SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY

Notice of Regular Meeting of the Board of Directors

Thursday, October 28, 2021

3:30 P.M.

Due to the risk of COVID-19 transmission, this meeting will be held remotely via video/teleconference pursuant to Government Code Section 54953(e) (Assembly Bill 361). Members of the public may observe or participate in this meeting by joining the meeting online through the Zoom link provided below or by joining the meeting with a telephone by dialing the Zoom teleconference number provided below.

You may provide public comment during the meeting: (1) by using the chat function and typing your question or comment, (2) if you are joining online, by selecting the raise your hand function and speaking when called upon, or (3) if you are joining by phone, by pressing *6 to unmute yourself and requesting permission to speak. If you experience technical problems with the Zoom meeting, please contact the Clerk of the Board at the phone number or email listed at the bottom of this Agenda.

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.

Join Zoom Meeting

https://us02web.zoom.us/j/81979152421?pwd=SFV5QkpLUFQ4czBaQkdmL0p3amhNUT09

Meeting ID: 819 7915 2421

Passcode: 803310

Dial In: (669) 900-6833,,81979152421#,,,,*803310#

Agenda

1. CALL TO ORDER AND ROLL CALL
2. APPROVAL OF AGENDA: Changes or additions to the agenda.
3. APPROVAL OF MEETING MINUTES: September 23, 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

6. ACTION ITEMS

   A. Consider resolution authorizing public meetings to be held via teleconferencing pursuant to Government Code Section 54953(e) and making findings and determinations regarding the same.

   B. Consider resolution to approve contract with H.T. Harvey to conduct Maintenance, Monitoring and Reporting in compliance with Reach 1 permit conditions.

   C. Consider acceptance of the 2021-2022 Comprehensive Plan Update.

   D. Review and approve Personnel committee's proposed process for Executive Director review, which will be integrated into the Board and Employee handbooks.

7. BOARD STUDY SESSION – Discussion of Potential Reach 2 Funding Framework

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

9. 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 October 25, 2021 at sfcjpa.org -- click on the "Meetings" tab near the top.

SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY

October 28, 2021

SFCJPA Regular Board Meeting & Study Session

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: September 23, 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 5 – Information Items

5.A. Executive Director's Report

Reach 1 – Downstream Project

Commemorative plaques and benches - aiming to complete by end of the year.

Monitoring Maintenance and Reporting Contract – item 6.B. on your agenda.

Reach 2 – Upstream Project

Ongoing: design evaluations, due diligence on design options.

Cultural Resources Survey, complete.

LEDPA submittal planned for November.

The USACE CAP 205 NEPA Scoping Meeting held on October 25.

SFCJPA portion of outreach to Palo Alto property owners for the purposes of easement evaluations complete. (Although community outreach will be ongoing)

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

Developing concept design.

A Feasibility Technical Memorandum anticipated by end of the calendar year.

SAFER Bay Project

NOP release anticipated before year-end (pending receipt of DWR funds).

Measure AA grant submitted.

Sub-applicant to MTC/BARC SB1 Sustainable Transportation grant.

Administration/Operations -

Celebrating Miyko Harris-Parker’s16th year of service to the SFCJPA!

Agenda Item 6 - ACTION ITEMS

6.A. Resolution

Consider Resolution Authorizing public meetings to be held via teleconferencing pursuant to Gov’t Code Section 54953(e).

Agenda Item 6 - ACTION ITEMS

6.B. Monitoring, Maintenance & Reporting contract

Consider Resolution Approving Consultant Services Agreement for Mitigation Monitoring and Reporting with HT Harvey and Associates and Authorizing Executive Director to Execute and Deliver the Agreement

Agenda Item 6 - ACTION ITEMS

6.C. - Comprehensive Plan

The 2021 edition of the SFCJPA Comprehensive Plan is presented here for the Board's review and approval.

Thanks to all who provided input.

Agenda Item 6 - ACTION ITEMS

6.D. – Proposed Executive Director Annual Review Process

Aligns with the SFCJPA's budget process. Provides for committee and board input. Establishes a regular schedule and template.

Agenda Item 7 – Study Session

Reach 2 Funding Framework

Agenda Item 8

BOARD MEMBER COMMENTS and ANNOUNCEMENTS

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

Agenda Item 9

Adjournment

Thank you, everyone.

SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY

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Director Abrica called the meeting to order at 3:36 p.m. via streaming video and teleconference call. Public input was solicited on each item and all public comments received are noted herein.

DRAFT

1) **ROLL CALL**

Members Present:	Director Abrica, City of East Palo Alto Director Drew Combs, City of Menlo Park Director Gary Kremen, Santa Clara Valley Water District (Valley Water) Not present at roll call Director Dave Pine, San Mateo County Flood & Sea Level Rise Resiliency District
Members Absent:	Director Pat Burt, City of Palo Alto
JPA Staff Present:	Margaret Bruce, Executive Director Kevin Murray, Staff Tess Byler, Staff Miyko Harris-Parker, Staff
Legal Present:	Trisha Ortiz

2) **APPROVAL OF AGENDA**

ACTION: Motion and second (Combs/Pine) to approve the agenda passed unanimously 3-0.

Roll call vote:
Director Abrica Aye
Director Combs Aye
Director Pine Aye

Director Kremen not present at time of vote. Director Burt not present.

3) **APPROVAL July 22, 2021, REGULAR BOARD MEETING MINUTES**

ACTION: Motion and second (Pine/Combs) to approve the July 22, 2021, Regular Board meeting minutes passed unanimously 3-0.

Roll call vote:
Director Abrica Aye
Director Combs Aye
Director Pine Aye

Director Kremen not present at time of vote. Director Burt not present.

4) **PUBLIC COMMENT**

Jerry Hearn, Portola Valley Resident, commented on the success of Coastal Cleanup Day. Mr. Hearn stated that the areas of Cooley Landing and San Francisquito Creek were both well attended with over one hundred people in attendance at each location.

Director Kremen arrived at 3:38 pm.

5) **STUDY SESSION – Shoreline projects, SFCJPA and partner organization roles and responsibilities**

Presentations were given by Ms. Bruce, Rechelle Blank of Valley water and Len Materman of One Shoreline.

Mark Dinan, East Palo resident, shared his excitement that the new levee will replace the old dirt berm.

Director Pine questioned if it is most immanent to complete the East Palo Alto portion of the project before the other project areas are completed. Ms. Bruce responded saying that in terms of construction she believes the most immanent part of the project is construction of the East Palo Alto Levees. Ms. Bruce explained that before that determination is made the NOP and the CEQA process must first happen for the pragmatic level and the project level.

Mr. Dinan commented on the importance of public outreach to residents as the project will have major impacts to the community. Mr. Dinan asked if there is guidance regarding the timing of the project and where people can send their questions regarding the project status. Ms. Bruce stated that construction is at least three years out and that there will be opportunity for the public to comment and participate in public meetings regarding the project.

Mr. Hearn asked Ms. Bruce to speak about the pollution efforts. Ms. Bruce stated that capping contaminated soils cannot be done by the SFCJPA and that property owners are responsible. Ms. Bruce stated that these efforts need to be completed before the completion of the project.

Mr. Dinan asked if it is feasible to build a conduit for the powerlines in the levee. Ms. Bruce stated that staff will follow up with PG&E.

Director Abrica expressed his appreciation to the presenters, staff, Board, and members of the public for participating in the study session. Director Abrica invited staff from the member agencies to reach out to the SFCJPA and provide any information that they believe the SFCJPA should be aware of regarding the project.

Ms. Bruce asked if there would be an opportunity for One Shoreline to work with the Army Corps. Ms. Blank commented that Valley Water has worked with the Army Corps and that it can be challenging. Mr. Materman stated that One Shoreline is not pursing a relationship with the Army Corps at this time.

Mr. Materman commented on the many projects being planned on and that they are complicated and are all related. Mr. Materman expressed the importance that every agency continues to coordinate and stay diligent with working together on planning and progress updates.

Director Combs left at 4:40 pm.

6) **INFORMATION ITEMS**

Executive Director's Report

Ms. Bruce provided a summary of the Executive Director's.

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7) CONSENT AGENDA

Consider approval of the CALPERS SSI Section 218 Resolution
ACTION: Motion and second (Pine/Combs) to approve the consent agenda which: CALPERS SSI Section 218 Resolution passed unanimously 3-0.

Roll call vote:
Director Abrica Aye
Director Kremen Aye
Director Pine Aye

Director Combs not present at time of vote. Director Burt not present.

Director Kremen left at 4:48 pm.

8) ACTION ITEMS

Consider Resolution Approving Consultant Services Agreement for Mitigation Monitoring and Reporting with HT Harvey and Associates and Authorizing Executive Director to Execute and Deliver the Agreement
Item carried to next agenda due to lack of quorum.

Consider Resolution to Accept Comprehensive Plan 2021 Update
Item carried to next agenda due to lack of quorum.

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

None.

10) ADJOURNMENT

Adjourned at 4:48 pm.
Minutes drafted by Clerk of the Board: Miyko Harris-Parker.

Executive Director's Report, October 28, 2021

Project Updates

Reach 2 Project -

Easement Acquisition -

Outreach has continued to property owners from whom we may or will need additional construction easements to install the currently proposed widening elements. Certified letters were mailed at the beginning of the month, formally requesting access to perform site evaluations. Responding to requests from some of these homeowners, we performed additional hydraulic analyses to see if we could reduce impacts to their properties. Shifting project features would affect our areas of impact and resulting mitigation requirements, so performing this additional analysis has caused a minor pause in the development of our permit applications. From this point forward, Valley Water will take the lead on easement acquisition from homeowners in Palo Alto. Easement needs in East Palo Alto and Menlo Park are limited to public lands and private properties with existing flood control easements. Agreements with San Mateo County and the SMC Flood and Sea Level Rise Resiliency District will be developed to enable construction on the existing easements.

USACE CAP 205 Project/Coordination -

A virtual NEPA scoping meeting and community project update is planned for Monday, October 25 from 6:00 pm to 7:30 pm. This public meeting is being held to provide both an update on the overall project (including the joint CAP 205 Study) and to solicit input from the community. This meeting will serve as early scoping in accordance with NEPA before USACE prepares a NEPA document for the CAP 205 Study. A meeting invitation was sent separately, but we would like to notify you here as well. Please RSVP at RSVP@sfcjpa.org. A link to the virtual meeting (via Zoom) will be sent to each RSVP. Postcards were mailed, and we will use our email list to reach stakeholders and community members.

Tribal/Cultural

A cultural resource investigation was completed September 16 and 17, 2021 in accordance with the August 5, 2021, Tribal Cultural and Archaeological Testing Plan (TCATP) for the Reach 2 Project. The TCATP was based on recommendations by Far Western Anthropological Research Group and was conducted by ESA Inc. archaeologists, with oversight from a tribal representative. The investigation did not reveal any evidence of remaining cultural resources or archaeological deposits below certain areas in Reach 2. However, this does not conclude the absence of significant cultural resources.

Additional tribal outreach was made based on an updated Native American Heritage Commission list and the October 5, 2021, draft TCATP investigation report, which is confidential, was shared with tribal representatives on October 15, 2021.

Summary of Reach 2 Project Elements and Status

Reach 2 Elements	Design	Permitting	Rights of Way	Utility Relocations	Construction Funding
Status	50% - 90%	Work is underway on potential optimization of widening sites to minimize impacts to trees, creek channel and property owners	Coordination ongoing between SFCJPA and Valley Water re. rights of way process, roles and responsibilities.	Utility mapping underway. PG&E has assigned PM for coordination	Construction funding gaps table is current.
This Month's Update	The SFCJPA evaluated several new alternatives to determine if it is possible to further reduce impacts to creek channel and trees as part of LEDPA analysis. The results indicate that the proposed project is the LEDPA. The Army Corps of Engineers will evaluate options for creating creek capacity.	Impacts calculations completed. Draft 401 materials to be submitted November 2021. Site 5 may not be constructed as part of the Reach 2 project but will be included in permit applications in case it is needed for FEMA considerations.	Our portion of the outreach and communication with Reach 2 project neighbors in Palo Alto from whom easements may be needed is complete. Valley Water's team will take it from here. (We may continue to participate in a supporting role) Monthly working group with technical staff from each JPA member agency continue. Notice of Determination to appraise property owned by San	Additional funding from FEMA is being sought	An updated Benefit Cost Analysis (BCA) to enable additional FEMA funding for Pope-Chaucer Bridge construction has been completed

Reach 2 Elements	Design	Permitting	Rights of Way	Utility Relocations	Construction Funding
			Mateo County for Reach 2 easement to be brought to Board in December.		
For Next Month (November)	CAP 205 hydraulic modeling to support design development to be completed. Corps to test performance of JPA alternative against other alternatives.	Draft 401 and 404 packages to be completed and ready for submission. Formal consultation with USFWS and NMFS to begin in November or December.	Outreach to all Reach 2 property owners has been concluded to the point we have handed off the process to our colleagues at Valley Water. JPA staff and legal will begin drafting documents for San Mateo County. VW will initiate easement acquisition legal process for Santa Clara County.	Initiate coordination of utility relocation for overall project with PGE, not just Pope Chaucer Bridge. Develop cost estimates with utility companies	Additional $6M request from CalOES/FEMA
Potential Issues	SCVWD is backlogged for updating CAD for several projects – could cause delay or require change of Engineer of Record.	Addition of fish migration elements could increase project footprint and costs	Negotiating with private property owners.	Overhead power lines – or other utilities - could impact construction methods and costs. Underground utilities may limit design options.	Not all funding sources have been secured through agreements and others have timelines that must be met

Reach 2 Milestones

Milestone	By Sept '21	By Jan '22)	By July '22)	By Jan '23)	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 -

SCVWD and their consultant NV5 have updated the construction cost estimate and a new Benefit Cost Analysis has been completed. This shows a favorable benefit cost ratio even if we include additional funding for utility relocations around the bridge in our request to FEMA and CalOES. We will likely ask for an additional $6M in construction funding. NV5 has been modifying the design to the extent possible to respond to our and regulatory requests to reduce impacts to the creek channel and trees.

Reach 2 Project Permitting –

We are working on final information needs for draft permit applications. We are on schedule to submit draft 401 and 404 packages, which include the LEDPA analysis and Mitigation Monitoring Plan, in November to continue our pace for receiving construction permits in November 2022.

The SFCJPA and Stanford have offered to convene a quarterly joint regulatory review session for the benefit of the Water Board, similar to the multi-agency meeting that we hosted on June 29 and attended by representatives from the Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service.

Upstream Detention Evaluation -

Staff and our consultants have completed the initial round of evaluation and have developed an information gaps technical memo which lays out the additional information needed to complete assessment of the feasibility of off-line detention on Stanford property. Stanford is not able to share all the information requested by the consultant, so we have modified, at no additional cost, the consultant's scope of work to backfill some of the hydraulic modeling information gaps. To stay in step with our access agreement with Stanford, we are developing the conceptual plan to a point that we believe it is technically feasible from an engineering standpoint. We will then work with Stanford to coordinate access for geotechnical and environmental field investigations in a manner respectful of property leaseholders and current land use.

There are still significant feasibility and logistical challenges for potential detention basins in Reach 3. These include not only the need for significant excavation and material off-hauling, limited access for construction equipment, protected species, and cultural resources, but also the likely need for involvement by the California Division of Safety of Dams (DOSD) for above ground embankments.

SAFER Bay

Funding –

We continue to work with the City of Menlo Park and the BRIC team members in anticipation of creating a Memorandum of Understanding between the parties. A Menlo Park City Council study session was planned for late August but has been rescheduled for November 2021.

We have applied for a Measure AA grant to support CEQA and select hydrologic and habitat studies. We expect a decision by April 2022.

As a sub-applicant to MTC/BARC we are applying for a SB 1 Sustainable Communities transportation grant to support technical and environmental analysis, community outreach and engagement for the area south of SR84, in the northern part of East Palo Alto, that aligns with the SAFER Bay programmatic EIR. The application will be submitted by October 27.

Project Status –

Notice of Preparation (NOP) Issuance –

We plan to release the NOP for a Programmatic EIR by the end of the year with public meetings in early 2022.

Reach 1 Project -

We released a Request for Proposals on July 1 for a consultant to provide mitigation monitoring and reporting, as well as recommendations for periodic maintenance activities, for the project's mitigation sites for years 4 through 10 (2022 through 2028). We have selected the responsive proposal and are seeking board authorization for the Executive Director to enter into a Master Services Agreement with the selected consultant at the October board meeting. Funding for the first year of services under the agreement is provided by the approved 2021/22 Operational Budget.

Interpretive signs - We are reviewing draft panels; fabrication and installation of the of interpretive panels on the Friendship Bridge were to be included in an installation contract held by the City of Palo Alto for similar signs within the Palo Alto Baylands. Installation of Palo Alto's signs have been postponed to September 2022 due to a delay in grant funding. We are considering our options to move forward with installation of our signs and a commemorative plaque and bench honoring community member Tommie Roberts before the end of the year.

Comprehensive Plan Update

This is action item 6C in your Board package. The draft updated plan was circulated for comments June 24 through August 31.

Organization/Administration Updates -

This month we are pleased to celebrate Miyko Harris-Parker's 16th year of service to the SFCJPA.

Website and Newsletter – In the last month we've had 429 visitors to the SFCJPA website (including 23 from Canada… go figure). Our newsletter distribution list is now greater than 400 recipients.

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 is updated for each Board Meeting.

Regular Board meeting	Envisioned Agenda Items
November	Winter preparation Mid-year budget check-in Draft Proposed E.D. Evaluation Surveys Board Handbook

Regular Board meeting	Envisioned Agenda Items
	Employee Handbook updates
December	Three-year rolling workplan review and update Members Agreement (tentative)
January	Election of new board member positions
February	Begin E.D. Review and Budget process
March	Complete E.D. Review
April	Finalize Budget
May	

RESOLUTION NO. 21-10-28 A

A RESOLUTION OF THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY AUTHORIZING PUBLIC MEETINGS TO BE HELD VIA TELECONFERENCING PURSUANT TO GOVERNMENT CODE SECTION 54953(e) AND MAKING FINDINGS AND DETERMINATIONS REGARDING THE SAME

WHEREAS, the Board of Directors (the "Board") of the San Francisquito Creek Joint Powers Authority (the "Authority") is committed to public access and participation in its meetings while balancing the need to conduct public meetings in a manner that reduces the likelihood of exposure to COVID-19; and

WHEREAS, all meetings of the Authority are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch the Board conduct its business; and

WHEREAS, pursuant to Assembly Bill 361, signed by Governor Newsom and effective on September 16, 2021, legislative bodies of local agencies may hold public meetings via teleconferencing pursuant to Government Code Section 54953(e), without complying with the requirements of Government Code Section 54953(b)(3), if the legislative body complies with certain enumerated requirements in any of the following circumstances:

1. The legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing.
2. The legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.
3. The legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote, that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

WHEREAS, on March 4, 2020, Governor Newsom declared a State of Emergency in response to the COVID-19 pandemic (the "Emergency").

WHEREAS, the Centers for Disease Control and Prevention continue to advise that COVID-19 spreads more easily indoors than outdoors and that people are more likely to be exposed to COVID-19 when they are closer than 6 feet apart from others for longer periods of time.

WHEREAS, due to the ongoing COVID-19 pandemic and the need to promote social distancing to reduce the likelihood of exposure to COVID-19, the Authority intends to hold public meetings via teleconferencing pursuant to Government Code Section 54953(e).

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY DOES RESOLVE AS FOLLOWS:

1. The Recitals provided above are true and correct and are hereby incorporated by reference.

2. The Board hereby determines that, as a result of the Emergency, meeting in person presents imminent risks to the health or safety of attendees.
3. The legislative bodies of the Authority shall conduct their meetings pursuant to Government Code section 54953(e).
4. Staff is hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.
5. This Resolution shall take effect immediately upon its adoption.

PASSED AND ADOPTED by the Board of Directors of the San Francisquito Creek Joint Powers Authority this __th day of _____, 2021, by the following vote:

Ayes: _____

Nays: _____

Agenda Item 6.B. Contract with HT Harvey for Mitigation Monitoring and Reporting

Background:

Upon completion of the marsh and riparian restoration that the SFCJPA was required to perform to mitigate the construction impacts of the Reach 1 flood protection project, the clock began on a 10-year monitoring and reporting period on the development and success of the restoration sites. Monitoring and reporting are requirements of the project's regulatory permits and is done on an annual basis. The cost of the first 3 years of monitoring and reporting were covered in the construction funding agreement for the project. Under that construction funding agreement, the SFCJPA is responsible for completing years 4 – 10 as required by the permitting agencies. A line item to cover this cost for the upcoming year was included and approved in the SFCJPA FY21/22 Operational Budget. Future SFCJPA Operational Budgets will include the same line item.

Discussion:

We released a Request for Proposals on July 1 of this year for a consultant to provide the required mitigation monitoring and reporting, and recommendations for periodic maintenance activities, for the project's mitigation sites for years 4 through 10 (2022 through 2028). SFCJPA and member agency staff participated in a review panel that has selected the responsive proposal.

The contract is in the form of a Master Service Agreement, which spans the 7-year period of the contract. Work under the contract will be authorized on an annual basis through the issuance of annual Task Orders. The Board will be informed of the anticipated cost of each annual Task Order during our Operational Budget deliberations. The anticipated cost will be placed as a line item for that year only, with subsequent annual costs to be approved with each annual Operational Budget. No work will be done by the consultant in any year until the Operational Budget is approved and a Task Order is issued. The total cost of the entire contract over the 7-year period shall not exceed $470,000.00 unless the not-to-exceed amount is increased by an action of the Board.

The entire MSA and Scope of Services are provided below.

Recommended Action:

Authorize the Executive Director to execute the contract with HT Harvey and Associates for mitigation monitoring and reporting

MASTER SERVICE AGREEMENT
FOR THE
San Francisquito Creek Flood Protection, Habitat Restoration and Recreation Project, Reach 1

MITIGATION MONITORING AND REPORTING &
RECOMMENDATIONS FOR HABITAT MAINTENANCE

This MASTER SERVICE AGREEMENT (MSA) is made as of October 28, 2021, by and between the San Francisquito Creek Joint Powers Authority, a body corporate and politic ("Authority"), and Triple HS, Inc. d/b/a H. T. Harvey and Associates, a California Corporation ("Consultant").

R E C I T A L S

A. Authority desires to retains Consultant to perform monitoring and reporting for the restoration sites that serve to mitigate construction impacts of the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Project, Reach 1 (the "Project") as well as provide periodic recommendations for mitigation maintenance and enhancement to meet the success criteria of the Project.

B. Consultant represents that it is fully qualified to perform such services by virtue of its experience and the training, education and expertise of its principals and employees.

NOW, THEREFORE, in consideration of performance by the parties of the promises, covenants, and conditions herein contained, the parties hereto agree as follows:

1. Consultant's Services.

A. Scope of Services. The services to be performed by Consultant are set forth in Exhibit A (the "Services"), attached to this MSA; provided, however, that Consultant shall not provide any Services until such time that the Authority provides a written authorization for such work (such written authorization being a "Task Order"). The Executive Director is authorized to issue Task Orders on behalf of the Authority. On or before February 30 of each year, Consultant shall submit a draft Task Order to the Executive Director identifying the Services to be performed and the estimated cost of such Services for the upcoming fiscal year.

B. Time of Performance. Consultant shall provide the Services in accordance with the schedule of performance set forth in each Task Order issued by Authority.

C. Standard of Care. As a material inducement to Authority to enter into this Agreement, Consultant hereby represents that it has the qualifications and experience necessary to undertake the services to be provided pursuant to this MSA, and will perform the services to a standard of reasonable professional care, for similar services on similar projects of like size and nature performed.

D. Compliance with Law. All services rendered hereunder by Consultant shall be provided in accordance with all ordinances, resolutions, statutes, rules, and regulations of Authority and any federal, state or local governmental agency having jurisdiction in effect at the time service is rendered.

2. Term of Agreement. This Agreement is effective on the date set forth in the initial paragraph of this Agreement and shall remain in effect until the Services are completed, unless earlier terminated pursuant to Section 13.

3. Compensation. The Authority agrees to compensate Consultant for Services according to the fee schedule set forth in each Task Order. In no event shall the total cost of the Services exceed $470,000.00.

4. Representatives.

A. Project Manager. Gavin Archbald has been designated as the representative of Consultant authorized to act in its behalf with respect to the services specified herein. It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Project Manager were a substantial inducement for Authority to enter into this MSA. Therefore, the foregoing Project Manager shall be responsible during the term of this MSA for directing all activities of Consultant and devoting sufficient time to personally supervise the services hereunder. The Project Manager may not be changed by Consultant without the express written approval of Authority; such approval shall not be unreasonably withheld.

B. Contract Administrator. The Contract Administrator and Authority's representative shall be Kevin Murray, or in his absence, an individual designated in writing by the Executive Director of Authority. If no Contract Administrator is so designated, the Executive Director shall be the Contract Administrator. It shall be Consultant's responsibility to keep the Contract Administrator informed of the progress of the performance of the services, and Consultant shall refer any decisions which must be made by Authority to the Contract Administrator. Unless otherwise specified herein, any approval of Authority required hereunder shall mean the approval of the Contract Administrator.

5. Standard of Performance. Consultant shall perform all work to the recognized professional standards relating to habitat maintenance, monitoring and reporting and pursuant to the above stated Standard of Care. Consultant hereby covenants that it shall follow the professional standards used by a competent practitioner in performing all services required hereunder.

6. Ownership of Work Product. All reports, documents or other written material developed by Consultant in the performance of this MSA shall upon payment of all amounts rightfully owed by the Authority to the Consultant herein be and remain the property of Authority without restriction or limitation upon its use or dissemination by Authority. Any reuse or modification of such Documents for purposes other than those intended by the Consultant herein shall be at the Authority's sole risk and without liability to the Consultant.

7. Status as Independent Contractor. Consultant is, and shall at all times remain as to Authority, a wholly independent contractor. Consultant shall have no power to incur any debt, obligation, or liability on behalf of Authority or otherwise act on behalf of Authority as an agent. Neither Authority nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not, at any time, or in any manner, represent that it or any of its agents or employees are in any manner employees of Authority. Consultant agrees to pay all required taxes on amounts paid to Consultant under this Agreement, and to indemnify and hold Authority harmless from any and all taxes, assessments, penalties, and interest asserted against Authority by reason of the independent contractor relationship created by this Agreement. Consultant shall fully comply with

the workers' compensation law regarding Consultant and Consultant's employees. Consultant further agrees to indemnify and hold Authority harmless from any failure of Consultant to comply with applicable worker's compensation laws. Authority shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to Authority from Consultant as a result of Consultant's failure to promptly pay to Authority any reimbursement or indemnification arising under this Section.

8. Confidentiality. Consultant, in the course of its duties, may have access to financial, accounting, statistical, and personal data of private individuals and employees of Authority. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement shall not be disclosed by Consultant without written authorization by Authority. Authority shall grant such authorization if disclosure is required by law. Upon request, all Authority data shall be returned to Authority upon the termination of this Agreement. Consultant's covenant under this section shall survive the termination of this Agreement. It is hereby agreed that the following information is not considered to be confidential under this Agreement:

a) Information already in the public domain;
b) Information disclosed to Consultant by a third party who is not under a confidentiality obligation;
c) Information developed by or in the custody of Consultant before entering into this Agreement;
d) Information developed by Consultant through its work with other clients; and
e) Information required to be disclosed by law or regulation, including, but not limited to, subpoena, court order or administrative order, or the California Public Records Act.

9. Conflict of Interest. Consultant covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which may be affected by the services to be performed by Consultant under this Agreement, or which would conflict in any manner with the performance of its services hereunder. Consultant further covenants that, in performance of this Agreement, no person having any such interest shall be employed by it. Furthermore, Consultant shall avoid the appearance of having any interest which would conflict in any manner with the performance of its services pursuant to this Agreement. Consultant agrees not to accept any employment or representation during the term of this Agreement which is or may likely make Consultant "financially interested" (as provided in California Government Code Sections 1090 and 87100) in any decision made by Authority on any matter in connection with which Consultant has been retained pursuant to this Agreement. Nothing in this section shall, however, preclude Consultant from accepting other engagements with Authority.

10. Indemnification.

A. Consultant shall defend, hold harmless and indemnify the Authority, its Board members, officers, employees, and agents, its constituent local public entities, and its constituent members' respective officers, employees, and agents (collectively, "Indemnitees"), from any and all costs, expenses, losses, claims, damages and liabilities directly or indirectly arising out of or in connection with the activities of the Consultant.

B. Authority does not, and shall not, waive any rights that they may possess against Consultant because of the acceptance by Authority, or the deposit with Authority, of any insurance

policy or certificate required pursuant to this Agreement. This hold harmless and indemnification provision shall apply regardless of whether or not any insurance policies are determined to be applicable to the claim, demand, damage, liability, loss, cost or expense. Consultant agrees that Consultant's obligations under this section 10 shall survive the termination of this Agreement.

11. Insurance.

A. Liability Insurance. Consultant shall procure and maintain for the duration of this Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by Consultant, its employees, agents, representatives, or subcontractors.

B. Minimum Scope of Insurance. Coverage shall be at least as broad as:

(1) Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001) or the equivalent.

(2) Insurance Services Office form number CA 0001 (Ed. 1/87) covering Automobile Liability, code 1 (any auto) or the equivalent.

(3) Worker's Compensation insurance as required by the State of California and Employer's Liability Insurance.

C. Minimum Limits of Insurance. Consultant shall maintain limits no less than:

(1) General Liability: $1,000,000 per occurrence for bodily injury, personal injury and property damage. Any general aggregate limit shall apply separately to this Agreement or the general limit shall be twice the required occurrence limit.

(2) Automobile Liability: $1,000,000 per accident for bodily injury and property damage.

(3) Employer's Liability: $1,000,000 per accident for bodily injury or disease.

D. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by Authority. At the option of Authority's Executive Director, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects to Authority, its officers, officials, employees and agents; or Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

E. Other Insurance Provisions. The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

(4) Indemnitees are to be covered as additional insureds under such policies. The coverage shall contain no special limitations on the scope of protection afforded to Authority, its officers, employees and agents.

(5) For any claims related to this Agreement, Consultant's insurance coverage shall be primary insurance as respects Authority. Any insurance or self-insurance maintained by Authority shall be excess of Consultant's insurance and shall not contribute with it.

(6) Any failure to comply with reporting or other provisions of the policies, including breaches of warranties shall not affect coverage provided to Authority, their officers, employees, and agents.

(7) Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(8) Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, or cancelled by either party, except after 30 days prior written notice by certified mail, return receipt requested, has been given to Authority.

F. Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII unless waived by Authority's Executive Director.

G. Verification of Coverage. Consultant shall furnish Authority with original endorsements effecting coverage required by this section. The endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. The endorsements are to be on forms provided by Authority. All endorsements are to be received and approved by Authority before work commences. As an alternative to Authority forms, Consultant may elect to have its insurer provide complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by these insurance specifications.

H. Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

12. Cooperation. In the event any claim or action is brought against Authority relating to Consultant's performance or services rendered under this Agreement, Consultant shall render any reasonable assistance and cooperation which Authority might require.

13. Termination. Authority shall have the right to terminate the services of Consultant at any time, without cause, on 5 calendar days written notice to Consultant. In the event this Agreement is terminated by Authority, Consultant shall be paid for any services properly performed to the last working day the Agreement is in effect, and Consultant shall have no other claim against Authority by reason of such termination, including, but not limited to, any claim for compensation.

14. Suspension. Authority may, in writing, order Consultant to suspend all or any part of the Services at the sole and absolute discretion of the Executive Director of the Authority.

Subject to the provisions of this Agreement relating to termination, a suspension of the work does not void this Agreement. In the event that work is suspended for a period exceeding 120 days, the schedule and cost for completion of the work will be adjusted by mutual consent of the parties.

15. Notices. Any notice, request, demand or other communication under this MSA shall be given by first class mail or personal delivery to the party entitled to such notice at its address set forth below. Notice shall be effective (a) if personally served or delivered, upon delivery, (b) if given by electronic communication, whether by telecopier or other forms, upon the sender's receipt of an appropriate answer back or other written acknowledgment or confirmation of receipt of the entire notice, approval, demand, report or other communication, (c) if given by first class, registered or certified mail, return receipt requested, deposited with the United States mail postage prepaid, 72 hours after such notice is deposited with the United States mail, (d) if given by overnight courier, with courier charges prepaid, 24 hours after delivery to said overnight courier, or (e) if by other means of personal delivery, upon receipt by the intended recipient of the notice. Each entity below may, by written notice to the other party, from time to time modify the address or number to which communications are to be given under this Indenture:

Authority:

SFCJPA
2100 Geng Road, Ste 210
Palo Alto, CA 94303
Attention: Kevin Murray

Consultant:

Triple HS, Inc. d/b/a H. T. Harvey and Associates
983 University Avenue, Bldg. D
Los Gatos, CA 95032
Attention: Gavin Archbald

16. Non-Discrimination and Equal Employment Opportunity. In the performance of this Agreement, Consultant shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, national origin, ancestry, age, physical or mental handicap, medical condition, or sexual orientation. Consultant will take affirmative action to ensure that employees are treated without regard to their race, color, creed, religion, sex, marital status, national origin, ancestry, age, physical or mental handicap, medical condition, or sexual orientation.

17. Assignability; Subcontracting. Neither party shall assign, transfer, or subcontract any interest in this Agreement or the performance of any obligation hereunder, without the prior written consent of the other party, and any attempt by a party to so assign, transfer, or subcontract any rights, duties, or obligations arising hereunder shall be void and of no effect.

18. Compliance with Laws. Consultant shall comply with all applicable laws, ordinances, codes and regulations of the federal, state, and local governments.

19. Non-Waiver of Terms, Rights and Remedies. Waiver by either party of any one or more of the conditions of performance under this Agreement shall not be a waiver of any other

condition of performance under this Agreement. In no event shall the making by Authority of any payment to Consultant constitute or be construed as a waiver by Authority of any breach of this Agreement, or any default which may then exist on the part of Consultant, and the making of any such payment by Authority shall in no way impair or prejudice any right or remedy available to Authority with regard to such breach or default.

20. Attorney's Fees. In the event that either party to this Agreement shall commence any legal action or proceeding to enforce or interpret the provisions of this Agreement, the prevailing party in such action or proceeding shall be entitled to recover its costs of suit, including reasonable attorney's fees. The venue for any litigation shall be San Mateo County or Santa Clara County.

21. Exhibits; Precedence. All documents referenced as exhibits in this Agreement are hereby incorporated in this Agreement.

22. Entire Agreement. This Agreement, and any other documents incorporated herein by specific reference, represent the entire and integrated agreement between Authority and Consultant. This Agreement supersedes all prior oral or written negotiations, representations or agreements. This Agreement may not be amended, nor any provision or breach hereof waived, except in a writing signed by the parties to this Agreement.

[*remainder of page intentionally left blank*]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

"Authority"	"Consultant"
San Francisquito Creek Joint Powers Authority	HT Harvey and Associates
By:_____	By:_____
Margaret Bruce, Executive Director	Max Busnardo, Principal

Exhibit A

Workplan for Each Task

The request for proposal identifies six main tasks. The detailed work plan for each task is described below. The budget for this workplan itemized by the JPA's fiscal year (July 1-June 30). Project "Years" below are defined as: Year 4 is from July 1, 2021-June 30 2022; Year 5 is from July 1, 2022-June 30, 2023, etc. A 20% contingency has been included in Task 7 to cover unanticipated costs that may arise over the 7 year monitoring period which are not covered under Tasks 1-6.

Task 1. Coordination with Valley Water for Annual Ridgway's Rail Surveys

The project's Section 7 Biological Opinion and Mitigation and Monitoring Plan (MMP) requires annual California Ridgway's rail (*Rallus obsoletus obsoletus*) surveys in tidally influenced areas of SF Creek and along the Faber Marsh levee to evaluate the effectiveness of the mitigation measures to support the Ridgway's rail population. Surveys are required annually between February and April for the duration of mitigation monitoring, which is 10 years. The survey plans require annual approval by the U. S. Fish and Wildlife Service (USFWS). We understand that Valley Water staff have the required 10a1A permits and will lead the protocol surveys. Therefore, H. T. Harvey's budget assumes that the survey plan will be prepared by Valley Water. A senior wildlife ecologist (Steve Rottenborn) will provide comments on the survey plan prior to Valley Water's submittal to USFWS. Steve Rottenborn is approved by USFWS to perform protocol level surveys.

H. T. Harvey wildlife ecologists will assist Valley Water's biologist during protocol surveys. Because Valley Water's permitted biologists will lead the survey, the wildlife ecologists assisting Valley Water will not need to be approved by USFWS to perform protocol surveys. They will, however, be experienced identifying Ridgway's rail by sight and sound and will be fully prepared to assist Valley Water in the field during the protocol surveys.

H. T. Harvey will provide 2 wildlife ecologists per protocol survey event in Years 4-9 to assist Valley Water. No surveys are needed in fiscal Year 10 because surveys for the final year of monitoring fall in fiscal Year 9. We assume the following for budgetary purposes:

- Two protocol survey events (active or passive) per year.
- Each protocol survey event will consist of 4 morning field visits.
- The spring 2021 survey event (for inclusion in the Year 4 monitoring report) have been completed, since the MMP calls for surveys in February-April.

Based on these assumptions, the total cost per survey event is $5,317 and the cost per year is $10,634 in fiscal Year 4 (fiscal Year 4 survey results to be included in the Year 5 monitoring report). The cost has been integrated for Years 4-9 in the Fee Schedule. Note that fiscal Year 9 surveys will be included in the Year 10 annual report.

Task 2. Mitigation Site Monitoring

Task 2.1. Tidal Wetland Vegetation Monitoring

The MMP calls for qualitative (i.e., reconnaissance level) and quantitative monitoring in the project's constructed tidal marsh along SF Creek and in a reference marsh. The following bullets summarize the work plan. Monitoring will be performed by two H. T. Harvey restoration ecologists during September-October.

- Qualitative marsh vegetation monitoring is required in Years 4-10. The monitoring consists of reconnaissance-level field observations and photo-documentation during a low tide. Our ecologists will

walk the extent of the restored tidal marsh and make observations of abiotic conditions relevant to plant species composition, coverage, general plant health, conditions by planting zone, invasive plants, and issues affecting vegetation establishment. We will collect photo documentation from all locations established by Valley Water in Years 1-3 showing planting zones and overall marsh habitat condition.

- Quantitative marsh monitoring is required in Years 4, 5 and 10. The monitoring consists of sampling vegetation cover and health by species using the quadrat method for comparison to the success criteria. The number of quadrat samples will be based on variability in cumulative cover, as described in the MMP. Valley Water will collect this data in Year 4. In subsequent years, H. T. Harvey will initially collect data in 26 quadrats in the lower marsh and 10 quadrats in the upper marsh, following the methods performed by Valley Water in Years 1-4.
- In Years 5 and 10, vegetation cover and health and vigor will be assessed in the reference marsh established for the project: Crittenden Marsh in Mountain View. We will initially sample 20 quadrats at Crittenden marsh and additional quadrats as needed based on the resulting variability in cumulative average percent cover. The average cover of wetland indicator species in the reference marsh and restored marsh will be compared per the MMP methods to determine if marsh plain success criteria are met in Years 5 and 10.
- The MMP requires a wetland delineation in Year 5 to determine whether at least 16.86 ac of U. S. Army Corps of Engineers (USACE) jurisdictional habitats are restored in the project footprint and whether at least 6.9 ac of that area qualifies as essential fish habitat (EFH). EFH is defined in the MMP as all USACE jurisdictional tidal marsh and tidal channel habitats occurring at or below Mean Higher High Water (7.1 ft NAVD88). H. T. Harvey's restoration ecologists trained in USACE delineation methods will complete the Year 5 wetland delineation. Our wetland delineation will follow the USACE's 1987 Corps of Engineers Wetlands Delineation Manual and the *2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. We will map the jurisdictional wetland extent with a Trimble GPS unit and determine the extent of EFH within the wetland area using Lidar collected in the study area in 2020 and field observations. One reconnaissance vegetation survey of areas above the regular reach of tides will be provided in spring of 2022. The main effort for the delineation will be carried out in the fall of 2022 after the rail breeding season. The resulting delineation will be attached to the Year 5 monitoring report.

Task 2.2. Monitoring of High-tide Refugia Islands

The MMP calls for a combination of qualitative and quantitative monitoring of the five high tide refuge islands constructed in Outer Faber Marsh. Monitoring will be performed by two H. T. Harvey restoration ecologists during September and October. Specifically:

- Reconnaissance level field observations will be collected in Years 4-10 documenting the ecological condition of the islands. Observations will consist of vegetation cover and observation of any conditions that could affect the intended function of the islands. Photo documentation will be collected.
- Top of island elevations will be measured using a laser level in Years 5 and 10 relative to the elevation control stake installed at each island. The heights of all gumplant plants will be recorded and the cover of vegetation by species on islands will be estimated for comparison to the success criteria.

Task 2.3. Monitoring of Faber Marsh Levee Enhancements

Faber Marsh levee enhancements consist of a 7.7 acre berm enhancement planting area. The target habitat in the berm enhancement area is a mixture of herbaceous vegetation and shrub patches to provide habitat for the salt marsh harvest mouse (*Reithrodontomys raviventris*) and Ridgway's rail, respectively. The MMP calls for quantitative monitoring in Years 4, 5 and 10 and reconnaissance level qualitative monitoring in Years 6-9. H. T. Harvey completed quantitative monitoring in Year 4 in July 2021. The following monitoring of the levee enhancements will be performed by two H. T. Harvey restoration ecologists:

- Quantitative monitoring of shrub patches and herbaceous cover (three days per event) in Years 5 and 10.
- Qualitative monitoring of shrub patches and herbaceous cover (half day per event) in Years 6-9.

Qualitative monitoring will include observations of vegetation cover, issues that could affect habitat establishment, and photo documentation. Quantitative monitoring will include:

- Percent cover of shrub patches using the line intersect method along permanent transects.
- Estimated percent cover in shrub patches without transects.
- Measurements of the length, width, distance of transect shrub patches.
- Quadrat sampling of herbaceous cover outside of patches and photo documentation

Task 2.4. Monitoring of Riparian Tree Mitigation

To mitigate riparian impacts, the project was required to protect trees along SF Creek adjacent to construction and to replace 108 oaks and 166 other native trees offsite. To meet the replacement goal, 280 trees and willow cuttings were planted along SF Creek between Guinda Street and Chaucer Street (the SF Creek planting area) and 50 existing trees were protected from deer browse with cages at the Arastradero Preserve (330 total trees). The final success criteria among the two sites is 108 oak trees and 166 non-oak trees alive in Year 10 and 50% cover of native woody and herbaceous species (at the SF Creek planting area) in Year 10.

The following monitoring will be performed by two H. T. Harvey restoration ecologists:

- The survival of protected trees on site at SF Creek adjacent to construction will be assessed in Year 4 and 5. Monitoring methods are not included in the MMP. Monitoring will be conducted using the methods in the project's Year 3 annual monitoring report: "analyzing aerial imagery and inspecting the areas for any dead trees in the field."
- The percent survival and health and vigor of the 330 planted and caged trees will be visually assessed in the field in Years 5 and 10 for comparison to the success criteria in Year 10.
- Percent cover of the planted vegetation at the SF Creek planting area will be assessed using the line intercept method along fixed length permanent transects (installed in Year 3). Percent cover will not be assessed for caged saplings at the Arastradero Preserve (per the MMP).

Task 2.5. Velocity Refuge Features and Geomorphic Stability

The MMP requires monitoring of geomorphic stability for by a qualified geomorphologist and monitoring of fish passage elements, vegetation, and channel performance "as it relates to fish passage conditions" by a fisheries biologist. A geomorphologist from Balance will provide the geomorphic stability monitoring and sediment deposition monitoring. H. T. Harvey staff will evaluate the fish passage elements as described below.

- **Geomorphic Monitoring.** Balance will visit the six velocity refuge structures and the constructed marsh plain annually in Years 4 through 10 to conduct geomorphic monitoring following the methodology in the MMP. During each annual visit a qualitative assessment of channel dimensions, geomorphic stability, and fish passage at the six velocity refuge features will be conducted concurrently with sediment deposition monitoring (bullet below). At the velocity refuge features, a geomorphologist will conduct a qualitative, visual field assessment of apparent scour around the structures and/or any other potential indicators of instability. Field sketches will be prepared to document key geomorphic features at each location and, when possible, photos will be taken of the structures for comparative interpretation from year to year.
- **Sediment Deposition Monitoring.** The Year-3 report recommended monitoring sediment accretion on the constructed marsh plain twice per year during 2020 and 2021 (Valley Water and H. T. Harvey 2019). We assume that the first monitoring visit during 2021 (following the wet season) has already occurred, and thus our scope assumes only one visit during Year-4 of the monitoring program and one annual visit for subsequent years (Year-5 through Year-10). The length of the marsh plain immediately downstream of the outfall channel (at HWY 101) will be traversed on foot during low tide to visually assess the longitudinal extent of sediment deposition, as depicted in the Year 3 report. Additionally, sediment depth will be measured along two transects established by Valley Water in prior years located between HWY 101 and the maintenance ramp downstream of HWY 101. Sediment on top of the constructed marsh plain will be measured by Valley Water along each transect at three to five evenly-spaced locations measurements using a graduated rod during Year 4. In Year 4, the H. T. Harvey team will collect elevational cross sections along each of Valley Water's sediment measurement transects with a laser level to characterize the elevation of the marsh plain and channels. These cross sections will be able to be re-measured in Years 5-10 to characterize sediment deposition in this area and the data will be provided to the JPA for operations and maintenance
- **Fisheries Habitat.** An H. T. Harvey fisheries ecologist will review the relevant site observations and geomorphology monitoring results and develop a professional opinion regarding whether the creek, restored marsh plain, and the velocity refuge structures are providing adequate fish passage and habitat conditions, as required in the MMP. This opinion will be conveyed in the annual reports (Task 3).4

Task 3. Regulatory Reporting

The H. T. Harvey team will prepare annual monitoring reports in Years 4-10 that meet the requirements in the MMP. The reports will utilize applicable text, tables, figures and structure of the project's Year 3 monitoring report for efficiency. Each annual report will be sent to the JPA for review by November 15. H. T. Harvey will revise each annual report based upon JPA comments and generate final annual reports by December 20 of each monitoring year for submission to the regulatory agencies. If requested by the JPA, H. T. Harvey will submit each report to the agencies by December 31 of each monitoring year. The following assumptions are included:

- The Year 4 report will utilize data collected and analyzed by H. T. Harvey for berm enhancements areas at Faber Marsh in July 2021 and data collected by Valley Water on sediment deposition in Year 4.
- A report of Ridgway's rail protocol surveys will be included as an attachment to each annual monitoring report. We assume that Valley Water will prepare these reports, as in prior years.'
- Success criteria will be met and JPA will not need assistance with regulatory agency communications.
- Qualitative (reconnaissance survey) results will be presented as narrative paragraphs.
- Quantitative results will be presented in tables, graphs, or narrative paragraphs, as needed.

- The Year 5 wetland delineation methods and results will be included in the Year 5 monitoring report.
- Annual reports will include a pesticide use report, as required by USFWS and described in Task 4.

Task 4. Mitigation Maintenance Recommendations

We understand that the JPA will retain contractor(s) to provide maintenance at the project's mitigation sites, including weed control and replacement planting. H. T. Harvey restoration ecologists will assist the JPA by conducting periodic site visits (in addition to annual monitoring) to assess vegetation maintenance needs and will prepare memoranda with maintenance recommendations. An H. T. Harvey restoration ecologist will:

- Provide 1 site visit per year to the riparian mitigation area in Years 4 and 6-9. No annual riparian mitigation monitoring is required in these years, therefore, these visits will enable H. T. Harvey to visit these sites annually to identify maintenance issues.
- No site visits to assess maintenance needs will be provided in the berm enhancement area or SF Creek marsh restoration area in Year 4 because such needs will be assessed in a timely way during Year 4 annual monitoring.
- Provide 2 site visits per year during the growing season in Year 5 in the berm enhancement areas, and the SF Creek tidal marsh restoration area, reduce to 1 site visit per year in Years 6-10. The site visits will be focused on assessing the adequacy of site specific maintenance (e.g., irrigation in the berm enhancement area, need for weed control in mitigation areas).
- Following each site visit in Years 4-10, an H. T. Harvey ecologist will generate a list of maintenance recommendations. The recommendations will be provided the JPA as a maintenance memoranda that describe the type and location of recommended maintenance work.
- In Years 4-10, up to 2 times per year, an H. T. Harvey ecologist will meet the JPA's contractor at the start of work to review maintenance activities to be performed. We assume that maintenance activities may occur in different places at different times and by different contractors. Therefore, an ecologist will not meet the contractor at the start of all maintenance events – the 2 specific meetings provided to review maintenance activities will be selected to maximize the value of H. T. Harvey's input.
- We assume pesticide use will be necessary to control invasive plants within the Don Edwards National Wildlife Refuge (Refuge). Therefore, an H. T. Harvey ecologist will work with the JPA's contractor to prepare up to 3 Pesticide Use Proposals for approval by USFWS. For any years in which pesticides are used within the Refuge, H. T. Harvey will prepare a Pesticide Use Report for inclusion in the annual monitoring report (Task 3). We assume up to 6 pesticide use reports will be necessary.
- The JPA will establish nursery contracts for replacement plant. H. T. Harvey will assist with nursery coordination for up to 8 hours per year in Years 4-7 and up to 6 hours per year in Years 7-9.

Task 5. Biological Monitoring During Maintenance Activities

One H. T. Harvey wildlife ecologist will provide pre-work surveys for Ridgway's rail and salt marsh harvest mouse at the start of each day's maintenance activities in the restored marsh along SF Creek, the refuge islands, or the berm enhancement area at Faber Marsh. Pre-work wildlife surveys are required to comply with the projects USFWS and CDFW permits prior to weeding or planting in the restored marsh, refuge islands, or the berm enhancement area. No mechanical weed control is anticipated as part of ongoing maintenance, therefore no on-site biological monitoring is anticipated. Our fee assumes the following quantity of pre-work surveys:

- Year 4-6: Up to 15 pre-work surveys per year.
- Year 7-10: Up to 10 pre-work surveys per year.

Task 6. Project Management

This task includes time for an H. T. Harvey project manager to coordinate the above tasks with Valley Water, Balance, and the JPA. This also includes time to prepare annual fiscal year scopes of work.

Task 7. Contingency

The contingency budget provides a source of funding for additional tasks which may arise during the monitoring period that are related to achieving the project's mitigation monitoring goals. Use of the contingency budget by the H. T. Harvey team would require written authorization from the JPA.

References

Valley Water and H. T. Harvey & Associates. 2019. San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project - San Francisco Bay to Highway 101, Year 2 (2019) Mitigation Monitoring Report. Santa Clara Valley Water District, San Jose, California and H. T. Harvey & Associates, Los Gatos, California.

Santa Clara Valley Water District. 2016. San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project - San Francisco Bay to Highway 101, Mitigation and Monitoring Plan, San Jose, California.

H. T. HARVEY & ASSOCIATES
Ecological Consultants

50 years of field notes, exploration, and excellence

Project Name: San Francisquito Creek Reach 1 Mitigation Monitoring and Reporting

Proposal Number: 10742

Date: October 18, 2021
Staff Time Estimates

	Personnel Hours by Task																
Task	**Max Busnardo** Principal, Restoration Ecology	**Steve Rottenborn** Principal, Wildlife Ecology	**Gavin Archbald** Senior Restoration Ecologist	**Zachery Gizicki** Restoration Ecologist	**Andi Greene** Restoration Biologist	**Craig Fosdick** Wildlife Ecologist	**Jane Lien** Wildlife Ecologist	**Robin Carle** Associate Wildlife Ecologist	**Steve Carpenter** Wildlife Ecologist	**Sharon Kramer** Principal, Fish Ecology	GIS Analyst	Technical Support	**HTH Cost by Task**	**Annual Labor Escalation (3%)**	**HTH Direct Expenses (incl. 10% mark-up)**	**Subcontractor (Balance Hydrologics)**	**10% mark-up on Subcontractor**	**Total Project Cost**
	$ 270	$ 281	$ 205	$ 141	$ 123	$ 160	$ 160	$ 226	$ 141	$ 270	$ 129	$ 98						
Year 4 (2021-22) Monitoring and Reporting	12	1	50	106	69	32	32	3	53	3	16	8	$ 59,253	$ 59,253	$ 1,334	$ 6,731	$ 673	$ 67,991
Year 5 (2022-23) Monitoring and Reporting	14	1	43	104	166	32	32	3	53	3	16	8	$ 70,007	$ 72,107	$ 1,688	$ 5,857	$ 586	$ 80,238
Year 6 (2023-24) Monitoring and Reporting	6	1	20	16	63	32	32	3	53	3	4	4	$ 36,115	$ 38,314	$ 980	$ 6,091	$ 609	$ 45,995
Year 7 (2024-25) Monitoring and Reporting	6	1	20	12	63	32	32	2	35	3	4	4	$ 32,787	$ 35,827	$ 857	$ 6,334	$ 633	$ 43,652
Year 8 (2025-26) Monitoring and Reporting	6	1	17	12	61	32	32	2	35	3	4	4	$ 31,926	$ 35,933	$ 832	$ 6,588	$ 659	$ 44,012
Year 9 (2026-27) Monitoring and Reporting	6	1	17	36	85	32	32	2	35	3	4	4	$ 38,262	$ 44,356	$ 832	$ 6,851	$ 685	$ 52,725
Year 10 (2027) Monitoring and Reporting	9	0	25	78	81	0	0	2	35	3	8	4	$ 36,137	$ 43,149	$ 778	$ 7,125	$ 713	$ 51,765
Total Labor Hours	**59**	**6**	**192**	**364**	**588**	**192**	**192**	**17**	**299**	**21**	**56**	**36**	Total Costs		**$7,303**	**$45,577**		Total Cost
TOTAL COST	**$ 15,930**	**$ 1,686**	**$ 39,360**	**$ 51,324**	**$ 72,324**	**$ 30,720**	**$ 30,720**	**$ 3,842**	**$ 42,159**	**$ 5,670**	**$ 7,224**	**$ 3,528**	$304,487	$328,940	$7,303	$50,135		**$386,378**
Contingency (20% of total cost)																		**$77,276**
Not To Exceed Limit																		**$463,653**

Billing rates are subject to annual increases and will be adjusted at the beginning of each calendar year.

SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY

RESOLUTION NUMBER 21-10-28 B

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY APPROVING CONSULTANT SERVICES AGREEMENT FOR MITIGATION MONITORING AND REPORTING WITH HT HARVEY AND ASSOCIATES AND AUTHORIZING EXECUTIVE DIRECTOR TO EXECUTE AND DELIVER THE AGREEMENT

BE IT RESOLVED by the Board of Directors of the San Francisquito Creek Joint Powers Authority that the Board of Directors hereby approves a consultant services agreement with HT Harvey and Associates for Reach 1 Mitigation Monitoring and Reporting, for a seven-year period and for a total amount not to exceed $470,000.00 and authorizes the Executive Director to execute and deliver the agreement.

Approved and adopted on October 28, 2021, the undersigned hereby certify that the foregoing Resolution was duly adopted by the Board of Directors of the San Francisquito Creek Joint Powers Authority.

INTRODUCED AND PASSED:
AYES:
NOES:
ABSENT:
ABSTAIN:
ATTEST: APPROVED:

_____ Date: 10/28/2021
Vice Chairperson

_____ Date: 10/28/2021
Chairperson

APPROVED AS TO FORM:

_____ Date: 10/28/2021

Legal Counsel

Agenda Item 6.C. - SFCJPA Comprehensive Plan 2021 Update

Background

The SFCJPA provided a draft 2021 Comprehensive Plan with preliminary staff edits and updates for Board and Public comments as part of the Board package for the June 24, 2021 Board Meeting. This plan was initially developed in 2020 to communicate our purpose and projects to diverse audiences. The Board approved the Comprehensive Plan in November 2020.

For this update, comments and suggestions were received from five individuals, and the updated plan in the Board Package incorporates the suggestions made in these comments. In addition, staff reviewed the document for general updates and past comments. The resulting draft is provided for Board approval.

Two versions are provided - one that shows proposed changes in redline/strikeout, and the second is a clean copy with those changes incorporated for Board approval consideration under Resolution 21-10-28-C.

Additional information

The 2021 comments can be summarized as follows:

- Add a section on history of major modifications to the creek;
- Include a reference graphic that shows the approximate locations of widening Sites 1 through 5 for the Reach 2 work.
- Add request to FEMA to potentially reduce flood insurance premiums as Reach 2 project is completed (SFCJPA separately determined that with FEMA Risk 2.0 this may be helpful for Reach 1 Project)
- Community member indicating their support for the Reach 2 project and noting their sense of urgency for the project.
- Added additional community partners.

The commentors also suggested several editorial updates that were helpful in creating a readable, clear, and consistent document and are sincerely appreciated.

This living document will be reviewed and *updated May-August 2022,* tracking progress on projects, and updating relevant changes to organizational or other watershed information. Future updates may include additional maps and graphics and may document any organization changes.

ACTION:

Recommend approval of the updated Comprehensive Plan

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	October 2021	Minor updates to project nomenclature, annual updates, and incorporation of 2021 stakeholder comments
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

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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~~ supplemented by 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's utilization of natural flood protection to address sea level rise. This project has similar ~~the same~~ protection criteria as our completed Creek project from San Francisco Bay to Highway 101. The SFCJPA will communicate and coordinate with stakeholders and 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."*

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

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1. Introduction

This document ~~is intended to be a Draft~~ serves as a 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~~ is 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 the planning goals of the SFCJPA. This document:

- describes the San Francisquito Creek Watershed and the resources within the watershed,
- describes the evolution of the creek and re-engineering efforts since the 1850's
- 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.

Vison: 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.

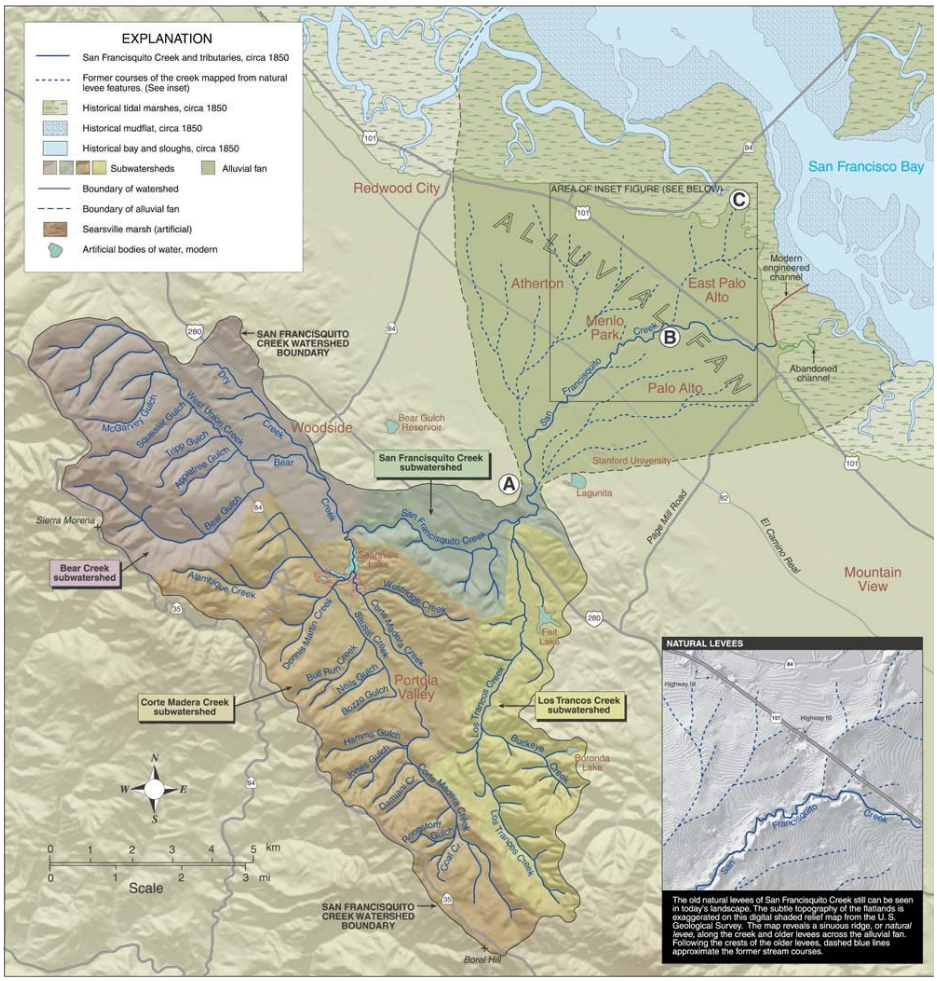
2. Description of the Watershed

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

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

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.

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 tailor~~ed, 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 resources[1]

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

[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.***

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, 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.

Creek Evolution and Re-engineering

San Francisquito Creek was first modified by early European 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 reservoir is nearly filled with sediment which has created wetland habitat for waterfowl, bats, and other species.

The section of creek downstream of what is now Highway 101 was first channelized and re-routed in 1931 for planned development. The area previously occupied by the creek mouth and slough is now the Palo Alto Airport and golf course. When the creek was channelized between levees it was moved north to its current alignment, which effectively moved the boundary between San Mateo and Santa Clara counties along this reach.

The Newell Road Bridge, located between Woodland Avenue (East Palo Alto) and Edgewood Drive (Palo Alto), was built in 1911. In East Palo Alto, Newell Road connects to Woodland Avenue, which provides access to University Avenue and US 101. In the City of Palo Alto, Newell Road connects to two main thoroughfares, Channing Avenue and Embarcadero Road, which also provide access to US 101. This bridge has limited hydraulic capacity and will be replaced both for traffic safety and flow conveyance.

The Pope-Chaucer bridge, which connect Pope Street in Menlo Park to Chaucer Street in Palo Alto, was originally a wooden structure built in 1907, and soon thereafter was replaced by a concrete bridge in the same location. In 1948, the bridge deck was expanded to support a right turn lane for vehicles travelling north on Chaucer Street to turn right onto Woodland Avenue after crossing the bridge. To support the expanded bridge deck, the existing culvert, which is a hydraulic constriction, was added under the existing bridge and expanded deck. The right turn land was later abandoned, and in the 1980s oak trees were planted in the soil between the culvert and former road surface. The bridge will be replaced as part of the Reach 2 project.

At least two efforts were initiated in the 1950s and 1960s, partially in response to the 1955 flood, to straighten and channelize the creek from Middlefield Road to SF Bay. The plans were abandoned for several reasons, including the difficulty in acquiring needed land rights and community opposition.

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 San Francisquito Creek Trail is well traveled and is the location of many community events, including Moonlight Run, Great Race for Saving Water and Bay Day.

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 substations and 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.

Climate change is already manifesting in longer and hotter dry periods, and more extreme precipitation events. To the extent possible, the SFCJPA will take into consideration these new uncertainties in project design and construction.

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. The SFCJPA can not transfer risks from one area to another so will evaluate each project to ensure that the design does not result in unintended consequences locally or regionally.

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.

Groundwater and Land Subsidence

Groundwater and surface water are hydraulically connected in the San Francisquito Creek Watershed (San Mateo County 2018). 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 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).

Regulatory Status of Creek and Watershed ~~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)
- 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.

The California Department of Water Resources has designated two groundwater Basins on each side of the creek that are also directly hydraulically connected in the watershed. In San Mateo County, it is Groundwater Basin 2-009.03 Santa Clara Valley- San Mateo Plain, and on the Santa Clara County side of the Creek, it is Groundwater Basin 2-009.02 Santa Clara Valley- Santa Clara Sub-basin (Department of Water Resources Bulletin 118, Groundwater Basins, 2021). The USGS designated the San Francisquito Cone Alluvial Aquifer and it is the most productive unit in the San Mateo Plain Groundwater Basin (San Mateo County 2018). The Sustainable Groundwater Management Act has classified the Santa Clara side as very high priority and the San Mateo side as very low priority (DWR Basin Prioritization 2021).

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.

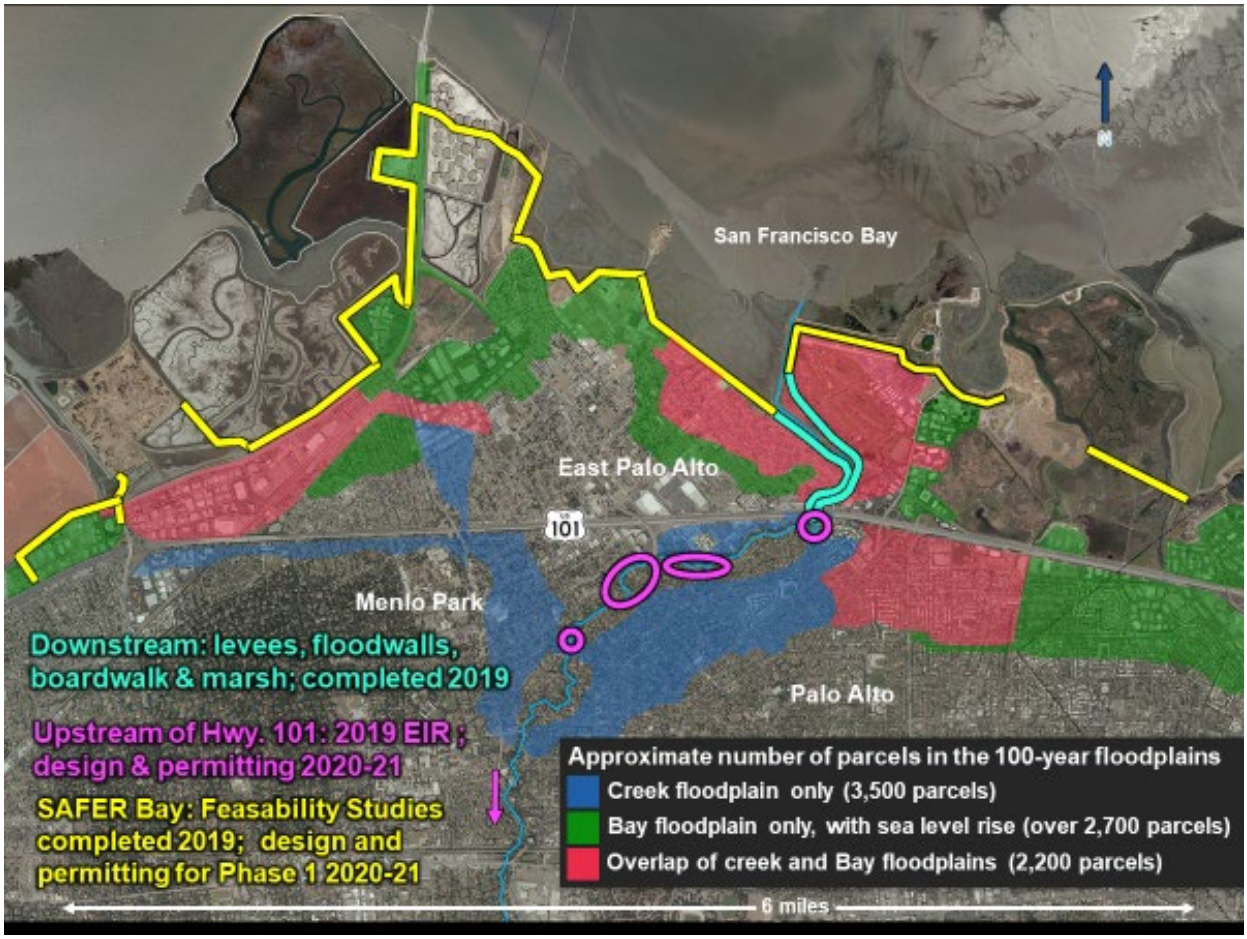
~~The hydrology of San Francisquito Creek began to experience modifications resulting from early settlers who established the large Ranchos in the 1830s. These early ranchers likely constructed irrigation ditches to transport water and ford crossings at creeks. In 1876, former Governor Leland Stanford 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, during ~~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.



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

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. This parcel tax was made permanent in 2020. 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~~ reduce 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, and was lead on a $50M FEMA BRIC grant, that was identified for funding July 2021.

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, Woodland Park Apartments, Sand Hill - Property management, West-of-Bayshore Community Association, 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 new CAP 205 partnership for ~~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 (SBSPRA)

The SBSPRA has been a partner for the past six years on our SAFER Bay Project. We are working with the SBSPRA 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 SBSPRA 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 partnerships with SFEI and others 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 discuses 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**.**

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).

The SFCJPA will work with FEMA to determine if the completion of Reach 1 project will allow some properties, particularly those in East Palo Alto, to have lower premiums for flood insurance.

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.

The City of Palo Alto has a parallel project to replace the Newell Street Bridge. Replacement of the Newell Street Bridge is part of the SFCJPA comprehensive plan, but is being led by Caltrans and the City of Palo Alto. The bridge is a hydraulic constriction but is also functionally obsolete and therefore eligible for Caltrans funding to replace it for traffic safety. The new bridge is designed to Caltrans standards for safety and the SFCJPA design flow. Construction of the new bridge will be covered under the SFCJPA's regulatory permits for creek work.

This project will remove constrictions in the creek channel including concrete structures at four or five locations within Reach 2 (Figure 3).

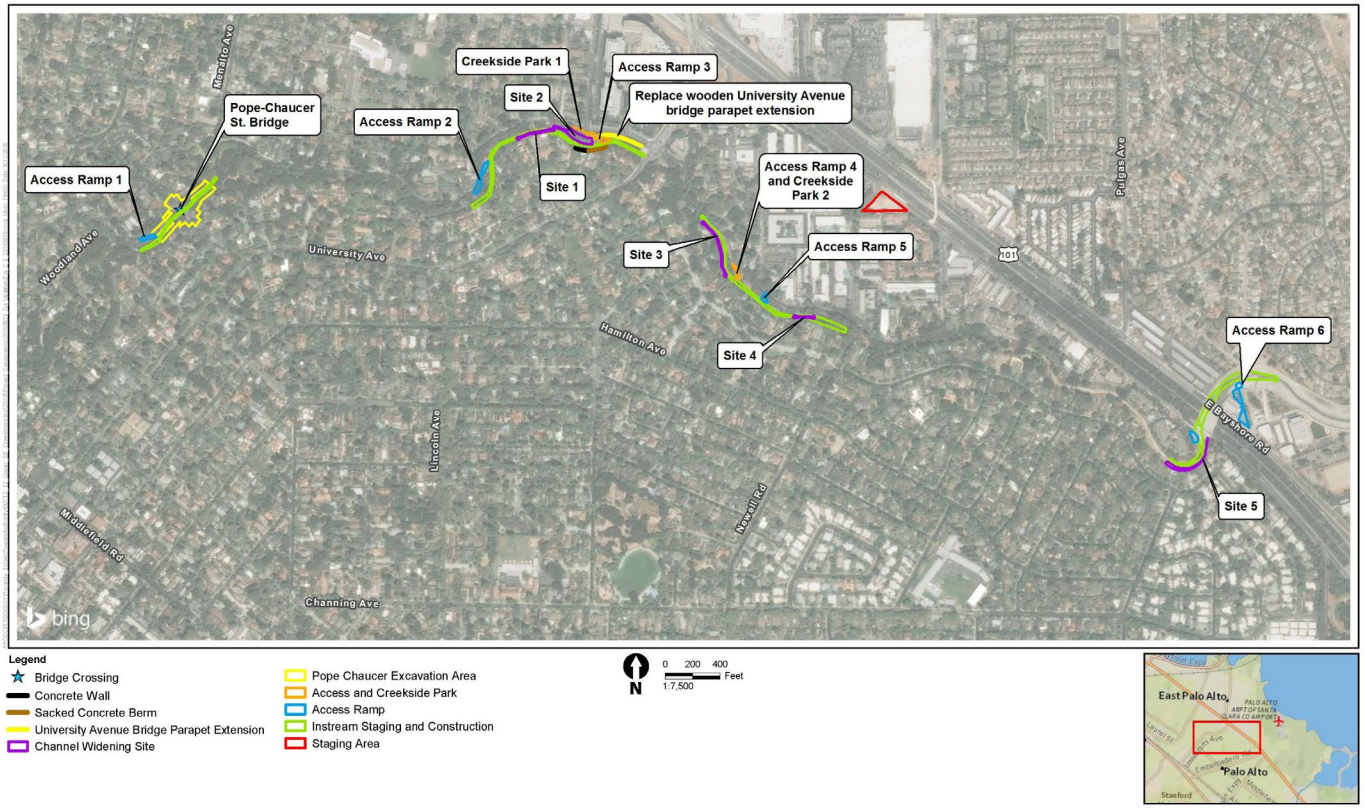


Figure 3. Location of Reach 2 Project Elements

~~Beginning at the upstream face of West Bayshore Road and continuing upstream of University Avenue.~~ The~~is~~ 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~~2~~-2024). The Newell Bridge replacement must be completed before the Pope Chaucer bridge work can begin.

Following project completion, the SFCJPA will explore with FEMA if creek widening and bridge replacements in Reach 2 can allow some properties to be removed from flood insurance requirements and/or pay lower premiums.

. 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 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, supplemented by ~~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's natural flood protection ~~to achieve a resilient "South Bay Sponge to provide protection against address~~ sea level rise.

Our completed Reach 1 Downstream project provides protection against flooding from San Francisquito Creek, but ~~the SFCJPA cannot request~~ requesting a letter of map revision from FEMA at this time may not be beneficial 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 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 risks, 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:

- 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 t~~ 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 and by U.S. Post 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 through its member agencies' accounts, 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. The SFCJPA responds as appropriate to media inquiries.

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, Executive Director and staff ~~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. All Board meetings are recorded and posted on the SFCJPA's website and YouTube channel.

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, are ~~can be~~ recorded and archived on the SFCJPA's website for future reference. Brief webinars, focusing on one topic, are ~~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. The SFCJPA has found webinars to be an effective communication tool. In the future, webinars will continue to be used to ~~may be helpful for~~ to inform~~ing~~ and engage~~ing~~ 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
- Menlo Park Fire Protection District
- Valley Water
- SFCJPA

- County of San Mateo
- County of Santa Clara
- 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, such as: ~~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~~ developed ~~ing~~ 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 Safe Clean Water and Natural Flood Protection 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~~ approved a permanent ~~updates to and the~~ extension of the Safe, Clean Water and Natural Flood Protection Program. ~~SCW program~~, ~~or not the outcome of this ballot measure is successful will have a significant impact on funding for the San Franciscquito 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.

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~~u~~pstream 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:

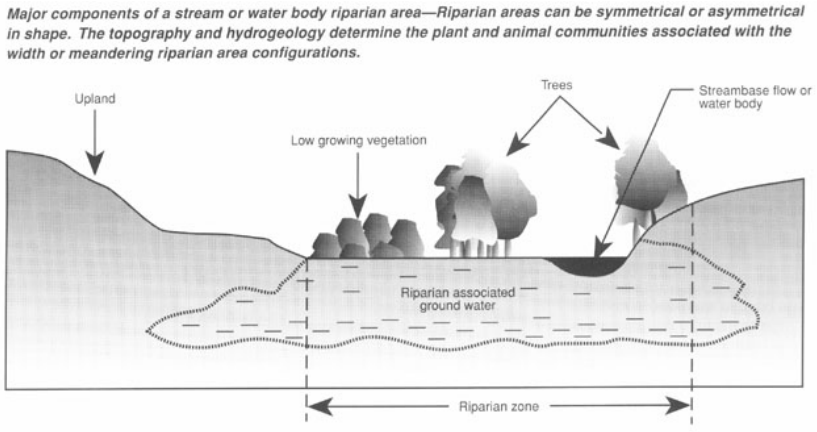

Image source: USDA, NRCS

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.

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

SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY
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REVISION HISTORY

Revision #	Revision Date	Revisions Made
0	November 2020	Initial Plan
1	October 2021	Minor updates to project nomenclature, annual updates, and incorporation of 2021 stakeholder comments
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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Contents

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 "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 20233~~2~~. Bridge construction is anticipated to begin in 20243~~3~~.

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

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 projects, supplemented by 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 initiated. 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. 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's utilization of natural flood protection to address sea level rise. This project has similar protection criteria as our completed Creek project from San Francisco Bay to Highway 101. The SFCJPA will communicate and coordinate with stakeholders and 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."*

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

1. Introduction

This document serves as a 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~~ is 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 the planning goals of the SFCJPA. This document:

- describes the San Francisquito Creek Watershed and the resources within the watershed,
- describes the evolution of the creek and re-engineering efforts since the 1850's
- 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.

Vison: 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.

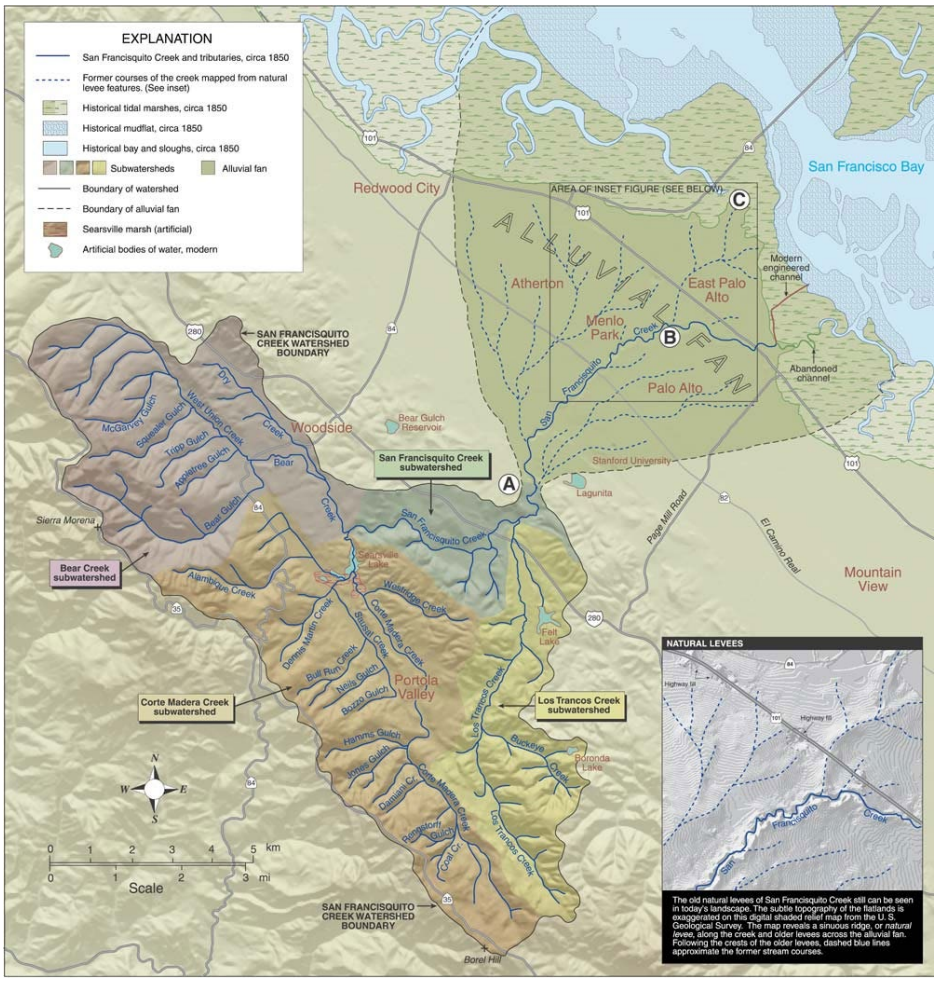
2. Description of the Watershed

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

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

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.

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 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 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 resources[1]

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

[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.*

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, 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.

Creek Evolution and Re-engineering

San Francisquito Creek was first modified by early European 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 reservoir is nearly filled with sediment which has created wetland habitat for waterfowl, bats, and other species.

The section of creek downstream of what is now Highway 101 was first channelized and re-routed in 1931 for planned development. The area previously occupied by the creek mouth and slough is now the Palo Alto Airport and golf course. When the creek was channelized between levees it was moved north to its current alignment, which effectively moved the boundary between San Mateo and Santa Clara counties along this reach.

The Newell Road Bridge, located between Woodland Avenue (East Palo Alto) and Edgewood Drive (Palo Alto), was built in 1911. In East Palo Alto, Newell Road connects to Woodland Avenue, which provides access to University Avenue and US 101. In the City of Palo Alto, Newell Road connects to two main thoroughfares, Channing Avenue and Embarcadero Road, which also provide access to US 101. This bridge has limited hydraulic capacity and will be replaced both for traffic safety and flow conveyance.

The Pope-Chaucer bridge, which connect Pope Street in Menlo Park to Chaucer Street in Palo Alto, was originally a wooden structure built in 1907, and soon thereafter was replaced by a concrete bridge in the same location. In 1948, the bridge deck was expanded to support a right turn lane for vehicles travelling north on Chaucer Street to turn right onto Woodland Avenue after crossing the bridge. To support the expanded bridge deck, the existing culvert, which is a hydraulic constriction, was added under the existing bridge and expanded deck. The right turn land was later abandoned, and in the 1980s oak trees were planted in the soil between the culvert and former road surface. The bridge will be replaced as part of the Reach 2 project.

At least two efforts were initiated in the 1950s and 1960s, partially in response to the 1955 flood, to straighten and channelize the creek from Middlefield Road to SF Bay. The plans were abandoned for several reasons, including the difficulty in acquiring needed land rights and community opposition.

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 San Francisquito Creek Trail is well traveled and is the location of many community events, including Moonlight Run, Great Race for Saving Water and Bay Day.

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 substations and 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 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.

Climate change is already manifesting in longer and hotter dry periods, and more extreme precipitation events. To the extent possible, the SFCJPA will take into consideration these new uncertainties in project design and construction.

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. The SFCJPA cannot transfer risks from one area to another so will evaluate each project to ensure that the design does not result in unintended consequences locally or regionally.

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.

Groundwater and Land Subsidence

Groundwater and surface water are hydraulically connected in the San Francisquito Creek Watershed (San Mateo County 2018). 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 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).

Regulatory Status of Creek and Watershed

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)
- 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.

The California Department of Water Resources has designated two groundwater Basins on each side of the creek that are also directly hydraulically connected in the watershed. In San Mateo County, it is Groundwater Basin 2-009.03 Santa Clara Valley- San Mateo Plain, and on the Santa Clara County side of the Creek, it is Groundwater Basin 2-009.02 Santa Clara Valley- Santa Clara Sub-basin (Department of Water Resources Bulletin 118, Groundwater Basins, 2021). The USGS designated the San Francisquito Cone Alluvial Aquifer and it is the most productive unit in the San Mateo Plain Groundwater Basin (San Mateo County 2018). The Sustainable Groundwater Management Act has classified the Santa Clara side as very high priority and the San Mateo side as very low priority (DWR Basin Prioritization 2021).

Hydrology

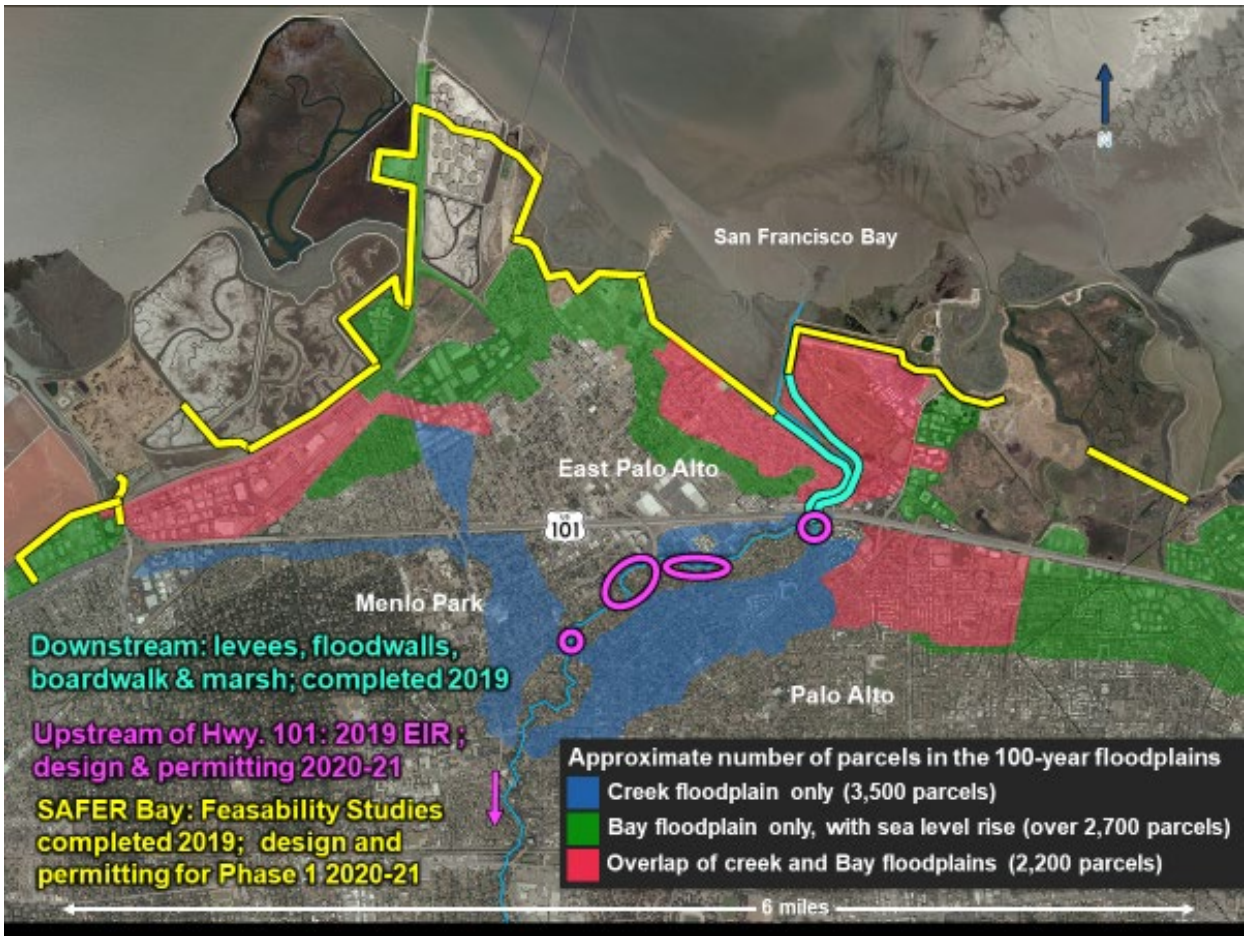
The San Francisquito Creek watershed encompasses an area of approximately 45 square miles on the south-central San Francisco Peninsula. The upper watershed primarily rural and mountainous, whereas the lower watershed (below Interstate 280) is increasingly urbanized and located in low (near sea level) 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.

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, during 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.



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 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. This parcel tax was made permanent in 2020. 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 reduce 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. Menlo Park is a key stakeholder in the design and implementation of SAFER Bay Phase 1, and was lead on a $50M FEMA BRIC grant that was identified for funding July 2021.

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, Woodland Park Apartments, Sand Hill Property management, West-of-Bayshore Community Association, 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 new CAP 205 partnership for 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 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 $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 (SBSPRA)

The SBSPRA has been a partner for the past six years on our SAFER Bay Project. We are working with the SBSPRA 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 SBSPRA 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 partnerships with SFEI and others 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 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 discuses 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**.**

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).

The SFCJPA will work with FEMA to determine if the completion of Reach 1 project will allow some properties, particularly those in East Palo Alto, to have lower premiums for flood insurance.

Reach 2 – Highway 101 to Pope Chaucer Bridge

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.

The City of Palo Alto has a parallel project to replace the Newell Street Bridge. Replacement of the Newell Street Bridge is part of the SFCJPA comprehensive plan but is being led by Caltrans and the City of Palo Alto. The bridge is a hydraulic constriction but is also functionally obsolete and therefore eligible for Caltrans funding to replace it for traffic safety. The new bridge is designed to Caltrans standards for safety and the SFCJPA design flow. Construction of the new bridge will be covered under the SFCJPA's regulatory permits for creek work.

This project will remove constrictions in the creek channel including concrete structures at four or five locations within Reach 2 (Figure 3).

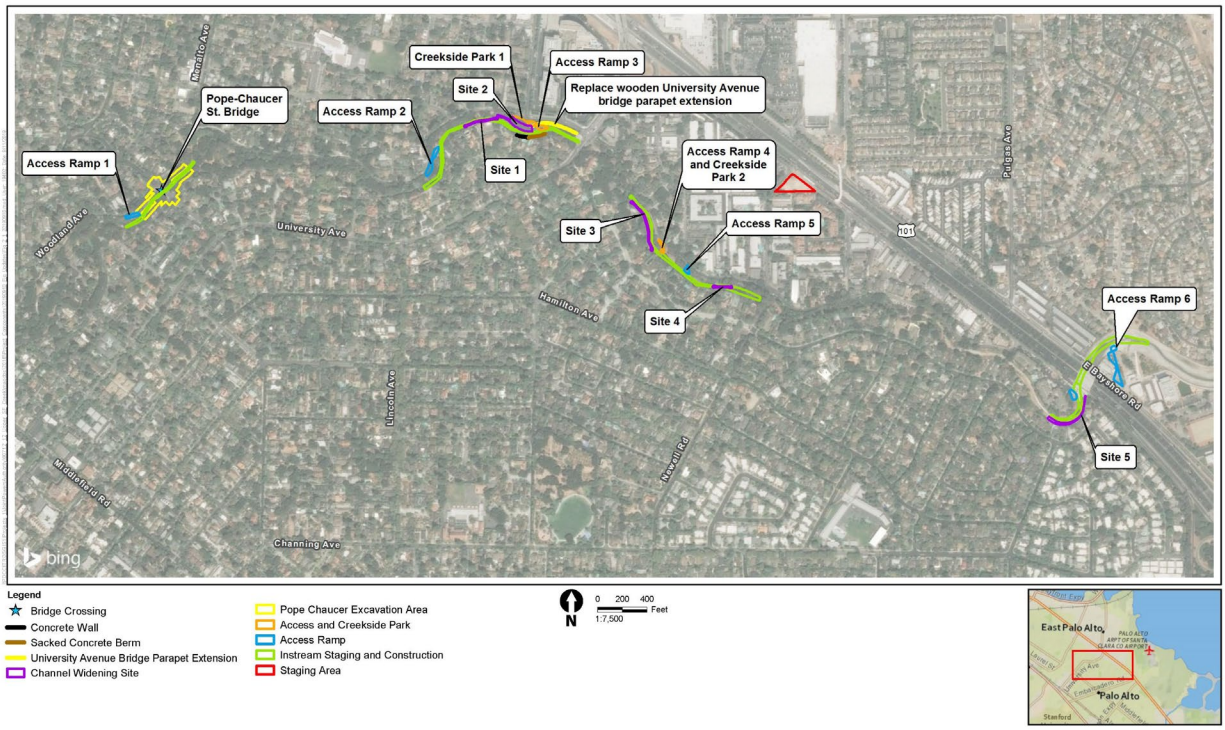


Figure 3. Location of Reach 2 Project Elements

The area around these project elements is fully developed, with Woodland Avenue 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.

Following project completion, the SFCJPA will explore with FEMA if creek widening and bridge replacements in Reach 2 can allow some properties to be removed from flood insurance requirements and/or pay lower premiums.

. 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 does not provide 100-year protection with FEMA freeboard by itself, the 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 water conveyance and capacity improvements, supplemented by 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.

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 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's natural flood protection against sea level rise.

Our completed Reach 1 Downstream project provides protection against flooding from San Francisquito Creek, but requesting a letter of map revision from FEMA at this time may not be beneficial because much of the area is also in the FEMA tidal floodplain. The SFCJPA's ultimate goal is to remove properties from the FEMA floodplain, and the associated requirement for flood insurance. SAFER Bay will build new levees and other flood control structures along the Bay in East Palo 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 risks, 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 project.

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:

- 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 – 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. Special announcements, such as those for community project updates, have also been ~~may also be~~ sent out via email specific distribution lists and by U.S. Post 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 through its member agencies' accounts, 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. The SFCJPA responds as appropriate to media inquiries.

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 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, Executive Director and staff 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. All Board meetings are recorded and posted on the SFCJPA's website and YouTube channel.

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, are recorded and archived on the SFCJPA's website for future reference. Brief webinars, focusing on one topic, are coordinated, promoted via newsletters, email distributions or social media posts, with moderate staff time and effort. Staff may choose to conduct the presentations themselves or find experts to make presentations. The SFCJPA has found webinars to be an effective communication tool. In the future, webinars will continue to be used to inform~~ing~~ and engage community members on a variety of topics.

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. Regarding building support for the long-term success of the SFCJPA, certain ideas or messages are important to instill, such as the importance of stream-side property owner stream stewardship, or 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. The SFCJPA developed a funding roadmap for the Reach 2 Upstream project. This roadmap will consider a broad range of funding options, including 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 Safe Clean Water and Natural Flood Protection 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 approved a permanent extension of the Safe, Clean Water and Natural Flood Protection Program.

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.

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~~u~~pstream 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:

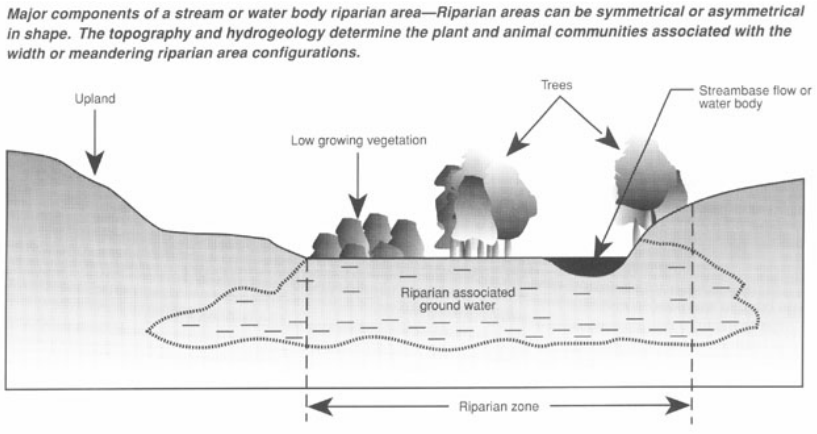

Image source: USDA, NRCS

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.

SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY

RESOLUTION NUMBER 21-10-28-C

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY ACCEPTING COMPREHENSIVE PLAN 2021-2022 UPDATE

BE IT RESOLVED by the Board of Directors of the San Francisquito Creek Joint Powers Authority that the Board of Directors hereby accepts the update to the SFCJPA's Comprehensive Plan.

Approved and adopted on October 28, 2021, the undersigned hereby certify that the foregoing Resolution was duly adopted by the Board of Directors of the San Francisquito Creek Joint Powers Authority.

INTRODUCED AND PASSED:
AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

_____ Date: 10/28/2021
Vice Chairperson

APPROVED:

_____ Date: 10/28/2021
Chairperson

APPROVED AS TO FORM:

_____
Legal Counsel Date: 10/28/2021

AGENDA ITEM 6.D. – Proposed Process for Executive Director's Annual Review

Background –

The Personnel Committee met to discuss formalizing the schedule and process for the regular review of the Executive Director (E.D.).

Discussion –

The following proposed process is based on the Personnel Committee's discussion, examples from other agencies, and conformity to the SFCJPA's budget schedule. The review schedule is tied closely with the budget schedule, which is referenced here as well.

The E.D. review shall occur each year on a fiscal year basis.

In February:

- Staff provides an early rough draft of budget to Finance Committee
- E.D. develops a self-evaluation and forwards it to each board member
- Personnel Committee convenes in early February to confirm format and distribution of E.D. evaluation that may include evaluation surveys (to Board and staff (internal), other key stakeholders (external), as the board determines, or as recommended by the Personnel Committee). The Personnel Committee will distribute evaluation materials and instructions after the February meeting.

In March:

- All evaluations (internal and external) to be received by the Personnel Committee two weeks before the March Board meeting.
- One member of the Personnel Committee shall compile and summarize the results
- The March Board meeting shall have a closed session where the review information is shared with the full board. The Board shall invite the E.D. into the closed session to discuss their findings and recommendations, including compensation or other contract details. The E.D. shall have the opportunity to discuss and respond to the findings and submit responses to the board in writing within one week following the Board's review.

In April:

- The regular open session Board agenda shall include an item regarding E.D. compensation and other relevant contract details.

Regarding E.D. review, if the Board does not come to a decision in the April meeting, the Board will convene a special closed session meeting with a quorum of the Board present as soon as possible prior to the May Board meeting to conclude decisions regarding the E.D. review.

E.D. compensation changes (if any) are integrated into the draft budget and presented at the May Board meeting as a final draft budget for the Board's consideration and passage.

In May:

- The Board considers and adopts the annual operating budget

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The Personnel Committee suggested the use of a standardized set of evaluation questions that cover the following topics: communications, budget, leadership objectives, culture/inclusion. Based on those recommendations, and drawing on examples from other agencies, in November, staff will draft and share with the Personnel Committee and the Board a set of internal and external review surveys for distribution in an electronic format for their consideration and approval.

This process, once approved by the Board, will be integrated into the SFCJPA Board Handbook, which will be presented for approval next month.

Agenda Item 7 - 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 $ 34,873,300.

Ancillary costs (construction management, mitigation, real estate, utility relocation): $13,749,836.

Uncertainties:

- Easement/access costs – These may vary depending on willingness of project neighbors and other variables.
- Whether or not we can defer widening Site 5 – This depends on whether upstream work impacts the hydrology and water surface elevation at Site 5 sufficiently to return project neighbors to the FEMA floodplain. We have requested information from FEMA and are awaiting reply.
- Utility relocation costs – We do not yet have an estimate from PG&E.
- Unknown cultural or historical resources encountered during construction – Stream banks are often associated with historical and cultural resources. Even though surveys have not indicated the presence of historical or cultural resources in areas of sub-surface construction, encountering these resources is possible.
- Tree removal and replacement costs – The costs for removing and replacing trees in compliance with community ordinances and project permit conditions is not yet known, because the final scope of tree impacts is not yet known, and one or more local ordinances may be changing during this project.

*Total Estimated Reach 2 Project Cost - **$48,632,136**.*

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 grant sources and for ways to reduce costs.

Identified Funding

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 – Presently $3M. Increasing budget request to $9M.

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 Identified Funding ~$38.3M.

The Funding Gap

Based on current project cost estimates, and current funding sources, in the *most optimistic* scenario, the funding gap is ~$1,913,136 (Total estimated known project costs – total identified funding). This number does not include a potential additional cost of $1.2M that VW estimates will be needed to move soil now temporarily stored near the Palo Alto Course Driving Range. The team is actively pursuing potential low or no costs options for permanent use of the excess soil (40,000cf) remaining from the Reach 1 project and working with the City of Palo Alto to ensure we honor their request to move the soil before they need the space for something else.

Funding Gap Scenarios

Scenario 1 – ~$10.3M gap. No additional grants, but all probable funding comes through. Assuming construction of Site 5.

This scenario is our present ‘status quo’. We believe the USACE CAP 205 process will be successful and result in a feasible project and ~$8.2M worth of channel widening work. We may be able to defer construction of Site 5 but are working to confirm that.

Scenario 2 ~$1.9M gap. Defer Site 5, expand HMGP grant to $9M to cover Pope/Chaucer bridge construction and related costs. USACE funding comes through.

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 - ~$10.1M 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 24+-month CAP 205 process will conclude without a funded project, resulting in a $10.6M funding gap.

Scenario 4 – Worst case scenario. Must construct Site 5. No USACE. No expanded HMGP. ~$24.5M gap.

Although unlikely, this scenario should be taken into consideration.

Possible cost escalations applicable to all scenarios - It is possible 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. Project costs may escalate because of unforeseen issues, in response to bids received, or because of macro-economic trends. Examples of cost escalations outside the SFCJPA's control include a competitive market for services and materials, escalating costs of labor or materials, legal challenges, the unknowable costs associated with utility relocations and encountering cultural resources.

<u>Additional Information</u>

"Local Match"

Some amount of locally sourced funding will be necessary as "local match" to federal or State grants. This amount can vary by grant 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”. The amount of local match will depend on the circumstances of funding and project progress.

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. However, if project schedules change, we are confident that we can work with DWR to modify the grant deliverable 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)

Also, to keep in mind…

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 – by any combination of suitable alternatives - and the remainder is directly funded by members.
    - The gap is financed in phases, as funding is needed for specific project elements.

Timeline –

Anticipating channel widening and bank work in 2023, the schedule would be:

Permits/Approvals must be obtained by November 2022, and funding must be fully identified / secured, and a construction funding agreement signed by December 2022, to proceed with the following schedule:

Advertise widening and restoration contract and Newell Road Bridge replacement contract – January 2023

Select/Award contracts – March 2023

Construction – April 2023 – October 2023 in channel, punch list activities through January 2024.

Advertise Pope-Chaucer replacement contract – January 2024

Construction – April 2024 – October 2024 in channel, punch list activities through January 2025.

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	$8,202,000	$1,230,300	$820,000	$250,000	$1,200,000	$11,702,300
Channel Improvements Sites 1 - 4	$10,500,000	$1,575,000	$357,000	$3,800,000	$1,000,000	$17,232,000
West Bayshore Inlet	$6,900,000	$1,035,000	$234,000	$0	$250,000	$8,419,000
Total Cost Estimate	**$34,873,300**	**$5,058,150**	**$1,578,686**	**$4,163,000**	**$2,950,000**	**$48,632,136**

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

SFC R2 Current Probable 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	$9,000,000	$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**	**$10,954,550**	**$11,075,000**	**$6,084,000**	**$32,213,150**

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. We are confirming with FEMA that they concur with our modeling and analyses.

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 increase 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

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 the 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. We are considering a total request of $9M. 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 and we can 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.

Historical Project Funding Contributions

It was the board's intention to discuss the funding framework for Reach 2 without reference to the prior project's funding allocations. However, the information is presented here as a point of reference in case it is useful for the board's discussions.

Funding for Bay101 (Reach I)	Paid to project	Paid by project
Other (Fee for bid docs)	$ 100.00	
City of East Palo Alto	$ 1,260,000.00	
City of Menlo Park	$ 800,000.00	
City of Palo Alto	$ 400,000.00	$3,008,198.00*
San Mateo	$ 693,778.58	
Santa Clara	$ 2,596,615.70	
As of 11/03/2020	$ 5,750,494.28	

*Project budgeted expense.