



Well Rehabilitation Projects FY 2016-17

Riverside Public Utilities

Board of Public Utilities

February 13, 2017

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BACKGROUND

1. RPU operates and maintains 52 active groundwater wells
2. Wells are located throughout Riverside, Colton and San Bernardino
3. Wells lose efficiency over time due to mechanical problems and large changes in groundwater levels
4. Wells and pump assemblies require periodic maintenance and rehabilitation work



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PROJECT DESCRIPTION

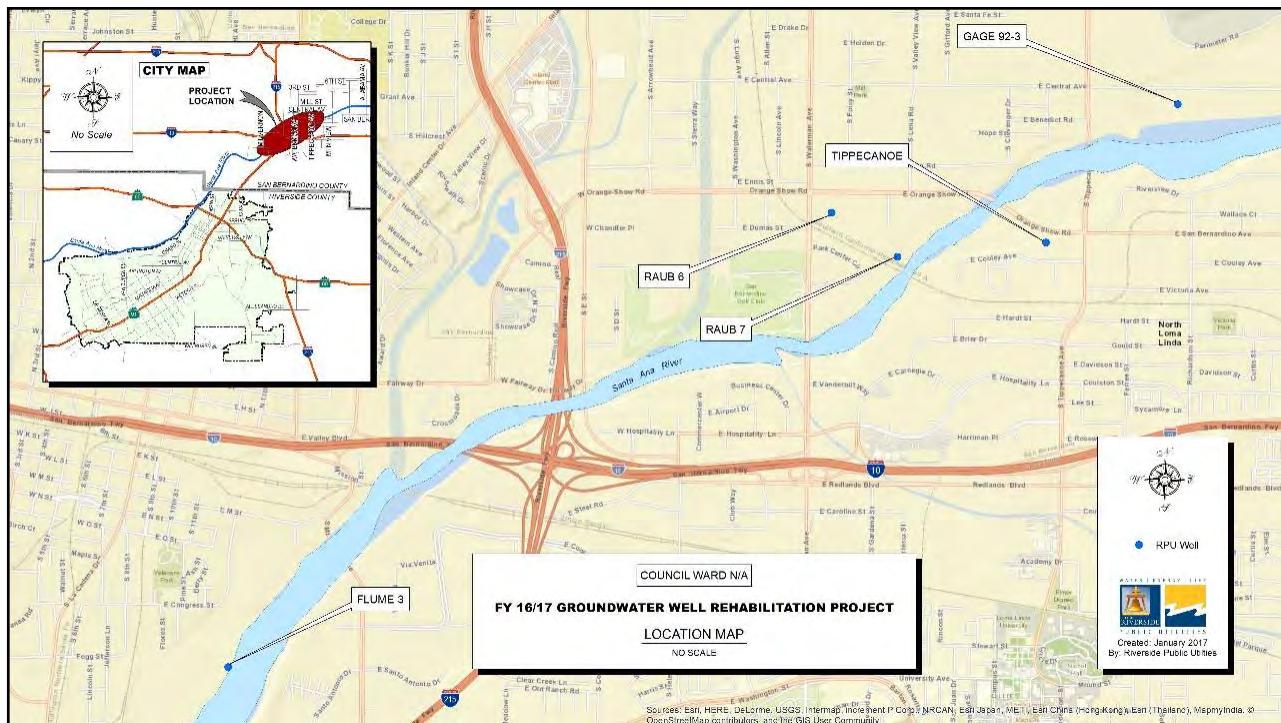
Five wells to undergo rehabilitation work during FY 2016-17:

1. Phase I: Raub 7, Tippecanoe and Flume 3
2. Phase II: Raub 6 and Gage 92-3



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SCOPE OF WORK

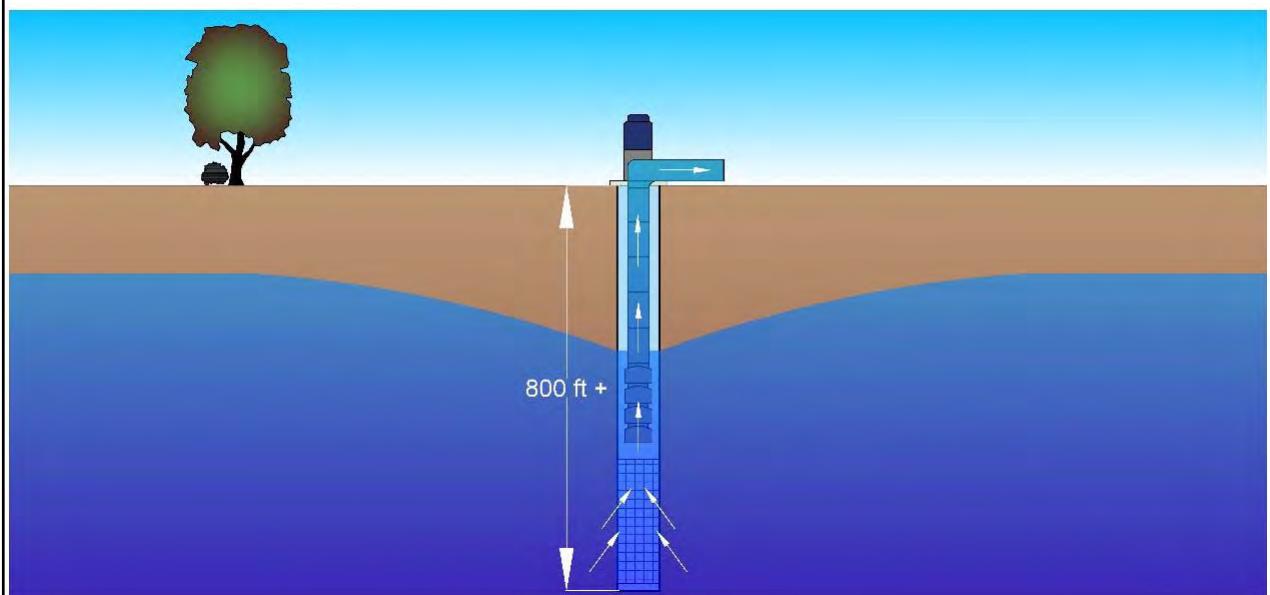
1. Removal and inspection of the pumping equipment
2. Repair or replacement of pumping components
3. Adjustment of the pump depth
4. Video surveys
5. Mechanical and chemical cleaning
6. Well redevelopment work and testing



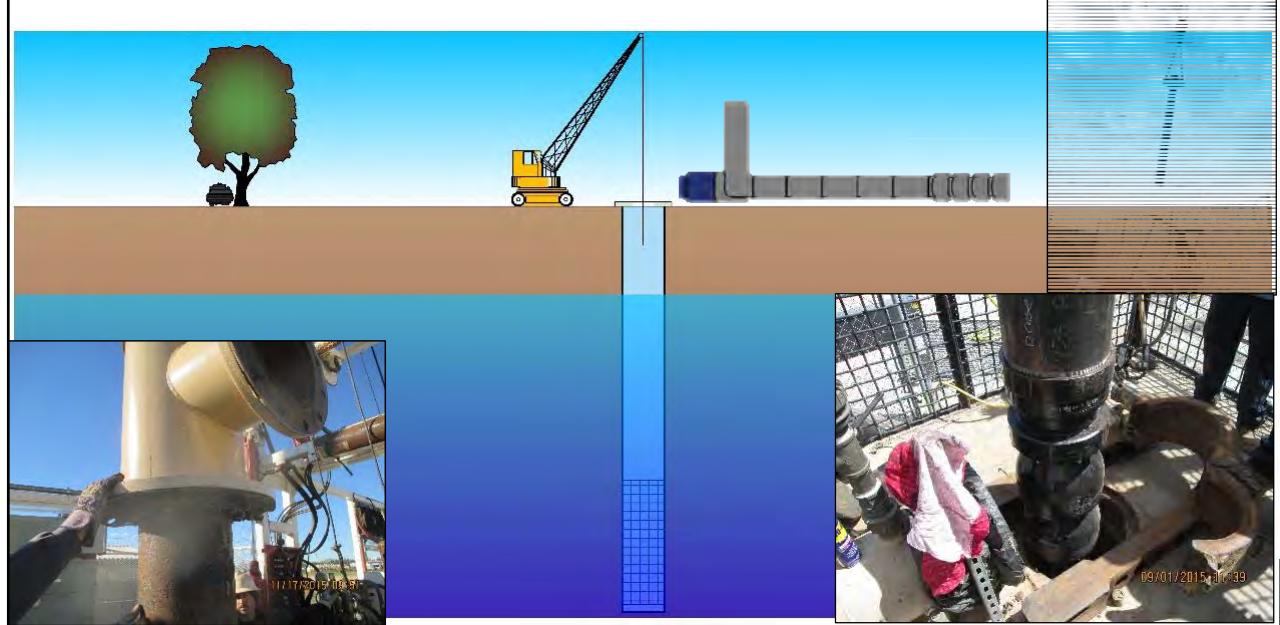
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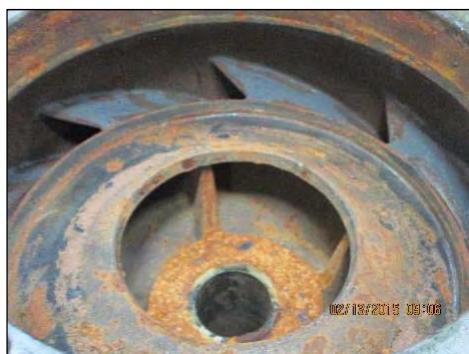
WELL REHABILITATION PROCESS



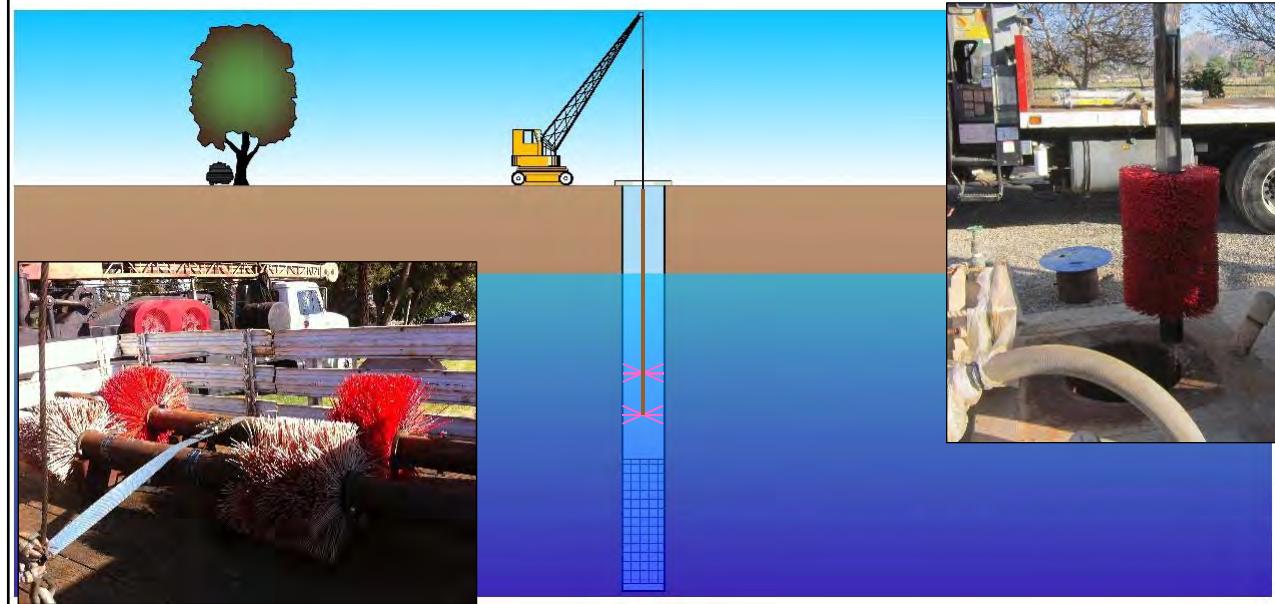
PUMP REMOVAL AND INSPECTION



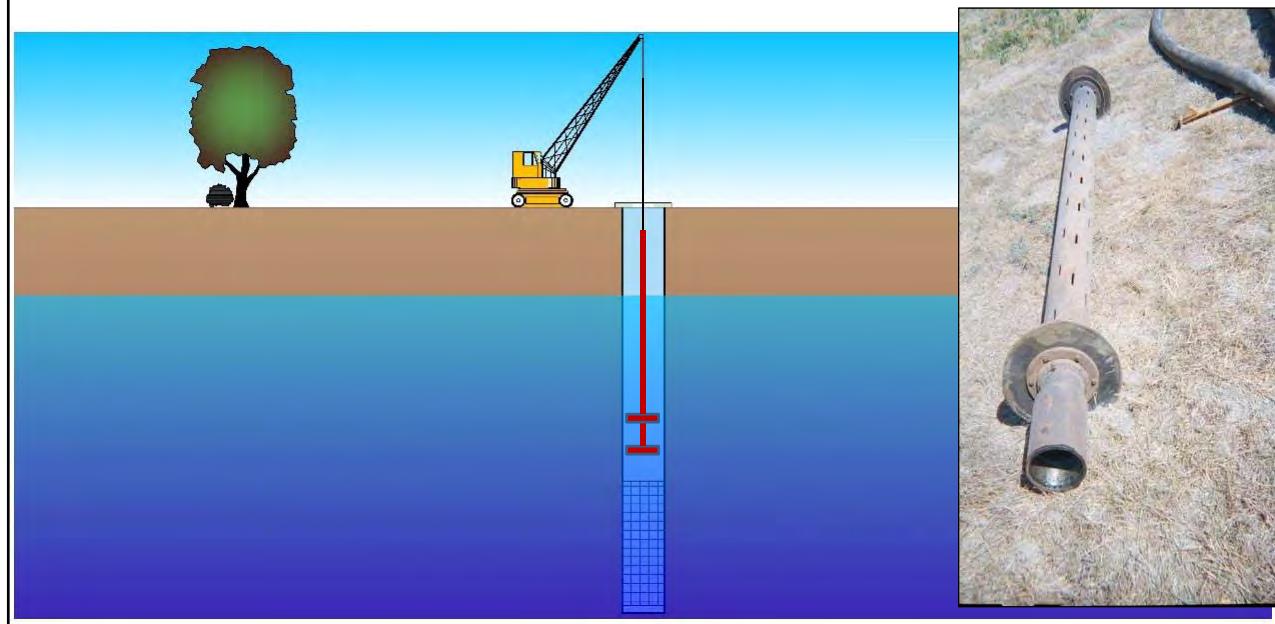
PUMP REMOVAL AND INSPECTION



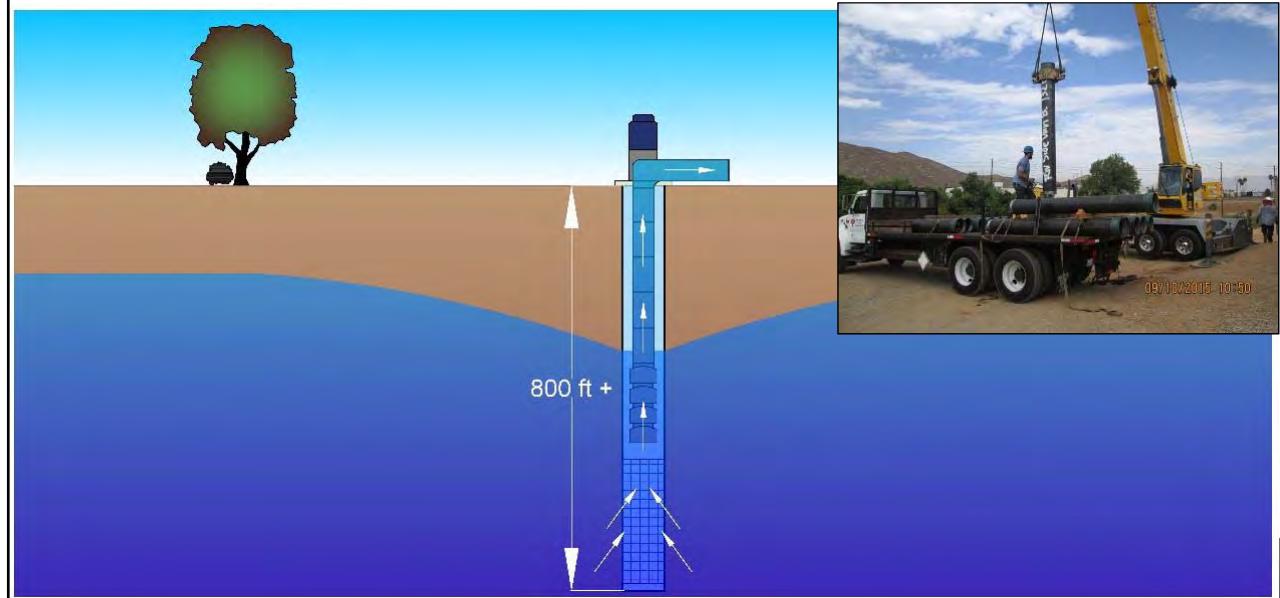
MECHANICAL CLEANING - BRUSHING



MECHANICAL CLEANING - SWABBING



COMPLETED WELL REHABILITATION



BID RESULTS

	<u>COMPANY</u>	<u>CITY LOCATION</u>	<u>BID TOTAL</u>
1.	General Pump Company, Inc.	San Dimas, CA	\$906,020.00
2.	Best Drilling and Pump, Inc.	Colton, CA	\$1,080,448.00
3.	Layne Christensen	Redlands, CA	\$1,211,361.80

► *Engineer's Construction Cost Estimate \$1,244,000*



PROJECT BREAKDOWN

Engineering Performed By:	RPU Engineering staff
Construction Performed By:	General Pump Company, Inc.
Anticipated Start Date:	March 2017
Anticipated Duration:	4 months
Coordination Required With:	<ul style="list-style-type: none"> ▪ RPU Field Forces
Reimbursements:	None



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PROJECT BUDGET BREAKDOWN

Description	Work Order No.					Total	Percent of Total
	1712389 (Raub 7)	1712675 (Raub 6)	1712676 (Tippecanoe)	1712677 (Gage 92-3)	172678 (Flume 3)		
Design	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$40,000	2.9%
Construction (General Pump Company, Inc.)	\$172,080	\$199,620	\$203,140	\$169,660	\$161,520	\$906,020	65.3%
Construction Contingencies	\$17,208	\$19,962	\$20,314	\$16,966	\$16,152	\$90,602	6.5%
Field Forces Construction Support	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	3.6%
Hydrogeologist Services	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000	1.8%
Construction Management and Engineering Support	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000	5.4%
Inspection	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$200,000	14.4%
Work Order Totals	\$267,288	\$297,582	\$301,454	\$264,626	\$255,672	\$1,386,622	100.0%



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RECOMMENDATIONS

That the Board of Public Utilities:

1. Award a contract for the construction of the FY16/17 Groundwater Well Rehabilitation Project – Bid No. RPU-7454 to the lowest responsive and responsible bidder, General Pump Company, Inc. of San Dimas, California, in the amount of \$906,020;
2. Approve five work orders for capital expenditures, including all design, construction, contract administration, inspection and construction contingency costs, for the FY16/17 Groundwater Well Rehabilitation Project, for a total project cost not to exceed \$1,386,622; and
3. Authorize the City Manager, or his designee, to increase or decrease the five individual work order amounts included in the FY16/17 Groundwater Well Rehabilitation Project, for a total project cost not to exceed \$1,386,622.



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