850 grant and a 1% interest 30-year loan at \$1,022,105 from the Clean Water State Revolving Fund loan program, as part of the Proposition 50 grant program, and a Department of Water Resources Proposition 84 grant program through Santa Ana Project Water Authority.

Cost Sharing Document: Task Order No. 3 of the Master Agreement of 2014

Project Update:

On March 18, 2015, IEUA will award the design/build contract to Sun Wireless, a qualified and experienced communication specialist. The installation cost is \$826,294. Work will begin on March 23, 2015 and it will be completed before December 31, 2015.

The following table summarizes the completed radio survey study:

Site	Remote Site	Distance	Tower Height (Feet)	Antenna Height
8th Street Basin	6-B	6.3 miles	Existing 55'	40' or above
Brooks Street Basin	6-B	10.8 miles	Existing 55'	55'
CB-11 MWD Turnout	6-B	1.6 miles	No tower (Need at least 45')	40' or above
CB-14 MWD Turnout	6-B	3.8 miles	No tower (Need at least 25')	20' or above
CB-15 MWD Turnout	6-B	2.5 miles	No tower (Need at least 20')	15' or above
CB-18 MWD Turnout	6-B	5.2 miles	No tower (Need at least 35')	30' or above
CB-20 MWD Turnout	6-B	4.8 miles	Need 10' extension on 25' square	30' or above
			monopole or new 35' tower	
College Heights	CCWRF	8.2 miles	Exitsing 55'	40' or above
Declez Basin	6-B	10.2 miles	Existing 55'	40' or above
Ely 3 Basin	RP-1	0.5 miles	Existing 55'	15' or above
Grove Basin	6-B	10.8 miles	Existing 55'	40' or above
Hickory Basin	6-B	6.1 miles	Existing 55'	40' or above
Hickory FMM Turnout	RP-4	1.3 miles	Existing 55'	40' or above
Jurupa Basin	6-B	8.8 miles	Existing 55'	40' or above
Lower Day Basin	6-B	2.9 miles	Existing 55'	15' or above
Montclair Basin	CCWRF	7.3 miles	Existing 55'	40' or above
Orchard RW Turnout	6-B	10.2 miles	No tower (Need at least 20')	15' or above
RP-3	6-B	10.4 miles	Existing 55'	40' or above
San Sevaine 5RW Turnout	6-B	4.5 miles	Existing 55'	40' or above
San Sevaine Basin 5	6-B	4.6 miles	No tower (25' lamp post or new 25' tower)	25' or above
Turner Basin 1	6-B	6.4 miles	Existing 55'	40' or above
Turner Basin 4	6-B	6.4 miles	Existing 55'	50' or above
Upland Basin	CCWRF	8.0 miles	No tower (Need at least 45')	40' or above
Victoria Basin	6-B	4.7 miles	Existing 55'	40' or above
Wineville Basin	6-B	8.8 miles	No tower (Need at least 45')	40' or above

Sites that need attention





CB20 NOISE MITIGATION PROJECT NO. EN14038 STATUS UPDATE: FEBRUARY 25, 2015

In 2010, a recharge basin turnout structure was constructed within the Metropolitan Water District's right-of-way in the residential area of the City of Upland. The turnout was to provide immediate access to available raw water for the purpose of groundwater storage. The Noise Mitigation Project is to reduce the impact of operating noise to the surrounding residences. Current sound studies reveal the facility generates noise levels above the allowable limits permitted by Upland's Ordinances. As a public service effort, IEUA and Chino Basin Watermaster initiated a capital project to design and build a sound enclosure by a qualified sound specialist. The objective is to maintain compliance with City Ordinance and reduce the impact of noise to nearby residents.

Schedule:

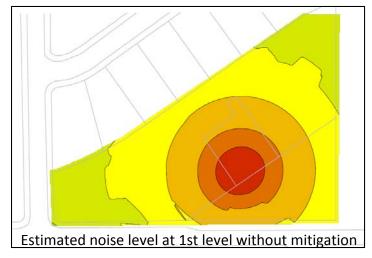
Project Budget	Actual Cost to Date					
\$160,000	9	\$29,476				
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost	
Project Development	09/25/13	01/23/14	Completed	\$200	\$182	
Design	01/24/14	11/26/14	In Progress	\$29,000	\$28,971	
Construction	11/30/14	04/30/15	In Progress	\$130,800	\$323	
				\$160,000	\$29,476	

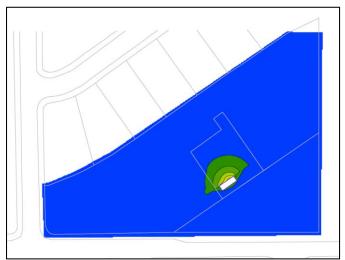
Cost Sharing Document: CBFIP, Phase II Cost Sharing Agreement of 2006

Project Update:

The designer and installer of the sound enclosure requested an additional one month extension in receiving all required materials due to the extended delays from the manufacturer. In late 2014, the sound wall system manufacturer recently relocated to newer facilities. This has created unanticipated delays in meeting production orders. The contractor is working with the manufacturer to ensure there are no further delays. Project completion is moved to April 2015.

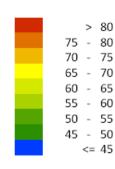
Sound study result which confirms the intended noise reduction with the added enclosure:





Estimated noise level at 1st level with mitigation

Estimated noise level at 2nd level with mitigation



Noise Level, dBA





PROJECT NO. EN12025 STATUS UPDATE: FEBRUARY 25, 2015

The Hickory Basin Arizona Crossing Project designed and constructed a new soil cement access road and culvert over the inlet channel at the Hickory Basin. The purpose of the access road was to provide immediate maintenance and operational access for IEUA and San Bernardino Flood Control District (SBCFCD) personnel to the north area of the Basin without interrupting recharge or storm water detention operations. The goal of the project is to minimize maintenance costs and mitigate recharge interruptions due to basin dewatering when accessing critical pumping equipment for routine or emergency maintenance. Secondly, the access crossing was also a required condition with the Flood Control as part of a maintenance agreement to utilize the basin for continuous recharge. This project was a part of the Chino Basin Facilities Improvement Program, Phase II, which was deferred due to Flood Control permitting approvals. In January 2012, the project re-commenced bidding after receiving full permitting documents from the District.

Schedule:

	Project Budget \$332,971		Actual Cost to Date \$275,417			
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost	
Design	10/01/11	12/31/11	Completed	\$7,200	\$7,200	
Permits	10/01/11	01/12/12	Completed	\$2,000	\$1,518	
Bid and Award	01/12/12	03/21/12	Completed	\$1,200	\$307	
Construction	03/22/12	04/17/13	Completed	\$222,571	\$211,392	
Added Contingencies				\$100,000	\$55,000	
				\$332,971	\$275,417	

The added contingency was included into the project towards the later phase of construction to address potential change orders with the General Contractor.

Cost Sharing Document: CBFIP Phase II Cost Sharing Agreement of 2006

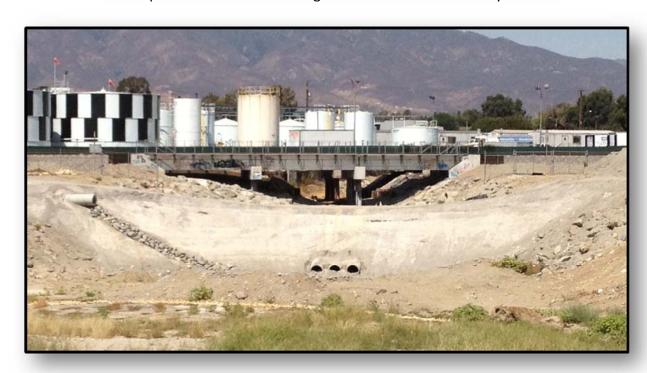
Project Update:

Project is completed. Final cost sharing invoicing with CBWM will be sent soon. This will address the recently accepted construction cost settlement.

Project Photo:



Completed access road leading to the north side of Hickory Basin



Completed Arizona Crossing which spans the inlet channel





UPPER SANTA ANA RIVER WATERSHED HABITAT CONSERVATION PLAN PROJECT NO. RW15002 STATUS UPDATE: FEBRUARY 25, 2015

The purpose of the Habitat Conservation Plan is to investigate and develop a plan to offset the biological impact of future water and recharge improvement projects in the Chino Basin area that have the potential to affect federally-listed endangered, threatened or special status species. This project will be a part of a regional plan with other proposed projects within the Upper Santa Ana River Region. The goal of the project is to identify, in advance, sites that may require biological offset/mitigation and avoid permitting delays on future RMPU projects or other identified recharge improvement projects.

Schedule:

Scriedule.	Project Budget \$160,000		Actual Cost to Date \$0		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost
Investigate/Plan	07/01/14	06/30/17	In Progress	\$160,000	\$0
				\$160,000	\$0

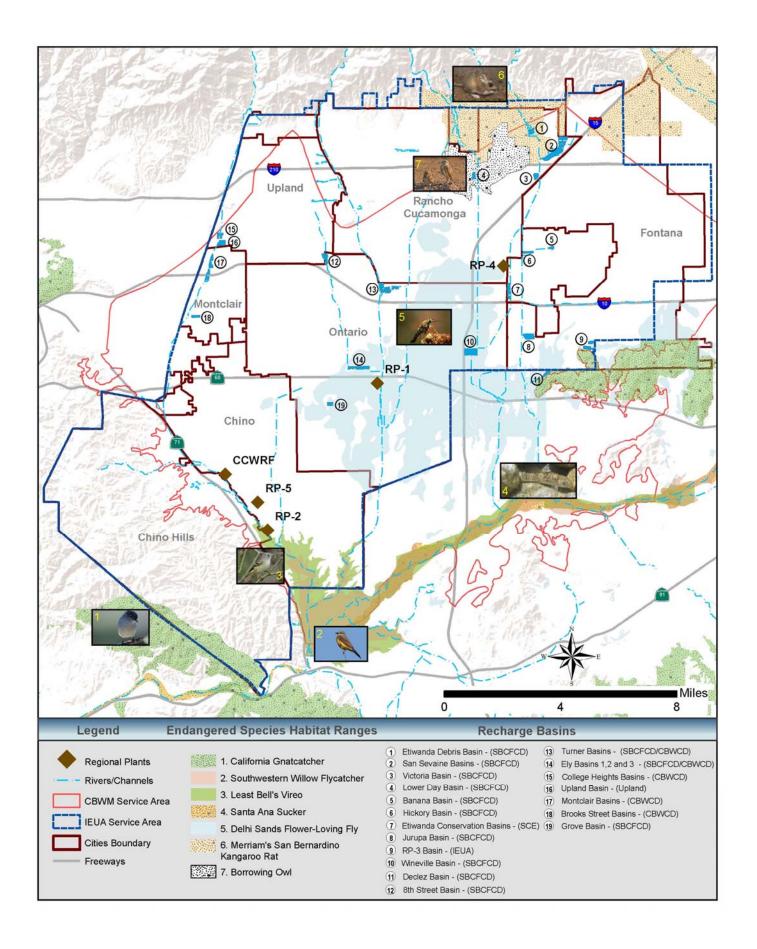
Cost Sharing Document: Task Order No. 7 of the Master Agreement of 2014

Project Update:

The HCP team has refined the covered activities for the proposed projects and is entering the hydraulic modeling phase. Hydraulic modeling will be used to determine the overall impacts to the Santa Ana River from all of the projects in the HCP which include the following RMPU project sites. ICF International is the firm that is conducting the research and planning of the project.

RMPU Projects	<u>Location</u>	Potential Species
PID - 19a	Wineville Basin	DSF
PID - 12	Lower Day Basin	SBKR,CAGN,BUOW
PID - 7	San Sevaine Basins (1-5)	SBKR
PID - 11	Victoria Basin	SBKR
PID - 2	Montclair Basins (1-3)	CAGN
DSF=Delhi Sands Flower-Lov	ing Fly: SRKR=Merriam's San Bernarding Kan	aaroo Rat: CAGN=California Gnatcatcher:

DSF=Delhi Sands Flower-Loving Fly; SBKR=Merriam's San Bernardino Kangaroo Rat; CAGN=California Gnatcatcher, BUOW=Burrowing Owl







2013 RMPU AMENDMENT YIELD ENHANCEMENT PROJECTS PROJECT NO. RW15003 STATUS UPDATE: FEBRUARY 25, 2015

The 2013 Amendment to the 2010 Recharge Master Plan Update recommended that the yield enhancement projects listed below be implemented for preliminary-design, environmental

review, permitting, and final design.

	Basin	Kan Prairie the annual contracts	Orig RMPL	ginal J Yield	I Adilisted Via	
ID	Projects	Key Project Improvements	SW	RW	SW	RW
				acre-feet	per year	
18a	CSI Storm Water Basin	New storage and recharge facility by deepening/removing 36,000 CY	81	-	81	ı
23a	Wineville, Jurupa, and RP3	Improve storage and recharge capacity with pumps/conveyance systems between basins and provide new diversion structures	3,166	2,905	3,166	2,905
27	Declez Basin	Improve capacity by modifying existing/adding new structures	241	-	241	
11	Victoria Basin	Improve the infiltration rate and increase storage by removing settled deposits	43	120	43	120
14	Turner Basin	Increase storage and recharge by raising the spillway height	66	-	66	-
15a	Ely Basin	Improve storage and recharge by removing 470,000 CY	221	-	221	1
2	Montclair Basins	Increase storage and recharge capacity by directing more channel flow	248	-	248	1
25a	Sierra	Improve storage and recharge by removing 40,000 CY <i>(Removed-no longer feasible)</i>	64	-		
17a	Lower San	Construct a new storage flow through basin	1 221			
1/a	Sevaine Basin	(Removed-no longer feasible)	1,221	-		
	East Declez	New basin towards the east (Pending			913	_
_	Basin	Approval)			313	-
			5,351	3,025	4,979	3,025

Schedule:

<u>Original Soft Cost</u>		Adjusted Soft Cost*		Actual Cost to Date	
\$8,122,	500	\$7,490,500		\$658	
Soft Cost Phases	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost
Project Development	07/01/14	04/15/15	In Progress	\$53,547	\$658
Preliminary Design	04/20/15	08/31/16	Not Started	\$1,360,328	-
Environmental	02/19/15	08/29/16	Not Started	\$532,190	-
Design	08/29/16	12/29/17	Not Started	\$5,169,055	-
Permits	08/29/16	12/29/17	Not Started	\$375,380	
				\$7,490,500	\$658

^{*}PID 25a and PID 17a removed and added the cost of the East Declez

Cost Sharing Document: Task Order No. 1 of the Master Agreement of 2014

Project Update:

Staff is recommending the addition of the East Declez Basin Project as potential replacement for the Lower San Sevaine Basin and Sierra Basin. The above tables reflect the estimated new storm water yield and design cost based on the proposed project adjustments.

Project Photos:



Aerial of Victoria Basin



Aerial of CSI Basin





LOWER DAY RMPU IMPROVEMENTS PROJECT NO. RW15004 STATUS UPDATE: FEBRUARY 25, 2015

This project will modify the existing intake structure and install pneumatic gates in the channel. The pneumatic gates will monitor and self-adjust to maintain a water level or rate of discharge over the gate structure in accordance with an established programmable logic controller. The basin's existing embankment will be evaluated and reconstructed to meet the requirements of a dam embankment with the Division of Safety of Dams. Improvement on the embankment may include excavation and keying to prevent piping and seepage.

The potential increase in recharge with the inlet is 789 acre-feet per year as per 2010 RMPU.

Schedule:

	Project Budget \$2,480,000		Actual Cost to Date \$11,208		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	Projected Cost	Actual Cost
Project Development	07/01/14	12/17/14	Completed	\$5,000	\$3,043
Pre-Design	12/18/14	04/10/15	In Progress	\$35,000	\$8,165
Design	04/13/15	02/10/16	Not Started	\$140,000	-
Environmental Impact	02/02/15	02/09/16	In Progress	\$72,000	-
Permits	07/08/15	02/02/16	Not Started	\$61,000	-
Bid and Award	02/11/16	04/20/16	Not Started	9,000	-
Construction	04/21/16	05/31/17	Not Started	\$2,158,000	-
				\$2,480,000	\$11,208

Cost Sharing Document: Task Order No. 2 of the Master Agreement of 2014

Project Update:

A preliminary design kick-off with the Consultant, Scheevel Engineering, was held on December 18, 2014 at IEUA. The schedule is to complete the pre-design on April 2015. After reviewing the pre-design recommendation with CBWM, IEUA will begin the process of soliciting design and construction services. Currently environmental studies are in progress with Tom Dodson & Associates.

Project Photos:



Aerial photo of the project site



Field photo showing the location of the proposed improvement to the existing channel to increase storm water capture