

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

1. **CALL TO ORDER** – The Engineering Committee Meeting of the Rainbow Municipal Water District on March 4, 2014, was called to order by Vice Chairperson Strapac at 3:00 p.m. in the Board Room of the District, 3707 Old Highway 395, Fallbrook, CA 92028. Vice Chairperson Strapac, presiding.

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL:**

Present: Member Brazier
Member Fekete
Member Taufer
Member Strapac
Member Rhyne
Member Prince

Absent: Member Saxon

Also Present: Assistant Rubio
General Manager Brady
Water Operations Manager Atilano
Water Operations Superintendent Walker

Mr. Sadasivan representing Kennedy/Jenks Consultants was the only public member present.

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

There were no comments.

COMMITTEE ACTION ITEMS

*5. **APPROVAL OF MINUTES**

A. February 4, 2014

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 Strapac, Member Rhyne and Member Prince.

NOES: None.

ABSTAINED: None.

ABSENT: Member Saxon.

6. DISCUSSION AND POSSIBLE ACTION REGARDING MORRO TANK PRESENTATION

Mrs. Plonka introduced Mr. Sadasivan the representative from Kennedy/Jenks Consultants that would be providing a presentation on the Morro Tank Retrofit Study. She said Morro Tank was located above the Morro Reservoir and District staff has recorded movement of the tank for the past few years. She said District action to conduct structural and geotechnical analysis of the tank was approved and Kennedy/Jenks Consultants were selected to perform these studies. She mentioned the study has been completed and the District was provided with some options.

Mr. Sadasivan began the presentation by providing a brief background of Morro Tank. He described the tank as being 135' in diameter, a welded steel tank, 40' high at the Morro Zone and a capacity of 4 MG. He pointed out the tank was built in the 1970s and was constructed on a cut/fill transition; he explained the area was over excavated and then back filled for compaction. He said the observed distresses of the tank were tank uplift, joint movement, voids below tank, paving cracks and weathered slope. Discussion ensued.

Mr. Sadasivan said in 1993 there was slope failure on the north side of the tank and a geotechnical investigation confirmed there would be slope movement in the coming years. He stated data from the 1993 Geotechnical Investigation Report was used during their investigations including the 24 points survey conducted over a period of 4 years. He said a site survey was also conducted on a monthly basis in addition to visual inspections. He pointed out the soil used for the cut/fill was native fill with high clay content, which is very expansive and unpredictable. Mrs. Plonka explained engineered fill uses very specific soil to withstand the required parameter, whereas native soil with high clay content causes problems, such as the sloping of the Morro Tank. Discussion ensued.

Mr. Sadasivan said the Site Survey was analyzed to calculate the Vertical and Lateral Displacement of the tank. He pointed out when the empty tank is filled with water it will go down by about half an inch, which correlates with the rebound data from the lab testing. He said the Lateral Displacement of the tank confirmed lateral movement of about less than an inch. He concluded the Vertical Displacement was due to the characteristic of the fill soil being highly expansive and high rebound. He confirmed the Lateral Displacement was due to slope stability.

Mr. Sadasivan pointed out Morro Tank's structural analysis was based on observation and the seismic analysis was based on the AWWA D-100 Standard. He said there was no structural damage observed although the displacement compromises the structural integrity. He continued the freeboard of the tank, which is the empty space at the top of the tank, requires 5 feet of space. He said to confirm the entire analysis it is recommended to verify the shell thicknesses through ultrasonic testing.

Mr. Sadasivan recommended the following options for temporary retrofits of Morro Tank as it stands:

- Stabilize the fill slope with excavation and benching with erosion control blankets.
- Analyze the cut slope to determine the best way to treat the slope.
- Pour a curb with flashing around the tank to minimize surface moisture from going under the tank.
- Drill holes in the floor plate and inject grout for stability.

Mr. Sadasivan stated the tank would really have to be removed to repair the base, even though the tank is in good structural standing the slopes need to be stabilized. He stated the temporary retrofits would last about 5 to 7 years with routine monitoring. He noted catastrophic failure of

the tank would not be from the subgrade, but most likely from the slopes. He said the estimated construction cost for the temporary retrofits would be approximately \$63,000.

Mr. Sadasivan recommended the following options for long term retrofits of Morro Tank:

- Demolition of the tank requiring system modifications.
- Stabilize the north and south slopes
- Excavate fill soil and backfill with structural fill.
- Tank foundation – drill piers and construct ring wall.
- Site and drainage improvements.
- Construct a new 2MG tank (estimated construction cost \$3M).

Mrs. Plonka said the next steps for staff would be to perform ultra sonic testing of the Morro Tank wall thickness, feasibility of upgrading another system to feed Morro Zone, continue to survey, and conduct hydraulic analysis to determine if the tank is really needed. She said more information was needed prior to making a decision. Discussion ensued.

Action:

Moved by Member Strapac for staff to prioritize the Morro Tank Project. Seconded by Member Prince.

After consideration, the motion CARRIED by the following vote:

AYES: Member Brazier, Member Fekete, Member Taufer, Member Strapac, Member Rhyne and Member Prince.
NOES: None.
ABSTAINED: None.
ABSENT: Member Saxon.

7. DISCUSSION AND POSSIBLE ACTION REGARDING CIP UPDATE

Mrs. Plonka informed the Committee Members that staff would be recommending award of the design contract for Lift Station 1 to Kennedy/Jenks Consultants at the March 24th Board Meeting. She suggested the Committee Members consider recommending award to the Board after an overview of the project. She pointed out since Mr. Sadasivan was in attendance he would be available to answer questions regarding the design of Lift Station 1.

Mrs. Plonka referred to the map provided out of the proposal submitted by Kennedy/Jenks Consultants; she said the existing site of Lift Station 1 would have to be abandoned due to the small size of the existing parcel not allowing room for construction or to provide sufficient emergency storage. She continued the project would include 6-8 hours of storage and a force main in addition to a gravity pipeline. She pointed out a developer plans to build in the middle of this project and was planning to relocate some of the main lines, which means the developer would be responsible for replacing a portion of the main line.

Ms. Rhyne asked what would happen if the Golf Course was replaced with wet lands. Mrs. Plonka responded it would not affect this project.

Mrs. Plonka reviewed the District's Request for Proposals (RFP) process as follows:

- Identify the project and writing a description.

- Advertise or Short list to qualified firms. Lift Station 1 was short listed to 5 firms.
- Evaluate the proposals. Lift Station 1 received 4 proposals; proposals are evaluated based on quality and qualifications of the firm and not by price. Evaluations concluded Kennedy/Jenks Consultants as the most qualified design firm. A copy of Lift Station 1 evaluation scores were provided to the committee.
- Engineering Committee review and recommendation to the Board of Directors.
- Board approval to award.

Mrs. Plonka pointed out the requirement to replace Lift Station 1 was identified in the 2000 Master Plan identifying the need for replacement. She continued the conditions of Lift Station 1 and of the pipelines have been a concern for more than 14 years, in addition to the current low capacity. She explained Lift Station 1 was already having issues during wet weather months, due to the pumps running more often for lack of storage capacity. She said the District has been looking at other options as follows:

- A larger site to build the new lift station.
- A boundary adjustment although it would be next to a creek.
- Purchasing property from the developer Davidson Communities was an option.
- Consider an alternate site proposed by Kennedy/Jenks Consultants. Discussion ensued.

Mrs. Plonka said the Consultant's proposed design fee was \$616,346, which covered the cost of design, submittal review, and construction management in addition to other options. Discussion ensued.

Mr. Strapac recommended the District install dual pipe lines as a safety backup. Mrs. Plonka acknowledge the recommendation.

Mrs. Plonka stated for operational purposes the District's 3 most recent Lift Stations would all look very similar in regards to parts and equipment. She mentioned lessons learned from Lift Station 2 would be applied on the new lift stations. Discussion ensued.

Ms. Plonka announced for full disclosure that she had worked for Kennedy / Jenks Consultants about 8 or 9 years ago, however she was not part of their current group and did not see a conflict. She then moved on to work with CH2M Hill Consultants.

Action:

Moved by Member Strapac to recommend to the Board to award the design of Lift Station 1 to Kennedy/Jenks Consultants. Seconded by Member Prince.

After consideration, the motion CARRIED by the following vote:

AYES: Member Brazier, Member Fekete, Member Taufer, Member Strapac, Member Rhyne and Member Prince.

NOES: None.
ABSTAINED: None.
ABSENT: Member Saxon.

Mrs. Plonka provided a handout with the following CIP updates:

Beck Reservoir UV Disinfection:

Timeline:

- 2011 - ARCADIS (previously Malcolm Pirnie) prepared a study regarding a cover versus ultra-violet for the reservoir. Mr. Bebee previously worked for Malcom Pirnie although not on the Beck Reservoir Study. The District applied for Department Safety of Dams (DSOD) permit.
- 2012 - The District received DSOD approval for Beck Reservoir Dam.
- 2013 - The Pala Mesa Tank was completed and Beck Reservoir was taken offline, Board approves moving forward with the UV Treatment, received conditional approval from CDPH to put Beck Reservoir back in service, RFP sent to 3 - firms evaluations and interviews conducted, Board approves award to ARCADIS, issued notice to proceed and attended project kickoff meeting.
- 2014 - Consultant progress meeting to discuss facility layout and preliminary reactor selection, equipment selections and preliminary architectural rendering, legal council approval regarding equipment procurement, Consultant progress meeting to discuss hydraulics, chemical storage, and valve replacement, draft conceptual design report (CDR) provided, staff provides comments on draft CDR. Discussion ensued.

Future milestones:

- 3/2014 - Finalize CDR (10% design effort, Finalize Geotechnical and Survey, Reservoir Assessment.
- 4/2014 - Preliminary Design Report (30% design effort).
- Thru 6/2014 - California Environmental Quality Act (CEQA) compliance, including 2 public meetings, drawings and specifications 50% design.
- 9/2014 - Drawings and Specifications 75%.
- 11/2014 - Drawings and Specifications 100%.
- 1/2015-2/2015 - Bid Phase.
- 3/2015-11/2016 - Construction.

Highway 76: Mr. Brady negotiating with Caltrans regarding who will pay the 14M for the pipeline. Project scheduled to bid in April 2014 and start construction by the end of the summer.

O&M Projects: Engineering works with operations on various District projects, which includes tank maintenance and CWA Shutdowns.

Other Projects:

- San Luis Rey Ground Water Study - All data provided to consultant. Working on water balance.
- Water and Sewer Master Plans - Sewer model is calibrated, waiting on final memo. Gathering information for the water model calibration and updating fire flow testing plan.
- Valley Center Regional Infrastructure Coordination - In discussion with VCMWD staff.
- Moosa Creek Mitigation Bank - The Army Corps is aware the Board has not officially taken a position on the project and that their maps are showing reestablish wet land on the District's easements of which environmental concerns and access to our easements will be an issue.
- Community Facilities District Formation - Contracts have been signed. Waiting on request for information from the Consultant.

Developer projects: There were no significant changes to the updated list of developers. Discussion ensued.

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

Ms. Rhyne would like an update on the Morro Tank's hydraulic analysis.

Mr. Prince would like an area Map of Beck Reservoir and Pala Mesa Tank.

Mr. Strapac would like to see electronic maps from the district. Mrs. Plonka would have to review District policy prior to allowing access.

Mrs. Plonka said a concern was brought to her attention regarding not having Engineering Committee meetings every month. She explained prior to cancelling a meeting she confers with Mr. Saxon providing her reason for cancelling, however if the committee would like to meet every month it was not a problem. She explained recently there have not been enough items to discuss. She asked the committee to provide feedback on how often they would like to meet and more suggestions on items of interest.

Ms. Brazier said her concerns, among other things, are that Engineering was not as far ahead or performing as fast as it could, which Engineering staff was not at fault. She explained the fault lies with the understaffing of Engineering. She said her concern that falling behind on some things which should be further along and not hearing from Engineering for several months makes her wonder where we are and what we are doing. Mr. Prince said he has expressed similar concerns by email and agrees the committee should meet every month.

Mr. Strapac said the committee might lose support if it does not meet every month.

Mr. Taufer asked if these committees were mandatory. Mrs. Plonka responded no other Districts have committees. Ms. Brazier said the District Board established the committees to receive public input and believed there was talent within the District. She continued she believes the Budget and Finance Committee has saved the District hundreds and thousands of dollars a year by their approach in simplifying the budget process the Board acknowledges their value and included them in the District's Administrative Code.

Mrs. Plonka stated based on the committee's responses a monthly meeting was preferred. She informed the committee when there were not any items for the committee meetings she would be relying on its members for items otherwise she would follow protocol and notify the Chairperson. Mr. Prince suggested prior to cancelling a meeting to send out an email to all the members. Discussion ensued.

Mrs. Plonka concluded prior to cancelling a meeting she would send the Chairperson an email and copy all the Engineering Committee Members.

Action:

Moved by Member Strapac to formalize the new procedures for the Engineering Committee Meetings email announcements and notifications. Seconded by Member Brazier.

After consideration, the motion CARRIED by the following vote:

AYES: Member Brazier, Member Fekete, Member Taufer, Member Strapac, Member Rhyne and Member Prince.
NOES: None.
ABSTAINED: None.
ABSENT: Member Saxon.

9. ADJOURNMENT

The meeting adjourned at 5:05 p.m.

Kurt Saxon, Committee Chairperson

Dawn M. Washburn, Board Secretary