

SECTION 2: EXECUTIVE SUMMARY

2.1 CONTEXT

The deep, incised San Francisquito Creek flows through both natural and urban settings including locations at the 280 freeway, Junipero Serra Boulevard, El Camino Real, and the 101 freeway. The study area reaches from top of bank to top of bank from Junipero Serra Boulevard to Highway 101. Land adjacent to the Creek is held in both public and private ownership and there is development, existing or planned, on all borders within the study area. Refer to Table 2.1 for detailed information on creek fronting property ownership.

The San Francisquito Creek Watershed basin area, in which the study area is contained, is approximately 45 square miles extending from Skyline Boulevard to the San Francisco Bay. The watershed contains three lakes (Searsville, Lagunita and Felt) and creeks including San Francisquito, Los Trancos, West Union, Alambique, Bear, and Corte Madera, as well as many smaller tributaries which drain into the creeks. San Francisquito Creek drains into Searsville Lake in Upper Portola Valley and resumes as a dam overflow, flowing through communities from Portola Valley to the San Francisco Bay.

San Francisquito Creek establishes the boundary between Santa Clara and San Mateo Counties. The Creek is located in the Santa Clara Valley Water District’s Northwest Flood Control Zone and San Mateo County’s San Francisquito Creek Flood Control Zone. In the study area, the City of Palo Alto and Stanford University border the Creek on the South, to the north are the Cities of Menlo Park and East Palo Alto.

*Table 2.1 Creek Ownership Summary.
Source: Assessor’s Maps - County of San Mateo, CA, and Office of County Assessor, Santa Clara, CA*

Public Agency	% of Total Creek Property	Private Entity	% of Total Creek Property
City of Palo Alto	15.9%	Stanford University	28%
City of Menlo Park	8.3%	Oak Creek Apartments Stanford Children's Hospital Shopping Center Undeveloped Golf Course Residential Frontages Stanford Park Hotel	
County of San Mateo/Flood Control District	1.6%		
Santa Clara Valley Water District	1.5%		
Penninsula Corridor Joint Powers Board	0.8%		
East Palo Alto	0.2%		
State of California	0.1%		
		Commercial/Institutional	5%
		Undeveloped	2%

Source: Assessor's Map - County of San Mateo, California
Assessor's Map - Office of County Assessor, Santa Clara, California

2.2 EXISTING CONDITIONS REPORT OVERVIEW

Documented here are existing conditions found in the creek corridor between the months of August 1998 and January 1999.

The project surveyor completed survey and base maps for the creek by first establishing a horizontal and vertical control network. Flight control for aerial photogrammetric work, and ground controls for future surveys within the creek were established. Digital-ortho color photos and approximate topographic maps were also used in the data mapping process.

This is a compilation of each specialists' inventory and analysis of existing conditions. The Consultants gathered their information independently, their results were then input into electronic format to create detailed maps which will be overlaid onto one another for comparison. From this base information, recommendations and prioritization of revegetation and bank stabilization measures were formed, to be detailed in the Master Plan Report.

2.3 ORGANIZATION OF THE REPORT

This report is provided in two volumes. Volume A is the narrative portion while Volume B, the technical appendices, contains all maps and raw reference data. Volume B is in an oversized format to allow for larger scale mapping.

2.4 SUMMARY OF CONCLUSIONS

Sections Three through Seven provide substantial detail on existing conditions found in the field relative to each specific discipline. For reference, general conclusions drawn by each Consultant group are summarized below:

2.4.1 HYDROLOGY AND GEOMORPHOLOGY

2.4.1.1 *Geomorphic evolution of the creek*

- Prior to human intervention, shifts in geomorphic processes in the watershed led to the channel incision (deepening) into alluvial deposits, and to the subsequent formation of high, steep stream banks.

- Over the last 100 years, the Creek has incised further in response to anthropogenic changes in watershed conditions and has not changed its planform pattern significantly via meandering.
- Within the study reach, bank heights have increased approximately 10 feet on average from 1888 to 1969.
- As a result of incision, San Francisquito Creek is much lower than its floodplain. Most floods now are contained within the incised channel, increasing potential scour of the bed and banks.
- Scour along the existing banks has disturbed riparian vegetation. In many locations, remaining vegetation overhangs steep, eroded banks.
- Historic bank heights show that since as early as 1969, the portion of the study reach downstream of Middlefield Road has aggraded up to 5 feet. Due to grade controls located within the study reach, the Creek is not expected to incise further.
- Since 1964, surveys of bank stability show that there has been an increase in the overall percentage of unstable banks threatening property within the study reach.

2.4.1.2 Existing geomorphic conditions

- Currently, bank instability is a widespread problem throughout the study reach. Approximately 40% of the study reach has unstable banks, posing immediate threat to adjacent property.
- The majority of existing revetments composed of sacked concrete, gabion baskets, sprayed concrete (“shot-crete”), and large placed boulders are in good or excellent condition. However, areas of dumped rubble generally have been ineffective in preventing erosion and such revetments are generally in poor condition or have failed.
- Based on results from the applied bank stability rating systems, bank instability can be characterized generally for each of four designated portions (“sub-reaches”) of the study reach.
- Steep bank angles and sparse (vegetative and structural) surface protection are closely correlated with bank instability in the most severely eroded sections of the study reach.

2.4.1.3 Future geomorphic conditions

- In those sections where erosion is currently severe, erosion risks are expected to remain high until corrective measures are under-

taken.

- We expect that the tendency toward bank widening will continue to compromise bank instability in the study reach.
- With time, additional erosion problems may develop in sections of the study reach that did not receive rankings indicating high priority for corrective measures, particularly as existing revetments degrade with age.

2.4.2 VEGETATION

- Coast Live Oak Woodland and Valley Foothill Riparian are the dominant habitat types within the San Francisquito Creek project area.
- The majority of existing vegetation in the project area is of high quality.
- The woody species composition is dominated by native species but substantial non-native species are present.
- Non-native species are prevalent throughout the majority of the project area and are significantly degrading habitat quality.
- Areas within the San Francisquito Creek project area having high revegetation potential are limited.
- Large-scale habitat restoration will require the integration of bank stabilization measures, native species plantings, and non-native species eradication.

2.4.3 WILDLIFE AND AQUATIC RESOURCES

- The primary value of the lower reaches of the Creek is that of a migration corridor.
- Migration barriers currently present the most significant adverse conditions to the steelhead population of San Francisquito Creek.
- Instream cover features should be carefully designed and incorporated into revegetation and bank stabilization projects.
- No bank stabilization projects should result in a further decrease in aquatic habitat quality.

2.4.4 CULTURAL/HISTORICAL ELEMENT

- San Francisquito Creek is an important archaeological resource and recommendations for bank stabilization and revegetation should consider future research potential.

2.4.5 LANDSCAPE SETTING AND URBAN CONTEXT

- Plans for future development provide excellent opportunities for improved access to the Creek.
- Several locations were identified that would be suitable for Creek access.
- A majority of land adjacent to the Creek is held in private ownership, although public land accounts for nearly 30% of the total.
- 31% of the Creek is bordered by public roadways, providing an opportunity for path systems running the length of the Creek.

2.4.6 THE REGULATORY ENVIRONMENT

- Numerous federal state and local agencies have regulatory authority over bank stabilization and revegetation projects in the Creek. The U.S. Army Corps of Engineers wetland permit process triggers the involvement of several other agencies.
- Compliance with the California Environmental Quality Act (CEQA) is required for several permits.
- For permit review, projects must be developed to a level that allows agencies to understand the activities that are proposed, the impacts that may result, and mitigation measures.
- Permitting may require three to six months for small projects with few impacts that meet the conditions of Nationwide Permit. More time would be required for larger projects with the potential to impact endangered species, or require other agency approvals.
- The Master Plan will help to coordinate the permitting process by identifying a range of stabilization and revegetation solutions that may be preliminarily approved by the regulatory agencies.