


AGENDA

**ENGINEERING COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT
Wednesday, March 5, 2014 – 8:30 a.m.
1960 La Costa Avenue, Carlsbad, CA 92009**

- 1. Call to Order**
- 2. Roll Call**
- 3. Public Comment**
- 4. New Business**
 - A. Leucadia (L1) Force Main and Batiquitos (B3) Force Main Condition Assessment Project. (Pages 1 - 2)
- 5. Information Items**
 - A. La Costa Pump Station Rehabilitation Project – Verbal Report
 - B. Leucadia Pump Station Generator Replacement Project – Verbal Report
 - C. Gravity Line Rehabilitation Project – Verbal Report
 - D. B2 Force Main Replacement Project – Verbal Report
- 6. Director's Comments**
- 7. General Manager's Comments**
- 8. Adjournment**

MEMORANDUM

DATE: February 27, 2014
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: **Leucadia (L1) Force Main and Batiquitos (B3) Force Main Condition Assessment Project**

RECOMMENDATION

Staff recommends that the Board of Directors

1. Authorize staff to discontinue the implementation of the L1 and B3 Forcemain Assessment using the SeaSnake technology from PICA Corporation.
2. Discuss and take other action, as appropriate.

BACKGROUND

In August 2013 the Board of Directors received and filed the Leucadia (L1) Force Main Internal Corrosion Evaluation Project Report completed by Infrastructure Engineering Corporation (IEC). Based on the condition of the sample taken from the L1 section west of Interstate 5 (I-5), IEC recommended that the District discontinue use of the L1 until the District conducts further condition assessments of the force main. The Board approved an additional appropriation to the Fiscal Year 2014 (FY14) Budget for the Leucadia Force Main Corrosion Evaluation Project in the amount of \$378,000 to complete a subsequent condition assessment of the entire length of the L1 Force Main. Included in that appropriation were funds to conduct a similar assessment of the Batiquitos (B3) Force Main to take advantage of the economy of scale in the inspection price and efficiencies in design and project administration.

In October 2013, the Board of Directors received and filed the technical memorandum on the Recommended Method for Non-Destructive Testing of Leucadia (L1) and Batiquitos (B3) Force Mains completed by IEC. In that memo IEC recommended using SeeSnake, developed by PICA Corporation (PICA), to conduct the assessment. SeeSnake was selected because it provides high defect resolution for condition assessment, can navigate bends up to 90 degrees in the force main and is free swimming (does not require mechanical conveyance).

Additionally, IEC recommended that the District contract directly with PICA for a packaged project to include construction of force main modifications for launching the SeeSnake, provide and operate the required pumping equipment, perform the testing and provide a report of the test results. Doing so would place project responsibility and liability with PICA, reduce the complexity of the project, and result in improved efficiency in project administration and management. Staff agreed with this recommendation and the Board concurred with this approach.

DISCUSSION:

IEC was tasked to obtain a quote from PICA to conduct the assessment. During development of the scope of work and specifications, IEC discovered that three valves were installed on L1

during the construction of the Leucadia (L2) Force Main to facilitate the phased construction of L2. The installation of these valves were shown on the As Built Plans for L2, but not indicated in the L1 As Built Plans. The valves are an obstacle to using SeeSnake and would have to be removed to conduct the assessment.

IEC provided PICA with the project scope of work and specifications. Subsequently, PICA submitted a cost proposal of \$663,325 to complete the L1 and B3 Force Main inspections. The cost breakdown was PICA SeeSnake inspection and report, \$310,295, and Charles King Company construction services, \$353,030. The revised cost to perform the assessment is significantly higher than the original estimate and the budget appropriation amount of \$378,000,

Due to the significant cost difference, staff and IEC met to discuss the alternatives. Based on that discussion, staff has determined that LWD should not perform the assessment at this time. Staff's determination was based on the following:

- LWD maintains redundant forcemains along La Costa Avenue and the second forcemain is relatively new (11 years old), is constructed primarily of high grade PVC, and is in excellent condition.
- Staff does not believe that there is high value in assessing the pipe at a cost of over \$660,000.
- From an engineering standpoint, the section of pipe should be completely full of wastewater thereby the reducing the chance of internal corrosion from hydrogen sulfide.
- Staff believes the \$660,000 would be better spent repairing the western section the pipe that we know is bad, and returning the pipe to standby status.

These issues combined with the fact that the Batiquitos B2 Forcemain Replacement Project is approximately 20% higher than originally anticipated, led staff to the conclusion that it is best to forgo the SeeSnake assessment at this time. There is some risk associated with not evaluating L1 and B3, but staff believes this risk is manageable given the excellent condition of the redundant forcemain L2 and the pending replacement of B2.

In terms of the cost of repairing the western section L1, staff is working with IEC to develop this information and it will be presented as part of the Fiscal Year 2015 Capital Budget process.

rym:PJB