



Santa Clara Valley Water District

File No.: 20-0235

Agenda Date: 2/25/2020
Item No.: 5.1.

BOARD AGENDA MEMORANDUM

SUBJECT:

Update on the Condition of the Almaden Valley Pipeline and Determination that the Condition of the Almaden Valley Pipeline Continues to Constitute an Emergency (San Jose) (District 7).

RECOMMENDATION:

- A. Receive an update on the Almaden Valley Pipeline; and
- B. Determine by a four-fifths vote of the Board that there is a need to continue the emergency action declared by the Acting Chief Executive Officer (CEO) on December 23, 2019, pursuant to California Public Contract Code §22050, to repair the Almaden Valley Pipeline.

SUMMARY:

According to Public Contract Code §22050, in order for the emergency action to remain in place, the Board must determine, by four-fifths vote at every regularly scheduled Board meeting until the emergency action is terminated, that there is a need to continue the emergency action; this agenda item recommends the Board make such a finding.

On December 23, 2019, the Acting CEO declared that the condition of the Almaden Valley Pipeline (AVP) constituted an emergency condition pursuant to California Public Contract Code §22050. The emergency declaration further determined that Santa Clara Valley Water District (Valley Water) staff may repair such pipeline, take any directly related and immediate action required by that emergency, and procure the necessary equipment, services, and supplies for those purposes, without giving notice for bids to let contracts. The emergency condition continues to exist as the repairs to the AVP are underway.

The AVP consists of approximately 12 miles of 72-inch to 78-inch diameter pre-stressed concrete cylinder pipe (PCCP) and welded steel pipe, operating under pressure. The pipeline was constructed in two major segments: AVP Unit 1 was constructed in the 1960's, and AVP Unit 2 was constructed in the 1980's. The AVP is used to supply raw water to Valley Water's treatment plants, groundwater recharge facilities, and service connections. When this pipeline is out of service, Valley Water does not have access to the San Luis Reservoir (Central Valley Project), Anderson and Calero Reservoir supplies. The South Bay Aqueduct must be relied upon as the sole source and supply of raw water to all Valley Water treatment facilities.

AVP planned inspection and rehabilitation work was performed in 2007, 2008, 2011, and 2017. On

December 5, 2017, Valley Water's Acting CEO declared an emergency and a contractor repaired multiple damaged sections of PCCP identified during inspection at risk of imminent failure. Based on the information gathered before and after the 2017/2018 repairs, the nature of damage to the pipe was correlated to embrittlement of the PCCP reinforcement wires.

On March 18, 2018, an acoustic fiber optic (AFO) system was brought on-line to monitor the AVP for events that correlate to additional distress of PCCP sections. This AFO system has detected numerous events since installation. Staff has reviewed this information in combination with other pipeline records, including operation and maintenance data, to analyze changes in failure risk and remaining service life of PCCP in AVP. Results of this analysis indicate a particular PCCP section of the AVP, between Shannon Line Valve and Calero Valve Yard, is significantly distressed and at risk of imminent structural failure. The distressed section is limited to one pipe segment (24 feet in length) under the Alamos Creek, near the bridge crossing at the southern end of Almaden Expressway.

Based on the current condition of significantly distressed pipe section and associated risks, Valley Water cannot return the AVP to safe and reliable service unless repair of significantly distressed pipe section is performed. The planned return to service date for AVP in this location is February 27, 2020. Failure to return the pipeline to service by the prescribed date will pose a significant risk to Valley Water's ability to provide sufficient water to meet minimum water supply demands, as Valley Water's contractual obligations for water delivery increase in the spring and summer.

In response to this emergency condition of the AVP, Valley Water staff activated the Water Utility Department Operations Center on December 23, 2019. Staff from various Valley Water business units participated and strategized on the necessary steps to move forward with the pipeline repairs.

The three water treatment plants in North County are already disconnected from San Luis, Anderson, and Calero reservoirs due to the Cross-Valley and Calero Pipelines Inspection and Rehabilitation Project that is underway from November 18, 2019, to February 28, 2020, and the plants are currently relying on water delivered through the South Bay Aqueduct (SBA). Taking down the AVP for inspection and repair is somewhat fortunately timed because the same contractor Kiewit Corporation working on the Cross-Valley Pipeline can go in and repair the AVP without impacting deliveries to the water treatment plants in January and February. Since the Cross-Valley Pipeline is due to be back up on February 28, 2020, staff is striving to repair the AVP by the same date.

Valley Water staff and consultant personnel performed an emergency visual and electromagnetic inspection of the distressed pipe segments on January 14, 2020. The electromagnetic inspection confirmed the level of distress that Valley Water staff has been monitoring through the AFO system. Contract C0657 for the emergency repair work was awarded to Kiewit Infrastructure West Company. The emergency repair work began, is currently progressing as planned, and is scheduled to be completed on time.

It is anticipated that the Santa Teresa Water Treatment Plant will remain online through completion of the repairs. If Valley Water should lose the ability to receive imported water from the State Water Project (via the SBA), there would be an immediate and substantial curtailment of water services in the County. Staff has informed the retailers of the emergency at AVP and will keep them abreast of

the developments. The Office of Communications has also reached out to the neighbors that may be impacted by the mobilization of the crews and the construction activities.

Staff is recommending that the Board determine, by a four-fifths vote, that there is a need to continue the emergency action declared by the Acting CEO, to enable timely procurement of necessary construction contract services, and other services, supplies and essential equipment, without competitively bidding the contracts to complete the repairs. Staff will return to the Board with an update at every regularly scheduled Board meeting until the emergency declaration is concluded.

FINANCIAL IMPACT:

Staff estimates repairing the distressed sections of the AVP could cost in the range of \$1.3M to \$1.7M depending on the scale of the necessary repairs. There are sufficient funds available within the FY20 budget for the 10-Year Pipeline Inspection and Rehabilitation Program (95084002). If repair costs exceed the available funding, staff will recommend a budget adjustment for this Program at a future Board meeting.

CEQA:

Impacts associated with the repair and maintenance activities of the AVP were evaluated by the Pipeline Maintenance Program and the Programmatic Environmental Impact Report, certified and approved by the Board on November 13, 2007. The California Department of Fish and Wildlife and the Regional Water Quality Control Board will be properly notified to address the issued permits for the repairs and the permits will be modified to address emergency actions. All work will be performed deploying the Valley Habitat Plan conditions and avoidance and minimization measures to prevent impacts to sensitive habitat in the project vicinity.

ATTACHMENTS:

Attachment 1: Declaration of Emergency

UNCLASSIFIED MANAGER:

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