



LOWER BERRYESSA CREEK PROJECT

PLANNING STUDY REPORT

PROJECT NO. 40174004

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SANTA CLARA VALLEY WATER DISTRICT
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This Planning Study Report has been prepared under the direction of the undersigned, who hereby certifies that he is a registered engineer in the State of California.



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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Introduction

The Lower Berryessa Creek Project (Project) is located in the City of Milpitas. The extent of the proposed Project begins at Calaveras Boulevard and continues downstream for approximately 8,700 feet, to the confluence with Lower Penitencia Creek. The Project also includes two tributary creeks, Tularcitos Creek and Calera Creek. The U.S. Army Corps of Engineers and the Santa Clara Valley Water District (District) are currently developing design documents for channel improvements on Upper Berryessa Creek upstream of Calaveras Boulevard.

Flooding has occurred along Berryessa Creek in 1982, 1983 and 1997. Federal Emergency Management Agency (FEMA)/District 100-year flood maps indicate flooding along portions of Lower Berryessa Creek and Calera Creek, but not on Tularcitos Creek. No reports of flooding along Calera Creek or Tularcitos Creek have been discovered. Lower Berryessa Creek cannot contain design flows that take into account future upstream channel improvements. Also, the existing levees on both sides of the creek are structurally stable, but are constructed with highly plastic clay that shrinks and swells, causing erosion and cracking along portions of the levees.

Flows in Lower Berryessa Creek have a backwater effect on most of Tularcitos Creek. Based on hydraulic modeling, Tularcitos Creek cannot contain design flows due to both this backwater effect and inadequate channel capacity.

A portion of Calera Creek extending about 3,000 feet upstream of its confluence with Berryessa Creek is also subject to a backwater effect from flows in Lower Berryessa Creek. This portion of Calera Creek cannot contain design flows due to this backwater effect and inadequate channel capacity. Beyond this portion of the creek, the upstream reaches of Calera Creek cannot contain design flows due to inadequate channel capacity.

Inadequate access makes maintenance of Berryessa Creek, Tularcitos Creek and Calera Creek more difficult, costly and time-consuming.

An evaluation will be carried out in compliance with the California Environmental Quality Act (CEQA) and will address the environmental impacts of and mitigation for the recommended project.

Project Objectives

The objectives of the Project are to:

- Provide flood protection for the design flood event
- Improve access for long-term channel maintenance

- Incorporate opportunities to integrate levees with the City of Milpitas trail system
- Identify opportunities of stream habitat enhancement and/or restoration
- Complete construction prior to the start of construction of the Upper Berryessa Creek Project

Public Outreach

Community feedback and support was actively sought during the development of alternatives for the Project. The District held several public meetings at various local venues to discuss the project planning process and gather public input. Representatives from the City of Milpitas attended and were active participants during many project planning meetings, and District staff made presentations to City of Milpitas staff and the City Council. District staff has also met with resource agencies throughout the project planning process.

Staff-Recommended Alternative

The Project was divided into five project elements:

- ***Lower Berryessa Creek***, which extends from the confluence with Lower Penitencia Creek upstream to Calaveras Boulevard
- ***Tularcitos Creek***, extending from the confluence with Berryessa Creek to the upstream face of the crossing under I-680.
- ***Lower Calera Creek***, which extends from the confluence with Berryessa Creek to an existing drop structure approximately 3,000 feet upstream of the confluence.
- ***Upper Calera Creek Element 1***, extending from the existing drop structure upstream approximately 2,300 feet to the downstream face of an existing pedestrian bridge near Founders Lane.
- ***Upper Calera Creek Element 2***, which extends from the upper limits of Reach 1 upstream approximately 3,000 feet under I-680 and through Jose Huger Adobe Park.

A range of potential alternatives were reviewed for each of these project elements. Conceptual alternatives were identified that could meet some or all of the project objectives and were qualitatively rated against key project criteria (see pg. 3-7). The conceptual alternatives were then screened down to identify feasible alternatives for further study. The feasible alternatives were rated using the District's Natural Flood Protection (NFP) objectives.

The staff-recommended alternative was identified after an evaluation using NFP objectives and engagement with the community and City of Milpitas staff. The staff-recommended alternative for each project element meets the project objectives, balances NFP objectives, and meets objectives identified by the City of Milpitas. The proposed project elements consist of the following: