



SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY

Notice of Regular Meeting of the Board of Directors

Thursday, June 24 ,2021

3:30 P.M.

Due to the risk of COVID-19 transmission, this meeting will be held remotely. Members of the public may observe and offer comment at this meeting by using the chat function and typing your question or comment, by selecting the raise your hand function or if you are joining by phone unmuting yourself and letting Clerk of the Board or Board Chair know you wish to speak. If you require an accommodation pursuant to the Americans with Disability Act, please contact the Clerk of the Board at the phone number or email listed at the bottom of this Agenda by 10:00 am on the day of the meeting.

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Members of the Public may speak on any agenda item for up to three minutes

Agenda

1. CALL TO ORDER AND ROLL CALL
2. APPROVAL OF AGENDA: Changes or additions to the agenda.
3. APPROVAL OF MEETING MINUTES: May 27, 2021, Regular Meeting
4. PUBLIC COMMENT: *Individuals may speak on a non-agendized topic for up to three minutes.*

REGULAR BUSINESS

Members of the Public may speak on any agenda item for up to three minutes

5. INFORMATION ITEMS
 - A. Executive Director's Report
 - B. Debrief on outcome of Joshua suit.

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6. BOARD DISCUSSION

A. Project Funding – Discuss funding elements.

B. Comprehensive Plan review and update

7. BOARD MEMBER COMMENTS, INFORMATION ITEMS, REQUESTS and
ANNOUNCEMENTS (Information only)

8. ADJOURNMENT

PLEASE NOTE: Board meeting Agenda and supporting documents related to items on the Agenda can be viewed online by 3:30 p.m. by Monday June 21, 2021 at sfcjpa.org -- click on the “Meetings” tab near the top.



SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY

June 24, 2021

SFCJPA Regular Board Meeting





Agenda

Members of the Public may speak on any agenda item for up to three minutes

1. ROLL CALL

2. APPROVAL OF AGENDA: Changes or additions to the agenda.

3. APPROVAL OF MEETING MINUTES: May 27, 2021 regular Board meeting.

4. PUBLIC COMMENT: *Individuals may speak on a non-agendized topic for up to three minutes on a topic within the SFCJPA's jurisdiction.*

Agenda Item 5A

Executive Director's Report – *Information Items*

Project Updates – Reach 2

We continue to work with project partners to evaluate and refine channel widening - hydraulics, sediment deposition, widening options, etc.

Staff will have more details to report in a few weeks.

The multi-agency meeting for early permit review is scheduled for June 29.

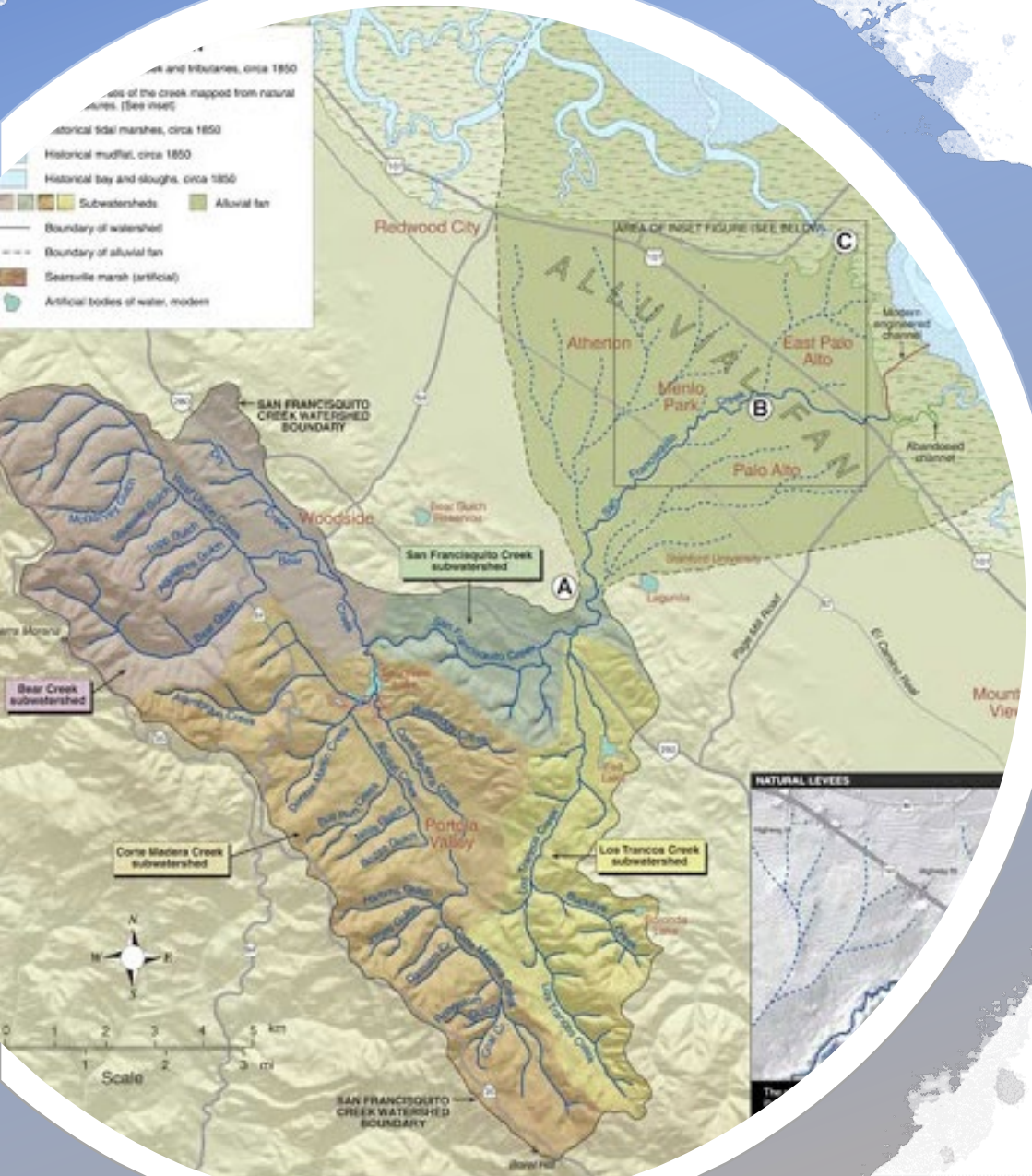


Agenda Item 5A

Executive Director's Report – *Information Items*

Reach 3 - 100-Year Flood Protection, evaluating detention basins

Onsite investigations, data collection and information sharing is ongoing. A draft conceptual plan will be shared with the Board in late summer or fall.





Agenda Item 5A

Executive Director's Report – *Information Items*

SAFER Bay

We anticipate releasing a Notice of Preparation in September and will begin environmental work thereafter.

Presentation to BRITT scheduled for September 1.



Agenda Item 5A

Executive Director's Report – ***Information Items***

Administration/Operations -

Summer 2021 Newsletter was distributed in early June.

Banking Transition is nearly complete.

Negotiated office lease term for next 12 months with a 1% increase.



Agenda Item 5B

Debrief on Joshua suit

Agenda Item 6A

Board Discussion

Reach 2 project funding principles
and elements





Agenda Item 6B

Board Discussion – Comprehensive Plan

Your Board packet contains staff's suggested updates to the 2020 Comprehensive Plan.

We would like the Board and community to consider these updates and offer additional feedback by the end of August. Staff will integrate comments and feedback and present the 2021 edition for the Board's consideration and possible acceptance at the September Board meeting.



Agenda Item 7

BOARD MEMBER COMMENTS and ANNOUNCEMENTS

Board members may share news, updates, and announcements and may request items for future agendas.



Agenda Item 8

Adjournment

Thank you, everyone.



SAN FRANCISQUITO CREEK
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Executive Director's Report, June 24, 2021

Project Updates

Reach 2 Project -

Channel Widening -

The channel widening elements of the Reach 2 project are at 30% to 50% design stage.

Regarding channel widening site #5, hydraulic analyses have confirmed that we may safely defer implementation of this project element. Deferring this work will not cause any adverse change in the FEMA flood maps. We are awaiting results of the sediment transport modeling. We want to ensure that deferral of this project element will not create any adverse sediment deposition, either before or after Stanford's proposed Searsville project. We will include Site 5 construction in our permit applications so that those can move forward expeditiously while we complete the analysis.

Deferring work at West Bayshore, if it is possible, could enable the \$6M estimated cost for Site #5 to be re-purposed to cover other project elements.

USACE Feasibility Cost Sharing Agreement (FSCA) and Project/Coordination -

Last month the Board voted to initiate the CAP 205 study by approving a new FCSA. The Corps have assembled their Project Delivery Team of technical experts and is preparing additional documents in preparation for a kick-off meeting in early July. Over the next month, we will work with the Corps to establish accounting systems, initiate federal funding, and conduct an initial hydraulics conference between technical staff.

Summary of Reach 2 Project Elements and Status

Reach 2 Elements	Design	Permitting	Rights of Way	Utility Relocations	Construction Funding
Status	50% - 90%	ESA work is underway on optimizing widening sites to minimize impacts to property owners	Ongoing outreach and discussions with property owners.	Utility mapping underway.	Construction funding gaps table updated

San Francisquito Creek Joint Powers Authority

June 24, 2021 Board Meeting

Agenda Item 5.A.

Executive Director's Report

Reach 2 Elements	Design	Permitting	Rights of Way	Utility Relocations	Construction Funding
This Month's Update	<p>Hydraulic modeling confirms that removing Widening Site 5 is possible.</p> <p>Waiting on sediment transport and deposition analysis.</p>	<p>Multi-Agency meeting scheduled for June 29.</p>	<p>Monthly working group with representatives from each member agency met on June 3rd.</p> <p>Met with Valley Water real estate team and project managers to confirm roles/responsibilities and next steps.</p> <p>Met with East Palo Alto apartment development management team.</p>	<p>Monthly working group with representatives from each member agency met on June 3</p>	<p>Discuss construction financing and funding frameworks</p>
For Next Month	<p>Awaiting regulatory and municipal requests</p>	<p>Draft 401 package to be submitted this summer</p>	<p>Confirming list of required easements and shared use agreements.</p> <p>Outreach to all Reach 2 property owners.</p>	<p>Develop cost estimates with utility companies</p>	
Potential Issues	<p>SCVWD is backlogged for updating CAD for several projects – could cause delay</p>	<p>Addition of fish migration elements could increase project footprint and costs</p>	<p>Negotiating with private property owners</p>	<p>Overhead power lines – or other utilities - could impact construction methods and costs.</p>	<p>Not all funding sources have been secured through agreements and others have timelines that must be met</p>

San Francisquito Creek Joint Powers Authority
 June 24, 2021 Board Meeting
 Agenda Item 5.A.
 Executive Director’s Report

Reach 2 Milestones

Milestone	3 mo	6 mo	12 mo	18 mo	2023/2024 Construction/Completion
Determination of Site 5 action					
USACE FSCA and Feasibility Study					
Acquire land easements					
Utility relocation to accommodate construction					
Permits acquired					
Funding agreement					
O&M agreement					
Final Design					
Bid and Award					
Construction of Newell Bridge					2023
Construction of Widening Sites					2023
Construction of Pope Chaucer Bridge					2024

Pope-Chaucer Bridge Update -

Tree removals in the vicinity of the Pope-Chaucer Bridge are a significant consideration and we continue to work with the bridge design team to reduce impacts to trees, enhance creek and riparian habitat. Recent reviews indicate a possibility of reducing grading which will preserve more trees.

Reach 2 Project Permitting –

We will be convening a multi-agency meeting on June 29. The purpose of the meeting is to discuss potential improvements to fish habitat, restoration features and future sediment management. What we learn from this meeting will be incorporated into our draft permit submittal.

Upstream Detention Evaluation -

Our consultant team has developed updated detention basin footprints and channel dimension/diversion location concepts. Of the two potential detention basin sites, one is likely to be screened out due an abundance of cultural resource locations at and around the site. Initial hydraulic modeling of the other potential basin site indicates that the peak discharge could be reduced by a few hundred cubic feet per second (cfs) over a three-hour period during a 100-year event. The model outputs are in draft form and are being reviewed and refined. In addition to more detailed analyses of hydraulic benefit, a

preliminary assessment of construction logistics, impacts, and costs will be developed during this stage of our analysis and will be shared as they emerge. If sufficient detention capacity is shown to be feasible, a draft conceptual plan will be shared with the Board in late summer or fall.

SAFER Bay -

A draft Memorandum of Understanding (MOU) for the portion of the SAFER Bay project within Menlo Park is undergoing legal review.

As described in earlier Board reports, consultant work on the SAFER Bay project has been paused since April 2020 while FEMA conducts environmental reviews for the FEMA/HMGP grant. Our active funding through DWR also lagged with an amendment. We have limited funding until the fourth quarter of 2022 when the FEMA/HMGP grant funds are anticipated to be available.

With the anticipated receipt of the first reimbursement check from DWR, we will resume a few key activities with the design and permitting team so the project can move forward.

Flood Early Warning System -

We have decommissioned the text and phone call alert function of the Flood Early Warning System. In preparation for that, we have notified everyone who has signed up for alerts through a set of email and text messages. Residents have been encouraged to sign up for the applicable county-wide alert system (SMC Alert and/or Alert SCC). This information is at the bottom of the landing page on our [website](#) and was also described in our [Summer 2021 newsletter](#).

Components of the system that provide real-time data on rain and flow conditions in the upper watershed that informs response agencies will remain operational and continue to be managed by SFCJPA staff.

Reach 1 Project -

The first three years of maintenance, monitoring and regulatory reporting for the mitigation/restoration sites for the Reach 1 project were paid for through the construction funding agreement, with year 3 monitoring completed in early June.

We are planning to release a Request for Proposals on or around July 1 for a consultant/contractor team to provide maintenance, monitoring, and reporting for the project's mitigation sites for years 4 through 10 - 2022 through 2028. Funding for this

year's monitoring and reporting is included in the approved FY21-22 budget. We anticipate bringing a contract to the Board for approval in September.

Interpretive signs:

Our design consultant submitted updated graphics and text in mid-June, which we are now reviewing and refining. We anticipate finalizing the design in August, in preparation for fabrication in September and installation in October. We are teaming with Palo Alto, who has a project to install similar signs along the SF Bay Trail, on a single fabrication and installation contract for efficiency and cost savings.

Funding Requests -

Reach 2:

We learned from CalOES that an existing \$3M HMGP grant for the Pope-Chaucer Bridge is eligible for an expanded funding request. We are working with Valley Water (the lead applicant for this grant) to provide CalOES with the updated cost, budget, and associated documentation. Tentatively, we are seeking an additional ~\$3.5M dollars.

Comprehensive Plan Update

The Comprehensive Plan was adopted in November 2020. We have reviewed the plan and have made minor updates to nomenclature so that we are consistent with Stanford's terminology. The changes are provided in redline strikeout in the draft updates in the Board packet. We are soliciting comments through August 31, with planned adoption of the updated Comprehensive Plan in September.

Organization/Administration Updates -

- We learned that on June 4, the Joshua suit was dismissed in our favor. Mr. Joshua has 60 days from June 4 if he chooses to file an appeal to this decision.
- We have negotiated our next office lease term – a 12-month term (rather than 3 months at a time) with a 1% increase (vs. the 26% increase Regus requested).
- We had 422 unique visitors to the SFCJPA website in the past month representing a 15% decline from last month.
- We have received positive feedback on the recent Summer Newsletter.
- We continue with the banking transition process and anticipate concluding the process soon.
- On June 22 we will collaborate with PG&E to host a tour of the SAFER Bay project for staff of federal and state elected officials.

San Francisquito Creek Joint Powers Authority
 June 24, 2021 Board Meeting
 Agenda Item 5.A.
 Executive Director's Report

Forward View of Board Agendas -

Please review and provide your input on items that you would like to see on future agendas. This forward view will be updated each month.

Regular Board meeting	Envisioned Agenda Items
July	Guest presentation by Stanford University regarding the Searsville project. SAFER Bay update.
August	Summer Board Recess. No meeting planned.
September	Approve Reach 1 Maintenance, Monitoring and Reporting contract. HDR Contract modification for SAFER SFCJPA - FSLRRD intersection of roles and responsibilities Study Session. Comprehensive Plan 2021 edition acceptance/ratification.
October	Winter Preparation`
November	
December	Three-year rolling workplan review and update
January	Election of new board member positions; review updated Board handbook

Agenda Item 6A - Discussion of Reach 2 Elements, Costs, and Funding Scenarios

Background

At the May board meeting, the board requested a discussion of the current project elements, their costs, funding scenarios, as well as potential options and opportunities for addressing the funding gap.

The following information is provided to help inform and support the board's discussion.

Discussion

Project Costs

The total estimated cost of the Reach 2 project, including channel widening and replacement of the Pope-Chaucer Bridge:

Construction costs \$38,138,150.

Ancillary costs (utility relocation, permits, easements, etc.) \$2,276,686.

Total Estimated Reach 2 Project Cost - \$40,414,836.

It is important to caveat these numbers – the costs may not reflect materials or labor cost increases at the time of construction. We also do not have complete knowledge of all construction cost details, such as for utility relocations. Additionally, we continue to refine the project footprint and look for ways to reduce costs.

Identified Funding (please refer to Appendix 1 for funding and project cost details)

The JPA and our members have secured local funding as well as grants from State and federal sources. These include:

CalOES/FEMA HMGP grant for the Pope/Chaucer Bridge - \$3M

DWR grant - \$3M

USACE - \$8.2M

CalTrans for the Newell Bridge - \$8.9M

Measure S revenue collected by Valley Water - \$9.2M (can be used on any project element)

Total ~\$32.2M.

The Funding Gap

Based on current project cost estimates, and current funding sources, the funding gap is ~\$8,201,686.

This presumes that all current funding sources come through, and that project costs remain more-or-less as estimated.

Funding Gap Scenarios

Scenario 1 – ~\$8.2M gap. No additional grants, but all probable funding comes through.

This scenario is our present 'status quo'. This is an optimistic but realistic and probable scenario. We believe the USACE CAP 205 process will be successful and result in a feasible project and ~\$8.2M worth of channel widening work.

Scenario 2 - ~\$5.2M gap. Defer Site 5 & expand HMGP grant by \$3.5M to cover all Pope/Chaucer bridge costs.

This is an optimistic but possible scenario, presuming we confirm that we can safely defer the channel widening at Site #5 and use that money to match an expanded HMGP grant for the Pope-Chaucer bridge, and contribute to other, presently unfunded project costs.

Scenario 3 - ~\$15.2M gap. Defer Site 5, expand HMGP for bridge, but no USACE.

Although unlikely, it is possible, that the USACE will conduct its project evaluation and conclude that the channel widening project elements are not feasible or cost-effective according to their criteria, and that the 18+-month CAP 205 process will conclude without a funded project, leaving an additional \$10M funding gap.

Scenario 4 – Greater than ~\$5.2M gap due to higher project costs. Defer Site 5 and expand HMGP grant by another \$3.5M.

It is probable that even though we will optimize our grant funding, optimize the project elements to reduce costs, and the size of the project footprint, the cost of the project will still escalate before we go to bid. Additionally, project costs may escalate in response to bids received. Examples of cost escalations outside the SFCJPA's control include competition for services and materials, escalating costs of labor or materials, legal

challenges, the unknowable costs associated with utility relocations and encountering cultural resources.

Addressing the Funding Gap

“Local Match”

Some amount of locally sourced funding will be necessary as “local match” to federal or State grants. This amount can vary but is typically 25-50% of the requested grant funding. At this time, most of the needed match funding is being provided by the Measure S funds from Valley Water, and the State’s Department of Water Resources Grant (which is providing ‘State’ match to federal funding).

The members of the JPA should expect to contribute some amount of funding to meet expectations for “local match”.

Timing of Grant Funding

There are two significant grants which have timing considerations.

The DWR grant requires that we have permits in-hand by September 2022. We are on course to meet this deadline.

The FEMA/CalOES HMGP grant for the Pope-Chaucer Bridge is confirmed, but the date the funding is anticipated to be ‘in hand’ is not known at this time.

Principles of Cost Sharing

Fundamental to any agreement is fairness. The allotment of costs and responsibilities should be fair according to all parties.

The Board may choose to define additional principles to guide their discussion and selection of funding strategies.

Approaches to Cost Sharing

Cost sharing can be determined using a single principle, multiple factors, a weighted formula, or other methods that meet the member’s principles. Examples include:

- Proportional according to impacts/benefits (by number of properties impacted, value of impacted properties, population, who benefits, etc.)

- Ability to Pay (by percentage of general fund, tax revenues, or other revenue stream)

Additional Issues to Consider.

Monies “borrowed” from future Reach 2 project to complete Reach 1.

Limited funding resources available from general fund sources (cities without dedicated revenue sources have long budgeting lead-times and other constraints).

Limited funding resources from defined / assessment district revenue source.

Potential funding / financing solutions

- Financing
 - The entirety of the gap is financed with one or more of the JPA members carrying the loan and providing liquid capital to fund construction, with repayment potentially structured in various ways to accommodate the conditions of each member, according to the board’s determination.
 - If there is a timing gap, the gap in anticipated funds (all or part) is financed based on the anticipated amount of funding to be received by state or federal grants (a ‘bridge’ loan).
 - Some of the gap is financed and the remainder is directly funded by members.
 - The gap is financed in phases, as funding is needed for specific project elements.

This is not a full analysis of all parameters, issues, or elements, but a place for the Board to begin its discussion.

Appendix 1

Funding scenarios – Reach 2

Currently, the known total project costs for Reach 2 look like this:

SFC R2 Estimated Costs						
Project Elements	Construction Contract	Construction Management	Mitigation	Real Estate	Utility Relocation	Total
Newell Road Bridge Replacement	\$8,834,300	\$1,152,300	\$176,686	\$113,000	\$500,000	\$10,776,286
Newell Road Bridge FNP costs	\$437,000	\$65,550	\$0	\$0	\$0	\$502,550
Pope/Chaucer Bridge Replacement	\$6,800,000	\$1,020,000	\$136,000	\$100,000	\$500,000	\$8,556,000
Channel Improvements Sites 1 - 4	\$8,800,000	\$1,320,000	\$176,000	\$3,200,000	\$1,000,000	\$14,496,000
West Bayshore Inlet	\$5,200,000	\$780,000	\$104,000	\$0	\$0	\$6,084,000
Total Cost Estimate	\$30,071,300	\$4,337,850	\$592,686	\$3,413,000	\$2,000,000	\$40,414,836

Currently, the known total project funding for Reach 2 looks like this:

SFC R2 Current Funding						
Funding Sources	Newell Road Bridge Modification	Newell Federally Non-Participating Costs	Pope/Chaucer Bridge	Channel Sites 1 - 4	West Bayshore Inlet Site 5	Total contribution
Measure S	\$1,158,424	\$0	\$1,954,550	\$0	\$6,084,000	\$9,196,974
Cal Trans Grant	\$8,941,176	\$0	\$0	\$0	\$0	\$8,941,176
Cal/OES FEMA HMGP Grant	\$0	\$0	\$3,000,000	\$0	\$0	\$3,000,000
Proposition 1 Grant	\$0	\$0	\$0	\$2,875,000	\$0	\$2,875,000
USACE CAP 205	\$0	\$0	\$0	\$8,200,000	\$0	\$8,200,000
Total Current Funding	\$10,099,600	\$0	\$4,954,550	\$11,075,000	\$6,084,000	\$32,213,150

The deficit or funding gap is \$8,201,686.

Additional background information

Staff have been evaluating the hydraulic performance of the channel, taking into consideration the completion of Reach 1 and the lower water surface elevation that provides. These data confirm that the West Bayshore inlet, as presently configured with three bores or barrels open, provides sufficient conveyance such that flooding at West Bayshore would not occur after bridge replacement and widening at Sites 1-4. Further, staff have modeled and evaluated potential changes in water surface elevation in Reach 2, in the scenario where the West Bayshore Inlet is widened, and where it is not widened, to see if there are any negative impacts to FEMA flood zone determinations or to sediment deposition. Modeling has indicated that FEMA flood zone determinations will not change if widening is deferred.

Additional sediment removal operations may be necessary in the future if Stanford is successful in modifying Searsville Dam. Stanford is now conducting additional modeling to determine what the potential increased in sediment removal events might be.

It is staff's assessment that the West Bayshore inlet (channel widening Site 5), can be deferred and no longer included in the Reach 2 project elements. However, we plan to include it in our permit applications so that the project is permitted considering the maximum possible impacts, which can be reduced once all analyses are completed.

By deferring the West Bayshore inlet, channel widening Site 5, \$6.084M of Measure S funds can be re-allocated to other project funding needs.

HMGP Grant Update

Staff recently learned that FEMA/CalOES has lifted the cap on the HMGP grants. In 2017 the JPA applied for a FEMA/CalOES HMGP grant for the Pope-Chaucer bridge for the maximum then allowable of \$3M. CalOES recently informed us that there is significant funding in the program and a decision was made to lift the maximum allowable award. We are updating our construction cost estimate and evaluating eligible expenses so we can increase our funding request to this program. Our updated request must still meet the required Benefit/Cost Ratio (BCR) of at least 1 to 1. The original Pope-Chaucer bridge BCR was very favorable, and we are confident that our new analysis based on increased construction costs will still result in a favorable BCR if we ask for as much additional funding as we need. Deferring Site 5 would enable the use of some Measure S funds from that project element for the necessary local match for the expanded HMGP grant.



COMPREHENSIVE PLAN

This Comprehensive Plan is the SFCJPA's description of our vision and action plan for the benefit of our member agencies, residents, and stakeholders. The SFCJPA has always considered a watershed approach for our work, and this document is intended to chronicle our overall plan. This plan is a living document and will be revisited annually during July and August and updated to reflect recent or anticipated activities and events that affect the watershed.

[San Francisquito Creek Joint Powers Authority](#)



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REVISION HISTORY

Revision #	Revision Date	Revisions Made
0	November 2020	Initial Plan
1	September 2021	Minor updates to project nomenclature
2		

ACKNOWLEDGEMENTS

This plan was prepared through a collaboration of stakeholders coordinated by the San Francisquito Creek Joint Powers Authority, the members of which are the Cities of East Palo Alto, Menlo Park and Palo Alto; the Santa Clara Valley Water District and the San Mateo County Flood and Sea Level Rise Resiliency District. We thank our reviewers for their thoughtful comments that have made this a better plan.



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Figure 1. San Francisquito Creek Watershed and Alluvial Fan

Figure 2. FEMA Floodplain Designation for Creek and Bay with approximate parcels in each that will be addressed by SFCJPA Projects



Summary

This Comprehensive Plan describes the SFCJPA's vision, goals, and action plan for the San Francisquito Watershed for the benefit of our member agencies, watershed partners and stakeholders. San Francisquito Creek is an asset unifying the communities it touches, providing ecosystem and recreation services. The San Francisquito Creek Joint Powers Authority (SFCJPA) works with its members and watershed partners to address the interrelated issues of flood protection, ecosystem restoration and creation of recreational opportunities along the creek and in the watershed.

Our overarching goal, working with our member agencies and partners, is to implement a suite of interrelated actions, each with independent utility but together comprising a comprehensive approach with multiple benefits to all inhabitants of the watershed.

The SFCJPA's action plan to achieve our vision and overarching goal is to implement the following projects that are components of the SFCJPA's plan to cost effectively provide protection to people and infrastructure, while improving habitat and recreational opportunities:

Reach 1 - San Francisco Bay to Highway 101 "Downstream Project"

This completed project was the necessary first step in our plan. The flood control aspects of the project consisted of widening the creek channel, constructing new setback levees and flood walls, and creating in-channel marsh plain. In total, this project created more than 22 acres of new and improved marsh and added new trails on top of the levees that connect to the San Francisco Bay Trail and West Bayshore Road. This project specifically incorporated protection against three feet of sea level rise. When considering the safety factor of FEMA freeboard, the project as built protects against 100-year creek flows and up to 10 feet of sea level rise compared to today's daily high tide. The [Reach 1 Downstream Project](#) flood protection elements were completed December 2018 and the overall project was completed June 2019.

Reach 2 - Highway 101 to El Camino Real "Upstream Middle Reach Project"

This project is designed to provide protection for people and property from a flood event similar to the 1998 flood, which is considered a 70-year event. This project will remove artificial constrictions at [four or](#) five locations to increase channel capacity, while incorporating improvements to habitat. The lowest flow capacity point is the Pope Chaucer Bridge, and it will be replaced by a new bridge with a more open design that restores natural creek bed. The new bridge has been carefully designed to minimize its footprint and to maintain current street elevations, while ensuring safe pedestrian and bicycle access. Channel widening is anticipated to begin in 2023~~2~~. Bridge construction is anticipated to begin in 2024~~3~~.

Reach 3 – Upstream Detention to complete 100-Year Flood Protection with FEMA Freeboard

In order to achieve the 100-year level of protection and associated FEMA freeboard to remove parcels from the FEMA floodplain (and the need to pay for flood insurance), an additional project for



upstream detention was evaluated at a programmatic level in our September 2019 Environmental Impact Report.

The topography of the upper watershed does not allow for upstream detention on its own to provide 100-year flood protection; only a combination of the completed [Reach 1 and Reach 2 Downstream](#) projects, coupled with [Reach 3](#) upstream detention and/or other similar flow reduction features can achieve 100-year protection with FEMA freeboard for San Francisquito Creek. Data collection for a project level evaluation of potential alternatives that can achieve 100-year flood protection with FEMA freeboard ~~has been is planned to be~~ initiated ~~early 2021~~. [Data collection and evaluation will provide an understanding of the potential for upstream detention to supplement Reach 1 and 2 improvements to provide for 100 year flood protection with freeboard.](#)

Tidal flood protection and marsh restoration- Strategy to Advance Flood Protection and Ecosystem Restoration along San Francisco Bay (SAFER Bay Project)

The [Strategy to Advance Flood protection, Ecosystem restoration and Recreation Project \(SAFER Bay\)](#) addresses tidal flood protection by improving or rebuilding flood protection features along San Francisco Bay within SFCJPA jurisdiction. [Public Draft Feasibility reports](#) were issued in 2016 for East Palo Alto and Menlo Park, and in 2019 for Palo Alto. The multiple reaches and elements of these projects, when fully constructed, will eliminate the protection gap in the tidally influenced areas, along the bay margin, outside of our completed project from San Francisco Bay to Highway 101 described above. We are currently moving forward with a portion of this project in East Palo Alto and Menlo Park - SAFER Bay Phase 1. We have initiated early coordination with permitting agencies working on a conceptual design, project description, and stakeholder outreach. [The SFCJPA will release a Notice of Preparation in the fall of 2021 and begin the CEQA process.](#) The SFCJPA has partnered with the South Bay Salt Ponds Restoration Project to restore Ponds R1 and R2 as part of this project to address sea level rise. This project has the same protection criteria as our completed Creek project from San Francisco Bay to Highway 101. [The SFCJPA will communicate and coordinate with other regional adaptation projects.](#)

The SFCJPA will implement these plan components to achieve our vision and goals. We intend to work with our member agencies and leverage other planned activities in the watershed using a partnership approach to augment our plan. As stated so eloquently in 2005, by the San Francisquito Creek Watershed Council in **A Stakeholder Vision for San Francisquito Creek**:

“This document offers a vision for securing the future of the San Francisquito watershed as a vital community resource. Its authors are a group of stakeholders with a range of perspectives as representatives from neighborhood associations, local cities, environmental groups, Stanford University, and local, state, and federal resource agencies. While they do not always agree on paths of action to a given goal, they put forward this vision as their collective expression of what it means to live in a watershed and keep it healthy and safe for the future.”



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The SFCJPA intends to follow this tradition with our member agencies and numerous partners in a transparent and collaborative manner.



1. Introduction

This document is intended to be a Draft Comprehensive Plan that details the past efforts and current Capital Improvement Program of the San Francisquito Creek Joint Powers Authority (SFCJPA) for use in documenting our efforts and as a communications tool. Its development and refinement are also intended to provide opportunities for discussion about the issues related to flood management, ecosystem restoration, and recreational opportunities in the creek corridor and show how stakeholders throughout the watershed can work together to implement planning goals of the SFCJPA. This document:

- describes the San Francisquito Creek Watershed and the resources within the watershed,
- states accomplishments of the Planning process to date and the role of the SFCJPA,
- outlines the SFCJPA's Comprehensive Capital Improvement Program, describes the roles and relationships of key watershed partners, and broadly outlines potential solutions and future funding needs.

Vision: The San Francisquito Creek is an asset unifying the communities it touches, providing recreation and ecosystem services. The SFCJPA works with its members and watershed partners to address the interrelated issues of flood protection, ecosystem restoration and creation of recreational opportunities along the creek and in the watershed in a fiscally responsible manner.

Overarching Goal: Implement a suite of interrelated actions, each with independent utility but together comprising a comprehensive approach with multiple benefits to all inhabitants of the watershed.

Action Plan: The projects described in Section 4 are components of the SFCJPA's overall plan to provide 100-year flood protection and improve habitat and ecosystems:

This Comprehensive Plan represents our path for implementing the SFCJPA's vision and tracking progress towards our overarching goal with our action plan.

This plan intended to be a living document that will be reviewed annually and updated as necessary. Additional information on the SFCJPA's activities can be found on our website at www.sfcjpa.org.

2. Description of the Watershed

The San Francisquito Creek watershed is approximately 45 square miles in extent and includes areas of Santa Clara and San Mateo counties. The mainstem and a portion of its Los Trancos Creek tributary form the boundary between the city of Palo Alto and the cities of Menlo Park and East Palo Alto, and

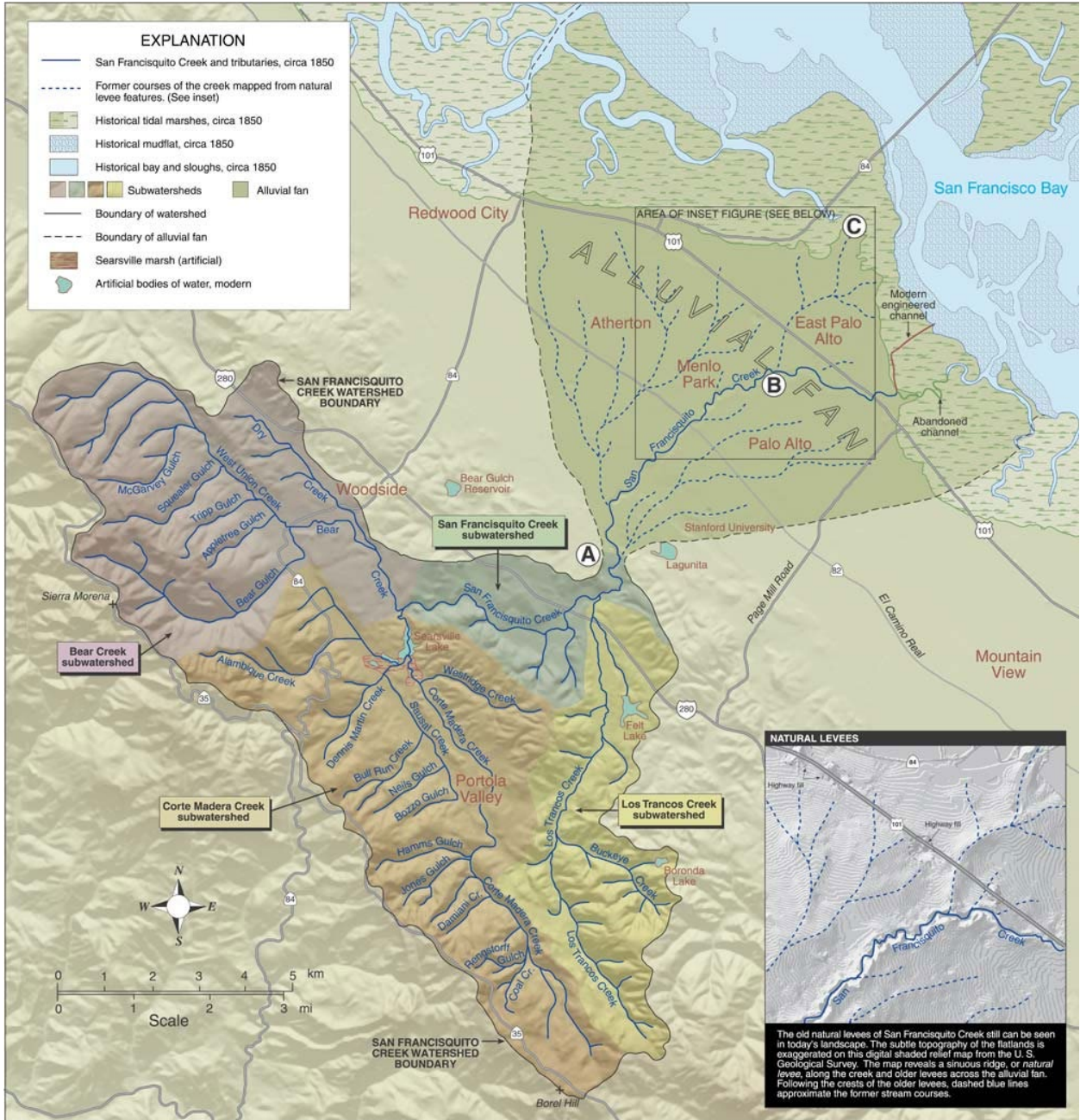


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between Santa Clara and San Mateo counties, reflecting the fact that it originally defined the boundary between the lands of the Spanish Missions in Santa Clara and San Francisco.

San Francisquito Creek begins at the confluence of Corte Madera Creek and Bear Creek below Searsville Dam in the Jasper Ridge Biological Preserve on land purchased by Stanford University in 1892. The creek is joined by Los Trancos Creek just northeast of Interstate 280.

The creek runs approximately 14 miles from southwest to northeast, and after exiting the foothills of the Santa Cruz Mountains near Junipero Serra Boulevard and Alpine Road, flows in an incised channel within a broad historic alluvial fan before emptying into the San Francisco Bay south of the Dumbarton Bridge and north of the Palo Alto Flood Basin.



Source: Janet M. Sowers, 2004. Oakland Museum of California, Creek and Watershed Map of Palo Alto and Vicinity, ISBN 1-882140-25-7

Figure 1. San Francisquito Creek Watershed and Alluvial Fan



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Land Use

Of the approximately 27,400 acres of the San Francisquito Creek watershed, approximately 8,798 acres are protected by public agencies, property easements, or private land trusts (32%), providing a natural feel within much of the watershed. The west side of the watershed is largely unpopulated, consisting primarily of forest and grasslands. Headwaters of the watershed are in the east side of Santa Cruz Mountains, and form the Los Trancos Creek, Corte Madera Creek, and Bear Creek sub-watersheds, include forested habitats and drain into the main stem. The lower watershed is highly urbanized and includes expansive areas of residential and commercial development. Although lower watershed development is prevalent when compared to the upper watershed, large, contiguous areas of open space, including forest, rangeland and agricultural areas, are interspersed throughout the urban and suburban land uses, complementing the undeveloped, open nature of much of the watershed.

The watershed is the dominant natural watercourse feature on the Peninsula, with the Santa Cruz Mountains to the west and the Bay to the east. The area east of the Alameda de las Pulgas is considered the “lowlands” with a slope of less than 5%. The densest development in the region is typically located in the lowlands and includes visually similar commercial and industrial buildings as well as multi- and single-family homes. Breaks in this dense development pattern include open areas along the Bayfront, large surface parking lots, setbacks along major arterials, or local and regional parks. Development density generally decreases as elevation increases, providing expansive views of the lower watershed.

The steep banks of the creek in the urban portions of the watercourse have been modified or hardened in many places in response to bank erosion. Even with these modifications, the San Francisquito Creek remains one of the least modified creeks on the Peninsula and the creek retains much of its natural appearance. The creek has created its own natural ‘levees’; with higher banks that slope away from the channel. The bank-tops feature many mature oak, bay, and buckeye trees, while willows grow abundantly on the lower portions of the bank and in the creek channel. The heavily wooded creek banks provide a unique natural character to neighborhoods adjacent to the creek. Many residents enjoy walking or bicycling on the creek-side roads.

Several bridges cross the Creek and physically and visually connect the communities of East Palo Alto, Palo Alto, and Menlo Park. Bridges include vehicular crossings at Newell Road, University Avenue, Pope Street/Chaucer Street, and Middlefield Road; there are two bicycle/pedestrian bridges between Middlefield Road and El Camino Real; and one railroad bridge adjacent to El Camino Real.

Demographics

Population in communities within the San Francisquito Creek Watershed is estimated in the table on the following page.



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Estimated Population, San Francisquito Creek Watershed (US Census data)		
Area	Population	Year
Woodside	5,510	2018
Stanford	15,668	2018
Palo Alto	66,666	2018
East Palo Alto	29,519	2018
Menlo Park	34,549	2018
Atherton	7,187	2018
Total	160,345	

Residents of the San Francisquito Creek Watershed represent a wide range of socio-economic circumstances, from the wealthiest to impoverished economically disadvantaged, as well as culturally and racially diverse communities. In the SFCJPA’s jurisdiction, 12,700 people in East Palo Alto and 4,300 people in Menlo Park are considered vulnerable communities, as defined by the Department of Water Resources. Using another measure for disadvantaged community, two entire census tracts within East Palo Alto, with a combined population of over 17,000, are recognized as California Disadvantaged and Severely Disadvantaged Communities by the California Environmental Protection Agency (2017) as defined by State Bill 535. According to the U.S. Census website, the population of the cities of Menlo Park and Palo Alto tend to be both older and whiter than neighboring East Palo Alto, although a sizable percentage of Palo Alto’s population is Asian. East Palo Alto’s population skews younger, and more racially diverse, with a majority of Hispanic, African-American and Pacific Islander residents.

The SFCJPA has and will continue to tailored, ~~and will continue to tailor,~~ community outreach to include as many stakeholders as possible. As described in Section 3, we have partnered with Nuestra Casa and Climate Resilient Communities for specific outreach for our work in disadvantaged portions of our communities. Additionally, SFCJPA can draw on the expertise of bi-lingual staff members where Spanish/English translation or interpretation is necessary.

Historic and archeological resources¹

The area was occupied by indigenous people for millennia prior to the first European visitors to the area in 1769. The aboriginal way of life for the Ohlone was disrupted by contact with European explorers and the establishment of missions by the Spanish in the late eighteenth century. At the time of Spanish contact, the Bay Area and the Coast Range valleys were dotted with native villages.

Gaspar de Portola crossed San Francisquito Creek in November 1769, and Spanish colonial policy throughout the late 1700s and early 1800s was directed toward establishing religious missions,

¹ Summarized from the 2011 report *Initial Cultural Resources Investigation San Francisquito Creek Flood Damage Reduction and Ecosystem Restoration Project, Santa Clara and San Mateo Counties, California* by Far Western Anthropological Research Group, Inc.



presidios, and secular towns known as pueblos, with all land being held by Spain. Mission San Francisco de Assisi (also called Mission Dolores) was founded on June 29, 1776 and situated about 25 miles to the northwest of the project area. Mission Santa Clara de Asis, located about 12 miles southeast of the project area, was then established on January 12, 1777.

With the transition of the area to the Mexican Government in 1821, the former Spanish mission lands were divided into vast tracts called “ranchos”, owned by individuals. The watershed encompasses portions of seven ranchos, two on the north side of San Francisquito Creek (Rancho Las Pulgas and Rancho Cañada de Raymundo) and five on the south side (Rancho Cañada El Corte de Madera, Rancho El Corte de Madera, Rancho San Francisquito, Rancho Rincon de San Francisquito, Rancho Rinconada del Arroyo de San Francisquito). Many of these names have come to define the geography of the watershed and its environs to this day.

After the Mexican-American War (1846-1848), the U.S. military gained control of California. The early American Period was primarily defined by the growth of agriculture in the region, with land grants establishing the towns of Menlo Park and Mayfield, and right of way for railroads. Locally, construction on the San Francisco and San Jose Railroad began in 1861, with passenger and freight service beginning in 1863. The railroad expanded the agricultural life of California and led to more innovative ways to ship and preserve food supplies, such as transporting fruit and meat in refrigerator cars which were invented in 1880. The railroad also facilitated the development of communities in the south Bay, a process greatly hastened by the San Francisco earthquake of 1906 which displaced hundreds of people.

Leland Stanford, Sr. purchased land along San Francisquito Creek in the late nineteenth century and established the Palo Alto Stock Farm. This land formed the basis of Stanford University, which was founded in 1891. During the early twentieth century, population in the region expanded considerably and marsh areas were filled for farming, and San Francisquito Creek was rerouted to accommodate desired growth. Menlo Park and Palo Alto expanded, with the latter incorporating the City of Mayfield by the beginning of World War II. The general area also began to transition from rural to urbanized, with residential and commercial uses wide-spread west of Highway 101 since the 1920s. Today, the area is almost entirely developed, with some areas now being redeveloped.

Recreation

The San Francisquito Creek watershed supports a wide range of local and regional parks, trails, and open spaces. The Creek flows into Don Edwards National Wildlife Refuge and Baylands Nature Preserve, a 1,940-acre tract of undisturbed marshland (the largest remaining marshland in the San Francisco Bay) with remaining high-quality marsh habitat. The creek is adjacent to the Palo Alto Municipal Golf Course and Palo Alto’s Baylands Athletic Center. The Creek corridor also supports a portion of the regional Bay Trail and connects to Cooley Landing Park and the Ravenswood Open Space Preserve to the north and Baylands Nature Preserve to the south.



The urban portion of the Creek between Highway 101 and Interstate 280 is mostly comprised of urban parks and trails such as Hopkins Creekside Park and El Palo Alto Park, transitioning to a wide range of larger parks and open space on Stanford University lands and in the surrounding foothills.

Utilities

As San Francisquito Creek runs through an urban environment, multiple utility corridors run adjacent to or over the creek. The relocation, protection, or avoidance of these utilities have a significant impact on work in or around the creek.

The typical utilities are expected to cross San Francisquito Creek at major road crossings. In addition, there are major known utilities running over or adjacent to the creek. Significant utilities include:

- Pacific Gas & Electric high-tension overhead electric lines and high-pressure gas transmission lines are within an easement adjacent to and across the channel downstream of Highway 101.
- Sanitary sewer, water service, and surface water drainage conduit occur beneath Woodland Avenue, while overhead electric lines occur adjacent to Woodland Avenue.

Critical utilities, including natural gas pipelines, electrical sub-stations, transmission and distribution lines, water supply and wastewater conveyance systems are all located in or near the bay margin. Sea level rise and storm events may adversely impact these utilities.

The SFCJPA will continue to coordinate closely with PG&E, local districts and municipal departments in the planning and implementation of our projects to ensure these critical infrastructure resources are safeguarded.

Fish and Wildlife resources

San Francisquito Creek flows through a mix of protected open space, agricultural, commercial, light industrial, and residential settings before reaching the baylands habitat associated with South San Francisco Bay. At the bottom of the watershed, where the creek meets the San Francisco Bay, is salt marsh habitat. The salt marsh harvest mouse, Ridgway's Rail and black rail, have all been observed in this vicinity. Moving upstream and west through the watershed, as water becomes less tidally influenced and salinity levels decrease, riparian corridors of perennial water, stream-side vegetation such as willows, box alders, and cattails, are present along many of the streams throughout the watershed. These areas provide suitable habitat for the California red-legged frog, California tiger salamander, and western pond turtle, which have all been observed within the watershed.

Additionally, streams within the Bear Creek, San Francisquito Creek and Los Trancos Creek watersheds provide suitable migration and spawning habitat for steelhead. Serpentine soil outcrops have been identified within the San Francisquito, Corte Madera, Bear, and West Union Creek sub-watersheds. This micro-habitat supports special status and common wildlife and plant species, including the Bay checkerspot butterfly, serpentine bunchgrass, and Crystal Springs lessingia.



Climate and Climate Change

The Bay Area has a Mediterranean climate with mild wet winters and warm dry summers. Coastal ocean currents moderate the effects of seasonal changes in temperature. The Santa Cruz Mountains impose a moderate rain-shadow (or orographic) effect to their east in the San Francisquito Creek watershed. This orographic effect contributes to variability in average annual precipitation in the watershed, ranging from about 40 inches at the crest of the mountains to approximately 15 inches in Palo Alto.

In the past century, global mean sea level has increased by 7 to 8 inches with human influence the dominant cause of observed atmospheric and oceanic warming. Given current trends in greenhouse gas emissions and increasing global temperatures, sea level rise is expected to accelerate in the coming decades, with scientists projecting as much as a 66-inch increase in sea level along segments of California's coast by the year 2100. While over the next few decades, the most damaging events are likely to be dominated by large El Niño - driven storm events in combination with high tides and large waves, impacts will generally become more frequent and more severe in the latter half of this century (<https://www.coastal.ca.gov/climate/slr/>).

The California Coastal Commission states that impacts of sea level rise in California will affect almost every facet of our natural and built environments. Natural flooding, erosion, and storm event patterns are likely to be exacerbated by sea level rise, leading to significant social, environmental, and economic impacts. New projects along the San Francisco Bay shoreline are recommended to incorporate a minimum of 55 inches of sea level rise.

Sea level rise along the bay margin will have an impact on ground water aquifers as saline or brackish water intrudes inland along with rising sea levels. This salt-water intrusion may compromise wells presently used for drinking or irrigation water. Rising ground water tables at the bay margin may also adversely impact the built environment where subsurface excavations or construction encounter groundwater.

Climate change will also impact the San Francisquito Creek watershed. As temperatures increase, this will raise the rate of evapotranspiration in watershed vegetation and soils. This will tend to decrease the amount of water retained in the soil and watershed vegetation, potentially leading to lower creek flows, and lower groundwater tables. Additionally, warmer and dryer conditions are conducive to greater fire risks, and to hotter, faster-burning fires, when they occur. Fires in the heavily vegetated areas of the higher elevations of the San Francisquito watershed could have significant negative impacts on habitat and both water quantity, and water quality in the watershed.

Changing heat and moisture regimes open new ecological niches for plants and animals not formerly associated with the watershed. New species may be benign, or they may disrupt ecosystems, such as



with forest damaging diseases or insects. Species disruptions may also increase the risk of fire, as existing vegetation regimes succumb to disease.

The SFCJPA has and will continue to consider foreseeable impacts and changing priorities due to climate change in all of our project planning and implementation.

Geology

San Francisquito Creek flows out of the Santa Cruz Mountains and onto a coalesced alluvial fan or apron near Junipero Serra Boulevard. The creek has deeply incised the alluvial fan sediments along much of its course, leaving steep banks that are often 25 feet high. The channel has had roughly the same alignment on the fan since the end of the nineteenth century. A geological profile along San Francisquito Creek, downstream from Alameda de Las Pulgas Road, shows a layer of coarse channel bed material (gravel, cobbles, and boulders) as far downstream as Middlefield Road. The coarse bed surface present was formed through a winnowing of finer sediment; the underlying subsurface material appears to be considerably finer. The 1892 completion of Searsville Dam on Corte Madera Creek, and subsequent reduction of coarse sediment supply while peak flows were maintained, is thought to be a contributing factor to formation of the bed surface. The coarse sediments overlie a sandy deposit that continues in the streambed to downstream from Highway 101 to the Palo Alto Municipal Golf Course. A thick layer of bay sediments with lenses of alluvium extends at depth beneath the sand upstream to about where the San Francisquito Creek passes the Stanford University Campus, forming a shallow aquifer beneath the fan. These bay sediments are underlain at depth by older, more consolidated alluvium.

Soils

The soils of the flatlands along lower San Francisquito Creek are relatively young. These soils are composed of fine particles (e.g., silt, clay) that were transported as suspended sediment derived from upstream sources and deposited overbank during flood events. The texture and characteristics of these soils affect how quickly water can infiltrate the ground surface. As a result, the soil is important for determining the volume of storm runoff, its timing, and its peak rate of flow.

Subsidence

Groundwater in the area is currently considered to be balanced, meaning that withdrawals approximately equal recharge (San Mateo County 2018). Historical overdraft (defined as long-term pumping that exceeds recharge) that resulted in historical land subsidence and salinity intrusion led to extensive investigations by the Department of Water Resources and local groundwater management agencies, such as Valley Water. Regional groundwater levels have been trending upward until the most recent drought due to reductions in regional irrigation pumping, and through augmented groundwater recharge programs.

Before the mid-1960s, groundwater production resulted in lowered groundwater elevations in Palo Alto, Menlo Park, and Atherton; movement of saline water inland from San Francisco Bay; and land



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subsidence in parts of Palo Alto and East Palo Alto. Groundwater levels have recovered since the mid-1960s. Land subsidence has occurred in and around the watershed as a result of past overdraft pumping of the groundwater basin. It is estimated that subsidence began around 1920. The ground level has dropped as much as 2.5 feet in some areas since that time, with the greatest amount of subsidence occurring in the tidal area near the Bay. With the introduction of imported water, groundwater levels have largely rebounded (San Mateo County 2018).

Water quality and Beneficial Uses

The creek is listed by the State Water Board under the 303(d) list as impaired for Diazinon, sedimentation/siltation, and trash. Placement of a water body and its offending pollutant(s) on the 303(d) list, initiates the development of a Total maximum Daily Load (TMDL). TMDLs may establish “daily load” limits of the pollutant, or in some cases require other regulatory measures, with the ultimate goal of reducing the amount of the pollutant entering the water body to meet water quality standards.

As a result of the rugged topography and highly erodible soils in the upper watershed, erosion and sediment loading are the primary water quality concerns in the San Francisquito Creek watershed. Bank erosion is the principal water quality concern in upper San Francisquito Creek, where some sections of the creek have enlarged due to downcutting and bank undercutting, other areas have been narrowed by the placement of armoring in an attempt to control erosion. Despite previous repairs and stabilization efforts, several areas along San Francisquito Creek exhibit slope instability.

The majority of sediment input into San Francisquito Creek is thought to come from the portion of the upper watershed below Searsville Dam, delivered by a number of natural and anthropogenic sources, including landslides, debris flows, bank erosion and failures, and urban development. The remainder of sediment input is presumed to be delivered to the Creek via storm runoff from the urbanized lower watershed. Urbanization has modified the hydrologic characteristics of the watershed. Although sediment removal activities in the watershed have not been a common occurrence for flood control purposes, it is considered to be a primary water quality issue. In the tidally influenced portion of the Creek, water quality may be affected by sediments entering the Creek from South San Francisco Bay.

The San Francisco Bay Basin Plan (San Francisco Bay Regional Water Quality Control Board 2015) describes beneficial uses for the waters in San Francisco Bay. Beneficial uses represent the services and qualities of a water body (i.e., the reasons the water body is considered valuable). Beneficial uses of San Francisquito Creek are listed below:

- Cold Freshwater Habitat (COLD); Fish Migration (MGR)
- Preservation of Rare and Endangered Species (RARE)
- Fish Spawning (SPWN)
- Warm Freshwater Habitat (WARM)
- Wildlife Habitat (WILD)
- Water Contact Recreation (REC-1)

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- Noncontact Water Recreation (REC-2)

Other federal, California and local regulatory authorities governing actions that the SFCJPA may take include regulations promulgated by US Fish and Wildlife, National Marine Fisheries Services, National Park Services, California Office of Historic Preservation, Bay Conservation and Development Commission, California Department of Fish and Wildlife as well as local plans and ordinances from our cities and counties. These requirements and others are described in environmental documentation for our projects as well as our Operations and Maintenance Manual for completed work.

Hydrology

The San Francisquito Creek watershed encompasses an area of approximately 45 square miles on the south-central San Francisco Peninsula. The upper watershed primarily rural and mountainous, whereas the lower watershed (below Interstate 280) is increasingly urbanized and located in low (near sea level) elevations. Tributaries that eventually feed into San Francisquito Creek include Bear Creek, Los Trancos Creek, Alambique Creek, Dennis Martin Creek, Sausal Creek, and Corte Madera Creek. San Francisquito Creek itself begins at the confluence of Bear and Corte Madera creeks in the upper watershed and continues to San Francisco Bay. There are three reservoirs in the San Francisquito Creek watershed, which are used for water conservation and water storage: Searsville Lake, Felt Lake, and Lake Lagunitas. All three of the reservoirs are located in the upper watershed.

The hydrology of San Francisquito Creek began to experience modifications resulting from early settlers who established the large Ranchos in the 1830s. These early ranchers likely constructed irrigation ditches to transport water and ford crossings at creeks. In 1876, former Governor Leland Stanford acquired the 8,800 acres which later became the Stanford University campus. In 1887, the Manzanita Water Company (later the Crystal Springs Water Company) constructed Searsville Dam on Stanford land. The dam, completed in 1891, was intended to supply water to Stanford University. Due to fine suspended sediment and odor, the water was non-potable and was therefore used for irrigation purposes. Today the dam is nearly filled with sediment which has created wetland habitat for waterfowl, bats, and other species.

Flood History

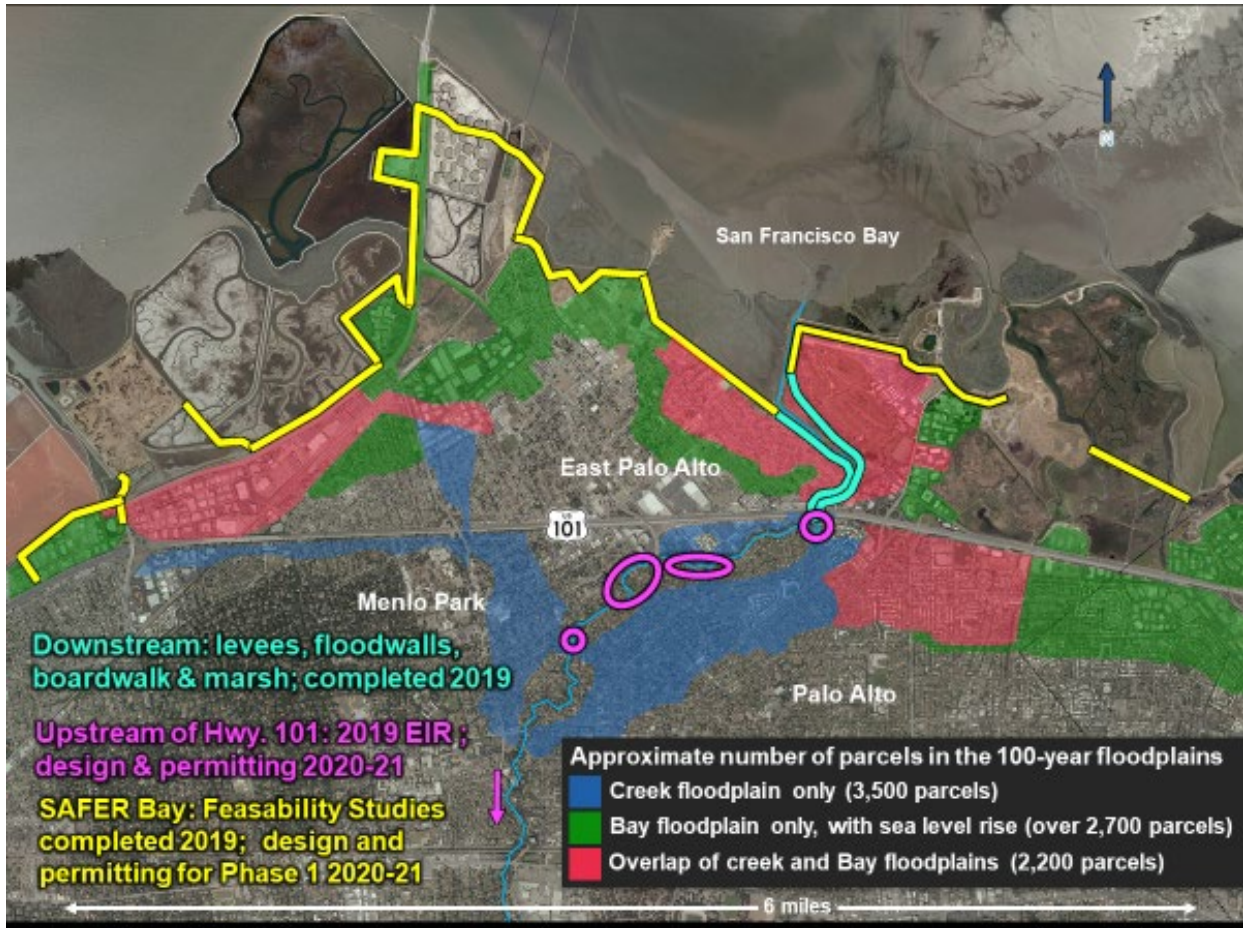
San Francisquito Creek has a history of recurring floods which have adversely impacted the safety and economic stability of the residents, businesses, and government property within the flood plain. Flooding within the watershed has been documented as far back as 1911, with significant flood events occurring in 1955, 1958, 1982, 1998, 2012, 2014 and 2017. San Francisquito Creek is “flashy”, meaning stream flow levels can rise and fall quickly. The creek is characterized by a dry bed during summer and fall, and periodic high flows or even flooding, as a result of winter rain events.

The maximum instantaneous peak flow recorded on San Francisquito Creek at the Stanford University station occurred February 3, 1998, with a peak of 7,200 cfs. After record rainfalls, San Francisquito Creek overtopped its banks and inundated over 11,000 acres of land in Palo Alto, East Palo Alto, and Menlo Park, affecting approximately 1,700 residential and commercial structures.

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Source: FEMA Flood Insurance Rate Maps 2015. Panels 0311E; 001H, 0309E, 0314E

Figure 2. FEMA Floodplain Designation for Creek and Bay with approximate parcels in each that will be addressed by SFCJPA Projects

FEMA does not prepare maps of 70-year floods, but the hydraulic model used by the SFCJPA and our partners for the watershed indicate that the area is similar to a 100-year FEMA floodplain, but that depths of inundation are less than that for a 100-year flood.

3. Integrated Planning with Watershed Partners

The SFCJPA works across jurisdictional boundaries to coordinate and collaborate with a wide range of organizations to develop and implement projects that address a large part of the watershed system that could create or be affected by flood events. The SFCJPA organizational structure has been cited as a model for local governments in planning for climate change impacts in a case study by the Bay Conservation and Development Commission (BCDC), the San Francisco Bay National Estuarine Research

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Reserve (NERR) and the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center. The SFCJPA Board is composed of elected officials from each of our member organizations.

SFCJPA Members

The five SFCJPA members have collaborated on past key documents that affect the watershed, including the following: Bank Stabilization Master Plan, Total Maximum Daily Loads to achieve water quality standards and Stormwater Resource Plans for Green Infrastructure. The SFCJPA also provides advisory role on proposed projects that are constructed along the Creek.

In addition to our collaborative work, each of our member entities has related projects that will ultimately help achieve the SFCJPA overall goal and vision. The list below is not intended to be exhaustive but rather current projects that affect the watershed or projects that are part of our comprehensive plan.

Valley Water

Valley Water has specific funding for [San Francisquito Creek](#) as part of the Safe Clean Water and Natural Flood Protection Program, a parcel tax approved by voters in Santa Clara County in 2012. As the largest contributor of SFCJPA creek project funding, Valley Water not only provided approximately \$30,000,000 for the [Reach 1](#) Downstream project construction, but also provided bid, award and construction oversight of the work. Valley water has provided the HEC-RAS stream flow modeling for our project work. Valley Water's Stream Maintenance Program covers San Francisquito Creek on the Santa Clara County side of the creek. In January 2020, Valley Water completed the [San Francisquito Creek Emergency Action Plan](#) to provide guidance on how Valley Water makes decisions during storm and flood events. It is consistent with the San Francisquito Creek Multi-Agency Coordination Operational Plan for Severe Flood events.

Valley Water also has several projects that will improve tidal flooding and address sea level rise like the Palo Alto [Flood Basin Tide Gates Project](#) which will replace the tide gates that protect homes and businesses in Palo Alto and the [San Francisco Bay Shoreline Project](#).

San Mateo County/ Flood and Sea Level Rise Resiliency District (FSLRD)

The new FSLR effective January 2020 is a key partner for SAFER Bay. In addition, the FSLRD has a mission to address flooding and sea level rise within San Mateo County. We anticipate a continued partnership with San Mateo County as a funding partner for SFCJPA as well as for shared mission area to mitigate flooding, creek maintenance activities and land easements.

East Palo Alto

East Palo Alto was a key partner for the [Reach 1](#) Downstream Project and continues with maintenance of the completed project along with Valley Water. East Palo Alto has taken the lead in



implementation with a portion of the SAFER Bay Project known as Phase 1 and has committed \$5.5 million of capital funding for construction and long-term maintenance.

Menlo Park

Menlo Park has provided strategic assistance to SFCJPA, including housing the SFCJPA for many years after formation, and continues to be a key stakeholder for our project work. The [Reach 2 Upstream](#) project will protect property and infrastructure [in Menlo Park](#). ~~and is primary reason that Menlo Park is a SFCJPA member.~~ Menlo Park is a key stakeholder in the design and implementation of SAFER Bay Phase 1.

Palo Alto

Palo Alto has been a key stakeholder for the [Reach 1 Downstream Project](#), [Reach 2 Upstream Project](#) and SAFER Bay. Palo Alto has several projects that are in the watershed, including the Newell Bridge replacement project with Caltrans, and their collaboration with Valley Water on the Flood Basin Tide Gates and the Shoreline Project. The [San Francisco Bay Shoreline Project](#) is a regional climate adaptation project [extending](#) from Palo Alto to Alviso.

SFCJPA Partners

Our partners have included the US Army Corps of Engineers, Don Edwards National Wildlife Refuge, California Department of Water Resources, San Francisco Estuary Partnership, San Francisco Bay Restoration Authority, Stanford University, PG&E, [Facebook](#), East Palo Alto Sanitary District, CalTrans, US Geological Survey (USGS), South Bay Saltponds Restoration Authority (SBSPRA), San Francisco Estuary Institute (SFEI), Association of Bay Area Governments (ABAG), the San Francisco Regional Water Quality Control Board, and many other consultants, non-profit entities and regulatory agencies.

The work of the SFCJPA relies on collaboration and coordination. We acknowledge our role in the success of others, and their roles in our success. Not all past or present partners are listed among the illustrative examples below.

U S Army Corps of Engineers

The SFCJPA has a long-standing partnership with USACE. This includes collaboration on the initial hydraulic model for San Francisquito Creek (Noble 2009) and reviewing modifications to that model. USACE has been part of a CAP 205 Study in 2003 and a GI Study 2004-2020. We are now working with USACE on a CAP 205 restart to identify key project element(s) that may result in a favorable cost benefit ratio to alleviate floods. We recognize that the ACOE CAP 205 has a single mission for flood protection and that is why we are examining project elements, such as [channel widening in Reach 2](#) ~~the Pope Chaucer Bridge replacement~~ that best fit that definition.



California Department of Water Resources (DWR)

The DWR has been a key funding partner for SFCJPA projects, particularly through the Integrated Water Resources Planning Program and Local Levee Repair programs. DWR grant funding totals more than of \$17,000,000, with more than \$14,000,000 that enabled construction of the [Reach 1](#) Downstream project, SAFER Bay Feasibility Studies and SAFER Bay Phase 1 design permitting. For the [Reach 2](#) Upstream project, DWR has awarded almost \$3 million in funding in June 2020 from Integrated Regional Water Management Proposition 1, Round 1 funding that is being managed through the San Francisco Estuary Partnership.

California Office of Emergency Services/FEMA

The Cal OES/FEMA is a funding partner for both [the Reach 2](#) Upstream project and the SAFER Bay Phase 1 in East Palo Alto and Menlo Park. For the [Reach 2](#) Upstream project OES/FEMA has committed ~~\$8M for construction, including \$5M for creek widening areas and~~ \$3M for Pope Chaucer Bridge [construction and has agreed to consider a request for additional funding.](#)

Stanford University

Stanford University is the largest landowner in the watershed and an important watershed partner with the SFCJPA. We have worked closely with Stanford and used their sediment transport model for the [Reach 2](#) Upstream project simulations. Our 2009 feasibility evaluation of potential upstream detention sites are all on Stanford land and Stanford has agreed to allow SFCJPA to evaluate this option.

The SFCJPA is supportive of Stanford's examination of options for the Searsville reservoir and consideration of the ways in which changes there will have an influence on the downstream portion of the watershed. The SFCJPA looks forward to working with Stanford University as their evaluation of options progresses.

South Bay Salt Ponds Restoration Authority (SBSPPRA)

The SBSPPRA has been a partner for the past six years on our SAFER Bay Project. We are working with the SBSPPRA Project Management Team on restoration of former salt ponds R1 and R2. This includes design options that are currently best suited for this area based on SBSPPRA adaptive management plan.

SFEI

The SFCJPA has partnered with SFEI since 2009 to develop [historical ecology](#) of the watershed and recommendations to improve flood control as part of [Flood Control 2.0](#). In 2016, SFEI assessed the condition of the [Santa Clara side of the watershed](#) using the widely accepted California Rapid Assessment Methodology.

We continue to explore our partnership with SFEI for SAFER Bay and rising groundwater.



NGO partners

The SFCJPA has relationships with several local non-profits, among them, the Watershed Council, Grassroots Ecology, Canopy, Nuestra Casa, Acterra, and The Nature Conservancy.

The Watershed Council facilitated the development of the first collaboratively created watershed vision in 2005.

Grassroot Ecology is a restoration and educational partner with regular events that benefit San Francisquito Creek, including monthly water quality citizen science, invasive plant removal, coordination of community creek clean-up events, with many restoration projects in our watershed. Their native plant nursery has supplied phytophthora-free plants for our [Reach 1](#) Downstream project and is located within the watershed in Palo Alto's Foothill Park.

The Nature Conservancy is a partner with the SFCJPA for nature-based flood protection and assessing the economic value of wetlands.

Nuestra Casa [and Climate Resilient Communities are](#) ~~is a new~~ partnerships developed in 2019 for public outreach for the SAFER Bay Phase 1 Project to specifically engage economically disadvantaged members of our communities.

Stormwater Resource and Green Infrastructure Plans

The City/County Association of Governments of San Mateo County developed a [Stormwater Resource Plan in February 2017](#) that used a watershed approach to identify and prioritize projects for implementation.

In 2019, the Santa Clara Valley Urban Runoff Pollution Prevention Program and Valley Water developed a [SWRP](#) for the Santa Clara county side of San Francisquito Creek.

The SFCJPA reviewed and provided input to each of these plans.

Each of our member cities is or has developed Green Infrastructure Plans that are consistent with the Stormwater Resources Plans. The SFCJPA believes that green infrastructure has an important role in managing stormwater runoff on a local level and encourages implementation where possible.

4. Comprehensive Flood Protection and Ecosystem Restoration Program

This section discusses SFCJPA projects and how they work together to form a suite of interrelated projects each with independent benefits, but together form a cohesive program. The following projects are components of the SFCJPA's overall plan to provide 100-year flood protection and improve habitat and ecosystems.



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[Reach 1 - San Francisco Bay to Highway 101: Downstream Project](#)

This completed [Reach 1](#) “Downstream” project was the necessary first step in our plan. The project included widening the creek channel, constructing new setback levees and flood walls, and creating in-channel marsh plain. In total, this project created more than 22 acres of new and improved marsh plain and added new trails on top of the levees that connect to the San Francisco Bay Trail and West Bayshore Road.

This project specifically incorporated consideration of three feet of sea level rise. When considering the safety factor of FEMA freeboard, the project as built protects against 100-year creek flows and up to 10 feet of sea level rise compared to today’s daily high tide. (Completed June 2019).

[Reach 2 – Highway 101 to Pope Chaucer Bridge](#) : [Upstream Project](#)

This project is designed to provide protection to people and property from a flood event similar to the 1998 event, which is considered a 70-year flood, while maintaining or improving the natural character of the banks and channel and improving in-channel habitat. The 70-year flood is the largest recorded flood since the US Geological Survey began measurements in the 1930’s.

This project will remove constrictions in the creek channel including concrete structures at [four or five locations within Reach 2, beginning at the upstream face of West Bayshore Road and continuing upstream of University Avenue.](#) ~~This~~ area around these project elements is fully developed, with Woodland Avenue ~~road~~ on the Menlo Park side and residential properties lining the opposite creek bank in Palo Alto. Most of the creek widening areas are constrained by engineering considerations, including shear stress and velocity requirements, and require updated hard armoring, while incorporating improvements to habitat. At one location in East Palo Alto, a large concrete structure will be removed, the creek bank will be regraded to a more natural configuration and planted with native riparian vegetation.

The Pope Chaucer Bridge, which is a concrete culvert, will be replaced with a new bridge and the natural creek bed will be restored. The new bridge will be as open as possible, taking into consideration constraints on the bridge design including existing homes in the area, maintaining street elevations, and ensuring safe pedestrian access. The intersections on both the Palo Alto and Menlo Park sides will be matched to the existing elevation (Construction anticipated ~~2023~~2024). The Newell Bridge replacement must be completed before the Pope Chaucer bridge work can begin.

[Reach 3 – Upstream Detention for 100-Year Flood Protection](#)

Meeting the Federal Emergency Management Agency (FEMA) requirements for 100-year flood protection, including FEMA freeboard is envisioned as an additive project that was evaluated at a programmatic level in our September 2019 Environmental Impact Report. “Freeboard” is the amount of additional protection needed to modify FEMA floodplain maps and eliminate the need for home and business owners to purchase flood insurance. Just as our [Reach 2](#) project from Highway 101 to [Pope-Chaucer Bridge](#) ~~El Camino~~ does not provide 100-year protection with FEMA freeboard by itself, the



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topography of the upper watershed does not allow for upstream detention at the scale needed to provide 100-year protection with FEMA freeboard on its own. Only a combination of the completed [Reach 1 and Reach 2 Downstream and planned Upstream](#) water conveyance and capacity improvements, coupled with upstream detention and/or other similar flow reduction or floodproofing features can achieve 100-year protection with FEMA freeboard for San Francisquito Creek.

One ongoing effort that may contribute to reducing flows downstream is Stanford University's planned modifications to Searsville Dam (which Stanford University is leading) that will allow for free flow conditions during normal weather but provide check-dam detention during large flow events. Another alternative could be constructing off-stream detention capacity that would provide similar benefits as the Searsville Dam project.

The SFCJPA Board affirmed their commitment to this project and has dedicated funding to evaluate it. The SFCJPA is working closely with Stanford for access to and information about the area to adequately evaluate potential options on Stanford lands. Data collection for a project level evaluation of potential alternatives that ~~may can~~ achieve 100-year flood protection with FEMA freeboard [has been initiated. Results are anticipated in early 2022.](#) ~~is planned to be initiated early 2021.~~

[Tidal flood protection and marsh restoration- Strategy to Advance Flood Protection and Ecosystem Restoration along San Francisco Bay \(SAFER Bay Project\)](#)

The [Strategy to Advance Flood protection, Ecosystem restoration and Recreation Project \(SAFER Bay\)](#) addresses tidal flood protection [and projected sea level rise](#) by [protecting critical infrastructure using natural and manmade improving or rebuilding](#) flood protection features along San Francisco Bay within SFCJPA jurisdiction. Public Draft Feasibility reports were issued in 2016 for East Palo Alto and Menlo Park, and in 2019 for Palo Alto. This project is intended to close the protection gap in the tidally influenced areas outside of our completed [Reach 1](#) project from San Francisco Bay to Highway 101 described above.

We are currently moving forward with a portion of this project in East Palo Alto and Menlo Park for a project known as SAFER Bay Phase 1. We are coordinating with permitting agencies, are working on a conceptual design, project description, and communicating with stakeholders. [The SFCJPA plans to release a Notice of Preparation for environmental documentation in the fall of 2021.](#) The SFCJPA is partnering with the South Bay Salt Ponds Restoration Authority to restore Ponds R1 and R2 as part of this project to achieve a resilient "South Bay Sponge" to address sea level rise.

Our completed [Reach 1](#) Downstream project provides protection against flooding from San Francisquito Creek, but the SFCJPA cannot request a letter of map revision from FEMA because much of the area is also in the FEMA tidal floodplain from San Francisco Bay. The SFCJPA's ultimate goal is to remove properties from the FEMA floodplain, and the associated requirement for flood insurance. SAFER Bay Phase 1 will build new levees and other flood control structures along the Bay in East Palo

[Review Draft June November 19, 2020](#)



Alto and Menlo Park over the next few years and when these planned improvements are built, the area will be protected from both creek and tidal flood [risk threats](#), and can then be removed from the FEMA flood maps. The SFCJPA will submit a request for map revision to FEMA after tidal flood risks are mitigated by SAFER Bay Phase 1.

~~We plan to submit a Notice of Preparation for environmental documentation in early 2021.~~ This project incorporates the same protection criteria as the completed [Reach 1](#) Downstream project from San Francisco Bay to Highway 101.

5. Stewardship

This section addresses long term actions, including monitoring and maintenance of implemented work. The SFCJPA facilitates an annual maintenance walk with member agencies, Stanford and Grassroots Ecology. The walk identifies key maintenance actions required prior to the rainy season and assigns responsibilities for action to each member entity. The annual maintenance walk also identifies areas for annual creek cleanup by community volunteers.

All of the SFCJPA's projects provide for watershed stewardship, for both short and long term. In the short term, up to 10 years after project completion, monitoring and assessment is performed for the project's components and overall health of the watershed in the project area as part of the Mitigation and Monitoring Plan. In the long term, the project's Operation and Maintenance manual specifies annual assessments of project performance and five-year plans to evaluate the project's effect on the watershed. These Operation and Maintenance manuals form the basis for long term stewardship in the Watershed.

The SFCJPA has or will delegate maintenance actions to member agencies where a project is located. For example, Valley Water and the City of East Palo Alto are the leads for long term operations and maintenance for our Reach 1 project between S.F. Bay and Highway 101.

6. Stakeholder Engagement

Ensuring the SFCJPA has the community's trust and confidence is essential to maintaining the SFCJPA's ability to execute projects. The SFCJPA's primary responsibility is to implement flood risk mitigation projects. These must also integrate as many co-benefits as possible – such as ecosystem restoration and recreation opportunities - into project design and construction.

The goals of community and stakeholder engagement are to:



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- Promote awareness of the SFCJPA, its purpose, roles, responsibilities and priorities, and its multi-benefit creek or bay shoreline flood mitigation projects by informing community members and stakeholders.
- Engage community members and stakeholders for the purposes of understanding community and stakeholder priorities and to refine and improve project design and implementation based on community and stakeholder input.
- Support community members and stakeholder involvement in the public engagement processes.

(Center for Economic and Community Development, Engagement Toolbox, at <https://aese.psu.edu/research/centers/cecd/engagement-toolbox/>).

Tools and Approaches

Electronic communications will be used to support community and stakeholder engagement. There are various tools and options for the purpose, some are more suitable to the SFCJPA than others.

Website - Our website at www.sfcjpa.org is the SFCJPA's main platform for sharing important information, projects, events and activities of the SFCJPA and its members or regional partners. The website hosts organizational documents, board meeting records, key project documents and schedule of meetings and events. The website also features [links to our Flood Early Warning System](#), and [Palo Alto's](#) real-time stream level monitor. This is an important community asset for [Emergency Operations personnel and for](#) winter flood response preparedness.

Newsletters – ~~A newsletter, should the SFCJPA~~ [has implemented a quarterly electronic newsletter. The newsletter provides timely information about SFCJPA projects, community creek or shoreline related issues, upcoming events, and meetings. choose to implement one, can be an effective way to keep community members and stakeholders informed about the SFCJPA's activities. Future newsletters may be published on our website, as well as emailed to those who request. Special announcements, \[such as those for community project updates, have also been\]\(#\) ~~may also be~~ sent out via email specific distribution lists to ensure community members and stakeholders are aware of critical information.](#)

Social Media – Various social media tools can be useful for reaching community members and stakeholders. However, maintaining social media accounts requires regular updates and dedicated staff with time for one-on-one engagement. With our small staff, and other mechanisms for outreach, our presence on these social media platforms is currently a low priority. The SFCJPA may choose to selectively use NextDoor, as it can be an effective platform for reaching local residents about specific events or issues.

Print and Traditional Media – The SFCJPA will maintain connections with local media outlets and keep them informed through media alerts when appropriate.



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SFCJPA Meetings & events - Regular in-Person meetings are an exceptional way to engage community members and stakeholders. However, for as long as the COVID-19 pandemic is a consideration, any in-person meetings must be carefully limited. In the future, in-person meetings may will be utilized for project updates, tours for interested stakeholders, various working groups and committees, and other special events alone, or in combination with web-based meetings.

SFCJPA presentations to City Councils, Boards of Supervisors or their various committees and Commissions - SFCJPA Board members, Executive Director, and staff may make formal or informal presentations to the elected bodies of its member agencies, or their appointed commissions, as part of project approvals, or to provide less formal project or organizational updates.

Informal in-person, "office hours", or other local meetings – SFCJPA Board members and/or the Executive Director may set up informal opportunities for community members to visit and discuss creek or bay margin projects in an unscripted and informal setting. These settings may only reach a few community members at a time, but provide a relaxed setting, convenient to community members

Board meetings – In addition to being the primary vehicle by which the SFCJPA Board conducts business, regular board meetings provide an opportunity to hear from community members and to share information about SFCJPA operations and projects with stakeholders.

Study sessions – These non-action item board meetings are an opportunity to explore topics of relevance to the SFCJPA. Study sessions often feature both in-house and outside experts presenting information. Study sessions provide community members and stakeholders the opportunity to hear the same information as the board, and to ask questions of the presenters. Study sessions conducted in person are typically hosted in a seminar format, with presentations, question and answer sessions and perhaps break-out groups for discussion and reporting back to all attendees.

Webinars – Webinars or video and audio presentations, with a Q&A component, can be recorded and archived on the SFCJPA's website for future reference. Brief webinars, focusing on one topic, can be coordinated, promoted via newsletters, email distributions or social media or NextDoor posts, with moderate staff time and effort. Staff may choose to conduct the presentations themselves or find experts to make presentations. In the future, webinars may be helpful for informing and engaging community members on a variety of topics, including stream stewardship, the natural history of the San Francisquito Creek, or the potential impacts of sea level rise.

Project Update Community meetings – Meetings and presentations specific to project updates are an important mechanism for informing community members and stakeholders who have a direct interest in the activities associated with a project, or phase of a project. In situations where project neighbors may be negatively impacted by project activities, informing community members of what to expect, what actions the SFCJPA and its contractors are taking to mitigate or minimize negative impacts, and who to contact with questions or concerns, can go a long way in alleviating community member's concerns or mistrust over project activities. One possible element of Project Update Community meetings may



include project walk-arounds and tours of project elements, providing community members and stakeholders an opportunity to see the project in context.

One-on-One calls or meetings – Personal outreach to community members and stakeholders may be time-intensive but is an essential tool for building understanding between SFCJPA staff and community members and stakeholders.

Tours – As part of project updates, or as stand-alone activities, tours for community members and stakeholders provide an opportunity for staff to explain our projects in the context of the natural and human ecology of the San Francisquito Creek and the Bay margin.

Other meetings

CEO & City Manager’s Meetings – These regular meetings, held approximately every two months, enable the SFCJPA to brief member agency staff leadership on the status of the SFCJPA’s work, including legal issues, project activities, project funding, project regulatory permitting, etc.

San Francisquito Creek Multi-Agency Coordination for Emergency Planning/Public Safety (MAC) – A MAC group and associated operations plan was formed in 2015 to facilitate a common flood and severe weather response for San Francisquito Creek that historically has impacted each member. The SFCJPA supports the MAC, which was composed of the following stakeholders in 2019; but other members may be added as indicated:

- City of East Palo Alto
- City of Menlo Park
- City of Palo Alto
- County of San Mateo
- County of Santa Clara
- Menlo Park Fire Protection District
- Valley Water
- SFCJPA
- Stanford University
- CalFire

The MAC Operations Plan is developed and maintained by the Palo Alto Office of Emergency Services (OES), as the chair of the MAC group. The plan describes coordination between member agency emergency operations staff and typically includes an annual briefing and table-top exercise to test the concepts and mobilization activities, as well as an After-Action Review of the Plan with stakeholders.

Engaging volunteers and building educational partnerships – The SFCJPA has a long history of supporting volunteer activities, including educational, fraternal, community and other outreach activities. We have supported educational research projects related to the Creek, promoted creek advocacy, and support many community events such as Bay Day, Earth Day, and Coastal Cleanup.

Volunteer opportunities have included:

- Tabling events and coordinating or presenting webinars



- Providing content for newsletters, blogs, and photographs or featuring the Creek or Bay margin on the SFCJPA website and/or in newsletters
- Promoting and coordinating community tours of various aspects of the creek and bay margin

The SFCJPA has supported high school and college internships in the past. Interns are an option when funding can be secured to support paid, short-term, focused engagements. The SFCJPA has supported educational partnerships with local schools, colleges and universities as requested.

In the future, we may expand our presence in the community through additional coordination of volunteer support, as the Creek provides a rich opportunity for local community members, learners, and educators.

7. Advocacy

As a government agency, there are limitations on advocacy. The agency may advocate for its interests before local, State and federal legislatures, but is limited in its scope to advocate to community members and stakeholders. Education takes the place of advocacy in all communications to community members and stakeholders. There are also targeted educational opportunities including community events described above as part of SFCJPA outreach activities. In addition, the SFCJPA routinely coordinates with staff of local, State, and federal elected representatives to brief them on SFCJPA projects, progress, and issues. Elected representatives can play a key role in the success of SFCJPA projects, so ensuring their staff is well-informed is an important investment of the Executive Director and SFCJPA Board members.

Education – All elements of the community and stakeholder engagement can be described as education. ~~With regard to~~ Regarding building support for the long-term success of the SFCJPA, certain ideas or messages are important to instill. For example: acknowledging the importance of Valley Water’s Safe Clean Water and Natural Flood Protection Program that is a large funding mechanism for SFCJPA projects, and the proposed renewal of this parcel tax measure on the November 2020 ballot, highlighting the importance of stream-side property owner stream stewardship, and elevating the importance of long-term funding for urban stream and bay margin flood mitigation and resilience projects.

To convey these messages, and any other timely priorities, SFCJPA Board and Executive Director may engage local elected representatives, regularly brief member City Councils and our County Supervisors (ideally twice a year) and inform local candidates about SFCJPA projects.

Advocacy – The Executive Director and SFCJPA Board may engage in advocacy before local, State, and federal legislative bodies on issues of importance to the SFCJPA.



Advocacy may take the form of support letters, participating in advocacy coalitions, meeting with individual policymakers to make the SFCJPA's case, or providing written or verbal testimony to committees or other bodies of elected or appointed officials.

In the future, the Board, and staff of the SFCJPA might choose to identify a specific set of policy issues and positions to facilitate advocacy engagement.

Access to funding and funding sources will likely be a relevant issue for the life of the SFCJPA. For example, there may be Statewide Climate Resiliency Bond measure issued in the future. This, and similar bond measures that provide flood risk mitigation, environmental restoration and stewardship are issues the SFCJPA should strongly support and be engaged in.

8. Funding

The SFCJPA has two funded components: operations and projects. Operations are funded through annual contributions from its five constituent members. Projects have been funded through a combination of funding from Valley Water's Safe Clean Water and Natural Flood Protection Program assessment revenues, additional contributions from member agencies, grant funding from the Department of Water Resources, State Water Resources Control Board, the Army Corps of Engineers and other sources non-profits. The In-late-2020, the SFCJPA will be developing a funding roadmap for the Reach 2 Upstream project. This roadmap will consider a broad range of funding options, including and will prioritize near and long-term funding strategies, which will include some or all of the options described below.

The Protecting the Bay Working Group has chosen to focus on the SFCJPA's SAFER Bay project for its assessment of the flood risk reduction benefits of salt marshes, and subsequent development of climate finance mechanisms. This working group consists of local stakeholders (San Mateo County Supervisor Dave Pine, Flood and Sea Level Rise Resiliency District, San Francisco Estuary Institute) and others focused on flood risk mitigation and natural infrastructure statewide (California Department of Insurance, California State Coastal Conservancy) and globally (TNC, Swiss RE).

Operations funding – The SFCJPA's operations funding comes from member contributions. Annual budgets are provided to the Board for consideration. Approved budget amounts are divided evenly among the five member agencies. These contributions pay for all shared costs: salaries, benefits, office and operations, etc.

Sponsorships are one possible additional operational funding source. These are gifts given directly to the SFCJPA to support specific operational purposes or activities. Typically, sponsorships are sought from private or corporate donors, who believe the purpose of the donation also helps them in some way. Such donations may be tax deductible charitable contributions for private or corporate donors.



Sponsorships might support elements of the SFCJPA's operations, such as paying an internship stipend, covering the costs to host a special event, or for the creation of a publication. Sponsorships might also be sought for ongoing ecosystem stewardship, recreational facilities and their maintenance. These activities are associated with projects but are themselves not capital projects.

Project Funding - The SFCJPA will continue to seek local and state contributions while also evaluating new funding opportunities.

Potential future funding mechanisms for projects include expansions of existing mechanisms, such as state agency grants funded through revenue bonds. Future revenue bonds may include a Statewide Climate Resiliency Bond measure, which may be on the ballot in the next couple of years. This, and similar bond measures that provide flood risk mitigation, environmental restoration and stewardship are issues the SFCJPA should strongly support and be engaged in.

Member contributions – the SFCJPA's members may choose to contribute funding or to provide collateral for low interest rate loans for project construction.

Philanthropy/Capital Campaign – Non-profit organizations such as museums, zoos or charitable organizations sometimes fund large investments in capital facilities through capital campaigns. These are well-organized, targeted fund-raising campaigns, seeking donations to fund large capital projects. While it may be unusual for a local government agency to conduct a capital campaign to fund projects such as creek channel modifications, flood detention basins, or bay margin levees, it is an option to consider.

General Parcel Taxes – This mechanism is what funds the SCW program implemented by Valley Water. This provides a predictable, long-term revenue stream, which Valley Water apportions based on number of parcels and flood risk mitigation project needs. In November 2020, Santa Clara County voters will have an opportunity to vote on updates to and the extension of the SCW program. Whether or not the outcome of this ballot measure is successful will have a significant impact on funding for the San Francisquito Creek flood mitigation and restoration projects.

Parcel taxes may be assessed by a JPA, including the SFCJPA. According to California law, these parcel tax assessments must be approved by a vote of two thirds.

Community Facility or Benefit Assessment District – Community Facilities Districts, or Benefit Assessment Districts can be established by local governments as a means of obtaining additional public funding to pay for public works and some public services. Assessment Districts are a "property tax" mechanism and are established for a specific geographical area receiving a special benefit from specified public improvements and services. This approach may be an effective mechanism for raising revenues from property owners impacted by creek flooding and sea level rise.



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Glossary

This glossary is intended to assist the reader with words that they may not be familiar with, especially as they relate to San Francisquito Creek.

Alluvial fan- a triangle-shaped deposit of gravel, sand, and smaller pieces of sediment, such as silt. These unconsolidated deposits, or alluvium, are left by flowing streams. Alluvial fans are typically thicker close to streams and thinner at the outer edges.

Groundwater in the alluvial fan formed by San Francisquito Creek forms a productive aquifer known as the San Francisquito Creek Cone (named for the general cone shape).

Anadromous- is the term that describes fish born in freshwater who spend most of their lives in saltwater and return to freshwater to spawn, such as salmon and some species of sturgeon.

Beneficial Uses- As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

The beneficial use category is related the California's water quality protection goals. For water with multiple beneficial uses, the beneficial use with the higher level of protection is used.

cfs - cubic feet per second, a measure of flow velocity

Engineered stream bed material- (ESM) this is a mix of boulders, cobbles and pebbles used to stabilize creek bottoms and banks. The mix is site-specific and depends on stream hydraulics and design criteria. The rocks are strategically emplaced to minimize scour, largest to smallest, tamped into place, and then covered with sand to minimize movement within design parameters.

ESM looks and functions much like a natural stream bed and has already been used in San Francisquito Creek in the Bonde Wier removal project that was completed in 2013. The SFCJPA prefers the use of ESM where possible over rock slope protection that uses uniform sized cobbles.

FEMA- Federal Emergency Management Agency, a federal agency that prepares for and responds to disasters. In 2003, FEMA became part of the Department of Homeland Security.

Freeboard- term used by the Federal Emergency Management Agency's National Flood Insurance Program to describe a factor of safety, usually expressed in feet above the 1-percent-annual-chance flood level.

Flashy- Stream that rapidly collects flows from the steep slopes of its catchment (watershed) and produces flood peaks soon after the rain that subside rather quickly after the cessation of rainfall. San Francisquito Creek is considered to be a flashy creek.



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Groundwater - Water held underground in the soil or in pores and crevices in rock. that collects or flows beneath the Earth's surface, filling the porous spaces in soil, sediment, and rocks. Groundwater originates from rain and from melting snow and ice and is the source of water for aquifers, springs, and wells.

Overbank- Flows that exceed top of channel margins. Flood flows

Perched Creek- A stream with a bottom that is above that of the groundwater table and thus is separated from underlying groundwater. This condition can vary seasonally and annually depending on the amount of precipitation, as well as in different sections of the same streambed. Another term for this is a losing stream because it can recharge ground water unless there is a confining layer that inhibits percolation. A gaining stream is a stream bottom that is below the top of the groundwater table and is thus directly hydraulically connected with groundwater.

Refugia- A natural or constructed feature that provides a resting area for animals. The San Francisquito Creek constructed five high tide refugia islands for salt marsh harvest mice and California Ridgeway's Rail to adapt to rising tides. We also installed rootwads and rock berms that provide habitat and refuge for fish in the creek. Our [Reach 2 U](#)ppstream project has incorporated similar features and includes pools and riffles for fish.

Riparian- Riparian areas are lands that occur along watercourses and water bodies. Typical examples include flood plains and streambanks. They are distinctly different from surrounding lands because of unique soil and vegetation characteristics that are strongly influenced by the presence of water. A riparian area or zone is illustrated below:

Major components of a stream or water body riparian area—Riparian areas can be symmetrical or asymmetrical in shape. The topography and hydrogeology determine the plant and animal communities associated with the width or meandering riparian area configurations.

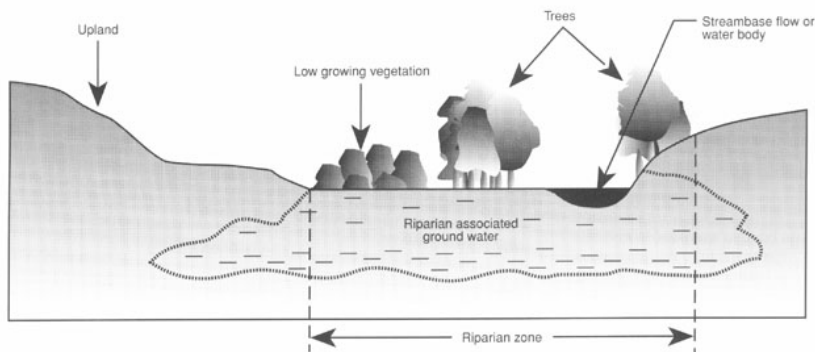


Image source: USDA, NRCS



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Scour- Net removal of sediment from stream by action of water flow. Scour may be measured in volume of sediment removed from a channel reach, in average depth of sediment removal from an area, in average change of depth at a cross section, or in change of depth at a point.

Streambed scour is the mobilization/fluctuations in the vertical position of the bed of a stream as material is eroded and degrades. Some degree of streambed fluctuation is natural process; however, urban development and floodplain encroachment have resulted in excessive channel incision or bed lowering during larger flow events in San Francisquito Creek.

Salmonoid spawning success requires that deep scour of the bed does not occur during the time the eggs are incubating in gravel deposits.

Sediment- A collective term for rock and mineral particles that 1) are being transported by a fluid (sediment in transport, suspension, or motion) caused by the fluid motion or 2) have been deposited by the fluid (i.e., sediment deposits).

Sheet Pile- Sheet piles are three dimensional vertical sections, most commonly made of steel, that interlock to form a continuous wall that can hold back soil and/or water. The term sheet piling refers to any retaining wall type that is a) installed into the ground by driving or pushing, rather than pouring or injection.

Stage- The level of the water surface in a stream, river, or reservoir, measured with reference to some datum.

Stream Bank- The sloping margin of a stream or river that confines flow to the natural channel during normal stages.

Toe of Bank- The "toe" lies at the bottom of the creek side slopes or banks and supports the weight of the bank. The toe is the area that is most susceptible to erosion because it is located in between the ordinary water level and the low water level, and it is the area most affected by currents and/or storm flows.

Top of Bank- The point along the bank of a stream where an abrupt change in slope is evident, and where the stream is generally able to overflow the banks and enter the adjacent floodplain during an annual flood event. Determination of the top of bank is site specific and vary along a bank. This determination may require a survey but is important to creek protection policies and buffers.

Total Maximum Daily Load (TMDL): An evaluation of the condition of an impaired surface water on the Section 303(d) List that establishes limitations on the amount of pollution that water can be exposed to without adversely affecting its beneficial uses, and allocating proportions of the total limitation among dischargers to the impaired surface water.

Tidal/Tidal Influence- areas that are subject to the ebb and flow of tides. San Francisquito Creek is tidal in Reach 1 from San Francisco Bay to Highway 101.



Undergrounding- utility lines or piping that is moved from above ground to below ground.

Waters of the State- Defined more broadly than “waters of the United States and includes “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code section 13050(e)). The definition is broadly interpreted to include all waters within the state’s boundaries, whether private or public, including waters in both natural and artificial channels. California includes riparian area of creeks, from Top of Bank to Top of Bank, rather than mean high water as interpreted federally. This broader application stems from the Porter-Cologne Act that expands the aerial extent of the Water Quality Control Boards’ authority as waters of the State. The Porter-Cologne Act also requires the Water Board to address both indirect and direct impacts of activities (including downstream impacts), as well as possible future impacts that can result in the degradation of water quality.

Waters of the United States - Very generally refers to surface waters, as defined by the federal Environmental Protection Agency in 40 C.F.R. § 122.2. In 2020, waters of the U.S. were defined to expressly to include the following:

- Territorial seas, and waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;
- Tributaries;
- Lakes and ponds, and impoundments of jurisdictional waters; and
- Adjacent wetlands.

The 2020 rule also has specific exclusions from waters of the U.S., including:

- Groundwater
- Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse stormwater run-off and directional sheet flow over upland;
- Ditches that are not “waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;”
- Tributaries; and non-ephemeral wetlands that are adjacent to waters of the United States;
- Prior converted cropland; artificially irrigated areas,
- Artificial lakes and ponds, or water filled depressions from mining or construction
- Stormwater and control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff;
- Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters; and
- Waste treatment systems.