

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

WEDNESDAY, SEPTEMBER 14, 2022 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: (415) 856-9169 / Conf Code: 813 028 107#

PURSUANT TO AB361 AND RESOLUTION NO. 2022-9-2, ADOPTED BY THE IEUA BOARD OF DIRECTORS ON SEPTEMBER 7, 2022, IEUA BOARD AND COMMITTEE MEETINGS WILL CONTINUE TO BE CONDUCTED THROUGH TELECONFERENCE. IN AN EFFORT TO PROTECT PUBLIC HEALTH AND PREVENT THE SPREAD OF COVID-19, THERE WILL BE NO PUBLIC LOCATION AVAILABLE FOR ATTENDING THE MEETING IN PERSON.

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 Board Secretary/Office Manager Denise Garzaro at dgarzaro@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. Comments will be limited to three 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. CONSENT ITEMS

A. MINUTES

Approve Minutes of the August 10, 2022 Engineering, Operations, and Water Resources Committee meeting.

B. RP-5 EXPANSION PROJECT BUDGET TRANSFER

Staff recommends that the Committee/Board:

- Approve a FY 2022/23 transfer in the amount of \$60,000 from the RP-5 Expansion to 30 MGD, Project No. EN19001 capital budget, to the RP-5 Expansion to 30 MGD, Project No. EN19001 operating budget in the Regional Capital (RC) Fund;
- 2. Approve a FY 2022/23 transfer in the amount of \$60,000 from the RP-5 Biosolids Facility, Project No. EN19006 capital budget, to RP-5 Biosolids Facility, Project No. EN19006 operating budget in the Regional Capital (RC) Fund; and
- 3. Authorize the General Manager to execute the budget transfer.

C. ARCHITECTURAL MASTER SERVICE CONTRACT AMENDMENT Staff recommends that the Committee/Board:

- 1. Approve a contract amendment for the Architectural Master Service Contract with Gillis + Panichapan Architects, Inc. in the amount of \$725,000 increasing the contract from \$700,000 to \$1,425,000 (204%) increase); and
- 2. Authorize the General Manager to execute the contract amendment, subject to non-substantive changes.

2. ACTION ITEMS

A. <u>CHINO BASIN PROGRAM PROFESSIONAL CONSULTING SERVICES</u> CONTRACT AMENDMENT

Staff recommends that the Committee/Board:

- 1. Award a professional consulting services contract amendment to Brown and Caldwell in the amount of \$2,855,000, increasing the contract from \$3,978,506 to revised not-to-exceed amount of \$6,833,506; and
- 2. Authorize the General Manager to execute the contract amendment, subject to non-substantive changes.

B. <u>COLLECTION SYSTEM CONDITION ASSESSMENT AND OPTIMIZATION PROJECT FISCAL YEAR 2022/23 PROJECT BUDGET AUGMENTATION</u>

Staff recommends that the Committee/Board:

- Approve a FY 2022/23 project budget augmentation for the Regional System Asset Management Project, No. EN19024, in the amount of \$50,237, from \$329,878 to \$380,115 in the Regional Operations and Maintenance (10800) Fund;
- Approve a FY 2022/23 project budget augmentation for the NRW Manhole and Pipeline Project, No. EN19028, in the amount of \$393,398, from \$70,000 to \$463,398 in the Non-Reclaimable Wastewater (10500) Fund; and
- 3. Authorize the General Manager to approve the budget augmentation.

C. RECHARGE MASTER PLAN UPDATE PROJECT – BUDGET INCREASE, AGREEMENT AMENDMENT, AND CONSTRUCTION CHANGE ORDER APPROVAL

Staff recommends that the Committee/Board:

- 1. Approve the total project budget augmentation for RW15003.00 in Fiscal Year 2022/23 from \$24,004,424 to \$27,260,512;
- 2. Approve the second amendment to IEUA and CBWM's Cost Sharing Agreement, Task Order No. 9, for the project under RW15003.06;
- 3. Approve the construction change order with MNR Construction, Inc. for Project No. RW15003.06 at a not-to-exceed amount of \$3,161,995 which increases the contract from \$15,669,068.27 to \$18,831.063.27 (20% increase); and
- 4. Authorize the General Manager to execute the contracts, subject to nonsubstantive changes.

3. <u>INFORMATION ITEMS</u>

- A. <u>RECYCLED WATER GROUNDWATER RECHARGE UPDATE</u> (POWERPOINT)
- B. RP-5 EXPANSION PROJECT UPDATE (POWERPOINT)

RECEIVE AND FILE INFORMATION ITEMS

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

Engineering, Operations, & Water Resources Committee September 14, 2022 Page 4

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

<u>ADJOURN</u>

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 www.ieua.org 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 dgarzaro@ieua.org, 48 hours prior to the scheduled meeting so that IEUA can make reasonable arrangements to ensure accessibility.

CONSENT ITEM 1A



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

WEDNESDAY, AUGUST 10, 2022 10:00 A.M.

COMMITTEE MEMBER PRESENT via Video/Teleconference

Marco Tule, Chair Michael Camacho, Director

STAFF PRESENT

Christiana Daisy, P.E., Deputy General Manager
Kristine Day, Assistant General Manager
Jerry Burke, Director of Engineering
Denise Garzaro, Board Secretary/Office Manager
Brandon Gonzalez Contreras, Technology Specialist I
Michael Larios, Technology Specialist I
Randy Lee, Director of Operations & Maintenance
Ryan Love, Deputy Manager of Operations
Jason Marseilles, Manager of Engineering
Kanes Pantayatiwong, Manager of Information Technology
Alyson Piguee, Director of External & Government Affairs
Travis Sprague, Principal Engineer
Justin Tao, Associate Engineer
Brian Wilson, P.E., CCM, Senior Engineer

STAFF PRESENT via Video/Teleconference

Lisa Dye, Director of Human Resources
Don Hamlett, Director of Information Technology
Michael Hurley, Director of Planning & Resources
Elizabeth Hurst, Chino Basin Program Manager
Jennifer Hy-Luk, Acting Executive Assistant
Cathleen Pieroni, Senior Policy Advisor
Sushmitha Reddy, Manager of Laboratories
Jeanina Romero, Executive Assistant
Victoria Salazar, Associate Engineer
Megan Trott, Associate Engineer
Teresa Velarde, Manager of Internal Audit

CALL TO ORDER

Committee Chair Marco Tule called the meeting to order at 10:00 a.m. He gave the public the opportunity to comment and provided instructions for unmuting the conference line. There were no public comments received or additions to the agenda.

1A. CONSENT ITEM

The Committee:

◆ Approved Minutes of the July 13, 2022 Engineering, Operations, and Water Resources Committee meeting.

2A - 2D. ACTION ITEMS

The Committee:

- Recommended that the Board:
 - Approve the award to provide the supply of ferric chloride chemicals, Contract No. 4600003169, to California Water Technologies, for a one-year contract for a not-to-exceed amount of \$1,800,000; and
 - 2. Authorize the General Manager to execute the contract;
- and
 - 1. Approve the award to provide the supply of sodium bisulfite chemicals, Contract No. 4600003128, to Univar, for a one-year contract, with four one-year renewal options, for a potential total contract term of five years for a not-to-exceed amount of \$4,900,000; and
 - 2. Authorize the General Manager to execute the contract;
- and
 - Award a consultant contract for the Montclair Force Main Improvements, Project No. EN21045, to Stantec Consulting Services Inc., for a not-to-exceed amount of \$688,290; and
 - 2. Authorize the General Manager to execute the contract, subject to non-substantive changes;
- and
 - 1. Approve the sole source purchase for continued technical support services with Schneider Electric, for three years, for a not-to-exceed amount of \$271,046; and
 - 2. Authorize the General Manager to execute the contract;

as Consent Calendar items on the August 17, 2022 Board meeting agenda.

3A – 3B. INFORMATION ITEMS

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

- ♦ RP-5 Expansion Project Update
- ♦ Engineering and Construction Management Project Updates

Engineering, Operations, and Water Resources Committee August 10, 2022 Page 3

4. GENERAL MANAGER'S COMMENTS

Deputy General Manager Christiana Daisy stated that IEUA's water quality laboratory is now accredited to perform PFAS analysis in both potable and non-potable water matrices. IEUA is required to monitor both RP-1 and RP-4 recycled water sites for groundwater recharge on a weekly basis and the new NPDES permit requires quarterly monitoring of influents and effluents at all four regional plants. The new permit went into effect on August 1, so this accreditation was very timely, allowing the Agency to perform in-house compliance testing to support IEUA's NPDES and GWR permits.

IEUA has received the District Transparency Certificate of Excellence from the Special District Leadership Foundation in recognition of its outstanding efforts to promote transparency and good governance. IEUA has maintained this distinction since 2015. The award is a testament to the Agency's commitment to open government. To receive the award, the Agency demonstrated the completion of essential governance transparency requirements, including conducting ethics training for all board members, properly conducting open and public meetings, and filing financial transactions and compensation reports to the State Controller in a timely manner.

Lasty, IEUA's Manager of Facilities & Water System Programs and 2019 California Water Environment Association (CWEA) Emerging Leader, Lucia Diaz, was recently featured in CWEA's Clean Water Magazine.

5. COMMITTEE MEMBER COMMENTS

Director Camacho congratulated Ms. Diaz on her feature in CWEA's Clean Water Magazine.

6. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS

There were no Committee member requested future agenda items.

ADJOURNMENT

With no further business, Committee Chair Tule adjourned the meeting at 10:39 a.m.

Respectfully submitted,

Denise Garzaro Board Secretary/Office Manager

*A Municipal Water District

APPROVED: SEPTEMBER 14, 2022

CONSENT ITEM 1B



Date: September 21, 2022

To: The Honorable Board of Directors From: Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources 09/14/22

Finance & Administration 09/14/22

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: RP-5 Expansion Project Budget Transfer

Executive Summary:

On July 15, 2020, Inland Empire Utilities Agency (IEUA) awarded a \$329,982,900 construction contract to W.M. Lyles Co., for the Regional Water Recycling Plant No. 5 (RP-5) Expansion Project. The RP-5 Expansion will expand the plant's liquids treatment capacity to 22.5 MGD and provide up to 30 MGD of solids treatment from both Carbon Canyon Water Reclamation Facility (CCWRF) and RP-5.

RP-5 plant prior to the start of construction had four secondary clarifiers. The RP-5 Expansion Project demolished one secondary clarifier to allow the construction of Phase 1 of the Membrane Bioreactor (MBR). To improve settleability and reduce other process impacts, polymer is added at the aeration basin effluent box prior to the remaining three secondary clarifiers ensuring compliance. The polymer will no longer be required once Phase 1 of the MBR goes into operation.

Staff is recommending a budget augmentation from RP-5 Expansion projects capital budgets to the RP-5 Expansion projects O&M budgets to support the cost of chemicals needed for the RP-5 Expansion.

Staff's Recommendation:

- 1. Approve a FY 2022/23 tranfer in the amount of \$60,000 from the RP-5 Expansion to 30 MGD, Project No. EN19001 capital budget, to the RP5 Expansion to 30 MGD, Project No. EN19001 operating budget in the Regional Capital (RC) Fund;
- 2.Approve a FY 2022/23 transfer in the amount of \$60,000 from the RP-5 Biosolids Facility, Project No. EN19006 capital budget, to the RP5 Biosolids Facility, Project No. EN19006 operating budget in the Regional Capital (RC) Fund; and
- 3. Authorize the General Manager to execute the budget transfer.

Budget Impact Budgeted (Y/N): Y Amendment (Y/N): Y Amount for Requested Approval: \$ 120,000

Account/Project Name:

EN19001-RP5 Expansion to 30 mgd EN19006/RP-5 Biosolids Facility

Fiscal Impact (explain if not budgeted):

If approved, the capital budget in Fiscal Year 2022/23 for the RP-5 Expansion, Project Nos. EN19001 and EN19006 will decrease \$120,000 and the O & M budget for EN19001 and EN19006 in the Regional Capital (RC) Fund will increase \$120,000.

Prior Board Action:

On July 15, 2020, the Board of Directors awarded a Construction Contract to W.M. Lyles Co., in the amount of \$329,982,900.

On November 20, 2019, the Board of Directors awarded a contract to Arcadis, for construction management services for a not-to-exceed amount of \$21,125,523.

On November 20, 2019, the Board of Directors awarded a contract amendment to Parsons, for engineering services during construction for a not-to-exceed amount of \$12,589,469.

Environmental Determination:

Program Environmental Impact Report (Finding of Consistency)

A Finding of Consistency with IEUA's Program Environmental Impact Report and a CEQA Plus evaluation for SRF Loan Funding have been completed.

Business Goal:

The RP-5 Expansion Project is consistent with 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 can accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.

Attachments:

Attachment 1 - PowerPoint

Board-Rec No.: 22192

Attachment 1





Issue/Solution:









Project Budget EN19001 & EN19006

| Description | O & M | Capital | Combined |
|---------------------------------|-----------|---------------|---------------|
| Design Phase Services | \$0 | \$26,406,753 | \$26,406,753 |
| Construction Services | \$0 | \$43,361,716 | \$43,361,716 |
| Construction | \$120,000 | \$376,061,190 | \$376,181,190 |
| RP-5 Expansion Bid | \$0 | \$329,982,900 | \$329,982,900 |
| Executed Change Orders | \$0 | \$3,783,454 | \$3,783,454 |
| Contingency | \$0 | \$29,094,836 | \$29,094,836 |
| Offsite Facilities Allowance | \$0 | \$12,000,000 | \$12,000,000 |
| Contingency | \$0 | \$1,200,000 | \$1,200,000 |
| Chemicals (this action) | \$120,000 | \$0 | \$120,000 |
| Total Project Cost: | \$120,000 | \$445,829,659 | \$445,949,659 |
| Total Requested Project Budget: | \$120,000 | \$450,000,000 | \$450,000,000 |





- 1. Approve a FY 2022/23 capital budget transfer in the amount of \$60,000.00 from the RP-5 Expansion to 30 MGD, Project No. EN19001, to the RP-5 Expansion to 30 MGD, Project No. EN19001, O&M budget in the Regional Capital (RC) Fund;
- 2. Approve a FY 2022/23 capital budget transfer in the amount of \$60,000.00 from the RP-5 Biosolids Facility, Project No. EN19006, to the RP-5 Biosolids Facility, Project No. EN19006, O&M budget in the Regional Capital (RC) Fund; and
- 3. Authorize the General Manager to execute the budget transfer.

The RP-5 Expansion Project is consistent with *IEUA's Business Goal of Wastewater Management and Water Reliability*, 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 can accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.

CONSENT ITEM 1 C



Date: September 21, 2022

To: The Honorable Board of Directors From: Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources 09/14/22

Staff Contact: Christiana Daisy, Deputy General Manager

Subject: Architectural Master Services Contract Amendment

Executive Summary:

In April 2019, the Board of Directors approved a five-year master service contract with Gillis + Panichapan Architects, Inc. (GPa) for a not-to-exceed amount of \$700,000 with the option to extend this contract by an additional two years, if needed. The initial contract amount was based on foreseeable work at that time. GPa's work has been exceptional during these past three years.

Based on the planned projects that will require architectural design services in the ten year capital improvement program and the past three year's level of effort on the projects GPa has been awarded, staff is requesting an additional \$725,000 to the current contract value which will increase the contract to \$1,425,000 (204% increase) and allow the Agency to continue to utilize their services to the end of the contract term.

Staff's Recommendation:

- 1. Approve a contract amendment for the Architectural Master Service Contract with Gillis + Panichapan Architects, Inc. in the amount of \$725,000 increasing the contract from \$700,000 to \$1,425,000 (204% increase); and
- 2. Authorize the General Manager to execute the contract amendment, subject to non-substantive changes.

 $\textbf{Budget Impact} \ \textit{Budgeted (Y/N):} \ \textit{Y} \ \textit{Amendment (Y/N):} \ \textit{N} \ \textit{Amount for Requested Approval:}$

Account/Project Name:

Multiple capital projects and department O&M budget under various program funds.

Fiscal Impact (explain if not budgeted):

There is no direct impact on IEUA's fiscal year budget as a result of this action. This contract is for work which will be required on various projects. As such, no separate funding is needed for this contract.

Full account coding (internal AP purposes only):

- - - Project No.: N/A

Prior Board Action:

On April 19, 2019, the Board of Directors awarded a five-year Architectural Master Service Contract to Gillis + Panichapan Architects, Inc. for a not-to-exceed amount of \$700,000.

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 15262 of the State CEQA Guidelines. When the project will be implemented will be subject to future environmental evaluation.

Business Goal:

The Architectural Master Service Contract is consistent with IEUA's Business Goal of Wastewater Management that ensures quality asset management and that systems are planned, constructed, and managed to protect public health, the environment, and meet anticipated regulatory requirements.

Attachments:

Attachment 1 - PowerPoint

Attachment 2 - Master Service Contract Amendment - GPa

Attachment 1



Background

RP-1 Administration Building Roof and Pre-Design



RP-1 Lab Repurpose Pre-Design

— Completed Work

- IEUA roofing (5 Projects)
- SCADA Migration Server Room Design
- Wetlands Education Center
- RP-1 Lab and Administration Building Pre-Design

- Future Work:

- IEUA roofing
- RP-1 Lab & Administration Bldgs. Rehabilitation
- SCADA Migration CM
- Misc. project managers' directed work



Completed and Future Projects at RP-1 Admin. and Lab Buildings



Contract Amendment Overview

| Description | Estimated Cost |
|--|----------------|
| Design Services to Date (3-Years): | \$601,785 |
| Complete | \$579,460 |
| Pending | \$22,325 |
| Two Year Contract Extension: | \$461,368 |
| Design Services to Date/3 Years | \$200,595 |
| Calculated 2-year Contract Extension (2 X Design Services Average) | \$401,190 |
| Contingency at 15% | \$60,178 |
| Pending Future TYCIP Projects: | \$362,174 |
| RP-1 Administration Building Rehabilitation | \$78,835 |
| RP-1 Lab Rehabilitation | \$123,995 |
| RP-1 Admin Building Rehab Construction Support | \$11,825 |
| RP-1 Lab Rehabilitation Construction Support | \$18,599 |
| Phase IV Roofing | \$81,680 |
| Contingency at 15% | \$47,240 |
| Subtotal 7-Year Cost (Rounded): | \$1,425,000 |
| Current Contract: | \$700,000 |
| Amendment (this action) | \$725,000 |
| Revised Contract: | \$1,425,000 |

| Contract Duration | Date | |
|---------------------------------|------------|--|
| Original Contract 5-Years | April 2024 | |
| 2-Year Contract Extension Terms | | |

Recommendation



- Approve a contract amendment for the Architectural Master Service Contract with Gillis + Panichapan Architects, Inc. in the amount of \$725,000 increasing the contract from \$700,000 to \$1,425,000 (204% increase); and
- Authorize the General Manager to execute the contract amendment, subject to non-substantive changes.

The Architectural Master Service Contract is consistent with IEUA's Business Goal of Wastewater Management that ensures quality asset management and that systems are planned, constructed, and managed to protect public health, the environment, and meet anticipated regulatory requirements.

Attachment 2



CONTRACT AMENDMENT NUMBER: 4600002710-001 FOR PROVISION OF

ARCHITECTURAL SERVICES

AMENDMENT NUMBER ONE is made and entered by and between the Inland Empire Utilities Agency (IEUA), a Municipal Water District, organized and existing in the County of San Bernardino under and by virtue of the laws of the State of California (hereinafter referred to as "Agency" or "IEUA"), and Gillis + Panichapan Architects, Inc., of Costa Mesa, CA (hereinafter referred to as "Contractor"), and shall revise the Contract as amended:

SECTION 2.A.3, TERM, IS REVISED TO READ AS FOLLOWS:

An additional term of this Contract shall commence on May 1, 2024, and shall continue in effect through April 30, 2026, unless terminated as specified in section 21, (Termination for Convenience), or in the event the maximum amount of this Contract is exceeded as set forth in section 5 (Compensation and Changes).

SECTION 5. COMPENSATION AND CHANGES, PARAGRAPH A. IS REVISED TO READ AS FOLLOWS:

A. An additional \$725,000.00 will be added to the total not-to-exceed compensation payable to the Contractor, such that the Contractor's total compensation for services rendered under this Agreement, as amended, shall not exceed the aggregate sum of \$1,425,000.00 for all services satisfactorily provided during the term of this Contract. The Consultant shall not be paid for any amount exceeding the NOT-TO-EXCEED amount, nor for work completed beyond the expiration date without an Amendment to the Contract.

ALL OTHER PROVISIONS OF THIS CONTRACT REMAIN UNCHANGED

WITNESSETH, that the parties hereto have mutually covenanted and agreed as per the above amendment item, and in doing so have caused this document to become incorporated into the Contract Documents.

| INLAND EMPIRE UTILITIES AGENCY: *A MUNICIPAL WATER DISTRICT | | GILLIS + PANICHAPAN ARCHITECTS, INC. | |
|---|--------|--------------------------------------|----------|
| | | DocuSigned by: | 8/4/2022 |
| Shivaji Deshmukh P.E. General Manager | (Date) | Jack Panichapan Principal/CEO | (Date) |

ACTION ITEM 2A



Date: September 21, 2022

To: The Honorable Board of Directors From: Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources 09/14/22

Staff Contact: Christiana Daisy, Deputy General Manager

Subject: Chino Basin Program Professional Consulting Services Contract Amendment

Executive Summary:

In July 2018, the California Water Commission (CWC) approved a maximum conditional grant funding of \$206.9M under Proposition 1 - Water Storage Investment Program (WSIP). In August 2021, an early funding agreement of \$8.9M was executed to assist with planning-related activities such as program administration, technical feasibility studies, environmental evaluation, and regulatory coordination to maintain eligibility for the funding. Since April 2022, an additional \$8M were received, increasing the funding amount to \$215M.

Brown and Caldwell was awarded a consulting services contract in March 2019 to provide preliminary design services for the PUT and TAKE facilities but it was amended to develop a technical feasibility study for the CWC feasibility determination in November 2021. This amendment will provide engineering services for preliminary design reports of the advanced water purification facility, injection wells, the Rialto recycled water intertie and permitting strategy. Their continued professional services will provide IEUA with the best value.

The proposed contract amendment for Brown and Caldwell is for a not-to-exceed amount of \$2,855,000, a 72% increase, and will provide continued services through 2023.

Staff's Recommendation:

- 1. Award a professional consulting services contract amendment to Brown and Caldwell in the amount of \$2,855,000, increasing the contract from \$3,978,506 to a revised not-to-exceed amount of \$6,833,506;
- 2. Authorize the General Manager to execute the contract amendment, subject to non-substantive changes.

 $\textbf{Budget Impact} \ \ \textit{Budgeted (Y/N):} \ \ \textit{Y} \ \ \ \textit{Amendment (Y/N):} \ \ \textit{N} \ \ \ \textit{Amount for Requested Approval:}$

Account/Project Name:

The contract amendment for a not-to-exceed amount of \$2,855,000 will be funded by Project No. PL19005 in the Water Resources (WW) fund.

Fiscal Impact (explain if not budgeted):

Full account coding (internal AP purposes only): - - - Project No.:

Prior Board Action:

On March 20, 2019, IEUA's Board of Directors approved a project budget amendment of \$8.7M, increasing the project budget from \$6.3M to \$15M for the Chino Basin Program and awarded a consulting services contract to Brown and Caldwell for a not-to-exceed amount of \$3,978,506.

Environmental Determination:

Not Applicable

Business Goal:

The CBP supports IEUA's business goal of Water Reliability, of implementing an integrated water resources management plan providing a reliable and cost-effective water supply and promoting sustainable water use throughout the region.

Attachments:

Attachment 1 - PowerPoint

Attachment 2 - Consultant Contract

Board-Rec No.: 22200







| July 2018 | Chino Basin Program (CBP) received the conditional funding award of \$207M |
|---------------|---|
| March 2019 | Brown and Caldwell (B&C) awarded an engineering services contract for preliminary design for CBP components |
| October 2021 | B&C completed the technical feasibility study for submission to the California Water Commission (CWC) |
| November 2021 | CWC determined CBP's feasibility and eligibility for Water Storage Investment Program funding |
| May 2022 | IEUA Board of Directors adopted the Program Environmental Impact Report |

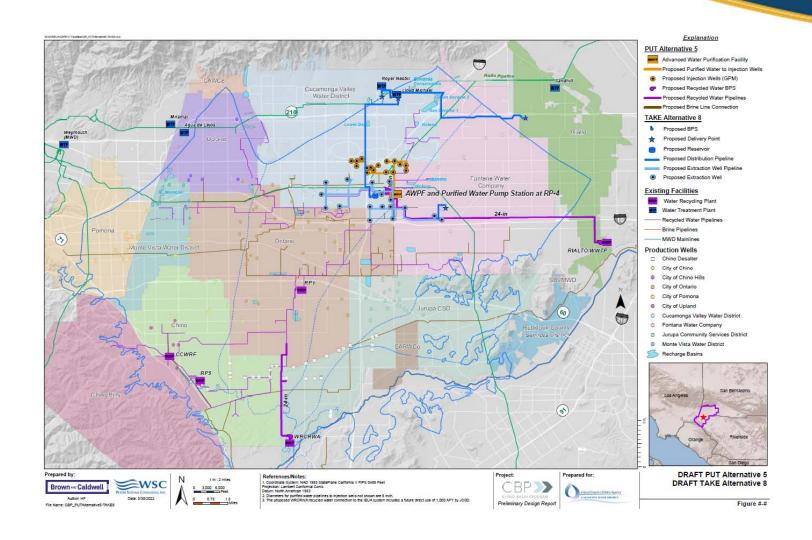


Key Roles

| Role | Consultant | |
|--------------------------------|--------------------|--|
| Program Management (State) | GEI | |
| Preliminary Design | Brown and Caldwell | |
| Owner's Agent | TBD | |
| AWPF Design Builder | TBD | |
| Injection Wells | TBD | |
| Rialto External Recycled Water | TBD | |

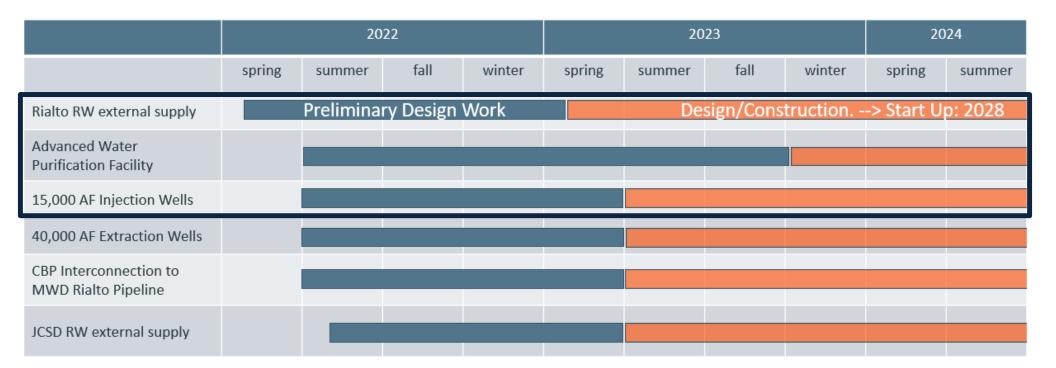


Chino Basin Program Facilities













- Perform a preliminary site investigation of RP-4
- Define process design criteria, site layout, facility implementation, and regulatory compliance
- Prepare project technical requirements for a progressive design build delivery approach
- Evaluate CEC compliance strategy such as regulatory requirements and treatment technologies
- Develop cost estimate in 2023 dollars
- Prepare a preliminary design report







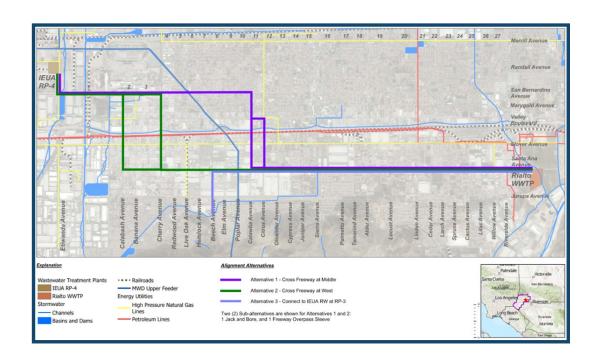
- Develop well siting criteria and evaluate preliminary well sites including test injection well sites
- Perform exploratory borings and geophysical investigation using seismic reflection survey
- Conduct geochemical aquifer analysis from soil samples and testing
- Provide oversight during test injection well construction and testing and document results
- Develop a cost estimate in 2023 dollars
- Prepare a preliminary design report







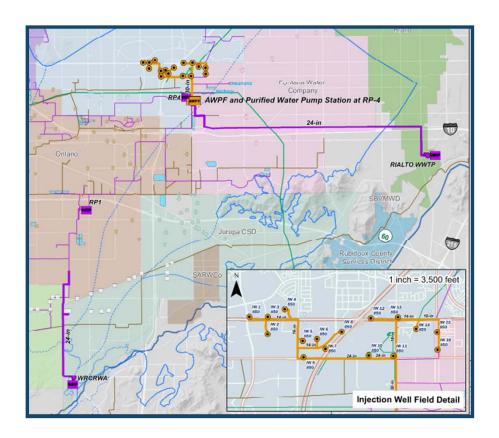
- Conduct workshops/meetings with IEUA staff and stakeholders
- Conduct pipeline alignment alternatives analysis, utility research, direct use opportunities, pump station siting
- Prepare preliminary design drawings for selected alignment alternative and pump station
- Develop a cost estimate in 2023 dollars
- Prepare a preliminary design report







- Conduct workshops/meetings with regulatory agencies to discuss compliance and expectations
- Prepare a permitting plan for PUT infrastructure
- Develop regulatory strategy to define requirements and expectations
- Prepare a technical memorandum







| Description | Cost |
|--|---------------|
| Preliminary Design/Technical Feasibility Contract | \$3,978,506 |
| Brown and Caldwell Expenditures | (\$2,398,506) |
| Remaining Contract Balance | \$1,580,000 |
| | |
| Preliminary Design Services: | \$4,435,000 |
| Ongoing coordination | \$375,000 |
| Advanced Water Purification Facility | \$1,399,000 |
| City of Rialto Recycled Water Intertie | \$592,000 |
| Injection wells | \$1,894,000 |
| Permitting plan | \$175,000 |
| | |
| Contract Amendment | \$2,855,000 |
| | |
| Total Revised Cost for Preliminary Design Services | \$6,833,506 |

| Project Milestone | Date |
|--|------------|
| Preliminary Design Completion | |
| Advanced Water Purification Facility | May 2023 |
| City of Rialto Recycled Water Intertie | May 2023 |
| Injection wells | May 2023 |
| Permitting plan | March 2023 |

| CBP Planning Budget | Cost |
|-------------------------------------|---------------|
| Current Budget | \$15,000,000 |
| Expenditures to date | (\$6,222,750) |
| Approved Early Funding Agreement | \$8,919,000 |
| Early Funding Reimbursement to date | \$5,109,823 |





- Approve a contract amendment with Brown and Caldwell, Contract No. 46000002697, for the Chino Basin Program in the amount of \$2,855,000, increasing the contract from \$3,978,506 to a revised not-to-exceed amount of \$6,833,506; and
- Authorize the General Manager to execute the contract amendment, subject to non-substantive changes.

The contract amendment is consistent with IEUA's business goal of Water Reliability by implementing an integrated water resources management plan that provides the region with reliable and cost-effective water supply and promotes sustainable water use.



CONTRACT AMENDMENT NUMBER: 4600002697-004 FOR CHINO BASIN PROGRAM PRELIMINARY DESIGN REPORT

| CHINO BACIN'I NOCKAMIT NELIMINAN'I BEGION NEI ON'I |
|---|
| AMENDMENT NUMBER FOUR is made and entered into this day of, 2022, by and between the Inland Empire Utilities Agency, a Municipal Water District, organized and existing in the County of San Bernardino under and by virtue of the laws of the State of California (hereinafter referred to as "IEUA" and "Agency") and Brown and Caldwell, with offices located in Irvine, California (hereinafter referred to as "Consultant"), shall revise the Contract as follows: |
| REVISE SECTION 4, SCOPE OF WORK AND SERVICES, ADDING A PARAGRAPH TO |
| READ: Additional Consultant services and responsibilities shall include and be in accordance with Consultant's Quote, dated August 4, 2022, Exhibit A , which is attached hereto, referenced herein, and made a part hereof. |
| REVISE SECTION 6, TERM, ADDING A PARAGRAPH, TO READ: With the execution of Contract Amendment Number 4600002697-004, the termination date of this Contract shall be |
| extended to December 31, 2023; unless agreed to by both parties, reduced to writing, and |

REVISE SECTION 7, COMPENSATION, ADDING A PARAGRAPH TO READ: In compensation for the work represented by this Contract Amendment, Agency shall pay Consultant a NOT-TO-EXCEED MAXIMUM of \$6,833,506 for all services provided. This represents an increase of \$2,855,000 in accordance with Exhibit A which is attached hereto, referenced herein, and made a part hereof.

ALL OTHER PROVISIONS OF THIS CONTRACT REMAIN UNCHANGED

The parties hereto have mutually covenanted and agreed as per the above amendment item, and in doing so have caused this document to become incorporated into the Contract Documents.

| *A MUNICIPAL WATER DISTRICT | NCY: | BROWN AND CALDWELL: | | | | | | | |
|-------------------------------------|--------|---|-----------|--|--|--|--|--|--|
| | | DocuSigned by: Michael Pucció F41ED4F14C8D49D | 8/19/2022 | | | | | | |
| Shivaji Deshmukh General Manager | (Date) | Michael Puccio, P. E. Vice President | (Date) | | | | | | |

amended in this Contract.

Exhibit A

18500 Von Karman Avenue, Suite 1100 Irvine, California 92612

iiviiie, Caiiioiiiia 920

T: 714.730.7600 F: 714.734.0940



August 4, 2022

Ms. Liza Munoz, P.E. Senior Engineer/Project Manager Inland Empire Utilities Agency 6075 Kimball Avenue Chino, California 91708

153489.010

Subject: Chino Basin Program PDR - Proposal for PDR Services

Dear Ms. Munoz:

Our team remains excited about our conceptual and preliminary design role for the Chino Basin Program (CBP) and are pleased with the recent momentum established with the various stakeholders. With submission of the Technical Feasibility Study and supporting documentation to the California Water Commission and receipt of letters of interest/support from potential program participants, we look forward to being of continued service to the Inland Empire Utility Agency (IEUA) in development of the CBP. Our team was established to be flexible and adjust to changes associated with implementing this complex program.

IEUA contacted Brown and Caldwell (BC) to prepare a brief letter proposal to provide continued preliminary design report (PDR) services for various CBP elements. This work would be authorized under our team's current CBP contract using remaining funds available from our team's flexible approach and workplan. Specific services include:

- Task 1 Prepare Regional Plant No. 4 (RP4) Advanced Water Purification Facility (AWPF) PDR and Project Technical Requirements
- Task 2 Prepare City of Rialto (Rialto) Recycled Water Supply PDR
- Task 3 Prepare Injection and Monitoring Wells PDR, Detailed Siting Report and Conduct Hydrogeologic Investigations
- Task 4 Prepare Permitting Plan and Regulatory Strategy

This letter proposal provides the Scope of Work, Level of Effort and Schedule for the requested services.

SCOPE OF WORK

The following tasks will be completed under this scope of work:

Task 1 – Prepare Regional Plant No. 4 (RP4) Advanced Water Purification Facility (AWPF) PDR and Project Technical Requirements

- **1.1 Conduct project management and administration.** Conduct general project management and administrative activities, including task coordination, general communications, scope, schedule and budget tracking and invoice preparation. Basis for level of effort is for the assumed twelve (12) month PDR duration.
- **1.2 Conduct change management and quality control.** Monitor task progress and notify IEUA of potential impacts to scope, schedule or budget. Document changes and

- obtain IEUA approval prior to implementation. Perform quality control reviews of all deliverables prior to submittal to IEUA.
- **1.3 Conduct meetings and workshops.** Prepare for and facilitate up to ten (10) workshops and meetings. Agendas will be prepared and reviewed with IEUA staff prior to each meeting and workshop. Following each meeting/workshop, project team shall prepare summary meeting minutes with major decisions and action items recorded in a working log.

As preferred by IEUA staff, each of the planned six (6) workshops will be split into two separate workshops. The first will serve as an overview/evaluation of the intended subject matter and recommendations such that IEUA staff has time to prepare and review input prior to the second workshop. The second workshop, scheduled approximately one week after the first, shall serve as a decision-driven meeting that will capture IEUA questions, input, and decisions for project implementation. The following workshops and meetings are recommended during development of the PDR:

- Meeting #1 Kick-off meeting
- Workshop #1 RP4 master planning
- Workshop #2 AWPF capacity/phasing, water sources and quality
- Workshop #3 Project technical requirements coordination
- Workshop #4 System-wide CEC compliance
- Workshop #5 Yard piping and brine disposal plan
- Workshop #6 AWPF treatment process and regulatory compliance
- Meeting #2 Draft PDR introduction/overview
- Meeting #3 Draft PDR comments/responses review
- Meeting #4 Final PDR presentation
- **1.4 Conduct preliminary site investigations at RP-4.** Conduct preliminary site survey to establish existing infrastructure limits, property boundaries and confirm available footprint for proposed AWPF. An aerial survey combined with field survey verification is planned. Conduct geotechnical evaluation of the RP-4 site to establish general geotechnical conditions and identify any bedrock, or other issues, requiring mitigation or that may impact project planning. Limited borings and/or test pits are planned for this preliminary investigation. Historical geotechnical reports at and around the RP-4 site will also be reviewed and analysis provided. It is expected that a detailed survey and geotechnical investigation (baseline report) will be conducted as part of the next phase of design development.
- **1.5 Conduct preliminary design.** Build from CBP concept design; in alignment with draft outline and preliminary sheet list (see Attachment A). Preliminary design will define the basis of design, treatment process design criteria, preliminary site layout and hydraulics, discipline-specific design criteria and facility implementation.

The preliminary design will also include development of the following:

- Up to 10% level preliminary design drawings (up to 28 sheets) to support cost development and confirm project feasibility
- Electrical load list

- 1.6 Prepare Project Technical Requirements. Preceding submittal of the Draft PDR, prepare Project Technical Requirements (PTR) technical memorandum I that may be included with the "bridging documents" for the RP4 AWPF, should the project process following a progressive design build (PDB) delivery approach. The PTR will summarize key project background, general requirements. water quality, hydraulics, process design, hydraulic and discipline design criteria that form the basis for IEUA's design requirements and preferences and would ultimately be considered minimum design requirements for PDR delivery. The PDR related work, including the various workshops requested from IEUA staff, would inform development of the PTR document. It is anticipated that, at IEUA's discretion, the PTR and any other PDR-related documents could be made available to the potential PDB entities.
- 1.7 Evaluate IEUA system CEC compliance strategy. Build from work conducted under non-CBP alternatives. CEC compliance will focus on PFOA and 1,2,3-TCP removal strategies. Current and pending regulatory requirements will be defined. Treatment technologies will be reviewed and evaluated. An IEUA-system mass balance will be prepared to define the level of treatment (capacity and technology) to be implemented at the various regional plants. Prepare separate technical memorandum I for the CEC compliance evaluation and include as an appendix to the AWPF PDR.
- **1.8 Develop opinion of probable cost.** Prepare AACEI Class 4 cost opinion in year 2023 dollars. Identify mid-point of construction cost opinion. Develop opinion of probable annual operations and maintenance costs.
- **1.9 Prepare PDR.** A Draft PDR will be prepared for IEUA and stakeholder review and comment. Comments received will be addressed and incorporated, as appropriate, into a Final PDR. Electronic .pdf versions of both the Draft and Final PDR will be provided. The PTR TM will be incorporated as an appendix to both the draft and final PDR submittals.
- **1.10 Prepare AWPF renderings and 360-degree video.** Following completion of the AWPF preliminary design, prepare an updated rendering and 360-degree fly around video of the RP4 AWPF that incorporates limited surrounding infrastructure. The intent for these materials is for IEUA use in stakeholder meetings and/or planned public education. Up to three (3) graphics to be developed from the working AWPF model.

Task 2 - Prepare City of Rialto (Rialto) Recycled Water Supply PDR

- **2.1 Conduct project management and administration.** Conduct general project management and administrative activities, including task coordination, general communications, scope, schedule and budget tracking and invoice preparation. Basis for level of effort is for the assumed twelve (12) month PDR duration.
- **2.2 Conduct change management and quality control.** Monitor task progress and notify IEUA of potential impacts to scope, schedule, or budget. Document changes and obtain IEUA approval prior to implementation. Perform quality control review of all deliverables prior to submittal to IEUA

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2.3 Conduct meetings and stakeholder coordination.

- Kickoff Workshop. Prepare for and facilitate a two (2) hour kick-off workshop to address the following: introductions, round table discussion regarding stakeholder goals and objectives, discuss opportunities for potential enhancements to the use of the facilities (i.e., serve RW to parks near the alignment), discuss any known alignment constraints and available data, discuss design criteria, discuss facility placement on Rialto WWTP site. PowerPoint slides will be prepared to help guide the discussion with attending stakeholders.
- Stakeholder Meetings. Meet individually with key stakeholders as needed to obtain and review detailed information related to available data, potential project enhancements, alignments, and on-site facility locations and design criteria. Level of effort assumes three (3) virtual 1-hour meetings and one (1) site visit to the Rialto WWTP.
- Pipeline Alignment Alternatives Review Meeting. Review three (3) alignment alternatives and discuss conceptual costs, benefits, risks and constraints of each.
- Pipeline Alignment Alternatives Selection Meeting. Select the preferred pipeline alignment.
- Pump Station Preliminary Review Meeting. Review hydraulic assumptions, design criteria, and conceptual design recommendations for the Rialto Recycled Water Pump Station.
- Draft PDR Review Meeting. Review comments on Draft PDR
- Final PDR Presentation Meeting. Present the Final PDR.

2.4 Prepare Pipeline Alignment TM

- Conduct Pipeline Alignment Alternatives Analysis
- Review potential project enhancements and alignment constraints identified by stakeholders and prepare up to three (3) conceptual pipeline alignments.
 For each alignment, summarize conceptual costs, benefits, risks and constraints.
- Conduct utility research to identify major utilities along the three (3)
 conceptual pipeline alignments. Utility research will be for schematics of
 utilities only to assist with the Pipeline Alignment Alternatives Analysis and
 utilities will not be plotted on preliminary pipeline drawings. Utility research
 information received will be included as an appendix to the Final PDR.
- Evaluate and incorporate, as appropriate, potential Fontana recycled water connection opportunities.
- Review the results with the stakeholders and select a preferred pipeline alignment alternative.
- Prepare Pipeline Alignment TM. Develop Draft TM to document the alternatives analysis and selected alternative. Incorporate comments and prepare Final TM. Final TM will be included as an appendix to the PDR.

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Inland Empire Utilities Agency
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2.5 Conduct Preliminary Surge Analysis

- Prepare a preliminary surge analysis of the recycled water pipeline based on the proposed pipeline alignment, size, pressure, flow rates, and the proposed operational strategy of the recycled water pump station.
- Prepare a draft TM detailing the findings from the surge analysis and preliminary recommendation of surge mitigation strategies (e.g., air release/vacuum relief valves, surge tank, valve selection, valve operation, etc.). Incorporate comments and prepare final TM. Final TM will be included as an appendix to the PDR.
- Final verification of surge mitigation requirements should be performed during final design based on final pipeline and pump station design parameters.

2.6 Conduct Potholing

 Pothole up to twelve (12) locations along the preferred alignment to determine location of critical utility conflicts

2.7 Prepare Preliminary Drawings.

- Data Collection and Review. GIS files, potential RW user demands, onsite asbuilts for Rialto WWTP, including topographic survey, Rialto WWTP flow projections, geotechnical report for Rialto WWTP site.
- For the preferred pipeline alignment, prepare more detailed GIS based maps depicting the following features based on information available in GIS format from project stakeholders or in the public domain: aerial imagery, public rights of way, freeway and railroad crossings, creek crossings. Potholed major existing utilities.
- Prepare Preliminary Drawings. Prepare up to 20% level drawings for the following, planned 22 sheets:
 - Key map, legend, abbreviations
 - Hydraulic profile
 - o Twelve (12) 100-scale pipeline plan sheets (GIS based)
 - Demolition plan (if needed)
 - o Pump station civil site plan
 - Pump station mechanical plan
 - Pump station mechanical section
 - o Pump station electrical single line diagram
 - o Pump station P&ID
 - o RW pipeline hydraulic profile
 - RP-4 connection detail
- **2.8 Develop Opinion of Probable Cost.** Prepare AACEI Class 4 cost opinion in year 2023 dollars. Identify mid-point of construction cost opinion. Develop opinion of probable annual operations and maintenance costs.
- **2.9 Prepare PDR.** Develop Draft PDR, including the following sections: Executive Summary, Introduction and CBP Overview, Purpose and Objectives, Basis of Design,

Environmental Compliance Considerations, RW Pipeline Alignment, WWTP Flow and Equalization Analysis, Rialto WWTP Onsite Improvements, Pump Station Design, Cost Estimate, and Implementation. Preliminary drawings and an electrical load list will be included as appendices. Incorporate comments and prepare Final PDR. Electronic .pdf versions of both the Draft and Final PDR will be provided.

2.10 Prepare Title XVI Feasibility Study. Prepare a Title XVI Feasibility Study (Feasibility Study) for the Rialto Recycled Water Supply Project in accordance with U.S Bureau of Reclamation requirements.

Task 3 – Prepare Injection and Monitoring Wells PDR, Detailed Siting Report and Conduct Hydrogeologic Investigations

- **3.1 Conduct project management and administration.** Conduct general task administrative activities, including task coordination, general communications, scope, schedule and budget tracking and monthly invoice preparation. Basis for level of effort is for the assumed twelve (12) month period to prepare and deliver a PUT Well Facilities Siting Study, Programmatic Implementation Plan for the CBP Well Network, and a Preliminary Design Report for Injection and Monitoring Wells.
- **3.2 Conduct change management and quality control.** Monitor task progress and notify IEUA of potential impacts to scope, schedule or budget. Document changes and obtain IEUA approval prior to implementation. Perform quality control reviews of all deliverables prior to submittal to IEUA.
- **3.3 Conduct meetings and workshops.** Prepare for and facilitate the following meetings and workshops that are planned for two (2) hours each:
 - Kick-off meeting
 - Schedule development workshop
 - Up to eight (8) meetings with stakeholders/property owners, project team consultants, and IEUA groundwater modeling consultants (i.e., West Yost)
 - Initial wellfield siting evaluation workshop
 - Draft siting report review meeting
 - Up to two (2) meetings with DDW and Groundwater Ambient Monitoring and Assessment Program (GAMA) unit

3.4 Conduct Hydrogeologic Investigations

- Exploratory Borings
 - IEUA coordination meetings to define the exploratory drilling program (i.e., drilling and testing methods, injection potential, depths, fate of the borings)
 - o Identify up to four (4) potential exploratory boring locations
 - Conduct up to four (4) falling head tests per borehole (results will be used to estimate injection potential)
 - Assist IEUA in developing specs and bid package for exploratory drilling program
 - Witness drilling, testing, and evaluate results

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Inland Empire Utilities Agency
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Geophysical Investigation

- Conduct 2D Seismic Reflection Survey
- Two orthogonal lines each about 2.5-to-3-mile survey lines through the preliminary identified injection well field
- Preliminary interpretation of 2D Seismic Reflection Survey
- Refine interpretation utilizing data from the exploratory borings
- Permitting, right-of-way coordination and/or traffic control plans for field set up are <u>not included</u> in this proposal and shall be conducted by others.
- Note: Collier Geophysics was contacted by our team to conduct this work. See Attachment B for their letter proposal which includes additional detail and background for the proposed geophysical investigation.

3.5 Develop PUT Well Facilities Siting Study

- Compile and Evaluate Data & Information
 - o Review Available Data & Information
 - o Issue Data Requests to Stakeholders & Amend Data Sets
 - Prepare Stratigraphic Cross Sections
 - Analyze Long-Term Trends for Water Levels, Production, and Water Quality
 - Determine Permitting and Regulatory Requirements for New Wells
- Develop Well Siting Criteria
 - o Parcel Ownership
 - Site Size & Constructability
 - Separation Distances based on DWR Water Well Standards & Santa Ana RWQCB Order No. R8-2005-0033 (for recycled water recharge in groundwater basins)
 - Located within the Storage Framework Investigation study area
 - Geology & Hydrogeology (Injection Potential)
 - Water Quality
 - o Potential Water Mounding Interference with Other Injection Wells
 - Others as Determined by Stakeholders
- Evaluate Preliminary Well Sites
 - Site identification only (with some limited, if any, coordination with landowner to confirm site availability). Any site acquisition work (formal discussions, agreements, documents, cost proposals) would be completed by others.
 - Prepare GIS-based Maps to Identify Sites Meeting Criteria
 - Evaluate Preliminary Well Sites based on the established well siting criteria
 - Develop Evaluation Matrix

- Assign Ranking and identify the preferred injection well sites based on the well siting criteria and preliminary evaluation of well sites
- Deliverable will include a living document that tracks the evaluation and ranking process for the injection and monitoring well sites
- Stakeholder Meeting to Review Preliminary Results (under Task 3.3)
- Identify Test Injection Well Sites
 - Identify Potential Sites for Pilot Test Injection Well and Associated Nested Monitoring well
- Coordinate groundwater model runs with West Yost (note: all groundwater and aquifer modeling in support of the injection well development shall be done by others)
- Prepare Draft Well Siting Technical Memorandum
- Finalize Well Siting Technical Memorandum
- Develop Workplan for the Pilot Test Injection Well
 - o Identify Test Injection Well Sites
 - IEUA coordination meetings to define the pilot injection well testing and exploratory drilling program
 - Regulatory coordination
 - o Construction details (injection well, nested monitoring well (s))
 - Testing components (aquifer test, leaching study, etc.)
- **3.6 Prepare Programmatic Implementation Plan for the CBP Well Network.** Develop refined Program Management Structure and Program Roadmap elements related to CBP injection and monitoring Wells.
 - Prepare a refined organization chart for the CBP wells component that depicts the key roles and lines of accountability for successful delivery.
 - Develop updated baseline schedule for the CBP wells component showing major tasks and milestones.
 - Update the preliminary program risk register to incorporate any additional risks identified for the CBP wells.

3.7 Develop Preliminary Design for Injection and Monitoring Wells

- Prepare basis of design for injection wells (identify typical site design/arrangement)
- Prepare basis of design for monitoring wells
- Prepare preliminary operational strategy for injection wells
- **3.8 Develop Opinion of Probable Cost.** Prepare AACEI Class 4 cost opinion in year 2023 dollars. Identify mid-point of construction cost opinion. Develop opinion of probable annual operations and maintenance costs.
- **3.9 Prepare PDR.** Develop Draft PDR, including the following sections: Executive Summary, Introduction and CBP Overview, Purpose and Objectives, Basis of Design for CBP wells, and implementation plan for wells. Incorporate comments and

prepare Final PDR. Electronic .pdf versions of both the Draft and Final PDR will be provided.

Task 4 - Prepare Permitting Plan and Regulatory Strategy

- **4.1 Conduct project management and administration.** Conduct general administrative activities, including task coordination, general communications, scope, schedule and budget tracking and monthly invoice preparation. Basis for level of effort is a nine (9) month schedule to prepare the Permitting Plan and Regulatory Strategy.
- 4.2 **Conduct change management and quality control.** Monitor task progress and notify IEUA of potential impacts to scope, schedule, or budget. Document changes and obtain IEUA approval prior to implementation. Perform quality control reviews of all deliverables prior to submittal to IEUA.
- 4.3 **Conduct meetings and workshops.** Prepare for and facilitate up to six (6) meetings, as summarized below. Agendas will be prepared and reviewed with IEUA staff prior to each meeting. Following each meeting, project team shall prepare summary meeting minutes with major decisions and action items recorded in a working log.
 - Kick-off meeting. Conduct kick-off meeting with IEUA staff and stakeholders, as appropriate, to review workplan for development of the permitting plan and regulatory strategy. Identify and discuss permitting and regulatory related risks and critical milestones for PUT infrastructure for vetting with regulatory agencies.
 - Regulatory and stakeholder meetings. Conduct up to four (4) meetings with SWRCB-DDW, SWRCB-Groundwater Ambient Monitoring and Assessment Program (GAMA), RWQCB and other stakeholders, as appropriate, to discuss project, permitting and regulatory compliance and expectations.
 - Draft TM review meeting. Conduct meeting with IEUA staff and other stakeholders, as appropriate, to review comments and comments on the Draft TM.
- 4.4 **Prepare permitting plan.** Prepare permitting plan for PUT infrastructure, including external supplies from City of Rialto, RP4 AWPF and planned injection/monitoring wells. Permitting plan shall include a tabular summary of major, required permits for implementation, including agency contacts information and timing/schedule requirements for application.
- 4.5 Prepare regulatory strategy. Prepare regulatory strategy for PUT-related infrastructure, including external supplies (i.e., City of Rialto, RP4 AWPF and injection/monitoring wells). Strategy will be refined throughout the task duration and following meetings with stakeholders and regulatory agencies. Strategy will address Title 22 reporting, source monitoring, source supply ownership, and NPDES permit coordination. The strategy will also address regulatory requirements and expectations for injection/monitoring wells implementation, including piloting and source supply, travel time, phasing, monitoring, and reporting. Input captured from meetings with the SWRCB-GAMA unit will also be reflected in the strategy.

4.6 **Prepare Technical Memorandum (TM).** Prepare Draft TM that comprises both the permitting plan and regulatory strategy for the planned CBP PUT infrastructure. Submit Draft TM to IEUA for review. Comments received will be addressed and incorporated, as appropriate, in a Final TM. Electronic .pdf versions of both the Draft and Final TM will be provided.

Integrated Services

Integrated services are considered additional tasks that would be scoped, budgeted, and authorized separately following implementation and/or completion of preceding services. Those integrated tasks that IEUA has identified for our Team to conduct are summarized below. For budget planning, rough order magnitude (ROM) costs for the integrated services are provided. The scope and detailed cost breakdown shall be provided closer to when such services would be rendered and following implementation and/or completion of preceding work.

- A. Conduct geochemical aquifer analysis. The objectives for this work include collection of geochemical data for the aquifer and to evaluate the potential for operational difficulties or aquifer quality degradation due to the geochemical interactions of the purified water with the injection aquifer. ROM cost for services is approximately \$150,000.
 - o Conduct project management and administration
 - Conduct change management and quality control
 - Conduct meetings
 - Develop site specific geochemical test plan comprised of a sampling and analysis plan (SAP). Note that sufficient soil samples would be made available from construction of the test injection well and/or any exploratory wells conducted as part of the pending geophysical survey work (by others).
 - Laboratory coordination and testing costs
 - Geochemical analysis and report
- **B.** Implement test injection well. A workplan for the test injection well testing will be developed in Task 3.4 which includes a detailed scope of work that will be used to provide a level of effort cost estimate. The ROM cost of services is approximately \$465,000.
 - Prepare bidding documents for test injection well construction and testing
 - o Provide injection well construction, development and testing oversight
 - Prepare draft and final well construction, development and testing report

LEVEL OF EFFORT/BUDGET

The estimated budget for this work (not including the "integrated services") is \$3,445,000. Table 1 provides a summary of our team's remaining CBP PDR budget and request for amendment to the support the effort required to deliver the additional services. Please note that the estimated LOE and budget provided are considered preliminary and provided for budgeting purposes. Our team will review the budget status monthly and contact the IEUA Project Manager as soon as possible if additional funds

are required to support the requested services. A detailed level of effort (LOE) and fee are provided in the attached Table 2.

| Table 1. CBP Contract and PDR Services Budget Summary | | | | | | |
|---|---------------|--|--|--|--|--|
| Task | Cost | | | | | |
| Approximate CBP PDR contract balance (as of 7/28/22) | \$1,580,000 | | | | | |
| Less on-going coordination and concept development (through 6/30/23) | (\$275,000) | | | | | |
| Less Augmented CBP study | (\$100,000) | | | | | |
| Less RP4 AWPF PDR (Task No. 1) | (\$1,399,000) | | | | | |
| Less Rialto recycled water supply PDR (Task No. 2) | (\$592,000) | | | | | |
| Less injection wells PDR, siting report and hydrogeologic investigations (Task No. 3) | (\$1,279,000) | | | | | |
| Less permitting plan and regulatory strategy (Task No. 4) | (\$175,000) | | | | | |
| CBP PDR contract balance (negative indicates amendment request) | (\$2,240,000) | | | | | |

SCHEDULE

Assuming authorization and notice to proceed (NTP) by June 15, 2022, the requested services included in this letter proposal can be completed within the following timeline:

- RP4 AWPF PDR: May 31, 2023 (12 months)
- Rialto recycled water supply PDR: May 31, 2023 (12 months)
- Injection and monitoring wells siting report and PDR: May 31, 2023 (12 months)
- Permitting plan and regulatory strategy: March 31, 2023 (9 months)

We look forward to implementation of the CBP and our continued service to IEUA and program stakeholders. Please contact me directly with any questions.

Very truly yours,

Brown and Caldwell

Andrew Lazenby, P.E.

Director/Sr. Project Manager

Attachment(s)

CHINO BASIN PROGRAM PDR SERVICES

Table 2 - Scope of Work and Preliminary Level of Effort [Rev. 8/4/2022]

| | | | | | | | | | Brown an | d Caldwell | | | | | | | | | | | | | | | | wsc | | | | | | | | |
|---|-------------------|-----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|-----------|----------|----------|-------------|----------|----------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|-----------|-------------|
| | Proje | t Project | Design | QA/QC | Process | Task | Senior | Project | Staff | Lead | Staff | Cost | Word | Subtotal | Subtotal | Direct | Subtotal | Subtotal | QA/QC | Task | Senior | Senior | Staff | Staff | QA/QC | CAD | Engr. | Staff | Staff | Subtotal | Subtotal | Direct | Subtotal | Total |
| | Manag | er Admin | Manager | Lead | Lead | Lead | Engineer | Engineer | Engineer | Designer | Designer | Estimator | Process | Hours | Labor | Expenses | Subs | Cost | | Manager | Hydroego | Engineer | Engineer | Engineer | Engineer | Designer | Support | Geologist | Geologist | Hours | Labor | Expenses | Cost | Cost (1) |
| Task | Bill Rate \$320.0 | \$125.00 | \$300.00 | \$320.00 | \$295.00 | \$185.00 | \$255.00 | \$185.00 | \$150.00 | \$180.00 | \$150.00 | \$270.00 | \$145.00 | | | | | | \$320.00 | \$280.00 | \$260.00 | \$230.00 | \$165.00 | \$165.00 | \$280.00 | \$180.00 | \$155.00 | \$155.00 | \$155.00 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 - Prepare RP4 AWPF PDR | 56 | | 322 | 184 | 402 | 624 | 674 | 916 | 1,026 | 510 | 448 | 152 | 92 | 6,078 | 1,298,320 | 20,355 | 76,500 | 1,395,175 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | G | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1.1 - Conduct project management and administration | | 2 144 | | | | | | | | | | | | 336 | 79,440 | 5,000 | 0 | 84,440 | | | | | | | | | | | | 0 | 0 | | 0 | 84,44 |
| 1.2 - Conduct change management and quality control | | 8 24 | | 120 | | | 80 | | | | | | | 272 | 77,160 | | 0 | 77,160 | | | | | | | | | | | | 0 | 0 | | 0 | 77,160 |
| 1.3 - Conduct meetings and workshops | 1 | 0 0 | 102 | . 0 | 94 | 184 | 102 | 110 | 192 | 18 | 48 | 0 | 0 | 970 | 216,370 | 10,565 | 1,500 | 228,435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 228,51 |
| 1.4 - Conduct preliminary site investigations at RP-4 | | 4 | 8 | | | 16 | 8 | | 16 | | | | | 52 | 11,080 | | 70,000 | 81,080 | | | | | | | | | | | | 0 | 0 | | 0 | 84,580 |
| 1.5 - Conduct preliminary design | 1 | .2 0 | 140 | 0 | 168 | 232 | 332 | 482 | 410 | 420 | 320 | 0 | 0 | 2,616 | 529,250 | 0 | 0 | 529,250 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (| 0 | 0 | 0 | 0 | 0 | 0 | 529,250 |
| 1.6 - Prepare project technical requirements | | 4 | 40 | 40 | 80 | 80 | 100 | 240 | 220 | | | | | 824 | 173,780 | | 0 | 173,780 | | | | | | | | | | | | 0 | 0 | | 0 | 173,780 |
| 1.7 - Evaluate IEUA-system CEC compliance strategy | | 4 | 8 | 8 | 40 | 32 | 48 | 80 | 96 | 24 | 24 | | | 384 | 79,720 | | 5,000 | 84,720 | | | | | | | | | | | | 0 | 0 | | 0 | 84,970 |
| 1.8 - Develop opinion of probable cost | | 8 | 4 | 8 | | 16 | | | | | | 152 | | 188 | 50,320 | | 0 | 50,320 | | | | | | | | | | | | 0 | 0 | | 0 | 50,320 |
| 1.9 - Prepare PDR | | 4 | 16 | 8 | 20 | 56 | | | 88 | | 24 | | 92 | 328 | 61,440 | 4,290 | 0 | 65,730 | | | | | | | | | | | | 0 | 0 | | 0 | 65,730 |
| 1.10 - Prepare AWPF renderings/video | | 4 | 4 | | | 8 | 4 | 4 | 4 | 48 | 32 | | | 108 | 19,760 | 500 | 0 | 20,260 | | | | | | | | | | | | 0 | 0 | | 0 | 20,260 |
| 2 - Prepare Rialto RW pump station and pipeline PDR | | 2 16 | 76 | 76 | 0 | 0 | 236 | 68 | 32 | 80 | 32 | 128 | 0 | 806 | 200,280 | 2,684 | 65,000 | 267,964 | 256 | 0 | 0 | 0 | 0 | 658 | 64 | 132 | 428 | 0 | 0 | 1,538 | 298,510 | 7,000 | 305,510 | 592,000 |
| 2.1 - Conduct project management and administration | | 8 8 | | | | | | | | | | | | 16 | 3,560 | | 0 | 3,560 | 26 | | | | | 36 | | | | | | 62 | 14,260 | | 14,260 | 18,533 |
| 2.2 - Conduct change management and quality control | | 8 8 | | 24 | | | 40 | | | | | | | 80 | 21,440 | | 0 | 21,440 | 16 | | | | | 16 | 24 | | | | | 56 | 14,480 | | 14,480 | 36,64 |
| 2.3 - Conduct meetings and stakeholder coordination | | 2 0 | 32 | . 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 86 | 24,800 | 2,684 | 0 | 27,484 | 82 | 0 | 0 | 0 | 0 | 90 | 0 | 0 | (| 0 | 0 | 172 | 41,090 | 7,000 | 48,090 | 77,979 |
| 2.4 - Prepare pipeline alignment TM | | | | 8 | | | | | | | | | | 8 | 2,560 | | 0 | 2,560 | 32 | | | | | 140 | | | 76 | | | 248 | 45,120 | | 45,120 | 49,936 |
| 2.5 - Conduct preliminary surge analysis | | 2 | 4 | 8 | | | 8 | | | | | | | 22 | 6,440 | | 0 | 6,440 | 12 | | | | | 24 | 40 | | 140 | | | 216 | 40,700 | | 40,700 | 49,175 |
| 2.6 - Conduct potholing | | 2 | 4 | | | | 8 | | 4 | | | | | 18 | 4,480 | | 65,000 | 69,480 | | | | | | 16 | | | | | | 16 | 2,640 | | 2,640 | 75,502 |
| 2.7 - Prepare preliminary drawings | | 8 0 | 8 | 24 | 0 | 0 | 96 | 40 | 0 | 80 | 32 | 0 | 0 | 288 | 63,720 | 0 | 0 | 63,720 | 26 | 0 | 0 | 0 | 0 | 124 | 0 | 132 | (| 0 | 0 | 282 | 52,540 | 0 | 52,540 | 118,88 |
| 2.8 - Develop opinion of probable cost | | 4 | 4 | 8 1 | | | | | | | | 112 | | 128 | 35,280 | | 0 | 35,280 | 2 | | | | | 24 | | | | | | 26 | 4,600 | | 4,600 | 40,110 |
| 2.9 - Prepare PDR | | 4 | 16 | ò | | | 48 | 24 | 24 | | | | | 116 | 26,360 | | 0 | 26,360 | 40 | | | | | 140 | | | 52 | | | 232 | 43,960 | | 43,960 | 72,518 |
| 2.10 - Prepare Title XVI feasibility study | | 4 | 8 | 3 4 | | | 4 | 4 | 4 | | | 16 | | 44 | 11,640 | | 0 | 11,640 | 20 | | | | | 48 | | | 160 | | | 228 | 39,120 | | 39,120 | 52,716 |
| 3 - Prepare injection/monitoring wells siting study and PDR | 1 | 0 28 | 132 | 64 | 0 | 0 | 320 | 52 | 0 | 56 | 0 | 112 | 0 | 874 | 230,320 | 4,014 | 422,000 | 656,334 | 103 | 469 | 794 | 120 | 40 | 0 | 0 | 48 | G | 812 | 180 | 2,566 | 567,320 | 5,600 | 572,920 | 1,279,000 |
| 3.1 - Conduct project management and administration | | 8 8 | | | | | | | | | | | | 16 | 3,560 | | 0 | 3,560 | 8 | 40 | 20 | | | | | | | | | 68 | 18,960 | 200 | 19,160 | 23,678 |
| 3.2 - Conduct change management and quality control | | 4 4 | | 24 | | | 48 | | | | | | | 80 | 21,700 | | 0 | 21,700 | 8 | 8 | | | | | | | | | | 16 | 4,800 | | 4,800 | 26,740 |
| 3.3 - Conduct meetings and workshops | | 0 0 | 64 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 164 | 47,300 | 3,014 | 13,000 | 63,314 | 48 | 116 | 116 | 0 | 0 | 0 | 0 | 0 | | 44 | 0 | 324 | 84,820 | 900 | 85,720 | 153,970 |
| 3.4 - Conduct hydrogeologic investigations | | 4 16 | 28 | 32 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 180 | 48,720 | 1,000 | 325,000 | 374,720 | 0 | 107 | 236 | 0 | 0 | 0 | 0 | 0 | (| 240 | 180 | 763 | 156,420 | 1,600 | 158,020 | 556,893 |
| 3.5 - Develop PUT well facilities siting study | | .6 0 | 16 | . 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 21,140 | 0 | 15,000 | 36,140 | 15 | 114 | 244 | 8 | 0 | 0 | 0 | 8 | (| 424 | 0 | 813 | 169,160 | 1,700 | 170,860 | 216,293 |
| 3.6 - Prepare programmatic implementation plan for well | s | 4 | 4 | | | | 8 | | | | | | | 16 | 4,520 | | 40,000 | 44,520 | 6 | 24 | 24 | | | | | | | | | 54 | 14,880 | 100 | 14,980 | 62,249 |
| 3.7 - Develop pre-design for injection and monitoring wel | ls | 6 0 | 12 | . 0 | 0 | 0 | 64 | 52 | 0 | 56 | 0 | 0 | 0 | 190 | 41,540 | 0 | 22,000 | 63,540 | 8 | 34 | 90 | 48 | 0 | 0 | 0 | 40 | (| 64 | 0 | 284 | 63,640 | 600 | 64,240 | 132,092 |
| 3.8 - Develop opinion of probable cost | | 4 | 4 | 8 | | | 8 | | | | | 112 | | 136 | 37,320 | | 0 | 37,320 | 4 | 6 | 24 | 24 | 16 | | | | | | | 74 | 17,360 | 200 | 17,560 | 55,758 |
| 3.9 - Prepare PDR | | 4 | 4 | | | | 8 | | | | | | | 16 | 4,520 | | 7,000 | 11,520 | 6 | 20 | 40 | 40 | 24 | | | | | 40 | | 170 | 37,280 | 300 | | |
| 4 - Prepare permitting plan and regulatory strategy | | 2 44 | 56 | 32 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 258 | 64,220 | 1,496 | 90,000 | 155,716 | 16 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | o | 0 | 0 | 48 | 14,080 | 0 | 14,080 | 175,000 |
| 4.1 - Conduct project management and administration | | .8 36 | | | | | | | | | | | | 54 | 10,260 | | . 0 | 10,260 | 4 | 4 | | | | | | | | | | 8 | 2,400 | | 2,400 | 12,780 |
| 4.2 - Conduct change management and quality control | | 8 8 | | 32 | | | | | | | | | | 48 | 13,800 | | 0 | 13,800 | | | | | | | | | | | | 0 | . 0 | | 0 | |
| 4.3 - Conduct meetings and workshops | | 4 | 24 | | | 24 | | | | | | | | 72 | 19,320 | 1,496 | 15,000 | 35,816 | | | | | | | | | | | | 0 | 0 | | 0 | 36,56 |
| 4.4 - Prepare permitting plan | | 4 | 12 | | | 12 | | | | | | | | 28 | 7,100 | | 35,000 | 42,100 | 4 | 8 | | | | | | | | | | 12 | 3,520 | | 3,520 | |
| 4.5 - Prepare regulatory strategy | | 4 | 12 | | | 12 | | | | | | | | 28 | 7,100 | | 25,000 | 32,100 | 4 | 12 | | | | | | | | | | 16 | 4,640 | | 4,640 | |
| 4.6 - Prepare technical memorandum | | 4 | 8 | | | 16 | | | | | | | | 28 | 6,640 | | 15,000 | | 4 | 8 | | | | | | | | | | 12 | 3,520 | | 3,520 | |
| TOTAL | 7 | 14 256 | 586 | 356 | 402 | 688 | 1,230 | 1,036 | 1,058 | 646 | 480 | 392 | 92 | 9.016 | ¢1 702 1/10 | 628 640 | C652 500 | \$2,475,189 | 375 | 501 | 794 | 120 | 40 | 658 | 64 | 180 | 428 | 812 | 180 | 4.152 | C970 010 | \$12,600 | \$997 510 | \$3,445,000 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Notes: (1) Includes subconsultant markup of 5.00%.

ATTACHMENT A

CHINO BASIN PROGRAM

RP4 AWPF PRELIMINARY DESIGN REPORT (DRAFT)

Outline

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ATTACHMENT B

Proposed Work Program for Seismic Services:

Collier Geophysical Services Proposal 22-247

Rancho Cucamonga, CA

July 29, 2022

Collier Geophysics, LLC 590 S South Loop Stephenville, TX 76401

Inland Empire Utility Authority 9644 Hermosa Ave Rancho Cucamonga, CA 91730





RANCHO CUCAMONGA, CALIFORNIA 2D SEISMIC EXPLORATION PROJECT GEOPHYSICAL SERVICES PROPOSAL 22-247

1.0 DESCRIPTION OF THE PROJECT

Collier Geophysics LLC (Collier) is pleased to present Inland Empire Utility Authority (IEUA) this proposal to assist in providing seismic services for a project near Cucamonga, California. The objective will be to help define sub-surface geologic control for water resources and new water well positioning.

1.1 PURPOSE & OBJECTIVES

The project is located near the city of Rancho Cucamonga (The City), California (Figure 1). The primary objective of the project is to assist IEUA in acquiring new 2D seismic reflection data for constraining the sub-surface Earth model for identifying water resources. The seismic data will be used to tie existing sub-surface information such as well information or other sub-surface geologic data in order to identify key geologic formations such as faults, fracture zones or other structures that may enhance the production capacity of the Chino and Cucamonga water basins or influence the selection of favorable Aquifer Storage and Recovery (ASR) well locations. We will also generate synthetics from any existing well control on or near the exploration areas in order to correlate the well information directly to the seismic sections for better understanding of lithology and sub-surface structure.

The primary area of interest and proposed 2D seismic line(s) are outlined in Figure 1





Figure 1: Regional and local map and proposed lines

Consideration for new 2D high resolution seismic reflection data

Given the lack of existing 2D/3D seismic data that can be acquired over the project area, Collier proposes acquiring new high resolution 2D seismic reflection data for sub-surface control.

Collier has considered several scenarios. Collier believes that the appropriate line length should be a minimum of 2.5 to 3.0 miles long in order to properly resolve both near surface reflectivity as well deeper reflectors. Collier also recommends (if possible) dense sampling of the near surface reflectivity for both statics and seismic velocity control.

We have proposed two orthogonally oriented 2-D seismic lines each nominally 2.5 to 3.0 miles long, for a total of 5.5 to 6.0 miles of seismic data. The location of each line will depend on site conditions and potential well locations and will be determined after a site visit. Where possible, we would make use of road and utility easements. We believe that line positioning will benefit from reduced cultural noise, allow the lines to be lengthened as needed and provide ease of access subject to appropriate private and public permit and use limitations.

A field site visit will be necessary to verify all field parameters proposed.

1.2 SEISMIC FIELD OPERATIONS

The Cucamonga, CA 2D Seismic Project will employ the use of advanced cable-free nodal seismic system technology such as the Geophysical Technology Inc. NuSeis Seismic System. The Project may employ use of our proprietary Accelerated Impact Source (AIS) seismic energy source to maximize flexibility and efficiency of seismic field operations. The estimated time required for completion of all field seismic work is **16 to 21 days**, not including an additional **2 to 3 weeks** to process the data. Data will be delivered in standard SEGY format with an interpretation of the major geologic features observable in the data.

1.3 2D SEISMIC DATA ACQUISITION PARAMETERS

The 2D seismic survey geometry and data acquisition parameters are based on geologic target objectives, required minimum seismic signal and spatial resolution, geologic information and environmental conditions. This proposal does not include costs for seismic permitting or site access. Collier assumes that IEUA will secure all needed permits and site access. Collier can assist with the permitting process and has provided an optional solution here at an additional cost.

Source and receiver station locations are subject to change during the deployment of autonomous geophone recording units, based on site conditions, property obstacles, or safe land access concerns for equipment and personnel. Using all available final permitting information, identification of any surface and subsurface infrastructure that requires "safe offset" distances from Source (SRC) stations and/or "exclusion zones", updated source-receiver station pre-plot map(s) can be reviewed prior to field deployment of any seismic Receiver (RCVR) data recording

equipment and/or relocation of SRC stations. The final SRC-RCVR station pre-plot map shall be presented to IEUA for review and approval prior to commencing data acquisition operations.

The seismic data will be collected using the following field parameters:

2D Seismic Survey Geometry Summary:

Total 2D Survey Line Coverage (per line) : 2.5-3.0 miles (static receiver spread)

Estimated minimum 2D Fold : 100

2D Seismic Survey Instruments and Recording Parameters

Seismic Instruments : GTI NuSeis™ Seismic System (or equivalent)

RCVR Interval : 100ft

Number of Live Channels : 200-250 (estimated - all active static 2D spread)

Shooting Configuration : Static 2D Line / shoot through spread

Sample Rate : 0.5 ms
Record Length : 1-2 seconds

Energy Source Types and Parameters:

Seismic Energy Source : XLR8-2000 AIS (or equivalent)

SRC Interval : 50ft

Operating Pressure : 400 to 450 psi Impacts/SRC Station : 6-8 (subject to tests) Number of Impact Source Points : 100-150 (estimated)

1.4 PROJECT SEISMIC INSTRUMENT AND ENERGY SOURCE SYSTEMS

2D Seismic Instruments System

The recording of high-quality broadband high resolution, low noise seismic data, is best achieved when deployed geophone sensors are well coupled to the ground, and when the seismic energy source is capable of generating seismic energy that will contain broadband frequencies in the range of 5 Hz to 130+ Hz.

The proposed cable free solution is environmentally friendly and provides enhanced operational efficiency. Collier recommends using a cable free system in order to minimize the intrusiveness during deployment, and visibility of seismic equipment deployed over private lands. Increased flexibility with respect to ground installation allows field crews the ability to avoid and/or work around obstacles, thus limiting the introduction of seismic "no data" gaps. Moreover, the integrated high-precision GPS receiver provides a high level of RCVR station certainty with respect to X, Y, Z geodetic location. Requirements for deployment personnel and supporting equipment is also minimized, affording field crews greater mobility and less obtrusive access within and around the Project area(s).





NuSeis NRU

Deployed NuSeis NRU

The NuSeis™ NRU™ is an example of a self-contained seismic nodal recording unit with a 58 gram internal eCab (electronic cab) that can be quickly removed and inserted into a dozen different interchangeable NuSeis™ form factors, each optimally suited for particular environments to provide peak operating performance, and the highest quality ground coupling. Each NRU encloses the geophone sensor, data recording electronics & storage with 148 dB dynamic range and Bluetooth 5.1 continuous broadcast for remote monitoring, 10 Ah Li-lon battery, GNSS/GPS (GPS, Glonass, Galileo, Beidou), and high-speed USB data download capabilities.

NuSeis[™] field operations will employ NuSuite[™], a fully integrated and comprehensive software package designed for deployment, infield QC, ancillary data logging, power recharge, data download and transcription, field work instructions, inventory control, and infield QC processing. To eliminate the need for pre-deployment geodetic surveying of RCVR and SRC stations, Collier NRU deployment crews will utilize the NuSuite[™] software installed on field tablets with pre-plot SRC-RCVR SP1 grid station data uploaded to guide Stake-Less NRU deployment. The Stake-Less method for NRU deployment enables on-the-fly relocation and recording of any RCVR position changes. SRC stations can be marked, flagged, and modified as need using the same Stake-Less survey method if required.

Seismic Energy Source Systems

Collier may employ our proprietary XLR8-2000 Accelerated Impact Source (AIS) energy source for acquisition of the 2D seismic data.



Collier XLR8-2000 Accelerated Impact Source (AIS)

The XLR8-2000 Accelerated Impact Source is a high performance and powerful seismic energy source but is non-destructive when operating in close proximity to buildings and other surface infrastructure. The XLR8-2000 is equipped with GPS to record AIS SRC station positions, and for managing/monitoring "time-break", or "zero time" for each seismic record. Recorded files containing critical AIS SRC station positions, and GPS clock-times for "time-break" correlation with NuSeis NRU recorded data, and source-signature signals, is downloaded daily for QA/QC and post-acquisition plotting of occupied SRC stations and QC monitoring. A significant benefit of using the XLR8-2000 AIS is the ability for maximizing SRC station coverage throughout the 2D survey grid area. The AIS poses no risk of damage to surface and buried infrastructure when operated in low to medium power output modes.

1.5 2D SEISMIC PROJECT FIELD CREWS

Collier Geophysics field operations are managed by a Project Manager and a Sr. Project Geophysicist to oversee and aid with management and coordination of field operations, project QA/QC of survey data, GTI instruments performance & deployment, day-to-day seismic data acquisition, and project close-out. For this seismic program, the minimum data acquisition operations management and crew position requirements are listed in 1.5.1 below.

1.5.1 Project Management, Supervision and Field Operations Crew

Project Management & Field Crew Supervision Staff

- 1. (1) Project Manager
- 2. (1) Sr. Project Geophysicist

Seismic Energy Source and Recording Crew

- 1. (2) Geophysical Field Technicians
- 2. (1) NuSeis Field Technician

Other Project Staff

- 1. (1) GIS Specialist
- 2. (1) Logistics Coordinator

1.5.2 2D Data Quality Assurance and Quality Control

The SRC and RCVR geometry for the 2D seismic survey is designed to produce good spatial resolution using high density RCVR coverage. Using the GTI NuSeis™ NRU nodal seismic system, which permits deployment of the geophone sensors below ground, assures the good uniform geophone-to-ground coupling throughout the 2D survey areas. Below ground planting of the NRU's also improves geophone signal amplitude and frequency sensitivity. Improvements to amplitude sensitivity are reported to be at least 12 dB, and there is better recovery of seismic data with wider frequency bandwidth. Both of these geophone sensor attributes are critical to maximizing seismic signal resolution. Other important performance attributes are uniform signal-to-noise, lower susceptibility to ambient noise interference, and NRU reliability (0.003% failure rate per 1,000 units over one-year period).

Use of the Accelerated Impact Source (XLR8-2000 AIS) enables acquisition of dense seismic data coverage and offers the opportunity to add SRC stations around areas where permits have not been obtained; infill operations along roads and paths that may not require permits. The use of the AIS will aid in producing balanced uniform CDP coverage and fold distribution.

1.5.3 2D Seismic Data Processing

Upon completion of all 2D seismic data acquisition work, all raw seismic data will be harvested, archived, and prepared for delivery for processing in Houston, Texas. Prior to delivery, archived data will be inspected and evaluated for QA/QC purposes. Delivery will include post-acquisition plots for all RCVR and SRC stations, RCVR and SRC geodetic coordinate information, and report logs of field operations.

The generalized 2D seismic processing workflow will consist of:

- Reformatting / Geometry / Trace Edit / Trace First Break Picks
- Surface Consistent & Source Signature Deconvolution, Shot and Receiver
- Refraction Statics
 - Vista 2-Layer Modeling
 - o Tomographic Refraction Statics Solution
- Automatic Surface Consistent Reflection Statics and Velocity Analysis: 2 Passes
- NMO/Mute
- DMO (If needed)
- Final CDP Stack
- Bandwidth Extension (BWE)
- Pre-stack Time Migration

TVF

The estimated time for completion of all 2D seismic data processing and imaging is approximately **2 to 3 weeks** from the delivery of raw field data to processing team.

1.5.3 Interpretation and Report

A Collier geophysicist will interpret the seismic data to assist in mapping the sub-surface structure, controlling horizons, stratigraphic markers as defined by any synthetic seismograms constructed, major faults and fracture zones. The data will be interpreted on the two-way travel time sections and converted to depth using a velocity model derived from well log data, if available, or an estimated velocity profile if no geophysical well logs are available.

Collier will also conduct simple attribute processing on the processed seismic data to delineate lithologic changes in the geologic units that may be indicative of more favorable aquifer material or confining units. Attribute processing looks at changes in the amplitude, frequency, phase and other wavelet properties, in a trace to trace comparison along the seismic line, to illuminate changes along a reflector. The physical properties of a formation affect the propagation of seismic energy which affects the properties of the wavelets produced by a seismic survey. By looking at the wavelets and how they change trace to trace, physical properties such as lithology, porosity, formation fluid properties (water, gas, or oil), faulting, fracturing, and other properties can be interpreted. Attribute processing emphasizes patterns in the seismic wavelets too subtle to be seen by the human eye but contain significant information about the stratigraphy of the subsurface.

Collier will process the seismic data using several standard attributes as an aid in the interpretation of the data and to assess how much more stratigraphic data can be extracted from the processed data set. The attribute set calculated for the data will include:

- Instantaneous Amplitude,
- Instantaneous Frequency,
- Energy,
- Relief,
- Similarity and Semblance.

There are many other standard attribute data sets that can be calculated and data specific attributes or combination of attributes that can be calculated. The attributes we chose are considered a subset of the simpler and most commonly used attributes. More advanced attributes can be applied if desired as a subsequent project task. If sufficient geophysical well log information is available from wells near the seismic line, we can conduct a petrophysical analysis to calibrate the attribute response and improve the predictability of formation properties from the seismic data. If geophysical well log control is sparse or not available, the attribute analysis will show relative changes in formation properties but will not be calibrated until a well is drilled and tested. The results of the seismic data acquisition and interpretation will be presented in a report that describes the field methods, processing steps, processed data, and interpretation.

2.0 SEISMIC OPERATIONS SAFETY

Collier Geophysics, its affiliates, subcontractors, and consultants, are committed to and will conduct safe seismic surveys and clean operations, with emphasis on protecting our staff, clients, the general public, and the environment in compliance with the IAGC Land Seismic Safety Guidelines (Attached Hereto). Site-specific HSE and Environmental Compliance guidelines can be developed in order to comply with any Federal, State, local government regulations, and private owner land access requirements.

3.0 Project Costs

3.1 2D Seismic Data Acquisition Turnkey Price

The proposal below presents all turnkey prices for the 2D high resolution seismic reflection acquisition scenarios as described in this proposal:

| | Turn-key Cost |
|--|---------------|
| Site visit and refinement od line locations | \$5,500.00 |
| 2x 2.5-3.0mi 2D seismic reflection lines + processing | \$259,500.00 |
| Interpretation and report | \$20,000.00 |
| Total | \$285,000.00 |
| Additional Log Analysis and Revising Report (Optional) | \$10,000.00 |

The Turnkey price includes, but is not limited to, the following seismic survey project tasks and services:

- 1. Survey design, geophysical modeling, seismic instruments and equipment testing & preparation, permitting activities support and review, site inspections.
- 2. Mobilization and Demobilization of all equipment and personnel to/from survey site Houston, Huntsville, and Austin, Texas.
- 3. Deployment of seismic instruments over the survey grid, supporting equipment, personnel, and per diem.
- 4. Seismic equipment setup, instruments deployment, data acquisition operations; includes supporting equipment, trucks, materials, management, field operations personnel, per diem.
- 5. Instruments and equipment in field maintenance.
- 6. Seismic Project, Logistics, GIS Mapping, and HSE management.
- 7. Seismic Processing
- 8. Attribute Processing

9. Interpretation

10. Report preparation

The estimated time for completion of all 2D seismic data acquisition field work is approximately **16-21 days** from the time crews and equipment mobilize for the start of field operations. Field operations can be conducted late this fall or early winter. As of the date of this report, we could conduct this work in late October to November, 2022. We have several other seismic projects in various stages of planning so the sooner IEUA can commit to the survey the sooner we can schedule the work and schedule the other surveys around this one.

3.2 Project Costs Not Included in the Turnkey Price

1. Crew Standby for Weather

Recording Crew & Equipment (not to exceed 8 hrs. per day) \$600.00/hr.

2. Other Standby

Recording Crew & Equipment (not to exceed 8 hrs. per day) \$600.00/hr.

NOTE: Any Standby time shall be verified by Contractor for each occurrence and is subject to mutual consent by Collier and IEUA.

3. Seismic permitting

Seismic permitting costs are difficult to estimate and are typically based upon accessibility of landowners and projected mineral costs. As such, Collier has chosen the proposed line layout to minimize permit fees by making use of the public road access. Permitting costs are not included in the cost estimates.

Should IEUA require seismic permitting, Collier would be able to provide this for a separate fee. Permitting is a variable expense that depends on geographic variability including regional laws for public and private land use.

3.3 Optional Project Costs Not Included in the Turnkey Price

In conjunction with the 2D seismic processing, synthetic seismograms from well information may be considered and generated from available well log data for correlation with dominant reflections identified in the 2D seismic data volume. This is a critical step in converting the seismic two-way travel time data to depth but requires that geophysical well log data are available, ideally a sonic or velocity log but other logs can be used if no velocity logs are available.

We understand that IEUA will be drilling 4 monitoring wells and will be collecting a suite of geophysical well logs, including sonic or acoustic logs. Assuming that geophysical well log data are available for the existing wells or other suitably located wells, Collier will prepare synthetic seismograms and depth conversion of the seismic data for the following costs:

Load, QC and Editing well log data: \$200/well
 Basic synthetic generation (assumes good condition LAS data): \$260/well
 Well digitization (if required; up to 3x curves): \$250/well

If the logs are not available we can complete the report using estimated seismic velocities for depth conversion. If the logs become available after the report has been completed, we can revise the depth conversion and attribute processing using the new logs, if so directed by IEUA. The optional cost to revise the interpretation and update the report is provided in the cost table.

4.0 Deliverables

The deliverables for the project will consist of the following:

Final georeferenced post-plot maps for all SRC and RCVR stations used to record and generate the Cucamonga, CA 2D seismic data volume.

- Copies of all raw seismic data, seismic processing test data, intermediate SEGY data files for data processing steps, all final 2D SEGY volume files, and project files.
- Final 2D seismic data acquisition and data processing reports.
- A report describing the field procedures, processing steps, and data interpretation

5.0 Closure

The proposed seismic survey has been designed to provide high-resolution images of the subsurface stratigraphy along the proposed seismic lines. This data will provide the required subsurface control for IEUA to site new ASR or production wells. Collier believes that the proposed survey described will reduce risks associated with geologic uncertainty in the area and lead to identifying suitable well location(s).

Collier looks forward to working with IEUA. Please let us know if you have any questions or comments.

Yours truly,

John Jansen, Pg.P., Ph.D.

Senior Geophysicist

John Jenson

ACTION ITEM 2B



Date: September 21, 2022

To: The Honorable Board of Directors From: Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources 09/14/22

Finance & Administration 09/14/22

Staff Contact: Christiana Daisy, Deputy General Manager

Subject: Collection System Condition Assessment and Optimization Project Fiscal Year

2022/23 Project Budget Augmentation

Executive Summary:

In 2020, Inland Empire Utilities Agency (IEUA) with CDM Smith initiated the Collection System Condition Assessment and Optimization Project. The goal of the project is to enhance IEUA's planning and maintenance of the collection assets within the regional and brine sewer systems by gathering condition assessment data on several critical sewer assets and develop a comprehensive sewer system maintenance optimization program. The project is scheduled to be completed by December 2022. On July 20, 2022, the Board of Directors approved a total project budget augmentation for Project EN19024 from \$3,590,419 to \$3,919,419 in the RO Fund and for Project No. EN19028, from \$915,000 to \$1,256,000 in the NC Fund to complete the condition assessment scope with CDM Smith with an amendment to perform additional cleaning and bypassing efforts on two remaining siphons. With the Board approved augmented budget for each project, staff is recommending a Fiscal Year (FY) 2022/23 budget augmentation for EN19024 and EN19028 to complete the project as scheduled. The adjustment would adjust the FY 2022/23 budget for EN19024 from \$329,878 to \$380,115 (\$50,237 increase) and EN19028 from \$70,000 to \$463,398 (\$393,398 increase). These adjustments would allow projected spending to align with the augmented total project budget.

Staff's Recommendation:

- 1. Approve a FY 2022/23 project budget augmentation for the Regional System Asset Management Project, No. EN19024, in the amount of \$50,237, from \$329,878 to \$380,115 in the Regional Operations and Maintenance (10800) Fund;
- 2. Approve a FY 2022/23 project budget augmentation for the NRW Manhole and Pipeline Project, No. EN19028, in the amount of \$393,398, from \$70,000 to \$463,398 in the Non-Reclaimable Wastewater (10500) Fund; and
- 3. Authorize the General Manager to approve the budget augmentation.

Budget Impact Budgeted (Y/N): N Amendment (Y/N): Y Amount for Requested Approval: \$443,635

Account/Project Name:

EN19024/Regional System Asset Management EN19028/NRW Manhole and Pipeline

Fiscal Impact (explain if not budgeted):

If approved, the FY 2022/23 project budget for Project EN19024 will increase from \$329,878 to \$380,115 in the RO Fund and for Project No. EN19028, the FY 2022/23 project budget will increase from \$70,000 to \$463,398 in the NC Fund. These changes will not increase the total project budget for each project.

Prior Board Action:

On July 20th, 2022 IEUA's Board of Directors approved an amendment to CDM Smith's contract for a not-to-exceed amount of \$659,325

On September 16, 2020, IEUA's Board of Directors approved the service contract with CDM Smith for a not-to-exceed amount of \$2,910,909 for the Condition Assessment and Optimization of the Collection System, Project Nos. EN19024 & EN19028.

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 15262 of the State CEQA Guidelines. When the project will be implemented, it will be subject to future environmental evaluation.

Business Goal:

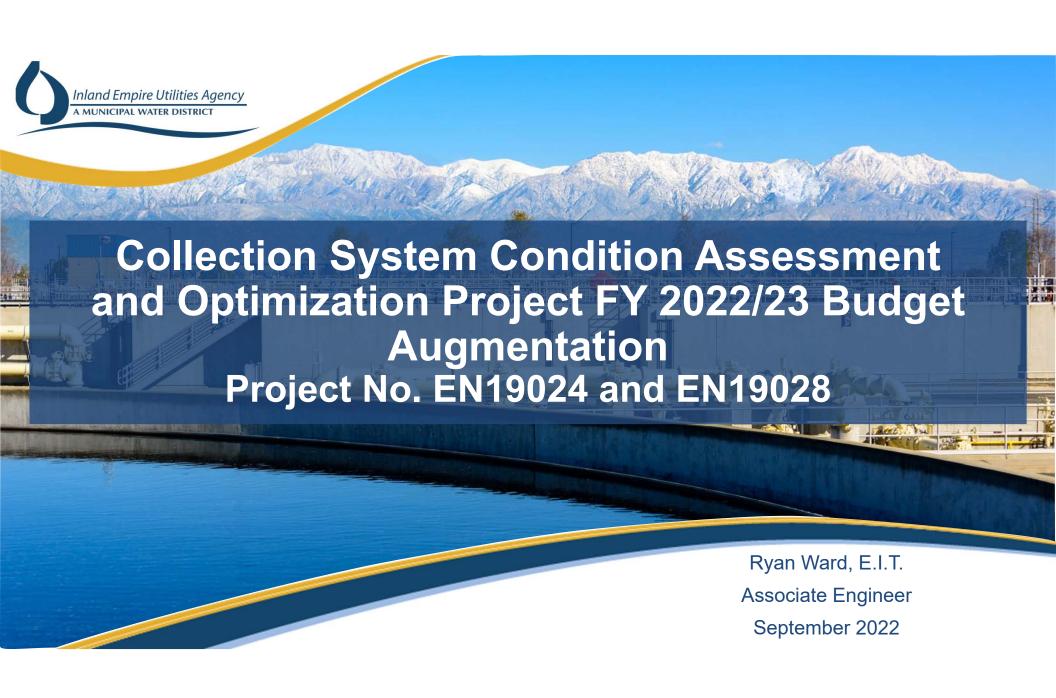
The Collection System Condition Assessment and Optimization Project is consistent with the IEUA's Business Goal of Wastewater Management, specifically the Asset Management and Water Quality objectives, that IEUA will ensure that systems are well maintained, upgraded to meet evolving requirements, sustainably managed, and accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.

Attachments:

Attachment 1- PowerPoint

Board-Rec No.: 22157

Attachment 1





Project Overview/Location



Brine Sewer System (BSS)
Regional Sewer System (RSS)

Collection Sewer
System

Brine Sewer
System
System
System
System

Collection Sewer System

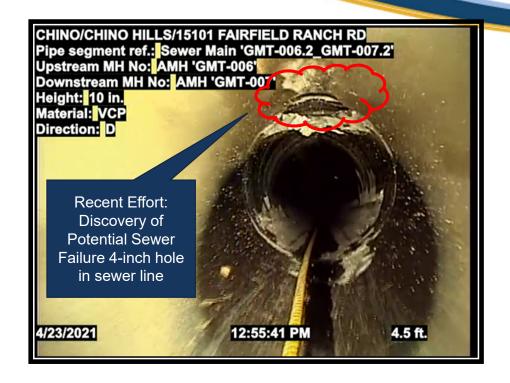
- Two independent sewer systems
- Regional Sewer System
- Brine Sewer System

| City | BSS – Siphons | RSS – Siphons |
|------------------------|---------------|---------------|
| Rancho Cucamonga | 4 | - |
| Ontario | 5 | 10 |
| Fontana | 3 | 4 |
| Chino | 1 | 14 |
| Chino Hills | - | - |
| Claremont | - | - |
| Total Assets | 13 | 28 |
| Total Length of Assets | 4,745 feet | 9,601 feet |

Project Goals/Objectives



- Goals
 - Enhance asset data
 - Develop risk management framework
 - Support asset management best practices
- Objectives
 - Conduct assessment, inspection and cleaning
 - Develop maintenance optimization plan



Coordination
Development of Condition
Assessment Implementation
Plan



Implementation
Condition Assessments,
Inspections, and Cleaning



Evaluation
Available Data and Information



Optimization
Collection System Enhanced
Management Program

Path to Meeting Goals & Objectives



Project Budget and Schedule

| Description | Cost | Contract Milestone | Date |
|--|-------------|--------------------------------|------------|
| Asset Management/Inspection Support (actuals/projected) | \$1,463,685 | Complete Condition Assessment | Sept. 2022 |
| Asset Management | \$471,687 | Complete Planning/Optimization | Dec. 2022 |
| Inspection Support | \$991,998 | | |
| Other Engineering Consulting Support (actuals/projected) | \$75,000 | | |
| Engineering Consultant (GHD Contract) | \$75,000 | | |
| CDM Smith's Service Contract (actuals/projected) | \$3,626,734 | | |
| CDM Smith's Service Contract | \$3,626,734 | | |
| Total Project Budget: | \$5,175,419 | | |
| Total EN19024's Budget for RSS Assets (RO Fund) | \$3,919,419 | | |
| Total EN19028's Budget for BSS Assets (NC Fund) | \$1,256,000 | | |
| Current FY22/23 Budget for EN19024 | \$329,878 | | |
| Current FY22/23 Budget for EN19028 | \$70,000 | | |
| Requested FY22/23 Budget Augmentation to EN19024 (this action) | + \$50,237 | | |
| Requested FY22/23 Budget Augmentation to EN19028 (this action) | + \$393,398 | | |
| Adjusted FY22/23 Budget for EN19024: | \$380,115 | | |
| Adjusted FY22/23 Budget for EN19028: | \$463,398 | | |



Recommendation

- Approve a FY 2022/23 project budget augmentation for the Regional System Asset Management Project, No. EN19024, in the amount of \$50,237, from \$329,878 to \$380,115 in the Regional Operations and Maintenance (10800) Fund;
- Approve a FY 2022/23 project budget augmentation for the NRW Manhole and Pipeline Project, No. EN19028, in the amount of \$393,398, from \$70,000 to \$463,398 in the Non-Reclaimable Wastewater (10500) Fund; and
- Authorize the General Manager to approve the budget augmentation.

This project is consistent with *IEUA's Business Goal of Wastewater Management*, specifically the Asset Management objective that IEUA will ensure the Collection's System is well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.

ACTION ITEM 2C



Date: September 21, 2022

To: The Honorable Board of Directors From: Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources 09/14/22

Finance & Administration 09/14/22

Staff Contact: Christiana Daisy, Deputy General Manager

Subject: RMPU Project - Budget Increase, Agreement Amendment, and Construction Change

Order Approval

Executive Summary:

In May 2017, Chino Basin Watermaster (CBWM) and Inland Empire Utilities Agency (IEUA) executed a cost sharing agreement, Task Order No. 9, under the Recharge Master Plan Update (RMPU) to implement the groundwater recharge improvements within the Chino Basin at Wineville, Jurupa, and RP-3 basins. These improvements will enhance the groundwater basin by adding approximately 2,921 acre-feet per year (AFY) of stormwater and 2,905 AFY of recycled water for basin recharge. On June 16, 2021, the Board of Directors awarded the construction contract under Project No. RW15003.06 to MNR Construction, Inc. in the amount of \$15,480,880 for the construction at Wineville and Jurupa basins and force main construction within Ontario and Fontana. Currently, additional funds are needed to address higher construction cost due to changes in the site conditions, delays to the schedule, and scope changes to the project. At the August 25th Board meetings at CBWM, the Board agreed to increase the project's budget through the approval of the amended Task Order No. 9. The following is staff's recommendation (1) increase the total project budget under RW15003.06 by \$3.26 M to address higher construction costs, (2) finalize the execution of the amended CBWM/IEUA Task Order No. 9, and (3) execute a change order in a not-to-exceed amount of \$3.16 M with the Contractor, MNR to resolve utility conflicts with buried utilities and to extend the schedule.

Staff's Recommendation:

- 1. Approve the total project budget augmentation for RW15003.00 in Fiscal Year 2022/23 from \$24,004,424 to \$27,260,512;
- 2. Approve the second amendment to IEUA and CBWM's Cost Sharing Agreement, Task Order No.9, for the project under RW15003.06;
- 3. Approve the construction change order with MNR Construction, Inc. for Project No. RW15003.06 at a not-to-exceed amount of \$3,161,995 which increases the contract from \$15,669,068.27 to \$18,831,063.27 (20% increase); and
- 4. Authorize the General Manager to execute the contracts, subject to non-substantive changes.

Budget Impact Budgeted (Y/N): N Amendment (Y/N): Y Amount for Requested Approval: \$ 3,256,088

Account/Project Name:

RW15003.06/Wineville, Jurupa, Force Main

Fiscal Impact (explain if not budgeted):

The budget increase will only impact fiscal year spending; however, the cost is offset with nearly \$9.7 M in state and federal grants. The remaining cost is funded by available Clean Water State Revolving Funds which will be an added debt service to CBWM after one year from construction completion. CBWM pays 100% of the cost under RW15003.06.

Prior Board Action:

On July 20, 2022, the Board of Directors ratified the change order with MNR Construction, Inc. in the amount of \$188,188.27.

On June 16, 2021, the Board of Directors awarded the construction contract for the Project No. RW15003.06 to MNR Construction, Inc. in the amount of \$15,480,880.

Environmental Determination:

Program Environmental Impact Report (Finding of Consistency)

The RMPU Project was under a comprehensive Program Environmental Impact Report which the Board adopted as complete on March 15, 2017. Within this report specific mitigation measures are a part of the Project that will be implemented under the attached Mitigation Measures and Reporting Program (MMRP).

Business Goal:

The projects under the 2013 RMPU which include the Wineville, Jurupa and Force Main are consistent with the IEUA's Business Goal of Water Reliability, specifically the Groundwater Recharge objective that IEUA will maximize groundwater recharge projects in the region through strategic, cost-effective partnerships, and development.

Attachments:

Attachment 1 - PowerPoint Presentation

Attachment 2 - Second amendment to IEUA and CBWM's Cost Sharing Agreement, Task Order No.9

Attachment 3 - Change Order with MNR Construction, Inc. which is a not-to-exceed amount of \$3,161,995.

Board-Rec No.: 22194

Attachment 1



Recharge Master Plan Update Project Wineville/Jurupa/Force Main Construction Project No. RW15003.06

AUGMENT TOTAL BUDGET - AMEND COST SHARING AGREEMENT - CHANGE ORDER APPROVALS

Joel Ignacio, PE Project Manager September 14, 2022



Overall RMPU Project Update





RW15003.06 Background/Scope



Inland Empire Utilities Agency A MUNICIPAL WATER DISTRICT

Construction Status



| CONSTRUCTION WINEVILLE/JURUPA/FORCE MAIN | | | | |
|---|---------------|--|--|--|
| CONTRACT | AMOUNT | | | |
| MNR's Original Contract Total | \$ 15,480,880 | | | |
| Project's Original Contingency | \$ 1,548,088 | | | |
| Construction Progress | 49% | | | |
| Contractor Invoiced | 49% | | | |
| SCHEDULE | DATE | | | |
| Completion Date based on Baseline Schedule: | 5/12/2023 | | | |
| Schedule Elapsed (on Approved Baseline Schedule): | 59% | | | |





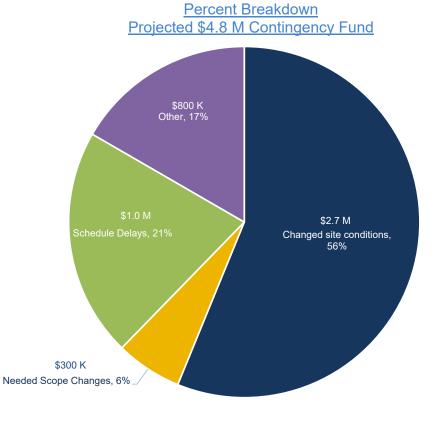






Increasing Construction Cost

- Unforeseen Field Conditions
 - Conflicts with buried utilities
- Schedule Delays
 - Permit delays at start of construction
 - Supply/demand issues on change conditions
 - Delaying completion to mid to late 2023
- Needed Scope Changes
 - Added manhole access
 - Fencing
 - Utility changes
 - Rubber Dam design changes
- Others
 - Additional Contingencies
- Impacts
 - Requesting a \$4.8 million contingency fund to address increasing cost
 - Current Contingency: \$1.5 million

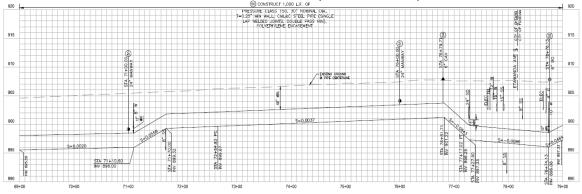




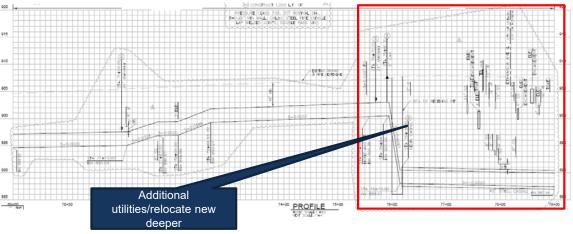
Change Order Request

- Resolving Utility Conflicts
 - Identified 89 buried utilities (200% more) along Jurupa Street/Road (Cities of Fontana and Ontario)
 - Revised 11 sheets of the construction plans
 - Changing alignment for nearly 90% of the 2.1 miles of new pipe
 - Change Order cost: \$2,411,995
- Extending Contract Schedule
 - Permit delays at start of construction
 - Availability of pipes delayed
 - Delaying completion to mid to late 2023
 - Additional overhead cost to manage extended schedule
 - Change Order cost: \$750,000
- Change Order cost of \$3,161,995
 - 20% Change Order Ratio

Initial Construction Plan (Sheet 78C-21)



Revised Construction Plan (Sheet 78C-21)





Impact to Project Budget (RW15003.06)

| Description (Wineville/Jurupa/Force Main) RW15003.06 | Budget (A) | Cost to Date (B) | Remaining (A-B) | Revised Item (D) | Impact (D-A) |
|---|---------------|---------------------|--------------------|---------------------|-----------------|
| Design Services | \$1,960,940 | \$1,960,940 | \$0 | | |
| Preliminary Design Contract (actual cost) | \$269,300 | \$269,300 | \$0 | | |
| Design Contract (actual cost) | \$1,500,000 | \$1,500,000 | \$0 | | |
| Environmental/Permits/Bid/Admin (actual costs) | \$191,640 | \$191,640 | \$0 | | |
| Construction Services | \$1,231,044 | \$494,035 | \$737,009 | | |
| Design Consultant Construction Services | \$397,977 | \$201,907 | \$196,070 | | |
| IEUA Construction Services | \$833,067 | \$292,128 | \$540,939 | | |
| Construction | \$17,028,968 | \$7,527,594 | \$11,939,667 | | |
| Construction Contract (MNR Construction) | \$15,480,880 | \$7,339,405 | \$10,391,579 | | |
| Contingency - Change Orders | \$1,548,088 | \$188,188 | \$1,359,900 | \$4,804,176 | (\$3,256,088) |
| Total: | \$20,220,952 | \$9,982,569 | \$12,676,675 | \$4,804,176 | (\$3,256,088) |

Augment project budget to increase project contingency funds from \$1.55 M to \$4.80 M (\$3.26 M increase)



Project Budget & Schedule

| Description | Cost |
|--|--------------|
| Design Services | \$1,960,940 |
| Preliminary Design Contract (actual cost) | \$269,300 |
| Design Contract (actual cost) | \$1,500,000 |
| Environmental/Permits/Bid/Admin (actual costs) | \$191,640 |
| Construction Services | \$1,231,044 |
| Design Consultant Construction Services (actual) | \$397,977 |
| IEUA Construction Services (projected) | \$833,067 |
| Construction | \$20,285,056 |
| Construction Contract (MNR Construction) | \$15,480,880 |
| Executed Change Orders | \$188,188 |
| Change Orders (this action) | \$3,161,995 |
| Remaining Adjusted Contingency | \$1,453,993 |
| Augmented Total Project Cost for RW15003.06 (sub-project): | \$23,477,040 |
| Augmented Total Project Cost for RW15003.00 (parent project): | \$27,260,512 |
| Current Budget for RW15003.00 (parent project): | \$24,004,424 |
| Increasing Budget for Parent Project RW15003.00 (this action): | \$3,256,088 |

| Project Milestone | Date | |
|---------------------------|----------|--|
| Construction | | |
| Contract Award | Jun 2021 | |
| Project Completion | May 2023 | |
| | | |

Change Order Ratio: 20% Contingency Remaining: 30%

The Project is funded with \$10.8 M grants and the remaining cost is financing with CWSRF



Amendment to Cost Sharing Agreement

Total Project Budget Breakdown Specific RW15003.06/.05

| Phase | Start | Finish | Projected Cost |
|----------------------|------------|------------|----------------|
| Project Development | 7/1/2014 | 12/17/2014 | \$14,600 |
| Pre-Design | 12/18/2014 | 11/16/2016 | \$407,900 |
| Environmental Impact | 12/18/2014 | 4/20/2016 | \$179,500 |
| Permits | 12/18/2014 | 1/8/2018 | \$52,400 |
| Design | 6/22/2017 | 12/31/2020 | \$1,372,500 |
| Bid and Award | 1/1/2021 | 6/15/2021 | \$15,000 |
| Construction | 6/22/2021 | 12/31/2023 | \$23,254,440 |
| | | Total | \$25,296,340 |

Revised Cost Share Breakdown Specific to RW15003.06/.05

| CBWM/IEUA/Grant | Stormwater Distribution System/Wineville Basin/Jurupa Basin | RP-3 Basin | Total |
|-----------------|---|-------------|--------------|
| Watermaster | \$13,742,873 | \$360,043 | \$14,102,916 |
| IEUA | - | \$360,043 | \$360,043 |
| Grants | \$9,734,167 | \$1,099,214 | \$10,833,381 |
| Total | \$23,477,040 | \$1,819,300 | \$25,296,340 |

Total Available Grants Specific to RW15003.06/.05

| Available Grants | Stormwater Distribution System/Wineville Basin/Jurupa Basin | RP-3 Basin | Total |
|---|---|-------------|--------------|
| State Water Resources Control Board - Storm Water Grant Program | \$8,994,167 | \$809,214 | \$9,803,381 |
| United States Department of Interior Bureau of Reclamation - Drought Resiliency | - | \$290,000 | \$290,000 |
| United States Department of Interior Bureau of Reclamation - Secure Water Act | \$740,000 | - | \$740,000 |
| Total | \$9,734,167 | \$1,099,214 | \$10,833,381 |

Chino Basin Watermaster's Actions:

Aug. 11 - All three Watermaster Pools unanimously agreed to have the Advisory Committee consider the amendment

Aug. 18 – The Advisory unanimously agreed to recommend the amendment for Board approval

Aug. 25 – CBWM Board to finalize approval and authorization of amendment to augment budget





- Approve the total project budget augmentation for RW15003.00 in Fiscal Year 2022/23 from \$24,004,424 to \$27,260,512;
- Approve second amendment to IEUA and CBWM's Cost Sharing Agreement, Task Order No.9, for Project No. RW15003.06;
- Approve the construction change order with MNR Construction, Inc. for Project No. RW15003.06 at a not-to-exceed amount of \$3,161,995 which increases the contract from \$15,669,068.27 to \$18,831,063.27 (approximately a 20% increase); and
- Authorize the General Manager to execute the contracts, subject to non-substantive changes.

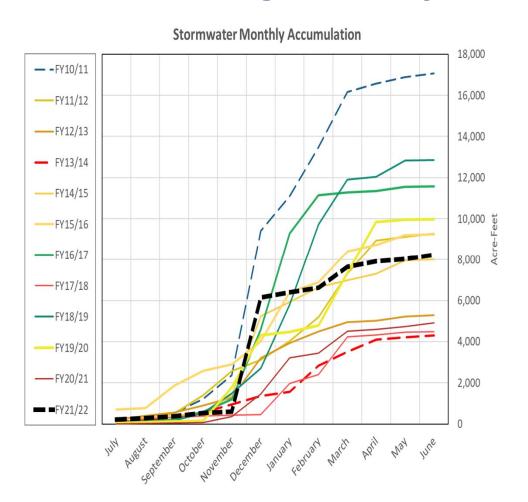
The RMPU Project is consistent with the *IEUA's Business Goal of Water Reliability* specifically the Groundwater Recharge objective that IEUA will maximize groundwater recharge projects in the region through strategic, cost-effective partnerships, and development.

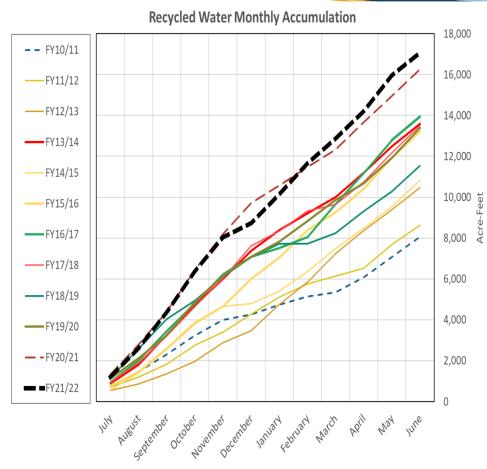
INFORMATION ITEM 3A





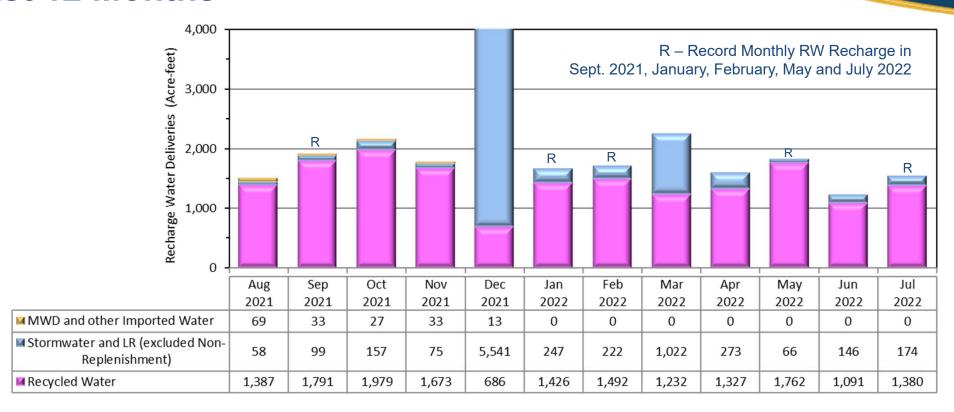
Annual Recharge Monthly Accumulation





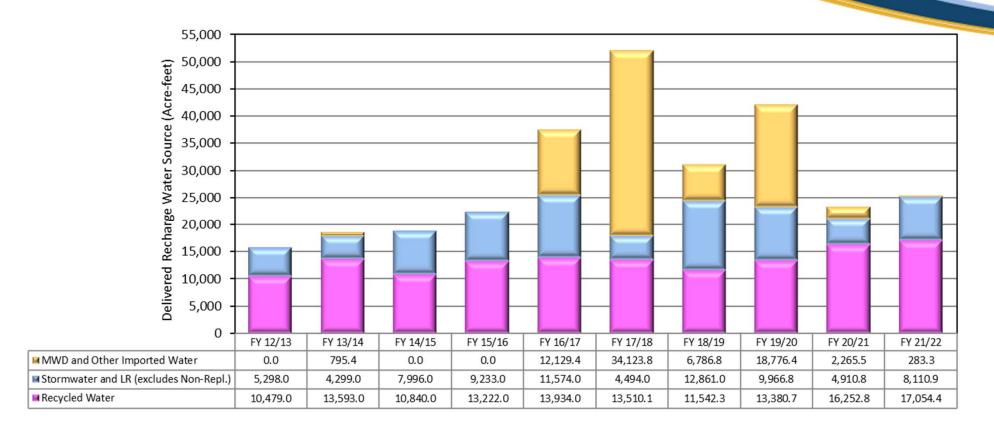


Groundwater Recharge Deliveries Past 12 Months



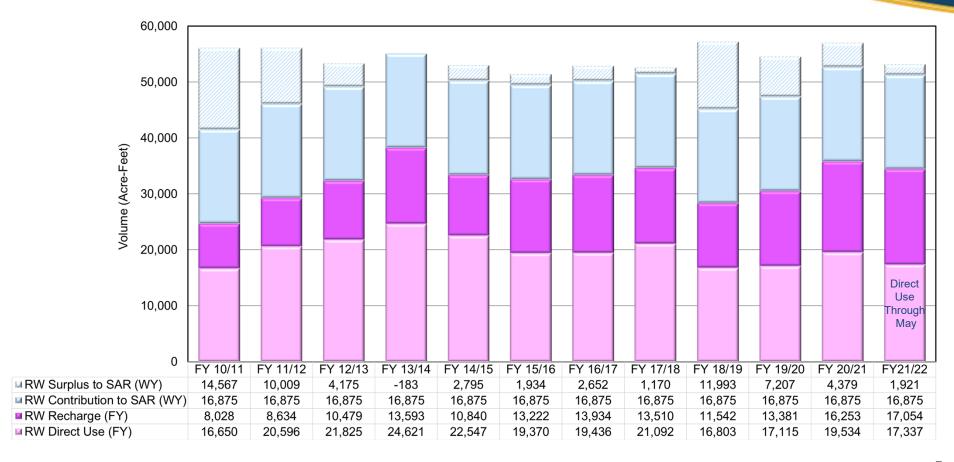


Groundwater Recharge 10-Year History





Recycled Water (RW) Deliveries



Summer 2022 RP-3 Maintenance















Upcoming Recharge Site Maintenance

- Fall Maintenance Activities (Preparing for Winter Rains)
 - -CalFire Crew Trash Pickup
 - -Graffiti Abatement
 - —Staff Gauge Repairs
 - —Gopher/Squirrel Hole Abatement











Record-Setting RW GWR Team

| Fiscal Year | Delivered for Recharge |
|-------------|------------------------|
| 2019/20 | 16,252.8 AF |
| 2021/22 | 17,054.4 AF |



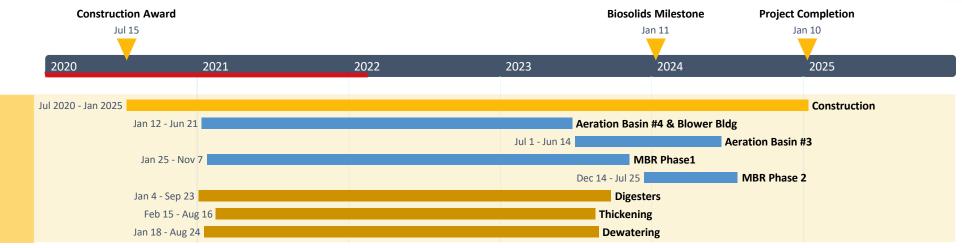
INFORMATION ITEM 3B







Day 777 of 1640 = 47%



| Role | Firm | Contract | This Month's Payment | Total Paid | % Complete |
|----------------------------|----------|---------------|-------------------------|---------------|------------|
| Contractor | WM Lyles | \$334,516,307 | \$6,783,899 | \$165,271,248 | 49% |
| Designer | Parsons | \$33,670,711 | \$281,062 | \$31,155,943 | 93% |
| Construction Management | Arcadis | \$21,125,523 | \$339,214 | \$9,160,702 | 43% |

Data date: 8/31/22





| | Amount | Quantity |
|-----------------------------|---------------|----------|
| Original Contact | \$329,982,900 | |
| Change Order (CO) | \$ 4,533,407 | 161 |
| Request For Deviation (RFD) | \$ 2,696,610 | 137 |
| Changes Total (CO+RFD) | \$7,230,017 | 298 |
| % Change of Contract | 2.19% | |
| % of Contingency Used | 21.9% | |

| Change Type | Amount \$ Millions | % Of Changes |
|---------------------------|--------------------|-----------------|
| Design Errors & Omissions | \$ 3.3 | 45% |
| District Requested | \$2.6 | 36% |
| Differing Site Conditions | \$ 2.1 | 29% |
| Contractor Requested | \$ -0.8 | -10% |







- RP-5 Expansion Engineering Services During Construction
 - Design changes
 - CO/RFD/RFI support
 - Value engineering support
 - Start-up and training support
- Mountain Ave., RP-2, and Butterfield Ranch Lift Stations
 - Finalize designs
 - Bid services
 - Engineering Services During Construction (ESDC)

RP-5: Major Activity Areas



Construction Staff

WML Craft: 162

WML Project: 40

• IEUA & CM: 15

Total: 217











Influent Pump Station









Headwork Influent Box Expansion













Primary Clarifiers







Primary Effluent Pipeline



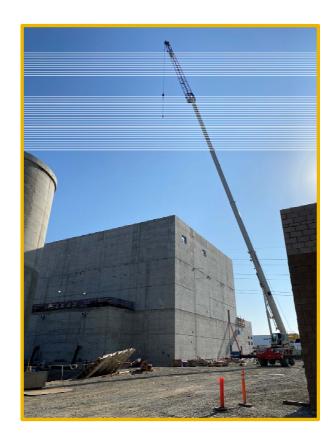






MBR Phase 1























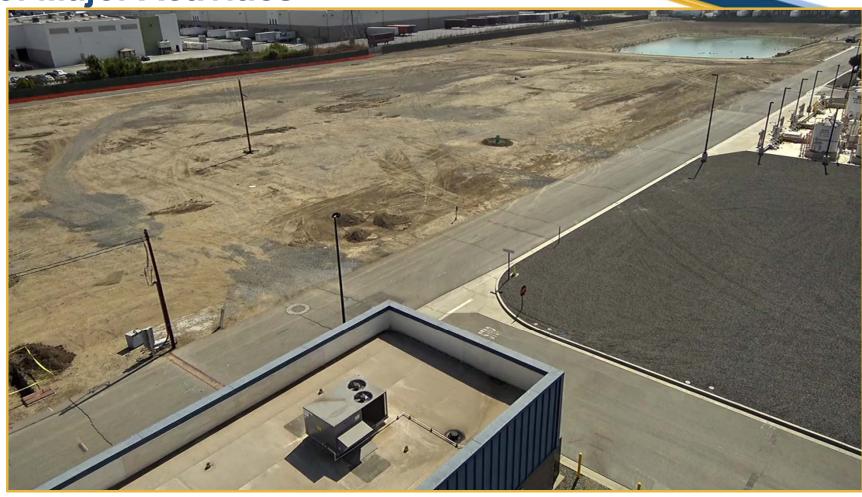
Gas Phase Digester Building





Dewatering Building





Solids South Timelapse



INFORMATION ITEM 3C





Project Location Map

SCADA Enterprise System - (Regional Water Recycling Plant No. 1)

Project Goal: Increase Reliability





Total Project Budget: \$16.2M **Project Completion:** July 2024 **Design Percent Complete:** 90%

| Phase | Consultant/ Contractor | Current Contract | Amendments/ Change Orders |
|---------------------|---------------------------|---------------------|------------------------------|
| Design (Current) | Eramosa | \$1.37M | 14% |
| Construction | TBD | \$0 | 0% |

| Project Management Team | | | |
|-------------------------------|----------------------|--|--|
| Project Manager: | Cayatte, Pierre | | |
| Assistant/Associate Engineer: | Nhothsavath, Cathy | | |
| Administrative Assistant: | Wallace & Associates | | |
| Inspector: | Jones, Nick | | |

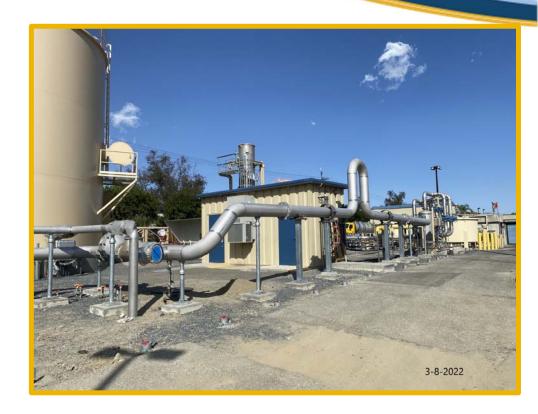
RP-1 Flare Improvements

Project Goal: Enhance Reliability and Permit Compliance



Total Project Budget: \$9.2M
Project Completion: December 2022
Construction Percent Complete: 80%

| Phase | Consultant/ Contractor | Current Contract | Amendments/ Change Orders | |
|-------------------------------|---------------------------|---------------------|------------------------------|--|
| Design | Lee & Ro | \$676k | 31% | |
| Construction (Current) | W.M. Lyles | \$6.4M | 16% | |
| Project Management Team | | | | |
| Project Manager: | | Zughbi, Jamal | | |
| Assistant/Associate Engineer: | | Tao, Justin | | |
| Administrative Assistant: | | Woods | | |
| Inspector: | | GK & Associates | | |



Digester Gas Discharge Piping with Expansion Loop

Montclair Basin Improvement

Project Goal: Increase Groundwater Recharge

Total Project Budget: \$1.8M
Project Completion: June 2024
Construction Percent Complete: 0%

| Phase | Consultant/Contract or | Current Contract | Amendments/ Change Orders |
|-------------------------|---------------------------|---------------------|------------------------------|
| Design (Current) | Carollo | \$155k | 7% |
| Construction | TBD | \$0 | 0% |
| Project Management Team | | | |

| Project Management Team | | | |
|-------------------------------|-----------------|--|--|
| Project Manager: | Ignacio, Joel | | |
| Assistant/Associate Engineer: | Ward, Ryan | | |
| Administrative Assistant: | GK & Associates | | |
| Inspector: | TBD | | |



