

Non-RMPU Ongoing Projects



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**GWR AND RW SCADA UPGRADES
PROJECT NO. EN14047
STATUS UPDATE: JANUARY 2, 2016**

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 The current PLCs are outdated and lack critical product and technical support.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 | | \$416,474 | | |
| <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 | \$226,310 |
| | | | | <u>\$610,490</u> | <u>\$416,474</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:

As reported in previous months, the contractor, Trimax Systems, Inc. has been delinquent in maintaining the project schedule on submitting the programming plan, hardware and software components, and PLC panel layout drawings. Since November 2016, IEUA worked with Trimax to correct this issue and bring the project to back a manageable schedule. All critical submittals were received and a series of workshops were conduct. This brought the contractor up to date, however, the delay caused the project time line to extend pass the expected project completion date of Feb. 14,

2017 to April 14, 2017. Staff will continue to monitor the situation and immediately address any further delays or issues.

Project Photos:



San Sevaine Turnout control panel



Turner Basin control panel



UPPER SANTA ANA RIVER WATERSHED HABITAT CONSERVATION PLAN
PROJECT NO. RW15002
STATUS UPDATE: JANUARY 2, 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:

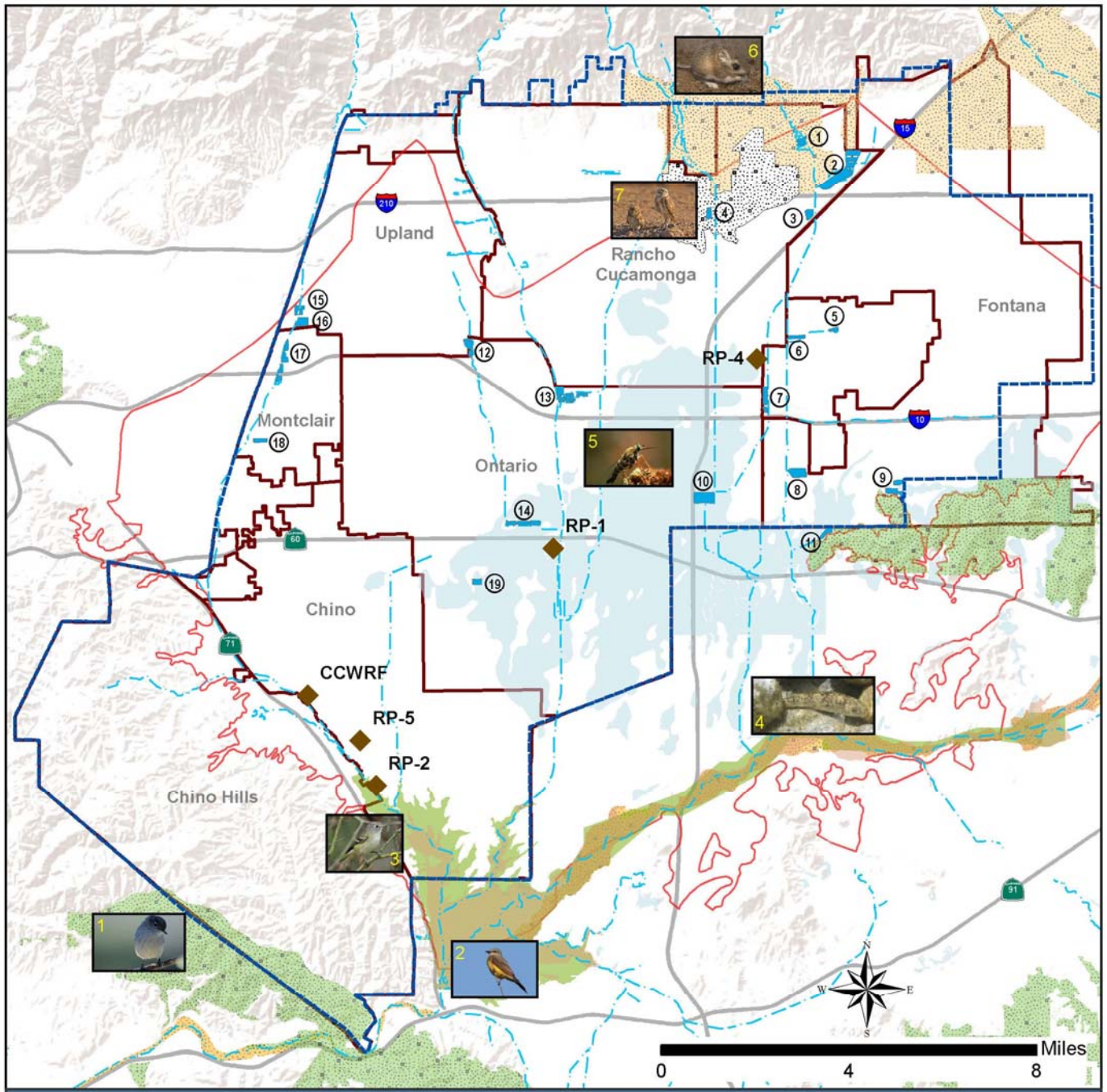
| | <u>Project Budget</u> | | <u>Actual Cost to Date</u> | | |
|------------------|-----------------------|---------------|----------------------------|-----------------------|--------------------|
| | \$160,000 | | \$84,326 | | |
| <u>Phase</u> | <u>Start</u> | <u>Finish</u> | <u>Status</u> | <u>Projected 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 has 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) |



**EAST DECLEZ BASIN IMPROVEMENTS
PROJECT NO. RW15003.01
STATUS UPDATE: JANUARY 2, 2017**

In 2014, Watermaster members proposed the utilization of the available land east of the existing Declez Basins. This project proposed to expand the Declez Recharge Facility with an added basin. It also included upstream improvements to divert and convey additional stormwater to the new basin. The potential increase in recharge capacity was 913 acre-feet per year. Project improvements included the following:

- Excavating and hauling offsite over 1,030,000 cubic yards of soil material to develop the new east basin.
- Constructing a diversion structure from the Declez Channel into the new basin with approximately 2,700 linear feet of new piping.
- Constructing a new spillway structure and outlet between the new and existing basins.
- Constructing a rubber dam system to divert flow from the San Sevaine Channel into the Jurupa Basin. The Jurupa Basin will act as a flow through basin to Declez Basin.
- Increasing the flow capacity to over 100cfs on an existing pump station within Jurupa Basin.
- Construct approximately 2,800 linear feet of new conveyance piping from Jurupa to the Declez Channel.

Schedule:

| | |
|-----------------------|----------------------------|
| <u>Project Budget</u> | <u>Actual Cost to Date</u> |
| \$3,665,000 | \$112,445 |

| <u>Soft Cost Phases</u> | <u>Start</u> | <u>Finish</u> | <u>Status</u> | <u>Projected Cost</u> | <u>Actual Cost</u> |
|-------------------------|--------------|---------------|---------------|-----------------------|--------------------|
| Project Development | 07/01/15 | 07/21/15 | Completed | \$26,000 | - |
| Pre-Environmental | 07/22/15 | 02/01/16 | Completed | \$11,000 | \$2,932 |
| Feasibility Study (PDR) | 07/22/15 | 02/19/16 | Completed | \$103,000 | \$99,574 |
| Preliminary Design | 02/20/16 | 08/29/16 | Canceled | \$511,000 | - |
| Land Acquisition* | 11/18/15 | 05/17/16 | Canceled | - | \$9,939 |
| Environmental | 02/02/16 | 08/29/16 | Canceled | \$197,000 | - |
| Design | 08/30/16 | 12/29/17 | Canceled | \$2,542,000 | - |
| Permits | 08/30/16 | 12/29/17 | Canceled | \$275,000 | - |
| | | | | \$3,665,000 | \$112,445 |

*The refundable deposit on the property hold, minus processing fees, has been returned.

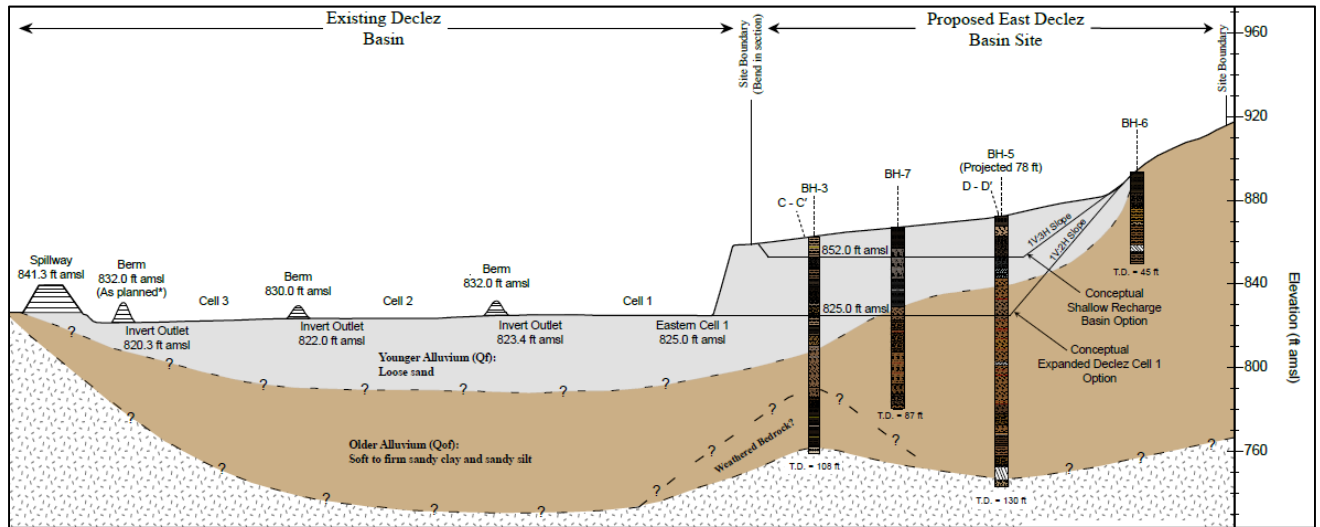
Cost Sharing Documents:

- Task Order No. 1 of the Master Agreement of 2014 (Aug, 2014)
- 1stAmendment 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:

This project is completed. The final balance on expenses is now at \$111,990. IEUA and Watermaster is finalizing all cost sharing amounts.

Project Photo:



Profile of the proposed East Declez with bore hole testing locations

RMPU PROJECTS



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SAN SEVAINE IMPROVEMENTS PROJECT
PROJECT NO. EN13001
STATUS UPDATE: JANUARY 2, 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> \$662,962 |
|--------------------------------------|-----------------------------------------|

| <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 | - |
| Construction | 04/16/17 | 04/20/18 | Not Started | \$5,740,000 | - |
| | | | | \$6,460,000 | \$662,962 |

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:

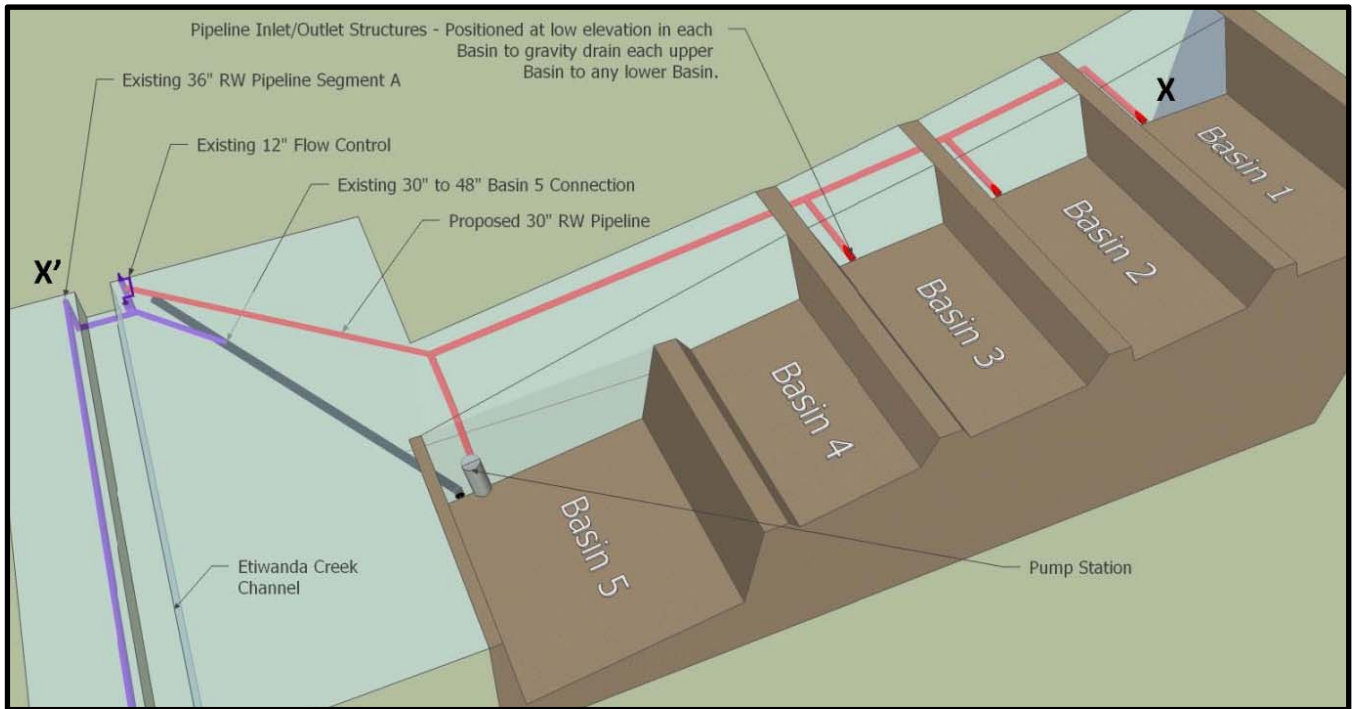
- Task Order No. 8 of the Master Agreement of 2014 (August, 2014)
- 1st Amendment Task Order No. 8 of the Master Agreement of 2014 (April, 2015)

Project Update:

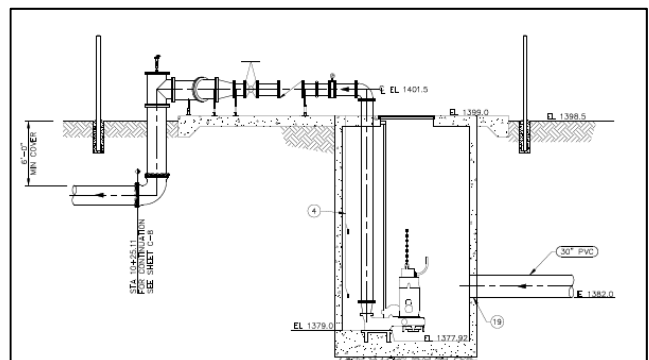
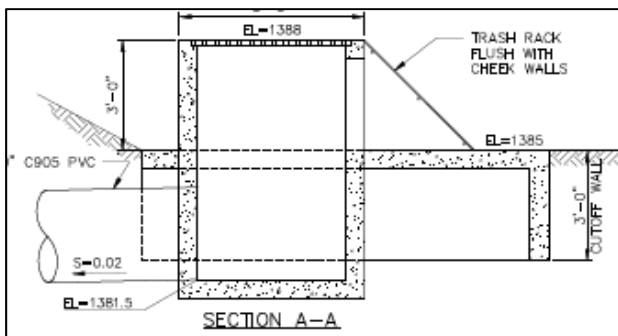
The design efforts to develop the construction plans and specifications for the proposed improvements at San Sevaire are fully completed. In December, a qualification questionnaire was sent to all general contractors. The response to these questionnaires will be reviewed and a list of pre-qualified contractors will be selected to bid the construction scope. The prequalification process was extended 30-days to meet solicitation requirements for disadvantaged businesses.

disadvantage businesses. Construction bidding is re-scheduled to February when a list of pre-qualified contractors is established.

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



Design Profile of proposed Pump Station in Basin 5



2013 RMPU AMENDMENT YIELD ENHANCEMENT PROJECTS
PROJECT NO. RW15003.00
STATUS UPDATE: JANUARY 2, 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 | 04/18/17 | In Progress | \$735,000 | \$731,440 |
| Environmental | 02/19/15 | 03/15/17 | In Progress | \$325,000 | \$279,547 |
| Design | 04/19/17 | 12/31/17 | Not Started | \$2,638,500 | - |
| Permits | 11/17/16 | 12/31/17 | Not Started | \$100,000 | - |
| | | | | \$3,825,500 | \$1,014,463 |

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

Grant/Loan Update:

IEUA is preparing to apply for state grants and loans through the SWRCB Prop. 1 Stormwater Grant and the Clean Water SRF Loans. The potential grant and loan amount is near \$14M and \$45M respectively. Recently, RP-3 Basin Improvements was awarded a \$300K grant from the US Bureau of Reclamation.

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:

Currently Tom Dodson & Associates is developing a Program Environmental Impact Report (PEIR) for multiple planning documents which includes the proposed RMPU projects. The scheduled completion date for a draft environmental study was late November 2016. The PEIR is scheduled to be completed in March 2017.

Since completion of the preliminary design report by Stantec, Watermaster stakeholders on November, decided on the list below for design. A task order amendment is in progress to reflect the updated list of projects and a draft RFP is being prepared to select a new consultant to finalize the design plans.

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: JANUARY 2, 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 | | \$239,412 | | |
| <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 | \$20,000 |
| 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 | - |
| | | | | \$4,008,000 | \$239,412 |

*Projected cost is updated to reflect the proposed design cost

Grant/Loan Update:

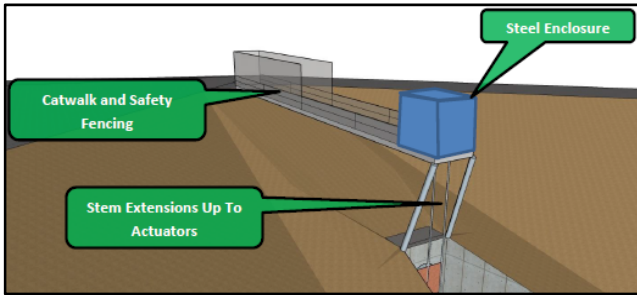
Awarded a \$750,000 state grant from the Department of Water Resources through the Santa Ana Watershed Project Authority as part of Proposition 84 and a \$375,000 federal grant from the US Bureau of Reclamation.

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

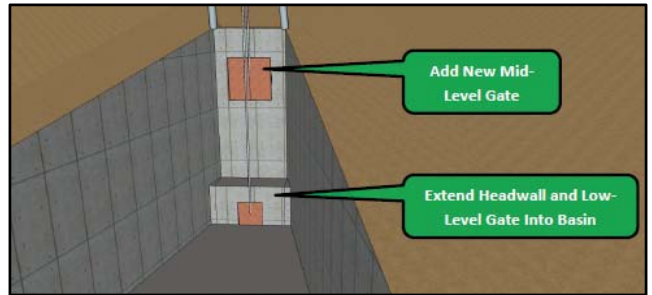
Project Update:

The PDR was finalized in October 2016. Watermaster stakeholders agreed with the design recommendation and staff is in the process of preparing an RFP to solicit a qualified engineering firm to finalize the design plans and specifications. Currently staff is also amending the current task order to update the scope and cost of the project. The PDR's updated capital cost is \$4 Million with a stormwater yield of 993 AF and a unit cost of \$300 per AF.

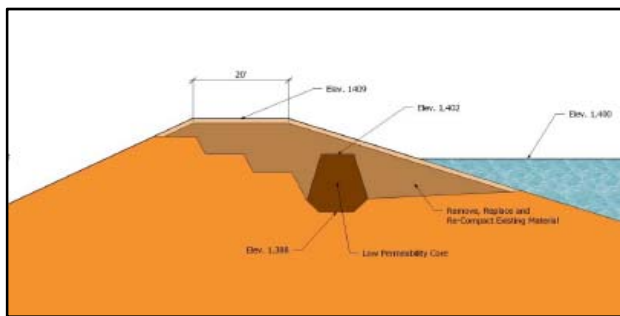
Conceptual Design of the Proposed Improvements:



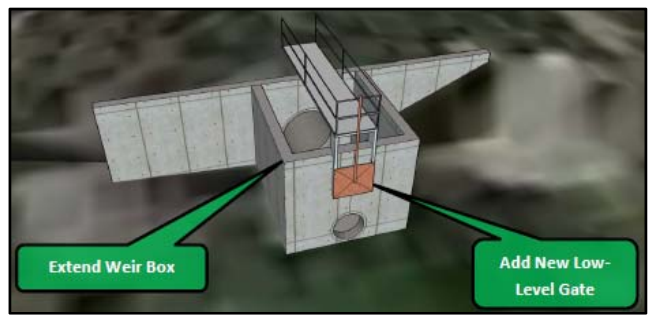
Mid-level Outlet Modifications – Increase Storage to the Lower Basin



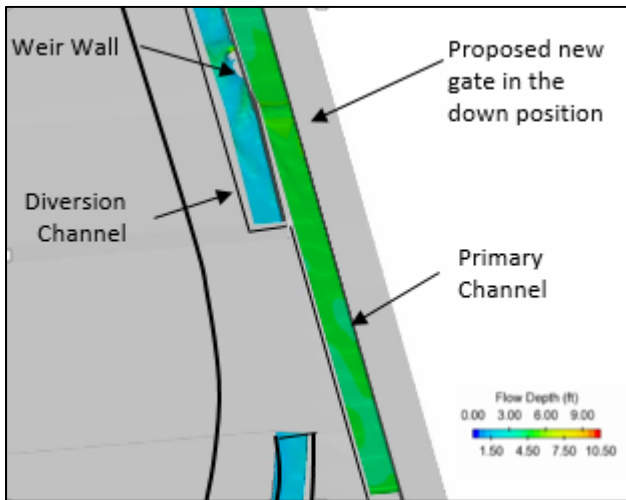
Coating Existing 36" & 72" Outlet Pipes – Maintain Flood Control requirements of immediate dewatering



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