

**MINUTES OF THE ENGINEERING AND OPERATIONS COMMITTEE MEETING
OF THE RAINBOW MUNICIPAL WATER DISTRICT
JULY 11, 2018**

1. **CALL TO ORDER** – The Engineering and Operations Committee Meeting of the Rainbow Municipal Water District on July 11, 2018 was called to order by Chairperson Prince at 3:00 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. Chairperson Prince presiding.

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL:**

Present: Member Prince, Member Stitle, Member Taufer, Member Brazier, Member Ratican, Member Robertson, Member Marnett, Alternate Nelson.

Also Present: General Manager Kennedy, District Engineer Strapac, Associate Engineer Powers, Engineering Tech. Rubio, Construction Superintendent Maccarrone, Water Operations Superintendent Walker.

Absent: Alternate Kirby.

Mr. Kennedy noted that Mr. Kirby stated if there was an interested public member wanting to join the committee he would step down. There were six members of the public present.

4. **SEATING OF ALTERNATES**

There were no alternates seated at this meeting.

5. **ADDITIONS/DELETIONS/AMENDMENTS TO THE AGENDA (Government Code §54954.2)**

Mr. Kennedy stated Item 13 would be moved after Item 8.

6. **PUBLIC COMMENT RELATING TO ITEMS ON THE AGENDA**

There were no comments.

COMMITTEE ACTION ITEMS

*7. **APPROVAL OF MINUTES**

A. June 6, 2018

Mr. Stitle's motion to recommend approval of the minutes was withdrawn. Mr. Kennedy suggested more detail regarding committee members' attendance.

8. **PRESENTATION ON ESTIMATED IMPORTED WATER RETURN FLOWS TO BONSALL BASIN (STEVE STUART, DUDEK)**

Mr. Kennedy mentioned a couple of years prior to being hired the District had contracted this project with West Yost. He said the report provided by West Yost had many uncertainties. He the Board proceeded to approve a contract with Dudek to reevaluate this project. He pointed out the

Board requested there be certain stops points in the process, prior to continuing to the next steps. He said currently the consultant was on one of those stops points and would be providing a presentation. He introduced Mr. Stuart and stated he would be providing preliminary assessments regarding the calibrated data and identifying the main goal of the District in determining the amount of water available. Mr. Stuart lead the presentation as follows:

1. Water Delivered by RMWD - Total water delivered to customers from July 2014 to June 2017 = 49,559 AF.
2. Water Served by RMWD - Customers categorized into eight different classifications:
 - a. Agriculture with Residence
 - b. Transitional Special Agricultural Water Rate (TSAWR) with Residence
 - c. Agriculture without Residence
 - d. Single Family
 - e. Multiple Family
 - f. TSAWR Commercial
 - g. Commercial
 - h. Institution (e.g. state parks, landfills, schools)
3. Distribution of Connections in the District Service Area: Total connections = 7,481. The distribution of these connections is about 65.5% Single Family and 30% Agricultural.
4. Distribution of Water in the District's Service Area from July 2014 to June 2017 (49,559 AF): The Single Family drops to 20.9% and the Agricultural goes up to about 70%.
5. District Service Area & Sub-Watersheds - There are 17 minor watersheds in the San Luis River and four are within the District's service area (Pala Mesa, Gird Road, Moosa Canyon and Gopher Canyon). These four sub-watersheds constitute about 70% of the total water use in the District's whole service area. The possibility of potentially capturing return flows would require placing wells within the Bonsall Basin.
6. Gird Road Sub-Watershed has the highest number of residential connections with 70% using septic systems, which will impact the return flow calculations. Focus was turned to the Gird Road sub-watershed, due to having the highest water residential connections:
 - a. Inflows - imported water delivered to customers, annual Mean = 2,270 AF, not factoring in rainfall and groundwater from wells.
 - b. Outflows - indoor water consumption, assuming 2.3 to 2.8 people per household:

195 gpd/household or .22 AFY
240 gpd/household or .27 AFY
 - c. Applied Irrigation - Assumed Avocados 10% to 50%, Citrus 5%, Landscaping 10%.
 - d. Calculation Assumptions - Estimated Mean Annual Return Flow to Bonsall Basin:
 - (1) 92% indoor water use returns via septic discharge.
 - (2) 79% Irrigation efficiency for applied irrigation, which means not all the water makes it to the root system.

- (3) Crop evapotranspiration rates - Avocados = 26.8 in./yr., Citrus = 32.5 in./yr., Landscaping = 30.7 in./yr.
 - (4) 20% of agriculture parcel is avocados and 5% citrus.
- e. Results – Mean Annual Return Flow is 400 to 424 AF. Representing 18% to 19% return flow (out of 2,270 AF delivered to Gird Road). Extreme scenarios were also discussed.
7. Variations and sensitivity analysis in Avocado Consumption and number of people per household were discussed.
8. Decline in Applied Irrigation – Estimated Return Flows to Bonsall Basin (Scaled up from Gird Road to the District Service Area):
- a. 189 AF to 224 AF / 0.2 = 945 to 1120 AFY Septic Recharge.
 - b. 73 AF to 211 AF / 0.2 = 363 to 1055 AFY Applied Irrigation.

Mr. Kennedy stated the most important item of a return flow project was to have enough factual back-up to withstand lawsuits from people challenging the District's rights. He said the next phase would be to determine if it was feasible to construct a treatment plant cost effectively based on the amount of return flow. He estimated that the District would not be able to produce water at a lower cost than purchasing it imported. Discussion ensued.

9. DISCUSSION REGARDING INSTALLATION OF FALL PROTECTION AT DISTRICT TANKS

Mr. Strapac provided a copy of Suez Advanced Solutions (Utility Service Co.) proposal for the upgrade of the fall prevention system for eleven of the Districts water tanks. Mr. Kennedy stated the District was required by the State of California to personally inspect the tanks weekly. He mentioned the District's fall protection for the tanks need improvement. He suggested working with Suez to include fall protection on the tanks by adding the cost throughout the current maintenance contract.

Mr. Prince suggested checking with other contractors for a cost comparison. Mr. Kennedy replied the District could search if there was another comparable fabricator.

Mr. Kennedy asked if the Committee agreed, as a baseline to install fall protection engineered-designed and installed stairways to the tanks. He continued, if the Committee agreed, then the District could focus on the most cost-effective contract. Discussion ensued.

Motion: Recommend staff obtain reasonable pricing for the fall protection program.

Action: Approve, Moved by Member Robertson, Seconded by Member Stitle.

Vote: Motion passed unanimously. (summary: Ayes 7).

Ayes: Member Prince, Member Stitle, Member Brazier, Member Ratican, Member Robertson, Member Marnett, Member Taufer.

10. DISCUSSION REGARDING REQUEST FOR PROPOSALS FOR THE PIPELINE RELOCATION PROJECT

Mr. Strapac said there are certain areas where the District would like to relocate pipelines for various reasons, such as maintenance, access, upsize, etc. He discussed a few examples of current pipeline issues. Mr. Kennedy mentioned some of the pipelines have become problematic for District staff and customers. Discussion ensued.

Mr. Strapac asked the Committee for a recommendation to proceed with a request for proposal for pipeline relocation design. Discussion ensued.

Mr. Nelson said if money was an object, the design could include all the work, although the construction work could be segregated depending on the available funds. Discussion ensued.

Motion: Recommend staff go forward with obtaining the most cost-effective proposals.

Action: Approve, Moved by Member Robertson, Seconded by Member Prince.

Vote: Motion passed unanimously. (summary: Ayes 7).

Ayes: Member Prince, Member Stitle, Member Brazier, Member Ratican, Member Robertson, Member Marnett, Member Taufer.

11. DISCUSSION REGARDING RELOCATION OF WATER FACILITIES NEAR WESTMONT DRIVE

Moved after Item 13.

Mr. Steele introduced himself as being new to Fallbrook moving in less than a year ago. He explained his concern regarding the unsafe location of his water meter on the private road.

Mr. Powers said the waterline ends where the cluster of meters are located. He stated the District's facilities were built in 1978 and the earliest house was built in 1981. Mr. Kennedy said the meters can be relocated at the cost of the owners, but not at the cost of the other ratepayers. Mr. Robertson mentioned the individual that build the first house created the hazard when the private road was installed. Mr. Kennedy suggested the most cost-effective alternative would be to widen the road. Discussion ensued.

Mr. Robertson reiterated that the situation was a hazard, although it was on a private road and the issue was not created by the District. He pointed out unfortunately the District could not use public funds to correct a private issue. Mr. Steele asked if the meters could be lowered, Mr. Kennedy responded yes, although the AIRVAC must be above ground. Discussion ensued.

Mr. Steele thanked the Committee for their time.

12. DISCUSSION REGARDING RELOCATION OF BLOW OFF NEAR PALA TEMECULA AND RANCHO HEIGHTS

Mr. Taufer said the issue regarding the blow off near Pala Temecula and Rancho Heights was a hazard with 300 psi off the blow off and a restricted turn radius. He shared some pictures of the blow off location.

Mr. Kennedy said District staff reviewed the request for the relocation of the blow off. He stated the location of the District facilities are standard to all other facilities and does not present anymore hazard than other facilities. He mentioned the developer was responsible for installing the facilities on the private road. He said it was not the District's responsibility, since it was on private road. Discussion ensued.

Mr. Taufer asked if the District had any liability regarding this issue. Mr. Kennedy responded no.

Mr. Prince asked if it was possible to place the facilities below grade. Mr. Kennedy responded yes. Mr. Prince asked if the customer paid for the work, then how would he proceed. Mr. Kennedy responded the customer would have to hire a contractor and contact the Engineering Department.

13. DISCUSSION REGARDING ABM METER REPLACEMENT PROJECT AND FLUME TECHNOLOGIES

Moved before item 9.

Mr. Kennedy introduced Mr. Katzen from ABM Building Services that would provide a presentation on the ABM Meter Replacement Project. He mentioned ABM has been involved with developing the Investment Grade Audit Report for a couple of years. He said this report has several main goals:

- Upgrade the meter infrastructure of the District by replacing more than 7,700 meters, which many being inaccurate and beyond their useful life.
- Significantly reduce the current non-revenue water percentage for the District and create enhanced revenue for the District, which would ultimately pay for the meter replacement project.
- No capital outlay required – paid from revenue savings.
- Financially guaranteed by ABM.

Mr. Katzen said the investment grade audit report provides the District with both a technical and a financial solution which details a districtwide meter replacement project. He went over the following details of the report:

- Required no out-of-pocket capital budget dollars from the District.
- Completely upgrades the meter infrastructure of the District with forward compatibility for future AMR to AMI upgrades if desired.
- Is completely self-funding through enhanced revenue and operational savings, conservatively estimated in excess of \$1M annually.
- Will provide significant cumulative General Fund relief through increased cash flow revenue for up to 20-years based on equipment lifecycle
- Can be financially guaranteed through an annual Measurement and Verification program to eliminate any financial risk to the District.

Mr. Havelaar discussed the testing of the existing meters and the baseline water data annual consumption per meter size. He pointed out the clear majority of consumption was from the 1", 1-½" and 2" meters. He mentioned the baseline water consumption data was based on calendar year July 2016 to June 2017, and in that database, there were approximately 7,735-meter accounts with a total consumption of 6,693,712 HCF. He mentioned 333 meters were tested and the current overall weighted system accuracy was calculated to be 93.6%. Mr. Kennedy said during the District's planning and forecasting of water purchased and sold there has been a 7% discrepancy. He pointed out the 93.6% accuracy shows a 6.4% loss due to meter inaccuracies, leaks, etc. He mentioned if the inaccuracies could be lessened then the water loss would be greatly reduced. Discussion ensued.

Mr. Katzen said the results of all the testing and analysis conducted in the last year for the District realized a potential starting annual revenue enhancement of over \$900K at 98% accuracy. He said there was also potential annual Operational and Maintenance savings estimated at \$180K. He pointed out the total conservative starting annual estimated savings for the District was at \$1M. Mr. Katzen described how ABM's financial guarantee worked:

1. Measurement and Verification ((M&V) – Validating Meter Accuracy:

- Baseline M&V consists of measuring a random sample set of meters (226) each year.
- Procedure continues to use AWWA testing methodology for all tests.
- Initial performance measured 12 months from completion of project implementation.
- Annual M&V is at the discretion of the District and may be cancelled at any time.

2. Project Financial Analysis – Tax Exempt Lease Purchase:

- Preservation of Capital dollars for other projects where leasing is not an option.
- Preservation of debt limitations (operating lease).
- Improvement of Cash Flow.
- Flexible structuring to meet budget needs.
- Low rates resulting from tax-exempt basis.
- Alternative financing method not requiring rate payer approval.

3. Potential Financial Analysis – Potential Funding Partners:

ABM does not fund or finance projects and does not receive any remuneration from any of the funding/financing partners that they work with. ABM has thoroughly vetted each recommended partner for their financial stability, experience, longevity and competitiveness in the area of rate and term for Tax Exempt Lease Purchase and other financing vehicles.

4. Project Financial Analysis – Project Options:

- Option No. 1: Full Scope of 7,735 meters with return on investment of 82.04%
- Option No. 2: Reduced Scope of 5,875 meters with return on investment of 99.27%

Discussion regarding the above two options continued.

Mr. Kennedy said the District has been having issues with the pressure regulators failing. He said to move the regulators to the customer side solves the problem for the District, but not for the customer. He pointed out the District has been working on a more aggressive method to lower the high pressures in certain zones by installing pressure stations. He also mentioned the possibility of starting a pressure regulator replacement program. Discussion ensued.

Mr. Katzen summarized ABM's Value Statement: ABM has been around for 109 years, guarantees financial results, manages all project implementation, facilitates all financial aspects. Discussion ensued.

Mr. Kennedy stated there has been a lot of work placed into this project for the past two years and the District has received a solid proposal. He mentioned a draft contract has been developed and was being finalized by the Districts' legal counsel. He said unless there were any objections, the plan was to take the project to the Board for approval. He pointed out there was too much money being lost and every year the District delays more money was lost.

Mr. Marnett said ABM still needed to show how the mix of older and newer types of meters alter the baseline cost modules. Mr. Kennedy responded ABM would be working through those projections. Discussion ensued.

Mr. Taufer asked if the project was a proposal. Mr. Kennedy replied yes. Mr. Taufer asked if there were other proposals. Mr. Kennedy replied no. Mr. Taufer asked if this was an unsolicited proposal and what was the justification. Mr. Kennedy replied it was a sole source proposal with specialized services, providing a financial benefit to the District. Discussion ensued.

Mr. Katzen stated every component of the services for this project was competitive.

Motion: ABM Meter Replacement Project be approved by the Committee and forward to the Board of Directors.

Action: Approve, Moved by Member Stitle, Seconded by Member Marnett.

Vote: Motion passed (summary: Ayes = 6, Noes = 1, Abstain = 0).

Ayes: Member Prince, Member Stitle, Member Brazier, Member Ratican, Member Robertson, Member Marnett.

Noes: Member Taufer.

14. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT SCHEDULED ENGINEERING AND OPERATIONS COMMITTEE MEETING

The following agenda items were suggested:

- Pressure Regulator Issue
- Tank Fall Protection
- Pre-Procurement
- Corrosion Protection

15. ADJOURNMENT

The meeting adjourned at 6:00 p.m.

Timothy Prince, Committee Chairperson

Dawn M. Washburn, Board Secretary