

# AGENDA ITEM 8a



## STAFF REPORT

TYPE MEETING:	Regular Board	MEETING DATE:	October 1, 2014
SUBMITTED BY:	Jeff Marchioro Senior Civil Engineer	PROJECT:	R2116- DIV. NO. 3 001101
	Bob Kennedy Engineering Manager		
APPROVED BY:	<input checked="" type="checkbox"/> Rod Posada, Chief, Engineering <input checked="" type="checkbox"/> German Alvarez, Assistant General Manager <input checked="" type="checkbox"/> Mark Watton, General Manager		
SUBJECT:	Award of a Professional Services Contract for Inspection and Condition Assessment of the Ralph W. Chapman Water Recycling Facility 14-inch Force Main to Pipeline Inspection & Condition Analysis Corporation		

### GENERAL MANAGER'S RECOMMENDATION:

That the Otay Water District (District) Board of Directors (Board) award a professional services contract to Pipeline Inspection & Condition Analysis Corporation (PICA) and authorize the General Manager to execute an agreement with PICA for inspection and condition assessment of the Ralph W. Chapman Water Recycling Facility (RWCWRF) 14-inch Force Main in an amount not-to-exceed \$302,092 (see Exhibit A for Project location).

### COMMITTEE ACTION:

Please see Attachment A.

### PURPOSE:

To obtain Board authorization for the General Manager to enter into a professional services contract with PICA for inspection and condition assessment of the RWCWRF 14-inch Force Main in an amount not-to-exceed \$302,092.

**ANALYSIS:**

The District owns and operates the RWCWRF 14-inch cement mortar lined, coal-tar epoxy coated steel force main. The 1980 era, 3.1 mile long steel force main, which has pressures up to 400 psi, conveys reclaimed water from the RWCWRF to a hydraulic structure (Junction Box) north of the Salt Creek Golf Course. At the Junction Box, the force main transitions to a gravity main and the pipe material transitions from steel to asbestos-cement pipe.

The entire force main traverses an environmentally sensitive area designated as an environmental preserve. The preserve contains an active river (Sweetwater River) which drains to the Sweetwater Reservoir through very rough/steep terrain.

District staff are concerned that RWCWRF chlorine residuals could shorten the force main's life expectancy. District staff recently repaired two (2) leaks in the upper (lower pressure) portions of the steel force main. District staff also completed a traditional above-grade noise based leak detection survey in May 2014 and did not find any leaks.

The District requires the services of a professional consulting firm to provide inspection and condition assessment of the 14-inch force main. In accordance with the Board of Directors Policy Number 21, the District initiated the consultant selection process on July 9, 2014, by placing an advertisement in the San Diego Daily Transcript, and posting the Project on the District's website for Professional Consulting Services. The advertisements attracted Letters of Interest and Statements of Qualifications from four (4) consulting firms. A Pre-Proposal Meeting was held on July 29, 2014. Five (5) people representing four (4) prime consulting firms attended the meeting.

On August 12, 2014, proposals were received from the following three (3) consulting firms:

1. PICA (Miami, FL)
2. Pure Technologies (San Diego, CA)
3. RBF Consulting (San Diego, CA)

The firm that submitted a letter of interest, but did not propose, was Rock Solid Group located in Australia.

After the written proposals were evaluated and ranked by a five-member review panel consisting of District Engineering and Operations staff, it was determined that all three (3) proposals ranked

sufficiently to warrant being invited to make an oral presentation and respond to questions from the panel. After conducting the interviews on August 27, 2014, the panel completed the consultant ranking process and concluded that PICA had the best approach to the Project and provided the best overall value to the District. A summary of the complete evaluation is shown in Exhibit B.

As suggested in the written proposals, and confirmed during the interviews, PICA and their civil engineering sub consultant (Brown & Caldwell), was the only team that could fulfill the entire Request for Proposal (RFP) scope which required civil engineering interpretation/calculations based on remaining wall thickness of the steel pipe. Remaining wall thickness is needed to quantitatively estimate the probability of pipe failure and remaining life expectancy and also recommend improvements with cost estimates and corresponding effect on life expectancy. PICA's inspection tool (SeeSnake®) can also pinpoint the location and size of existing defects to facilitate development of effective action plans for repairs.

Pure Technologies' inspection tool (SmartBall®) can detect active leaks, air pockets, and stress anomalies within about 10 feet accuracy; however, the SmartBall® technology could not provide remaining wall thickness of the steel pipe. Pure Technologies has other tools that can provide remaining wall thickness data, but none would be suitable for the pipe diameter associated with this effort.

RBF's team proposed closed circuit television (CCTV), an option for helium leak detection, and another option for high definition CCTV. Similar to Pure Technologies, RBF's team could not estimate remaining wall thickness of the steel pipe.

PICA submitted the Company Background Questionnaire as required by the RFP and staff did not find any outstanding issues. In addition, staff checked their references and performed an internet search on the company. Staff found the references to be excellent and did not find any outstanding issues with the internet search.

**FISCAL IMPACT:**             Joe Beachem, Chief Financial Officer

The total budget for CIP R2116, as approved in the FY 2015 budget, is \$1,500,000. Total expenditures, plus outstanding commitments and forecast, including this contract, are \$340,210. See Attachment B for budget detail.

Based on a review of the financial budget, the Project Manager anticipates that the budget for CIP R2116 is sufficient to support the Project.

Finance has determined that 100% of the funding is available from the Betterment Fund for CIP R2116.

**STRATEGIC GOAL:**

This Project supports the District's Mission statement, "To provide high value water and wastewater services to the customers of the Otay Water District in a professional, effective, and efficient manner" and the General Manager's Vision, "A District that is at the forefront in innovations to provide water services at affordable rates, with a reputation for outstanding customer service."

**LEGAL IMPACT:**

None.

JM/BK:jf

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Attachments: Attachment A - Committee Action  
Attachment B - Budget Detail  
Exhibit A - Location Map  
Exhibit B - Summary of Proposal Rankings



## ATTACHMENT A

<b>SUBJECT/PROJECT:</b> R2116-001101	Award of a Professional Services Contract for Inspection and Condition Assessment of the Ralph W. Chapman Water Recycling Facility 14-inch Force Main to Pipeline Inspection & Condition Analysis Corporation
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### COMMITTEE ACTION:

The Engineering, Operations, and Water Resources Committee (Committee) reviewed this item at a meeting held on September 15, 2014, and the following comments were made:

- Staff recommended that the Board award a professional services contract to Pipeline Inspection & Condition Analysis Corporation (PICA) and authorize the General Manager to execute an agreement with PICA for inspection and condition assessment of the Ralph W. Chapman Water Recycling Facility (RWCWRF) 14-inch Force Main in an amount not-to-exceed \$302,092.
- Staff would like to gain a better understanding of the condition and remaining life expectancy of the pipe for a few reasons:
  - District staff has recently repaired two (2) leaks in the upper portions of the steel force main as an emergency
  - All air-vac and in-line valves were replaced about 5 years ago. The replaced valves were found severely corroded. The new valves are already showing corrosion.
  - The consequence of failure is high. The entire force main traverses an environmental preserve which drains to the Sweetwater Reservoir.
- Staff contacted several experts before the selection process. Condition assessment work is very specialized and there are three (3) commonly recognized inspection specialty firms in the world which offer substantially different assessment approaches including Pure Technologies which has contracts with SDCWA, PICA headquartered in Canada with offices in the United States, and Rock Solid located in Australia.
- Staff discussed the advertising and selection process that was in accordance with Policy 21 and stated that the District received three (3) proposals.

- It was noted that Rock Solid, located in Australia, dropped out before submitting a proposal as the scope of work required construction work such as dewatering and removal and reinstallation of valves that Rock Solid was not positioned to provide.
- Staff indicated that five (5) staff members ranked the proposals and the result of the analysis are shown in Exhibit A of the staff report.
- Staff highlighted that PICA and their civil engineering sub-consultant (Brown & Caldwell), was the only team that could fulfill the entire Request for Proposal scope which required civil engineering interpretation/calculations based on remaining wall thickness of the steel pipes; the other technologies did not offer all the information necessary to prepare the assessment.
- Staff checked PICA's references, reviewed their Company Background Questionnaire form, and performed an internet search on the company and did not find any significant issues.
- The Committee inquired if staff has considered total replacement of the Ralph Chapman Water Recycling Facility 14-inch Force Main as opposed to spending funds to inspect and assess the condition of the current pipeline. The Committee questioned if it would be better to apply the inspection/condition assessment costs towards total replacement. Staff stated that the life expectancy for this pipe is approximately 75 years. The pipeline has been in place for about half of its expected life. The recent repairs to the pipeline appeared to be the result of improperly placed backfill that damaged the exterior coating causing corrosion on the exterior of the pipe. The existing pipe on each side of the repairs appeared to be in good shape suggesting localized issues. Staff does not have enough information to make a strategic decision to determine if total replacement is required at this time. The inspection and condition assessment of the pipeline will provide information to aid the decision.
- The Committee commented that the selection panel's scores suggest that Pure Technologies' (Pure) met the District's RFP requirements at half the price of PICA. The scope of work included in the RFP was developed and written in a manner that allowed several different condition assessment technologies to be evaluated by District staff. Within the written proposals, Pure and the other respondents to the RFP provided information that they were capable of performing some of the inspection and condition assessment. However, during the oral interviews, staff determined that PICA's solution was the only one that

could provide the level of condition assessment required by the project since the PICA solution can quantitatively estimate the remaining life expectancy of the pipe through civil engineering interpretation/calculations based on remaining wall thickness of the steel pipe which is critical information that the other technologies could not provide. In response to the Committee's question, District staff stated that PICA is best positioned to meet the needs of the project.

Upon completion of the discussion, the committee received staffs' report and supported presentation to the full board as an action item.

The following was provided after the Committee meeting in response to the Committee's inquiry questions:

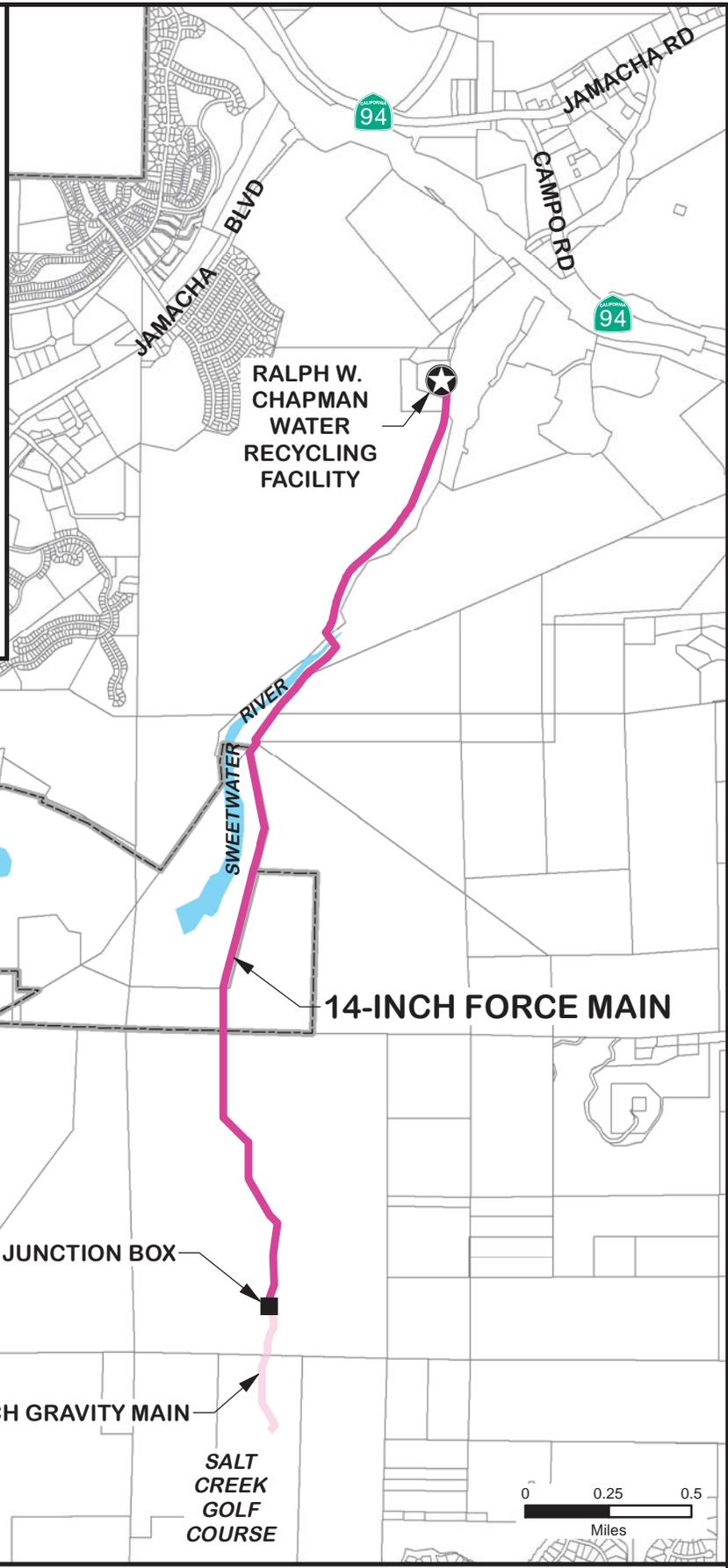
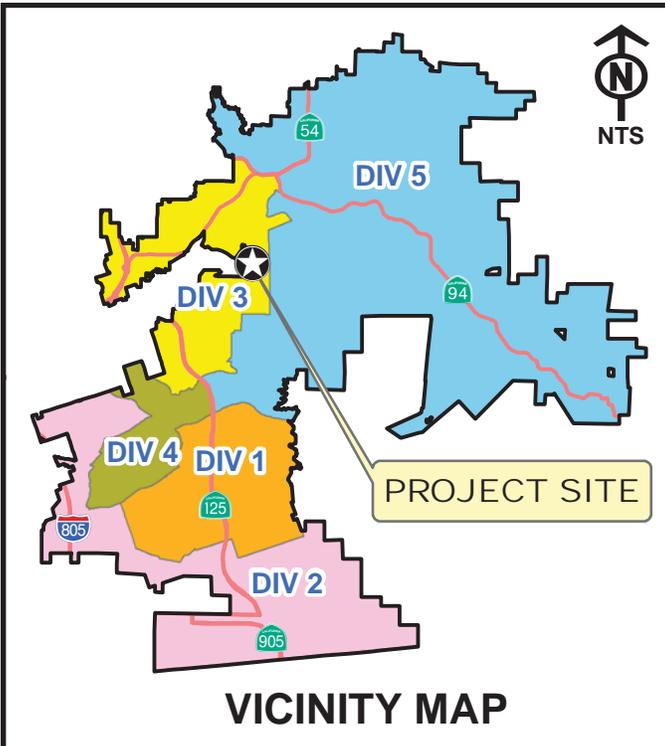
- The cost to replace the project's 3.1 miles of 14-inch high pressure steel pipe through the environmentally sensitive area is estimated to be in excess of \$10 million. Additionally, environmental permitting for total replacement is anticipated to be very challenging requiring an Environmental Impact Report and extensive offsite mitigation of multiple endangered species. The data obtained from PICA will predict the remaining life expectancy of the pipe. This information will assist staff in making decisions that will maximize the life of the assets while strategically planning for their replacement. The cost of the inspection and condition assessment contract represents approximately three percent of the estimated cost of replacement.



## ATTACHMENT B – Budget Detail

<b>SUBJECT/PROJECT:</b> R2116-001101	Award of a Professional Services Contract for Inspection and Condition Assessment of the Ralph W. Chapman Water Recycling Facility 14-inch Force Main to Pipeline Inspection & Condition Analysis Corporation
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Otay Water District					Date Updated: 8/28/2014
r2116-RecPL - 14-Inch, 927 Zone, Forcemain Ass					
<i>Budget</i>	<i>Committed</i>	<i>Expenditures</i>	<i>Outstanding Commitment &amp; Forecast</i>	<i>Projected Final Cost</i>	<i>Vendor/Comments</i>
<b>1,500,000</b>					
<b>Planning</b>					
Standard Salaries	37,011	7,011	30,000	37,011	
Consultant Contracts	302,092	-	302,092	302,092	PICA
<b>Total Planning</b>	339,103	7,011	332,092	339,103	
<b>Design</b>					
Consultant Contracts	420	420	-	420	HDR ENGINEERING INC
Service Contracts	152	152	-	152	SAN DIEGO DAILY TRANSCRIPT
Standard Salaries	535	535	-	535	
<b>Total Design</b>	1,107	1,107	-	1,107	
<b>Construction</b>					
	-	-	-	-	
<b>Total Construction</b>	-	-	-	-	
<b>Grand Total</b>	<b>340,210</b>	<b>8,118</b>	<b>332,092</b>	<b>340,210</b>	



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**OTAY WATER DISTRICT**  
 INSPECTION AND CONDITION ASSESSMENT  
 OF THE RWCWRF 14-INCH FORCE MAIN



**EXHIBIT B**  
**SUMMARY OF PROPOSAL RANKINGS**  
**Inspection and Condition Assessment of the Ralph W. Chapman Water Recycling Facility 14-Inch Force main**

		WRITTEN							ORAL							REFERENCES	
		Qualifications of Team	Responsiveness and Project Understanding	Technical and Management Approach	INDIVIDUAL SUBTOTAL - WRITTEN	AVERAGE SUBTOTAL - WRITTEN	Proposed Fee*	Consultant's Commitment to DBE	TOTAL - WRITTEN	Additional Creativity and Insight	Strength of Project Manager	Presentation and Communication Skills	Responses to Questions	INDIVIDUAL TOTAL - ORAL	AVERAGE TOTAL ORAL		TOTAL SCORE
<b>MAXIMUM POINTS</b>		<b>30</b>	<b>25</b>	<b>30</b>	<b>85</b>	<b>85</b>	<b>15</b>	<b>Y/N</b>	<b>Y/N</b>	<b>15</b>	<b>15</b>	<b>10</b>	<b>10</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>Poor/Good/Excellent</b>
<b>PICA</b>	<i>Dan Martin</i>	28	24	27	79	76	1	Y	77	15	14	10	10	49	47	124	Excellent
	<i>Jose Martinez</i>	25	23	27	75					14	14	10	10	48			
	<i>Steve Beppler</i>	28	22	25	75					15	14	9	10	48			
	<i>Howard Almgren</i>	25	22	25	72					13	13	8	8	42			
	<i>Kevin Cameron</i>	27	23	28	78					15	14	9	10	48			
<b>Pure</b>	<i>Dan Martin</i>	27	23	20	70	69	15	Y	84	10	12	6	6	34	33	117	
	<i>Jose Martinez</i>	28	19	25	72					9	12	8	7	36			
	<i>Steve Beppler</i>	25	19	23	67					9	11	7	6	33			
	<i>Howard Almgren</i>	26	18	21	65					8	10	5	5	28			
	<i>Kevin Cameron</i>	27	22	23	72					9	13	7	5	34			
<b>RBF</b>	<i>Dan Martin</i>	26	23	23	72	67	8	Y	75	8	14	7	7	36	32	107	
	<i>Jose Martinez</i>	25	21	22	68					10	13	7	6	36			
	<i>Steve Beppler</i>	23	18	23	64					8	9	6	6	29			
	<i>Howard Almgren</i>	26	18	20	64					7	8	8	5	28			
	<i>Kevin Cameron</i>	26	20	20	66					8	12	7	5	32			

RATES SCORING CHART*			
<b>Firm</b>	PICA	Pure	RBF**
<b>Fee</b>	\$302,092	\$144,492	\$221,703
<b>Score</b>	1	15	8

\*Note: Review Panel does not see or consider proposed fee when scoring other categories. The proposed fee is scored by the PM, who is not on Review Panel.

\*\*Average of four price options ranging from \$184,145 to \$259,261 provided in RBF's cost proposal