



MEMORANDUM

FC 14 (01-02-07)

TO: Board of Directors
Santa Clara Valley Water District

FROM: Garth Hall
Acting Chief Operating Officer
Water Utility Enterprise

SUBJECT Emergency Declaration for Dam Repairs
Pursuant to Public Contract Code §22050:
Coyote Percolation Dam

DATE: August 21, 2017

The purpose of this memorandum is to formally request that the Board of Directors of the Santa Clara Valley Water District (District) declare an emergency pursuant to California Public Contract Code §22050 to enable the prompt repair of the Coyote Percolation Dam. The objective is to receive authorization to retain a construction contractor to complete the dam repair, including procuring the necessary equipment, services, and supplies without the competitive bid process.

RECOMMENDATION:

Staff recommends that the Board take the following actions:

1. That the Board finds by at least a two-thirds vote that the need to decide whether Coyote Percolation Dam poses an emergency pursuant to California Public Contract Code §22050 came to the attention of the District after today's Board meeting agenda was posted pursuant to California Government Code §54954.2(a); and
2. That the Board finds by at least a four-fifths vote that based on substantial evidence set forth in this memorandum, that the condition of the Coyote Percolation Dam is an emergency condition pursuant to California Public Contract Code §22050 and does not permit a delay resulting from a competitive solicitation for bids, and that action is necessary to repair said dam; and
3. That the Board by at least a four-fifths vote declare that the condition of the Coyote Percolation Dam constitutes an emergency condition pursuant to California Public Contract Code §22050, and that District staff may repair such dam, 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.

BACKGROUND:

The Coyote Percolation Dam (dam) is an in-channel dam located on Coyote Creek. Its operation provides the key groundwater recharge to the lower Coyote Valley. The population of this area are almost exclusively dependent on ground water demonstrated by the large demand and recurring need to replenish the aquifer. Location of this dam is critical to groundwater recharge to the North Basin aquifers. Under normal operation, steel panels are secured to the concrete foundation; a concrete apron protects the downstream side of the dam. A concrete fish ladder allows fish migration when the dam is in place. A set of radial gates allows flow releases to manage the impoundment behind the dam. The dam is regulated by Division of the Safety of Dams (DSOD) and is inspected regularly for condition and operational safety.

Analysis

The storm flows on February 21-22, 2017, damaged the dam facility severely, in particular the dam apron suffered a scour hole that may extend 14 to 16 feet below the foundation. The exact extent of the damage is unknown because visibility is restricted by the concrete apron and the material beneath the apron.

Under an emergency permit issued by the Army Corps of Engineers (File No. 2017-00166S/NWP 5, issued March 17, 2017), actions were taken to temporarily buttress the facility along the downstream side of the apron. Stabilization work was not completed as flows did not recede, and the emergency permit expired on April 1, 2017. The dam site remained inundated until the end of May as a result of required reservoir releases and tributary flows. DSOD conducted a visual inspection on May 8, 2017, but was unable to see the damage due to high flows and requested additional inspection of the apron and dam foundation prior to reinstallation of the steel panels.

In June, flows receded enough to allow staff to evaluate the condition of the dam. It was determined that the dam apron structure was not likely to weather another winter of high flows in its current condition. Flows over the dam could continue to erode the apron and undermine the dam foundation ultimately leading to failure of the concrete structures. Should the structures fail, high flows could mobilize large amounts of sediment and concrete chunks, potentially damaging flood protection facilities and blocking flows -- for example by jamming against bridge abutments -- leading to flooding.

The current condition of the Coyote Percolation Dam poses an emergency condition. 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."

In the event of high flows passing through the Coyote Percolation Dam site, there is high possibility that the concrete structure would fail, allowing concrete, boulders, and large volumes of sediment and debris to be transported downstream. This could inducing flooding and risking public health and property in the flood prone areas of Coyote Creek, such as the areas that flooded on February 21, 2017. Boulders and concrete chunks could also join with flood-carried tree trunks to form debris jams that would be very difficult to manage and could create significant channel blockage, bank erosion, and flood risk. Seismic restrictions imposed on Anderson Dam increase the likelihood and duration of reservoir releases in the coming months. The facility must be repaired before the seasonal rains to ensure the facility's integrity and protect the public from increased risk of flooding.

There is not adequate time to complete a formal competitive bidding process for the work and complete the required repairs before the start of the rain season (October 15). Staff must immediately begin working with a qualified contractor to initiate the work as soon as possible to allow time for DSOD to inspect the facility and the District's contractor to complete repairs prior to the rain season. The inspection by DSOD will be scheduled during the repair work when the District excavates the concrete apron. The dam's foundation will be evaluated and the concrete apron replaced in a manner approved by DSOD to protect the facility from future high flow events.

Staff has begun working with the regulatory agencies having jurisdiction within the project area. Upon declaration of an emergency, staff will proceed with the repair work and continue working with regulatory agency staff to identify and comply with all applicable regulatory conditions associated with the proposed work.

Garth Hall
Acting Chief Operating Officer
Water Utility Enterprise

Attachment: Site Photographs

Coyote Percolation Dam

Photo 1: High flows and erosion caused by February storms – February 2017



Photo 2: Emergency work to buttress downstream side of dam – March 2017



Photo 3: Dewatered site showing damaged apron and downstream buttress – June 2017

