



FY2022/23 Groundwater Well Rehabilitation Project

Riverside Public Utilities

Board of Public Utilities
November 28, 2022

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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 DESCRIPTION

1. Evaluate and prioritize groundwater wells
 - a. Hired Geoscience on June 21, 2013
 - b. Assess current operational data and needs



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PROJECT DESCRIPTION (CONT.)

2. Two wells to undergo rehabilitation work during FY2022/23:
 - a. Garner D
 - b. Garner 6



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PROJECT LOCATION MAP



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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.

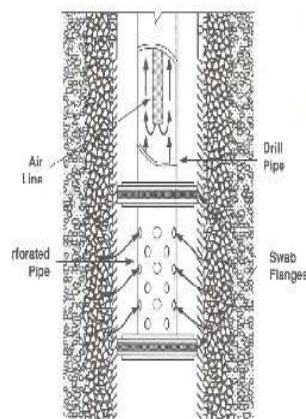


Figure 14.7. Airlift swabbing tool.



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PUMP TESTING THE WELL AFTER WELL CLEANING



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BID RESULTS

1. The project was advertised on September 30, 2022
2. Bids were opened on October 14, 2022
3. One bid was received



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BID RESULTS (CONT.)

Rank	Vendor	City Location	Bid Total
1.	General Pump Company, Inc.	San Dimas, CA	\$1,425,290

Engineer's Construction Cost Estimate: \$1,130,000



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PROJECT BUDGET BREAKDOWN

Project and Fiscal Breakdown		W.O. No. 2225604 (Garner D)	W.O. No. 2225606 (Garner 6)	Total Project
Work Type:	Performed By:	Amount:	Amount:	Amount:
Planning and Design	Internal Staff	\$14,500	\$14,681	\$29,181
Construction	General Pump Company, Inc.	\$666,670	\$758,620	\$1,425,290
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	\$66,667	\$75,862	\$142,529
Work Order Total:		\$802,837	\$904,163	\$1,707,000
Reimbursements:				None
Anticipated Start Date:				January 2023
Anticipated Duration:				3 Months



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STRATEGIC PLAN ALIGNMENT



Strategic Priority 6 - Infrastructure, Mobility and Connectivity

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.

Cross-Cutting Threads



Community Trust



Fiscal Responsibility



Sustainability & Resiliency



Equity



Innovation



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RECOMMENDATIONS

That the Board of Public Utilities:

1. Award a construction contract for Bid No. RPU-7929 for the Fiscal Year 2022/23 Groundwater Well Rehabilitation Project to General Pump Company, Inc. of San Dimas, California, in the amount of \$1,425,290;
2. Approve the capital expenditure for Work Order No. 2225604 in the amount of \$802,837 which includes all design, construction, construction support, contract administration, inspection and construction change order authority costs for the rehabilitation of the Garner D Well;
3. Approve the capital expenditure for Work Order No. 2225606 in the amount of \$904,163 which includes all design, construction, construction support, contract administration, inspection and construction change order authority costs for the rehabilitation of the Garner 6 Well; and
4. 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 and non-substantive changes including changes to each of the work order amounts but not-to-exceed the cumulative total of \$1,707,000 and in accordance with all purchasing policies.



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