



**ENGINEERING, OPERATIONS, AND
WATER RESOURCES
COMMITTEE MEETING
OF THE BOARD OF DIRECTORS
INLAND EMPIRE UTILITIES AGENCY*
AGENCY HEADQUARTERS, CHINO, CALIFORNIA**

**WEDNESDAY, MAY 10, 2017
9:45 A.M.**

CALL TO ORDER

PUBLIC COMMENT

Members of the public may address the Board on any item that is within the jurisdiction of the Board; however, no action may be taken on any item not appearing on the agenda unless the action is otherwise authorized by Subdivision (b) of Section 54954.2 of the Government Code. Those persons wishing to address the Board on any matter, whether or not it appears on the agenda, are requested to complete and submit to the Board Secretary a "Request to Speak" form which is available on the table in the Board Room. Comments will be limited to five minutes per speaker. Thank you.

ADDITIONS TO THE AGENDA

In accordance with Section 54954.2 of the Government Code (Brown Act), additions to the agenda require two-thirds vote of the legislative body, or, if less than two-thirds of the members are present, a unanimous vote of those members present, that there is a need to take immediate action and that the need for action came to the attention of the local agency subsequent to the agenda being posted.

1. ACTION ITEMS

A. MINUTES

The Committee will be asked to approve the Engineering, Operations, and Water Resources Committee meeting minutes from the April 12, 2017.

B. RP-5 EXPANSION CONSULTANT CONTRACT AMENDMENT

It is recommended that the Committee/Board:

1. Approve a consulting engineering services contract amendment for the design of the RP-5 Liquids Expansion and Solids Treatment Facility, Project Nos. EN19001 and EN19006, to Parsons Water & Infrastructure, Inc. for the not-to-exceed amount of \$17,993,680; and
2. Authorize the General Manager to execute the consulting engineering services contract amendment.

C. RP-1 and RP-4 CONSTRUCTION CONTRACT AWARD – SAFETY IMPROVEMENTS

It is recommended that the Committee/Board:

1. Award a construction contract for the RP-1 and RP-4 Safety Improvements, Project No. EN17052, to Ferreira Construction, Inc., in the amount of \$635,376;
2. Approve a total project budget amendment in the amount of \$189,000 for Project No. EN17052; and
3. Authorize the General Manager to execute the construction contract and budget amendment.

D. SCADA ENTERPRISE SYSTEM CONSULTANT CONTRACT AMENDMENT

It is recommended that the Committee/Board:

1. Amend the consulting engineering services contract for the SCADA Enterprise System Project No. EN13016, to Westin Engineering, Inc. in the amount of \$389,020; and
2. Authorize the General Manager to execute the consulting engineering services contract subject to non-substantive changes.

E. RP-1 CONSULTING SERVICES AWARD – 1158 RECYCLED WATER PUMP STATION

It is recommended that the Committee/Board:

1. Award a consulting engineering services contract for the RP-1 1158 Recycled Water Pump Station Upgrades, Project No. EN14042, to Stantec for the not-to-exceed amount of \$428,000; and
2. Authorize the General Manager to execute the consulting engineering services contract.

F. RP-1 CONSTRUCTION CONTRACT AWARD – PIPING REPLACEMENT

It is recommended that the Committee/Board:

1. Award a construction contract for the RP-1 thickened waste activated sludge (TWAS) Piping Replacement, Project No. EN15013, to J.F. Shea Construction, Inc., in the amount of \$242,492; and
2. Authorize the General Manager to execute the construction contract.

G. CHINO BASIN WATERMASTER COST SHARING AGREEMENTS

It is recommended that the Committee/Board:

1. Approve Amendment No. 3 of Task Order No. 1 with Chino Basin Watermaster (Watermaster) for the design of multiple basin improvements under the Recharge Master Plan Update (RMPU) projects;
2. Approve Amendment No. 1 of Task Order No. 2 with Watermaster for the design and construction of the RMPU's Lower Day Basin improvements;
3. Approve Amendment No. 2 of Task Order No. 8 with Watermaster for the design and construction of the RMPU's San Sevaine Basin improvements;
4. Approve Task Order No. 9 with Watermaster for the design and construction of the RMPU's Wineville/Jurupa/RP-3 Basins;
5. Approve Task Order No. 10 with Watermaster for the design and construction of RMPU's Victoria Basin improvements;
6. Approve Task Order No. 11 with Watermaster for the design and construction of RMPU's Montclair Basin improvements;
7. Approve Task Order No. 12 with Watermaster for the design and construction of RMPU's CSI Basin improvements; and
8. Authorize the General Manager to finalize and execute these task order amendments and new task orders subject to non-substantive changes.

2. INFORMATION ITEM

A. UPPER SAR HABITAT CONSERVATION PLAN & RIVER MODEL UPDATE (POWERPOINT)

B. CALIFORNIA DATA COLLABORATIVE MEMBERSHIP UPDATE (POWERPOINT)

RECEIVE AND FILE INFORMATION ITEMS

C. ENGINEERING AND CONSTRUCTION MANAGEMENT PROJECT UPDATES (POWERPOINT)

3. GENERAL MANAGER'S COMMENTS


4. COMMITTEE MEMBER COMMENTS

5. **COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS**

6. **ADJOURN**

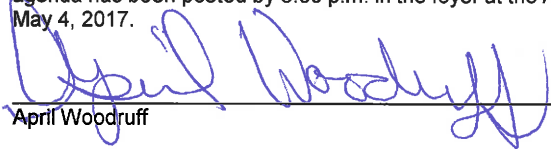
*A Municipal Water District

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Board Secretary (909-993-1736), 48 hours prior to the scheduled meeting so that the Agency can make reasonable arrangements.

Proofed by: 

DECLARATION OF POSTING

I, April Woodruff, Board Secretary of the Inland Empire Utilities Agency, A Municipal Water District, hereby certify that a copy of the agenda has been posted by 5:30 p.m. in the foyer at the Agency's main office, 6075 Kimball Ave., Building A, Chino, CA on Thursday, May 4, 2017.


April Woodruff

**ACTION
ITEM
1A**



MINUTES

ENGINEERING, OPERATIONS, AND WATER RESOURCES COMMITTEE MEETING INLAND EMPIRE UTILITIES AGENCY* AGENCY HEADQUARTERS, CHINO, CA

WEDNESDAY, APRIL 12, 2017
9:45 A.M.

COMMITTEE MEMBERS PRESENT

Michael Camacho, Chair
Kati Parker

STAFF PRESENT

P. Joseph Grindstaff, General Manager
Adham Almasri, Senior Engineer
Chris Berch, Executive Manager of Engineering/AGM
Jerry Burke, Deputy Manager of Engineering
Jason Gu, Grants Officer
Randy Lee, Executive Manager of Operations/AGM
Sally Lee, Executive Assistant
Sylvie Lee, Manager of Planning and Environmental Resources
Liza Munoz, Senior Engineer
Shaun Stone, Manager of Engineering
Ken Tam, Senior Associate Engineer
Christina Valencia, Chief Financial Officer/AGM
Al VanBreukelen, Deputy Manager of Maintenance
April Woodruff, Board Secretary/Office Manager

OTHERS PRESENT

None

The meeting was called to order at 9:45 a.m. There were no public comments received or additions to the agenda.

ACTION ITEMS

The Committee:

- ◆ Approved the Engineering, Operations, and Water Resources Committee meeting minutes of March 8, 2017.
- ◆ Recommended that the Board:
 1. Adopt an Addendum to the California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration for the Fontana Water Company Recycled Water Improvement Project; and

2. Authorize the General Manager to file the Notice of Determination (NOD) with the San Bernardino County Clerk of the Board.

as a Consent Calendar Item on the April 19, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Adopt Resolution No. 2017-4-2, authorizing IEUA to enter into a financial assistance agreement with the U.S. Department of Interior – Bureau of Reclamation (USBR) for the WaterSMART Grants: Water Marketing Strategy Grants for Fiscal Year 2017; and
2. Authorize the General Manager to execute the financial assistance agreement, any amendments, and any grant related documents thereto;

as a Consent Calendar Item on the April 19, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Award a digester cleaning service contract for the RP-1 Digesters Nos. 1, 6, and 7, Project No. EN17042, to Synagro-WWT, Inc. in the amount of \$1,750,200; and
2. Authorize the General Manager to execute the contract;

as a Consent Calendar Item on the April 19, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Award a consulting engineering services contract for the CCWRF Asset Management and Improvements Project No. EN17006, to CDM Smith, for the not-to-exceed amount of \$3,631,892; and
2. Authorize the General Manager to execute the consulting engineering services contract;

as an Action Item on the April 19, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Approve the Master Service Contract Amendments to perform corrosion and condition assessment services for the Agency's physical assets for a total aggregate not-to-exceed amount of \$300,000 over a three-year period to the following:
 - Contract No. 4600001614 to V&A Consulting Engineering Inc.
 - Contract No. 4600001616 to Lockwood, Andrews, & Newman, Inc.
 - Contract No. 4600001622 to HDR Engineering, Inc.; and
2. Authorize the General Manager to execute the contract amendments;

as a Consent Calendar Item on the April 19, 2017 Board meeting agenda.

◆ Recommend that the Board:

1. Award a construction contract for the Non-Reclaimable Wastewater Manhole Upgrades FY 2016/17 and Collection System Upgrades FY 2016/17, Project Nos. EN17014 and EN17015 respectively, to Ferreira Construction Co. Inc., in the amount of \$284,738; and
2. Authorize the General Manager to execute the construction contract;

as a Consent Calendar Item on the April 19, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Award the consulting architectural services contract for the proposed RP-5 Operations and Maintenance Building, Project No. EN19001, to Gillis & Panichapan Architects, Inc., for the not-to-exceed amount of \$136,510; and
2. Authorize the General Manager to execute the contract;

as a Consent Calendar Item on the April 19, 2017 Board meeting agenda.

INFORMATION ITEMS

The following information items were presented or received and filed by the Committee:

- ◆ Recycled Water Semi-Annual Update FY 2016/17
- ◆ Septic to Sewer Feasibility Study Update
- ◆ 3rd Quarter Planning & Environmental Resources Update
- ◆ Engineering and Construction Management Project Updates

GENERAL MANAGER'S COMMENTS

There were no General Manager's comments.

COMMITTEE MEMBER COMMENTS

There were no Committee Member comments.

COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS

There were no Committee Member requested future agenda items.

With no further business, Director Camacho adjourned the meeting at 11:10 a.m.

Respectfully submitted,

April Woodruff
Board Secretary/Office Manager

*A Municipal Water District


APPROVED: MAY 10, 2017


**ACTION
ITEM
1B**


Date: May 17, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (5/10/17)
Finance and Administration Committee (5/10/17)

From: P. Joseph Grindstaff 
General Manager

Submitted by: Chris Berch 
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone 
Manager of Engineering

Subject: RP-5 Expansion Consultant Contract Amendment

RECOMMENDATION

It is recommended that the Board of Directors:

1. Approve a consulting engineering services contract amendment for the design of the RP-5 Liquids Expansion and Solids Treatment Facility, Project Nos. EN19001 and EN19006, to Parsons Water & Infrastructure, Inc. for the not-to-exceed amount of \$17,993,680; and
2. Authorize the General Manager to execute the consulting engineering services contract amendment.

BACKGROUND

On January 20, 2016, IEUA Board of Directors approved the consulting engineering services contract award for the RP-1/RP-5 Expansion Preliminary Design Report (PDR) to Parsons Water & Infrastructure Inc. (Parsons) for the not-to-exceed amount of \$2,431,598. The major objectives for the PDR included evaluating the requirements for the RP-1 Liquids and Solids Capacity Recovery, RP-5 Liquids Expansion, and RP-5 Solids Treatment Facility. IEUA and the Parsons project team promptly began working on the PDR, which resulted in three Board Workshops conducted in May 2016, October 2016, and February 2017. Additionally, the project team provided updates to the Engineering, Operations, and Biosolids Management Committee in April 2016, August 2016, and November 2016 and conducted multiple staff workshops over the 14-month preliminary project phase. Based upon the collaborative efforts of the Board of Directors,

Agency staff, and Parsons project team throughout the development of the PDR, the RP-1/RP-5 Expansion Preliminary Design Report was completed and approved on March 19, 2017.

Based upon the major recommendations of the PDR, the RP-5 Liquids Expansion, Project No. EN19001, is recommended to consist of the following major items:

- Expanded Influent Pump Station.
- Headworks improvements including: bar screens, vortex grit chamber, fine screens for Membrane Bio Reactor (MBR), and a screenings/grit building.
- Two primary clarifiers and four new primary clarifier covers.
- Improvements to the existing aeration basin including new aeration diffusers, mixed liquor pumps, and air headers.
- Demolish two secondary clarifiers and construct a 30 million gallons per day (MGD) MBR system for improved water quality.
- UV disinfection system for improved water quality.
- Centralized odor control system for solids and liquids to meet the objectives of the IEUA's Business Goals.
- Emergency overflow and storm water system.
- New Mountain Avenue Lift Station and modify the City of Chino Hills Butterfield Ranch Pump Station.

The RP-5 Solids Treatment Facility, Project No. EN19006, is recommended to consist of the following:

- Rotary drum thickening building for primary and secondary solids thickening.
- Phased digestion including acid phase digesters, methane digesters, and digested sludge storage.
- Provide digested sludge storage.
- Centrifuge dewatering building, biosolids cake storage, and centrate equalization.
- Digester gas treatment, digester gas flaring, and emissions control systems for the existing Renewable Energy Efficiency Project (REEP) engines.
- Food waste receiving station and digestate transfer pump station at RP-5 Solids Handling Facility.

The project costs for the RP-5 Liquids Expansion and RP-5 Solids Treatment Facility are approximately \$160,000,000 and \$165,000,000, respectively, with a total estimated project cost of \$325,000,000.

Throughout the development of the PDR, Parsons has performed extremely well in meeting project milestones and has fostered a cohesive project team. The Parsons project team has worked diligently to complete the PDR in an extremely tight schedule of 14 months to ensure the project can continue through design, construction, and full operational start-up before the completion of the raising of the Prado Dam Spillway in early 2023. They have conducted multiple staff workshops and compiled three different series of technical memoranda packages as part of the creation of the PDR, always meeting or exceeding staff's expectations. Additionally, Parsons has

maintained the contract budget for the project only requiring two minor contract amendments amounting to a total of \$55,989 for additional work requested by IEUA.

During the contract award of the PDR, staff discussed with the Board of Directors the intention of amending Parsons' contract to complete the RP-5 Expansion design if Parsons performed well as the design consultant for the PDR. As noted, Parsons has performed extremely well in the development of the PDR and has been an outstanding partner on this challenging project. Therefore, staff believes that it is in the best interest of IEUA to amend the existing contract with Parsons to complete the final design. As a design consultant, Parsons has an intrinsic knowledge of the PDR, an established and committed project team, a successful project history, and does not have to go through a project "learning curve" as another consultant would.

On January 12, 2017, IEUA staff issued a Request for Proposal (RFP) to Parsons for consulting engineering services for the design of the RP-5 Liquids Expansion and Solids Treatment Facility as an amendment to their existing contract for the RP-1 and RP-5 Expansion PDR. On March 9, 2017, IEUA received an excellent proposal from Parsons, meeting all the requirements and requested scope of work as detailed in the RFP. The Parsons' fee proposal envelope was opened and a fee of \$21,289,859 was presented. This fee was higher than anticipated. IEUA and Parsons entered negotiations to decrease the fee for the requested scope of work. Multiple productive meetings and teleconferences were conducted to collaboratively reach a plan to reduce the overall fee estimate. This plan focused on the following key points:

- Maintain all major scope items as described in the PDR.
- Deferment of project components not immediately required.
- Streamline project management and meetings to reduce cost.
- Parsons to provide a discount of their hourly rates.

With this strategy, the Parsons' fee proposal was reduced to \$17.99M, a reduction of \$3.30M or 15.5% of the original fee proposal. Additionally, representatives from all the member agencies were invited to review Parsons' proposal.

During the February Committee meetings, IEUA staff discussed a validation methodology to verify fee negotiations. Staff completed a survey of the scopes of work and the design costs from the recent comparable plant expansions in California, which included:

- City of Riverside's Water Quality Control Plant Expansion
- City of Visalia's Water Conservation Plant Improvements
- Eastern Municipal Water District's Temecula Valley Regional Water Reclamation Facility Expansion
- Elsinore Valley Municipal Water District's Regional Water Reclamation Facility Expansion
- Fresno Yosemite International Airport's Recycled Water Facility
- Irvine Ranch Water District's Michelson Water Reclamation Plant Expansion (Liquids and Solids)
- Western Municipal Water District's Treatment Plant Expansion

This survey covered major designs from Albert A. Webb Associates, Black & Veatch, CDM Smith, CH2M, HDR, and Parsons conducted between 2006 and 2017. To normalize each of the

expansions for comparison, IEUA staff analyzed two common industry metrics: the cost per design sheet (adjusted for inflation) and the total design cost versus construction cost (as a percentage). The results of the survey are shown in the table on the following page:

Table 1: Parsons' Fee Comparison to Survey Average

Firm	Cost Per Sheet	% of Construction
Survey Average	\$13,652	8.2%
Parsons	\$11,723	7.4%

Additionally, to remain consistent with the above approach, it is staff's intention to amend Parsons' contract at the conclusion of the final design to include engineering services during construction, an estimated amendment value of \$5,500,000 to \$8,000,000, contingent upon excellent performance throughout the final design.

The RP-5 Liquids Expansion and Solids Treatment Facility projects are consistent with *IEUA's Business Goal of Wastewater Management* specifically the Water Quality objective that IEUA will ensure that systems are planned, constructed, and managed to protect public health, the environment, and meet anticipated regulatory requirements.

PRIOR BOARD ACTION

On January 20, 2016, the Board of Directors approved the consulting engineering services contract award for the RP-1/RP-5 Expansion PDR to Parsons Water & Infrastructure Inc. for the not-to-exceed amount of \$2,431,598.

IMPACT ON BUDGET

The approved TYCIP budgets for Project No. EN19001, RP-5 Liquids Treatment Expansion, and Project No. EN19006, RP-5 Solids Treatment Facility, are \$125,000,000 and \$136,000,000, respectively. With the recommendations provided in the PDR, the total project budget for the RP-5 Liquids Treatment Expansion will increase to \$160,000,000 in the FY 2017/2018 TYCIP. In addition, the total project budget for the RP-5 Solids Treatment Facility will increase to \$165,000,000 in the FY 2017/18 TYCIP. Parsons' design fee is within the estimates created for these budgets.

Attachments:

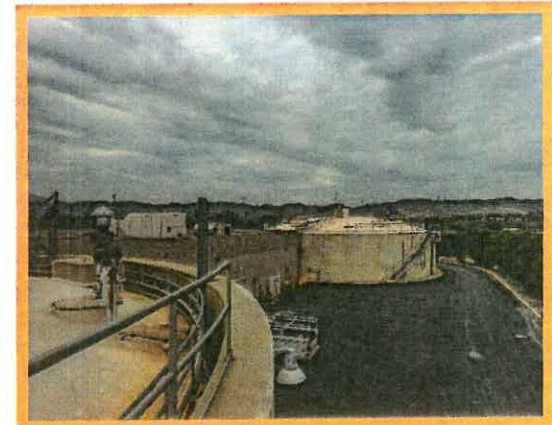
1. Consultant Contract
<https://dl.dropbox.com/s/jcka1sp2eu8a28d/17122%20Attachment%20No.%201%20RP-5%20Expansion%20Design%20Contract%20Amendment%205-2017.pdf?dl=0>
2. Consultant Contract Amendment
<https://dl.dropbox.com/s/s4edmhj7s4lfhee/17122%20Attachment%20No.%202%20RP-5%20Expansion%20Design%20Contract%20Amendment%205-2017.pdf?dl=0>

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RP-5 Liquids Expansion and Solids Treatment Facility Consultant Contract Amendment Project Nos. EN19001 and EN19006

Board Meeting



Project Location



Project Background

- Objective to create standardization for all facility expansions
- Wastewater Facilities Master Plan (2015)
- Preliminary Design Report (PDR) started January 2016
 - 40+ project meetings, staff workshops, Committee updates, and Board workshops
- PDR completed in March 2017



Project Scope

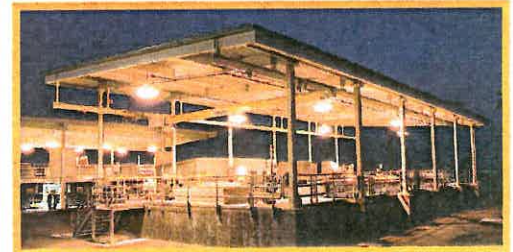


RP-5 Liquids Expansion and Solids Facility

Membrane Bio-Reactor



Ultraviolet Disinfection



Rotary Drum Thickening



Phased Digestion



Centrifuge Dewatering



Amendment Negotiations

- Request for Proposal (RFP) for amendment issued to Parsons on: January 12, 2017
- Proposal received from Parsons on: March 9, 2017

Original Fee Proposal

\$21.29M

- Negotiations conducted from March 10th through April 7th
 - Streamlining of project management
 - Deferment of project components not immediately required
 - All major scope items maintained as described in PDR
 - Discount of Parsons' Fee

Revised Fee Proposal

\$17.99M

- Reduction of fee of \$3.30M (15.5%)

Recent Major Expansion Cost Analysis

- Agencies Surveyed: City of Riverside, City of Visalia, Eastern Municipal Water District, Elsinore Valley Municipal Water District, Fresno Airport, Irvine Ranch Water District, and Western Municipal Water District
- Design Firms Surveyed: A.A. Webb, Black & Veatch, CDM, CH2M, HDR, & Parsons

Parsons' Fee Comparison to Survey Average

Firm	Cost Per Sheet ¹	Design as % of Const.
Survey Average	\$13,652	8.2%
Parsons	\$11,723	7.4%

¹ Adjusted for Inflation

Project Budget and Schedule

Description	Estimated Cost
Project Development	\$9,200
Consultant Engineer	\$17,993,680
IEUA Design Support Services (4%)	\$10,760,000
Construction Services (8%)	\$21,520,000
Construction (with 30% Contingency)	\$269,000,000
Total Project Cost:	\$319,282,880
Total Project Budget:	\$325,000,000*

* Total Budget for EN19001 & EN19006 as included in FY 2017/2018 TYCIP

Milestone	Date
Consultant Contract Amendment	May 2017
Design Completion	June 2019
Construction Contract Award	December 2019
Construction Completion	December 2022

Recommendation

- Approve the consultant contract amendment for the design of the RP-5 Liquids Expansion and Solids Treatment Facility, Project Nos. EN19001 and EN19006, to Parsons Water & Infrastructure, Inc. for the not-to-exceed amount of \$17,993,680; and
- Authorize the General Manager to execute the consultant engineering services contract amendment.


The RP-5 Liquids Expansion and Solids Treatment Facility Projects are consistent with the *IEUA's Business Goal of Wastewater Management* specifically the Water Quality objective that IEUA will ensure that systems are planned, constructed, and managed to protect public health, the environment, and meet anticipated regulatory requirements.


**ACTION
ITEM
1C**


Date: May 17, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (5/10/17)
Finance and Administration Committee (5/10/2017)

From: P. Joseph Grindstaff 
General Manager

Submitted by: Chris Berch 
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone 
Manager of Engineering

Subject: RP-1 and RP-4 Construction Contract Award - Safety Improvements

RECOMMENDATION

It is recommended that the Board of Directors:

1. Award a construction contract for the RP-1 and RP-4 Safety Improvements, Project No. EN17052, to Ferreira Construction, Inc., in the amount of \$635,376;
2. Approve a total project budget amendment in the amount of \$189,000 for Project No. EN17052; and
3. Authorize the General Manager to execute the construction contract and budget amendment.

BACKGROUND

Regional Plant No. 1 (RP-1) and Regional Plant No. 4 (RP-4) Safety Improvements include two projects requested by Facilities Management, Maintenance, and Safety staff related to plant access and safety. The RP-1 portion of the project will widen the existing ingress/egress road so large trucks can safely deliver chemicals and supplies to RP-1. Additionally, the project will provide safe access to the warehouse and to the proposed bleach disinfection storage facility. The RP-4 portion of the project will complete the construction of the block wall along the south property line north of the San Bernardino County West Valley Detention Facility.

On March 29, 2017, IEUA advertised a request for bids to the prequalified contractors on the under \$2,000,000 list. Eight contractors participated in the job walk on April 5, 2017. On April 13, 2017, the following bids were received:

Bidder's Name	Total Price
Ferreira Construction Company	\$635,376
S.C.W. Contracting	\$638,120
W.A. Rasic	\$745,000
Engineer's Estimate	\$650,000

Ferreira Construction Company was the lowest responsive and responsible bidder with a bid price of \$635,376. Ferreira Construction Company has performed several successful projects for IEUA in the past, showing good workmanship and responsiveness.

The following table is the anticipated project cost:

Description	Estimated Cost
Design	\$167,000
Construction Services (~ 8%)	\$50,000
Construction	\$635,376
Construction Contingency (~ 15%)	\$95,000
Total Project Cost	\$947,376
Current Total Project Budget	\$760,000
Budget Amendment	\$189,000

Based on project final scope of work, bid results, and the anticipated total project cost, staff is requesting a total project budget amendment in the amount of \$189,000 for the RP-1 and RP-4 Safety Improvements, Project No. EN17052. Projected expenditures for Fiscal Year 2016/17 is within the current, approved fiscal year budget of \$760,000.

The following is the project schedule:

Project Milestone	Date
Construction Contract Award	May 2017
Construction Completion	December 2017

The project is consistent with IEUA's *Business Goal of Work Environment* specifically the Safety Objective where IEUA will promote and ensure a safe and healthy work environment, exceeding industry best practices in support of achieving the CalOSHA Star Voluntary Protection Program (CAL/VPP) certification.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

If approved, the construction award for the RP-1 and RP-4 Safety Improvements, Project No. EN17052, in the amount of \$635,376 will be supported by the revised total project budget of \$949,000 within the Regional Wastewater Operations and Maintenance (RO) Fund. An estimated amount of \$200,000 will be spent on the project this fiscal year, with the remaining project costs to be spent in the future fiscal year. The future year's funding will be re-appropriated accordingly during the Fiscal Year 2017/18 review of the Ten-Year Capital Improvement Plan.

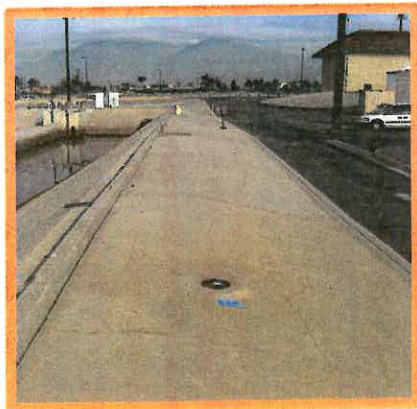
Attachment:

Construction Contract

<https://dl.dropbox.com/s/461vto7ehxp8s5w/17126%20Attachment%20RP-1%20RP-4%20Safety%20Improvements%20Construction%20Contract%20Award%205-2017.pdf?dl=0>

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RP-1 and RP-4 Safety Improvements Construction Contract Award Project No. EN17052 Board Meeting



Regional Water Recycling Plants Nos. 1 and 4

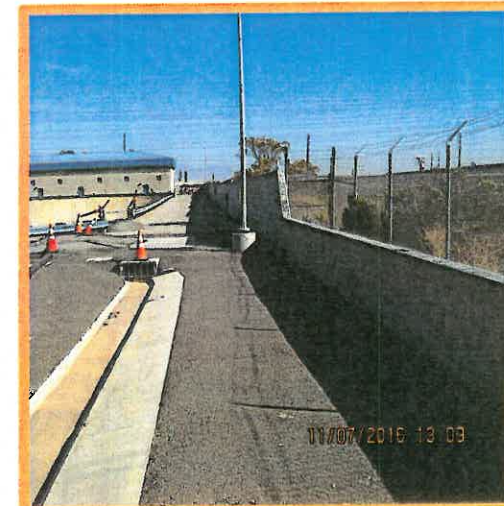


Project Background

- RP-1
 - RP-1 ingress/egress requires widening and associated improvements
 - Large delivery trucks require wider turn radius and more direct access
- RP-4
 - Existing wall requires completion to full height for security and aesthetics



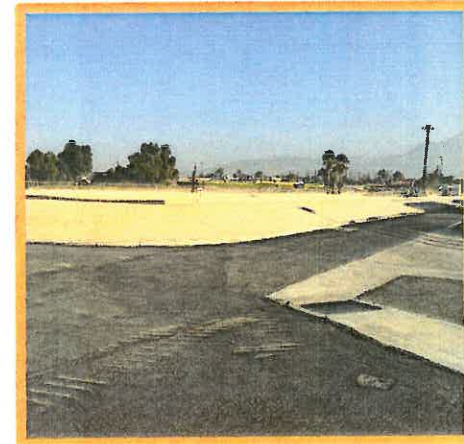
Wash Water Basin Wall to be Modified



Stem Wall to be Completed to Full Height

Project Scope

- Regional Plant No. 1
 - Modifications to wash water basin wall for road widening
 - Relocate existing utilities
 - Install traffic markings and protective bollards
- Regional Plant No. 4
 - Construct full height iron fence
 - Grading and drainage improvements
 - Re-surface affected areas
 - Remove temporary fence



RP 1 Existing Truck Route



RP 4 Stem Wall

Contractor Selection

- Three proposals received on April 13, 2017:

Proposals Received

Bidder's Name	Total Price
Ferreira Coastal Construction Company	\$635,376
S.C.W. Contracting	\$638,120
W.A. Rasic	\$745,000
Engineer's Estimate	\$650,000

Project Budget and Schedule

Description	Estimated Cost
Design	\$167,000
Construction Services (8%)	\$50,000
Construction	\$635,376
Contingency (15%)	\$95,000
Total Project Cost	\$947,376
Current Total Project Budget	\$760,000
Requested Budget Amendment	\$189,000

Milestone	Date
Construction Contract Award	May 2017
Construction Completion	December 2017

Recommendation

- Award a construction contract for the RP-1 and RP-4 Safety Improvements, Project No. EN17052, to Ferreira Construction, Inc., in the amount of \$635,376;
- Approve a total project budget amendment in the amount of \$189,000 for Project No. EN17052; and
- Authorize the General Manager to execute the construction contract and budget amendment.

The RP-1 and RP-4 Safety Improvement Project is consistent with **IEUA's Business Goal of Work Environment** specifically the Safety Objective where IEUA will promote and ensure a safe and healthy work environment, exceeding industry best practices in support of achieving the CalOSHA Star Voluntary Protection Program (CAL/VPP) certification.


**ACTION
ITEM
1D**





Date: May 17, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee

From: P. Joseph Grindstaff
General Manager 

Submitted by: Chris Berch 
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone 
Manager of Engineering

Subject: SCADA Enterprise System Consultant Contract Amendment

RECOMMENDATION

It is recommended that the Board of Directors:

1. Amend the consulting engineering services contract for the SCADA Enterprise System Project No. EN13016, to Westin Engineering, Inc. in the amount of \$389,020; and
2. Authorize the General Manager to execute the consulting engineering services contract subject to non-substantive changes.

BACKGROUND

The existing Supervisory Control & Data Acquisition (SCADA) System network is comprised of a wide variety of equipment which is located at various facilities throughout IEUA's service area. The future state of the SCADA Systems is based on the concept of an Enterprise SCADA System with a seamless and transparent access from any of IEUA's SCADA Systems portals, including the facilities, recycled water, and groundwater recharge systems. The SCADA master plan prepared a road map for a migration from the existing Foxboro Invensys Distributed Control System (DCS) to a Rockwell Automation Enterprise PlantPax SCADA system. The SCADA Enterprise System will maintain the highest levels of operability, serviceability, reliability, and risk mitigation for current and long-term operations.

In May 2013, Westin Engineering, Inc. (Westin) was awarded a contract to provide engineering consulting services for the SCADA migration of CCWRF, RP-1, RP-4, and RP-5. To date, Westin has completed the pre-design work for RP-4 and RP-5, as well as the full design at CCWRF, which was the first facility to successfully complete migration to the PlantPax system in March 2016. In July 2016, Westin’s contract was amended to revise the scope of work without a budget modification. This scope modification was intended to focus Westin’s efforts on critical tasks that were identified during the CCWRF migration, while shifting other tasks internally to IEUA staff.

The most cost-intensive item that was modified from the scope of work was the responsibility for authoring Process Control Narratives (PCNs) for each remaining facility. PCNs are documents that detail the step-by-step process for programming a single piece of equipment, including the operation, maintenance, and alarming requirements. Due to the large number of processes at each plant, authoring these documents is a significant effort and requires a working knowledge of the wastewater treatment process. The July 2016, contract amendment intended to shift the responsibility of authoring PCNs from Westin’s scope to IEUA’s Technical Services department.

From July 2016 to March 2017, Technical Services staff generated the PCN documentation for RP-5 and initiated work on the PCNs for RP-1 and RP-4. Following the dissolution and reassignment of the Technical Services department, IEUA no longer has the internal resources available to satisfy this project’s requirement. Westin provided a proposal to author the remaining PCNs for RP-1 and RP-4 and identified consulting staff that has the necessary knowledge of the treatment plant to accomplish the task in a timely manner. Using the labor accounting from the RP-5 PCN generation, Westin’s proposal compares favorably to the cost and schedule forecasts if IEUA staff maintained the PCN generation responsibility. The costs for Westin to generate the PCNs are marginally higher (within 2% of forecasted IEUA labor costs), but contracting this work is estimated to save approximately eight months on the project schedule. The proposal also includes additional review of RP-5 PCNs, as well as a credit for PCN review that was included in the original contract scope.

Below are the projected engineering consulting costs for the project:

Description	Cost
Original Approved Contract Amount	\$1,926,650
Proposed Contract Amendment	\$389,020
Total Project Design Cost	\$2,315,670
Total Construction Cost	\$11,584,330
Total Project Budget	\$13,900,000

The overall project schedule is as follows:

Milestone	Date
Consultant Contract Amendment	May 2017
RP-5 Design Completion	February 2018
RP-1 Design Completion	November 2018
RP-4 Design Completion	April 2019

The SCADA Enterprise System project is consistent with the *IEUA's Business Goal of Business Practices* that strives to apply best industry practices in all processes to maintain or improve the quality and value of the services we provide to our member agencies and the public.

PRIOR BOARD ACTION

On July 18, 2012, the Board of Directors adopted the SCADA Master Plans.

On May 15, 2013, the Board of Directors approved the Consulting Engineering Services Contract Award for the SCADA Enterprise System, Project No. EN13016, to Westin Engineering, Inc.

IMPACT ON BUDGET

If approved, the consulting engineering services contract amendment for the SCADA Enterprise System, Project No. EN13016, for a net increase of \$389,020 will be within the total project budget of \$13,900,000 in the Regional Operations (RO) Fund.

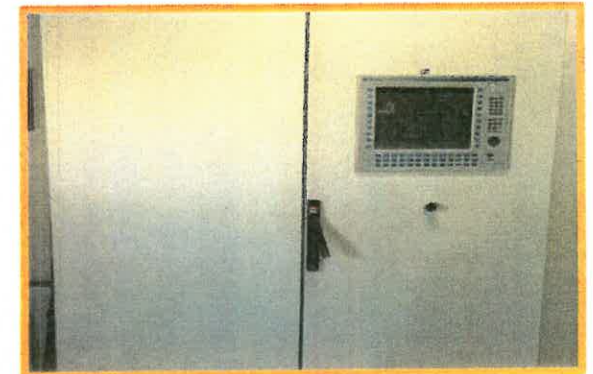
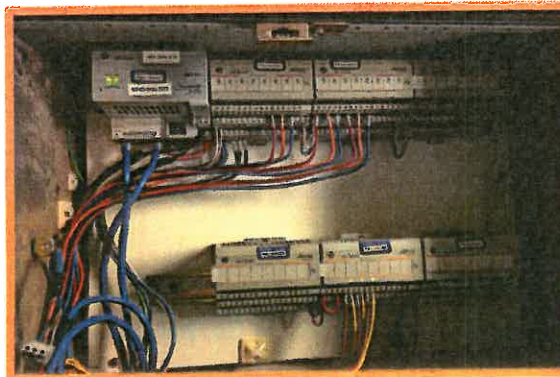
Attachment

Consultant Contract Amendment

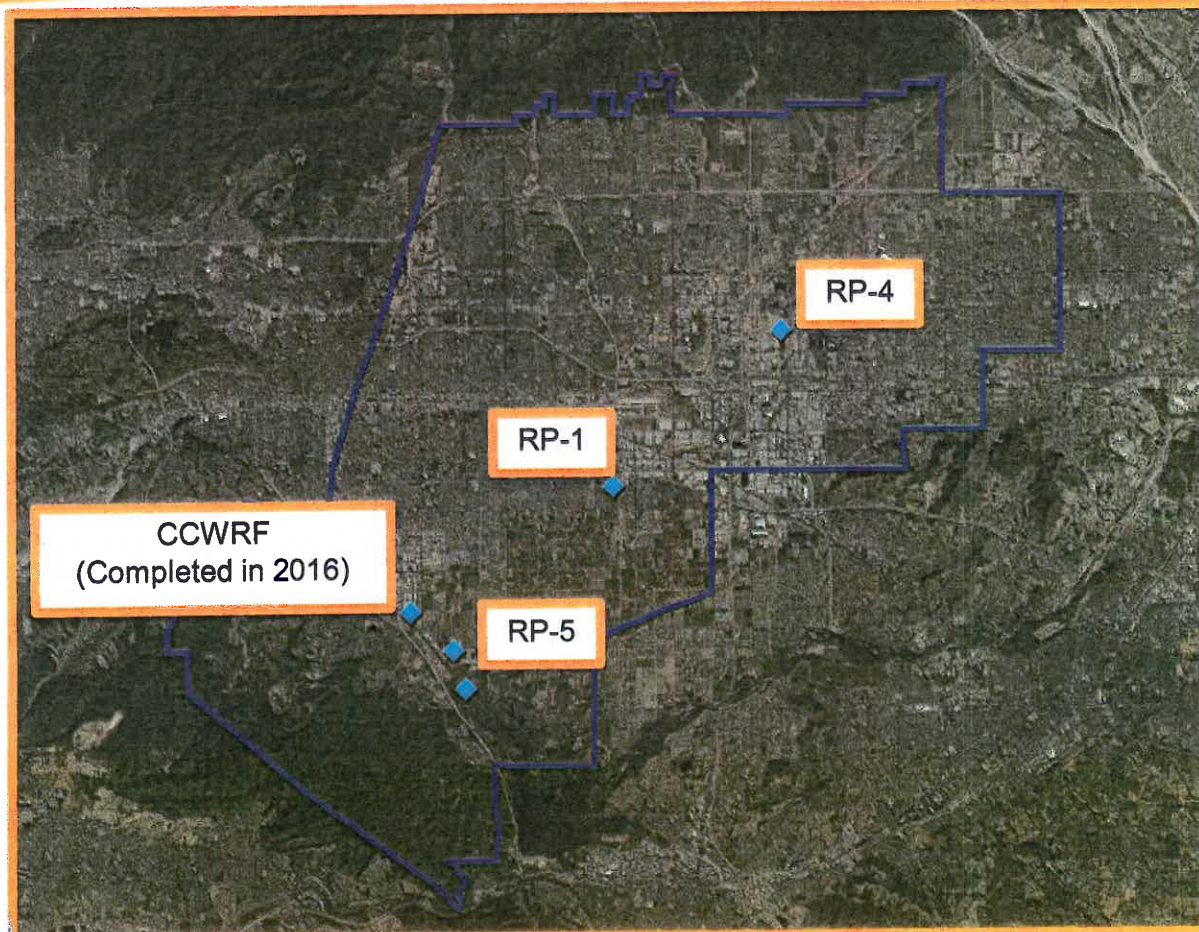
<https://dl.dropbox.com/s/91kzvedqc8wj8s9/17123%20Attachment%20SCADA%20Consultant%20Amendment%205-2017.pdf?dl=0>

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SCADA Enterprise System Consultant Contract Amendment Project No. EN13016 May 2017 Board Meeting



Project Location



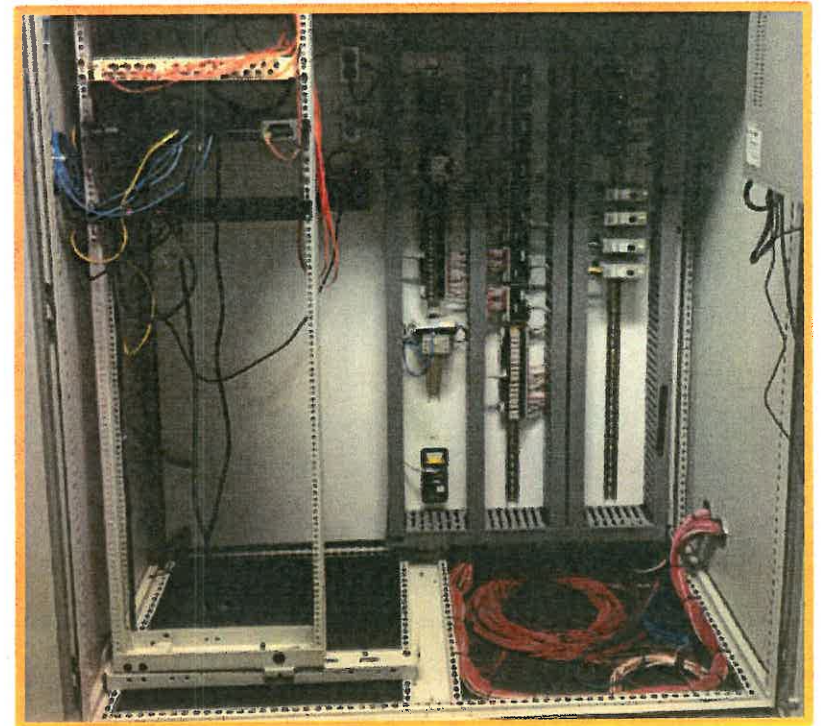
Project Background

- Standardize Plant Control Systems at IEUA facilities
 - Migrate Foxboro DCS to Rockwell PlantPAx
- All process equipment to be reprogrammed to Rockwell standards
- Westin Engineering under contract to complete pre-design and design work for all facilities

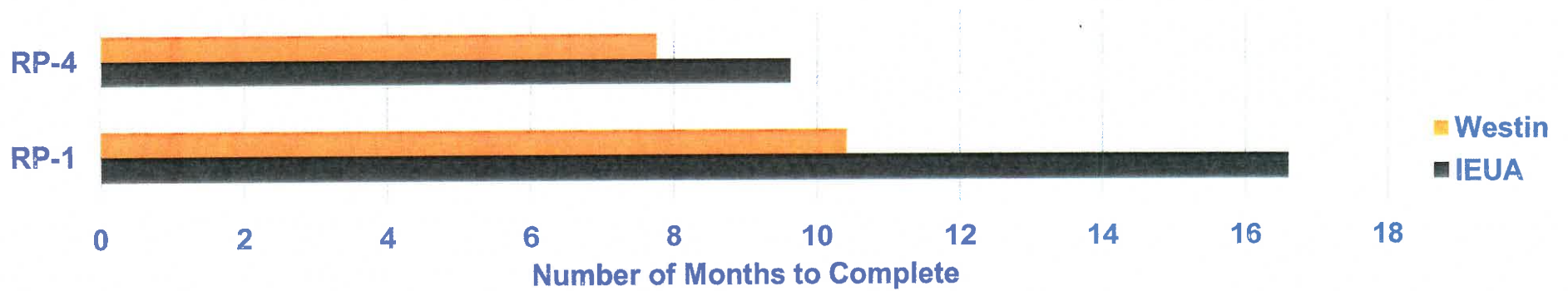


Project Scope

- Process Control Narratives (PCNs) are required for programming equipment
 - Process controls
 - Alarms
 - Operating ranges
- PCN generation not in Westin's scope
 - IEUA Technical Service staff responsible for generating PCNs at RP-5
- Proposed amendment to shift PCN generation responsibility to Westin



Project Budget and Schedule Impacts



Project Budget and Schedule

Description	Cost
Original Approved Contract Amount	\$1,926,650
Proposed Contract Amendment	\$389,020
Total Project Design Cost	\$2,315,670
Total Construction Cost	\$11,584,330
Total Project Budget	\$13,900,000

Project Milestone	Date
Consultant Contract Amendment	May 2017
RP-5 Design Completion	February 2018
RP-1 Design Completion	November 2018
RP-4 Design Completion	April 2019

Recommendation

- Amend the consulting engineering services contract for the SCADA Migration Project No. EN13016, to Westin Engineering, Inc. for the not-to-exceed amount of \$389,020
- Authorize the General Manager to execute the consulting engineering services contract subject to non-substantive changes

The SCADA Enterprise System Project is consistent with the **IEUA's Business Goal of Business Practices** that strives to apply best industry practices in all processes to maintain or improve the quality and value of the services we provide to our member agencies and the public.


**ACTION
ITEM
1E**





Date: May 17, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (5/10/2017)

From: P. Joseph Grinds 
General Manager

Submitted by: Chris Berch 
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone 
Manager of Engineering

Subject: RP-1 Consulting Services Award - 1158 Recycled Water Pump Station

RECOMMENDATION

It is recommended that the Board of Directors:

1. Award a consulting engineering services contract for the RP-1 1158 Recycled Water Pump Station Upgrades, Project No. EN14042, to Stantec for the not-to-exceed amount of \$428,000; and
2. Authorize the General Manager to execute the consulting engineering services contract.

BACKGROUND

The 2015 Recycled Water Program Strategy concluded that the Regional Water Recycling Plant No. 1 (RP-1) 1158 Zone pumps are inadequate to meet the existing recycled water demands in the northern service area. In 2016, IEUA retained the engineering services of Stantec to perform a feasibility study to define the existing 1158 Zone pump system limitations and provide recommendations for improvement. The results of the study indicated that the existing system is undersized and needs to be expanded to meet the recycled water demands in the northern service area.

The RP-1 1158 Recycled Water Pump Station Project will achieve the following objectives:

1. Replace the existing four 400 HP pumps with four new 700 HP pumps.
2. Perform condition assessment of the existing wet well structure.

3. Perform necessary upgrades to energize the four new larger pumps.
4. Provide surge protection upgrades by replacing the existing surge tank with a new one.

On February 7, 2017, IEUA staff advertised the Request for Proposals for consulting engineering services for the project on *PlanetBids*. On March 21, 2017, IEUA received proposals from Stantec and RMC. The proposals were reviewed by a selection committee of IEUA staff from Engineering and Construction Management, Maintenance and Operations, and the City of Ontario. Based on the project team qualifications and experience, understanding of the project scope, and ability to meet the project schedule, the committee unanimously concurred that Stantec was the most qualified firm to do the work.

The following table is the anticipated project cost:

Description	Estimated Cost
Project Development	\$150,000
Consultant Engineer	\$428,000
Design Services (~ 5%)	\$125,000
Construction Services (~ 10%)	\$250,000
Construction	\$2,500,000
Contingency (~ 10%)	\$250,000
Total Project Cost	\$3,703,000
Total Project Budget	\$4,000,000

The following is the project schedule:

Project Milestone	Date
Consultant Contract Award	May 2017
Design Completion	May 2018
Construction Contract Award	September 2018
Construction Completion	November 2019

The RP-1 1158 Recycled Water Pump Station Upgrades is consistent with *IEUA's Business Goal of Water Reliability* to develop and implement an integrated water resource management plan that promotes cost-effective, reliable, efficient, and sustainable water use along with economic growth within the IEUA Service Area.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

If approved, the consulting engineering services contract award for the RP-1 1158 Recycled Water Pump Station, Project No. EN14042, for the not-to-exceed amount of \$428,000 is within the total project budget of \$4,000,000 in the Recycled Water (WC) Fund.

RP-1 Consulting Services Award - 1158 Recycled Water Pump Station

May 17, 2017

Page 3 of 3

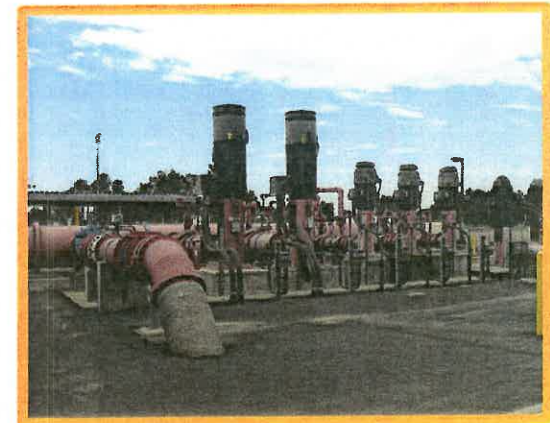
Attachment:

Consultant Contract

<https://dl.dropbox.com/s/tqxwugpw91ez4pn/17127%20Attachment%20RP-1%201158%20RWPS%20Upgrades%20Design%20Contract%20Award%205-2017.pdf?dl=0>

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RP-1 1158 Recycled Water Pump Station Upgrades
Consultant Contract Award
Project No. EN14042
May 17, 2017
Board Meeting



Nasrin Maleki, P.E.
May 2017

Regional Water Recycling Plant No. 1 Project Location



Project Background

- Recycled Water (RW) Program Strategy
 - Increasing RW demand in the northern service area
- Feasibility Study indicated pump system limitations and required upgrades
- Inadequate existing pump capacity to meet the RW demand



RP-1 Recycled Water Pump Station



Non-operational surge tank

Project Scope

- Replace the existing 400 horse power (HP) pumps with four new 700 HP pumps
- Perform condition assessment of the existing wet well structure
- Perform necessary upgrades to the electrical system
- Provide additional surge protection upgrades



Consultant Selection

- Evaluation and selection committee
 - IEUA Engineering and Construction Management, Maintenance and Operations, and City of Ontario
- Justification for selecting Stantec
 - Qualifications and experience
 - Understanding of the project scope
 - Ability to meet the project schedule
- Two proposals received on March 21, 2017

Proposals Received

RMC
Stantec

Project Budget and Schedule

Milestone	Date
Project Development	\$150,000
Consultant Engineer	\$428,000
Design Services (~5%)	\$125,000
Construction Services (10%)	\$250,000
Construction	\$2,500,000
Contingency (~10%)	\$250,000
Total Project Cost	\$3,703,000
Total Project Budget	\$4,000,000

Milestone	Date
Consultant Contract Award	May 2017
Design Completion	May 2018
Construction Contract Award	Sept 2018
Construction Completion	Nov 2019

Recommendation

- Award a consulting engineering services contract for the RP-1 1158 Recycled Water Pump Station Upgrades, Project No. EN14042, to Stantec for the not-to-exceed amount of \$428,000; and
- Authorize the General Manager to execute the consultant engineering services contract.


The RP-1 1158 Recycled Water Pump Station Upgrades Project is consistent with IEUA's **Business Goal of Water Reliability** to develop and implement an integrated water resource management plan that promotes cost-effective, reliable, efficient, and sustainable water use along with economic growth within the IEUA Service Area.


**ACTION
ITEM
1F**


Date: May 17, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (5/10/2017)

From: P. Joseph Grindstad 
General Manager

Submitted by: Chris Berch 
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone 
Manager of Engineering

Subject: RP-1 Construction Contract Award - Piping Replacement

RECOMMENDATION

It is recommended that the Board of Directors:

1. Award a construction contract for the RP-1 thickened waste activated sludge (TWAS) Piping Replacement, Project No. EN15013, to J.F. Shea Construction, Inc., in the amount of \$242,492; and
2. Authorize the General Manager to execute the construction contract.

BACKGROUND

Regional Water Recycling Plant No. 1 (RP-1) TWAS pipeline line has had several failures and has reached the end of its useful life. In addition, other sludge handling lines require modification to eliminate flow restrictions within the system. Operations and Maintenance staff also indicated the need for additional cleanouts and flush connections to facilitate the cleaning and maintenance of known problems areas within the piping system.

The project will provide a permanent below grade high-density polyethylene pipeline to transfer thickened sludge from the dissolved air floatation thickeners to the digesters and will install the necessary cleanouts to provide for enhanced operation and maintenance.

Bidder's Name	Total Price
J.F. Shea Construction, Inc.	\$242,492
Genesis Construction	\$262,613
S.C.W. Contracting	\$326,515
W.A. Rasic	\$332,888
Ferreira Construction Company	\$415,258
Engineer's Estimate	\$288,000

J.F. Shea Construction, Inc. was the lowest responsive and responsible bidder with a bid price of \$242,492. J.F. Shea Construction has performed several successful projects for IEUA in the past, showing good workmanship and responsiveness.

The following table is the anticipated project cost:

Description	Estimated Cost
Design	\$53,000
IEUA Design Support Services	\$90,000
Underground Investigation	\$42,000
Construction Services (~ 10%)	\$24,000
Construction	\$242,492
Construction Contingency (~ 15%)	\$36,000
Total Project Cost	\$487,492
Total Project Budget	\$500,000

The following is the project schedule:

Project Milestone	Date
Construction Contract Award	May 2017
Construction Completion	December 2017

The RP-1 TWAS Piping Replacement Project is consistent with *IEUA's Business Goal of Wastewater Management* specifically the Asset Management objective that IEUA will ensure the regional sewer system and treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use.

PRIOR BOARD ACTION

None.

RP-1 Construction Contract Award - Piping Replacement
May 17, 2017
Page 3 of 3

IMPACT ON BUDGET

If approved, the construction award for the RP-1 TWAS Piping Replacement, Project No. EN15013, in the amount of \$242,492 will be within the total project budget of \$500,000 within the Regional Wastewater Operations and Maintenance (RO) Fund.

Attachment:

Construction Contract

<https://dl.dropbox.com/s/q978o5dap42c4ba/17125%20Attachment%20RP-1%20TWAS%20Piping%20Replacement%20Construction%20Contract%20Award%205-2017.pdf?dl=0>

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RP-1 Piping Replacement Contract Award Project No. EN15013 Board Meeting

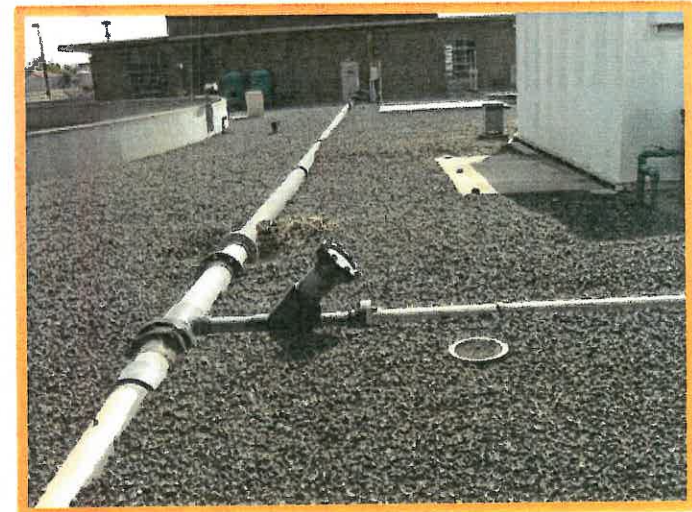


Regional Water Recycling Plant No. 1



Project Background

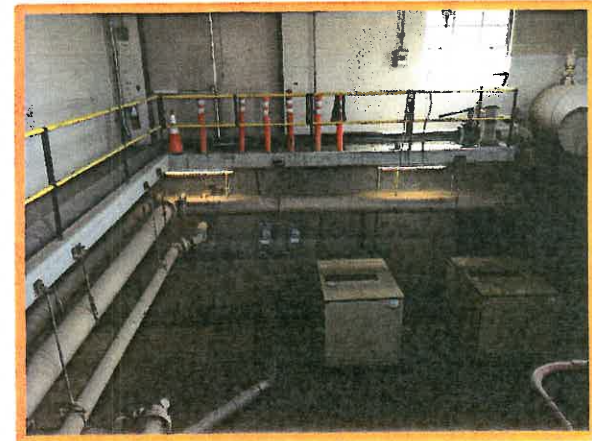
- RP-1 above grade temporary thickened waste activated sludge (TWAS) line needs to be replaced
- Pipeline restrictions in sludge line



TWAS Line to be Replaced

Project Scope

- Installation of new below grade pipeline between processes to include:
 - Install additional cleanouts for ease of maintenance
 - Install utility water flush connections
 - Install air relief valves and pressure safety discs
- Modification of existing piping at digester area to eliminate bottleneck issues
- Removal of unnecessary pipes and components



Plant No. 2 Basement Piping



Bottleneck at Digester Area

Contractor Selection

- Five proposals received on April 13, 2017:

Proposals Received

Bidder's Name	Total Price
J.F. Shea Construction, Inc.	242,492
Genesis Construction	262,613
S.C.W Contracting	326,515
W.A. Rasic Construction	332,888
Ferreira Coastal Construction Company	415,258
Engineer's Estimate	\$288,000

Project Budget and Schedule

Description	Estimated Cost
Design	\$53,000
IEUA Design Support Services	\$90,000
Underground Investigation	\$42,000
Construction Services (~10%)	\$24,000
Construction	\$242,492
Contingency (~15%)	\$36,000
Total Project Cost	\$487,492
Total Project Budget	\$500,000

Milestone	Date
Construction Contract Award	May 2017
Construction Completion	December 2017

Recommendation

- Award the construction contract for the RP-1 TWAS Piping Replacement, Project No. EN15013, to J.F. Shea, in the amount of \$242,492; and
- Authorize the General Manager to execute the contract.

The RP-1 TWAS Piping Replacement Project is consistent with **IEUA's Business Goals of Wastewater Management** specifically the Asset Management objective that IEUA will ensure the regional sewer system and treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use..


**ACTION
ITEM
1G**





Date: May 17, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (5/10/2017)

From: P. Joseph Grindstad 
General Manager

Submitted by: Chris Berch 
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone 
Manager of Engineering

Subject: Chino Basin Watermaster Cost Sharing Agreements

RECOMMENDATION

It is recommended that the Board of Directors:

1. Approve Amendment No. 3 of Task Order No. 1 with Chino Basin Watermaster (Watermaster) for the design of multiple basin improvements under the Recharge Master Plan Update (RMPU) projects;
2. Approve Amendment No. 1 of Task Order No. 2 with Watermaster for the design and construction of the RMPU's Lower Day Basin improvements;
3. Approve Amendment No. 2 of Task Order No. 8 with Watermaster for the design and construction of the RMPU's San Sevaine Basin improvements;
4. Approve Task Order No. 9 with Watermaster for the design and construction of the RMPU's Wineville/Jurupa/RP-3 Basins;
5. Approve Task Order No. 10 with Watermaster for the design and construction of the RMPU's Victoria Basin improvements;
6. Approve Task Order No. 11 with Watermaster for the design and construction of the RMPU's Montclair Basin improvements;
7. Approve Task Order No. 12 with Watermaster for the design and construction of the RMPU's CSI Basin improvements; and
8. Authorize the General Manager to finalize and execute these task order amendments and new task orders subject to non-substantive changes.

Chino Basin Watermaster Cost Sharing Agreements

May 17, 2017

Page 2 of 4

BACKGROUND

In 2013, IEUA and Watermaster approved the amendment to the 2010 RMPU. This comprehensive planning document listed 11 groundwater recharge improvements that would increase stormwater and recycled water recharge into the Chino Basin groundwater system. In August 2014, a Master Agreement was executed to define the roles and responsibilities in managing and funding the implementation of the RMPU projects and other recharge improvement projects. This was followed by the approval of the following RMPU related task orders (TO):

- Task Order No. 1 (TO1) - Implement and budget the design efforts of the RMPU projects: CSI Basin, Wineville/Jurupa/RP-3 Basins, Sierra Basin, Declez Basin, Victoria Basin, Turner Basin, Ely Basin, Lower San Sevaine Basin, and Montclair Basin (RW15003).
- Task Order No. 2 (TO2) - Implement and budget the design/construction efforts of the RMPU project: Lower Day Basin Improvements (RW15004).
- Task Order No. 8 (TO8) - Implement and budget the design/construction efforts of the RMPU project: San Sevaine Basin Improvements (EN13001).

In November 2016, the preliminary design reports (PDR) for the projects under TO1 and TO2 were completed. Immediately following this, Watermaster approved and validated the following RMPU projects for final design, bid, and construction: CSI Basin, Wineville/Jurupa/RP-3 Basins, Victoria Basin, Montclair Basin, Lower Day Basin, and San Sevaine Basin.

IEUA and Watermaster agreed to develop new and amended task orders to reflect the recent findings and decisions made towards the RMPU projects. The following table summarizes the proposed amendments and new task orders:

Task Order	Description	Total Budget	Available Grants	Watermaster's Share	IEUA's Share
TO1 (Amend. 3)	Defers Ely Basin, Turner Basin, and Declez Basin with Lower San Sevaine Basin, Sierra Basin, and East Declez Basin. Reduces the total TO budget with the consolidated cost on the final expenses of the deferred projects and the separated projects which were shifted into an individual new TOs	\$497,000	-	\$497,000	-
TO2 (Amend. 1)	Increase scope and budget of Lower Day after approving the PDR design recommendation. Also adjust the cost share to account for additional grant funding.	\$4,008,000	\$1,125,000	\$2,883,000	-
TO8 (Amend. 2)	Adjust the cost share to account for additional grant funding for the San Sevaine Basin project.	\$6,460,000	\$1,125,000	\$2,667,500	\$2,667,500
TO9 (new)	Separately implement the design/construction of approved RMPU project: Wineville/Jurupa/RP-3 Basins. Also apply received grants to the cost share.	\$16,482,900	\$8,541,450	\$7,554,135	\$387,315
TO10 (new)	Separately implement design/construction of approved RMPU project: Victoria Basin	\$168,800	-	\$84,400	\$84,400
TO11 (new)	Separately implement design/construction of approved RMPU project: Montclair Basin	\$1,788,100	-	\$1,788,100	-
TO12 (new)	Separately implement design/construction of approved RMPU project: CSI Basin	\$966,000	-	\$966,000	-
Total for proposed amendments and task orders		\$30,370,800	\$10,791,450	\$16,440,135	\$3,139,215

IEUA's Contracts and Procurement Department reviewed the proposed task orders and amendments and provided comments that were incorporated into the final agreement language.

The new and amended task orders between IEUA and Watermaster for the continued implementation of the RMPU projects with *IEUA's Business Goal of Water Reliability* specifically the Groundwater Recharge Objective where IEUA will maximize groundwater recharge projects in the region through strategic, cost-effective partnerships and development.

PRIOR BOARD ACTION

On June 15, 2016, the Board of Directors approved the second amendment to Task Order No. 1 of the 2014 Master Agreement with Watermaster. This TO deferred the proposed East Declez Expansion from the RMPU list and accounts for the cost associated in completing the East Declez feasibility study.

On April 15, 2015, the Board of Directors approved the first amendments to Task Order Nos. 1 and 8 of the 2014 Master Agreement with Watermaster. TO1 amendment deferred Lower San Sevaine Basin and Sierra Basin and includes East Declez Expansion as part of the RMPU list of projects for design. TO8 amendment increased the project scope and budget to reflect the approved preliminary design recommendation for the San Sevaine Basin RMPU project.

On August 20, 2014, the Board of Directors approved the Task Order No.1, Task Order No. 2, and Task Order No. 8 under the 2014 Master Agreement between Inland Empire Utilities Agency and Chino Basin Watermaster. These TOs authorized the implementation of the select RMPU projects.

On July 16, 2014, the Board of Directors approved the Master Cost Sharing Agreement (Master Agreement) between Inland Empire Utilities Agency and Chino Basin Watermaster.

IMPACT ON BUDGET

These new and amended task orders are a part of multiple budgeted capital projects (EN13001, RW15003, RW15004, and EN18007) within the Recharge Funds and Recycled Water Funds. All project budgets are within the approved Fiscal Year and Ten Year Capital Improvement Plan.

The total for these amendments and task orders are \$30.3 million with \$10.8 million in available grants, where Watermaster's share is \$16.4 million and IEUA's share is \$3.1 million.

Attachments:

1. Amendment No. 3 to Task Order No. 1

<https://dl.dropbox.com/s/lqb45il8rx8n15j/17128%20Attachment%20No.%201%20CBWM%20Cost%20Sharing%20Agreement%20Amendments%205-2017%203rd%20Amend%20to%20TO%20No%201.pdf?dl=0>

Chino Basin Watermaster Cost Sharing Agreements

May 17, 2017

Page 4 of 4

2. Amendment No. 1 to Task Order No. 2

<https://dl.dropbox.com/s/9iohh5f0lc4dejc/17128%20Attachment%20No.%202%20CBWM%20Cost%20Sharing%20Agreement%20Amendments%205-2017%201st%20Amend%20to%20TO%20%202.pdf?dl=0>

3. Amendment No. 2 to Task Order No. 8

<https://dl.dropbox.com/s/pfv29gjr9sd5h/17128%20Attachment%20No.%203%20CBWM%20Cost%20Sharing%20Agreement%20Amendments%205-2017%202nd%20Amend%20to%20TO%20No%208.pdf?dl=0>

4. Task Order No. 9

<https://dl.dropbox.com/s/7m7minc7v8i1rlx/17128%20Attachment%20No.%204%20CBWM%20Cost%20Sharing%20Agreement%20Amendments%205-2017%20Task%20Order%20No.%209.pdf?dl=0>

5. Task Order No. 10

<https://dl.dropbox.com/s/hh39jhtyhg37kz8/17128%20Attachment%20No.%205%20CBWM%20Cost%20Sharing%20Agreement%20Amendments%205-2017%20Task%20Order%20No.%2010.pdf?dl=0>

6. Task Order No. 11

<https://dl.dropbox.com/s/x6n5kw18afb005e/17128%20Attachment%20No.%206%20%20CBWM%20Cost%20Sharing%20Agreement%20Amendments%205-2017%20Task%20Order%20No.%2011.pdf?dl=0>

7. Task Order No. 12

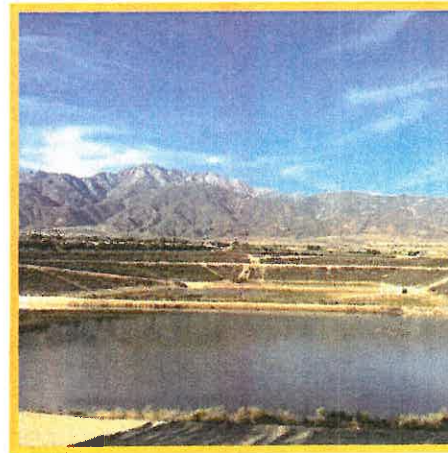
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IEUA/CBWM

New and Amended Task Orders

Recharge Master Plan Update (RMPU)



Amendment/Task Order Overview

- Authorize the following new and amended task orders for the RMPU projects:

Task Order	Description	Total Budget	Available Grants	Watermaster's Share	IEUA's Share
TO1 (Amend. 3)	Reduces the total budget and scope due to deferred projects and separated task orders	\$497,000	-	\$497,000	-
TO2 (Amend. 1)	Increase scope and budget of Lower Day	\$4,008,000	\$1,125,000	\$2,883,000	-
TO8 (Amend. 2)	Adjust the cost share due to grant funding	\$6,460,000	\$1,125,000	\$2,667,500	\$2,667,500
TO9 (new)	Separate design and construction of Wineville/Jurupa/RP-3 Basins	\$16,482,900	\$8,541,450	\$7,554,135	\$387,315
TO10 (new)	Separate design and construction of Victoria Basin	\$168,800	-	\$84,400	\$84,400
TO11 (new)	Separate design and construction of Montclair Basin	\$1,788,100	-	\$1,788,100	-
TO12 (new)	Separate design and construction of CSI Basin	\$966,000	-	\$966,000	-
Total		\$30,370,800	\$10,791,450	\$16,440,135	\$3,139,215

- The above Task Orders are a part of an executed Master Agreement between Watermaster/IEUA on the implementation and cost sharing of multiple recharge improvement projects

Overview of Task Order Changes

Re-defined Scope

Completed Preliminary Design

- Nov 2016
- Stantec and Scheevel Eng.

Refined scope and budget

Deferred Projects

Identified insufficient stormwater benefit

- East Declez, Ely Basin, Turner, and Declez Basin

Basin property not available

- Lower San Sevaine Basin and Sierra basin

Available Grants

Previous Task Orders included \$750K in grants

Adding over \$10.15 M in grants

\$10.9 M total in grants

- \$8.5 M SWRCB
- \$1.0 M USBR

Watermaster's share \$16.4M

IEUA's share \$3.2M

- Watermaster's Pool Member Board to approve on May 25

Recommendation

- Approve and Authorize the execution of the following:
 - a. Task Order No. 1 (Amendment No. 3) – RMPU Design Project
 - b. Task Order No. 2 (Amendment No. 1) – Lower Day Basin
 - c. Task Order No. 8 (Amendment No. 2) – San Sevaine Basin
 - d. Task Order No. 9 (new) – Wineville/Jurupa/RP-3 Basins
 - e. Task Order No. 10 (new) – Victoria Basin
 - f. Task Order No. 11 (new) – Montclair Basin
 - g. Task Order No. 12 (new) – CSI Basin
- Authorize the General Manager to finalize and execute these task order amendments and new task orders subject to non-substantive changes.

The approval to amend and execute these new task orders are consistent with IEUA's **Business Goal of Water Reliability** specifically the Groundwater Recharge Objective where IEUA will maximize groundwater recharge projects in the region through strategic, cost-effective partnerships and development.

INFORMATION

ITEM

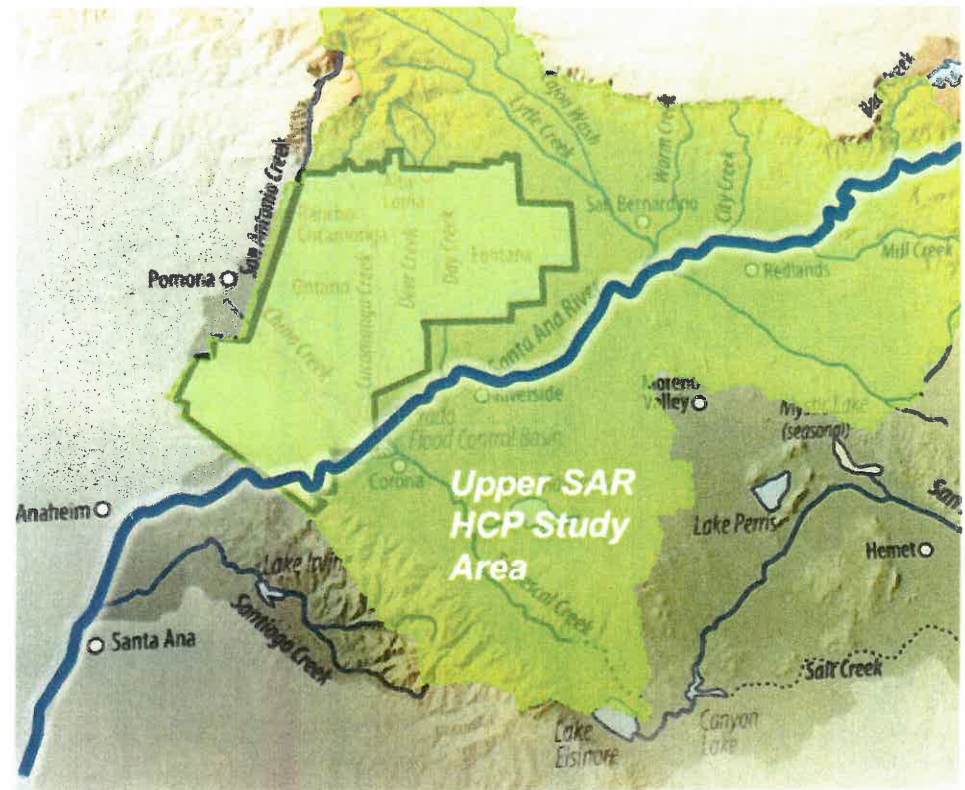
2A

Upper SAR Habitat Conservation Plan & River Model Update FY 2016/17



Upper Santa Ana River Habitat Conservation Plan

- Includes Areas with:
 - Covered Activities
 - Covered Species
 - Conservation Activities
- 863,000 Acres
- Includes all recharge basins within Chino Basin
- Jointly funded by IEUA & Chino Basin Watermaster



Upper Santa Ana River Habitat Conservation Plan

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

Upper Santa Ana River Habitat Conservation Plan Schedule

	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Habitat Conservation Plan												
Introduction	■	■										
Covered Activities	■	■										
Plan Area and Biological Resources	■	■										
Potential Take and Impact		■	■									
Conservation Program		■	■									
Implementation			■									
Monitoring and Adaptive Management			■	■								
Funding			■	■								
Alternatives			■	■								
Administrative Drafts (2)	■	■	■	■	■	■						
Public Draft (60-day review period)						■	■					
Final								■	■			
USFWS Consultation & Decision								■	■	■		
EIS/EIR												
NOI and Public Scoping		■	■									
Administrative Drafts (2)				■	■	■						
Public Draft (60-day review period)						■	■					
Final								■	■			
Record of Decision										■		

Santa Ana River Model

Develop an Integrated Santa Ana River (SAR) Model to:

- Predict the SAR flow (groundwater and surface water interaction)
- Provide biological effects analysis of HCP Covered Activities and proposed projects that may have cumulative long-term effects on SAR
- Capability to analyze any future projects not currently in the HCP
- Study to be cost shared equally by:
 - Inland Empire Utilities Agency (IEUA),
 - Orange County Water District (OCWD),
 - San Bernardino Valley Municipal Water District (Valley District), and
 - Western Municipal Water District (WMWD)
- Geoscience – selected as the consultant
- Cost share: \$245,003 (IEUA/CBWM cost share TBD)

Santa Ana River Model

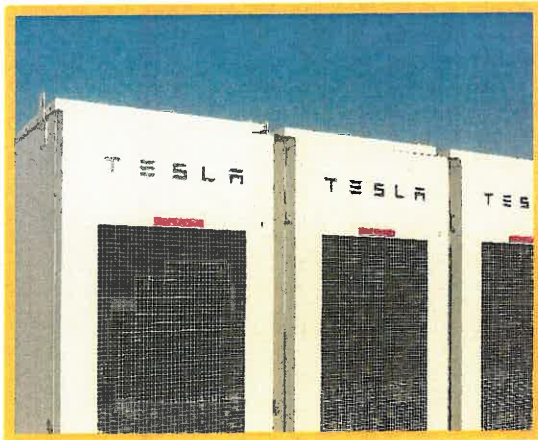
- Issues to consider moving forward:
 - Integration with results from the Prado Adaptive Management Plan

INFORMATION

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2B

California Data Collaborative Membership Update

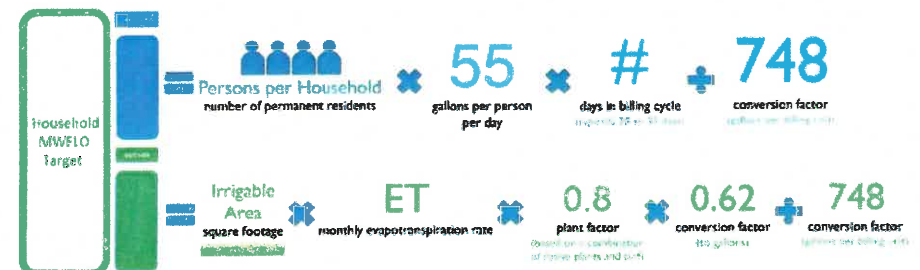


Model & Inform Statewide Water Use Efficiency Policy

- Analyzed Gov. Brown's May 2016 Long-Term Water Use Efficiency framework
- Outdoor imagery analysis to develop outdoor landscape area estimates
- Collaboration with:



*The Graduate University of
The Claremont Colleges*

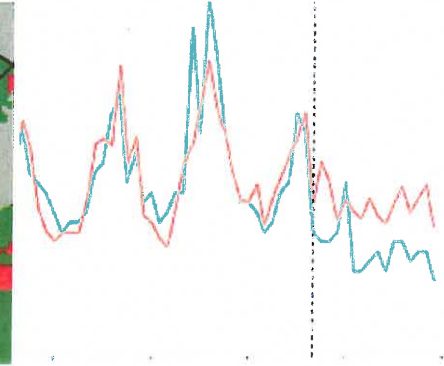


Integrate Data Across Utilities

- Developed a cloud-based secure infrastructure
 - Data “clean up”
 - Identified and evaluated gaps
 - Automated monthly use/billing data uploads
- Data can be easily shared with researchers
 - Requires GM’s signed consent
- Partners’ data incorporated into all dashboards and tools

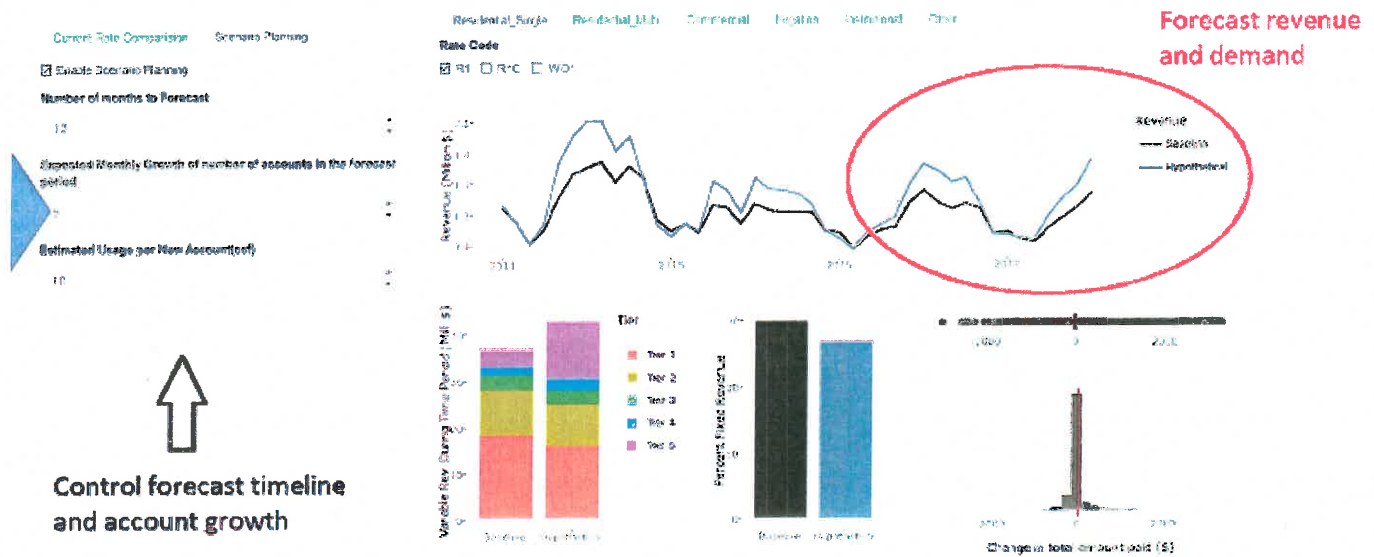
Data-Driven Demand Management

- Turf-grass rebate program evaluation
 - Analysis of customer participation/\$
 - Aerial imagery analysis of spill-over participation
 - Partnering with CivicSpark Water Fellows for customer preference survey



Support Revenue Stability

- Interactive rate modeling tool
 - Changes in revenue as compared to existing structure
 - Enables side-by-side comparison of Tiered Rates vs. Flat Rates vs. Budget Based Rates structures
 - Highlights which customer classes would be impacted by proposed changes



Accomplishments & Next Steps

- Data infrastructure architecture built
- Rates model deployed
- Modeled Statewide water use efficiency targets for the State
- Turf program econometric evaluation published
- Hosted CA Water Data Conference at Stanford
- Recognition:
 - White House 2016 Water Summit
 - Featured in Harper's Magazine
 - Participated in CA Senate Panel for open and transparent data re: SB272 (Hertzberg)
- Moving from start up to annual membership, effective June 2017

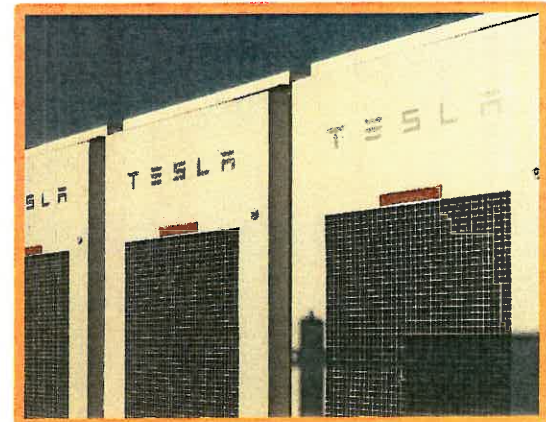
INFORMATION

ITEM

2C

Engineering and Construction Management Project Updates

Board Meeting



EN11031 – RP-5 Flow Equalization

- Contractor: SCW Contracting
- Current Contract (Construction): \$945 K
- Total Project Budget: \$3.4 M
- Project Completion: June 2017
- Percentage Complete: 15%
- Scope of Work:
 - Install level transmitters
 - Replace chemical pumps
 - Concrete repair and coating at chemical facility
- Current Activities:
 - Chemical pump removal and replacement
 - Chemical facility concrete repair and coating
- Focus Points:
 - Install and test new pumps



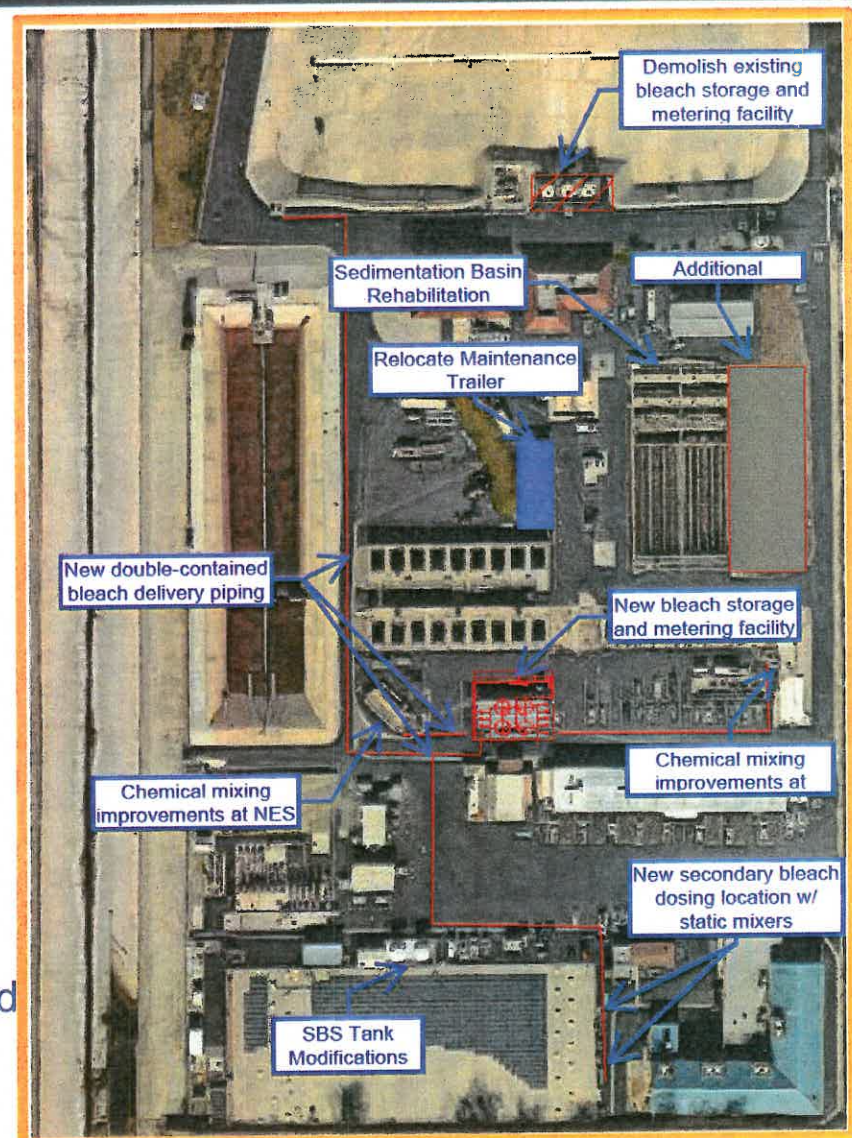
Replace Existing SHS Pumps



Inlet Structure

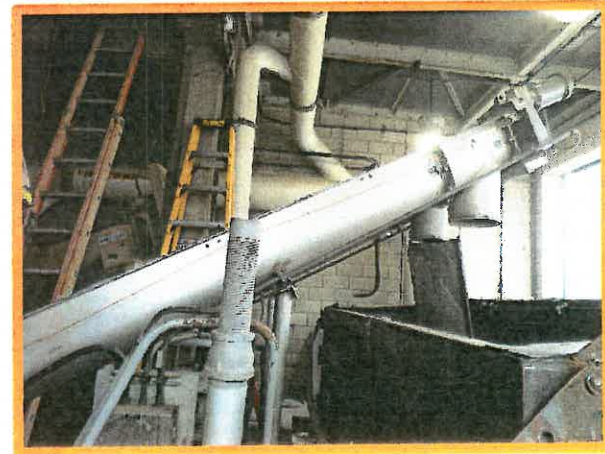
EN11039 – RP-1 Disinfection Pump Improvements

- Design Engineer: Carollo Engineers
- Current Contract (Design): \$498 K
- Total Project Budget: \$1.3 M
- Project Completion: August 2018
- Percentage Complete: 30%
- Scope of Work:
 - Chemical containment area relocation
 - New chemical feed systems
 - New/upgraded chemical dosing locations
- Current Activities:
 - 30% Design submittal received
 - Beginning 50% design
 - Potholing and surveying
- Focus Points:
 - 50% Design Development, site survey , and underground investigation

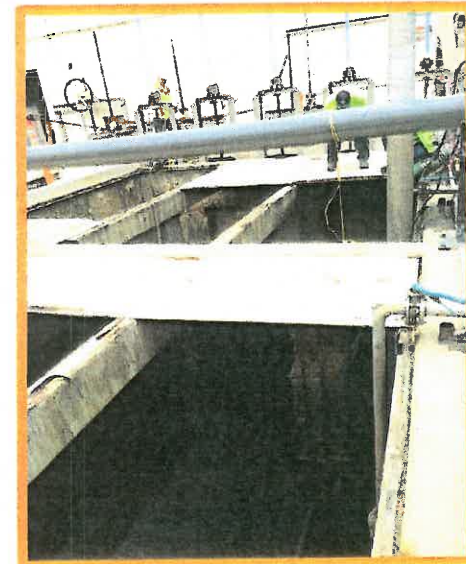


EN14019 – RP-1 Headworks Primary and Secondary Upgrades

- Design Engineer: RMC Water and Environment
- Current Contract (Design): \$819 K
- Total Project Budget: \$10.4 M
- Project Completion: October 2018
- Percentage Complete: 85%
- Scope of Work:
 - Rehabilitate the grit removal systems
 - Install submersible scum pumps and mixer
 - Design a bypass for System C flow meter
- Current Activities:
 - Final design complete
 - Advertise to bid
- Focus Points:
 - Improve the quality of I& C drawings



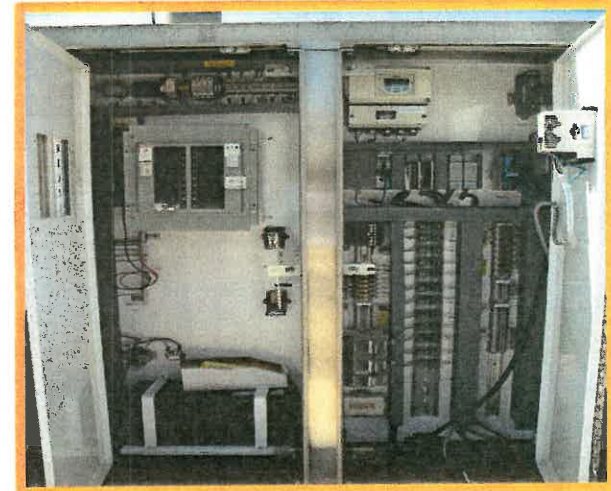
Grit Processing Equipment



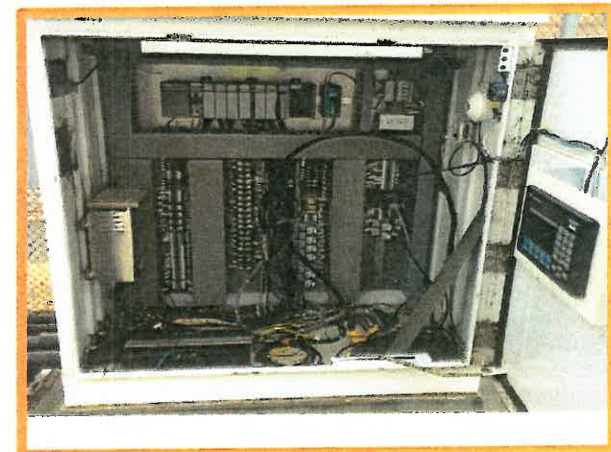
Corroded Concrete

EN14047 – SCADA Control Upgrades

- Contractor: Trimax
- Current Contract (Construction): \$251 K
- Total Project Budget: \$932 K
- Project Completion: June 2017
- Percentage Complete: 85%
- Scope of Work:
 - Replace rubber dam system and controllers at five recharge basins
 - Upgrade remote interface system
- Current Activities:
 - Import upgraded SCADA application onto IEUA server
 - Conduct testing
- Focus Points:
 - Finalize programming and testing of new interface screens
 - Coordinate the controller change overs at rubber dam sites



San Sevaine Turnout Control Panel



Turner Basin Control Panel

EN15012 – RP-1 Primary Effluent Conveyance Improvements

- Design Engineer: Stantec Consulting
- Current Contract (Design): 461 K
- Total Project Budget: \$1.8 M
- Project Completion: May 2019
- Percentage Complete: 2%
- Scope of Work:
 - Rehabilitation primary effluent system
 - Corrosion protection
 - Wet well decommissioning pre-design
 - Analysis for improvement of foul air system
- Current Activities:
 - Preliminary Design Report
- Focus Points:
 - Resolve discrepancy between Primary Clarifier Effluents Theoretical HGL and the field data



Exposed Rebar In Grating At Support Beam



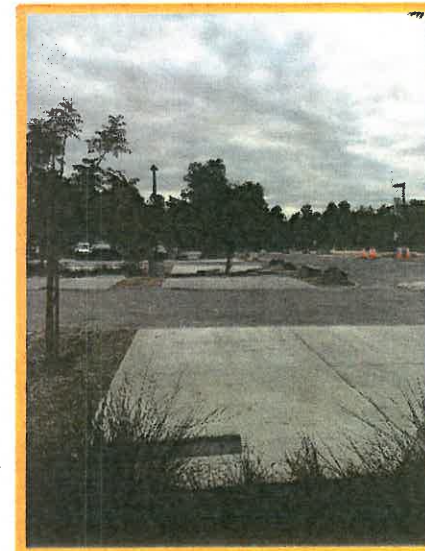
IPS Wet Well Concrete Corrosion

EN16047 – HQ Parking Lot

- Contractor: W.A. Rasic
- Current Contract (Construction): \$264 K
- Total Project Budget: \$443 K
- Project Completion: September 2018
- Percentage Complete: 96%
- Scope of Work:
 - Remove 59 ash trees
 - Replace 24 slabs (49 parking stalls)
 - Grind 85 lf of raised pavement
 - Clean 7,000 sf of permeable concrete
- Current Activities:
 - Pouring concrete on remaining slabs
 - Preparing to clean permeable concrete
- Focus Points:
 - Special Construction, Striping and Marking, Project Close-out



Slab Pour



Recently Poured Slabs and Removed Ash Trees