

# FY2021/22 GROUNDWATER WELL REHABILITATION PROJECT

## Riverside Public Utilities

Board of Public Utilities  
December 13, 2021

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## BACKGROUND

1. Over 50 active groundwater wells
2. Performance decreases with time:
  - a. Mineralization and scale buildup
  - b. Wear and tear
  - c. Declining water levels
3. Periodic maintenance required
4. Project benefits:
  - a. Maintains the health of well assets
  - b. Improve operation and reliability of the water system



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# PROJECT DESCRIPTIONS

1. Evaluate and prioritize groundwater wells
  - a. Hired Geoscience on June 21, 2013
  - b. Assess current operational data and needs
  
2. Two wells to undergo rehabilitation work during FY 2021/22:
  - a. Cooley H
  - b. Moore-Griffith



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## SCOPE OF WORK

1. Remove and inspect pumping equipment
2. Repair / replace, as needed
3. Adjust pump depth
4. Video survey
5. Clean well
6. Redevelop and test



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## REMOVAL OF MOTOR, DISCHARGE HEAD AND PUMP



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## MECHANICAL CLEANING – BRUSHING AND BAILING

1. The inside of the well screen is mechanically cleaned by raising and dropping a tight-fitting brush tool.
2. Debris is removed from the bottom of the well.



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## CLEANING ADDITIVES

Special additives are mixed into the well to assist in descaling the well screen and demineralizing the well formation.



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## MECHANICAL CLEANING – DUAL SWAB AND SIMULTANEOUS AIRLIFT

1. The well is mechanically swabbed by raising and dropping the drill pipe equipped with a tight-fitting dual swab on the bottom.
2. During swabbing, water is airlifted from the well.

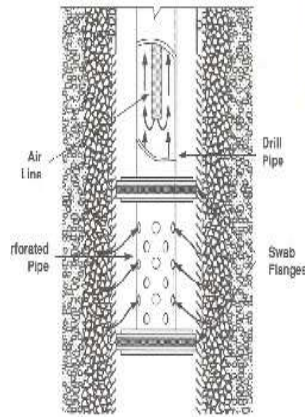


Figure 14.7. Airlift swabbing tool.



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## PUMP TESTING THE WELL AFTER WELL CLEANING



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## BID RESULTS

1. The project was advertised on September 10, 2021
2. A pre-bid conference was held on September 22, 2021
3. Bids were opened on October 6, 2021
4. Three bids were received

Rank	Vendors	City Location	Bid Total
1.	Weber Water Resources CA, LLC	Riverside, CA	\$606,195.42
2.	<b>Best Drilling and Pump, Inc.</b>	<b>Colton, CA</b>	<b>\$632,220.00</b>
3.	Layne Christensen Company	Redlands, CA	\$1,047,987.00

Engineer's Construction Cost Estimate: \$565,000



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## PROJECT BUDGET BREAKDOWN

Project and Fiscal Breakdown		W.O. No. 2119272 (Cooley H)	W.O. No. 2205199 (Moore-Griffith)	Total Project
Work Type:	Performed By:	Amount:	Amount:	Amount:
Planning and Design	Internal Staff	\$7,495.44	\$5,062.56	\$12,558
Construction	Best Drilling and Pump, Inc.	\$328,160	\$304,060	\$632,220
Construction Support	Internal Staff	\$10,000	\$10,000	\$20,000
Engineering Support, Construction Management and Inspection	Internal Staff	\$35,000	\$35,000	\$70,000
Hydrogeologist Services	Informal Procurement, Vendor to be Determined	\$10,000	\$10,000	\$20,000
Construction Contingencies	N/A	\$32,816	\$30,406	\$63,222
<b>Work Order Total:</b>				<b>\$818,000</b>
Reimbursements:				None
<b>Anticipated Start Date:</b>				<b>January 2022</b>
<b>Anticipated Duration:</b>				<b>3 Months</b>



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## STRATEGIC PLAN ALIGNMENT

This item contributes to Strategic Priority No. 6 Infrastructure, Mobility and Connectivity and Goal No. 6.2 – Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – RPU took the initiative to rehabilitate these groundwater wells which will enhance the reliability of the overall water system, demonstrating RPU's commitment to the customers it serves and building community trust.
2. **Equity** – RPU endeavors to provide safe and reliable water service to all its customers. Since RPU's water system is an interconnected network, investments made to individual parts of the system improve the reliability of the overall system, thereby providing an equitable benefit to all customers.
3. **Fiscal Responsibility** – The lowest price for these construction services was ensured through a competitive bidding process.
4. **Innovation** – This project employs the latest technology and methods for rehabilitating groundwater wells, helping to ensure effective operation of these groundwater wells.
5. **Sustainability & Resiliency** – This project will help ensure RPU can provide reliable water service to its customers.

## RECOMMENDATIONS

That the Board of Public Utilities:

1. Reject as non-responsive the bid submitted by Weber Water Resources CA, LLC of Riverside, California in the amount of \$606,195.42;
2. Award a contract for the construction of the FY2021/22 Groundwater Well Rehabilitation Project – Bid No. RPU-7858 to the lowest responsive and responsible bidder, Best Drilling and Pump, Inc. of Colton, California, in the amount of \$632,220.00;
3. Approve the capital expenditure for Work Order No. 2119272 in the amount of \$423,471.44 which includes all design, construction, construction support, contract administration, inspection and construction change order authority costs for the rehabilitation of the Cooley H Well;



## RECOMMENDATIONS (CONT.)

4. Approve the capital expenditure for Work Order No. 2205199 in the amount of \$394,528.56 which includes all design, construction, construction support, contract administration, inspection and construction change order authority costs for the rehabilitation of the Moore-Griffith Well; and
5. Authorize a budget transfer of \$200,000 from the Public Utilities' Transmission Main Account No. 6230100-470735 to Public Utilities' Facility Rehabilitation Account No. 6230100-470803; and
6. Authorize the City Manager, or designee, to execute construction agreements and any other documents necessary to effectuate the project described herein, as well as the ability to make minor non-substantive changes including changes to each of the work order amounts but not-to-exceed the cumulative total of \$818,000 and in accordance with all purchasing policies.

