MINUTES
JOINT ADJOURNED REGULAR MEETING OF THE ENGINEERING AND OPERATIONS COMMITTEE AND SPECIAL MEETING OF THE BOARD OF DIRECTORS
THURSDAY, MAY 24, 2018
8:30 AM

DIRECTORS PRESENT:

William Plummer	Chairman
Carol Lee Brady	Committee Member
Bill Wilson	Committee Member
Lisa Herman	Committee Alternate
Bennett Drake	President (Absent)
Angel Garcia	Board Member
Danny Martin	Board Member

STAFF PRESENT:

Assistant General Manager-Engineering & Operations Eva Plajzer (left at 9:40 AM), Director of Administration Jason Martin, Chief Engineer Andrew Webster, Assistant General Manager-CFO/Treasurer Rick Aragon, Water Operations Manager Rich Ottolini, Field Services Manager Randy Crowell, Engineering Manager-CIP & Development Jake Wiley, Construction Contracts Manager Heath McMahon, Water Reclamation Manager Mark Kaveney, Water Resources Manager Jeff Kirshberg (left at 8:40 AM), Operations Systems Analyst Tom Greene (left at 8:55 AM), and Senior Administrative Assistant/Recording Secretary Leslie Mayer.

Others Present: Christofer Coppinger (Geoscience Support Services, Inc.) [left at 8:55 AM].

ADDITIONS TO AGENDA

There were no additions to the Agenda.

APPROVAL OF AGENDA

Chairman Plummer called for approval of the Agenda of the Adjourned Regular Meeting of the Engineering and Operations Committee of the Rancho California Water District of May 24, 2018, as presented.

MOTION: Director Wilson moved to approve the Agenda of the Adjourned Regular Meeting of the Engineering and Operations Committee of the Rancho California Water District of May 24, 2018, as presented. Director Brady seconded the motion, and it carried as follows:

RESULT: **APPROVED [UNANIMOUS]**
MOVER: Bill Wilson, Committee Member
SECONDER: Carol Lee Brady, Committee Member
AYES: William Plummer, Carol Lee Brady, Bill Wilson

PUBLIC COMMENT

There was no public comment.

Item 1. Update and Direction to Staff on Rancho California Water District's Subsidence Monitoring Program

Water Operations Manager Rich Ottolini addressed the Engineering and Operations Committee (Committee) to introduce this agenda item and provided background information, reminding the Committee that, along with the annual groundwater audit performed to monitor/ensure proper groundwater basin management, annual subsidence monitoring has been performed as well, which began in the late 1980s. He further reminded the Committee that, presented at the January 25, 2018 regular Committee meeting, staff provided information relative to the annual subsidence monitoring program for the Committee's consideration and recommendation to the Board of Directors; however, staff were tasked by the Committee to consider more efficient and/or cost-effective methods for subsidence monitoring by: 1) using best management practices (BMPs), 2) considering upgrades to existing monitoring equipment for better efficiency; and 3) recommending an alternative approach to monitoring. Mr. Ottolini then introduced Christofer Coppinger of Geoscience to present staff's findings to the Committee.

Utilizing a PowerPoint presentation, Mr. Coppinger addressed the Committee and began by highlighting the major points to be covered in staff's report for this meeting, including: 1) general discussion of land subsidence; 2) data required for subsidence monitoring; 3) RCWD subsidence monitoring history; 4) examples of other agencies' subsidence monitoring practices; and 5) recommended changes/updates to RCWD's subsidence monitoring program.

Displaying a few slides containing compaction diagrams, Mr. Coppinger reviewed how land subsidence occurs due to aquifer compression; more importantly, how permanent land subsidence follows instances where non-recoverable compaction occurs when an aquifer is compacted above its compressible limit. Next, he displayed a series of slides covering the data required for subsidence monitoring, which includes: 1) groundwater level; 2) land surface level using both Global Positioning System (GPS) and Interferometric Synthetic Aperture Radar (InSAR) surveys (providing satellite information of larger areas of land); and 3) aquifer compression/rebound measurements using extensometers, which are wells drilled into the strata, containing a rod from the bottom of the well that is connected to a strip chart. Continuing, he used the same

series of slides to show overview maps of the GPS surveying for extensometer wells and monuments and InSAR data (displacement in inches) to confirm land surface elevation, and then reviewed the historical use of RCWD's extensometers/early survey points, which were initiated in 1991, as a result of damage that occurred between 1987 and 1989.

Next, Mr. Coppinger displayed a slide containing several graphs that included data received from Extensometer Well Nos. EW-1, EW-2, EW-3, and EW-4 beginning in 1997 and continuing through 2016, involving groundwater production and land surface aquifer compression/rebound, for which he noted that the graphed data shows very little land movement over the years.

Mr. Coppinger then reviewed the Department of Water Resources (DWR) subsidence monitoring guidelines, noting the following:

- No set standard established for collecting subsidence data;
- Studies performed by the United States Geological Survey (USGS) often incorporate a variety of methods;
- USGS studies can be used as examples for planning subsidence monitoring programs; and
- Methods should comply with standards outlined in the BMPs produced by DWR.

Continuing, Mr. Coppinger indicated that Chino Basin Watermaster's subsidence information was reviewed to compare with the District's method of subsidence monitoring and resulting historical information; however, it was determined that their data shows a higher level of movement than that of the District.

Mr. Coppinger then reported on RCWD's current subsidence monitoring criteria/methods, which are similar to many agencies' monitoring practices, as follows:

- Water levels - transducers and hand levels;
- Pumping volumes - meters from nearby wells;
- Land surface elevation using GPS survey and InSAR data capture (10-12 months apart);
- Aquifer compression/rebound using pipe extensometer on strip chart; and
- Annual reporting.

After reviewing additional slides containing overview maps of RCWD extensometer and survey station locations, Mr. Coppinger reviewed another slide depicting InSAR interferograms that illustrated changes in land surface elevations from September 11, 2015 through August 12, 2016. He opined that InSAR data capture should be done more frequently in order to produce better data; further, because InSAR data analysis is very expensive, it is recommended that RCWD continue to capture InSAR data and only analyze the data if deemed necessary to do so, as in cases where a higher level of movement is detected, which will ultimately result in an overall savings to the District.

Concluding his presentation, Mr. Coppinger discussed proposed updates to RCWD's

subsidence monitoring program, as follows:

- Shaft encoder use for extensometers, which will eliminate digitizing costs;
- Add more GPS survey stations to increase the area covered;
- Biennial GPS surveys to reduce land surface elevation data costs;
- Six-month InSAR data collection to preserve InSAR data at reduced costs that can be analyzed in the future, if required; and
- Biennial reports to reduce overall costs, as historical information for the District's groundwater basin indicates very little movement in land elevation.

General discussion ensued regarding the recommendation to perform subsidence monitoring reports every two years due to the lack of elevation change discovered through historical data.

At this time Assistant General Manager-Engineering and Operations Eva Plajzer reviewed for the Committee the tables included in staff's report for Fiscal Years 2017-2018, 2018-2019, and 2019-2020, wherein she reminded that the original recommended budget for subsidence monitoring that was presented at the before-mentioned January 25, 2018 regular meeting was approximately $70,000. Further, she stated that, with the proposed updates to RCWD's subsidence monitoring program, the budget amounts for the upcoming fiscal years will realize a savings of between $20,000 to $30,000 on an annual basis.

Fairly lengthy general discussion ensued regarding whether or not staff could be alerted of any major elevation changes such as when earthquakes occur, wherein it was determined that the six-month review of data, along with sensors that have been recently added to the District's Supervisory Control and Data Acquisition (SCADA) system, will assist with the overall discovery of any such potential elevation changes.

Ms. Plajzer added that, while the subject matter for this item had been presented at the January 25, 2018 regular Committee meeting as an action item, the costs associated with the newly proposed updates for RCWD's subsidence monitoring program currently fall within the General Manager's signing authority for the next two fiscal years. She also added that staff will provide the next presentation on the subject matter in 2020 since the expected budget total will exceed the General Manager's signing authority; further, unless the Committee has specific direction to staff at this time, this item is simply informational.

No motion was offered for this item, as the Committee provided no specific direction to staff at this time.

Item 2. Consider Approval of a Request by Eastern Municipal Water District for a Grant of Easement along Washington Avenue, between Cherry Street and Elm Street, for a New 36-Inch Diameter Recycled Water Pipeline

Engineering Manager-CIP & Development Jake Wiley addressed the Engineering and

Operations Committee (Committee) to provide information concerning a request from Eastern Municipal Water District (EMWD) for the granting of a non-exclusive easement to install and operate a 36-inch diameter recycled water pipeline along (future) Washington Avenue, between Cherry Street and Elm Street, across Rancho California Water District (RCWD/District)-owned property.

Utilizing a PowerPoint presentation, Mr. Wiley began by displaying and describing a location map of the subject requested 40-foot easement area that traverses the District's 300-acre property, covering an area of approximately 2.68 acres. He instructed that EMWD is currently constructing an expansion of its Temecula Valley Regional Water Reclamation Facility and this expansion requires a new 36-inch diameter recycled water pipeline to accommodate the projected increases in wastewater flows.

Continuing, Mr. Wiley reminded the Committee that this corridor was previously offered by RCWD, upon the Board of Directors' approval, as a grant deed of easement for the establishment of public right-of-way to the City of Murrieta in late 2013, as a condition of the construction of RCWD's Recycled Water Storage Pond No. 5, and he instructed that the City of Murrieta has not accepted this grant of easement to date; therefore, the property is still under RCWD's control. Mr. Wiley described RCWD's structuring of the subject easement, wherein the grant of easement to the City of Murrieta involves a 110-foot right-of-way and the District retains prior rights within same, noting that a copy of the draft non-exclusive easement to EMWD is included in the Committee meeting packet for review of specific provisions.

Next, Mr. Wiley highlighted certain easement provisions relative to EMWD's current request, as follows:

- EMWD to quitclaim easement upon acceptance of right-of-way by the City of Murrieta;
- One pipeline only;
- RCWD approval of EMWD alignment/plans; and
- RCWD right to inspect.

General discussion ensued intermittently regarding existing turnouts that RCWD has available from EMWD, and any potential additional turnouts that the District may desire in the future for additional recycled water supply.

Mr. Wiley instructed that District staff have reviewed EMWD's construction plans and EMWD plans to bid its project in the next few months, once RCWD approves the grant of easement and the City of Murrieta subsequently grants the encroachment permit required for the project; further, EMWD has performed the required environmental documentation.

MOTION: Director Wilson moved that the Board of Directors approve the request from Eastern Municipal Water District (EMWD) for the granting of a non-exclusive easement to install and operate a 36-inch diameter recycled water pipeline along (future) Washington Avenue, between Cherry Street

and Elm Street, across Rancho California Water District-owned property. Director Brady seconded the motion, and it carried as follows:

RESULT: **APPROVED [UNANIMOUS]**
MOVER: Bill Wilson, Committee Member
SECONDER: Carol Lee Brady, Committee Member
AYES: William Plummer, Carol Lee Brady, Bill Wilson

Item 3. Review of Bid Results for the Santa Rosa Water Reclamation Facility Rehabilitation (SRRRA Project No. S0013)

Engineering Manager-CIP & Development Jake Wiley addressed the Engineering and Operations Committee (Committee) to provide an information overview of the Santa Rosa Water Reclamation Facility (SRWRF) Rehabilitation project (Project No. S0013), along with bid results received on Thursday, May 17, 2018 for the project.

Utilizing a PowerPoint presentation, Mr. Wiley reminded the Committee of the subject project goals for the 30-year old wastewater treatment plant, as follows:

1. Extend the useful life of the SRWRF.
2. Increase plant redundancy and reliability.
3. Improve overall process efficiency and reduce operating costs.
4. Ensure reliable treatment of full plant capacity (5.0 million gallons per day).

Continuing, Mr. Wiley displayed an overview map of the SRWRF that was included in the Committee meeting packet and identified how each of the before-mentioned goals correspond to specific individual facilities slated for rehabilitation at the SRWRF, highlighting that major upgrade work will take place within the Sequencing Batch Reactors (SBR), with all existing SBR equipment being replaced with new, efficient equipment, and will include the construction of a new solids dewatering facility.

Next, Mr. Wiley reviewed the results of the bid opening for the subject project that took place on Thursday, May 17, 2018, noting that the submitted bids range in price from $28 million to $32 million, while the engineer's estimate for the project was $23.4 million. He advised that Rancho California Water District (RCWD/District) staff are looking into the differential between the engineer's estimate for the project and the received low bid amount of $28 million, noting that there is no specific identified cause at this time, and discussions are taking place with the Santa Rosa Regional Resources Authority (SRRRA) partners-Elsinore Valley Municipal Water District and Western Municipal Water District. Mr. Wiley offered that the higher received bid amounts could be caused by overall market pressure, State Revolving Fund (SRF) program financing that dictates specific federal wage requirements, and the volatility of the steel market; further, the design engineer, Black & Veatch, will provide a technical memorandum soon that could potentially identify the differential.

Displaying another slide, Mr. Wiley discussed the project cost estimate timeline, as follows:

- 50 percent design, $31.8 million total estimated project cost: establishes SRF agreement and includes value engineering effort by the District/SRRRA;
- 90 percent design, $29.1 million total estimated project cost: SRRRA budget amended and includes $1.2 million for projects not SRF-funded; and
- 100 percent design, $29.4 million total estimated project cost.

With the assumption that the project contract will be awarded to the apparent low bidder, Mr. Wiley reviewed the funding requirements resulting from the received bids, noting that RCWD's share of SRRRA's funding requirement equates to approximately 42 percent, as follows:

SRF Funding Request		SRRRA Funding Request	
Loan Agreement =	$31.8 million	Approved Budget =	$27.9 million
Estimated Project Cost =	$36.6 million	Estimated Project Cost =	$36.6 million
Funding Needed =	**$4.8 million**	**Funding Needed =**	**$8.7 million**

Mr. Wiley advised the Committee that a bid protest was received from the 2nd apparent low bidder on May 22, 2018, challenging the accuracy of the apparent low bidder's submitted paperwork relative to the SRF's requirement for exercising a good faith effort toward soliciting disadvantaged/small businesses (subcontractors and suppliers), wherein the District's legal counsel, Best Best & Krieger, will be reviewing the submitted protest to provide an opinion. Specific findings for the protest will be relayed accordingly in any correspondence involving the SRF program funding.

Continuing, Mr. Wiley indicated that, with the expected increase in RCWD budget cost for the subject project, the additional funding request would equate to an additional annual debt service to RCWD customers, in the amount of $161,000.

Concluding his presentation, Mr. Wiley provided alternatives for consideration, as follows:

1. Approve the additional funding request and award the project at the June 12, 2018 regular SRRRA Board meeting, after the bid protest is resolved and additional SRF funding is secured.
2. Reject all bids, revise the project scope/goals, redesign, and rebid the project.

Lengthy general discussion ensued regarding the fact that the received bid amounts most likely reflect the actual cost of the project today, and, despite an anticipated customer rate hike based on the higher project construction budget, delaying the project by revising the scope/goals, redesigning, and rebidding can result in higher project costs overall. It was suggested that all SRRRA agencies must decide how to proceed given the information received. Director Wilson expressed his concern over the received bid amounts coming in substantially higher than the engineer's estimate and asked if it may be wise to put the project off for one year, as he feels the bids are ridiculous in the current economy and bid amounts will be lower in a year. Responding,

Chief Engineer Andrew Webster explained that, by purposefully delaying the rehabilitation work at the SRWRF, the SRRRA may lose SRF program funding and the $4 million loan forgiveness, and there is no guarantee it would be offered later at the same rate; additionally, as for the current condition of the SRWRF, the required rehabilitation work is way past its time for implementation; staff are trying their best to keep the treatment plant operational at this point. Assistant General Manager-Engineering and Operations Eva Plajzer opined that, because the recently received bid amounts were already made public, bid amounts in another year could be received similarly or even higher.

Further discussion ensued regarding the idea that construction material prices will most likely be higher later and confirmation that the bid amounts just received are fixed price and will be in effect for a 30-month construction period. Assistant General Manager-CFO/Treasurer warned against putting the grant funding in jeopardy by delaying this project. Further conversation continued regarding potential change orders during construction and the approximate 5 percent contract contingency amount, along with liquidated damage provisions.

To a question posed by Director Garcia, Mr. Wiley advised that, for the use of reverse osmosis treatment, the issue becomes the high cost of brine removal.

To a question submitted by Director Herman, Mr. Wiley and Mr. Webster explained that the SBR basins will remain in place, the existing equipment will be removed, and the overall SBR process will be upgraded with more efficient equipment.

Chairman Plummer opined that, based on this discussion, he doesn't see a 25 percent cost savings by waiting a year to move forward with the project; further, he stated that now is the time to proceed with the rehabilitation project.

Item 4. Project Status Reports - April/May 2018

Presented for Engineering and Operations Committee (Committee) review and acceptance were the Rancho California Water District (District) Construction Project Status Report, Outside Contracts Summary Report, and Capital Job Status Report for the months of April/May 2018.

Construction Contracts Manager Heath McMahon highlighted additional information on a few construction projects included in the Committee meeting packet, as follows:

- Equipping Well No. 238, Well No. 216 Replacement (Project No. D1781): the well in operational and online;
- Senga Doherty Pump Station Disinfection System Improvements (Project No. 20164): pre-startup process has begun this week, with the anticipation of the facility being operational within the next few weeks; and
- Camino Sierra Road Pressure Zone Conversion (Project No. D1807): project is complete; however, staff are working through a few submitted change order/closeout items.

Mr. McMahon also instructed that the bid opening for Recycled Water Pond Relining, Pond 1/2 (Project No. D1904) occurred on May 23, 2018, wherein several bids were received under the engineer's estimate.

The Committee accepted the Project Status Reports for the months of April/May 2018, as presented.

Item 5. Operations Reports - April 2018

Presented for Engineering and Operations Committee (Committee) review and acceptance were the Rancho California Water District (District) Operations Reports, Regulatory Compliance Report, production charts, Vail Lake storage and elevation charts, status reports, and water sales and production statistics for the month of April 2018.

The Committee accepted the Operations Reports for the month of April 2018, as presented.

Item 6. Vail Lake Property Update

Chief Engineer Andrew Webster briefly addressed the Engineering and Operations Committee and reminded that submittals are due for the Vail Lake RV Resort Request for Proposals solicitation on Thursday, June 14, 2018; further, the non-mandatory pre-submittal was held at Vail Lake on Wednesday, May 16, 2018. He indicated that three familiar potential proposing firms were represented at the pre-submittal meeting and he is expecting a proposal from another entity who will offer a different concept.

Hearing no questions or comments, this item being presented for information only, Chairman Plummer proceeded to adjournment.

Item 7. Adjournment

There being no further business to come before the Committee, the meeting adjourned at 9:54 AM.