

# Non-RMPU Ongoing Projects



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**GWR AND RW SCADA UPGRADES**  
**PROJECT NO. EN14047**  
**STATUS UPDATE: May 1, 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 The current PLCs are outdated and lack critical product and technical support.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		\$532,915		
<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	06/30/17	In Progress	\$413,678	\$342,478
				<u>\$610,490</u>	<u>\$532,915</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 contractor required an additional extension to the schedule to assure final display testing meets specifications. This extended period has pushed out their installation and testing of the new rubber dam controllers. The revised schedule is to complete display testing and begin installation and testing of new controllers by late May. The completion date is now set for late June 2017. The extension will not impact the current budget.

**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: May 1, 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	\$119,874

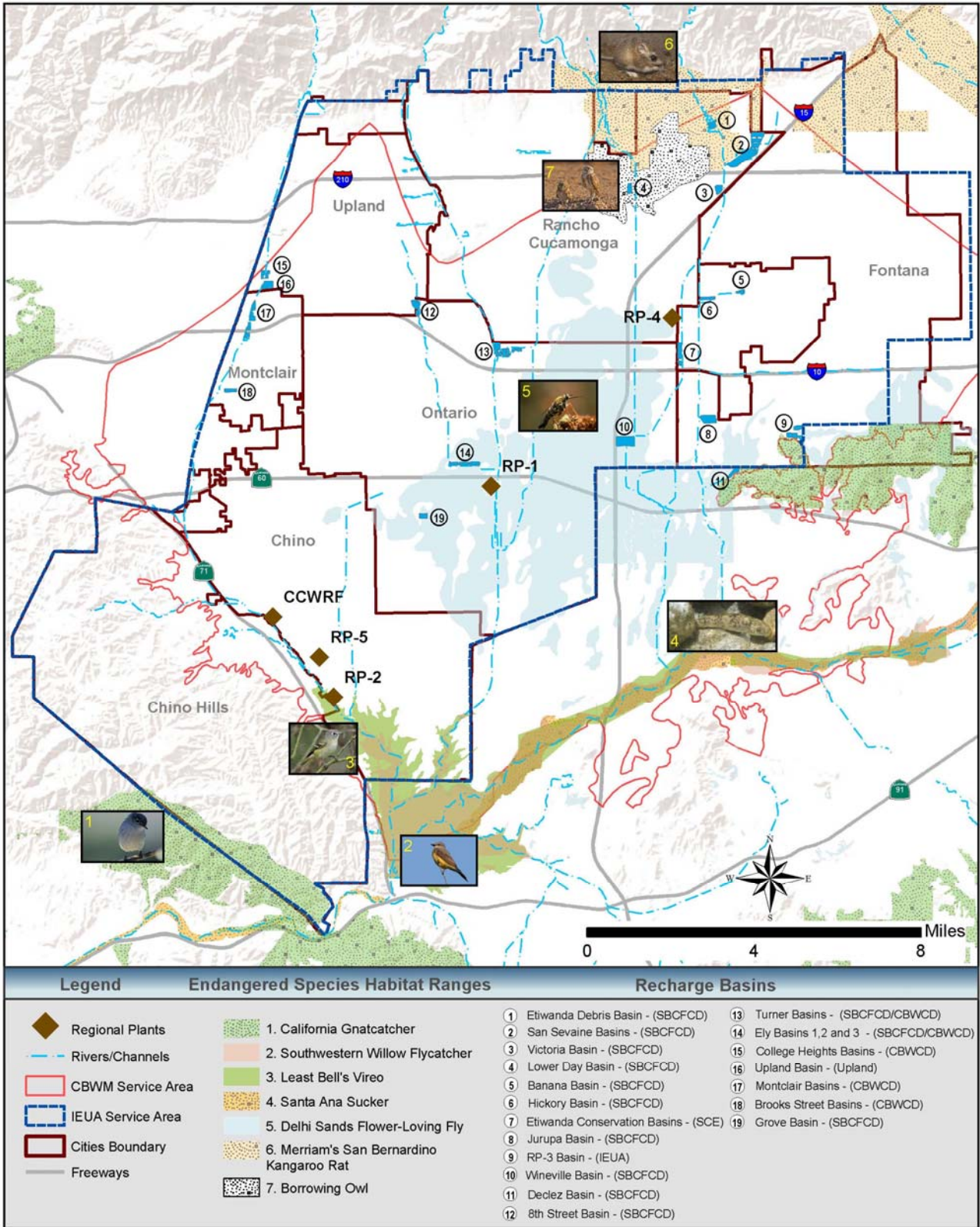
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Investigate/Plan	07/01/14	06/30/18	In Progress	\$160,000	\$119,874
				\$160,000	\$119,874

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

**Project Update:**

Recent updates have revised the projected completion date due to the following:

- Currently writing the HCP and beginning Environmental analysis process
  - a. Covered activities effects analysis
  - b. Cumulative biological impacts
  - c. Conservation and mitigation strategy
- Initiating discussions on HCP implementation
  - a. Reporting responsibilities
  - b. Potential creation of a JPA to manage the Conservation Bank



# RMPU PROJECTS



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**SAN SEVAINE IMPROVEMENTS PROJECT**  
**PROJECT NO. EN13001**  
**STATUS UPDATE: May 1, 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> \$734,555
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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	09/20/17	In Progress	\$5,000	\$5,000
Construction	09/21/17	09/21/18	Not Started	\$5,740,000	\$66,593
				\$6,460,000	\$734,555

**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:**

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

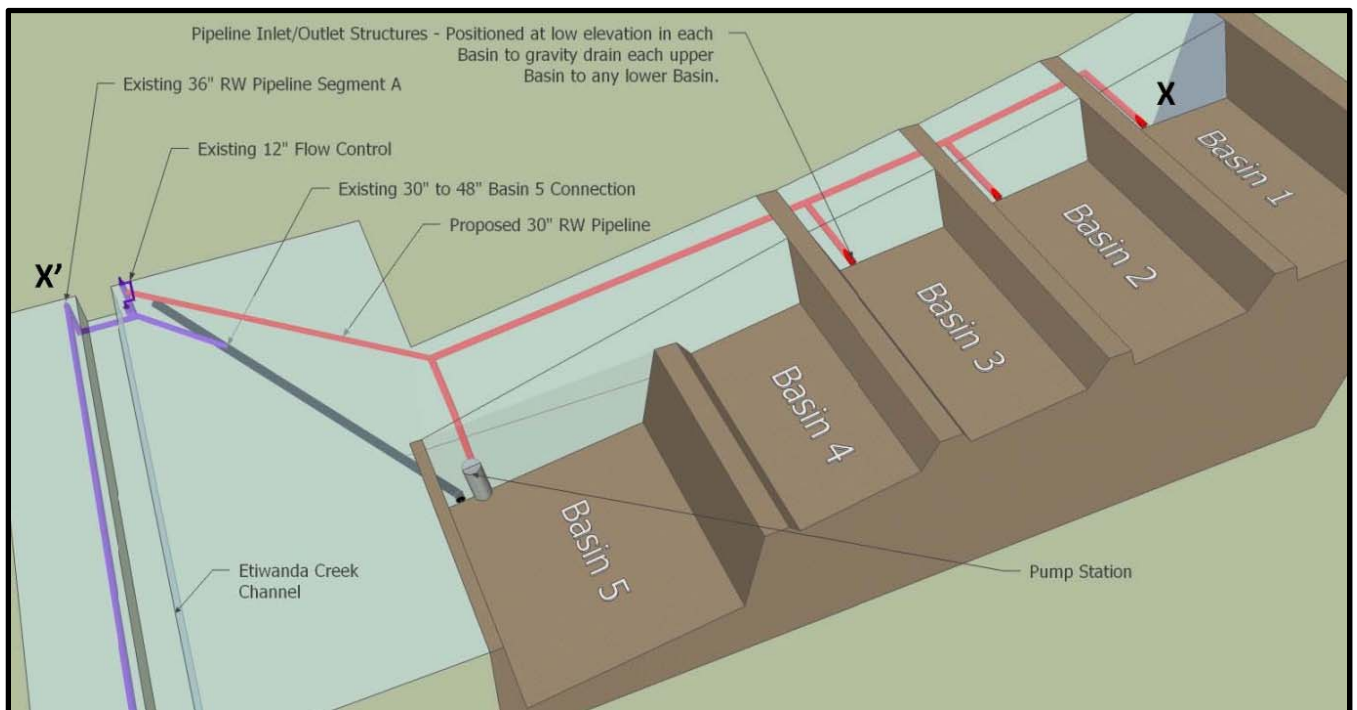
Construction bidding started on March 14 with an expected closing date of May 30, 2017 and a potential award date of September 2017. The extended award date is due to coordinate the

construction award date with the expected SRF loan which is expected to be finalized in August 2017.

In the meantime, an amendment to the current Task Order is under way for review and board approval. This amendment is incorporate the latest grant award for the US Bureau of Reclamation, however, it does not include the anticipated grant pending in August.

This project also includes the construction of the monitoring well which is being designed, bid, and constructed in parallel to the basin improvement. Currently, the project is out for public bid.

### 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: May 1, 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 <sup>(1)</sup>	
			SW	RW	SW	RW
			acre-feet per year			
18a	CSI Storm Water Basin	New storage and recharge facility by deepening basin	81	-	100	-
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	2,921	2,905
11	Victoria Basin	Improve the infiltration rate and increase storage by removing settled deposits	43	120	75	120
2	Montclair Basins	Increase storage and recharge capacity by directing more channel flow	248	-	96 <sup>(2)</sup>	-
27	Declez Basin	Improve capacity by modifying existing/adding new structures <b>(Deferred)</b>	241	-		
14	Turner Basin	Increase storage and recharge by raising the spillway height <b>(Deferred)</b>	66	-		
15a	Ely Basin	Improve storage and recharge by deepening basin <b>(Deferred)</b>	221	-		
25a	Sierra	Improve storage and recharge by removing 40,000 CY <b>(Removed-no longer feasible)</b>	64	-		
17a	Lower San Sevaine Basin	Construct a new storage flow through basin <b>(Removed-no longer feasible)</b>	1,221	-		
			<b>5,351</b>	<b>3,025</b>	<b>3,192</b>	<b>3,025</b>

(1) Adjusted further to reflect new values as adopted during the completion of the PDR

(2) Previous SW value of 233 AFY was updated to 96 AFY per after recent modelling review adjusted the potential recharge benefit.

**Schedule:**

Soft Cost Phases	Soft Cost		Status	Actual Cost to Date	
	Start	Finish		Projected Cost	Actual Cost
	\$3,825,500			\$1,124,103	
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	\$325,000
Design	06/22/17	02/09/18	Not Started	\$2,638,500	\$60,627
Permits	11/17/16	02/09/18	Not Started	\$100,000	-
				\$3,825,500	\$1,124,103

**Grant/Loan Update:**

Received a \$300K grant award from the US Bureau of Reclamation for the RP-3 Basin Improvement and received an award notice for nearly \$8.3 million from SWRCB for the 23a project. IEUA is waiting for a response on the following applied grants:

- USBR Water Use Efficiency’s \$750,000 grant (Wineville/Distribution System)
- USBR Drought Resiliency’s \$726,500 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:**

- 1) Recent evaluation of the Montclair Basin project revealed a lower SW benefit.
  - a) Suggestions from Chino Basin Water Conservation District’s engineer changed the flow model assumption to where more SW is assumed captured at higher elevated basin.
  - b) Changed the RMPU’s melded unit cost from \$380 per AF to \$390 per AF.
- 2) Seeking a qualified consulting firm to provide design services for the approved RMPU projects. Consultant award is scheduled in June.
- 3) For the projects that were authorized for final design, bid, and construction, separate task orders for each project was requested to be created. This action will amend the current task to account for the cost incurred on the deferred projects.

Deferred Projects (Task Order No.1)	Total
Watermaster	\$497,000
IEUA	\$0
Total	\$497,000

Lower Day Basin (Task Oder No. 2)	Total
Watermaster	\$2,883,000
IEUA	\$0
Grant Funding	\$1,125,000
Total	\$4,008,000

San Sevaine Basin (Task Order No. 8)	Total
Watermaster	\$2,667,500
IEUA	\$2,667,500
Grant Funding	\$1,125,000
Total	\$6,460,000

PID 23a (Task Order No. 9)	Total
Watermaster	\$7,554,135
IEUA	\$387,315
SWRCB Grant	\$8,241,450
USBR Grant	\$300,000
Total	\$16,482,900

Victoria Basin (Task Order No. 10)	Total
Watermaster	\$84,400
IEUA	\$84,400
Total	\$168,800

Montclair Basin (Task Order No. 11)	Total
Watermaster	\$1,788,100
IEUA	\$0
Total	\$1,788,100

CSI Basin (Task Order No. 12)	Total
Watermaster	\$740,000
IEUA	\$0
CSI’s proposed share	\$226,000
Total	\$966,000

**Existing Task Orders**

Task Order No. 1 - amended to only show the cost of deferred projects.  
 Task Order No. 2 - amended to reflect the recent adjustment on scope and budget and available grants.  
 Task Order No. 8 - amended to reflect recent grant funding.

**New Task Orders**

New Task Order Nos. 9 to 12 - reflect the accepted RMPU projects for design, bid, and construction.



**LOWER DAY RMPU IMPROVEMENTS**  
**PROJECT NO. RW15004**  
**STATUS UPDATE: May 1, 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		\$262,148		
<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	\$42,736
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	06/21/18	06/28/19	Not Started	\$3,323,000	-
				\$4,008,000	\$262,148

\*Projected cost is updated to reflect the proposed design cost which will be within the upcoming task order amendment.

**Grant/Loan Update:**

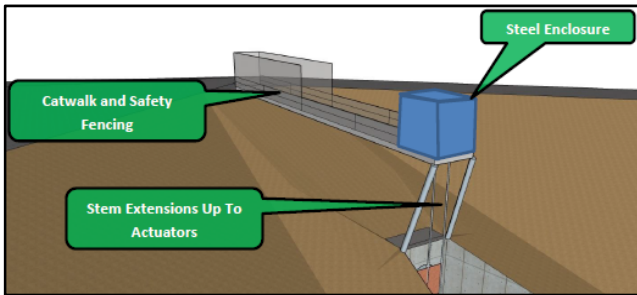
Awarded a \$750,000 state grant from the Department of Water Resources through the Santa Ana Watershed Project Authority as part of Proposition 84 and a \$375,000 federal grant from the US Bureau of Reclamation.

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

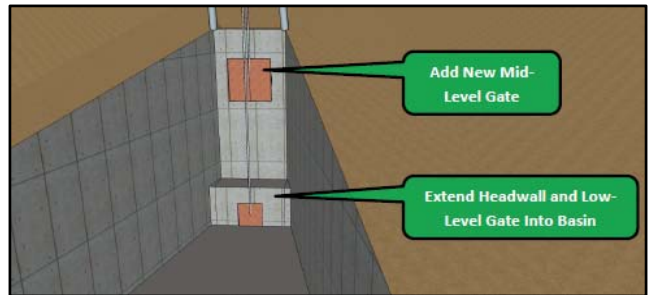
**Project Update:**

The project is currently in the process of soliciting design services to prepare the final design. IEUA is anticipating awarding 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. An amendment to the cost sharing agreement is pending to adjust the above budget and cost share.

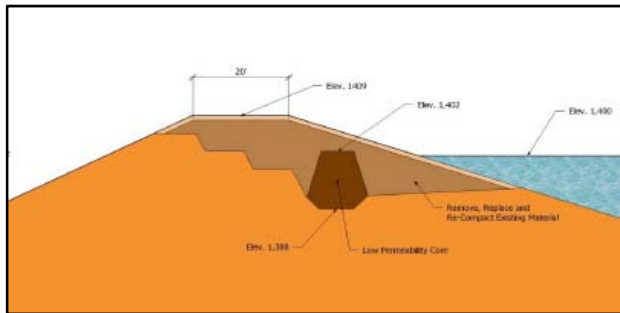
**Conceptual Design of the Proposed Improvements:**



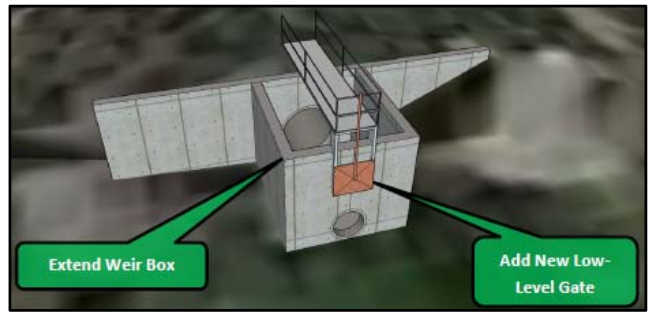
Mid-level Outlet Modifications – Increase Storage to the Lower Basin



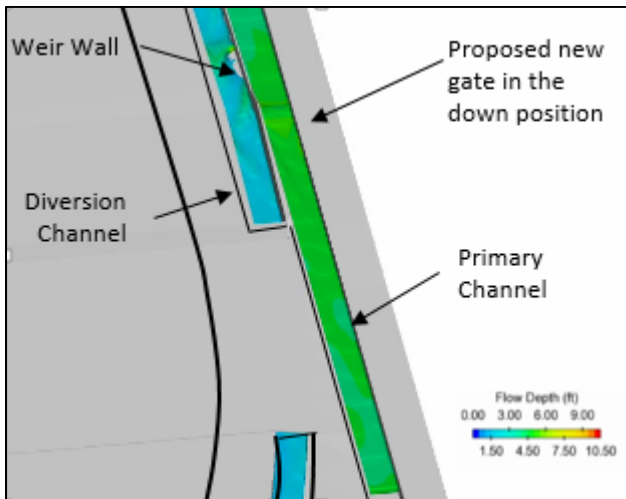
Coating Existing 36" & 72" Outlet Pipes – Maintain Flood Control requirements of immediate dewatering



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