

**MINUTES OF THE ENGINEERING COMMITTEE MEETING
OF THE RAINBOW MUNICIPAL WATER DISTRICT
FEBRUARY 4, 2014**

1. **CALL TO ORDER** – The Engineering Committee Meeting of the Rainbow Municipal Water District on February 4, 2014 was called to order by Chairperson Saxon at 3:04 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. Chairperson Saxon, presiding.

2. **PLEDGE OF ALLEGIANCE**

Ms. Brazier made an announcement to the public and committee members regarding the District's Administrative Code. She said for those who are not familiar with the Code when a member of the Board is a member of the Committee that Board member may speak, any member of the Board attending the Committee meeting who was not a member of the Committee may attend only as an observer. She pointed out if in the audience of the Committee there are two or more Board members then the Board member on the Committee is also silenced. She said therefore she would not be participating in the discussion and would only be attending this meeting in the status of observer.

3. **ROLL CALL:**

Present: Member Brazier
Member Fekete
Member Taufer
Member Saxon
Member Prince

Absent: Member Strapac
Member Rhyne
Alternate Roth

Also Present: Assistant Rubio
General Manager Brady
District Engineer Plonka
Associate Engineer Kirkpatrick
Water Operations Superintendent Walker
Director McManigle
Director Griffiths

There were 5 members of the public present.

4. **PUBLIC COMMENT RELATING TO ITEMS NOT ON THE AGENDA**

There were no comments.

COMMITTEE ACTION ITEMS

***5. APPROVAL OF MINUTES**

A. November 5, 2013

Mr. McManigle left the meeting. Ms. Brazier returned to speaking status.

Mr. Brady said one of the specific reasons the Committee was reviewing the architectural design of Beck Reservoir UV Disinfection Facility was due to the District having received feedback from the community surrounding the reservoir over the past year regarding the architectural design. He said the reservoir was a critical part of the District's emergency storage and the proposed architectural design plan would be compatible with the surrounding homes. He mentioned the District would have additional public meetings prior to the final design.

Action:

Moved by Member Brazier to approve the minutes as written. Seconded by Member Prince.

After consideration, the motion CARRIED by the following vote:

AYES: Member Brazier, Member Fekete, Member Taufer, Member Saxon and Member Prince.

NOES: None.

ABSTAINED: None.

ABSENT: Member Strapac, Member Rhyne and Alternate Roth.

6. PRESENTATION ON BECK RESERVOIR ULTRA VIOLET (UV) TREATMENT PROJECT

Mr. Brady introduced Mrs. Plonka, RMWD District Engineer and Mr. Bebee, FPUD Assistant General Manager working cooperatively on the Beck Reservoir Project. Mrs. Plonka stated members of the public were always welcomed to attend the Engineering Committee Meetings. She mentioned there would be a series of meetings to address the environmental, architectural and equipment for Beck Reservoir UV Treatment Project. She said feedback would be welcomed during the presentation.

Mrs. Plonka stated Beck Reservoir was taken off-line when Pala Mesa Tank was built at which time the District became compliant with the CDPH. She said District Staff evaluated options for Beck Reservoir such as leaving it out of service, installing a cover or installing a UV treatment system. She pointed out the Board voted to install a UV treatment system and District Staff proceeded to obtain conditional approval from the CDPH to move forward. She mentioned the consultant ARCADIS, U.S., Inc. was selected in the fall of 2013 for the design of the UV Treatment Plant.

Mr. Bebee began the presentation by providing the background of the District reservoirs, he said in order to comply with CDPH mandate the District had to cover, treat or abandon its reservoirs. He mentioned Beck Reservoir was a large investment made by the District in the 1980s; a concrete lined reservoir, in good shape, at high elevation in the District, and approximately 200MG storage capacity. He continued the reservoir was an asset in an emergency with the ability to provide 200MG of water service to its customers and for firefighting service. He said the Board had to decide to invest funds to reuse this reservoir or abandon it and lose the ability to provide water in an emergency. He pointed out the Board decided to keep the open reservoir using UV Treatment instead of placing a floating cover on it which would cause water quality

problems due to not cycling the water out sufficiently. He noted the UV Treatment at Red Mountain Reservoir in FPUD was similar to what the District would be doing at Beck Reservoir.

Mr. Bebee said the services covered in the consultant agreement included conceptual design, CEQA components, facility design and construction/administration services. He pointed out there were two key initial decisions that need to be made for the Beck Reservoir Disinfection Facility, which are the UV equipment selection and the architectural approach. He mentioned the equipment selection was important because the facility needed to be designed around the equipment. He noted the earlier the equipment was selected the sooner the completion of the design.

Mr. Bebee said with a UV Disinfection Facility there are two main parts. He explained the first is the disinfection with UV lights, which is a reactor with lamps powered by electricity. He said the second item is chlorine and ammonia to chloramine the water. He said there would also be a backup system to provide power. He pointed out that the reactor required for the facility had to be provided by a specific manufacturer, all other equipment would be standard items.

Mr. Bebee said after going over various criteria, staff recommended going forward with the procurement of Calgon Carbon 24" reactors, the same equipment being used at Red Mountain Reservoir. He mentioned Red Mountain Reservoir is larger than Beck Reservoir and has used the UV Disinfection system successfully for approximately 3 years. He said there were two reactor manufactures available and this system was half the cost of the other system; and the operations/maintenance on the same equipment at both reservoirs would allow one team to operate both systems and share spare parts in emergencies as the two Districts function together; and the pre-selection would assist in expediting the design schedule. Discussion ensued.

Mr. Saxon asked why there was such a big disparity in cost. Mr. Bebee explained it had to do with the number of lamps and how the other system was set up including the life cycle cost.

Mr. Taufer asked if the number of lamps is a function of the water flow at a maximum or average time. Mr. Bebee said the number of lamps placed into a reactor was based on the amount and quality of the water. Mr. Taufer asked how an emergency was qualified. Mr. Bebee said a true emergency was losing the aqueduct water supply from the CWA. Discussion ensued.

Mrs. Plonka said the the CWA has a plan to supply water to the San Diego region in an emergency, however the District is at the very Northern end and currently not covered by their emergency system. She mentioned during the CWA shutdowns when the aqueduct is being worked on the District operators can supply water to almost all customers by renting pumps and setting up temporary lines for approximately 10 days. She said staff has been looking into using Beck Reservoir to supply all the customers with water during an emergency.

Mr. Bebee said during higher demands in the summer months Beck Reservoir would be used and during lower demands Pala Mesa Tank would be used. He explained the District is not building a UV Disinfection Facility to treat water; the main reason is to maintain emergency storage. He noted the reservoir would be shutdown for approximately 6 months out of the year. Ms. Brazier asked if there are maintenance requirements when the UV Disinfection Facility is shutdown. Mr. Bebee said there are a few water quality maintenance items to take care of but nothing major. Discussion ensued.

The following questions were asked by public members in attendance:

Question: Will the reservoir be full? Mr. Bebee responded it would be at least half full. Mr. Brady said once the facility was built the District would optimize the system.

Question: Is the water treated coming in or out? Mr. Bebee responded both. He explained the District purchases treated water from CWA and is required to disinfect it after it leaves the reservoir.

Question: Can you please show a sketch of the location of the facility? Mrs. Plonka responded a site plan would be made available and also showed the location on Google Earth.

Question: When the UV lamps are overheated and turn off for 10 minutes what are the backup procedures? Mr. Bebee responded the lamps would not turn off from overheating there is a built in water cooling system to prevent overheating. He explained the only reason the lamps would go out would be if there was a power outage, which was why there would be a generator and an uninterruptable power supply.

Question: What noise will be generated by this facility? Mr. Bebee responded the UV equipment is mostly lamps and electrical which does not generate a lot of noise. He said the ventilation and mixing pumps may provide some noise; minimizing the noise is part of the scope of work. He mentioned the generator during an emergency or during routine testing would generate some noise as well.

Question: Will the storage tank north of the reservoir go away? Mr. Bebee responded most of it would probably be removed.

Mr. Taufer asked if the CDPH would require this system for agricultural use in lieu of a cover. Mr. Bebee responded no. He continued if it was designated non-potable and piped into a separate system. He pointed out that the raw water option had already been determined non-economical in a previous study. Discussion ensued.

Question: If the District is moving the equipment already located north of the reservoir, why not use the same location for the UV Disinfection Facility? Mr. Bebee responded that equipment was for a different purpose. He explained that site above the reservoir fed chemicals into the reservoir and the UV Disinfection Facility has to be lower than the reservoir to avoid having to pump the water.

Question: What is the square footage of the facility? Mr. Bebee responded approximately 300x300 ft.

Question: What is the fenced in area of the parcel? Mr. Bebee responded approximately 9K ft. and approximately located 50 ft. from the front of Vern Street.

Question: Is it a single story building? Mr. Bebee responded yes.

Mrs. Plonka said the proposal submitted by the consultant included an architectural sketch of which copies were made available. She mentioned this design was not final and welcomed additional feedback from the public regarding the preliminary architectural design.

Question: Is the building going to be sound proof? Mr. Bebee responded there would be noise studies to ensure the reduction of offsite noise. He noted the building equipment would probably not be an issue, the noise from the mixing pump and ventilation would create some noise.

Question: How often would the facility be operating? Mr. Bebee responded 24 hours a day in the summer.

Question: How much truck traffic? Mr. Bebee responded it depended on how much chemical storage was available and the time of year.

Question: What about getting the power from SDGE? Mr. Bebee said the District has not contacted SDGE at this time although stringing on existing poles would be an option. He said more information would be provided in the future.

Question: Can the District place the power underground? Mr. Bebee responded in some areas it could be possible.

Question: Based on the sketch where will the ventilation be placed? Mr. Bebee responded it was not known yet, it would be a part of the noise study.

Question: Have the neighbors near Red Mountain Reservoir complained of noise from the UV Disinfection Facility? Mr. Bebee responded no.

Question: How many decibel levels of noise? Mr. Bebee responded this would not be known until the noise study is completed.

Mr. Saxon asked whether a tour of the Red Mountain UV Facility would be scheduled in the future. Mr. Bebee responded yes.

Question: What is the total cost? Mr. Bebee responded the initial cost is \$12M.

Question: Will the customers have to pay an increase on their bill to cover the cost? Mrs. Plonka responded it would have to be a Board decision.

Question: What fuel is used for the generator? Mr. Brady responded diesel.

Statement: Customer stated he was probably the closest person to the proposed UV Disinfection Facility; he said in his opinion all things considered the facility looked good, small footprint and at low elevation.

Mr. Saxon suggested a tile roof instead of a flat roof would look better. He said incorporating the design as a house instead of an industrial facility in this residential area was a good plan. Discussion ensued.

Mr. Taufer asked if there was a standard or regulation on how to run UV Disinfection Facility systems. Mr. Bebee responded yes, there was a UV Disinfection Guidance Manual on how to operate a UV system. Discussion ensued.

Question: When is Beck Reservoir going to be operational? Mrs. Plonka responded in approximately 3 years.

Mrs. Plonka listed the UV Disinfection Facility architectural design concerns brought up at this meeting as follows:

- Install a tile roof instead of a flat roof.
- Consider aerial view when considering equipment on the roof.
- Maximize the facility distance from the road.
- Have the facility architecture look like a house including landscaping.
- Research solar power options.

7. LIST OF SUGGESTED AGENDA ITEMS FOR THE NEXT SCHEDULED ENGINEERING COMMITTEE MEETING

Mrs. Plonka suggested CIP Updates and Master Plans.

Ms. Brazier would like to discuss the general time table for Beck Reservoir. Mrs. Plonka mentioned the current schedule was design for a year working along with CDPH to ensure the District was meeting all of their criteria, after design the District would go out to Bid and the contractor would be selected to start construction, which would last approximately 2 years. Mr. Bebee said the District would also be going through the CEQA process which includes the noise study.

Mr. Taufer would like to review the Backflow Device Policy. Mr. Brady stated that it would be appropriate to discuss outside of the Engineering Committee Meeting. Discussion ensued.

8. ADJOURNMENT

The meeting adjourned at 4:45 p.m.

Kurt Saxon, Committee Chairperson

Dawn M. Washburn, Board Secretary