

# Non-RMPU Ongoing Projects



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**GWR AND RW SCADA UPGRADES  
PROJECT NO. EN14047  
STATUS UPDATE: February 7, 2017**

During Inland Empire Utilities Agency’s asset review of the existing Supervisory Control & Data Acquisition (SCADA) system, a thorough and comprehensive evaluation of the recycled water (RW) and groundwater recharge (GWR) control system was conducted. A Master Plan was developed; and it recommended critical upgrades to the RW and GWR SCADA systems. The purpose of this project is to provide control system improvements to sustain and support the continued growth of the RW and GWR programs. Under this project, five recharge basins which operate a rubber dam system will be replaced with newer, reliable and fully supported programmable logic controllers (PLCs). The current PLCs are outdated and lack critical product and technical support. The upgrade will extend the site’s reliability by 10 years and provide the initial development model when transitioning other sites to newer controllers.

**Schedule:**

	<u>Project Budget</u>		<u>Actual Cost to Date</u>		
	\$892,000		\$468,766		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Project Development	11/11/11	02/24/14	Completed	\$450	\$422
Design	02/26/14	01/15/16	Completed	\$192,312	\$186,512
Permits	09/12/14	01/15/16	Completed	\$50	\$42
Bid and Award	01/18/16	04/20/16	Completed	\$4,000	\$3,461
Construction*	04/21/16	04/14/17	In Progress	\$413,678	\$278,329
				<u>\$610,490</u>	<u>\$468,766</u>

\*Received bids reduced projected construction cost.

**Grant/Loan Update:**

Awarded 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:**

Since last month, the following tasks were completed:

- Rubber Dam - Panel programming test
- Rubber Dam Sites – Cutover Inspection
- PLC Programming Development

The following are scheduled for completion:

- Import Upgraded SCADA application onto IEUA server

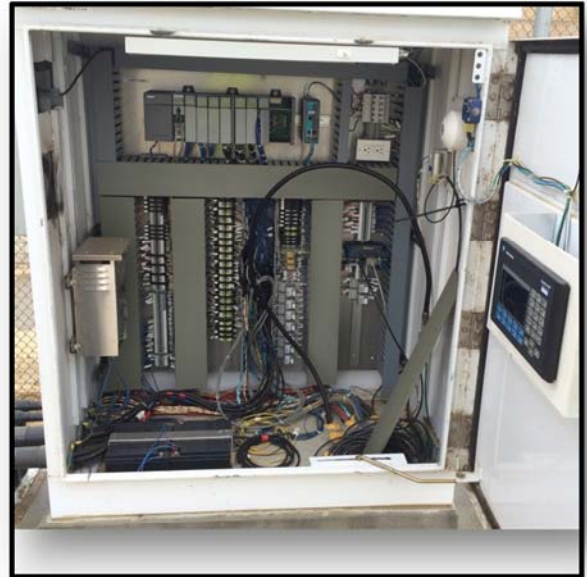
- SCADA testing of remote terminal units

The project is currently scheduled for completion on April, 2017.

**Project Photos:**



San Sevaine Turnout control panel



Turner Basin control panel



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**UPPER SANTA ANA RIVER WATERSHED HABITAT CONSERVATION PLAN**  
**PROJECT NO. RW15002**  
**STATUS UPDATE: February 7, 2017**

The purpose of the Habitat Conservation Plan (HCP) 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:**

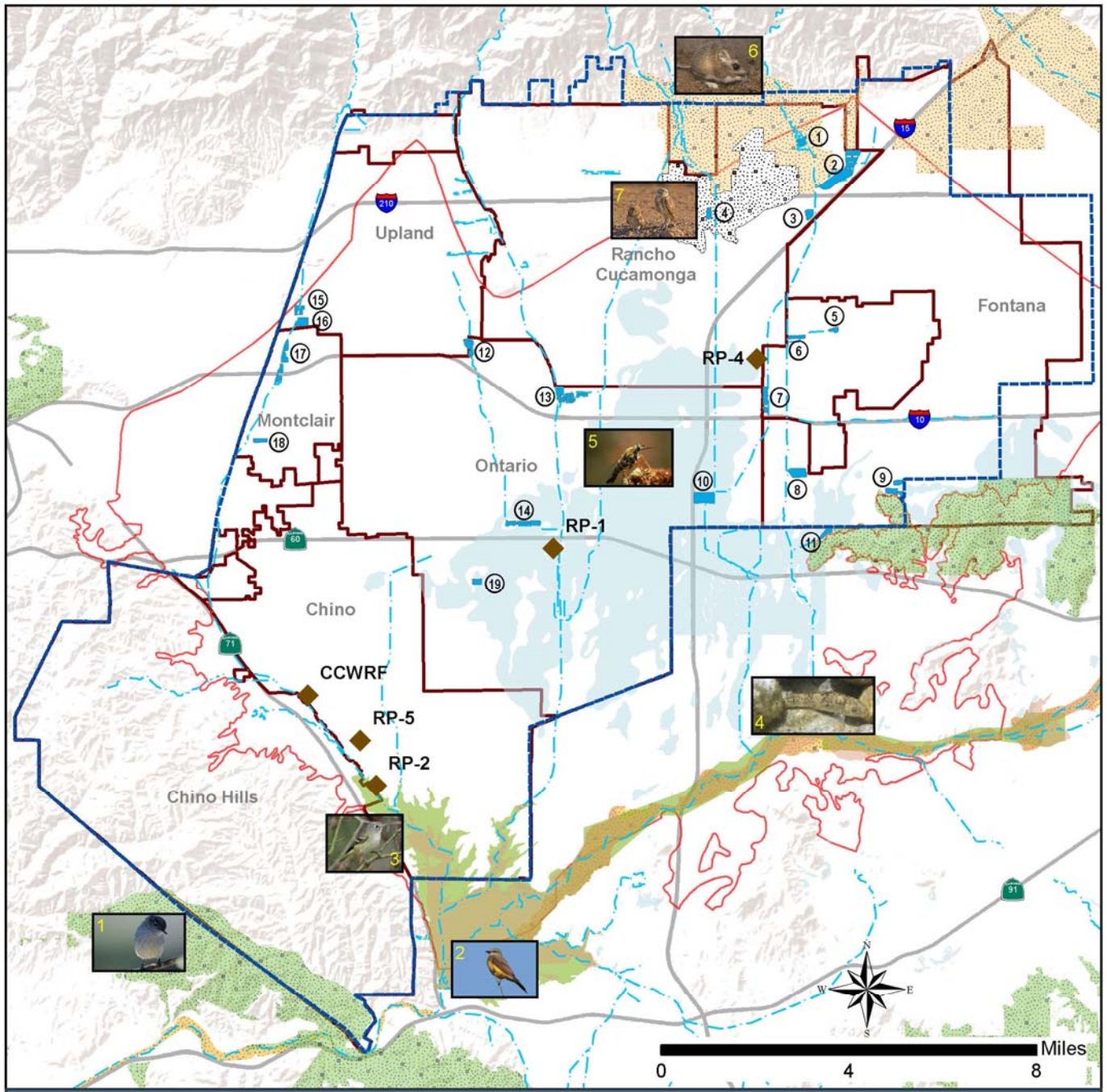
	<u>Project Budget</u>		<u>Actual Cost to Date</u>		
	\$160,000		\$84,326		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Investigate/Plan	07/01/14	12/30/17	In Progress	\$160,000	\$84,326
				\$160,000	\$84,326

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

**Project Update:**

- Hydraulic modeling is complete.
- Climate change impacts will be addressed during the adaptive management portion of the plan, which will include monitoring requirements.
- Study area includes 451 miles of streams; 83 miles have been identified as potentially impacted by projects. Approximately half of the identified streams are preliminarily identified as “highly modified” (e.g. concrete storm drain channels). A series of workgroup meetings in December will go through the data to confirm status of unmodified versus modified.
- Biological impact studies have been occurring in parallel with the hydrology analysis for the 23 listed/anticipated to be listed species.

The project is about one year behind schedule, but is gaining momentum since the modeling work is completed. A revised schedule will be circulated next month.



Legend		Endangered Species Habitat Ranges		Recharge Basins	
	Regional Plants		1. California Gnatcatcher		Etiwanda Debris Basin - (SBCFCD)
	Rivers/Channels		2. Southwestern Willow Flycatcher		San Sevaime Basins - (SBCFCD)
	CBWM Service Area		3. Least Bell's Vireo		Victoria Basin - (SBCFCD)
	IEUA Service Area		4. Santa Ana Sucker		Lower Day Basin - (SBCFCD)
	Cities Boundary		5. Delhi Sands Flower-Loving Fly		Banana Basin - (SBCFCD)
	Freeways		6. Merriam's San Bernardino Kangaroo Rat		Hickory Basin - (SBCFCD)
			7. Borrowing Owl		Etiwanda Conservation Basins - (SCE)
					Jurupa Basin - (SBCFCD)
					RP-3 Basin - (IEUA)
					Wineville Basin - (SBCFCD)
					Declez Basin - (SBCFCD)
					8th Street Basin - (SBCFCD)
					Turner Basins - (SBCFCD/CBWCD)
					Ely Basins 1,2 and 3 - (SBCFCD/CBWCD)
					College Heights Basins - (CBWCD)
					Upland Basin - (Upland)
					Montclair Basins - (CBWCD)
					Brooks Street Basins - (CBWCD)
					Grove Basin - (SBCFCD)

# RMPU PROJECTS



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**SAN SEVAINE IMPROVEMENTS PROJECT**  
**PROJECT NO. EN13001**  
**STATUS UPDATE: February 7, 2017**

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 Sevaire 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 tying it 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 proposed improvements will add 642 acre-feet per year of stormwater and 4,100 acre-feet per year of recycled water for groundwater recharge.

**Schedule:**

<u>Project Budget</u> \$6,460,000	<u>Actual Cost to Date</u> \$681,304
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<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Pre-design	10/01/12	05/14/15	Completed	\$160,000	\$159,833
Environmental Impact	06/26/13	01/20/16	Completed	\$30,000	\$24,218
Design	05/15/15	12/12/16	Completed	\$500,000	\$453,911
Permits	05/15/13	05/01/17	In Progress	\$25,000	\$25,000
Bid and Award	12/13/16	03/15/17	In Progress	\$5,000	\$5,000
Construction	04/16/17	04/20/18	Not Started	\$5,740,000	\$13,342
				\$6,460,000	\$681,304

**Grant/Loan Update:**

Awarded a \$750,000 state grant from the Department of Water Resources through the Santa Ana Watershed Project Authority as part of Proposition 84 and a \$375,000 federal grant from the US Bureau of Reclamation.

**Cost Sharing Document:**

- Task Order No. 8 of the Master Agreement of 2014 (August, 2014)
- 1<sup>st</sup> Amendment Task Order No. 8 of the Master Agreement of 2014 (April, 2015)

**Project Update:**

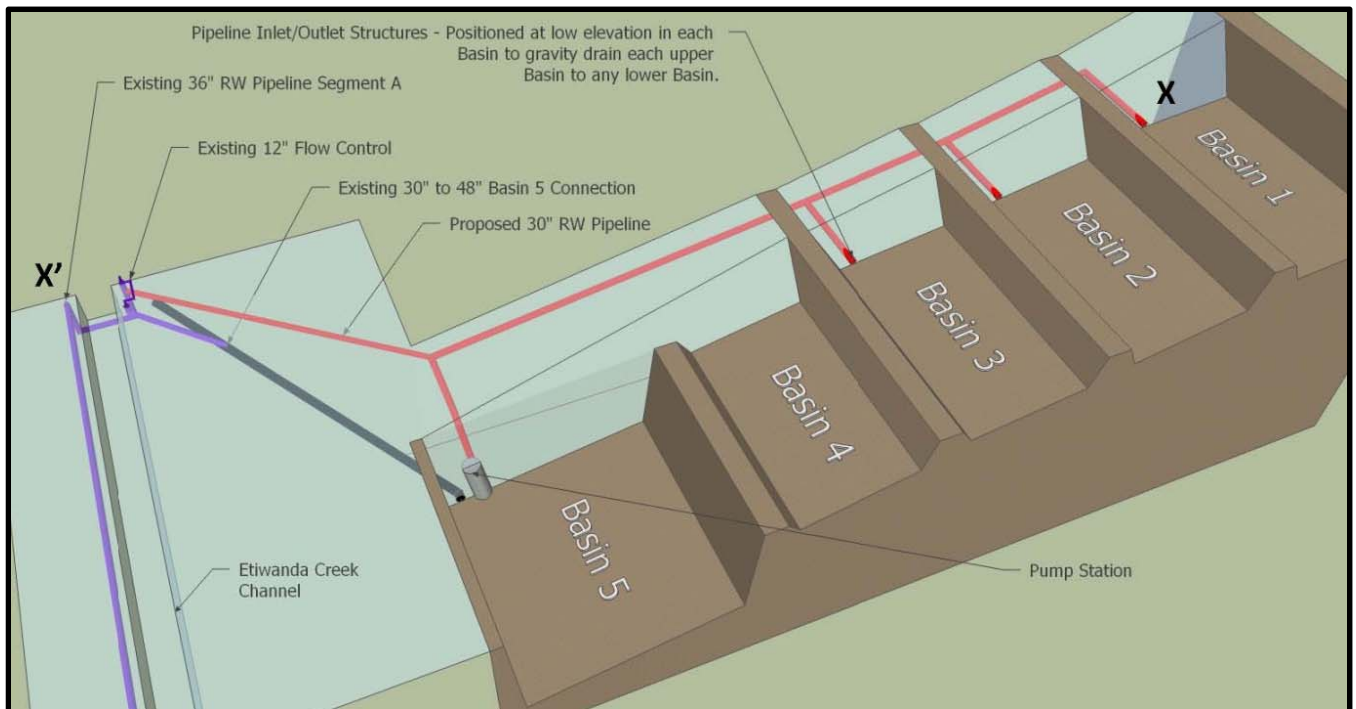
In December, a qualification questionnaire was sent to all general contractors. The response to these questionnaires will be used to evaluate and select eligible contractors to bid on the construction project. On January 17, 2017, IEUA received 20 responses. Of the 20, 17 were deemed eligible to bid based on their qualifications, experience, scheduling knowledge, history

on labor compliance, past references, and fiscal stability. The 17 eligible contractors all scored 75 points or higher out of 100. The following are the selected contractors:

- Atkinson Construction
- Canyon Springs Enterprises
- CCL Contracting, Inc.
- CDM Constructors, Inc.
- E. J. Meyers Company
- Environmental Construction
- Ferreira Construction Co.
- Gwinco Construction & Engineering
- H & H General Contractors, Inc.
- J. F. Shea Construction, Inc.
- J. R. Filanc Construction Co.
- L. H. Woods & Sons, Inc.
- Mike Bubalo Construction Co., Inc.
- Norstar Plumbing & Engineering, Inc.
- Reyes Construction, Inc.
- SCW Contracting Corporation
- W. M. Lyles Co.

Construction bidding is scheduled to begin in February with an expected award date of April 2017.

### 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



**2013 RMPU AMENDMENT YIELD ENHANCEMENT PROJECTS**  
**PROJECT NO. RW15003.00**  
**STATUS UPDATE: February 7, 2017**

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.

ID	Basin Projects	Key Project Improvements	Original RMPU Yield		Adjusted Yield	
			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	-
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	-
2	Montclair Basins	Increase storage and recharge capacity by directing more channel flow	248	-	248	-
25a	Sierra	Improve storage and recharge by removing 40,000 CY <b><i>(Removed-no longer feasible)</i></b>	64	-		
17a	Lower San Sevaine Basin	Construct a new storage flow through basin <b><i>(Removed-no longer feasible)</i></b>	1,221	-		
			<b>5,351</b>	<b>3,025</b>	<b>4,066</b>	<b>3,025</b>

**Schedule:**

	<u>Amended Soft Cost*</u>			<u>Actual Cost to Date</u>	
	\$3,825,500			\$1,044,304	
<u>Soft Cost Phases</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Project Development	07/01/14	06/17/15	Completed	\$27,000	\$3,476
Preliminary Design	06/25/15	04/18/17	In Progress	\$735,000	\$735,000
Environmental	02/19/15	03/15/17	In Progress	\$325,000	\$305,828
Design	04/19/17	12/31/17	Not Started	\$2,638,500	-
Permits	11/17/16	12/31/17	Not Started	\$100,000	-
				<u>\$3,825,500</u>	<u>\$1,044,304</u>

\*PID 25a and PID 17a are removed from the design and not included within the total soft cost.

### Grant/Loan Update:

Recently, RP-3 Basin Improvements was awarded a \$300K grant from the US Bureau of Reclamation. IEUA is responding to another funding opportunity announcement from the US Bureau of Reclamation which are the following:

- USBR Water Use Efficiency's \$750K grant (Wineville/PS/CSI)
- USBR Drought Resiliency's \$750 K grant (Jurupa Basin Project)

### Cost Sharing Document:

- Task Order No. 1 of the Master Agreement of 2014 (August, 2014)
- 1<sup>st</sup> Amendment Task Order No. 1 of the Master Agreement of 2014 (April, 2015)
- 2<sup>nd</sup> Amendment Task Order No. 1 of the Master Agreement of 2014 (June, 2016)

### Project Update:

IEUA is finalizing the following:

- 1) Drafting final RFP for the solicit design services for the recommended listed projects.
- 2) Addressing the additional evaluation of the Montclair Basin project.
  - a) Recently received comments from Chino Basin Water Conservation District's engineering.
  - b) Running further modelling efforts with Wildermuth Environmental to consider alternative design.

### Proposed RMPU Project (Post 2014 Stormwater Recharge Program)

Project ID	Project	Yield	Recycled Water	Storm Water Recharge Unit Cost to CBWM Parties	Direct Construction Cost	Engineering and Admin Costs	Total Capital Cost	Total Capital Cost to CBWM Parties
<b>Recommended MZ3 Projects<sup>1</sup></b>								
23a	2013 Proposed RP3 Improvements <sup>2</sup>	2,921	2,905	\$ 413	\$ 1,117,000	\$ 382,000	\$ 1,499,000	\$ 749,500
	2013 RMPU Proposed Wineville				\$ 3,054,000	\$ 611,000	\$ 3,665,000	\$ 3,665,000
	2013 RMPU Proposed Jurupa				\$ 1,177,000	\$ 276,000	\$ 1,453,000	\$ 1,453,000
	2013 Wineville PS to Jurupa, Expanded Jurupa PS to RP3 Basin				\$ 9,108,000	\$ 1,069,000	\$ 10,177,000	\$ 10,177,000
<b>Total MZ3</b>	<b>2,921</b>	<b>2,905</b>	<b>\$ 413</b>	<b>\$ 14,456,000</b>	<b>\$ 2,338,000</b>	<b>\$ 16,794,000</b>	<b>\$ 16,044,500</b>	
<b>Recommended MZ2 Projects<sup>3</sup></b>								
11	Victoria Basin	75	120	\$ 114	\$ 143,000	\$ 34,000	\$ 177,000	\$ 88,500
7	San Sevaine Basins	669	4,100	\$ 384	\$ 5,840,000	\$ 620,000	\$ 6,460,000	\$ 3,230,000
12	Lower Day Basin (2010 RMPU)	993	0	\$ 300	\$ 3,332,000	\$ 676,000	\$ 4,008,000	\$ 4,008,000
<b>Total MZ2</b>		<b>1737</b>	<b>4220</b>	<b>\$ 324</b>	<b>\$ 9,315,000</b>	<b>\$ 1,330,000</b>	<b>\$ 10,645,000</b>	<b>\$ 7,326,500</b>
<b>Recommended MZ1 Projects</b>								
2	Montclair Basins	233	0	\$ 552	\$ 1,567,000	\$ 276,000	\$ 1,843,000	\$ 1,843,000
<b>Total MZ1</b>		<b>233</b>	<b>0</b>	<b>\$ 551.55</b>	<b>\$ 1,567,000</b>	<b>\$ 276,000</b>	<b>\$ 1,843,000</b>	<b>\$ 1,843,000</b>
<b>Total Recommended Projects</b>		<b>4,891</b>	<b>7,125</b>	<b>\$ 388</b>	<b>\$ 25,338,000</b>	<b>\$ 3,944,000</b>	<b>\$ 29,282,000</b>	<b>\$ 25,214,000</b>

1. PID 25a (Sierra Basin) and PID 27 (Declez Basin) were deleted from the recommended project list. Property owners had other use for the site. PID 18a (CSI Basin) is removed because it is still under consideration.

2. PID 23a (2013 RMPU Proposed Wineville PS to Jurupa, Expanded Jurupa PS to RP3 Basin, and 2013 Proposed RP3 Improvements) was separated into its individual components. The total capital cost is about \$16,448,000.

3. PID 17a (Lower San Sevaine Basin), PID 14 (Turner Basin), and PID 15a (Ely Basin) were deferred.



**LOWER DAY RMPU IMPROVEMENTS**  
**PROJECT NO. RW15004**  
**STATUS UPDATE: February 7, 2017**

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 to the embankment may include excavation and keying to prevent piping and seepage. Per the 2013 RMPU, this project proposes to increase the recharge capacity of the basin by 789 acre-feet per year.

**Schedule:**

	<u>Project Budget</u>		<u>Actual Cost to Date</u>		
	\$2,480,000		\$242,114		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost*</u>	<u>Actual Cost</u>
Project Development	07/01/14	12/17/14	Completed	\$25,000	\$24,790
Pre-Design	12/18/14	11/16/16	Completed	\$159,000	\$151,309
Environmental Impact	12/18/14	04/20/16	Completed	\$44,000	\$43,313
Permits	12/18/14	01/08/18	In Progress	\$170,000	\$22,702
Design	04/20/17	01/08/18	Not Started	\$278,000	-
Bid and Award	01/09/18	03/21/18	Not Started	9,000	-
Construction	03/22/18	03/29/19	Not Started	\$3,323,000	-
				<u>\$4,008,000</u>	<u>\$242,114</u>

\*Projected cost is updated to reflect the proposed design cost

**Grant/Loan Update:**

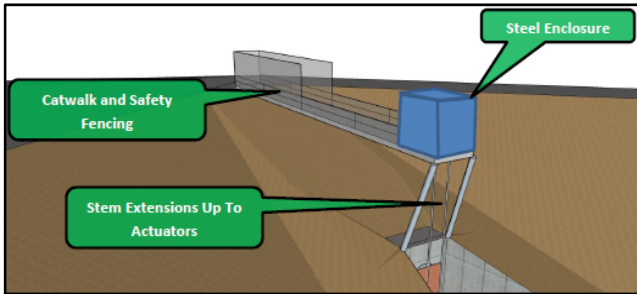
Awarded a \$750,000 state grant from the Department of Water Resources through the Santa Ana Watershed Project Authority as part of Proposition 84 and a \$375,000 federal grant from the US Bureau of Reclamation.

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

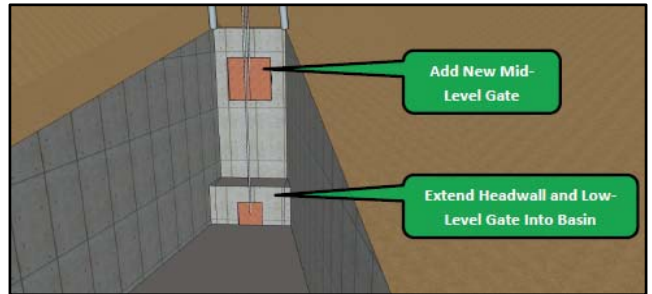
**Project Update:**

The project is currently in the process of soliciting design services to prepare the final design. IEUA is anticipating to award these services by April 2017. Design is schedule for a Dec. 2017 completion date.

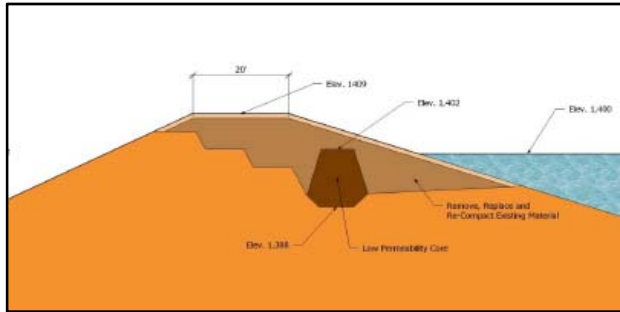
**Conceptual Design of the Proposed Improvements:**



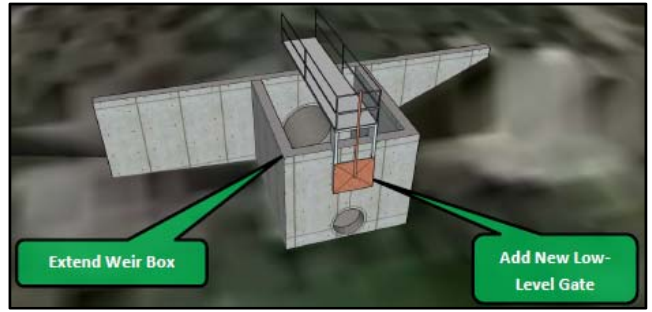
Mid-level Outlet Modifications – Increase Storage to the Lower Basin



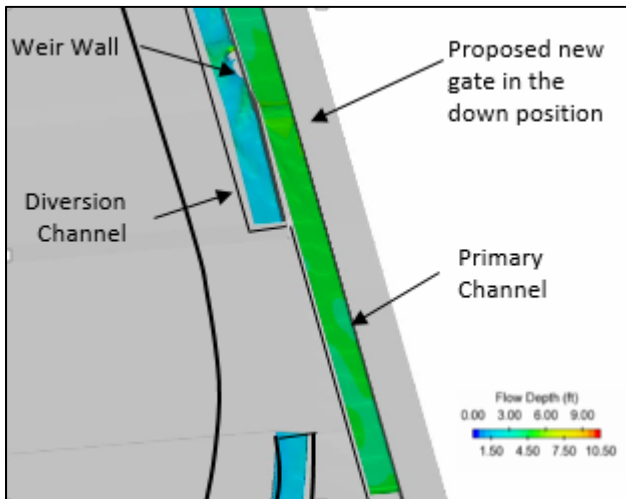
Coating Existing 36" & 72" Outlet Pipes – Maintain Flood Control requirements of immediate dewatering



Reconstruction of Southern Berm – Prevent Seepage



Modifications to Upper Basin Outlet – Increase Storage to the Upper Basin



Water Flow Simulation of Channel with Proposed New Gate



An Obermeyer Weir Wall example in Mendocino, California