



**TURNER BASIN IMPROVEMENTS
PROJECT NO. WR11017.00
STATUS UPDATE: JUNE 25, 2014**

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:

<u>Project Budget</u>	<u>Actual Cost to Date</u>
\$1,275,000	\$1,208,119

<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Project Development	11/01/11	02/22/12	Completed	\$32,622	\$35,380
Master Plan	02/22/12	04/30/14	In Progress	\$326	\$551
Pre-design	02/22/12	04/30/14	In Progress	\$13,093	\$74,997
Environmental Impact	03/01/11	12/20/12	Completed	\$72,892	\$74,197
Design	04/02/12	02/22/13	Completed	\$120,772	\$122,203
Permits	03/30/12	12/20/12	Completed	\$9,927	\$9,927
Bid and Award	12/21/12	02/20/13	Completed	\$2,736	\$2,747
Construction	02/20/13	09/30/14	In Progress	\$1,022,632	\$888,117
				<u>\$1,275,000</u>	<u>\$1,208,119</u>

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

Project Update:

Construction on the new recharge structure under KIP Constructors Inc. is nearing completion where programming and testing of the new controls are the remaining tasks. The dirt hauling and grading activities for the new north basin at Turner No. 4 will be completed through a new contractor, GRB Engineering. Final contract and permitting documents are in progress as GRB completes their activities. The north basin will be completed in September 2014.

Project Photos:



Completed Junction Structure



Damages to new electrical enclosure



Completed new south basin



**WINEVILLE PROOF OF CONCEPT
PROJECT NO. EN13031.00
STATUS UPDATE: JUNE 25, 2014**

The Wineville Basin Proof of Concept (POC) was an investigative project that consists of six cells designed to test and evaluate infiltration rates at strategic locations throughout the Basin. Each of the test cells were 0.5 acres in size. The test cells were excavated at different depths to allow the project to gather percolation data for soils above and below the previously identified clay layer. The Wineville Basin Proof of Concept Project was developed to provide information and data to determine the likely benefit if the Basin were improved to facilitate artificial groundwater recharge. The primary objective of the POC was to measure Basin infiltration rates and use those rates to estimate the likely annual recharge capacity of the Basin in the event improvements are constructed.

Schedule:

<u>Project Budget</u> \$424,300	<u>Actual Cost to Date</u> \$361,303
------------------------------------	---

<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Design	01/11/13	04/30/14	Completed	\$22,000	\$22,000
Weeding	09/01/13	09/30/13	Completed	\$28,000	\$28,000
Permits	04/24/13	01/17/14	Completed	\$2,200	\$2,200
Environmental Assist.	03/01/13	11/30/13	Completed	\$22,600	\$18,800
Survey	09/01/13	11/30/13	Completed	\$21,000	\$11,767
Construction	06/19/13	04/30/14	Completed	\$208,000	\$208,000
Extra Equipment	10/01/13	11/30/13	Completed	\$7,500	\$7,500
Ontario Pump Costs	10/01/13	11/30/13	Completed	\$19,967	\$19,967
CM/Testing Support	09/01/13	04/30/14	Completed	\$50,000	\$43,069
Contingency				\$43,033	
				\$424,300	\$361,303

Project Update:

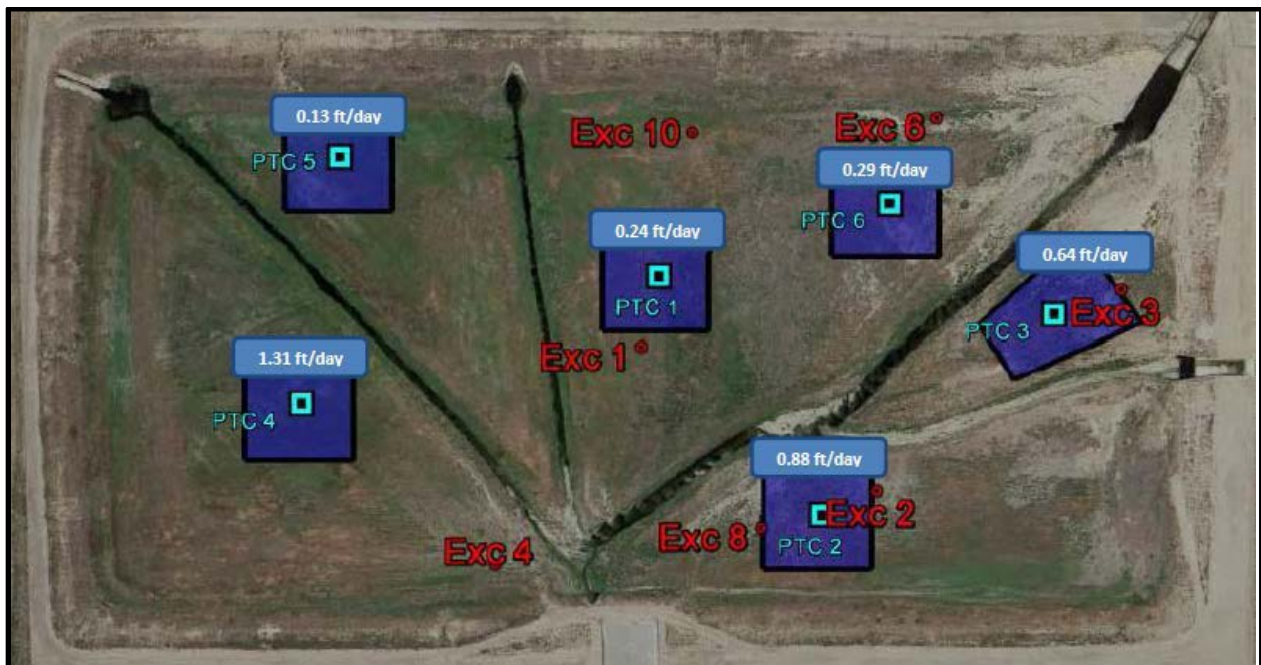
The study was completed in April 2014. It concluded and recommended that the Basin presents an opportunity to use an existing facility for the dual purpose of flood control and groundwater recharge. Because it is a flood control basin, the conveyance of stormwater to the Basin lends itself to stormwater capture and infiltration. Future Basin improvements should include reconfiguring the Basin to capture stormwater and accept supplemental water.

Final Project Data:

Table 1 - Projected Basin Performance Summary in Acre-Feet per Year (AFY)

Scenario	Infiltration Rate	Stormwater Recharge	Supplemental Water Recharge	Total Annual Recharge
No. 1	0.13 ft./day	820 AFY	940 AFY	1,760 AFY
No. 2	0.24 ft./day	2,080 AFY	1,750 AFY	3,830 AFY

Figure 1- Infiltration Rate Summary by Test Cells





JURUPA PUMP STATION HVAC IMPROVEMENTS
PROJECT NO. EN14040
STATUS UPDATE: JUNE 25, 2014

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:

	<u>Project Budget</u>		<u>Actual Cost to Date</u>		
	\$300,000		\$17,777		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Project Development	09/02/13	03/20/14	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	11/30/14	In Progress	\$186,000	\$4,758
				<u>\$206,000</u>	<u>\$17,777</u>

The total project cost was originally \$300,000. Through the Pre-design Phase, the Agency has been able to evaluate the details of the project and simplify the scope. The projected cost is expected to be completed below the total project budget.

Project Update:

Currently the design/build contract work with Integrated Design Services (IDS) is in progress. Staff anticipates completion of the HVAC improvements by November 30, 2014.

Project Photos:



MCC Control Panel



Pumping System



SAN SEVAINE IMPROVEMENTS PROJECT
PROJECT NO. EN13001
STATUS UPDATE: JUNE 25, 2014

San Sevaire basins consist of five, soft-bottomed basins along the San Sevaire Channel. The basins encompass approximately 93 acres with the potential to recharge up to 8,500 acre-feet per year (AFY) of recycled water (RW), storm water (SW) and imported water. The basins currently operate by delivering most flow to Basin No. 5, which has the lowest infiltration rate as compared to the other basins. This has limited current recharge to approximately 500 AFY.

The Project will evaluate and propose construction improvements needed to maximize infiltration and recharge at the San Sevaire Basins. Depending upon the evaluation, either one or more of the following measures will be implemented: (1) construct a new stormwater/recycled water pump station and pipeline, (2) extend the existing RW pipeline, (3) re-grade and deepen basin, (4) construct internal berms.

Schedule:

<u>Phase</u>	<u>Project Budget</u>		<u>Status</u>	<u>Actual Cost to Date</u>	
	<u>Start</u>	<u>Finish</u>		<u>Projected Cost</u>	<u>Actual Cost</u>
Pre-design	10/01/12	07/24/14	In Progress	\$177,677	\$65,722
Environmental Impact	06/26/13	09/26/14	In Progress	\$22,677	\$8,942
Design	09/10/14	06/18/15	Not Started	\$152,247	\$0
Permits	05/15/13	12/22/15	In Progress	\$75,570	\$8,687
Bid and Award	07/06/15	09/18/15	Not Started	\$8,140	\$0
Construction	12/23/15	04/03/17	Not Started	\$2,063,689	\$0
				\$2,500,000	\$83,351

The Agency received official notification from DWR through SAWPA that the requested \$750,000 grant from the Prop 84 Round 2 funding has been approved.

Project Update:

A preliminary design report is expected by late July 2014.

Recent Activities:

	<u>Date</u>	<u>Status</u>
▪ Obtain CEQA and Impacts from TDA	12/30/13	Completed
▪ Complete Project Development Report	08/30/14	In Progress
▪ Perform Soil Investigation	09/15/14	Delayed (1)

Notes:

(1) Soil investigation activities required an approved permit with ACOE. Since the receipt of the permit was received in late February which was a few weeks before the start of the bird nesting season the investigation was pushed out after September 15, 2014.

Project Photo:



San Sevaine Basin 5 - Berm



**GWR SCADA UPGRADES
PROJECT NO. EN14047
STATUS UPDATE: JUNE 25, 2014**

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 the 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.

Schedule:

<u>Project Budget</u> \$892,000	<u>Actual Cost to Date</u> \$25,628
------------------------------------	--

<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	\$927	\$422
Design	02/26/14	08/11/14	In Progress	\$129,900	\$25,206
Permits	07/21/14	02/23/16	Not Started	\$10,000	\$0
Bid and Award	10/07/14	12/11/14	Not Started	\$428	\$0
Construction	12/12/14	04/08/16	Not Started	\$750,745	\$0
				\$892,000	\$25,628

This project has qualified for a \$139,650 grant and a 1% interest 30-year loan at \$740,145 through the Clean Water State Revolving Fund loan program, a Proposition 50 grant program, and a Department of Water Resources Proposition 84 grant program through Santa Ana Project Water Authority.

Project Update:

Staff received a copy of a draft Preliminary Design Report from MSO Technologies on June 23, 2014. Staff is scheduled to review the document internally and provide comments by mid-July. The draft in general contains the following discussions on the SCADA System:

- Evaluation of the existing SCADA System, Hardware, and HMI
- Alternative Equipment Analysis
- Recommended Equipment Upgrades
- Detailed Project Cost Estimate
- Project Design & Construction Schedule

Project Photo:



San Sevaine Turnout Control Panel



**COMMUNICATION UPGRADES
PROJECT NO. EN12019
STATUS UPDATE: JUNE 25, 2014**

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 anticipates all remote sites to be upgraded for integration with the new communication network, and seven monopoles necessary to improve the line-of-sight communication. After the completion of a predesign study, which will determine the required location and number of towers, the project will move forward with a design/build approach in implementing the communication upgrades.

Schedule:

	<u>Project Budget</u>		<u>Actual Cost to Date</u>		
	\$1,245,000		\$176,220		
<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	01/17/14	Completed	\$5,771	\$47,270
Design	01/20/14	07/29/14	In Progress	\$135,129	\$128,950
Permits	03/17/14	03/05/15	In Progress	\$6,000	\$0
Construction	07/30/14	06/24/15	Not Started	\$1,098,100	\$0
				<u>\$1,245,000</u>	<u>\$176,220</u>

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

Project Update:

On June 26, 2014 staff met with Dahl Taylor and Associates and Sun Wireless to discuss their findings on the completed Radio Survey Study, which evaluated all 27 remote groundwater and recycled water controllers for communication tower improvements. The findings are summarized below:

1. The network required four communications hubs to maintain full line of sight to all remote sites.
2. Each hub would have the following number of remote sites: 20 to 6-B Tower; One each to RP-1 and RP-4; and three to Carbon Canyon Recycled Water Facility.

3. Eight remote locations had no existing communication structure and require monopoles. An existing site had a square monopole that would need an extension or a new edifice. The height of these structures would range from twenty feet up to forty-five feet.

The final phase of the report is the cost estimate to implement the proposed improvement, which staff is expected to receive by late July. Further internal review on the cost will follow before a recommendation is brought to Watermaster staff.

Project Photo:



Basin Communication Tower



**CB20 NOISE MITIGATION
PROJECT NO. EN14038
STATUS UPDATE: JUNE 25, 2014**

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:

	<u>Project Budget</u>		<u>Actual Cost to Date</u>		
	\$160,000		\$3,625		
<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
Project Development	09/25/13	01/23/14	Completed	\$11,319	\$182
Design	01/24/14	07/24/14	In Progress	\$9,057	\$3,443
Construction	07/25/14	09/10/14	Not Started	\$137,237	\$0
				<u>\$157,613</u>	<u>\$3,625</u>

Project Update:

Currently, C.E. Pickup is conducting additional services to evaluate the anticipated sound reductions at the recently planned residential development. The sound model will determine the additional sound proofing material required to ensure all ordinance requirements are met. The added study and re-design on the enclosure has extended the project to September 2014.

Project Photos:



CB-20 Turnout Facility



CB20 Outlet while in use



Proposed rendition of the sound proof enclosure



**HICKORY BASIN ARIZONA CROSSING
PROJECT NO. EN12025
STATUS UPDATE: JUNE 25, 2014**

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:

<u>Project Budget</u>	<u>Actual Cost to Date</u>
\$332,971	\$220,417

<u>Phase</u>	<u>Start</u>	<u>Finish</u>	<u>Status</u>	<u>Projected Cost</u>	<u>Actual Cost</u>
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	
				<hr/> 332,971	<hr/> \$220,417

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

Project Update:

The project completed construction and the facility has been in operation since April 17, 2013, with a final total project cost of \$220,417. In November 2013, IEUA received from the General Contractor a "Notice of Potential Claim" and "Notice of Claim" which were both denied by IEUA. On April 8, 2014, IEUA Legal Counsel notified staff of a filed lawsuit from Kaveh Engineering and Construction. Currently IEUA Legal Counsel is addressing the notice.

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
STATUS UPDATE: JUNE 25, 2014**

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 the 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	\$0

<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	06/30/17	In Progress	\$160,000	\$0
				\$160,000	\$0

The project is scheduled to begin in the first quarter of Fiscal Year 2014/2015.

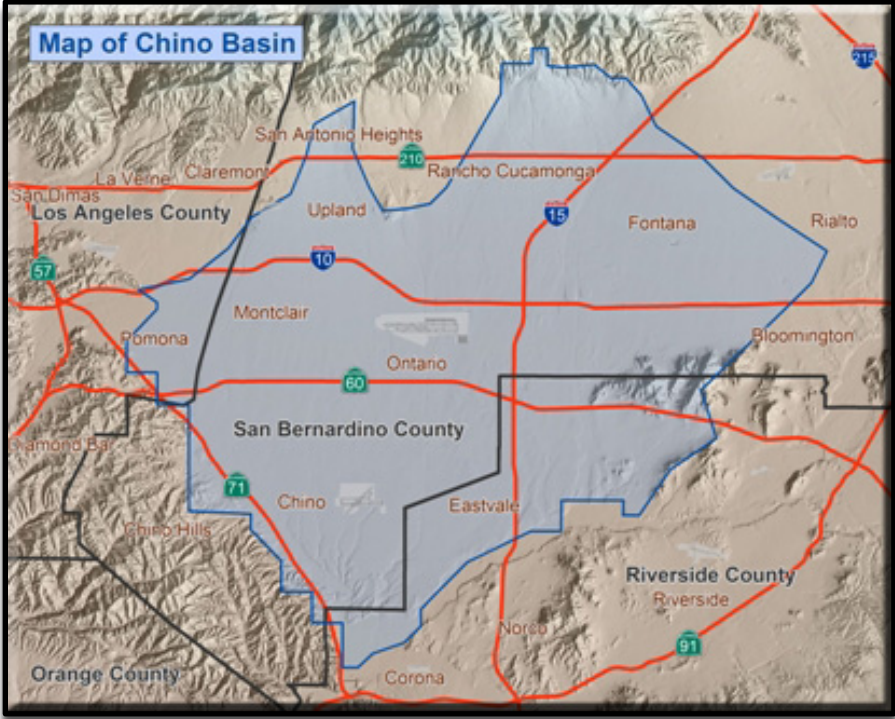
Project Update:

Currently nine projects sites, which are listed below and a part of the 2013 Amendment to the 2010 Recharge Master Plan Update, have the potential to impact federally-listed species. The scope will investigate these sites and other RMPU projects and develop a plan if required.

<u>RMPU Projects</u>	<u>Location</u>	<u>Potential Species</u>
PID - 19a	Wineville Basin	DSF
Listed on Table 6-1	Etiwanda Debris Basin	SBKR
PID - 22a	RP-3 Basins	CAGN,DSF
PID - 12	Lower Day Basin	SBKR,CAGN,BUOW
PID - 27	Declez Basin	CAGN,DSF
PID - 25a	Sierra Avenue Basin	DSF
PID - 39	Lower Cucamonga Basin	DSF
PID - 43	Alder Basin	DSF
Listed on Table 6-1	Riverside Basin	DSF

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

Project Photo:



Map of Chino Basin