

TO: Rick L. Callender
Chief Executive Officer

FROM: Aaron Baker
Chief Operating Officer
Water Utility Enterprise

SUBJECT: Emergency Declaration to Repair Almaden
Valley Pipeline Pursuant to Public Contract
Code §22050

DATE: November 2, 2021

The purpose of this memorandum is to formally request that you as the Santa Clara Valley Water District (Valley Water) Chief Executive Officer (CEO) immediately declare an emergency pursuant to California Public Contract Code §22050 and Valley Water Resolution 05-67 to enable immediate repair of the Almaden Valley Pipeline (AVP) in the City of San Jose, California. This emergency declaration will exempt Valley Water from undergoing competitive bidding requirements to procure the necessary equipment, supplies, non-professional services, and public works to attend to the emergency action described in this memorandum.

The current condition of the AVP poses an emergency condition and needs to be temporarily taken out of service to perform significant repairs. Per California Public Contract Code §1102, an emergency is "a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services."

Background

The AVP consists of approximately 12 miles of 72-inch to 78-inch diameter prestressed 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 San Luis Reservoir (Central Valley Project) 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 15, 2017, Valley Water declared an emergency and staff repaired numerous 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 its installation. Staff continually reviews 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. On December 23, 2019, based on staff's review and analysis of the updated AFO, operations and maintenance data, Valley Water declared an emergency to repair distressed sections of PCCP that were at risk of imminent failure. The AFO system, since that repair in 2019, has captured additional events, and analysis of the current data indicates that several sections of

PCCP have reached a similar critical level of distress and are at risk of imminent failure thereby requiring immediate repair.

Potential consequences of a pipe failure in the location include:

- a. Physical damage to adjacent area;
- b. Negative impact to endangered species habitat (e.g., steelhead fish) due to excessive raw water discharge into Alamos Creek, along with substantial erosion; and
- c. Significant risk to Valley Water's ability to provide sufficient water to meet minimum water supply demands due to prolonged unplanned pipeline outage to repair a pipe break.

Potential consequences of an unplanned prolonged outage to isolate and repair a failed pipeline in this location include:

- a. Inability to meet contractual water supply agreements, which restrict planned outages between November and March;
- b. Inability to meet treated water allotment obligations to retailers; and
- c. Valley Water treatment facilities must rely solely on the South Bay Aqueduct for raw water supply.

Based on the current condition of the significantly distressed pipe sections and associated risks, Valley Water needs to temporarily shutdown and repair the AVP to maintain safe and reliable service. The planned shutdown and repair of AVP, is tentatively scheduled to occur in December of 2021 and is estimated to take approximately three (3) weeks. Failure to perform the needed repairs 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.

Recommendation

Staff recommends a Declaration of Emergency be issued so that immediate action can be taken to complete all work activities related to the repair of structurally distressed pipe in the Almaden Valley Pipeline. Based on the substantial evidence detailed above, I recommend that you officially declare that an emergency situation exists as defined by the California Public Contract Code §1102. If you agree with this recommendation, please indicate concurrence by signing below.

Concur:



Aaron Baker, P.E.
Chief Operating Officer
Water Utility Enterprise



Joseph Aranda
Assistant District Counsel

Concur:



Melanie Richardson, P.E.
Assistant Chief Executive Officer

Concur:



Rick L. Callender, Esq.
Chief Executive Officer