

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

WEDNESDAY, JUNE 14, 2023 10:00 A.M.

AGENCY HEADQUARTERS BOARD ROOM 6075 KIMBALL AVENUE, BUILDING A CHINO, CALIFORNIA 91708 VIEW THE MEETING LIVE ONLINE AT IEUA.ORG TELEPHONE ACCESS: <u>(415) 856-9169 / Conf Code: 721 323 248#</u>

The public may participate and provide public comment during the meeting by dialing the number provided above. Comments may also be submitted by email to the Recording Secretary Laura Mantilla at lmantilla@ieua.org prior to the completion of the Public Comment section of the meeting. Comments will be distributed to the Board of Directors.

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 email the Board Secretary/Office Manager prior to the public comment section or request to address the Board during the public comments section of the meeting. <u>Comments will be limited to three minutes per speaker.</u> 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.

Engineering, Operations, & Water Resources Committee June 14, 2023 Page 2

1. <u>CONSENT ITEMS</u>

A. <u>MINUTES</u>

Approve Minutes of the April 12, 2023, Engineering, Operations, and Water Resources Committee meeting.

2. ACTION ITEMS

- A. <u>RP-1 HEADWORKS BIOFILTER CONSTRUCTION CONTRACT AWARD</u> Staff recommends that the Committee/Board:
 - 1. Award a construction contract for the RP-1 Headworks Biofilter Construction Contract Award, Project No. EN23088.05, to T.E. Roberts, for the amount of \$479,100.70; and
 - 2. Authorize the General Manager to execute the construction contract subject to non-substantive changes.
- B. <u>VARIABLE FREQUENCY DRIVE REPLACEMENT (RECYCLED WATER)</u> Staff recommends that the Committee/Board:
 - 1. Award a construction contract for the Old Variable Frequency Drive Replacement (Recycled Water), Project No. AM23002, to Big Sky Electric Co., Inc., in the amount of \$242,600; and
 - 2. Authorize the General Manager to execute the contract, subject to nonsubstantive changes.

C. <u>EMERGENCY AND SMALL CONSTRUCTION PROJECT CONTRACT</u> <u>AWARDS</u>

Staff recommends that the Committee/Board:

Award three-year Emergency Master Contracts with four one-year 1. extension options to the following 38 Contractors: Allison Mechanical, Arizona Pipeline Company, Athena Engineering, Inc., Best Contracting, Inc., Big Sky Electric, Inc., CertaPro Painters, Charles King Company, Inc., Davis Electric Inc., Diversified Thermal Services, Inc., E.J. Meyer Company, Ferreira Construction Co, Inc., FM Thomas Air Conditioning, Garney Pacific, Inc., GSE Construction Co., Inc., Hampton Tedder Electric Company, Hemet Mfg Co. Inc dba Genesis Construction, Henkels & McCoy, Horizons Construction Company Int'l, Inc., Howard Ridley Co., Inc., Innovative Construction Solutions, JF Shea, J.R. Filanc Construction Co, Inc., Kiewitt Infrastructure West Co., Kingmen Construction, Inc., Leed Electric, Inc., Mladen Buntich Construction Co., Inc., Norstar Plumbing and Engineering, Inc., Pacific Hydrotech Corporation, PCL Construction, Inc., Rite-Way Roof Corporation, Sancon Technologies, Inc., SCW Contracting Corporation, SoCal Pacific Construction Corp dba National Coating & Lining, Southern Contracting Company, T.E. Roberts, Inc., Tony Painting, United Mechanical Contractors, Inc., W.A. Rasic Construction Company, Inc.; and

- 2. Award three-year Small Construction Project Master Contracts with four one-year extension options with an aggregate total of \$10,000,000 to the following 37 Contractors: Allison Mechanical, Arizona Pipeline Company, Athena Engineering, Inc., Best Contracting, Inc., Big Sky Electric, Inc., CertaPro Painters, Charles King Company, Inc., CSI Electrical Contractors, Inc., Davis Electric Inc., Diversified Thermal Services, Inc., E.J. Meyer Company, Ferreira Construction Co, Inc., FM Thomas Air Conditioning, Garney Pacific, Inc., GSE Construction Co., Inc., Hampton Tedder Electric Company, Hemet Mfg Co. Inc dba Genesis Construction, Henkels & McCoy, Horizons Construction Company Int'l, Inc., Howard Ridley Co., Inc., Innovative Construction Solutions, JF Shea, J.R. Filanc Construction Co, Inc., Kingmen Construction, Inc., Leed Electric, Inc., Mladen Buntich Construction Co., Inc., Norstar Plumbing and Engineering, Inc., Pacific Hydrotech Corporation, PCL Construction, Inc., Rite-Way Roof Corporation, Sancon Technologies, Inc., SCW Contracting Corporation, SoCal Pacific Construction Corp dba National Coating & Lining, Southern Contracting Company, T.E. Roberts, Inc., Tony Painting, United Mechanical Contractors, Inc., W.A. Rasic Construction Company, Inc.; and
- 3. Authorize the General Manager to execute the contracts, subject to non-substantive changes.

3. INFORMATION ITEMS

A. <u>ENGINEERING AND CONSTRUCTION MANAGEMENT DEPARTMENT</u> <u>PROJECT UPDATES (POWERPOINT)</u>

RECEIVE AND FILE INFORMATION ITEMS

B. <u>RP-5 EXPANSION PROJECT UPDATE JUNE 2023 (POWERPOINT)</u>

- 4. GENERAL MANAGER'S COMMENTS
- 5. <u>COMMITTEE MEMBER COMMENTS</u>
- 6. <u>COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS</u>

ADJOURN

DECLARATION OF POSTING

I, Denise Garzaro, CMC, Board Secretary/Office Manager of the Inland Empire Utilities Agency^{*}, a Municipal Water District, hereby certify that, per Government Code Section 54954.2, a copy of this agenda has been posted at the Agency's main office, 6075 Kimball Avenue, Building A, Chino, CA and on the Agency's website at <u>www.ieua.org</u> at least seventy-two (72) hours prior to the meeting date and time above.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Board Secretary at (909) 993-1736 or <u>dgarzaro@ieua.org</u>, 48 hours prior to the scheduled meeting so that IEUA can make reasonable arrangements to ensure accessibility.

Engineering, Operations, and Water Resources Committee

CONSENT ITEM **1A**



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

WEDNESDAY, APRIL 12, 2023 10:00 A.M.

COMMITTEE MEMBERS PRESENT

Michael Camacho, Chair Marco Tule, Director

STAFF PRESENT

Shivaji Deshmukh, P.E., General Manager Christiana Daisy, P.E., Deputy General Manager Kristine Day, Assistant General Manager Adham Almasri, Principal Engineer Jerry Burke, Director of Engineering Lucia Diaz, Manager of Facilities & Water System Programs Karen Ferrer Chairez, Assistant Engineer Christian Gomez, Associate Engineer Brandon Gonzalez Contreras, Technology Specialist I Michael Hurley, Director of Policy and Resources Joel Ignacio, Senior Engineer Randy Lee, Acting Director of Finance Scott Lening, Manager of Operations Laura Mantilla, Executive Assistant Jason Marseilles, Manager of Engineering Pierre Cayatte, Senior Engineer Vicky Salazar, Senior Associate Engineer Steven Smith, Acting Groundwater Recharge Supervisor Travis Sprague, Principal Engineer Jeff Ziegenbein, Acting Director of Operations and Maintenance Jamal Zughbi, Senior Engineer/Project Manager

STAFF PRESENT via Video/Teleconference

Arin Boughan, Compost Facility Superintendent Javier Chagoyen-Lazaro, Director of Finance Jennifer Hy-Luk, Executive Assistant Cathy Nhothsavath, Associate Engineer Monica Nelson, Administrative Assistant II Teresa Velarde, Manager of Internal Audit Ryan Ward, Associate Engineer Brian Wilson, Principal Engineer Ashley Womack, Grants and Government Affairs Officer Engineering, Operations, and Water Resources Committee April 12, 2023 Page 2

CALL TO ORDER

Committee Chair Michael Camacho called the meeting to order at 10:00 a.m. There were no public comments received or additions to the agenda.

1A – 1B. CONSENT ITEMS

The Committee:

- Approved Minutes of the March 8, 2023 Engineering, Operations, and Water Resources Committee meeting.
- Recommended that the Board:
 - 1. Award a design consultant contract for the Central Plant Cooling Tower Replacement, Project No. EN23003, to IDS Group, Inc.; for the not-to-exceed amount of \$263,984; and
 - 2. Authorize the General Manager to execute the contract, subject to nonsubstantive changes.

as a Consent Calendar item on the April 19, 2023 Board meeting agenda.

2A – 2C. ACTION ITEMS

The Committee:

- Recommended that the Board:
 - 1. Approve a contract amendment for the Regional Plant No. 1 Solids Thickening Building, Project No. EN22044, to Carollo Engineering Inc., for a not-to-exceed amount of \$351,112, increasing the contract from \$14,557,895 to \$14,909,007 (2.4% increase); and
 - 2. Authorize the General Manager to execute the contract amendment, subject to non-substantive changes;
- and
- 1. Award a construction contract for the RP-1 TP Building Water Piping Upgrades, Project No. EN13016.06 to W.A. Rasic Construction Company, Inc. in the amount of \$150,888; and
- 2. Authorize the General Manager to approve and execute the master service contract, subject to non-substantive changes;
- ♦ and
- Approve a FY (Fiscal Year) 2022/23 project budget augmentation for the Regional System Asset Management Project, No. EN19024, in the amount of \$282,283 from \$414,297 to \$696,580 (68% increase) on the Regional Operations and Maintenance (10800) Fund; and
- 2. Authorize the General Manager to approve the budget augmentation;

Engineering, Operations, and Water Resources Committee April 12, 2023 Page 3

as Consent Calendar items on the April 19, 2023 Board meeting agenda.

3A – 3D. INFORMATION ITEMS

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

- Operations and Maintenance Department Quarterly Update
- Recycled Water Groundwater Recharge Update
- RP-5 Expansion Project Update
- Engineering and Construction Management Project Updates

4. GENERAL MANAGER'S COMMENTS

General Manager Shivaji Deshmukh stated that IERCF recently hosted tours for approximately 50 environmental science students from Mt. San Jacinto College.

General Manager Deshmukh reported that on April 11, the US Bureau of Reclamation released the draft Supplemental Environmental Impact Statement (SEIS) that evaluates two options for responding to ongoing shortage conditions (in addition to a no project option). One option would reduce deliveries to all states according to a long-established water rights system based on seniority. Among the lower basin States, California has seniority over Arizona and Nevada, which is because California put in early claims for the water over a century ago. The other option would reduce deliveries evenly among all basin states – each state would instead reduce deliveries by the same percentage. He added that if enacted this option would greatly reduce California's allocation of Colorado River water supplies. While the draft analysis does not favor either of the two options, a decision could be made as soon as this summer. Metropolitan Water District responded to the draft SEIS in a press release, calling for continued collaboration to find a third option – stating that neither option is ideal. Staff is tracking this item and will keep the Board updated.

5. COMMITTEE MEMBER COMMENTS

There were no Committee member comments.

6. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS

Director Tule requested additional information regarding the Arc Flash incident and audit program. He also asked for a presentation regarding the current training schedule as well as the current tribology, greasing and lubrication schedule and practices.

ADJOURNMENT

With no further business, Committee Chair Camacho adjourned the meeting 10:58 a.m.

Respectfully submitted,

Laura Mantilla Recording Secretary

*A Municipal Water District

APPROVED: JUNE 14, 2023

Engineering, Operations, and Water Resources Committee

ACTION ITEM **2A**



Date: June 21, 2023

To: The Honorable Board of DirectorsFrom: Shivaji Deshmukh, General ManagerCommittee: Engineering, Operations & Water Resources06/14/23

120

Staff Contact:Christiana Daisy, Deputy General ManagerSubject: RP-1 Headworks Biofilter Construction Contract Award

Executive Summary:

Regional Recycling Plant No. 1 (RP-1) Headworks Biofilter was in the process of having its media replaced. After media removal, some of the holes in the concrete slab were found to be plugged. Concrete surface deterioration is the apparent and most likely contributor to the plugging of the holes. After internal evaluation of potential options to minimize future plugging of the holes, Inland Empire Utilities Agency (IEUA) decided that the remediation would include cleaning the plugged holes, coating the concrete floors and walls prior to placing the new media on and placing the biofilter back in service.

On February 23, 2023, IEUA issued an invitation for bids to the pre-qualified contractors on the under \$2 million list. On March 30, 2023, one construction bid was received. T.E. Robert's was the responsive, responsible bidder, with a bid price of \$479,100.70. The engineer's estimate was \$350,000.

Staff's Recommendation:

1. Award a construction contract for the RP-1 Headworks Biofilter Construction Contract Award, Project No. EN23088.05, to T.E. Roberts, for the amount of \$479,100.70; and

2. Authorize the General Manager to execute the construction contract subject to non-substantive changes.

Budget Impact Budgeted (Y/N): Y Amendment (Y/N): N Amount for Requested Approval:

Account/Project Name:

EN23088.05/RP-1 Headworks Biofilter

Fiscal Impact (explain if not budgeted):

The project has an approved FY22/23 budget of \$1,265,000 and an approved total project budget of \$1,265,000 in the Regional Operations and Maintenance (10800) Fund. The funding sources for the project include: sewer rates, property taxes, and capital replacement reserves.

Prior Board Action:

None.

Environmental Determination:

Statutory Exemption

CEQA exempts a variety of projects from compliance with the statute. This project qualifies for the Common Sense Exemption as defined in Section 15061(b)(3) of the State CEQA Guidelines.

Business Goal:

The RP-1 Headworks Biofilter Project is consistent with the IEUA's Business Goal of Wastewater Management, specifically the Air Quality Management District (AQMD) objectives that IEUA will ensure that systems are in compliance with South Coast AQMD requirements to properly treat foul air to protect public health, the environment, and meet anticipated regulatory requirements.

Attachments:

Attachment 1 - PowerPoint Attachment 2 - Construction Contract

Attachment 1



RP-1 Headworks Biofilter Coating Construction Contract Award Project No. EN23088.05

Alan Lau, PE Senior Associate Engineer June 2023

Location



Inland Empire Utilities Agency

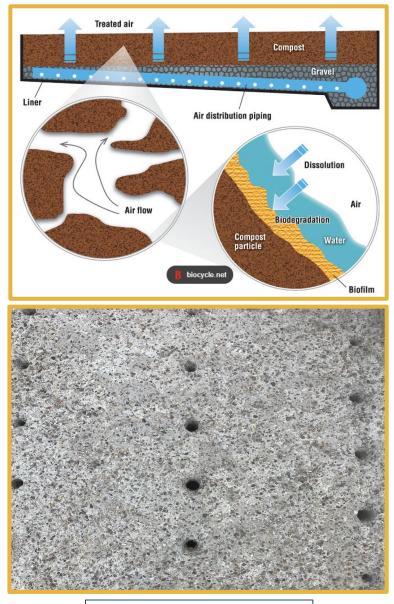
Background

Asset Condition

- -Biofilter removes H2S
- -Media oxidizes the odor
- -Perforated holes plugged
- -Condition assessment conducted



Removal of Media in Biofilter (left) and Plugged Perforated Holes (right)



Perforated Holes Unplugged



Scope

- Headworks Biofilter
- Replace/rehab:
 - -Coat walls and floors
 - -Unplug any plugged holes



Concrete Floors and Walls







Contractor Selection

- Pre-qualified Contractors under \$2 million list
- PlanetBids solicitation posted on February 23, 2023
 —35 calendar days (20 workdays)
- One bid received \$623,229.49
- Staff negotiated to a final price of \$479,100.70
- T.E. Roberts was the lowest, responsive, responsible bidder

Bidder's Name	Total
T.E. Roberts	\$479,100.70
Engineer's	s Estimate \$350,000



Project Budget and Schedule

Description	Estimated Cost
Construction Services	\$47,900
IEUA Construction Services (~10%)	\$47,900
Construction	\$527,000
Construction (this action)	\$479,100
Contingency (~10%)	\$47,900
Total Project EN23088.05 Budget	\$574,900
Total Subprojects EN23088.00-EN23088.04 Costs	\$690,000
Total Project Costs	\$1,074,900
Total Project Budget	\$1,265,000

Project Milestone	Date
Construction	
Construction Contract Award	June 2023
Construction Completion	September 2023



Staff's Recommendation

- Award a construction contract for the RP-1 Headworks Biofilter Construction Contract Award, Project No. EN23088.05, to T.E. Roberts, for the amount of \$479,100.70; and
- 2. Authorize the General Manager to execute the construction contract subject to non-substantive changes.

RP-1 Headworks Biofilter Coating Project is consistent with the *IEUA's Business Goal of Wastewater Management*, specifically the Asset Management and Water Quality objectives that IEUA will ensure that systems are well maintained, upgraded to meet evolving requirements, sustainably managed, and accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.



MUNICIPAL WATER DISTRI

Attachment 2

CONTRACT NUMBER: 4600003364

RP-1 Headworks Biofilter Coating

1.0 CONTRACT

THIS CONTRACT made and entered into this 21st day of June, 2023, by and between T.E. Roberts, Inc., hereinafter referred to as "CONTRACTOR," and The Inland Empire Utilities Agency, a Municipal Water District, located in San Bernardino County, California, hereinafter referred to as "IEUA".

WITNESSETH:

That for and in consideration of the promises and agreements hereinafter made and exchanged, IEUA and the CONTRACTOR agree as follows:

- A. CONTRACTOR agrees to perform and complete in a workmanlike manner, all Work required under these Bid Documents FOR <u>IFB-JV-23-002, Project No.</u> <u>EN23088.05, RP-1 Headworks Biofilter Coating</u> in accordance with the Bid Documents, and to furnish at their own expense, all labor, materials, equipment, tools, and services necessary, except such materials, equipment, and services as may be stipulated in said Bid Documents to be furnished by IEUA, and to do everything required by this Contract and the said Bid Documents.
- **B.** For furnishing all said labor, materials, equipment, tools, and services, furnishing and removing all plant, temporary structures, tools and equipment, and doing everything required by this Contract and said Bid Documents; also for all loss and damage arising out of the nature of the Work aforesaid, or from the action of the elements, or from any unforeseen difficulties which may arise during the prosecution of the Work until its acceptance by IEUA, and for all risks of every description connected with the Work; also for all expenses resulting from the suspension or discontinuance of Work, except as in the said Bid Documents are expressly stipulated to be borne by IEUA; and for completing the Work in accordance with the requirements of said Bid Documents, IEUA will pay and said CONTRACTOR shall receive, in full compensation therefore, the price(s) set forth in this Contract.
- C. That IEUA will pay the CONTRACTOR progress payments and the final payment, in accordance with the provisions of the Contract Documents, with warrants drawn on the appropriate fund or funds as required, at the prices bid in Section 4 Forms, Bid Price Schedule & Bid Forms, and accepted by IEUA, and set forth in this below.

Total Bid Price: \$479,100 Dollars and 70 Cents.

D. IEUA hereby employs the CONTRACTOR to perform the Work according to the

terms of this Contract for the above-mentioned price(s), and agrees to pay the same at the time, in the manner, and upon the conditions stipulated in the said Bid Documents; and the said parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to the full performance of the covenants herein contained.

- E. The Notice Inviting Bids, Instructions to Bidders, Bid Forms, Information Required of Bidder, Performance Bond, Payment Bond, Contractor's License Declaration, Specifications, Drawings, all General Conditions, Special Conditions, and all Project Requirements, and all Addenda issued by IEUA with respect to the foregoing prior to the opening of bids, are hereby incorporated in and made part of this Contract, as if fully set forth.
- F. The CONTRACTOR agrees to commence Work under this Contract on or before the date to be specified in a written "Notice To Proceed" and to complete said Work to the satisfaction of IEUA September 30, 2023. All Work shall be completed before final payment is made.
- **G.** Time is of the essence on this Contract.
- H. CONTRACTOR agrees that in case the Work is not completed before or upon the expiration of the Contract Time, damage will be sustained by IEUA, and that it is and will be impracticable to determine the actual damage which IEUA will sustain in the event and by reason of such delay, and it is therefore agreed that the CONTRACTOR shall pay to IEUA the amounts as set forth in Section 2 – General Information, S., Liquidated Damages for each day of delay, which shall be the period between the expiration of the Contract Time and the date of final acceptance by IEUA, as liquidated damages and not as a penalty. It is further agreed that the amount stipulated for liquidated damages per day of delay is a reasonable estimate of the damages that would be sustained by IEUA, and the CONTRACTOR agrees to pay such liquidated damages as herein provided. In case the liquidated damages are not paid, the CONTRACTOR agrees that IEUA may deduct the amount thereof from any money due or that may become due to the CONTRACTOR by progress payments or otherwise under the Contract, or if said amount is not sufficient, recover the total amount.
- I. In addition to the liquidated damages, which may be imposed if the CONTRACTOR fails to complete the Work within the time agreed upon, IEUA may also deduct from any sums due or to become due to the CONTRACTOR, penalties and fines for violations of applicable local, state, and federal law.
- **J.** That the CONTRACTOR shall carry Workers' Compensation Insurance and require all subcontractors to carry Workers' Compensation Insurance as required by the California Labor Code.

- **K.** That the CONTRACTOR shall have furnished, prior to execution of the Contract, two bonds approved by IEUA, one in the amount of one hundred (100) percent of the Contract Price, to guarantee the faithful performance of the Work, and one in the amount of one hundred (100) percent of the Contract Price to guarantee payment of all claims for labor and materials furnished.
- L. The CONTRACTOR hereby agrees to protect, defend, indemnify and hold IEUA and its employees, agents, officers, directors, servants and volunteers free and harmless from any and all liability, claims, judgments, costs and demands, including demands arising from injuries or death of persons (including employees of IEUA and the CONTRACTOR) and damage to property, arising directly or indirectly out of the obligation herein undertaken or out of the operations conducted by the CONTRACTOR, its employees agents, representatives or subcontractors under or in connection with this Contract to the extent permitted by law.

The CONTRACTOR further agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands or suit at the sole expense of the CONTRACTOR

IN WITNESS WHEREOF, The CONTRACTOR and the General Manager of Inland Empire Utilities Agency^{*}, thereunto duly authorized, have caused the names of said parties to be affixed hereto, each in duplicate, the day and year first above written.

M. The CONTRACTOR, by signing the contract does swear under penalty of perjury that no more than one final unappeasable finding of contempt of court by a Federal court has been issued against the CONTRACTOR within the immediately preceding two year period because of the CONTRACTOR's failure to comply with an order of a Federal court which orders the CONTRACTOR to comply with an order of the National Labor Relations Board (Public Contract Code 10296).

Inland Empire Utilities Agency*, San Bernardino County, California. CONTRACTOR

Ву _____

Shivaji Deshmukh General Manager

Title

* A Municipal Water District

Ву ____

Engineering, Operations, and Water Resources Committee

ACTION ITEM **2B**



Date: June 21, 2023

To: The Honorable Board of DirectorsFrom: Shivaji Deshmukh, General ManagerCommittee: Engineering, Operations & Water Resources06/14/23

SOD

Executive Contact: Christiana Daisy, Deputy General ManagerSubject: Variable Frequency Drive (VFD) Replacement (Recycled Water)

Executive Summary:

The Recycled Water pump stations at Regional Recycling Plant No. 1 (RP-1) provide recycled water to the 930, 1050 and 1158 pressure zones for direct use by Inland Empire Utilities Agency (IEUA) customers. The pump stations currently have five 17 year-old variable frequency drives (VFDs) approaching the end of their useful lives. The purpose of this project is to upgrade the pump stations' VFDs to current agency standards in order to improve operational and maintenance consistency, reliability, and flexibility.

On December 13, 2022, IEUA issued an invitation for bids to the pre-qualified electrical contractors on the under \$2 million list. On April 19, 2023, one construction bid was received. Big Sky Electric Co., Inc. was the responsive, responsible bidder, with a bid price of \$242,600. The engineer's estimate was \$500,000.

Staff's Recommendation:

1. Award a construction contract for the Old Variable Frequency Drive Replacement (Recycled Water), Project No. AM23002, to Big Sky Electric Co., Inc., in the amount of \$242,600; and

2. Authorize the General Manager to execute the contract, subject to non-substantive changes.

Budget Impact Budgeted (Y/N): Y Amendment (Y/N): N Amount for Requested Approval:

Account/Project Name:

RP-1 Variable Frequency Drive (VFD) Replacement (Recycled Water)

Fiscal Impact (explain if not budgeted):

The project has an approved FY22/23 budget of \$250,000 and an approved total project budget of \$1,350,000 in the Recycled Water (10600) Fund. This action is covered by the approved budget. The funding sources for the project include: recycled water rates and property taxes.

Prior Board Action: None.

Environmental Determination:

Statutory Exemption

CEQA exempts a variety of projects from compliance with the statute. This project qualifies for the Common Sense Exemption as defined in Section 15061(b)(3) of the State CEQA Guidelines.

Business Goal:

Old Variable Frequency Drive (VFD) Replacement Project is consistent with IEUA's Business Goal of Wastewater Management specifically the Asset Management objective that IEUA will ensure the treatment facilities are well maintained, upgraded to meet evolving requirements, sustainability managed, and can accommodate changes in regional water use.

Attachments:

Attachment 1 - PowerPoint Attachment 2 - Construction Contract

Attachment 1



Variable Frequency Drive (VFD) Replacement (Recycled Water) Construction Contract Award Project No. AM23002

Kevin Asprer, PE Senior Associate Engineer - PE June 2023

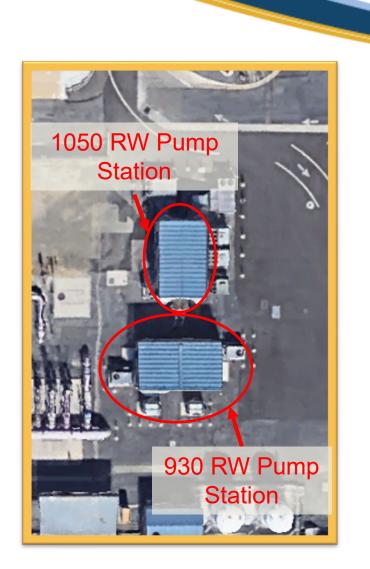
Project Location (City of Ontario)





Project Background

- 8 Existing Recycled Water pumps
- 930 Recycled Water (RW) Pump Station 5 pumps and VFDs
- The 1050 Recycled Water (RW) Pump Station 3 pumps and VFDs
- 5 VFDs are approaching the end of useful life



Inland Empire Utilities Agency

Variable Frequency Drive (VFD)

What is a VFD?

- Accelerator
- Adjusts speed
- Improves efficiency
- Provides flexibility
- Conserves electricity
- Prolongs motor life



Inland Empire Utilities Agency

A MUNICIPAL WATER DISTR

Variable Frequency Drive (VFD)

The Project

- Retrofit 5 outdated VFDs
 - -930 RW Pump Station
 - Pump #2
 - Pump #3
 - Pump #4
 - Pump #5
 - -1050 RW Pump Station
 - Pump #3
- Includes configuration and startup



Inland Empire Utilities Agency

A MUNICIPAL WATER DISTRIC

930 RW Variable Frequency Drive (VFD)

Contractor Selection

- Pre-qualified Contractors under \$2 million list
- PlanetBids Solicitation Posted on December 13, 2022
 - -127 calendar days
 - -One bid was received on April 19, 2023
- Big Sky Electric Inc.: Lowest, responsive, responsible bidder

Bidder's Name	Final Bid Amount
Big Sky Electric Inc.	\$242,600
Engineer's Estimate	\$500,000

Project Budget and Schedule

	Project Milestone	Date
)	Construction Contract	
	Construction Contract Award	June 2023
	Construction Completion	May 2024

Description	Estimated Cost AM23002
Design Services	\$16,470
IEUA Design Services (actuals)	\$16,470
Construction Services	\$24,260
IEUA Construction Services (~10%)	\$24,260
Construction	\$291,120
Construction Contract (this action)	\$242,600
Contingency (~20%)	\$48,520
Total Project Cost	\$331,850
Total Project Budget:	\$1,350,000

Inland Empire Utilities Agency

Staff's Recommendation



- Award a construction contract for the Old Variable Frequency Drive Replacement (Recycled Water), Project No. AM23002, to Big Sky Electric Co., Inc. in the amount of \$242,600; and
- 2. Authorize the General Manager to execute the contract, subject to nonsubstantive changes.

The Old Variable Frequency Drive Replacements (Recycled Water) Project is consistent with *IEUA's Business Goal of Wastewater Management,* specifically the Asset Management objective that IEUA will ensure the treatment facilities are well maintained, upgraded to meet evolving requirements, sustainability managed, and can accommodate changes in regional water use..

Attachment 2

CONTRACT NUMBER: 4600003095

Old Variable Frequency Drive Replacement (Recycled Water)

1.0 CONTRACT

THIS CONTRACT made and entered into this 21st day of June, 2023, by and between Big Sky Electric., hereinafter referred to as "CONTRACTOR," and The Inland Empire Utilities Agency, a Municipal Water District, located in San Bernardino County, California, hereinafter referred to as "IEUA".

WITNESSETH:

That for and in consideration of the promises and agreements hereinafter made and exchanged, IEUA and the CONTRACTOR agree as follows:

- A. CONTRACTOR agrees to perform and complete in a workmanlike manner, all Work required under these Bid Documents FOR <u>IFB-RW-22-028, Project No.</u> <u>AM23002, Old Variable Frequency Drive Replacement (Recycled Water)</u> in accordance with the Bid Documents, and to furnish at their own expense, all labor, materials, equipment, tools, and services necessary, except such materials, equipment, and services as may be stipulated in said Bid Documents to be furnished by IEUA, and to do everything required by this Contract and the said Bid Documents.
- **B.** For furnishing all said labor, materials, equipment, tools, and services, furnishing and removing all plant, temporary structures, tools and equipment, and doing everything required by this Contract and said Bid Documents; also for all loss and damage arising out of the nature of the Work aforesaid, or from the action of the elements, or from any unforeseen difficulties which may arise during the prosecution of the Work until its acceptance by IEUA, and for all risks of every description connected with the Work; also for all expenses resulting from the suspension or discontinuance of Work, except as in the said Bid Documents are expressly stipulated to be borne by IEUA; and for completing the Work in accordance with the requirements of said Bid Documents, IEUA will pay and said CONTRACTOR shall receive, in full compensation therefore, the price(s) set forth in this Contract.
- C. That IEUA will pay the CONTRACTOR progress payments and the final payment, in accordance with the provisions of the Contract Documents, with warrants drawn on the appropriate fund or funds as required, at the prices bid in Section 4 Forms, Bid Price Schedule & Bid Forms, and accepted by IEUA, and set forth in this below.

Total Bid Price: \$242,600 Dollars and 00 Cents.

- D. IEUA hereby employs the CONTRACTOR to perform the Work according to the terms of this Contract for the above-mentioned price(s), and agrees to pay the same at the time, in the manner, and upon the conditions stipulated in the said Bid Documents; and the said parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to the full performance of the covenants herein contained.
- E. The Notice Inviting Bids, Instructions to Bidders, Bid Forms, Information Required of Bidder, Performance Bond, Payment Bond, Contractor's License Declaration, Specifications, Drawings, all General Conditions, Special Conditions, and all Project Requirements, and all Addenda issued by IEUA with respect to the foregoing prior to the opening of bids, are hereby incorporated in and made part of this Contract, as if fully set forth.
- F. The CONTRACTOR agrees to commence Work under this Contract on or before the date to be specified in a written "Notice To Proceed" and to complete said Work to the satisfaction of IEUA May 31, 2024. All Work shall be completed before final payment is made.
- **G.** Time is of the essence on this Contract.
- H. CONTRACTOR agrees that in case the Work is not completed before or upon the expiration of the Contract Time, damage will be sustained by IEUA, and that it is and will be impracticable to determine the actual damage which IEUA will sustain in the event and by reason of such delay, and it is therefore agreed that the CONTRACTOR shall pay to IEUA the amounts as set forth in Section 2 – General Information, S., Liquidated Damages for each day of delay, which shall be the period between the expiration of the Contract Time and the date of final acceptance by IEUA, as liquidated damages and not as a penalty. It is further agreed that the amount stipulated for liquidated damages per day of delay is a reasonable estimate of the damages that would be sustained by IEUA, and the CONTRACTOR agrees to pay such liquidated damages as herein provided. In case the liquidated damages are not paid, the CONTRACTOR agrees that IEUA may deduct the amount thereof from any money due or that may become due to the CONTRACTOR by progress payments or otherwise under the Contract, or if said amount is not sufficient, recover the total amount.
- I. In addition to the liquidated damages, which may be imposed if the CONTRACTOR fails to complete the Work within the time agreed upon, IEUA may also deduct from any sums due or to become due to the CONTRACTOR, penalties and fines for violations of applicable local, state, and federal law.
- **J.** That the CONTRACTOR shall carry Workers' Compensation Insurance and require all subcontractors to carry Workers' Compensation Insurance as required by the California Labor Code.

- **K.** That the CONTRACTOR shall have furnished, prior to execution of the Contract, two bonds approved by IEUA, one in the amount of one hundred (100) percent of the Contract Price, to guarantee the faithful performance of the Work, and one in the amount of one hundred (100) percent of the Contract Price to guarantee payment of all claims for labor and materials furnished.
- L. The CONTRACTOR hereby agrees to protect, defend, indemnify and hold IEUA and its employees, agents, officers, directors, servants and volunteers free and harmless from any and all liability, claims, judgments, costs and demands, including demands arising from injuries or death of persons (including employees of IEUA and the CONTRACTOR) and damage to property, arising directly or indirectly out of the obligation herein undertaken or out of the operations conducted by the CONTRACTOR, its employees agents, representatives or subcontractors under or in connection with this Contract to the extent permitted by law.

The CONTRACTOR further agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands or suit at the sole expense of the CONTRACTOR

IN WITNESS WHEREOF, The CONTRACTOR and the General Manager of Inland Empire Utilities Agency^{*}, thereunto duly authorized, have caused the names of said parties to be affixed hereto, each in duplicate, the day and year first above written.

M. The CONTRACTOR, by signing the contract does swear under penalty of perjury that no more than one final unappeasable finding of contempt of court by a Federal court has been issued against the CONTRACTOR within the immediately preceding two year period because of the CONTRACTOR's failure to comply with an order of a Federal court which orders the CONTRACTOR to comply with an order of the National Labor Relations Board (Public Contract Code 10296).

Inland Empire Utilities Agency*, San Bernardino County, California. CONTRACTOR

Ву _____

Shivaji Deshmukh General Manager

Title

* A Municipal Water District

Ву ____

Engineering, Operations, and Water Resources Committee

ACTION ITEM **2C**



Date: June 21, 2023

To: The Honorable Board of DirectorsFrom: Shivaji Deshmukh, General ManagerCommittee: Engineering, Operations & Water Resources06/14/23

120

Staff Contact:Christiana Daisy, Deputy General Manager

Subject: Emergency and Small Construction Project Contract Awards

Executive Summary:

The Inland Empire Utilities Agency (IEUA) issued a request for qualifications solicitation for the under \$2,000,000 pre-qualified contractors list in April 2022. Fifty contractors submitted packages. Staff approved forty-three contractors to be pre-qualified. All contractors who were deemed qualified, were offered the opportunity to participate in IEUA's emergency and small construction project program. Of the contractors solicited, thirty-four contractors indicated interest and were selected to participate, with four additional contractors that indicated interest from the previous years qualification approval process.

IEUA has established master contracts with contractors to provide emergency services on an "as needed" basis since August 2009. The current emergency contracts are set to expire in June 2023. This program has been very successful in supporting IEUA's emergency projects. With this success, staff is recommending a new program for small construction projects to have the ability to utilize master contracts with an aggregate amount of \$10,000,000. This will allow a shortened contract award period to expedite these small projects. As such, staff is requesting award of emergency and small construction master service contracts. All work will be implemented in compliance with the established emergency and small project protocols within the purchasing ordinance, contracts, and IEUA standard operating procedures.

Staff's Recommendation:

1. Award three-year Emergency Master Contracts with four one-year extension options to the following:

- See background (Attachment No. 1) for details of each company recommended;

2. Award three-year Small Construction Project Master Contracts with four one-year extension options with an aggregate total of \$10,000,000 to the following:

- See background (Attachment No. 1) for details of each company recommended; and

3. Authorize the General Manager to execute the contracts, subject to non-substantive changes.

Budget Impact Budgeted (Y/N): Y Amendment (Y/N): N Amount for Requested Approval:

Account/Project Name:

Various current and future projects.

Fiscal Impact (explain if not budgeted):

These contracts are for emergency and small construction project work which may be required under the term of the agreements. Each fiscal year budget includes emergency and small projects under the various program funds for which these contracts will be used. Those projects are funded with user fees, property taxes and reserves.

Full account coding (internal AP purposes only):

Prior Board Action:

None.

Environmental Determination:

Statutory Exemption

CEQA exempts a variety of projects from compliance with the statute. This project qualifies for a Statutory Exemption as defined in Section 15269 of the State CEQA Guidelines.

Business Goal:

The Emergency and Small Construction Contracts are consistent with the IEUA's Business Goal of Work Environment, specifically the Staff Safety objective that 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.

Attachments:

Attachment 1 - Background

Attachment 2 - PowerPoint

Attachment 3 - Emergency Construction Contracts (Click to Download)

Attachment 4 - Small Construction Contracts (Click to Download)

Attachment 1



Background

Subject: Emergency and Small Construction Project Contract Awards

Staff's Recommendation:

1. Award three-year Emergency Master Contracts with four one-year extension options to the following 38 Contractors: Allison Mechanical, Arizona Pipeline Company, Athena Engineering, Inc., Best Contracting, Inc., Big Sky Electric, Inc., CertaPro Painters, Charles King Company, Inc., Davis Electric Inc., Diversified Thermal Services, Inc., E.J. Meyer Company, Ferreira Construction Co, Inc., FM Thomas Air Conditioning, Garney Pacific, Inc., GSE Construction Co., Inc., Hampton Tedder Electric Company, Hemet Mfg Co. Inc dba Genesis Construction, Henkels & McCoy, Horizons Construction Company Int'l, Inc., Howard Ridley Co., Inc., Innovative Construction Solutions, JF Shea, J.R. Filanc Construction Co, Inc., Kiewitt Infrastructure West Co., Kingmen Construction, Inc., Leed Electric, Inc., Mladen Buntich Construction Co., Inc., Norstar Plumbing and Engineering, Inc., Pacific Hydrotech Corporation, PCL Construction, Inc., Rite-Way Roof Corporation, Sancon Technologies, Inc., SCW Contracting Corporation, SoCal Pacific Construction Corp dba National Coating & Lining, Southern Contracting Company, T.E. Roberts, Inc., Tony Painting, United Mechanical Contractors, Inc., W.A. Rasic Construction Company, Inc.; and

2. Award three-year Small Construction Project Master Contracts with four one-year extension options with an aggregate total of \$10,000,000 to the following 37 Contractors: Allison Mechanical, Arizona Pipeline Company, Athena Engineering, Inc., Best Contracting, Inc., Big Sky Electric, Inc., CertaPro Painters, Charles King Company, Inc., CSI Electrical Contractors, Inc., Davis Electric Inc., Diversified Thermal Services, Inc., E.J. Meyer Company, Ferreira Construction Co, Inc., FM Thomas Air Conditioning, Garney Pacific, Inc., GSE Construction Co., Inc., Hampton Tedder Electric Company, Hemet Mfg Co. Inc dba Genesis Construction, Henkels & McCoy, Horizons Construction Company Int'l, Inc., Howard Ridley Co., Inc., Innovative Construction Solutions, JF Shea, J.R. Filanc Construction Co, Inc., Kingmen Construction, Inc., Leed Electric, Inc., Maden Buntich Construction, PCL Construction, Inc., Rite-Way Roof Corporation, Sancon Technologies, Inc., SCW Contracting Corporation, SoCal Pacific Construction Corp dba National Coating & Lining, Southern Contracting Company, T.E. Roberts, Inc., Tony Painting, United Mechanical Contractors, Inc., W.A. Rasic Construction Company, Inc.; and

3. Authorize the General Manager to execute the contracts, subject to non-substantive changes.

Attachment 2



Emergency and Small Construction Project Contract Awards

Jason Marseilles, P.E.

Manager of Engineering and Construction Management

June 2023

Background

• April 2022, a request for qualification solicitation was conducted

nland Empire Utilities Agency

- -50 qualification packages received
- -43 contractors added to the pre-qualified list

• Emergency Contracts

- -38 Contracts
- -Three Year Term (4-one-year extension options)

Small Construction Project Master Contracts

- -37 Contracts
- -Aggregate amount of \$10,000,000
- -Three Year Term (4-one-year extension options)

Emergency Project Protocol

Solicitation	Solicitation Response		
Priority Level 1	Requires the first responding contractor to mobilize immediately. Typically, on- site within 1.5 hours of call-out.		
Priority Level 2	Requires the first responding contractor to mobilize typically the following day.		
Priority Level 3	Scope developed by IEUA (typically, within a few days) and will allow the Project Manager to review the first three (3) "Not to Exceed" proposals.		

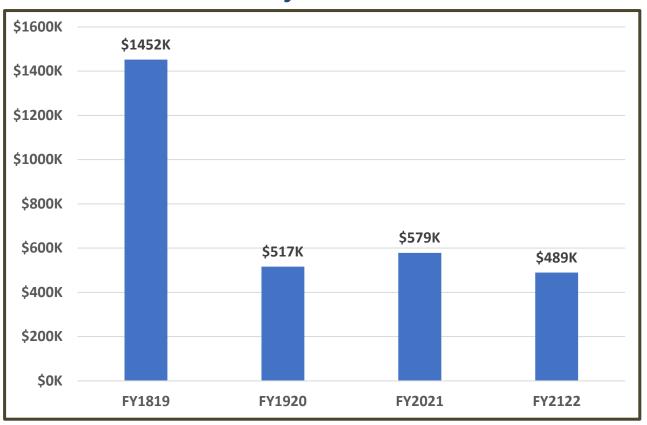
nland Empire Utilities Agency

• Per IEUA's Purchase Ordinance No. 110, all emergency projects details are provided to the Board of Directors through the General Managers Report.

Emergency Project Trends

Inland Empire Utilities Agency A MUNICIPAL WATER DISTRICT

By Year



By Location

	FY18/19	FY19/20	FY20/21	FY21/22	Total
Agency-Wide	\$274K	\$255K	\$98K	\$43K	\$670K
Carbon Canyon Water Recycling					
Facility	\$34K	\$29K	\$46K	\$15K	\$124K
Headquarters	\$17K				\$17K
Non-Reclaimable Wastewater	\$109K				\$109K
Off-site	\$17K				\$17K
Regional Recycling Plant No. 1	\$262K	\$222K	\$285K	\$66K	\$834K
Regional Recycling Plant No. 2	\$579K		\$7K	\$9K	\$595K
Regional Recycling Plant No. 4		\$11K	\$9K		\$20K
Regional Recycling Plant No. 5	\$10K				\$10K
Recycled Water System	\$150K		\$133K	\$356K	\$639K
Total	\$1,452K	\$517K	\$579K	\$489K	\$3M

Small Construction Project Protocol

Estimated Value of Work	Solicitation	Solicitation Response	Response Period	Award
Less than \$35,000	 A rotating list of contractors will be utilized. A rotation list will be established at random by IEUA staff. Once the list is established, the list will be sent out to the awarded contractors. 	 Invitation for Bid will be emailed to the contractor next on the rotation list. If the contractor passes on the solicitation, IEUA will go to the next contractor on the rotation list. 	14-days	 Upon review and approval of the submitted bid, IEUA will issue a Task Order for the lump sum value.
\$35,000 - \$500,000	 Solicitation to all contractors, by specialty, included in the master service contracts. 	 Invitation for Bid will be posted on PlanetBids with the award going to the lowest, responsible bid. 	28-days	 Upon review and approval of the submitted bid, IEUA will issue a Task Order for the lump sum value.

Staff's Recommendation

 Award three-year Emergency Master Contracts with four one-year extension options to the following 38 Contractors: Allison Mechanical, Arizona Pipeline Company, Athena Engineering, Inc., Best Contracting, Inc., Big Sky Electric, Inc., CertaPro Painters, Charles King Company, Inc., Davis Electric Inc., Diversified Thermal Services, Inc., E.J. Meyer Company, Ferreira Construction Co, Inc., FM Thomas Air Conditioning, Garney Pacific, Inc., GSE Construction Co., Inc., Hampton Tedder Electric Company, Hemet Mfg Co. Inc dba Genesis Construction, Henkels & McCoy, Horizons Construction Company Int'l, Inc., Howard Ridley Co., Inc., Innovative Construction Solutions, JF Shea, J.R. Filanc Construction Co, Inc., Kiewitt Infrastructure West Co., Kingmen Construction, Inc., Leed Electric, Inc., Mladen Buntich Construction Co., Inc., Norstar Plumbing and Engineering, Inc., Pacific Hydrotech Corporation, PCL Construction, Inc., Rite-Way Roof Corporation, Sancon Technologies, Inc., SCW Contracting Corporation, SoCal Pacific Construction Corp dba National Coating & Lining, Southern Contracting Company, T.E. Roberts, Inc., Tony Painting, United Mechanical Contractors, Inc., W.A. Rasic Construction Company, Inc.; and

nland Empire Utilities Agenc

- 2. Award three-year Small Construction Project Master Contracts with four one-year extension options with an aggregate total of \$10,000,000 to the following 37 Contractors: Allison Mechanical, Arizona Pipeline Company, Athena Engineering, Inc., Best Contracting, Inc., Big Sky Electric, Inc., CertaPro Painters, Charles King Company, Inc., CSI Electrical Contractors, Inc., Davis Electric Inc., Diversified Thermal Services, Inc., E.J. Meyer Company, Ferreira Construction Co, Inc., FM Thomas Air Conditioning, Garney Pacific, Inc., GSE Construction Co., Inc., Hampton Tedder Electric Company, Hemet Mfg Co. Inc dba Genesis Construction, Henkels & McCoy, Horizons Construction Company Int'l, Inc., Howard Ridley Co., Inc., Innovative Construction Solutions, JF Shea, J.R. Filanc Construction Co, Inc., Kingmen Construction, Inc., Leed Electric, Inc., Mladen Buntich Construction Co., Inc., Norstar Plumbing and Engineering, Inc., Pacific Hydrotech Corporation, PCL Construction, Inc., Rite-Way Roof Corporation, Sancon Technologies, Inc., SCW Contracting Corporation, SoCal Pacific Construction Corp dba National Coating & Lining, Southern Contracting Company, T.E. Roberts, Inc., Tony Painting, United Mechanical Contractors, Inc., W.A. Rasic Construction Company, Inc.; and
- 3. Authorize the General Manager to execute the contracts, subject to non-substantive changes.

The Emergency and Small Construction Contracts are consistent with the *IEUA's Business Goal of Work Environment*, specifically the Staff Safety objective that 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.

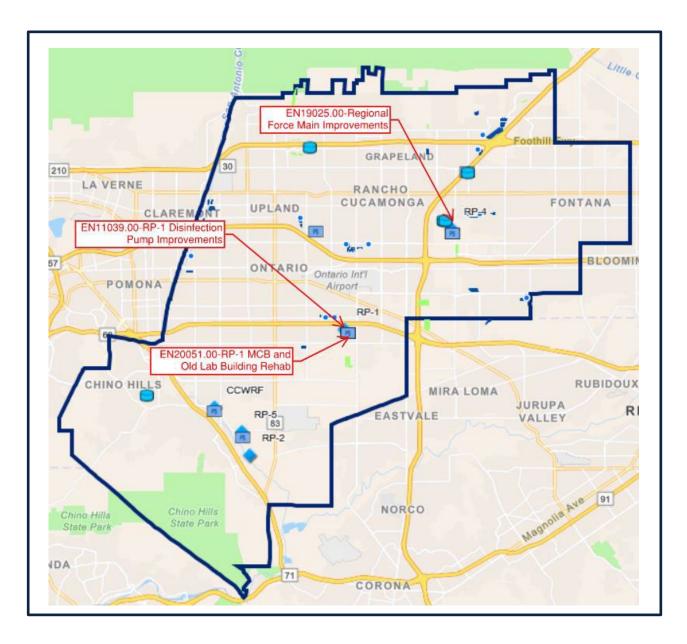
Engineering, Operations, and Water Resources Committee

INFORMATION ITEM **3A**

Inland Empire Utilities Agency

Engineering and Construction Management Project Updates

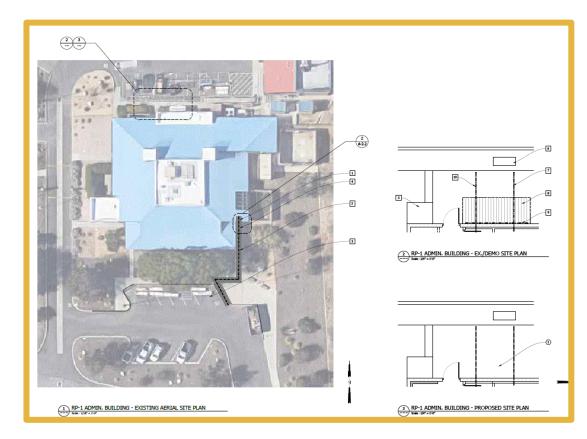
Jason Marseilles, PE Manager of Engineering & Construction Management June 2023



Project Location Map

Inland Empire Utilities Agency

RP-1 Main Control and Old Lab Building Rehab Project Goal: Improve Efficiency



Total Project Budget: \$2.5M Project Completion: January 2025 Design Percent Complete: 90%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders	
Design (Current)	GPa	\$98k	0%	
Construction	TBD	\$0	0%	
Project Management Team				
	Senior Engineer:	Poeske, Matt		
Assistant/As	sociate Engineer:	Burns & McDonnel		
Administrative Assistant:		Guthrie, Rosalind		
	Inspector:	TBD		



Inland Empire Utilities Agency

3

Regional Force Main Improvements Project Goal: Increase Reliability

Total Project Budget: \$4.8M Project Completion: Dec 2023 Construction Percent Complete: 20%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders	
Design	GHD	\$450k	0%	
Construction (Current)	Ferreira		0%	
Project Management Team				
Pr	oject Manager:	Biesiada, Josh		
Assistant/Asso	ciate Engineer:	Trott, Megan		
Administra	ative Assistant:	Anser Advisory		
	Inspector:	MWH		



Rebar Slab



RP-1 Disinfection Pump Improvements Project Goal: Increase Operational Efficiency



Sodium Hypochlorite Facility Excavation

Total Project Budget: \$13M Project Completion: December 2023 Construction Percent Complete: 20%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders	
Design	Carollo	\$748k	58%	
Construction (Current)	Innovative Construction Solutions	\$8.7M	1%	
Project Management Team				
Project Manager:		Spears, James		
Assistant/Associate Engineer:		WSP		
Administrative Assistant:		Anser Advisory		
Inspector:		Carollo		



Engineering, Operations, and Water Resources Committee

INFORMATION ITEM **3B**

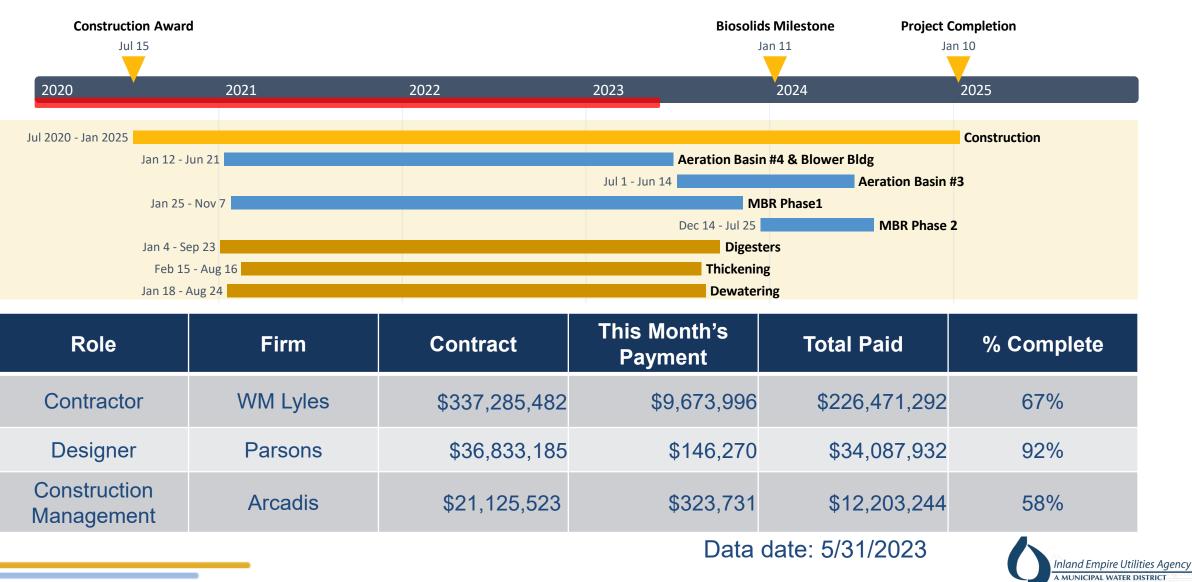


RP-5 Expansion Project Update June 2023 Project Nos. EN19001 and EN19006

Vicky Salazar Senior Associate Engineer June 2023

RP-5: Project Status

Day 1048 of 1640 = 64%



RP-5: Major Activity Areas



Construction Staff

- WML Craft: 112
- WML Project: 32
- IEUA & CM: 15
- Total: 159

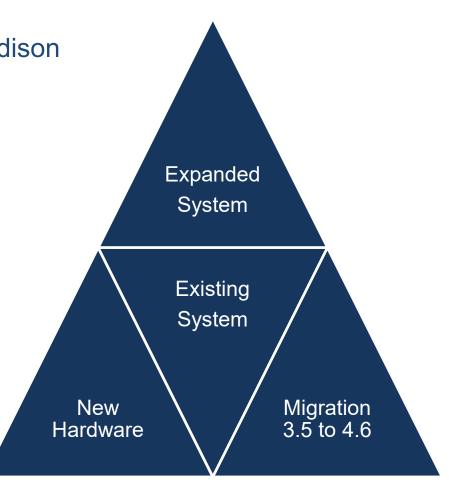


Electrical and SCADA Status Update

- Electrical Load Coordination Study reviewed and approved by Edison
- Existing SCADA hardware system upgrades complete

CHALLENGES AHEAD

- Electrical Subcontractor
 - New SCE power feed August 2023
 - Electrical & control gear installation
 - Power & control circuit installation
- SCADA Integrator
 - PlantPAx 3.5 to 4.6 Migration
 - Interactive staff training prior to migration
 - Control system parts delays
 - Programming and factory testing
 - Commissioning







Influent Pump Station





Aeration Basins





Membrane Bioreactor







Thickening Building





Gas Phase Digester





Digester Building





Dewatering Truck Loading





Delivery of Centrifuges





Questions?

in the part