

Non-RMPU Ongoing Projects



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**GWR AND RW SCADA UPGRADES
PROJECT NO. EN14047
STATUS UPDATE: March 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 The current PLCs are outdated and lack critical product and technical support.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		\$507,225		
<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	\$316,788
				\$610,490	\$507,225

*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:

- Import Upgraded SCADA application onto IEUA server

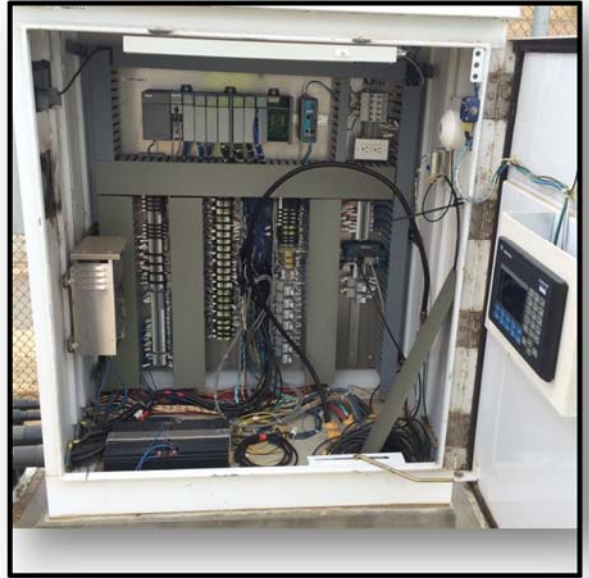
SCADA testing is ongoing until project completion.

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

Project Photos:



San Sevaine Turnout control panel



Turner Basin control panel



**UPPER SANTA ANA RIVER WATERSHED HABITAT CONSERVATION PLAN
PROJECT NO. RW15002
STATUS UPDATE: March 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

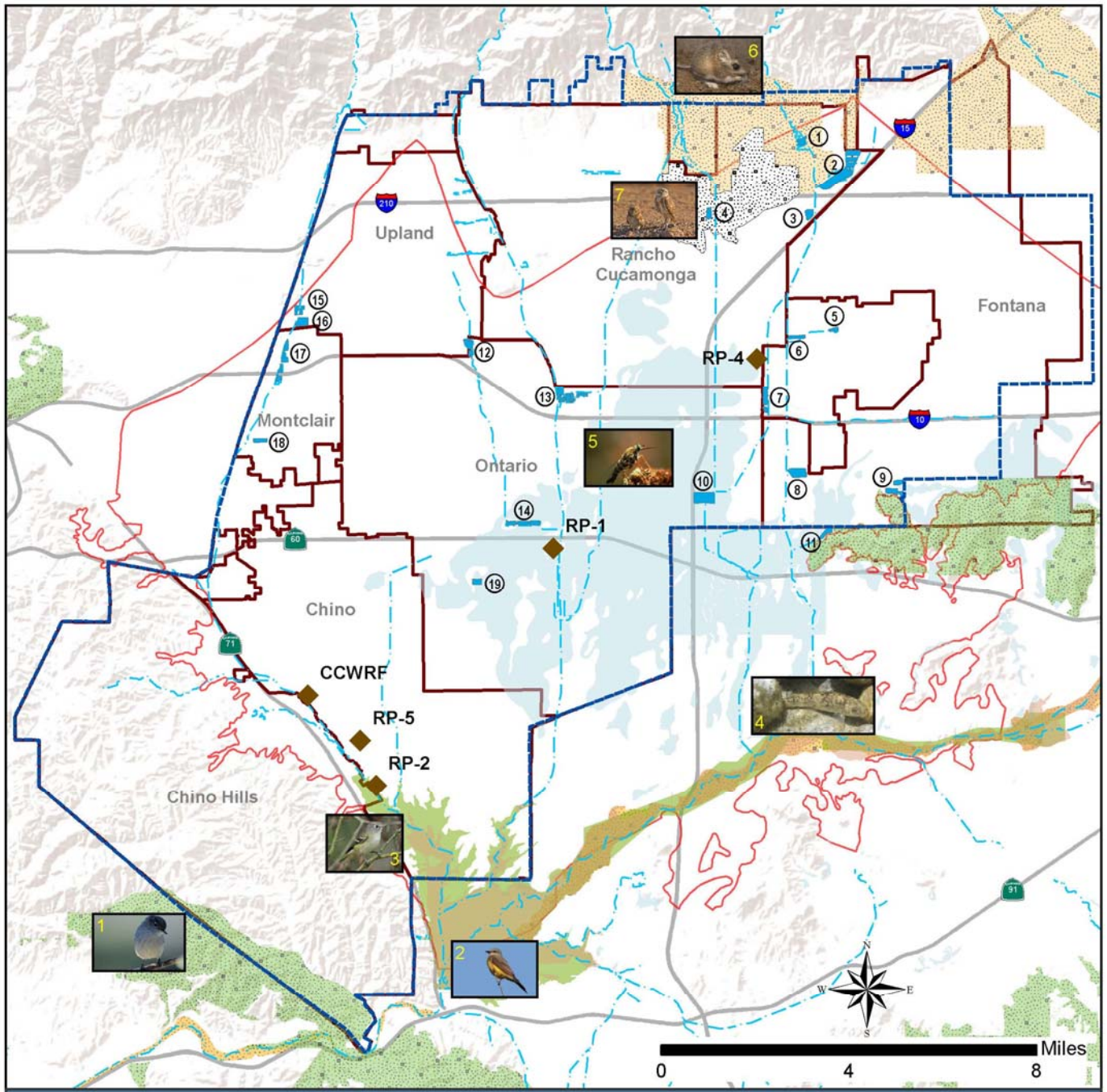
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Investigate/Plan	07/01/14	12/30/17	In Progress	\$160,000	\$84,326
				\$160,000	\$84,326

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

Project Update:

No further updates to report since the last month.

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 Sevaire 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: March 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> \$6,295,000	<u>Actual Cost to Date</u> \$697,652
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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	06/21/17	In Progress	\$5,000	\$5,000
Construction	06/22/17	06/22/18	Not Started	\$5,740,000	\$29,690
				\$6,460,000	\$697,652

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)
- 1st Amendment Task Order No. 8 of the Master Agreement of 2014 (April, 2015)

Project Update:

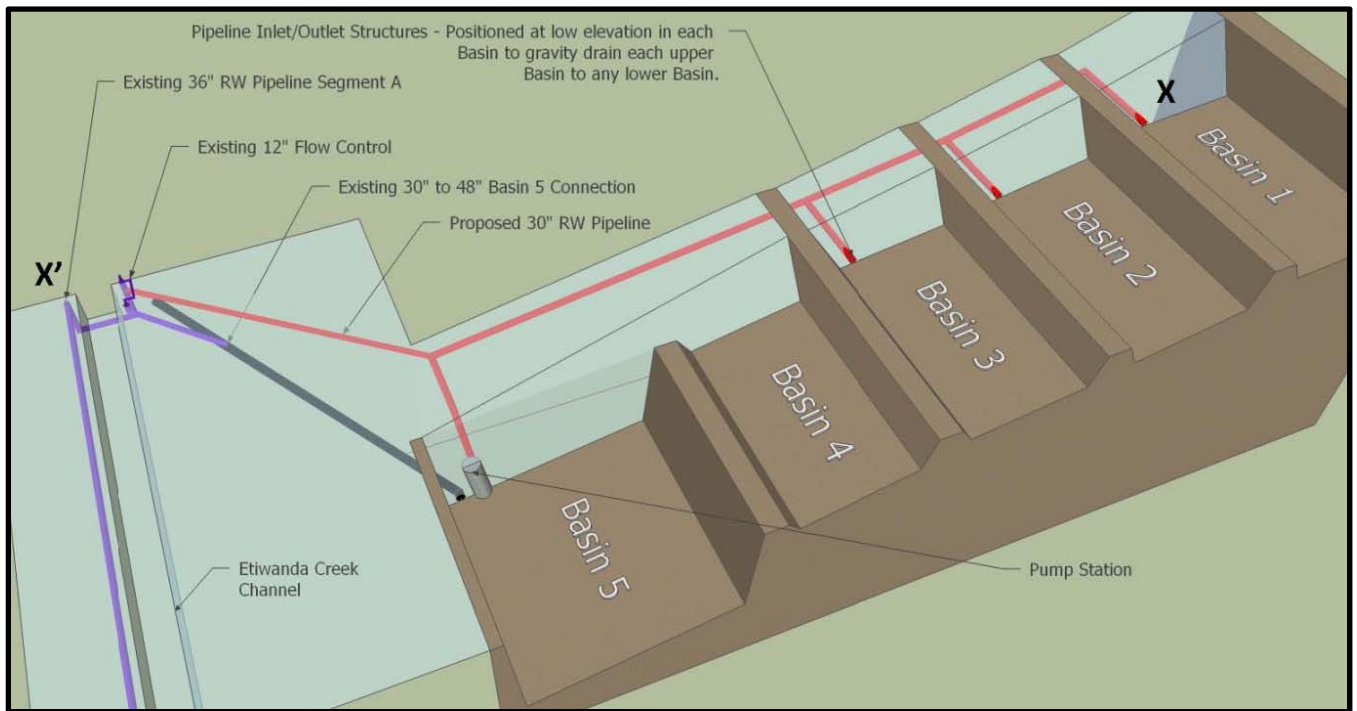
As mentioned in the last update, the following 17 eligible contractors were pre-selected to bid on the construction:

- 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 started on March 14 with an expected award date of June 2017. The delay is due to coordinating the construction award date with the expected SRF loan which is currently delayed for state approval.

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: March 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 (Removed-no longer feasible)	64	-		
17a	Lower San Sevaine Basin	Construct a new storage flow through basin (Removed-no longer feasible)	1,221	-		
			5,351	3,025	4,066	3,025

Schedule:

<u>Soft Cost Phases</u>	<u>Amended Soft Cost*</u>			<u>Actual Cost to Date</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	06/21/17	In Progress	\$735,000	\$735,000
Environmental	02/19/15	03/15/17	In Progress	\$325,000	\$315,583
Design	06/22/17	02/09/18	Not Started	\$2,638,500	-
Permits	11/17/16	02/09/18	Not Started	\$100,000	-
				\$3,825,500	\$1,054,059

*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 recently responded to two funding opportunity announcements from US Bureau of Reclamation which are the following:

- USBR Water Use Efficiency's \$750K grant (Wineville/Distribution System)
- USBR Drought Resiliency's \$697,500 K grant (Jurupa Basin Project)

Cost Sharing Document:

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

Project Update:

IEUA is finalizing the following:

- 1) Released the Design RFP on March 15. Contract award for design services is scheduled for June 2017. The late award date was due to coordinating the award date with the expected SRF planning loan and addressing the concerns noted below for the Montclair Basin.
- 2) Conducting additional evaluation of the Montclair Basin project.
 - a) Recently received comments from Chino Basin Water Conservation District's engineering requesting further preliminary evaluation.
 - b) Presenting findings at the next (April) RIPCom Meeting.

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
Recommended MZ3 Projects¹								
23a	2013 Proposed RP3 Improvements ²	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
Total MZ3		2,921	2,905	\$ 413	\$ 14,456,000	\$ 2,338,000	\$ 16,794,000	\$ 16,044,500
Recommended MZ2 Projects³								
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
Total MZ2		1737	4220	\$ 324	\$ 9,315,000	\$ 1,330,000	\$ 10,645,000	\$ 7,326,500
Recommended MZ1 Projects								
2	Montclair Basins	233	0	\$ 552	\$ 1,567,000	\$ 276,000	\$ 1,843,000	\$ 1,843,000
Total MZ1		233	0	\$ 551.55	\$ 1,567,000	\$ 276,000	\$ 1,843,000	\$ 1,843,000
Total Recommended Projects		4,891	7,125	\$ 388	\$ 25,338,000	\$ 3,944,000	\$ 29,282,000	\$ 25,214,000

1. PID 25a (Sierra Basin) and PID 27 (Decler 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: March 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		\$253,584		
<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	\$34,172
Design	06/22/17	03/12/18	Not Started	\$278,000	-
Bid and Award	03/13/18	06/20/18	Not Started	9,000	-
Construction	03/22/18	06/28/19	Not Started	\$3,323,000	-
				\$4,008,000	\$253,584

*Projected cost is updated to reflect the proposed design cost

Grant/Loan Update:

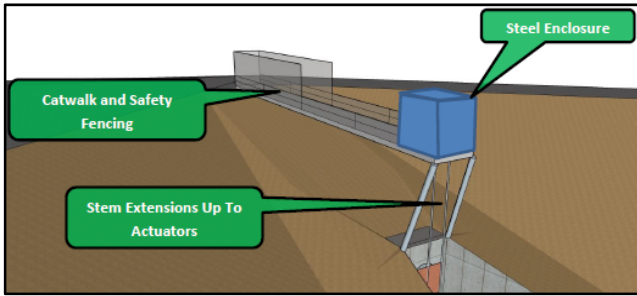
Awarded a \$750,000 state grant from the Department of Water Resources through the Santa Ana Watershed Project Authority as part of Proposition 84 and a \$375,000 federal grant from the US Bureau of Reclamation.

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

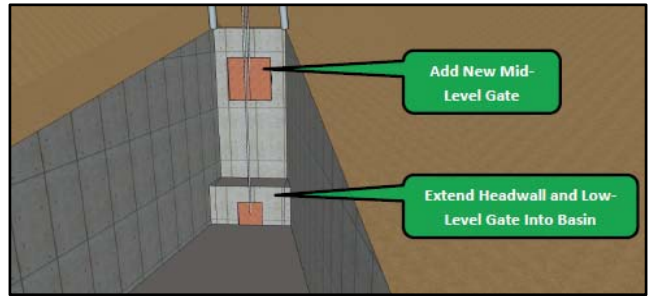
Project Update:

The project is currently in the process of soliciting design services to prepare the final design. IEUA is anticipating to award these services by June 2017 which is in parallel to the other RMPU projects that recently completed preliminary design. Design is scheduled for a March 2018 completion date.

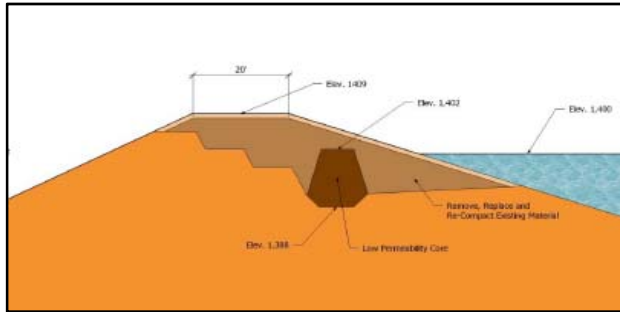
Conceptual Design of the Proposed Improvements:



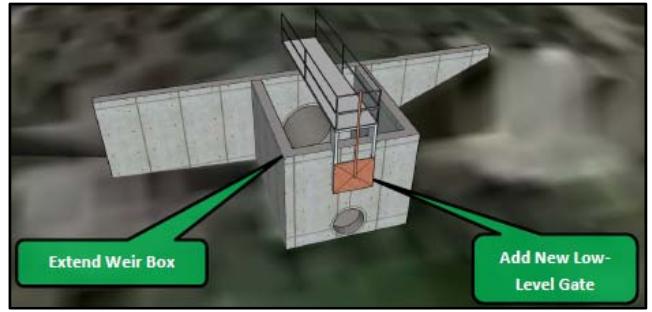
Mid-level Outlet Modifications – Increase Storage to the Lower Basin



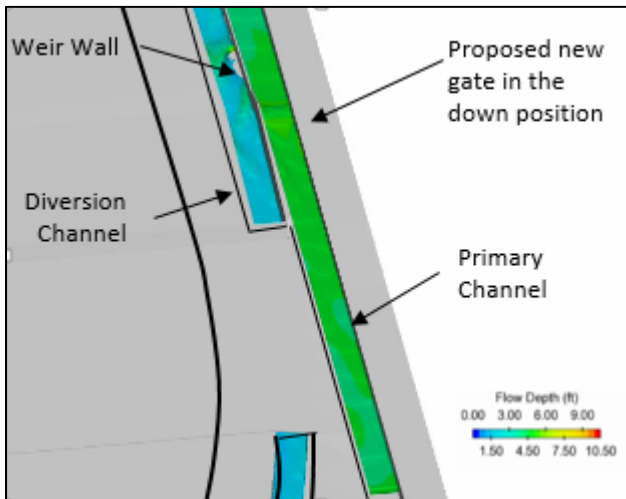
Coating Existing 36" & 72" Outlet Pipes – Maintain Flood Control requirements of immediate dewatering



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