



SAN FRANCISQUITO CREEK  
JOINT POWERS AUTHORITY

**Notice of Regular Meeting of the Board of Directors**

**Thursday, May 25, 2023**

**3:30 P.M.**

**City of Palo Alto City Council Chambers**

**250 Hamilton Avenue, Palo Alto, CA**

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

**Hybrid Registration:**

**You are invited to a Zoom meeting.**

**When: May 25, 2023, 03:30 PM Pacific Time (US and Canada)**

**Register in advance for this meeting:**

[https://us02web.zoom.us/meeting/register/tZAqd--gpzooHtwGhQjSOeEj7-m\\_mG3Ttkw9](https://us02web.zoom.us/meeting/register/tZAqd--gpzooHtwGhQjSOeEj7-m_mG3Ttkw9)

**After registering, you will receive a confirmation email containing information about joining the meeting.**

1. CALL TO ORDER AND ROLL CALL
2. APPROVAL OF AGENDA
3. APPROVAL OF MEETING MINUTES April 27, 2023, Regular Board Meeting
4. PUBLIC COMMENT: *Individuals may speak on a non-agendized topic for up to three minutes.*
5. GUEST PRESENTATION: Dr. Jenny Suckale, of Stanford University, will present a summary of her research paper "Increasing equity in flood-risk mitigation planning. Lessons from San Francisquito Creek, California."
6. CLOSED SESSION:
  - A. PUBLIC EMPLOYEE PERFORMANCE EVALUATION  
Title: Executive Director
  - B. CONFERENCE WITH LABOR NEGOTIATOR  
Agency designated representative: Board Member Ruben Abrica  
Unrepresented employee: Executive Director

**750 Menlo Ave. Suite 250. Menlo Park, CA 94025**

**SFCJPA.ORG**



SAN FRANCISQUITO CREEK  
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7. ACTION ITEMS

- A. Review and consider adopting the proposed Fiscal Year 2023/2024 SFCJPA Operations Budget
- B. Review and consider adopting Resolution 23-05-25-A to Authorize the Executive Director to Negotiate and Execute an Amendment to the Master Service Agreement (MSA) for HDR, Inc., pertaining to HDR's consulting services in support of the SAFER Bay Project.
- C. Review and consider adopting Resolution 23-05-25-B to Authorize the Executive Director to Negotiate and Execute Amended Task Order #4 (TO4) to the Master Service Agreement pertaining to HDR's services for the SAFER Bay Project.
- D. Review and consider adopting Resolution 23-05-25-C to Authorize the Executive Director to Negotiate and Execute a Contract Amendment with Environmental Science Associates (ESA) for Reach 2 Permit Support.

8. INFORMATION ITEMS

- A. Executive Director's Report

9. Board Member Announcements, Information Items, and Requests (Information only)

10. ADJOURNMENT

PLEASE NOTE: Board meeting Agenda and supporting documents can be viewed online no later than 3:30 p.m. on Monday, May 22, 2023, at [sfcjpa.org](http://sfcjpa.org) -- click on the "Meetings" tab near the top. The Board Meeting package will be emailed to those on our Board Meeting distribution list prior to the Board meeting date. Contact SFCJPA Board Clerk, Miyko Harris-Parker at [MHParker@sfcjpa.org](mailto:MHParker@sfcjpa.org) if you are not on this list and would like to be added.

**San Francisquito Creek Joint Powers Authority**  
**May 25, 2023, Regular Meeting of the Board**  
**Agenda Item 3**  
**April 27, 2023, Regular Board Meeting Minutes**  
**DRAFT**

Director Combs called the meeting to order at 4:02 p.m., at the City of East Palo Alto Council Chambers, East Palo Alto, CA. This meeting was conducted as a hybrid meeting with all members of the Board and SFCJPA staff in person and other meeting attendees participating in person and via streaming video and teleconference call.

Public input was solicited on each item and all public comments received are noted herein.

**1) ROLL CALL**

Members Present: Director Ruben Abrica, City of East Palo Alto  
Director Drew Combs, City of Menlo Park  
Director Rebecca Eisenberg, Santa Clara Valley Water District (Valley Water)  
Director Greer Stone, City of Palo Alto

Members Absent: Director Dave Pine, San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline)

SFCJPA Staff Present: Margaret Bruce, Executive Director  
Miyko Harris-Parker, Staff  
Kevin Murray, Staff  
Tess Byler, Staff

Legal Present: Lori Liu

**2) APPROVAL OF AGENDA**

ACTION: Motion and second (Eisenberg/Combs) to approve the agenda, passed 4-0.

Roll call vote:  
Director Abrica Aye  
Director Combs Aye  
Director Eisenberg Aye  
Director Stone Aye

Director Pine not present.

**3) APPROVAL OF MEETING MINUTES: March 23, 2023, Special Meeting minutes**

ACTION: Motion and second (Eisenberg/Abrica) to approve the March 23, 2023, Special Meeting minutes, passed 3-0-1.

Roll call vote:  
Director Abrica Aye  
Director Combs Aye  
Director Eisenberg Aye  
Director Stone Abstained

Director Pine not present.

**4) PUBLIC COMMENT**

None.

**San Francisquito Creek Joint Powers Authority**  
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**DRAFT**

**5) ACTION ITEMS**

Review and consider updates to the SFCJPA's Mission and Vision Statements, provide direction to staff and, if applicable, adopt resolution 23-04-27-A.

ACTION: Motion and second (Eisenberg/Abrica) consider accepting the updates to the SFCJPA's Mission and Vision Statements adopting resolution 23-04-27-A approved as amended to include the language protecting people and property equitably 4-0.

Director Eisenberg expressed appreciation for the clarifying and clear updates. Director Stone expressed appreciation that mitigation and flood risk have been acknowledged in the updates. Director Abrica suggested that the term equitable be included. Director Eisenberg concurred.

Roll call vote:

Director Abrica Aye

Director Combs Aye

Director Eisenberg Aye

Director Stone Aye

Director Pine not present.

**6) INFORMATION ITEMS**

Agenda Item 6.A. Conflict of Interest Code update

Executive Director Margaret Bruce gave notice that the 45-day public comment period on the SFCJPA updated Conflict of Interest code, which was reviewed and amended by SFCJPA legal, with input from the FPPC, is now open.

Agenda Item 6.B. Executive Director's Report

Ms. Bruce presented the Executive Director's report.

Director Eisenberg thanked staff for the April 20, 2023, Community Update meeting.

Director Abrica asked for an update on the scheduling of presentations to the City Councils and County Boards. Ms. Bruce stated that she had reached out to member agency staff and is waiting for responses.

Director Combs thanked staff for being proactive with the banking solutions.

Jerry Hearn thanked staff for the April 20, 2023, Community Update and asked where the mitigation measures associated with any design changes in the Reach II/Reach III riparian areas will be. Senior Project Manager Kevin Murray responded saying that the plantings for project mitigation will be near the Arastradero Preserve.

**7) BOARD MEMBER ANNOUNCEMENTS, INFORMATION ITEMS, AND REQUESTS**  
**(INFORMATION ONLY)**

Director Abrica asked for an update on the creek lidar inspection. Ms. Bruce explained that the inspection cannot proceed until the creek is completely dry. Director Abrica shared that the City of East Palo Alto recently held a development meeting regarding two large projects and that he told the project consultants to be sure to include OneShoreline and the SFCJPA in their project update communications.

**8) ADJOURNMENT**

Adjourned at 4:36 pm.

**San Francisquito Creek Joint Powers Authority  
May 25, 2023, Regular Meeting of the Board  
Agenda Item 3  
April 27, 2023, Regular Board Meeting Minutes  
DRAFT**

Minutes drafted by Clerk of the Board: Miyko Harris-Parker.

## **Agenda Item 7.A. Budget Line Item Descriptions**

The following is a description of the draft SFCJPA budget for fiscal year 23-24 by line item.

### **Personnel (Budget line items 1-10)**

Executive Director Salary – 3.5% to be proposed in negotiations.

Executive Director \$5000/year Transportation Allowance (previously line item #2) – Eliminate and combine with Salary.

The SFCJPA's salaries overall are on the low side of comparability. Last year I informed the board that I would be benchmarking SFCJPA staff salaries with the intention of adjusting accordingly in the future. This budget reflects the first substantial change of those adjustments. The salary furthest from benchmarked salaries for similar positions (via Salary.com<sup>i</sup>) was that of the JPA's Finance and Administration Manager/Clerk of the Board. I am proposing a salary adjustment to bring compensation for this role into the low-to-mid-range of compensation as documented on Salary.com.

Finance and Administration Manager/Clerk of the Board (FAM/CB) Salary – proposed increase from \$116,483/year to \$140,872 or 20% increase. Of that increase 7.5% is for a COLA reflecting higher costs associated with the SF Bay Area and 12.5% salary adjustment reflecting professional development and accomplishments, contribution to the organization, and salary comparability.

Senior Project Managers (SPM) Salaries – I am recommending a Cost-of-Living Adjustment (COLA) of 3.5% for one Sr. Manager, reflecting cost of living increases outside the SF Bay Area. I am recommending a small salary adjustment of 2.5% and a larger COLA of 7.5% for the other Sr. Manager based on higher costs associated with the SF Bay Area.

These adjustments reflect costs of living increases and balance the Director's desire to keep staff salaries competitive while moderating cost increases for JPA members.

Part-time Interns – I have initiated a part-time internship program. For the next FY (23-24) two internship positions are envisioned: one to support operations and administration and one to support projects. I anticipate paying \$20/hour for *up to* 20 hours/week. During regular class sessions, this will likely be less, and will vary, but will not be less than 12 hours/week. The new budget item is \$17,000/year.

### **COLA**

This budget line item reflects the total of the Executive Director's recommended Cost-of-Living adjustments (COLA) for SFCJPA employees. COLA is listed as a separate line item. The budget per Board direction/request COLA will be a separate line item so that

the Board can see the entire dollar amount that will impact the budget for COLA increases.

### **Employee Benefits**

The cost of health insurance and other benefits continues to increase on par with other economy-wide cost increases. Providing employee benefits through the ACWA-JPIA program has been the most cost-effective for a small governmental organization such as the SFCJPA. ACWA-JPIA benefits include medical, dental, vision and life insurance. The SFCJPA participates in the CALPERS retirement program and Short-term and Long-term disability are provided through Standard Insurance. Final numbers will be confirmed sometime in May.

### **Membership Dues**

This budget line item covers the SFCJPA's membership in:

Association of California Water Agencies (ACWA/ACWAJPIA) – ACWA/JPIA provides our employee health and life insurance benefits. This is associated with our annual budget and will be set once our budget is confirmed. For reference, in FY22-23 the cost was \$9500.

California Special Districts Association (CSDA) – CSDA provides education and training, current information that is crucial to a special district's management and operational effectiveness, industry-wide litigation and public relations support, legislative advocacy, capital improvement and equipment funding. Our membership with CSDA also provides us with a discount on our worker's compensation and general liability insurance programs which are provided by Special District Risk Management Authority (SDRMA). For reference, in FY 22-23, membership dues were \$1600. We anticipate the cost for FY 23-24 will be slightly higher.

City Clerks Association of California (CCAC) – CCAC provides leadership and management training opportunities, enhancing levels of service responsive to the growing demands within our organizations, fostering proactive programs to promote effective legislation, and promoting networking among members. Membership cost is about \$200 per year.

Government Finance Officers Association (GFOA) – GFOA represents public finance officials throughout the United States and Canada. The association's more than 20,000 members are federal, state/provincial, and local finance officials deeply involved in planning, financing, and implementing thousands of governmental operations in each of

their jurisdictions. GFOA's mission is to advance excellence in public finance. Membership cost is about \$175.

International Institute Municipal Clerks (IIMC) – the premier organization for Municipal Clerks. Founded in 1947, IIMC has 75 years of experience improving the professionalism of Municipal Clerks representing towns, small municipalities, and large urban jurisdictions of more than several million people. Annual membership cost is about \$230.

National Association of Government Archives and Records Administrators (NAGARA) – promotes and provides awareness and understanding of government archives and records management programs; to encourage the continuous exchange of information among government archives and records management agencies to improve their programs and services; to provide opportunities for government records administrators and archivists at each level of government to meet and discuss problems and issues relevant to their level of government; to develop and improve professional standards of government archives and records administration. Annual dues are anticipated to be about \$100.

Bay Area Flood Protections Agencies group (BAFPAA) – provides a unified voice for Bay Area Flood Protection Agencies in developing and implementing regional plans and working with other regional agencies at the State and Federal level. BAFPAA participates in the Integrated Regional Water Management Planning (IRWMP) efforts in the Bay Area to integrate projects and programs across all functional service areas. BAFPAA membership is normally approximately \$5000 per year, but BAFPA has decided to provide the SFCJPA membership for free, because two of our members already participate in BAFPA. The requested budget for memberships reflects this complementary membership.

The proposed budget amount reflects projected membership dues. Our ACWA/JPIA dues are indexed to our annual budget; as it changes, so do these dues.

### **Payroll Administration/Fees**

The SFCJPA utilizes QuickBooks payroll. The annual cost is estimated to be \$3,500. This fee is charged to support the payroll function and reporting.

### **Employer Taxes**

State and federal payroll taxes are based on employee compensation and are estimated to be \$85,000.



## **Contract Services (Budget line items 11-13)**

### **Legal Counsel**

Legal counsel costs are anticipated to increase, as we get closer to construction and have to work through a variety of project-related agreements (property access, funding, etc.). We are estimating \$150,000 for legal services in the 23-24 FY.

### **Auditor**

The current contract for auditing services is set to expire after the completion of our FY22-23 audit. Per the contract, \$20,000 is the known cost of the annual audit. The board should anticipate a different budget amount based on a new contract/auditor in the ongoing fiscal years. An RFP will be released for new audit services for FY23-24 at the completion of the FY22-23 audit.

### **Project Consultants**

This budget line item is for consultant support resources which include (but are not limited to): providing technical support for responding to grant funding opportunities, preparation of outreach materials (graphics, translation, production), advanced technical website support, and maintenance and upgrades to the Flood Early Warning System. For all these items, we are projecting \$85,000 in FY 23-24 costs.

### **Upstream Detention Project expenses**

Investigation of the feasibility and cost-benefit of an off-stream detention basin in the upper watershed on Stanford lands, including geotechnical, environmental, and cultural resources investigations. Preliminary evaluation work has been done in the current FY. We anticipate this work to continue into the 23-24 fiscal year with funds provided in previous budgets. Additional funding of \$50,000 in the FY 23-24 budget will be applied to modeling and calculations needed to determine the total amount of upstream storage that would be needed to remove all parcels from the FEMA floodplain.

### **USACE CAP 205**

Non-federal match to U.S. Army Corps of Engineers Continuing Authorities Program Section 205 study.

This item was funded in the previous two annual budgets and by borrowing from unspent Reach 1 maintenance funding. Due to cost overruns associated with adjusting planning based on the December 31 storms, and to maximize future funding available for construction, the total Non-Federal cost to close is estimated to be \$155,000.

The \$1.230M study, which is cost-shared 50/50 between the SFCJPA and the federal government, is the first necessary phase to secure up to \$10M in total federal investment through the Corps of Engineers for Reach 2 widening. The FY 23-24 contribution covers the cost of the USACE CAP 205 team for the SFCJPA's 23-24

Fiscal Year (which does not coincide with the USACE FY). The 22-23 FY increase does not increase our non-federal share/commitment to the study (which remains at 50%). The amount of our contribution for FY 23-24 is based on the USACE current total study cost estimate of \$1.230M. The Corps team is completing the federal reporting required under the CAP 205 program and drafting the Design and Implementation Cost Share Agreement. Execution of this agreement will constitute federal commitment of a maximum of \$10M in construction funding.

### **Reach 1/Downstream O & M**

Annual maintenance costs for project mitigation sites have been about \$70k/year. This item covers regulatory monitoring and reporting, as well as weeding, watering, and plant replacement to meet the mitigation success criteria required by our construction permits. The cost for this item increased significantly last year due to drought conditions. This year's budget includes \$33,000 to cover cost overruns from last year, as well as a more conservative estimate of \$107,000 for maintenance activities and consultant maintenance recommendations and reporting. Additional expenses to cover LiDAR or other work items being identified for the 5-year report to the regulatory agencies may be added at a later date, if needed.

### **Administrative (Budget line items 14-26)**

#### **Computers/Software**

This line item of \$8,500 ensures we are current with all necessary software licenses and have the tools to conduct our work effectively.

Details:

- One new laptop for Student Interns
- All Microsoft office suite tools
- SmartSheet
- Harvest Timekeeping
- QuickBooks
- Adobe
- Netfile
- Potential software or tools for JPA hybrid meetings

#### **Meeting Supplies**

This budget line item of \$5000 covers the cost of meeting expenses. This includes Zoom software license enabling hybrid board meetings, refreshments, placards, and name cards.

## **Travel/Training**

This \$9,000 budget line item includes professional development, tuition reimbursement, travel expenses and costs for seminars and conferences for all four SFCJPA staff members.

## **Office Supplies**

\$2,000 covers printer ink, paper, and other miscellaneous office supplies.

## **Telecommunication**

This \$7,500 line item covers cell phone allowances for staff, four office telephones and associated VOIP system, as well as Comcast for business monthly costs.

## **IT Support**

\$20,000 covers IT support through contracted services from RelyOnIT. This includes regular troubleshooting, security check-ups, coordination of software updates, advice regarding system upgrades, advice regarding new technology implementation and integration.

## **Postage**

\$500 covers postage for anticipated SFCJPA U.S. Mail correspondence.

## **Printing/Design**

\$1,500 covers printed meeting materials, presentations, posters, business cards, or similar.

## **Website**

\$5,000 covers the cost of our subscription to SquareSpace, and Nexcess. SquareSpace is the design framework for the SFCJPA website, Nexcess provides hosting services for our website.

## **Office Lease**

The budget line item of \$43,000 for FY 23-24 for office lease reflects a 3% increase beginning in as per our lease agreement.

## **General Contingency (Budget line item 27)**

This \$35,000 budget field is for use of items not classifiable in other budget fields as well as contingency funds to cover expenditures in administrative or contract services at the Executive Director's discretion.

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<sup>i</sup> Salary.com information: <https://www.salary.com/research/salary/benchmark/finance-manager-salary/ca>  
<https://www.salary.com/research/salary/benchmark/administrative-manager-salary/ca>

**DRAFT**

	FY2022/2023 Approved Budget	FY2022/2023 current expenses as of 05/17/2023	FY2023/2024 preliminary <b>Draft</b> Proposed Budget	% Increase/Decrease Per Category from FY21/22 approved budget
<b>REVENUES</b>				
Member Contributions towards expenses (\$375,798 x 5)	1,759,670	1,759,670	1,878,990	6.8%
Member Contributions towards reserves (per reserve policy approved by Board in 2020) (\$46,974.75 x 5)	219,960	219,960	234,874	6.8%
<b>Total proposed FY22/23 Member Contribution \$1,979,630</b>				
Interest	3,500	22,970	10,000	185.7%
<b>Total Revenues</b>	<b>1,983,130</b>	<b>2,002,600</b>	<b>2,123,864</b>	<b>7.1%</b>
<b>EXPENSES</b>				
Acct.	Description	Amount	Amount	Amount
<b>Personnel</b>				
1	Executive Director Salary	180,000	157,500	185,000 2.8%
2	E.D. Transportation Allowance	5,000	4,375	- -100.0%
3	Finance & Admin. Mgr./Clerk of the Board (FAM/CB) Salary	111,467	112,953	131,044 17.6%
4	Senior Project Mgr. (SPM) Salary	129,037	117,988	134,843 4.5%
5	Senior Project Manager (SPM) Salary	129,037	117,988	138,214 7.1%
	Internship Program	-	-	17,000 100.0%
6	COLA	16,629	-	- 88.8%
7	Employee Benefits	260,000	233,223	260,000 0.0%
8	Membership Dues	15,000	12,894	- -13.3%
9	Payroll Administration/Fees	3,000	2,240	3,500 16.7%
10	Employer Taxes	65,000	43,971	- 30.8%
	<b>Subtotal Personnel</b>	<b>914,170</b>	<b>803,132</b>	<b>998,998 9.3%</b>
<b>Contract Services</b>				
11	Legal Counsel	130,000	54,483	150,000 15.4%
12	Auditor	20,000	-	- 0.0%
13	Project Consultants (Flood Early Warning System, Ad Hoc Technical services, etc.)	70,000	25,396	- 57.1%
	Upstream Detention Project expenses	150,000	98,434	50,000 -66.7%
	Reach 2 Supplementary EIR	155,000	-	- -35.5%
	Cap 205	143,000	360,000	155,000 8.4%
	Reach 1 O&M	70,000	61,400	- 100.0%
	<b>Subtotal Contract Services</b>	<b>738,000</b>	<b>599,712</b>	<b>725,888 -1.8%</b>
<b>Administrative</b>				
14	Computers/Software	8,000	10,018	8,500 6.3%
15	Meeting Supplies	5,000	2,714	5,000 0.0%
16	Travel/Training	8,000	6,294	9,000 12.5%
17	Office Supplies	1,500	697	2,000 33.3%
18	Telecommunication	8,600	4,554	7,500 -12.8%
19	IT	18,000	33,806	20,000 11.1%
20	Postage	150	50	500 233.3%
21	Printing/Design	750	221	1,500 100.0%
22	Website	500	359	5,000 900.0%
23	Liability Insurance	15,000	14,572	- 16.7%
24	Office Lease	42,156	34,420	- 2.0%
25	Utilities	-	-	- -
26	Office furniture/maintenance	8,800	4,071	500 -94.3%
	<b>Subtotal Administrative</b>	<b>116,456</b>	<b>111,777</b>	<b>3.0%</b>
<b>General Contingency</b>				
27	General Contingency	35,000	1,680	35,000 0.0%
<b>Total Expenses</b>	<b>1,803,626</b>	<b>1,516,301</b>	<b>1,878,990</b>	<b>4.18%</b>

**1st Draft FY 2023/2024 Budget**

**REVENUES**

Member Contributions towards expenses (\$375,798 x 5)	<b>1,878,990</b>
Member Contributions towards reserves (per reserve policy approved by Board in 2020 12.5% Min reserves contribution) (\$46,974.75 x 5) <b>Will be transferred to SFCJPA reserves account</b>	<b>234,874</b>
<b>Total Member Contribution \$2,113,863</b>	
Interest	10,000
<b>Total Revenues</b>	<b>2,123,864</b>

Acct.	Description	Amount
1	Executive Director Salary	185,000
2	Finance & Admin. Mgr./Clerk of the Board (FAM/CB) Salary	131,044
3	Senior Project Mgr. (SPM) Salary	134,843
4	Senior Project Manager (SPM) Salary	138,214
5	Internship Program	17,000
6	COLA	31,389
7	Employee Benefits	260,000
8	Membership Dues	13,000
9	Payroll Administration/Fees	3,500
10	Employer Taxes	85,000
	<b>Subtotal Personnel</b>	<b>998,990</b>
11	Legal Counsel	150,000
12	Auditor	20,000
13	Project Consultants (New stream gauges, Ad Hoc Technical services, Communications etc.)	110,000
	Reach 2*	100,000
	Upstream Detention (Reach 3) Project expenses	50,000
	Cap 205	155,000
	Reach 1 O&M	140,000
	<b>Subtotal Contract Services</b>	<b>725,000</b>
14	Computers/Software	8,500
15	Meeting Supplies	5,000
16	Travel/Training (professional Development)	9,000
17	Office Supplies	2,000
18	Telecommunication	7,500
19	IT	20,000
20	Postage	500
21	Printing/Design	1,500
22	Website	5,000
23	Liability Insurance	17,500
24	Office Lease	43,000
25	Office furniture/maintenance	500
	<b>Subtotal Administrative</b>	<b>120,000</b>
26	General Contingency	<b>35,000</b>
<b>Total Expenses</b>		<b>1,878,990</b>

1st Draft FY 2023/2024 Budget		
<b>REVENUES</b>		
Member Contributions towards expenses (\$375,798 x 5)		
Member Contributions towards reserves (per reserve policy approved by Board in 2020 12.5% Min reserves contribution) (\$46,974.75 x 5)		
<b>Will be transferred to SFCJPA reserves account</b>		
<b>Total Member Contribution \$2,113,863</b>		
Interest		10,000
<b>Total Revenues</b>		<b>2,123,864</b>
Acct.	Description	Amount
1	Executive Director Salary	185,000
2	Finance & Admin. Mgr./Clerk of the Board (FAM/CB) Salary	131,044
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10	Employer Taxes	85,000
	<b>Subtotal Personnel</b>	<b>998,990</b>
11	Legal Counsel	150,000
12	Auditor	20,000
13	Project Consultants (New stream gauges, Ad Hoc Technical services, Communications etc.)	110,000
	Reach 2*	100,000
	Upstream Detention (Reach 3) Project expenses	50,000
	Cap 205	155,000
	Reach 1 O&M	140,000
	<b>Subtotal Contract Services</b>	<b>725,000</b>
14	Computers/Software	8,500
15	Meeting Supplies	5,000
16	Travel/Training (professional Development)	9,000
17	Office Supplies	2,000
18	Telecommunication	7,500
19	IT	20,000
20	Postage	500
21	Printing/Design	1,500
22	Website	5,000
23	Liability Insurance	17,500
24	Office Lease	43,000
25	Office furniture/maintenance	500
	<b>Subtotal Administrative</b>	<b>120,000</b>
26	General Contingency	35,000
<b>Total Expenses</b>		<b>1,878,990</b>

FY23/24	FY22/23	Percent Change
<b>Member Contribution per agency towards expenses:</b>	<b>Member Contribution per agency towards expenses:</b>	Percent change from FY22/23 to FY23/24
\$375,798.00	\$351,934.00	7%
<b>Member Contribution per agency towards reserves:</b>	<b>Member Contribution per agency towards reserves:</b>	
\$46,974.75	\$43,992.00	7%
<b>Total Member contribution per agency:</b>	<b>Total Member contribution per agency:</b>	
\$ 422,772.75	\$ 395,926.00	7%

Reserves Total: \$898,758.04		
1999-2020	\$	184,583.14
FY21/22	\$	259,341.15
Fy22/23	\$	219,960.00
FY23/24	\$	234,873.75

Current Bank Balances as of 05/17/2023			
OPS Checking:	LAIF:	Total SFCJPA Reserves:	Total SFCJPA Savings:
\$ 105,031.95	\$ 1,747,234.20	\$ 848,476.16	\$ 1,087,832.89
Ops Savings:			
\$ 189,074.85			
SAFER:			
\$ 117,228.07			
Reach II & III:			
\$ 15,192.99			
Reach I:			
\$ 29,769.43			

**Agenda Item 7.B.** – Review and consider adopting Resolution 23-05-25-A to Authorize the Executive Director to Negotiate and Execute a First Amendment to the Master Service Agreement (MSA) with HDR Engineering, Inc., for the SAFER Bay Project.

## **Background**

The SFCJPA contracted with HDR Engineering, Inc. (HDR) in October 24, 2013 utilizing a Master Service Agreement and Task Order framework to support planning and design of the SAFER Bay Project. Over the course of HDR's support for the SAFER Bay project, there have been four task orders. Three have been completed.

## **Discussion**

The original MSA, dated October 24, 2013, contains contact and other information that is out of date.

Additionally, the original MSA contains an expenditure cap that will be exceeded with the implementation of the scope of work enabled by the recent award and acceptance of the San Francisco Bay Restoration Authority (SFBRA) grant award of \$1,000,000 and subsequent supplemental award of up to \$3,980,000, necessitating an expansion of the expenditure cap.

Further, the original MSA provided for \$1M in general liability coverage, but it is now common practice for contracts and projects of this scope to require \$2M in general liability coverage.

Included in your board packet is the proposed MSA contract amendment which summarizes the existing contract sections to be updated, alongside the draft proposed amendments highlighted in bold font.

## **Recommendation**

Accept the proposed general conditions of the amendment and authorize the Executive Director to negotiate and execute the Amendment to the HDR MSA by approving resolution 23-05-25-A.



**First Amendment to the Master Service Agreement (MSA) between HDR Engineering, Inc. and the San Francisquito Creek Joint Powers Authority (SFCJPA)**

This First Amendment (“Amendment”), effective as of May 25, 2023, is entered into between THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY, a California joint powers authority (“Authority”) and HDR ENGINEERING, INC., a California corporation. (“Consultant”) to amend the terms of the Master Services Agreement (“Agreement”) between the parties, dated October 24, 2013.

**WHEREAS**, the parties desire to amend the Agreement to update the compensation cap, increase the level of insurance coverage and correct other minor items.

**NOW, THEREFORE**, in consideration for the mutual promises and agreements contained herein and notwithstanding anything to the contrary in the Agreement, Consultant and the Authority hereby agree to the changes shown bold in the table below:

Original October 24, 2013, MSA text	Amended May 25, 2023, MSA text
<p>Page 2 of 7, Paragraph 3 Compensation.</p> <p>“Authority agrees to compensate Consultant for its services according to the fee schedule set forth by way of each approved Task Order. The compensation limit available through this MSA is \$4,300,000.00. “.....”In no event shall the total compensation and costs payable to Consultant under this Agreement exceed the sum of \$4,300,000.00 unless specifically approved in advance, in writing, by Authority.”</p>	<p>Page 2 of 7, Paragraph 3 Compensation.</p> <p>“Authority agrees to compensate Consultant for its services according to the fee schedule set forth by way of each approved Task Order. The compensation limit available through this MSA is <b>\$7,600,000.00</b>. “.....”In no event shall the total compensation and costs payable to Consultant under this Agreement exceed the sum of <b>\$7,600,000.00</b> unless specifically approved in advance, in writing, by Authority.”</p>
<p>Page 2 of 7, Paragraph 4 Representatives. Subparagraph A. Project Manager</p> <p>“Project Manager. Sergio Jimenez is hereby designated as the representative of Consultant authorized to act in its behalf with respect to the services specified herein....”</p>	<p>Page 2 of 7, Paragraph 4 Representatives. Subparagraph A. Project Manager</p> <p>“Project Manager. <b>Elizabeth Mesbah, P.E.</b> is hereby designated as the representative of Consultant authorized to act in its behalf with respect to the services specified herein....”</p>
<p>Page 2 of 7, Paragraph 4 Representatives. Subparagraph B. Contract Administrator.</p> <p>“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....”</p>	<p>Page 2 of 7, Paragraph 4. Representatives. Subparagraph B. Contract Administrator.</p> <p>“The Contract Administrator and Authority’s representative shall be <b>Tess Byler</b>, or in her absence, an individual designated in writing by the Executive Director of Authority....”</p>
<p>Page 4 of 7, Paragraph 11. Insurance. Subparagraph C. Minimum Limits of Insurance. (1) General Liability.</p>	<p>Page 4 of 7, Paragraph 11. Insurance. Subparagraph C. Minimum Limits of Insurance. (1) General Liability.</p>

Original October 24, 2013, MSA text	Amended May 25, 2023, MSA text
<p>“\$1,000,000 per occurrence for bodily injury, personal injury and property damage....”</p>	<p>“<b>\$2,000,000</b> per occurrence for bodily injury, personal injury and property damage....”</p>
<p>Page 6 of 7, Paragraph 15. Notices</p> <p>“Any notices, bills, invoices, or reports required by this Agreement shall be deemed received on (a) the day of delivery if delivered by hand during receiving party’s regular business hours or by facsimile before or during receiving party’s regular business hours; or (b) on the second business day following deposit in the United States mail, postage prepaid, to the addresses heretofore below, or to such other addresses as the parties may, from time to time, designate in writing pursuant to the provisions of this section.</p>	<p>Page 6 of 7, Paragraph 15. Notices</p> <p>“Any notices, bills, invoices, or reports required by this Agreement shall be deemed received on (a) the day of delivery if delivered by hand during receiving party’s regular business hours or by facsimile before or during receiving party’s regular business hours; or (b) on the second business day following deposit in the United States mail, postage prepaid, to the addresses heretofore below, or to such other addresses as the parties may, from time to time, designate in writing pursuant to the provisions of this section or (c) <b>via email as the preferred delivery option to <a href="mailto:billing@sfcjpa.org">billing@sfcjpa.org</a> with a copy to <a href="mailto:tbyler@sfcjpa.org">tbyler@sfcjpa.org</a>.</b>”</p>
<p>Page 6 of 7, Paragraph 15. Notices Authority:</p> <p>SFCJPA 615-B Menlo Avenue Menlo Park, CA 94025 Attention: Kevin Murray</p>	<p>Page 6 of 7, Paragraph 15. Notices Authority:</p> <p>SFCJPA <b>750 Menlo Avenue</b> <b>Suite 250</b> Menlo Park, CA 94025 Attention: <b>Tess Byler</b></p>
<p>Page 6 of 7, Paragraph 15. Notices Consultant:</p> <p>HDR 2121 N. California Blvd., Suite 475 Walnut Creek, CA 94596 Attention: Sergio Jimenez</p>	<p>Page 6 of 7, Paragraph 15. Notices Consultant:</p> <p>HDR <b>2365 Iron Point Road, Suite 300</b> <b>Folsom, CA 95630</b> <b>Attention: Elizabeth Mesbah</b></p>
<p>Page 7 of 7 Len Materman, Executive Director</p>	<p>Page 7 of 7 <b>Margaret Bruce</b>, Executive Director</p>

All other terms and conditions stated in the original Agreement remain in full force and effect.

**AUTHORITY**

**San Francisquito Creek Joint Powers  
Authority**

---

By: Margaret Bruce  
Title: Executive Director  
Date:

**CONSULTANT**

**HDR Engineering, Inc.**

---

By: Amy Gilleran  
Title: Senior Vice President  
Date:

APPROVED AS TO FORM:

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Lori Liu  
General Counsel

Date: 05/25/2023



SAN FRANCISQUITO CREEK  
JOINT POWERS AUTHORITY

**RESOLUTION NUMBER 23-05-25-A**

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY**

**AUTHORIZING THE EXECUTIVE DIRECTOR TO  
NEGOTIATE AND EXECUTE FIRST AMENDMENT TO THE  
MASTER SERVICE AGREEMENT WITH HDR  
ENGINEERING, INC., FOR THE  
SAFER BAY PROJECT**

RECITALS

Whereas, on October 24, 2013, SFCJPA executed a Master Services Agreement (MSA) with HDR Engineering, Inc. to complete feasibility analysis, design, environmental documentation and permitting for the SAFER Bay Project. The MSA serves as a governing agreement while specific work plans and actions are implemented through Task Orders; and,

Whereas, the MSA dated October 24, 2013, contains contact and other information that is out of date; and,

Whereas, SFCJPA has been awarded and accepted grant funding for the SAFER Bay project, including the San Francisco Bay Restoration Authority (SFBRA) award of \$1,000,000 and subsequent supplemental award of up to \$3,980,000 to further SAFER Bay project planning and design; and

Whereas, the total funding cap documented in the MSA must be adjusted to reflect current scope of work and funding received,

**NOW THEREFORE, BE IT RESOLVED** by the Board of Directors of the San Francisquito Creek Joint Powers Authority hereby authorizes the Executive Director to negotiate and execute a First Amendment to the Master Service Agreement between itself and HDR to reflect current project scope and funding, as well as current administrative information in the document.

APPROVED AND ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

\_\_\_\_\_  
Vice Chairperson

Date: 05/25/2023

\_\_\_\_\_  
Chairperson

Date: 05/25/2023



SAN FRANCISQUITO CREEK  
JOINT POWERS AUTHORITY

APPROVED AS TO FORM:

\_\_\_\_\_  
Legal Counsel

Date: 05/25/2023

## **Agenda Item 7.C. Proposed Amended Task Order 4 for HDR Engineering, Inc., (HDR) related to their contracted services in support of the SAFER Bay project.**

### **Background**

The Master Service Agreement (MSA) with HDR is implemented through a series of Task Orders. Each Task Order has a defined scope of work and budget. (See Table 1 below for a list and description of Task Orders).

### **Discussion**

Task Order 4, approved by the SFCJPA Board on December 15, 2022, reflected the award of the \$1M grant from the San Francisco Bay Restoration Authority (SFBRA) which enabled the SFCJPA project team to begin CEQA, with a limited scope, for the SAFER Bay project.

On March 3, 2023, the Governing Board of the SFBRA approved a supplemental award of up to \$3,980,000 in grant funding to the SFCJPA for planning and preliminary design of the SAFER Bay Project in East Palo Alto and Menlo Park.

The proposed amended Task Order 4 describes the additional scope necessary to complete CEQA, using the funding from the \$3.98M SFBRA grant awarded in March that is now available to further the project.

The proposed amended Task Order 4 includes:

- Expanding scope from producing a Project Description to producing a full Draft and Final EIR (Project-level for the portion south of Bay Road in East Palo Alto and for Ponds R1/R2; programmatic-level for the remainder of the project reaches).
- Expanding geographic area to be evaluated at a more detailed level by including additional surveying and base mapping to support EIR and engineering design work.
- Progressing engineering designs for more reaches- up to 30% engineering designs.

### **Recommendation**

Accept the proposed general conditions of the amended Task Order 4 and authorize the Executive Director to negotiate and execute an amended Task Order 4, by approving resolution 23-05-25-B.

Table 1 – Task Orders under HDR Master Service Agreement

<b>Task Order</b>	<b>Work Performed</b>	<b>Approved Fee</b>	<b>Expended Fee</b>
1 (closed/complete)	Feasibility Study, East Palo Alto and Menlo Park, 2016	\$559,976	\$552,864.26
2 (closed/complete)	Feasibility Study, Palo Alto, 2019	\$468,995	\$391,216
3 (closed/complete)	Moving forward with design and environmental documentation of selected project elements in East Palo Alto and Restoration options for Ponds R1 and R2 in Menlo Park	\$1,290,000	\$979,727.70
4	Continuing with the above, using additional \$1,000,000 funding from SFBRA.	\$1,320,210	\$54,331.61
<b>Total</b>		<b>\$3,639,181</b>	<b>\$1,978,139.61</b>

**NOTE:** Task Orders 1-3 are closed, with all deliverables provided to the satisfaction of the SFCJPA and funding partners.

## **MASTER SERVICE AGREEMENT**

**For the**

### **Strategy to Advance Flood protection, Ecosystems and Recreation along the Bay (SAFER Bay) Project Evaluation, Design and Environmental Services**

This MASTER SERVICE AGREEMENT (MSA) is made as of October 24, 2013, by and between the San Francisquito Creek Joint Powers Authority, a California joint powers authority ("Authority"), and HDR Engineering, Inc., a Nebraska corporation ("Consultant").

WHEREAS, Authority has advertised publicly the availability of a contract and seeks the services of a consultant to perform tasks related to the evaluation, feasibility, design, environmental documentation, and permitting of the SAFER Bay Project (Project), which is intended to provide protection against coastal flooding and enable ecosystem restoration and recreational enhancements in San Mateo County, CA, along San Francisco Bay in the Cities of East Palo Alto and Menlo Park, and

WHEREAS, the geographic area of the Project may be extended to an additional portion of San Mateo County during the performance of the services described herein, and

WHEREAS, the geographic area of the Project may be extended to portions of Santa Clara County during the performance of the services described herein, and

WHEREAS, this MSA provides for a contractual vehicle for services to be provided to the Authority by Consultant, and

WHEREAS, Consultant has provided a Master Scope of Services (Exhibit A) organized by task, in order to complete the work contemplated by this MSA, and

WHEREAS, no work under this MSA by Consultant shall commence or be billable to Authority on any task without prior written authorization by Authority by way of a Task Order approved by the Executive Director of the Authority, as authorized by the Board of Directors of the Authority, and issued to Consultant by way of a Notice to Proceed signed by the Contract Administrator of the Authority.

#### **R E C I T A L S**

A. Authority has retained Consultant to perform evaluation, feasibility, design, environmental documentation, and permitting services for the Project.

B. Authority desires to utilize the services of Consultant as an independent contractor to provide services as described herein and subject to the required authorization set forth in this MSA.

C. 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 and Level of Services. The nature, scope, and level of the specific services to be performed by Consultant are as set forth in Exhibit A attached hereto. No work for any task within Exhibit A by Consultant shall commence or be billable to Authority without prior written authorization by Authority by way of a Task Order approved by the Executive Director of the Authority, as authorized by the Board of Directors of the Authority.

B. Time of Performance. The services shall be performed on a timely, regular basis 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 Agreement, 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.**

A. This Agreement is effective on the date set forth in the initial paragraph of this Agreement and shall remain in effect until the services required hereunder have been completed satisfactorily by Consultant unless earlier terminated pursuant to Section 13.

**3. Compensation.** Authority agrees to compensate Consultant for its services according to the fee schedule set forth by way of each approved Task Order. The compensation limit available through this MSA is \$4,300,000.00. This limit has been established to provide for services beyond the funding resources available to the Authority at the time of the execution of this MSA, to provide for services in the additional geographic areas described in the Scope of Services as optional tasks, specifically in Santa Clara County and around the PG&E Ravenswood Substation along Highway 84 in San Mateo County. In no event shall the total compensation and costs payable to Consultant under this Agreement exceed the sum of \$4,300,000.00 unless specifically approved in advance, in writing, by Authority.

**4. Representatives.**

A. Project Manager. Sergio Jimenez is hereby 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 Agreement. Therefore, the foregoing Project Manager shall be responsible during the term of this Agreement 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 that 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 levee and flood wall design 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 Agreement with the exception of those standard details and specifications regularly used by the Consultant in its normal course of business 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 are deemed confidential and 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.

**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 that 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, 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 claim, demand, damage, liability, loss, cost or expense, including defense costs, for any damage whatsoever, including but not limited to death or injury to any person and injury to any property, to the extent actually resulting from willful misconduct, negligent acts, errors or omissions of Consultant or any of its officers, employees, or agents.

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 covenant under this section 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:

- (1) Indemnitees are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of Consultant; products and completed operations of Consultant; premises owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to Authority, its officers, employees and agents.
- (2) 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.
- (3) 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.
- (4) 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.
- (5) 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 Risk Manager.

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 that 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. As a condition precedent to termination for cause Consultant shall have five days to cure such cause. 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 Consultant's services under this Agreement for the convenience of Authority or for work stoppages beyond the control of Authority or Consultant. 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 notices, bills, invoices, or reports required by this Agreement shall be deemed received on (a) the day of delivery if delivered by hand during receiving party's regular business hours or by facsimile before or during receiving party's regular business hours; or (b) on the second business day following deposit in the United States mail, postage prepaid, to the addresses heretofore below, or to such other addresses as the parties may, from time to time, designate in writing pursuant to the provisions of this section.

**Authority:**

SFCJPA  
615-B Menlo Avenue  
Menlo Park, CA 94025  
Attention: Kevin Murray

**Consultant:**

HDR  
2121 N. California Blvd, Suite 475  
Walnut Creek, CA 94596  
Attention: Sergio Jimenez

**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 of 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.

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

"Authority"

San Francisquito Creek Joint Powers  
Authority

By:  \_\_\_\_\_  
Len Materman, Executive Director

"Consultant"

HDR ENGINEERING, INC.

By:  \_\_\_\_\_  
Amy Gilleran, Senior Vice President

**TASK ORDER NO. 1  
TO MASTER SERVICE AGREEMENT FOR THE  
SAFER BAY PROJECT — EVALUATION, DESIGN AND ENVIRONMENTAL SERVICES**

This Task Order No. 1 ("Task Order") is made and entered into by and between the San Francisco Creek Joint Powers Authority, a California joint powers authority (the "Authority") and HDR Engineering, Inc., a Nebraska corporation ("Consultant").

**RECITAL**


A. Authority and Consultant entered into an agreement entitled Master Service Agreement for the Strategy to Advance Flood Protection, Ecosystems and Recreation along the Bay (SAFER BAY) Project, Evaluation, Design and Environmental Services and dated October 24, 2013 ("Agreement"), by which the Consultant agreed to perform services in accordance with Task Orders issued by the Authority.

**NOW, THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:**

1. **INCORPORATION BY REFERENCE.** This Task Order hereby incorporates by reference all terms and conditions set forth in the Agreement.
2. **SCOPE OF TASK ORDER.** Consultant shall perform the services described in Exhibit "A," attached hereto and incorporated herein by reference, in accordance with the terms and conditions of the Agreement.
3. **PAYMENT.** For services performed by Consultant in accordance with the fee schedule, Exhibit "B," attached hereto and incorporated herein by reference, Authority will compensate Consultant in accordance with the terms and conditions of the Agreement, in an amount not to exceed \$559,976.00
4. **SIGNATURES.** The individuals executing this Task Order represent and warrant that they have the right, power, legal capacity, and authority to enter into and to execute this Task Order on behalf of the respective legal entities of the Consultant and the Authority.

**IN WITNESS WHEREOF,** the Authority and Consultant do hereby agree to the full performance of the terms set forth herein.

**AUTHORITY**


  
\_\_\_\_\_

By: Len Materman

Title: Executive Director

Date: 11/12/13

**CONSULTANT**

  
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By: AMY SILVERMAN

Title: SENIOR VICE PRESIDENT

Date: 11/7/13

## Exhibit A – SAFER Bay Master Scope of Services

### Task 1: Project Management

HDR will manage the project and its team members to ensure adherence to the scope, budget, and schedule, as well as conformance with appropriate engineering standards and practices. HDR will hold regular coordination and progress meetings with our Team members and SFCJPA to ensure all are apprised of project status, upcoming deliverables and activities. We will maintain communication by phone, email, and in-person meetings. This task includes the development of a document control system, project guide, and quality control plan. Through our project management process, the HDR Team will provide SFCJPA with monthly status updates, notification of any changes in scope or budget, and necessary corrective actions. Quarterly status reports will be prepared in a manner consistent with DWR grant reimbursement requirements.

**Deliverables:** Monthly and Quarterly status reports, Quality Control Plan, Project Guide, Meeting notes and agenda

**Assumptions:** Status meetings will be held at SFCJPA offices. Regular team meetings will be via conference call.

### Task 2: Identify Potential Flood Control Feature Alignments

The HDR Team will work collaboratively with SFCJPA, its member agencies, and stakeholders to evaluate and screen viable alternative alignments in the project area north of San Francisquito Creek to Redwood City, including the Facebook campus and PG&E Ravenswood Substation. The evaluation of alignment alternatives will include consideration of the potential impact of site and project features such as geologic and subsurface conditions, constructability including levee subgrade preparation requirements, condition of existing levees that are to be built upon, locations of existing utilities and other structures, real estate and encroachments constraints, opportunities for restoration, mitigation, recreation, and construction cost. The preliminary evaluation will be based on SFCJPA objectives, and will be compliant with US Army Corps of Engineers (USACE), FEMA and California Department of Water Resources (DWR) requirements. The evaluation will result in a preliminary array of alignments to be carried forward to the feasibility stage of the project. A Preliminary Alternatives Report will be provided that summarizes evaluation and identification of a viable set of preliminary alternatives to carry forward into the Feasibility Study phase. This report will include an initial assessment of utilities, lands, encroachments and other potential conflicts and challenges to the project. The activities required during development of the Preliminary Alternatives Report will be expedited in order to inform the SFCJPA on the opportunities associated with the optional tasks, and allow early communication with project stakeholders. In addition to the Preliminary Alternatives Report, a Data Needs Memorandum, based on identification of the preliminary alignments, will be provided to support Task 3.

**Deliverables:** Preliminary Alternatives Report, Data Needs Memorandum

**Assumptions:**

- Up to 4 different alignments will be considered for each project reach, for up to 12 total alignments. The preliminary alternatives evaluation will identify up to 4 overall viable alternatives.
- Attend one half-day meeting (or equivalent effort) with the SFCJPA and stakeholders for discussion of potential alignments and restoration features.

### Task 3: Preliminary Engineering Evaluations

#### Subtask 3.1: Surveying

The HDR Team will review existing LiDAR and topographic survey information in the project area for quality and coverage, and will attempt to develop conversions for each data set so that all data are reasonably co-registered within the project's horizontal and vertical reference systems, sufficient for planning level use. Record assessor's parcel map Geographic Information System data will be procured and imported into AutoCAD to serve as a backdrop for the project Landnet.



Research will be performed to gather public record maps for highways, state lands and major residential subdivisions. This information will be analyzed to develop a preliminary location, and added to the Landnet. We will also perform research with local utility agencies to obtain record map information for utilities, and the approximate location shown within the Landnet.

Minimal field surveys will be performed, as needed, in order to perform QC checks of existing data, establish survey boundary monumentation, and identify specific utilities and structures of specific interest. This information will be combined with other collected data into an AutoCAD drawing.

**Deliverables:** Survey Report, Planning Level Topographic Mapping in CAD format, Utility and Encroachment Survey Report

**Assumptions:**

- 5 days of surveys are budgeted to perform the above and work will be coordinated with SFCJPA. Note that access may be required to some private lands, and assistance will be needed to obtain access permission.
- Further research and field surveys will be required to determine boundary and utility locations for later stages of the project.
- Planning level topography will rely on existing survey and data coverages. No new aerial or field mapping will be provided.

***Subtask 3.2: Geotechnical Evaluation and Investigations***

Under Phase 1, we will conduct a geotechnical investigation to a level sufficient to develop preliminary geotechnical recommendations to support the Feasibility Study. After the Feasibility Study is completed and a preferred alignment is selected, we would undertake a supplemental geotechnical study under Phase 2. The Phase 2 work will include additional field explorations, laboratory testing, and analysis, and the preparation of a Final Geotechnical Report. The focus of the Phase 2 investigation would be to gather information and perform additional analyses for areas where there are data gaps.

**Review of Information and Site Reconnaissance** - HDR will review available published information and information provided to us by SFCJPA on geologic and geotechnical information in the site area, including geotechnical reports and logs of subsurface explorations. We will perform a site reconnaissance, and note physical site features that could impact the project from a geotechnical perspective.

**Field Investigation** - Undertake a subsurface exploration program along the proposed project alignment and alternative alignments. Prior to conducting the field work, we will prepare a Field Work Plan and Health and Safety Plan, obtain the applicable encroachment and drilling permits, check site access, and check for the presence of underground utilities by contacting Underground Service Alert (USA). We will retain and coordinate with appropriate exploration subcontractors to select suitable exploration equipment to access the desired exploration locations, to the extent that is reasonable and practical.

Our scope and fee do not include measures such as mobilizing barges or rafts, or preparing temporary pads to explore hard-to-access and potentially sensitive areas such as marshes or ponds. Drill cuttings and fluids will be generated from the borings. We will contain drill cuttings and fluids in drums, and transport them to a nearby temporary storage area provided by SFCJPA. Following chemical testing of samples of the drummed materials, we would arrange to have the materials transported to a suitable disposal facility. Our scope and fee assume that the subsurface materials encountered are free of contaminants. If that is not the case, additional scope and fee would be needed for soil handling and disposal.

**Laboratory Testing** - A laboratory testing subcontractor will be retained to perform geotechnical laboratory tests on selected samples obtained from the borings. Testing will include moisture content, density, Atterberg limits, gradation, consolidation, and shear strength, as appropriate.

**Geotechnical Engineering Analyses and Evaluations** - Engineering analyses to develop geotechnical conclusions and recommendations for the proposed project will be performed. We will perform stability and seepage analyses for up to seven cross sections. For each cross section location, stability, and seepage analyses will be performed for one levee geometry and one design water surface elevation for the following conditions, which we judge are potentially the most critical loading conditions that may occur during the design life of the levees: 1) Stability at the end of levee construction, 2) Stability under rapid flood loading conditions, 3) Stability under rapid drawdown loading conditions (when floodwaters recede), 4) Seepage (both levee through seepage and underseepage), and 5) Stability under seismic loading, including estimated magnitudes of liquefaction induced levee settlement and lateral deformation. We will also perform analyses to estimate magnitudes of levee settlement over time. Our scope and fee do not include the development and implementation of liquefaction mitigation measures, such as soil improvement. Should such conditions be encountered, the SFCJPA would need to weigh the cost and benefit of liquefaction mitigation measures versus the risks. This issue would need to be addressed as a separate topic, if it arises, and we have not included a scope for it herein.

**Deliverables:** Feasibility Level Geotechnical Report

**Assumptions:**

- Level of effort assumes useful existing geotechnical data are available and will be provided by SFCJPA.
- Field exploration program based on performing up to 14 borings or CPTs to 40 to 50 feet.
- It is assumed that the new and existing data together would provide on average, an exploration every 2,000 feet along levee crest plus some explorations beyond the levee alignment.
- Also assumes geotechnical analysis for up to 7 cross sections, for Feasibility Level Geotechnical Report.

**Subtask 3.3: Coastal Hydraulics**

The HDR Team will prepare a Design Conditions Memorandum to support the feasibility level analyses of the alternative alignments developed under Task 2. Design conditions will be based on prior studies including USACE Shoreline, FEMA Bay Modeling, and SBSPP. The evaluation will document the design elevation for 50-year project lifespan with a sensitivity test for anticipated geomorphic changes to the shoreline. Specific activities under Task 3.3 will include:

- Prepare a proposed methodology document for review and approval by SFCJPA, FEMA, USACE.
- Identify climate change Relative SLR scenarios for study using latest guidance from National Academy of Science, USACE, National Oceanic and Atmospheric Administration, and United States Geological Survey. The scenarios will consider vertical land motions based on benchmark re-leveling and more recent IPSAR.
- Establish water levels, winds and waves for the study area starting with FEMA Regional Bay and recent USACE evaluations. Develop 50-year time series of water levels, winds and waves at several selected offshore locations incident to flood protection levee reaches.
- Compare water levels time series and Extreme Value Analysis (EVA) extrapolations based on transfer of Presidio water levels versus FMEA Regional Bay model (by Danish Hydraulics Institute). Convert nearshore waves to offshore values without bottom friction for comparison. Compare wave time series for offshore locations and EVA extrapolations for extreme values. Numerical wave models or parametric equations will be utilized.
- For each levee reach within project area, we will run simple wave runup time series with wind setup and friction for one location in each reach. We will identify approximate “no-overtopping crest elevation” for range of SLRs. Apply two to four selected “events” (still water level, wind setup wind waves) with WHAFIS profile model to ascertain design crest elevations (total water level + freeboard with SLR allowance) for each reach, for suite of sub-reach variations / options / scenarios.
- Assess erosion potential and identify recommended approach.

**Deliverables:** Coastal Hydraulics Design Conditions Memorandum which documents the analyses and findings.

**Assumptions:** Technical studies from partnering agencies (FEMA, USGS, USACE) will be provided.

#### **Subtask 3.4: Interior Drainage**

The HDR Team will review the interior landside levee drainage system to assess how the proposed levee alignment will impact current drainage patterns and whether the existing drainage system is likely to have sufficient capacity to provide flood protection at levels that will meet FEMA certification, once the levees are in place. We will review available record drawings to determine volume of flow collected along the proposed/existing levee alignment and discharged into the salt ponds, other information on drainage infrastructure that is provided to us by public agencies, and perform site visits to observe and confirm specific drainage-related features. We may conclude from our evaluation there is insufficient information to readily characterize the existing layout, capacity, and function of the interior drainage system, and identify appropriate design stormwater flow rates.

**Deliverables:** Interior Drainage Design Conditions Memorandum describing existing drainage conditions, gaps in drainage hydrology assessments, and potential coastal levee impacts to those conditions.

#### **Assumptions:**

- Sufficient information will be available to readily characterize the existing layout, capacity and function of the interior drainage system and identify appropriate design stormwater flow rates.
- It is assumed hydraulic modeling of the drainage system is not required.
- SFCJPA and member agencies will provide relevant record drawings of existing drainage system.

#### **Subtask 3.5: Interior Drainage Optional Task**

Once protection is provided against coastal and fluvial flood sources, the appropriate flood map for FEMA will be determined the local drainage. At this time, it is not known if the existing drainage can meet FEMA certification standards. If the existing conditions assessment suggests that drainage issues may preclude certification, then the JPA may consider the some or all of the following optional tasks:

- Develop new or revise existing hydrology and hydraulic models of the drainage system(s) to estimate design drainage flow rates
- Develop new or revise existing hydrology and hydraulic models to quantify drainage capacity relative to FEMA certification standards and, if necessary to design drainage system improvement
- Consider potential drainage system vulnerability to projected future climate change conditions for SLR, watershed hydrology, and/or groundwater levels
- Conduct interior flood mapping of existing or proposed conditions

### **Task 4: Feasibility Study**

#### **Subtask 4.1: Project Alignments**

Based on evaluations conducted in Task 3, the HDR Team will conduct a feasibility assessment of the potential alignments established during Task 2 (less the PG&E Ravenswood Substation, which may be awarded at a later time under a separate Task Order). As noted above, these alternatives will take into account the existing conditions, opportunities, and constraints associated with the ecosystem habitat of adjacent lands, recreation, and connectivity associated with the Bay Trail and other facilities, and utility and transportation corridors. Alternative evaluations will be based on criteria, constraints, and objectives developed and confirmed with SFCJPA and its member agencies. To assess opportunities and constraints, our Team will also prepare a Biotic Opportunities and Constraints Report. The Biotic Opportunities and Constraints Report will analyze preliminary biotic resource impacts associated with up to four potential project alignments, and will contain descriptions of existing habitat conditions (including a reconnaissance-level habitat map) and other information that will be incorporated into CEQA and permitting documentation in the subsequent tasks.

For each of the project alignments, the feasibility report will include documentation of design considerations, flood control, restoration and recreation features, utility and real estate impacts, preliminary assessment of environmental impacts, and potential construction phasing. The feasibility report will include feasibility level designs (plans and typical sections) for each of the alternatives identified in Task 2. The Feasibility Report will include economic, quantitative, and qualitative evaluations of each of the (up to 4) alternatives required to identify the recommended project/alignment to carry forward into design (Task 8). The report will document the basis for selection of the alternative and identify preliminary design criteria.

#### ***Subtask 4.2: Mitigation and Permitting***

For each of the potential alignments determined in Task 2, the HDR Team will provide input on possible environmental resource area opportunities and constraints; identify possible permits; identify additional technical studies to support the environmental and permitting documentation; and recommend the appropriate level of environmental clearance documentation, including an assessment of federal involvement and associated NEPA requirements. The HDR Team will review available documentation, run data base searches for documented biological and cultural resources, and use the IS Environmental Checklist as a guide to qualitatively review other resource topics. The results will be incorporated into the Feasibility Study to inform the decision on the preferred alignment.

During this process, the HDR Team will collaborate with SFCJPA to analyze trade-offs between impacts, costs, and other design objectives and criteria. We will compare the opportunities and constraints associated with various biotic and regulatory compliance issues associated with each alignment.

Early regulatory agency coordination is an important component of streamlined environmental compliance; therefore the HDR Team will assist the SFCJPA to communicate with agency staff during the feasibility study phase of the project to ensure that agency input is integrated into alternatives development and mitigation. Prior to initiating regulatory agency meetings, our ecologists will assist the SFCJPA in communications with key managers for SBSRP (e.g., John Bourgeois) and USFWS Don Edwards National Wildlife Refuge (e.g., Eric Mruz) to establish the tidal marsh habitat mitigation concept(s) that will compensate for project impacts via the SBSRP. We will utilize the preliminary wetland impact/mitigation quantities developed in our Biotic Constraints and Opportunities Report above and our understanding of the SBSRP to inform this discussion. We (with the SFCJPA) will then bring the SBSRP mitigation concept developed from these discussions along with on-site T-zone habitat enhancements on the outboard levee slope to the regulatory agencies for their early input.

Our team's ecologists will assist the SFCJPA in communications with the regulatory agencies to get agency staff assigned to this specific project prior to meetings, such that we communicate with the agency staff that will ultimately issue permits for the project. We will attend meetings with the SFCJPA, USFWS, USACE, CDFW, RWQCB, and BCDC on project design and potential mitigation. Because agency feedback will be incorporated into the project's design and mitigation package, attendance of multiple interagency meetings may be necessary. Such meetings will be designed to best facilitate various parts of the overall regulatory process, for example USACE, USFWS, and CDFW meetings for FESA/CESA regulated species (e.g., California clapper rail, salt marsh harvest mouse, western snowy plover) or USACE, RWQCB, and BCDC meetings for tidal wetlands impacts and mitigation considerations under Sections 404 and 401 of the Clean Water Act (CWA).

#### ***Subtask 4.3: Cost Estimate***

The HDR Team will prepare an initial opinion of probable construction quantities and costs for each alignment alternative. This will include a description of cost assumptions, and will be broken out into soft costs and construction costs. Cost estimates will be American Association of Cost Engineering (AACE) Class 4.

**Deliverables:** Draft and Final Feasibility Report, including preliminary plans, estimates, schedule.

**Assumptions:**

- Up to four alternative alignments will be evaluated.
- Geomorphic change will be based on analysis by SBSP or other nearby reference restoration sites.
- Attendance at one meeting with the SFCJPA to review Mitigation and Permitting options.
- One round of revisions to the Draft Feasibility Report based upon one set of consolidated SFCJPA comments.
- Up to 2 meetings with SBSPRP managers and up to 3 regulatory agency meetings.

**Task 5: Additional alignment alternatives (optional task)**

These additional alignment alternatives expand the reach of shoreline would be evaluated for coastal flood protection. Since the additional shoreline has specific opportunities and constraints, additional scope and budget is required. The degree to which these additional alignments can use information from the prior tasks varies significantly; hence the estimated level of effort varies too. In the scope and budget estimates for these tasks, we assume this work is done concurrently with and integrated with Tasks 1-4 to maximize shared effort and minimize additional cost. If any of the subtasks in this task are pursued independently, the budget would be larger. Also note that since Task 5.2 and Task 5.3 include an overlapping reach (south from San Francisquito Creek to Matadero Creek), only one of these subtasks would need to be selected and funded.

**Subtask 5.1: PG&E's Ravenswood Substation**

The scope outlined in Tasks 3 and 4 will be extended to include consideration of a levee around the PG&E Ravenswood Substation. We will consider alignments that include a ring levee around PG&E property, and a levee extending along Highway 84 coupled with a levee around the PG&E property. This task will include additional geotechnical investigation for the added levee length, additional coastal hydraulics analyses, evaluation of potential levee alignments and closure features. Development of text, figures and cost estimates will be coordinated with Tasks 3 and 4, and submitted with those task deliverables. It is assumed that PG&E is willing to consider levees and/or closure structures on its property.

**Subtask 5.2: From San Francisquito Creek South (Palo Alto north of Matadero)**

The scope outlined in Tasks 1-4 will be extended to include consideration flood protection from San Francisquito Creek to Matadero Creek. The alignment of this levee has a likely route that will extend from Friendship Bridge, along San Francisquito Creek, around the golf course, airport, and wastewater treatment plant, coupled with a second segment along Matadero Creek between East Bayshore Road and the landfill. While this reach of shoreline can use some of the regional background information collected as part of Tasks 1-4, it has substantially different physical setting and set of involved stakeholders and agencies. For this reason, we recommend a separate, but parallel process be conducted for the shoreline south of San Francisquito Creek. The regional coastal hydraulics should still be largely applicable, but additional geotechnical investigation and nearshore wave modeling will need to be conducted specific to this reach. In addition, this reach has an entirely different set of interior drainage facilities.

**Deliverables:** Feasibility Report, including preliminary plans, estimates, schedule.

**Assumptions:**

- Up to four alternative alignments will be evaluated.
- Geomorphic change will be based on analysis by SBSP or other nearby reference restoration sites.
- Attendance at one meeting with the SFCJPA to review Mitigation and Permitting options.
- Matadero Creek and its north bank flood protection measures are sufficient to prevent coastal flooding from south of the creek from impacting the area north of the creek.

### **Subtask 5.3: From San Francisquito Creek South (Palo Alto-Mountain View border)**

The scope outlined in Tasks 1-4 will be extended to include consideration flood protection from San Francisquito Creek to the Mountain View border. While the northern portion of this alignment has a very likely route (from Friendship Bridge, along San Francisquito Creek, around golf course, airport, and water treatment plant), the alignment in the southern portion may have different routes as a function of the landfill, marsh restoration, and the levee alignment for the Palo Alto Flood Basin south of Matadero Creek. While we recognize that the reach north of Matadero Creek may offer the opportunity to remove a substantial developed area from the FEMA floodplain, we recommend that the entire reach of Palo Alto shoreline be considered simultaneously, at least at the feasibility level, rather than limiting to just north of Matadero Creek.

While much of this project area's shoreline has high density development that significantly constrains the levee alignment corridor, the Palo Alto Flood Basin is a minimally-developed portion of the shoreline that warrants a broader planning effort. We recognize and support the City of Palo Alto's goal of preserving the function of the flood basin as part of its overall floodplain management strategy for the Matadero, Barron, and Adobe Creek watersheds. However, because of the potential for sea level rise to significantly impact local groundwater, the flood basin's gravity-based drainage, as well as make long-term operations and maintenance of the outboard levees increasingly expensive, we think an alternative configuration may be feasible.

For example, a viable configuration for the flood basin may consist of adding an interior levee to split the basin into a landward detention basin and an outboard restored tidal marsh. The landward detention basin could expand upon the Palo Alto Marsh Enhancement Project, which uses reclaimed wastewater to create a freshwater/brackish marsh. The detention area may require the addition of pumping facilities to avoid impacts on creek drainage; this pumping would also address the reduced gravity drainage resulting from sea level rise. The outboard restored tidal marsh would blend with the existing tidal marsh to the north and the proposed SBSP tidal marsh restoration to the south. The marsh would front the coastal levee, thereby offering wave dissipation and erosion protection for the levee.

While this configuration may require new infrastructure (e.g. pumps), these costs may be offset by a significantly shorter the length of levee needed to protect the south Palo Alto and Mountain View shoreline and reduced long term operations and maintenance costs.

While this reach of shoreline can use some of the regional background information collected as part of Tasks 1-4, it has substantially different physical setting and set of involved stakeholders and agencies. For that reason, we recommend a separate, but parallel process be conducted for the shoreline south of San Francisquito Creek. The regional coastal hydraulics should still be largely applicable, but nearshore wave modeling will need to be conducted specific to this reach. In addition, this reach has an entirely different set of interior drainage facilities. Because of the flood basin provides detention for the creeks, the feasibility study will need to include creek hydrology and hydraulics as part of the evaluations.

**Deliverables:** Feasibility Report, including preliminary plans, estimates, schedule.

#### **Assumptions:**

- Up to four alternative alignments will be evaluated.
- Geomorphic change will be based on analysis by SBSP or other nearby reference restoration sites.
- Existing hydrologic and hydraulic models of the Matadero, Barron, and Adobe Creek watersheds and channels are sufficient for feasibility evaluations.

### **Task 6: Project Management**

The HDR Team will update the Project Guide developed under Task 1 and incorporate Phase 2 activities. Phase 2 Project Management will include:

- Continued communication and coordination with the HDR Team, SFCJPA and stakeholders
- Continued document control
- Monthly progress meetings and status reports
- Continued technical review of documents and deliverables.

**Deliverables:** Updated Project Guide, monthly status reports

**Assumptions:** Status meetings will be held at SFCJPA offices. Regular team meetings will be via conference call.

### **Task 7: Base Mapping**

The HDR Team will produce new topographic and digital orthophoto mapping at a scale of 1"= 50' (1:600). New stereo aerial photography will be acquired and provide as a significant source for up to date planimetrics, accurate terrain modeling and high resolution (0.25 ft.) color, digital orthophoto imagery. Aerial photo coverage is planned to include optional areas noted in Tasks 5.3 and 5.4.

The new aerial photography will also be applied to review existing topographic data, such as; LiDAR, photogrammetric terrain and field surveys; and to update or supplement the terrain data where needed. Survey data produced under Task 3.1 and new field measurements and cross-section data, as outlined in the RFP, will be incorporated into the new mapping. Airborne GPS (AGPS) will be used for the primary control of the aerial photography.

In addition to the use of AGPS, approximately 20 ground control points will be surveyed for controlling the stereo photography. Where practical, surveyed locations of existing - photo identifiable features, project control and cross-sections will be re-employed to reduce the photo control survey and associated costs and strengthen the aerotriangulation.

**Deliverables:** Survey Control Report, Topographic Survey, Base Maps, orthophotos, digital terrain model

#### **Assumptions:**

- Orthophoto imagery will be provided in GeoTIFF and compressed MrSID file formats.
- A buffered zone of approximately 50 feet (Westerly) and 500 feet (Easterly) will be applied to alignments for the purpose of defining the general mapping limits.
- However, the detailed limits will be reviewed with SFCJPA prior to the mapping efforts to ensure that coverage incorporates items deemed significant and minimizes collection of features that are deemed non-essential.
- Orthophoto mapping limits will be developed to provide additional referential imagery, up to 100 feet beyond the topographic mapping.

### **Task 8: 30% Plans, Specifications and Estimates (PS&E)**

The HDR Team will generate finished construction drawings, specifications, and estimate of probable construction costs suitable for bidding and construction. This task includes revegetation PSE for native plant dominated T-zone habitat on the outboard levee slope (including horizontal levees) adjacent to the Faber Tract, Laumeister Tract, and Cooley Landing Salt Pond Restoration site. PS&E will be completed for the recommended levee alignment identified during Task 4, Feasibility Study. PS&E for additional alignments (Tasks 5.1 through 5.3) may be awarded separately under optional tasks 20.1 through 20.3. PS&E submittals will be reviewed by JPA and associated member agencies at the 30, 60 and 90 percent levels. The HDR Team will revise PS&E, incorporating the comments from each review. The preparation of PS&E shall include plans, details, cross sections, technical specifications, quantity calculations, and preliminary and final estimates of probable construction costs.

#### **Subtask 8.1: Design Phase Geotechnical Evaluations and Report**

HDR will undertake the second phase of our geotechnical study, following the selection of the preferred alternative, to support preparation of final design and specification. Phase 2 services will include supplemental field explorations, laboratory testing, and analyses similar to those performed

during Phase 1, and the updating of our Feasibility Level Geotechnical Report. This would result in a Final Geotechnical Report with recommendations appropriate for project design. The level of effort needed for the Phase 2 geotechnical study will depend on the alignment selected and its considerations, the extent of the data gaps that exist following the completion of the Phase 1 work, and the variation in site and subsurface conditions encountered. HDR recommends this estimate be re-visited following the completion of Phase 1, and adjusted accordingly if needed.

**Subtask 8.2: 30% Plans**

A 30% design package will be prepared for the recommended alternative identified in the Task 4 Feasibility Study. In addition to supplemental geotechnical evaluations, additional hydraulic modeling may be run to confirm elevations.

Drawings will be prepared using 2011 Auto Cad Civil 3D software. A preliminary sheet listing for the 30% design is presented in Table 1. Drawings will be prepared per Santa Clara Valley Water District design standards.

**Table 1 – Preliminary Drawing List, 30%**

Drawing Title	Approximate Sheets No.	
	Final Bid Set	30% Plans
Title, Vicinity Map, Drawing List, Abbreviations & Legend, General Notes	5 Sheets	5 Sheets
Site Plan	1 Sheet	1 Sheet
Survey Control	32 Sheets	16 Sheets
Demolition	22 Sheets	0 Sheets
Levee Typical Sections	35 Sheets	20 Sheets
Levee Plan and Profile (40 Scale)	255 Sheets	255 Sheets
Levee Cross Sections	260 Sheets	0 Sheets
Levee Details	20 Sheets	0 Sheets
Utility Plan	50 Sheets	40 Sheets
Roadway and Traffic Control	20 Sheets	0 Sheets
Levee Revegetation	35 Sheets	35 Sheets
<b>TOTAL</b>	<b>735 Sheets</b>	<b>372 Sheets</b>

**Subtask 8.3: Technical Specifications**

Technical specifications at the 30% submittal will include an outline of anticipated technical sections only.

**Subtask 8.4: Opinion of Probable Construction Costs**

The HDR Team will prepare a 30% opinion of probable construction costs (OPCC). Quantity take-off calculations and opinion of probable construction costs will be prepared in a Microsoft Excel™ spreadsheet. This OPCC will include a contingency factor of 25%.



**Deliverables:** Final Geotechnical Report, 30% Plans, (Half-size drawings only) Electronic format will be submitted, 30% OPCC, Table of Contents for Technical Specification.

**Assumptions:**

- Drawings will include design for the recommended alternative identified during Task 4.
- Analysis of additional alternatives will be beyond the scope of this task.
- Real estate costs will not be included in the OPCC.

**Task 9: 60% PS&E**

After the 30% documents are reviewed, the HDR Team will further develop the design to address comments provided by the SFCJPA and member agencies, and to provide additional detail not provided in the 30% submittal. Responses to comments will be provided to the SFCJPA; any non-concur responses will be resolved with the SFCJPA before significant progress on the 60% design.

**Subtask 9.1: 60% Plans**

Plans will be prepared to provide additional detail not provided by the 30% design. A preliminary sheet listing for the 60% design is presented in Table 2. Drawings will be prepared per Santa Clara Valley Water District design standards. Drawings will be prepared using 2011 Auto CAD Civil 3D software as previously submitted.

**Table 2 – Preliminary Drawing List, 60%**

Drawing Title	Approximate Sheets No.	
	Final Bid Set	60% Plans
Title, Vicinity Map, Drawing List, Abbreviations & Legend, General Notes	5 Sheets	5 Sheets
Site Plan	1 Sheet	1 Sheet
Survey Control	32 Sheets	16 Sheets
Demolition	22 Sheets	15 Sheets
Levee Typical Sections	35 Sheets	35 Sheets
Levee Plan and Profile (40 Scale)	255 Sheets	255 Sheets
Levee Cross Sections	260 Sheets	260 Sheets
Levee Details	20 Sheets	10 Sheets
Utility Plan	50 Sheets	50 Sheets
Roadway and Traffic Control	20 Sheets	10 Sheets
Levee Revegetation	35 Sheets	35 Sheets
<b>TOTAL</b>	<b>735 Sheets</b>	<b>692 Sheets</b>

**Subtask 9.2: Technical Specifications**

The 60% technical specification submittal will consist of preliminary specifications for major design features and general specifications (front-end documents).

### Subtask 9.3: Opinion of Probable Construction Costs

HDR will prepare a more detailed OPCC in Microsoft Excel™ spreadsheet format. A draft bid schedule will be prepared for the 60% submittal. The OPCC will include a contingency of 20%.

**Deliverables:** 60% Plans, (Half-size drawings only) Electronic format will be submitted, 60% OPCC and bid schedule, Table of Contents, General Specifications, Preliminary Specifications for Major Design Features.

#### Assumptions:

- Real estate costs will not be included in the OPCC.
- Drawings will include design progressed from the 30% submittal along with results from the preliminary hydrology and hydraulics modeling performed by the Team.
- The plan set will consist of 2 separate volumes.
- The 60% design submittal will serve as the “design freeze” point. Since at the 60% design the majority of drawings are substantially complete, any changes in design elements or project features following submittal of the 60% design will require a revision to the scope, budget, and schedule.

### Task 10: 90% PS&E

After the 60% documents are reviewed, HDR will further develop the design to address comments provided by the SFCJPA and member agencies, and to provide additional detail not provided in the 60% submittal. Responses to comments will be provided to the SFCJPA; any non-concur responses will be resolved with the SFCJPA before significant progress on the 90% design. The 90% design documents are intended to include a level of detail required for a contractor to be able to construct all the flood control features for this project.

#### Subtask 10.1: 90% Plans

Plans will be prepared to provide additional detail not provided by the 60% design. All sheets will be provided at the 90% design. These are summarized in Table 3. Drawings will be prepared per Santa Clara Valley Water District design standards. Drawings will be prepared using 2011 Auto CAD Civil 3D software as previously submitted.

**Table 2 – Preliminary Drawing List, 90%**

Drawing Title	Approximate Sheets No.	
	Final Bid Set	90% Plans
Title, Vicinity Map, Drawing List, Abbreviations & Legend, General Notes	5 Sheets	5 Sheets
Site Plan	1 Sheet	1 Sheet
Survey Control	32 Sheets	36 Sheets
Demolition	22 Sheets	22 Sheets
Levee Typical Sections	35 Sheets	35 Sheets
Levee Plan and Profile (40 Scale)	255 Sheets	255 Sheets
Levee Cross Sections	260 Sheets	260 Sheets
Levee Details	20 Sheets	20 Sheets
Utility Plan	50 Sheets	50 Sheets
Roadway and Traffic Control	20 Sheets	20 Sheets
Levee Revegetation	35 Sheets	35 Sheets
<b>TOTAL</b>	<b>735 Sheets</b>	<b>735 Sheets</b>

### **Subtask 10.2: Technical Specifications**

The 90% technical specification submittal will consist of a full set of specifications, General specifications (front-end documents), Special Provisions, and a bid schedule.

### **Subtask 10.3: Opinion of Probable Construction Costs**

HDR will prepare a detailed OPCC in Microsoft Excel™ spreadsheet format. A bid schedule will be prepared for the 90% submittal. The 90% OPCC will include a contingency of 10%.

**Deliverables:** 90% Plans, (Half-size drawings only) Electronic format will be submitted, 90% OPCC and Bid Schedule, Table of Contents, General Specifications, Specifications for Design Features, Special Provisions.

#### **Assumptions:**

- Real estate costs will not be included in the OPCC.
- The plan set will consist of 2 separate volumes.

### **Task 11: 100% PS&E**

After the 90% documents are reviewed, HDR will develop a 100% set of Plans, Specifications, and OPCC. The 100% documents will revise the 90% submittal by addressing errors identified during the 90% review; however any changes to the design features will require an amendment to the scope of work at the 100% design level. Responses to comments will be provided to the SFCJPA; any non-concur responses will be resolved with the SFCJPA before significant progress on the 100% design.

### **Subtask 11.1: 100% Plans**

The 100% design set will incorporate any errors identified in the 90% review. Drawings will be prepared per Santa Clara Valley Water District design standards. Drawings will be prepared using 2011 Auto CAD Civil 3D software as previously submitted.

**Table 2 – Preliminary Drawing List, 100%**

Drawing Title	Approximate Sheets No.	
	Final Bid Set	100% Plans
Title, Vicinity Map, Drawing List, Abbreviations & Legend, General Notes	5 Sheets	5 Sheets
Site Plan	1 Sheet	1 Sheet
Survey Control	32 Sheets	36 Sheets
Demolition	22 Sheets	22 Sheets
Levee Typical Sections	35 Sheets	35 Sheets
Levee Plan and Profile (40 Scale)	255 Sheets	255 Sheets
Levee Cross Sections	260 Sheets	260 Sheets
Levee Details	20 Sheets	20 Sheets
Utility Plan	50 Sheets	50 Sheets
Roadway and Traffic Control	20 Sheets	20 Sheets
Levee Revegetation	35 Sheets	35 Sheets
<b>TOTAL</b>	<b>735 Sheets</b>	<b>735 Sheets</b>

### **Subtask 11.2: Technical Specifications**

The 100% technical specification submittal will consist of a full set of specifications, General specifications (front-end documents), Special Provisions and a final bid schedule.

### ***Subtask 11.3: Opinion of Probable Construction Costs***

HDR will prepare a detailed OPCC in Microsoft Excel™ spreadsheet format. A bid schedule will be prepared for the 100% submittal. The 100% OPCC will include a contingency of 10%.

**Deliverables:** 100% Plans, (Half-size drawings only) Electronic format will be submitted, 100% OPCC and Bid Schedule, Table of Contents, General Specifications, Specifications for Design Features, Special Provisions.

#### **Assumptions:**

- Real estate costs will not be included in the OPCC.
- The plan set will consist of 2 separate volumes.

### ***Task 12: Certification Reports***

The HDR Team will update the reports and other documents prepared under previous tasks, and compile the supporting calculations, to develop a set of documents for submission to comply with CFR 44 65.10. This will include the Final Design Report, Geotechnical Report, O&M Manual, hydraulic and relevant engineering calculations, and appropriate supporting documents.

**Deliverables:** Certification reports

### ***Task 13: Conditional Letter of Map Revision (CLOMR)***

The HDR Team will assist SFCJPA in preparation of a Conditional Letter of Map Revision for submittal to FEMA after completion of final design to secure conditional FEMA approval for removing protected properties from the Special Flood Hazard Area when construction is complete.

The CLOMR process allows a community to determine in advance whether and how a proposed project would affect flood maps in compliance with NFIP regulations. A CLOMR is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the Special Flood Hazard Area (SFHA) and Base Flood Elevations (BFEs).

Tasks below outline the process that HDR recommends to create the best possible chance of receiving an approved CLOMR submittal.

#### ***Subtask 13.1: Pre-preparation Consultation with FEMA Region IX***

HDR will consult with FEMA Region IX officers on the project scope to uncover any fatal flaws, clarify requirements, and eliminate as many uncertainties that may present future obstacles in receiving an approved CLOMR package.

#### ***Subtask 13.2: Comply with FEMA's Endangered Species Act (ESA) Requirements (Procedural Memorandum 64)***

FEMA requires documented ESA compliance prior to issuance of a CLOMR. FEMA must receive confirmation of ESA compliance from U.S. Fish and Wildlife Services (USFWS) and the National Marine Fisheries Service (NMFS). HDR will assist in coordination between the Services and complete and submit required application documentation.

#### ***Subtask 13.3: Prepare and Submit CLOMR Application***

This subtask includes preparing the FEMA forms for the CLOMR submittal and compiling supporting data, including model documentation, drawings, models, work maps, and levee and floodwall design plans (satisfying Code of Federal Regulations Section 65.10).

The process for obtaining a CLOMR requires submittal of standard forms, relevant project plans and data for review by FEMA's consultants. The completion of Forms 1, 2, 3, 4, and 5 may be required for this CLOMR submittal. A brief description of the required information is listed for each form below.

#### Form 1 – Overview and Concurrence Form

- Provides a project overview and revision information.
- The applicant(s) must provide a current fee of \$6,050.00 for review of a CLOMR of this scope. The fees are established by Congress.
- The Chief Executive Officers (CEOs) of the communities in which the project is proposed must submit a signed declaration that they support the application.
- The certification of documentation by a Registered Professional Engineer and/or Land Surveyor is also required.

#### Form 2 – Riverine Hydrology and Hydraulics Form

- Describes reasons for revised hydrologic results; compares the effective to the revised discharges; and discusses the methodology used for the new analysis. The updated hydrologic model and backup data are submitted in support.
- Describes the hydraulic modeling methodology used, the tie-ins of revisions to effective model, and comparisons of the effective to the revised model results.
- Provides certification documentation of the topographic map data, including an annotated FIRM panel showing revised floodplains including tie-in with effective floodplains; and metadata and project data with digital mapping.

#### Form 3 – Riverine Structures Form

- Provides the name, type, location, and appropriate cross-section labels for all new structures.
- Indicates all accessory structures included with channelization; provides channel design criteria (capacity and type of flow); and indicates areas affected by sediment transport. Certified engineering drawings are included.
- Provide reasons for revised bridge modeling and indicate the model used to analyze the hydraulics; attach plans of the structure certified by a registered professional engineer.
- Indicates new or redesigned levee/floodwall system elements and the amount of freeboard; lists closure devices for all openings through levee system; summarizes information where embankment protection is required; summarizes the analysis of the levee foundation and analysis of potential settling of the levee; summarizes the analysis of potential flooding from interior drainage; provides a summary of the operational plan and criteria, including an indication whether the maintenance plan for levee is in compliance with NFIP; and submit the applicable Operation and Maintenance Plan.

#### Form 4 – Coastal Analysis Form

- Provides the basic information on the scope and methodology of coastal analyses that are prepared in support of the revision request.

#### Form 5 – Coastal Structures Form

- Provides the basic information regarding hydraulic structures constructed along the coast.
- This form is used for revisions request that involve proposed levees and floodwalls.

Once the CLOMR package is submitted, it is reviewed for completeness, and any additional information that is required must be provided by the applicants before technical review can begin. Review begins when the information is deemed complete. Typically, there are requests for additional information or revision after the review has begun.

#### ***Subtask 13.4: Coordinate with FEMA's Consultant During Review***

HDR will coordinate with FEMA and their Review Consultant regarding the CLOMR submittal. It is anticipated that coordination with FEMA's Consultant will require conducting a completeness check; responding to interim comments/questions; and revising and resubmitting updated documents. It is typical for the Review Consultant to request additional information during the review process.

HDR will review and respond to one comprehensive set of comments.

### ***Subtask 13.5: Public Outreach regarding CLOMR Results***

It is likely that public outreach will be needed in the course releasing the CLOMR/LOMR. The JPA may require an informational presentation of the CLOMR process; the respective NFIP jurisdictions may require public hearings to approve the proposed CLOMR; and FEMA may require notification of affected parties and a subsequent public hearing. HDR's current public outreach specialist on the project is available to assist the team and the JPA with these efforts.

**Deliverables:** Conditional Letter of Map Revision Submittal Package

#### **Assumptions:**

- It is assumed that all permitting documents and models required for submission of the CLOMR submittal and FEMA's PM 64 requirements will be readily available. This task does not include additional fee for hydraulic modeling, environmental permitting, interior drainage, and/or design analysis for any of the proposed flood control facilities. It is assumed that all modeling and design efforts are included under other tasks.
- HDR will attend two coordination meetings with FEMA and/or JPA staff regarding the CLOMR application.
- CLOMR processing fees will be paid separately by the JPA directly to FEMA. The processing fee is \$6,050.
- It is assumed that the JPA will coordinate required signatures for the final CLOMR deliverable. The CEO of each jurisdiction (Cities of East Palo Alto and Menlo Park, County of San Mateo, and potentially County of Santa Clara and Santa Clara Valley Water District) will need to sign.
- Certification for the topographic data sources must be provided to FEMA. It is assumed that the certification documentation for topographic data will be developed and provided by Towill.
- It is assumed that an in-depth sediment transport analysis quantifying sediment loads, aggregation depths or scour depths, will not be required by FEMA's CLOMR submittal. Only the collection of existing documentation on sediment transport will be included.
- A Detailed Analysis will be conducted computing 100-Year floodplain boundaries and BFEs. A floodway analysis will not be conducted.
- HDR will review and respond to one comprehensive set of comments received from FEMA.
- If FEMA requires notification of affected parties, additional costs for publication of hearing notices in both jurisdictions will be incurred.
- The level of outreach required by FEMA is currently unknown and dependent upon their review comments.
- A total of one public outreach meeting/ workshop is included within this task.
- This task will not address deferred maintenance or public works issues unrelated to the levee/floodwall construction.

### **Task 14: Environmental Review**

#### ***Subtask 14.1: Review Existing Documentation***

A portion of the proposed levee reach was addressed in the 2007 SBSRP EIS/EIR at a programmatic level. Other work has been completed in the SAFER Bay project area. We will work with SFCJPA to identify available existing data and will review the data for accuracy and will identify any data gaps and recommendations for addressing identified gaps. This assessment will include identification of additional technical studies needed to support the CEQA analysis including those identified as part of Task 4, Feasibility Study, for the preferred alternative, and a recommendation on any NEPA compliance documentation. Deliverables:

**Deliverables:** Data Gaps Memorandum

#### ***Subtask 14.2: Technical Studies***

Based on the technical studies identified under subtask 14.1, the HDR Team will conduct the necessary field investigations and prepare the studies necessary to support the CEQA analysis including, cultural resources Section 106, greenhouse gas and air quality emission modeling, construction noise modeling, and biological resources survey report.

### ***Subtask 14.2a: Cultural Resources Report***

The HDR Team will complete all surveys, assessments, and documentation required for CEQA/NEPA cultural resource evaluation and Section 106 of the National Historic Preservation Act compliance. Such efforts will include an archeological literature and records search of the California Historical Resource Information System (CHRIS), a search of the Sacred Lands Files (SLF) of the Native American Heritage Commission (NAHC), contact with potentially interested Native American Tribes (e.g., the Amah Mutsun Tribal Band), and an archaeological survey of the Area of Potential Effect (APE). The cultural resources report will be used for CEQA/NEPA and Section 106 purposes to determine the presence of cultural resources on the project site and to determine the level of effects on such resources.

**Deliverables: Cultural Resources report.**

### ***Subtask 14.3: Environmental Impact Report***

#### ***Subtask 14.3.1: Initial Study and Notice of Preparation***

Following selection of the preferred alternative and identification of inclusion of any of the alignment alternatives, the HDR Team will develop a detailed project description for review and comment. Following one round of comments and revisions, the project description will be used to prepare an IS Environmental Checklist to confirm the appropriate level of environmental review. This scope of work assumes that there will be potentially significant impacts and that an EIR is the appropriate environmental clearance document. Therefore, the IS will be used to focus the environmental resource topics to be addressed in the EIR to those topics that could result in a potentially significant impact. An administrative draft IS will be prepared for SFCJPA review and comment. Following one round of comments and revisions, we will revise the IS, prepare the NOP and publish the Notice of Preparation (NOP) with the IS. The HDR team will work with the SFCJPA to prepare a distribution list. This scope assumes that the SFCJPA will distribute the NOP and do the posting. The HDR Team will prepare the Notice of Completion (NOC) and submit the document to the State Clearinghouse to initiate the 30 day comment period. The HDR Team will coordinate with the SFCJPA to prepare the materials for and participate in one scoping meeting during the NOP comment period.

#### ***Subtask 14.3.2: Draft EIR***

The HDR Team will prepare a Draft EIR in compliance with the CEQA Guidelines. The Draft EIR will provide detailed information regarding the existing environmental and regulatory setting (existing conditions) and will address potential project-specific and cumulative environmental impacts associated with the construction and operation of the Project for resource topics identified for further analysis in the NOP. If significant impacts are identified (based on standards of significance found in Appendix G of the CEQA Guidelines), mitigation measures will be proposed to reduce those impacts to a less-than-significant level, to the extent it is feasible to do so. The EIR will include an analysis of up to three alternatives that could potentially avoid identified significant impacts of the project, including, the No Project and two additional alternatives. In addition, the EIR will also include other statutory sections required by CEQA including: summary of cumulative impacts, growth inducing impacts, summary of significant unavoidable impacts, and significant irreversible changes.

Our team will use existing data to the maximum extent feasible to describe the existing conditions in the project area and in characterizing impacts and developing mitigation measures. We will review the data for accuracy and will augment it when appropriate. We anticipate being able to incorporate by reference information from the SBSRP EIS/EIR, as appropriate. Results for the technical studies conducted under subtask 14.2 will be incorporated. The project description will be refined, as needed as result of the scoping process. Throughout the EIR process, the HDR Team will build the administrative record consistent with an agreed to format.

The HDR Team will prepare an Administrative Draft EIR for SFCJPA review and comment. Our scope of work assumes monthly conference calls and 1 review meeting for the ADEIR and Screencheck EIR.

#### ***Subtask 14.3.2.1: Introduction and Project Description***

The HDR Team will develop Introduction and Project Description sections that meet CEQA legal requirements, and provide the appropriate level of detail for the EIR. This will establish the foundation for the impact analysis in the EIR. The project description will include project background, project objectives, a description of proposed components, and will describe each component in sufficient detail to facilitate determination of the nature and scale of environmental impacts, including area of disturbance and construction equipment scenarios identified as part of the Feasibility Study and PS&E efforts. The project description will also identify discretionary approvals the agencies that would be expected to use the EIR to support issuance of those approvals.

#### ***Subtask 14.3.2.2: Geology and Soils***

Analysis will summarize regional reports on geologic conditions within the service area; conduct site visits; identify special problems such as potential liquefaction and shrink/swell; describe proposed grading and methods to handle differential settlement; describe erosion hazards; prepare setting, summarize regulatory framework, determine impacts and level of significance, and identify mitigation measures to reduce impacts.

#### ***Subtask 14.3.2.3: Hydrology/Flooding***

Analysis will identify impacts to surface waters associated with construction of project components, including the following tasks: identify local and coastal flood hazard zones using FEMA maps; describe extent and general character of hydrological conditions; assess existing runoff conditions and character of surface water features; evaluate impact of facility construction and grading on surface runoff and changes in drainage patterns; discuss effectiveness of existing site drainage plan; ESA will review and summarize available sources on water levels, sea level rise, waves, run-up and overtopping from published reports, studies and maps, including the USACE South San Francisco Bay Shoreline Study, state, and federal sea level rise planning guidance. Analysis will include a discussion of the existing and post-project flooding potential over the 50-year project lifespan, and will include a review of proposed levee configurations to assess the ability of the project to meet FEMA requirements. For the flooding assessment, we will review guidance including the 2007 State Hazard Mitigation Plan, FEMA's 2008 Draft Final Guidelines for Pacific Coast Flood Studies, and other recent documents and plans. HDR team will obtain and review standard requirements (storm drainage criteria, flood criteria, etc.), and impacts or mitigation input from agencies.

#### ***Subtask 14.3.2.4: Water Quality***

Analysis will summarize the relevant regulatory framework; describe ambient water quality of the receiving waters; discuss quality of current and potential stormwater runoff; identify mitigation measures for stormwater quality protection for incorporation in to the Storm Water Pollution Prevention Plan (SWPPP); assess the extent of salinity changes and potential to permanently affect habitat conditions at receiving water locations; determine potential impacts and level of significance; identify mitigation measures, if possible, to reduce impacts.

#### ***Subtask 14.3.2.5: Land Use/Recreation***

Analysis will review existing land uses in the study area; review applicable plans, policies and objectives of local, regional and state public agencies having jurisdiction over the project; discuss project consistency with plans, policies and CEQA guidelines; discuss compatibility with surrounding uses; identify facility impacts to existing recreational uses, and potential enhancements to recreational access;; identify measures to mitigate identified impacts.

#### ***Subtask 14.3.2.6: Biological Resources***

The HDR Team will prepare the biological resources section of the EIR document. The effort for this task will leverage work performed in Task 4, including the characterization of existing biotic resource information for the Project site. This task will also develop feasible conceptual mitigation measures for biotic resource impacts, drawing upon the tidal marsh habitat mitigation package developed with regulatory agency input in Task 4.



The HDR Team will visit the site to update existing conditions assessed under Task 4.1, if needed. We will review background information from the U.S. Geological Survey quadrangle maps, USFWS National Wetland Inventory Maps, the California Natural Diversity Database, species data compiled by the California Native Plant Society, the National Audubon Society, or other public interest groups, resource agency data (USFWS, CDFW, etc.). This task includes characterization of existing biological conditions on the site to a level sufficient for CEQA analysis, assesses impacts related to project implementation, and describes conceptual mitigation measures to reduce potentially significant impacts to less than significant levels. Our existing conditions characterization will draw heavily upon the numerous environmental documents that have been prepared for other projects on in the vicinity, most notably documents pertaining to the SBSRP. We will include preparation of a Project vicinity map and biotic habitats map. We anticipate that some components of Tasks 4.2, 14, and 16 will develop concurrently, thus the Biological Resources chapter of the IS/EID will incorporate mitigation measures related to special-status wildlife that are acceptable to resource agencies.

#### ***Subtask 14.3.2.7: Cultural Resources***

Analysis will incorporate results of the Cultural Resources Survey Report conducted under Task 15.7. The analysis will incorporate findings of the site reconnaissance; describe the regulatory framework, cultural setting, and known resources; determine potential impacts and level of significance and identify mitigation measures as appropriate.

#### ***Subtask 14.3.2.8: Noise***

Analysis will describe the existing noise environment; discuss relevant noise policies, regulations and standards; discuss noise levels likely to be generated during construction activities and potential for construction to adversely affect adjacent land uses or violate noise control ordinances; describe typical noise generated by the project and potential for noise to adversely affect adjacent uses and consistency with noise compatibility guidelines. Identify practical, feasible mitigation measures for noise impacts identified for the project.

#### ***Subtask 14.3.2.9: Air Quality***

The study area lies within the San Francisco Bay Area Basin which is in “nonattainment” status for state standards for ozone and particulate matter. The analysis will focus on the temporary effects of construction traffic, assuming that electric pumps will be used for plant expansion. Task include: describe the federal, state and local regulatory agencies and the BAAQMD’s CEQA Guidelines; discuss current air quality in the project area based on data from the monitoring station closest to the project site; discuss emissions likely to be generated during construction and evaluate potential for construction dust to cause local violations of particulate standards; discuss types of emission related to vehicle traffic; and identify practical, feasible mitigation measures for air quality impacts identified for the project.

#### ***Subtask 14.3.2.10: Traffic***

Analysis will review and summarize available city, county and state traffic information for local roads, highway and freeways; describe the circulation setting; identify bicycle, pedestrian and transit corridors; determine level of service and significance criteria for study area roadways and intersections; determine temporary daily construction impacts during weekday AM and PM peak hour; evaluate effects on pedestrian, bicycle and transit facilities; discuss site circulation and access; and identify mitigation measures, prioritized in terms of safety and level of service.

#### ***Subtask 14.3.2.11: Hazardous Materials***

Analysis will summarize applicable federal, state and local hazardous waste regulations; review and summarize available databases to identify known areas of hazardous material contamination that could affect proposed facilities; review available soil testing reports at existing facilities; identify and discuss known contamination of soil and groundwater; discuss and evaluate impacts on general public health and safety, potential exposure to workers and waste disposal handlers; prepare setting, determine impacts, level of significance and mitigation measures to reduce potential health and safety impacts to less than significant levels.

#### ***Subtask 14.3.2.12: Public Services/Utilities***

Analysis will summarize potential for utility disruption and service disruption within the project area. Analysis will review major utilities that could be affected by construction, potential short-term impacts to public services, and potential effects to emergency response, and establish mitigation measures to reduce potential impacts to less than significant levels.

#### ***Subtask 14.3.2.13: Aesthetics***

Analysis will generally describe important elements of the visual quality in the regional and local area surrounding the project site and the site itself, including any publicly accessible scenic vistas; qualitatively discuss the visual impacts of the project, including effects from existing public viewing areas; and identify mitigation measures that would reduce any significant visual impacts of the proposed project. Our scope of work does not include visual rendering(s) of proposed facilities.

#### ***Subtask 14.3.2.14: Growth Inducement***

Project implementation is not anticipated to affect growth levels, rates, or distribution; however, the analysis will review the potential for provision of regional flood protection to contribute to regional growth beyond the adopted General Plans, or to change anticipated land use patterns or practices within the affected area.

#### ***Subtask 14.3.2.15: Alternatives***

The EIR will include review of a range of Alternatives to meet CEQA requirements. Our scope of work assumes review of 3 alternatives. In general, analysis will include:

- 1) **Alternatives to the Project.** This will include review of alternative methods to addressing flood control and coastal flood protection, including the No Project Alternative.
- 2) **Alternatives of the Project:** Review of up to 2 alternatives identified in the Feasibility Study. Analysis provided in the EIR will be summarized for each of these alternatives, and a review of their ability to meet the project objectives will be provided, including their ability to reduce or minimize environmental impacts.

Our scope of work assumes we will receive one consolidated set of comments on the Administrative Draft EIR from the JPA. The project team will revise the Administrative Draft EIR and prepare a screencheck version of the Draft EIR for SFCJPA to review to confirm that that comments have been addressed prior to publication. Our scope of work assumes that screencheck draft comments will be limited to minor edits.

This scope assumes that the SFCJPA will distribute the Draft EIR using the distribution list developed under subtask 14.2 and do the posting. The HDR Team will prepare the NOC and submit the document to the State Clearinghouse to initiate the 45 day comment period. The HDR Team will coordinate with the SFCJPA to prepare the materials for and participate in one public hearing during the Draft EIR comment period.

#### ***Subtask 14.3.3: Final EIR and Mitigation Monitoring and Reporting Program***

Following the close of the comment period, the HDR Team will respond to comments and prepare an Administrative Final EIR for SFCJPA review and comment. The Final EIR will include comment letters and responses to comments received; summary of text changes (in response to comments or staff initiated); and the Mitigation Monitoring and Reporting Program (MMRP) (in table format specifying mitigation measures, timing of the action and parties responsible for implementation and monitoring). The MMRP, to be prepared in accordance with the CEQA Guidelines (Section 15097), can be prepared and circulated with the Draft EIR. Following receiving one consolidated set of comments from the JPA, we will revise the Administrative Final EIR and prepare a screencheck version of the Final EIR for the SFCJPA to review that all comments have been addressed prior to publication. Our scope of work assumes one review meeting for the administrative draft and screencheck Final EIR.

#### **Subtask 14.3.4: Findings of Fact, Statement of Overriding Considerations, Notice of Determination**

The HDR Team will prepare draft Findings of Fact and Statement of Overriding Considerations (if there are any significant and unavoidable impacts) (Findings) for SFCJPA to review and comment. Following receiving a consolidated set of comments, we will revise the draft Findings and prepare a screencheck version of the Findings for the SFCJPA to review that all comments have been addressed prior to finalizing the document for consideration by the SFCJPA Board. The HDR Team will attend the Board meeting for certification of the EIR. Following certification of the EIR and project approval, we will prepare the Notice of Determination (NOD). This scope assumes that the SFCJPA post the NOD and pay any required California Department of Fish and Wildlife (CDFW) fees.

**Deliverables:** Draft Project Description; administrative draft IS; Notice of Completions (NOC); 15 printed copies of the NOP/IS and 1 electronic copy; presentation materials for scoping meeting; Administrative Draft EIR; Screencheck Draft EIR; Draft EIR; 15 printed copies of the Draft EIR and 1 electronic copy; presentation materials for Draft EIR hearing; Administrative Final EIR; screencheck Final EIR; Final EIR; Draft Findings; Final Findings; Notice of Determination (NOD).

#### **Assumptions:**

- SFJPA will provide one set of consolidated comments on all internal review draft submittals.
- All submittals will be in electronic format unless otherwise noted.
- NEPA documentation is not included in this scope of work. In the event compliance with NEPA is identified as required in consultation with SFCJPA, the HDR Team will prepare a scope of work and cost estimate.
- The decision to include an analysis of any of the alternative alignments at an equal level to the preferred alignment will be made prior to issuing the NOP so all potential project elements can be addressed in one EIR. The additional scope for including any alternative alignments will be negotiated separately, if requested by SFCJPA.
- Protocol-level surveys for special-status species are not included.
- Because the formal USACE wetland delineation will not have been conducted until the optional permitting phase, wetland impact estimation will be conducted using general habitat mapping rather than a formal wetland delineation. Therefore, it is likely that wetland impacts will be overestimated during the CEQA phase by as much as several acres over the extent of the levee alignment.
- We assume that it will be possible to mitigate impacts to wetlands and special-status species habitat via the SBSRP, and potentially on site via T-zone revegetation on the outboard levee slope outside and possibly within the SBSRP footprint.
- Up to three project alternatives, including the No Project and No Action Alternatives, will be evaluated in the EIR at a CEQA level of review.
- The HDR Team will attend one scoping meeting, one Draft EIR hearing, and one certification hearing.
- Additional meetings/hearings will be negotiated separately, if requested by SFCJPA.
- SFCJPA will post availability of and distribute all CEQA document.
- It is assumed that SFCJPA will pay any required CDFW fees.

#### **Task 15: Habitat Mitigation and Monitoring Plan**

The HDR Team will prepare a Habitat Mitigation and Monitoring Plan (MMP). The MMP is a required component of the permit application packages (see Task 16) and is therefore a distinctly different report from the CEQA-related MMRP covered above in Task 14. The MMP will describe the project's impacts to regulated habitats and species, present the conceptual habitat mitigation plan, and include an ecological monitoring plan to objectively evaluate mitigation performance.

The MMP will provide the following information in accordance with the *USACE San Francisco and Sacramento Districts Mitigation and Monitoring Proposal Guidelines (2004)*:

1. Brief summary of the proposed project
2. Summary of habitat impacts and proposed mitigation ratios
3. Location of mitigation site(s) and description of existing site conditions (both physical and biotic), including photo-documentation
4. Conceptual mitigation plan
5. Monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule)
6. Remedial measures/adaptive management plan for mitigation elements that do not meet performance or final success criteria
7. Appendix with photo-documentation of project site (pre-impact) and mitigation site(s) (pre-impact)

**Deliverables:** Draft MMP for SFCJPA review; Final MMP.

**Assumptions:**

- We assume that it will be possible to mitigate impacts to wetlands and special-status species habitat via the SBSRP, and potentially on site via T-zone revegetation on the outboard levee slope outside and possibly within the SBSRP footprint.
- We assume one round of revisions to the Draft MMP based upon one set of consolidated SFCJPA comments.
- This task also assumes that the wetland mitigation design will be developed only to a preliminary, conceptual level.

**Task 16: Regulatory Permit Acquisition (optional task)**

The HDR Team will prepare and submit permit applications to the applicable agencies including USFWS, NMFS, USACE, RWQCB, the BCDC, and CDFW. As described under Task 4.2, prior to permit acquisition, regulatory agencies will be approached to obtain input on design and conceptual mitigation such that permit acquisition will be as efficient as possible.

**Subtask 16.1: Biological Assessment (BA) and Section 7 Consultation**

Prepare a draft BA describing the project's impacts on species listed as threatened or endangered, or proposed for such listing, under the Federal Endangered Species Act. The document will contain a description of the project; life history information on all these species; information on the known or potential occurrence of these species on and adjacent to the project site; a description of potential effects on these species; a description of measures to be incorporated into the Project to avoid and minimize impacts to these species; and a description of mitigation proposed to offset Project impacts.

We anticipate that the BA and consultation will focus primarily on the project's potential impacts to salt marsh harvest mice and California clapper rail related to levee construction. By drawing on our experience working with salt marsh harvest mice, we will assess the likelihood of take occurring through project actions and provide minimization and mitigation measures that have been successfully implemented on other projects. For instance, we will likely propose measures that include biological monitoring of vegetation removal and of construction activities that may result in take of this species. We may also propose to trap and remove salt marsh harvest mice prior to vegetation removal, as this will substantially reduce the likelihood of take during project activities and may be necessary to obtain CDFW approval to implement the Project. We will also address potential impacts to California clapper rail and propose measures to avoid take of that species. Due to the proximity of suitable clapper rail breeding habitat to potential levee alignments, measures will most likely include the avoidance of the clapper rail breeding season, although we will explore all suitable options while preparing the BA. We also anticipate the need to address potential impacts to western snowy plover, Central California Coast steelhead, green sturgeon, and critical habitat for these species in the document, due to the proximity of known occurrences of these species. The BA will also include an Essential Fish Habitat (EFH) Assessment for purposes of Magnuson-Stevens Fishery Conservation and Management Act compliance. The EFH Assessment will describe the fish that are subject to established management plans; the habitats on and adjacent to the proposed levee alignments that are considered EFH; the project's effects on EFH; a description of measures incorporated into the Project to avoid and minimize impacts to EFH; and a description of any mitigation (if necessary) proposed to offset project impacts to EFH.

The HDR Team will submit the BA to the USACE and assist the USACE as needed in preparing a letter addressed to the USFWS and NMFS to accompany the document. We will then coordinate with the USFWS and NMFS as necessary during the Section 7 consultation between those agencies and the USACE with the intent of obtaining BOs from those agencies. We will coordinate with agencies, the SFCJPA, the SBSRP, and other stakeholders to develop necessary mitigation for the project.

As described above under Task 4.2, we will also engage the CDFW to obtain the Department's opinion regarding whether the project will result in the take of species listed or proposed under the California Endangered Species Act. The state-listed species with the greatest potential to be affected by the project is the salt marsh harvest mouse and we anticipate that most discussions with the CDFW will involve avoiding take of that species. In addition to protection under the CESA, salt marsh harvest mice and California clapper rails are a fully protected species in California. This status requires that no take of the species can occur and thus the CDFW will likely require that mitigation measures ensure that the project does not result in take of those species. Thus, the CDFW may necessitate trapping and removal of salt marsh harvest mice prior to vegetation removal and levee construction. Also, the CDFW may determine take of the recently listed longfin smelt could occur as a result of activities associated with project activities, although that is less likely.

The CDFW may provide a Consistency Determination for portions of the project. However, as noted above, the CDFW cannot authorize take of a fully protected species (e.g., salt marsh harvest mice, California clapper rails), so the emphasis of consultations with CDFW will likely focus on measures to insure no animals are killed during construction. Alternatively, the CDFW may require submittal of a 2081 permit application requesting an Incidental Take Permit from the CDFW, although this is less likely. If necessary, the 2081 permit application would contain a description of the Project; life history information on the covered species; information on the known or potential occurrence of the covered species on and adjacent to the Project site; a description of potential effects on the covered species; a description of measures to be incorporated into the Project to avoid and minimize impacts to the covered species; and a description of mitigation proposed to offset Project impacts. The budget for this task assumes that a 2081 is not necessary.

#### ***Subtask 16.2: USACE 404 Individual Permit and Section 10 Letter of Permission***

Based on the size and potential impact area of the Project, it is assumed that the Project cannot be processed under an existing USACE nationwide permit (NWP), and that the proposed work will require an Individual Permit. The Individual Permit application requires a substantially greater level of effort compared to the NWP, in part, because it requires an alternatives analysis to illustrate the Least Environmentally Damaging Alternative (LEDPA) for the project. The HDR Team will prepare an Individual Permit application and alternatives analysis for submission to the USACE. These materials include copies of relevant sections of the EIR (e.g. archeology/cultural resources, biology), all correspondence with the USACE, RWQCB, USFWS, NMFS, CDFW, and BCDC staff, National Flood Insurance Program (NFIP) and Conditional Letter of Map Revision (CLOMR) information pursuant to the proposed improvements, wetland and wildlife impact assessment, proposed mitigation approach, detailed project drawings, and the Application for Department of the Army Permit (ENG Form 4345).

The alternatives analysis will be prepared in consultation with Project engineers, pursuant to the EPA Section 404(b)(1) Guidelines (40 CFR 230). The Corps uses the alternatives analysis to evaluate the proposed activities and determine the LEDPA. The EPA's Guidelines restrict discharges into aquatic areas where less environmentally damaging, practicable alternatives exist.

During preparation of the alternative analysis, Project engineers will provide 2-3 design alternatives to the preferred project to be analyzed (in addition to the no project alternative). This information will include detailed descriptions of each alternative, cost estimates and impact zones. These will be analyzed to determine if the preferred alternative is the most appropriate design in terms of project design functions and least environmental impact. Preparation of off-site alternatives is not anticipated, due to the required location for the project purpose of flood control improvement in the East Palo Alto, Menlo Park and Palo Alto areas.

### ***Subtask 16.3: RWQRB 401 Water Quality Certification Application***

The HDR Team will prepare an application for Section 401 Water Quality Certification for submittal to the RWQCB. We assume an Individual Permit will be required under this process; however, the complete package will provide much of the same information that is to be submitted to the USACE as described above. In addition, RWQCB requires a processing fee for handling the application. The amount of this fee is based upon the size of the fill activity proposed and as such is not included in this current scope.

### ***Subtask 16.4: BCDC Major Permit***

The HDR Team will prepare an application for a BCDC major permit. This task will require the limits of BCDC jurisdiction be identified and mapped as discussed in Task 4.1. A figure shall be prepared as part of the application that will show specific elements such as the bay, the shoreline and a line 100 feet inland from the shoreline which delineates the limit of BCDC jurisdiction. BCDC requires a processing fee for handling the application, also not included in this scope.

### ***Subtask 16.5: CDFW 1602 Lake and Streambed Alteration Agreement***

The HDR Team will prepare permit materials in support of a 1602 notification package for submittal to CDFW. This includes completion of Form FG 2023, all copies of environmental documentation, all correspondence with USACE, RWQCB, CDFW, BCDC, NMFS, and USFWS staff, an impact assessment, and project drawings. In addition, CDFW requires a processing fee for handling applications, not included in this scope.

### ***Subtask 16.6: California State Lands Commission Land-use Lease***

The HDR Team assist the SFCJPA with jurisdiction determination for the project as it relates to the State Lands Commission's sovereign lands (navigable and tidal waterways). Assuming that at least a portion of the project footprint lies within the Commission's jurisdiction, we will then prepare a land use lease application for the SFCJPA to submit to the Commission. Our scope of work assumes 58 hours for this task; additional resources may be necessary depending upon the extent of State Lands Commission jurisdiction over the proposed project.

### ***Subtask 16.7: State Historic Preservation Office National Historic Preservation Act, Section 106***

As indicated above under Subtask 14.2a, The Cultural Resource report prepared for the CEQA/NEPA evaluation will also be used for compliance with Section 106 of the National Historic Preservation Act.

### ***Subtask 16.8: Wetland Delineation***

As part of the permit application materials, the USACE will require that the extent and distribution of wetlands and other waters within the boundaries of the Task 2 baseline levee alignment be documented in a wetland delineation technical report. To this end, we will conduct a wetland delineation to identify potential waters of the U.S. (both Section 404 and Section 10 Waters of the U.S.) within the project limits that may be subject to the jurisdiction of the USACE. This level of effort will require the collection of data in the field relative to vegetation, soils, and hydrology in order to document site conditions. All work will be completed according to methodologies outlined in the USACE Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008), and guidance provided by the USACE in a technical memorandum titled, Information Needed for Verification of Corps Jurisdiction (2012). Additionally, BCDC jurisdiction does not correspond in all locations to USACE jurisdiction, so the limits of both agency jurisdiction will be mapped using a Trimble GPS unit, with sub-meter accuracy.

We will prepare a draft report on the results of the field surveys for USACE jurisdictional waters for submittal to the USACE. We will also produce a GIS-based map layer for team use for BCDC jurisdictional bay waters, shoreline, and shoreline band jurisdiction, and CDFW riparian jurisdiction. All work will be conducted at a level of effort sufficient to allow verification of the delineation by USACE staff, and the BCDC/CDFW map layer will be suitable for BCDC and CDFW impact assessments, agency coordination, and later permitting purposes. We will then meet with USACE staff on the project site to verify the delineation of jurisdictional waters of the U.S. Revisions will be made to the delineation report and accompanying maps, if necessary, after the site visit with a USACE representative.

The HDR Team will work to obtain the USACE, RWQCB, BCDC, and CDFG permits for the Project. We will submit a first-review administrative draft USACE permit package for review and comment to the SFCJPA. This scope assumes that edits will be minimal. After incorporation of any changes, the package will be submitted to the USACE. This task includes time to correspond (i.e., telephone calls, email, faxes) with the USACE in order to monitor the progress of the permit review. In addition, since the project will require work within Section 10 tidal waters, the project will require a Letter of Permission from the USACE. Therefore, the permit application package will include a request for the USACE to provide a Letter of Permission. This task includes one round of minor revisions to the permit package and supporting documents based on SFCJPA review.

**Deliverables:** BA and 2081 Permit application, USACE, RWQCB, BCDC, and CDFW permits, State Lands Commission lease application, Cultural Resources Report, Letter of Permission from USACE, Wetland Delineation Report, verified site delineation maps, and BCDC/CDFW map layer.

**Assumptions:**

- Existing studies of potentially historic architectural resources are sufficient and no additional surveys or evaluation will be required.
- Recordation of no more than one cultural site (if found during the surface survey) will be necessary.
- Recordations and evaluations of more than one site will be scoped separately.
- The proposal assumes that 4 meetings, both on the site and in these agencies' respective offices, will be necessary during the Section 7 consultation.
- It is assumed that no 2081 permit will be necessary from CDFW.
- Permit fees for the RWQCB, BCDC, and CDFW and permits will be supplied by SFCJPA at a later date.

**Task 17: Right-of-Way Acquisition (optional task)**

The HDR Team will assist SFCJPA in Right-of-Way Acquisition activities. The HDR Team will provide support for title and escrow activities, right-of-way engineering, appraisals, acquisition and negotiation, and file close out.

**Assumptions:**

- HDR will provide the SFCJPA with the following items on a per parcel cost- one preliminary title report, one legal description and plat map, one appraisal and one appraisal summary statement.
- HDR will provide these items as a pass-through cost to SFCJPA, without any markup.
- If requested by SFCJPA, HDR can coordinate the preparation of Environmental Site Assessment reports for the proposed acquisition areas.
- SFCJPA will provide approved and offer-package ready acquisition document templates. If SFCJPA directs HDR to provide acquisition template documents to SFCJPA for approval by its legal counsel, they will be provided by HDR on a Time and Expense basis.
- HDR's fee does not include relocation of business or residential displaces, and/or personal property relocation. If these services are required, HDR will provide a cost to complete fee amendment to SFCJPA for these services.

**Task 18: Bidding and Construction Support Services (optional task)**

The HDR Team will assist SFCJPA with the bidding process, including providing addenda clarification and responding to technical questions related to the contract documents from potential bidders. During pre-construction and construction, the HDR Team will:

- Attend pre-construction conference, respond to questions, and prepare conformance documents
- Attend resolution meetings
- Assist SFCJPA in providing responses to inquiries, change orders, Requests for Information (RFIs), and/or re-design work addenda, and letters of clarifications; and
- Provide clarifications/interpretations of plans and specifications
- Perform shop drawing review and submittal reviews as requested

- Assist SFCJPA or a designated construction manager with the preparation of contract change orders;
- Perform periodic site visitations and review of construction activities as requested
- Provide recommendations for changes required by design discrepancies, utility conflicts, or other unforeseen circumstances, which may develop during construction
- Provide assistance to final walk-through inspection

**Deliverables:** Conformance Documents, Resident Engineer Files (as appropriate)

**Task 19: Letter of Map Revision (LOMR) (optional task)**

The HDR Team will assist SFCJPA in preparation of a LOMR for submittal to FEMA after completion of project construction in order to secure FEMA approval for removing protected properties from the Special Flood Hazard Area.

A Letter of Map Revision (LOMR) is an official revision, by letter, to an effective NFIP map. A LOMR may change flood insurance risk zones, floodplain and/or floodway boundary delineations, planimetric features, and/or BFE. The letter becomes effective on the date sent.

**Subtask 19.1: Update and Submit LOMR Application**

This subtask includes updating the FEMA forms for the LOMR submittal and compiling any supporting data, model documentation, drawings, models, work maps, and levee and floodwall design plans that may have changed during the construction phase of the project(satisfying Code of Federal Regulations Section 65.10).

The process for obtaining a LOMR is the same as the CLOMR process where standard forms, relevant project plans and data, will be submitted for review by FEMA’s consultants. The completion of Forms 1, 2, 3, 4, and 5 may be required for this CLOMR submittal. A brief description of the required information is listed for each form below is included in the CLOMR task.

**Subtask 19.2: Coordinate with FEMA’s Consultant during Review**

HDR will coordinate with FEMA and their Review Consultant regarding the LOMR submittal. It is anticipated that coordination with FEMA’s Consultant will require conducting a completeness check; responding to interim comments/questions; and revising and resubmitting updated documents. It is typical for the Review Consultant to request additional information during the review process.

HDR will review and respond to one comprehensive set of comments.

**Subtask 19.3: Public Outreach regarding CLOMR Results**

It is likely that public outreach will be needed in the course releasing the LOMR. The JPA may require an informational presentation of the LOMR process; the respective NFIP jurisdictions may require public hearings to approve the proposed CLOMR; and FEMA may require notification of affected parties and a subsequent public hearing. HDR’s current public outreach specialist on the project is available to assist the team and the JPA with these efforts.

**Deliverables:** Letter of Map Revision Submittal Package

**Assumptions:**

- It is assumed that all permitting documents and models required for submission of the LOMR submittal and FEMA’s PM 64 requirements will be readily available. This task does not include additional fee for hydraulic modeling, environmental permitting, interior drainage, and/or design analysis for any of the proposed flood control facilities. It is assumed that all modeling and design efforts are included under other tasks.
- HDR will attend one coordination meeting with FEMA and/or JPA staff regarding the LOMR application.
- LOMR processing fees will be paid separately by the JPA directly to FEMA.



- It is assumed that the JPA will coordinate required signatures for the final LOMR deliverable. The CEO of each jurisdiction (Cities of East Palo Alto and Menlo Park, County of San Mateo, and potentially County of Santa Clara and Santa Clara Valley Water District) will need to sign.
- It is assumed that an in-depth sediment transport analysis quantifying sediment loads, aggregation depths or scour depths, will not be required by FEMA's LOMR submittal. Only the collection of existing documentation on sediment transport will be included.
- A Detailed Analysis will be conducted computing 100-Year floodplain boundaries and BFEs. A floodway analysis will not be conducted.
- HDR will review and respond to one comprehensive set of comments received from FEMA.
- If FEMA requires notification of affected parties, additional costs for publication of hearing notices in both jurisdictions will be incurred.
- The level of outreach required by FEMA is currently unknown and dependent upon their review comments.
- A total of one public outreach meeting/ workshop is included within this task.
- This task will not address deferred maintenance or public works issues unrelated to the levee/floodwall construction.

**Task 20: Additional Alignment Alternatives (optional task)**

For each of the additional alignment alternatives that will be included with the scope of services, the HDR Team will complete all tasks under Phase 2, as appropriate, and incorporate the additional alignment alternatives into the project deliverables and activities. For the purpose of developing a scope for this option, the alignment consistent with optional task 5.3 is assumed. Activities, deliverables, and assumptions will be consistent with Tasks 7 through 18.



SAN FRANCISQUITO CREEK  
JOINT POWERS AUTHORITY

**RESOLUTION NUMBER 23-05-25-B**

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY**

**AUTHORIZING THE EXECUTIVE DIRECTOR TO  
NEGOTIATE AND EXECUTE AMENDED  
TASK ORDER 4 TO THE MASTER SERVICE AGREEMENT  
WITH HDR ENGINEERING, INC.  
FOR THE  
SAFER BAY PROJECT**

RECITALS

Whereas, on October 24, 2013, SFCJPA executed a Master Service Agreement (MSA) with HDR Engineering, Inc. to complete feasibility analysis, design, environmental documentation and permitting for the SAFER Bay Project. The MSA serves as a governing agreement while specific work plans and actions are implemented through Task Orders; and,

Whereas, four Task Orders (TO) have been approved for the SAFER Bay Project: TO1 for East Palo Alto and Menlo Park Public Draft Feasibility Study, TO2 funded by the City of Palo Alto for the Palo Alto Public Draft Feasibility Study, TO3 for work on design and environmental documentation of selected project elements in East Palo Alto and restoration options for Ponds R1 and R2 in Menlo Park that was using anticipated funding from CalOES grant, and TO4 for continuing the TO3 work as described further hereto; and

Whereas, due to funding limitations, consultant work was halted in 2020 and progressed in 2021- 2022 using limited funding from the California Department of Water Resources (DWR) grant; and

Whereas, the SFCJPA Board of Directors unanimously approved Resolution No. 22-5-26-B for the acceptance of potential grant of funds from the San Francisco Bay Restoration Authority (SFBRA); and

Whereas, on September 15, 2022, SFCJPA and SFBRA executed Agreement No. SFB41-RA35 for \$1,000,000 in funding to further the “Strategy to Advance Flood Protection, Ecosystems and Recreation Along the San Francisco Bay” (SAFER Bay) Project planning and design, with SFBRA approval of the Work Program; and

Whereas, on December 15, 2022, the SFCJPA Board authorized the Executive Director to negotiate and execute TO4 using \$1,000,000 in funding from the San Francisco Restoration Authority and applicable remaining task funding from DWR grant Agreement No. 4600009954; and

Whereas, on January 24, 2023, the SFBRA issued a Notice to Proceed and approved of all the documentation that is required by SFB41-RA35, including Board Resolution No. 22-5-26-B, Work Plan, and evidence of insurance by SFCJPA, HDR Inc., Climate Resilient Communities, Nuestra Casa and Grassroots Ecology; and

Whereas, on March 3, 2023, the Governing Board of the SFBRA approved a supplemental award of up to \$3,980,000 in grant funding to the SFCJPA for planning and design of the SAFER Bay Project in East Palo Alto and Menlo Park; and



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Whereas, with the additional SFBRA funding and associated scope of work, SFCJPA must amend TO4 to reflect additional engineering and environmental project work; and

Whereas, Amended Task Order 4 incorporates remaining funding from Department of Water Resources Grant Agreement No. 4600009954 in accordance with approved budget as of April 2023; and

Whereas, the estimated cost for amended Task Order 4 is within the currently available funding from SFBRA and DWR.

**NOW THEREFORE, BE IT RESOLVED** by the Board of Directors of the San Francisquito Creek Joint Powers Authority hereby authorizes the Executive Director to negotiate and execute Amended Task Order 4 to implement SAFER Bay project work that is part of and in an amount not to exceed the approved project planning funding from the SFBRA grants.

APPROVED AND ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

\_\_\_\_\_  
Vice Chairperson

Date: 05/25/2023

\_\_\_\_\_  
Chairperson

Date: 05/25/2023



SAN FRANCISQUITO CREEK  
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APPROVED AS TO FORM:

\_\_\_\_\_  
Legal Counsel

Date: 05/25/2023

**San Francisquito Creek Joint Powers Authority**  
**SAFER Bay Project**  
**San Francisco Bay Restoration Authority**  
**Measure A Grant Work Program**  
**First Amendment to Task Order 4**  
**Scope of Work**

**(Scope additions for Amendment 1 are in red text)**

~~CEQA Existing Conditions~~ California Environmental Quality  
Act Documentation and Preliminary Design for Coastal Reaches of  
Menlo Park, East Palo Alto, and Ponds R1 and R2

May 17, 2023

The San Francisquito Creek Joint Powers Authority is the recipient of a \$4,980,000 grant from the San Francisco Bay Restoration Authority (SFBRA) for a project known as Strategy to Advance Flood Protection, Ecosystem Restoration and Recreation along San Francisco Bay shoreline (SAFER Bay). The SAFER Bay project has been moving forward via Department of Water Resources Grant Agreement No. SFB0041-RA035

For this scope of work, the team is being led by HDR Engineering Inc. with support from subcontractors ESA Associates and H.T. Harvey. Resumes of key team members are provided in Attachment A.

This is the **first amendment to the** fourth Task Order for the SAFER Bay Project. **All additional work in this scope of work that was not included in the original TO 4 is shown in red text.** A summary of previous Task Orders is provided below with major focus areas:

- Task Order 1- 2016 Feasibility Study for East Palo Alto and Menlo Park (Funded by the Cities of East Palo Alto and Menlo Park and closed SFCJPA and DWR Grant Agreement #4600009955)
- Task Order 2 -2019 Feasibility Study for Palo Alto (funded by the City of Palo Alto)
- Task Order 3 – Preliminary design and environmental documentation of selected Project Elements in East Palo Alto and Restoration options for Ponds R1 and R2 in Menlo Park (funded under SFCJPA and DWR Grant 4600009954 with local match from City of Menlo Park and East Palo Alto). **This task was closed January 26, with all SAFER work moving to TO4.**

The Scope of Work for Task Order 4 **Amendment 1** outlined below was prepared to support both the SFBRA and DWR grant for CEQA environmental clearance process and related documentation for SAFER Bay’s programmatic project. This scope includes preparation of the Project Description for the Draft Environmental Impact Report (DEIR) which will cover the entire programmatic SAFER Bay project area in Menlo Park and East Palo Alto, as well as a project-specific analysis for select project elements. The engineering analyses and designs will be developed to a **minimum of 10% to maximum of 30% level for reaches north of Bay Road**, to support CEQA for the programmatic project, and to a 30% level for the reaches South of Bay Road, to support future regulatory permitting through the BRRIT process. Assumptions regarding construction will also be developed to facilitate environmental review.

Table 1 outlines the level of design that will be prepared as part of this task order.

Table 1. Level of Design

SAFER Bay Project Reach	Level of Design	EIR Level of Analysis
Marsh Road	10%	Program Level*
Bedwell Bayfront Park	10% - 30%	Program Level*
Bayfront Expressway	10% - 30%	Program Level*
Tech Campus	10% - 30%	Program Level*

SAFER Bay Project Reach	Level of Design	EIR Level of Analysis
Substation and Marsh Restoration (R1/R2)	10% -30%	Project level for marsh restoration
Dumbarton Approach	10%	Program level
North of Bay Road – East Palo Alto	10% -30% Partial 30%, 30% up to Emerson	Program level*
South of Bay Road – East Palo Alto	30%	Project Level

\*For those reaches/project elements evaluated at a program level of detail, ESA will develop evaluations that aim to reduce to scope of future project-level CEQA analysis (e.g., by quantifying air emissions).

This scope of work covers a 23-month period from January 28, 2023, to December 31, 2024. The proposed schedule is included in Attachment B.

General Assumptions are:

- SFCJPA will manage all grants
- Separate contracts with Community Based Organizations will perform community outreach and educational activities
- This task order covers specific activities that are part of the larger SAFER Bay program.
- Ability to reach 30% design depends significantly on timely coordination with and cooperation by other agencies and interested parties.

Contract terms and conditions pertaining to floodplain work are also included in Attachment C.

The proposed fee is included in Attachment D.

**Task 1 – CEQA Existing Conditions Documentation, EIR Preparation, and Environmental Outreach/Regulatory Agency Communications**

These tasks describe work that is needed for environmental permits and the draft Environmental Impact Report.

**Task 1.1 – Team Coordination and Meetings**

This task includes budget for inter-disciplinary project planning and coordination meetings between the project team members across various disciplines needed for the execution of the SAFER Bay project.

HDR’s Project Manager will also hold coordination and progress meetings with team members and SFCJPA to apprise the team of project status, upcoming deliverables, and activities. Communication will be maintained by phone, email, and in-person meetings.

This task also includes scope for ESA and H. T. Harvey to attend regular SFCJPA coordination meetings and participate in related email communications.

Deliverables:

- Monthly invoices and status reports
- Weekly team meeting agendas and meeting minutes
- SAFER Programmatic Schedule

Assumptions:

- The project schedule is 23 months – February 2023 to December 2024.
- A total of 92 weekly team meetings (1-hr duration)

### **Task 1.2 - National Environmental Policy Act Support**

Federal Emergency Management Agency (FEMA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and National Historic Preservation Act. FEMA, in consultation with the US Army Corps of Engineers (USACE), will prepare documentation to support compliance with the NEPA. The HDR Team will advise on developing CEQA documentation to facilitate NEPA compliance.

Deliverables:

- Written responses to Requests for Information for NEPA specific topics

Assumptions:

- The level of effort for this task will be up to 80 hours.

### **Task 1.3 – Project Description**

The HDR Team will assist the SFCJPA in its selection of the least environmentally damaging practicable alternative (LEDPA) to be analyzed as the preferred alternative in the DEIR. The project’s 2016 feasibility study evaluated flood protection alignment alternatives and selected a preferred alternative at a conceptual level. However, to develop the LEDPA for the project’s forthcoming DEIR, additional finer scale refinements are needed to test the benefits and impacts of flood protection design decisions in the context of the unique conditions in the various project reaches. Therefore, the HDR team will develop refined alternative flood protection alignments and associated conceptual flood protection design cross sections to facilitate evaluation of the pros and cons of various alternatives for the SFCJPA’s review.

Upon the SFCJPA’s selection of the LEDPA, **assumed for purposes of schedule performance to occur no later than mid-July 2023**, the team will then prepare a detailed Project Description of the preferred alternative for use in the California Environmental Quality Act (CEQA) and NEPA environmental review process. The project description may include tidal marsh restoration/mitigation, managed pond enhancements for western snowy plover and tidal marsh-upland habitat transition zone (transition zone) creation. The Project Description will include project background, project objectives, a description of proposed components, and will describe each component to facilitate determination of the nature and scale of environmental impacts, including area of disturbance (i.e., construction limits) and construction scenarios. The Project Description will also identify discretionary approvals by regulatory agencies. Basic project components to be described in the project description include the levees, floodwalls, and appurtenant features for the programmatic project, construction access and staging assumptions, as well as the following environmental restoration/mitigation elements:

- Restoration of tidal salt marsh and potentially managed pond habitat within Ponds R1 and R2 of the Ravenswood Pond Complex in collaboration with the SBSP Restoration Project’s Project Management Team (PMT) and the San Francisco Bay Restoration Regulatory Integration Team



(BRRIT). Four options will be developed in the Ravenswood Pond Complex as outlined below. The PMT and BRRIT's opinions on these options will be factored into which the preferred option(s) the SFCJPA decides to incorporate into the SAFER Bay Project depending upon the status of adaptive management of shorebird populations in the South Bay. Prospective options are described below.

- Option 1- Pond R2- Restored Tidal Marsh/ Pond R1- No Action. Option 1 would restore an approximately 122-acre tidal marsh ecosystem of primarily tidal salt marsh with created high tide refugial habitat including a relatively created tidal marsh-upland transition zone that is customized to the size and functional needs of R2. No Action would be taken in Pond R1. This option assumes that ample western snowy plover (*Charadrius nivosus nivosus*) mitigation could be provided onsite within the Ravenswood Pond Complex and the team will develop the conceptual onsite plover mitigation approach.
- Option 2- Pond R2-Enhanced Managed Pond/Pond R1-Restored Tidal Marsh. This option would restore an approximately 450-acre tidal salt marsh ecosystem (with some created transition zone habitat (T-zone) in Pond R1 and would enhance approximately 120 acres of managed pond habitat for shorebirds in Pond R2, with a focus on western snowy plover tidal marsh. This option would impact snowy plover breeding habitat in Pond R1 via conversion to tidal marsh. Therefore, this option would require greater western snowy plover mitigation than Option 1, and potentially necessitate the project to develop feasible offsite mitigation options for the plover if ample plover mitigation could not be provided in the Ravenswood Pond Complex. This scope includes coarse level development of potential offsite plover mitigation options, should this Option be retained in the forthcoming EIR project description and ample mitigation is not feasible within the Ravenswood Pond Complex.
- Option 3- Pond R1 and R2- Restored Tidal Marsh. This option would restore an approximately 570-acre tidal salt marsh ecosystem composed of primarily tidal salt marsh with a smaller proportion of created tidal marsh-upland transition zone habitat (T-zone) in Ponds R1 and R2. This option would impact western snowy plover due to conversion of Pond R1 and R2 to tidal marsh. Therefore, this option would also require greater western snowy plover mitigation, and potentially necessitate the project to develop feasible offsite mitigation options for the plover if ample plover mitigation could not be provided in the Ravenswood Pond Complex. This scope includes coarse level development of potential offsite plover mitigation options, should this Option be retained in the forthcoming EIR project description and ample plover mitigation is not feasible within the Ravenswood Pond Complex.
- Option 4 – No Action and Wetland Mitigation Outside of the Ravenswood Pond Complex. The option includes the HDR team's coarse level identification of feasible wetland mitigation options outside of the Ravenswood Complex, likely offsite elsewhere in the SBSRP either in the Alviso Pond Complex and/or Eden Landing Pond Complex. The option assumes that ample snowy plover mitigation for plover impacts can be provided in Pond R3 and SF2.
  - Potential creation of tidal marsh-upland habitat T-zone habitat at Pond R4
  - Enhancement of breeding habitat for the federally threatened western snowy plover at Pond R3, and potentially in Pond R2 and/or SF2 and at locations outside of the Ravenswood Pond

#### Complex

- Creation of high tide refugial habitat as indicated by project studies at Ravenswood Open Space Preserve and Don Edwards Wildlife refuge Faber and Laumeister marshes.

The Project Description will also identify discretionary approvals by regulatory agencies. It is assumed that the project description will provide the appropriate level of detail to support project-level CEQA for and NEPA document.

#### Deliverables:

- Project Description for NEPA and CEQA review processes (draft and final)

#### Assumptions:

- The project description will describe the proposed project (i.e., the project proponent's preferred alternative).
- Descriptions of other alternatives will be developed as part of Task 1.5.2 at a level of detail consistent with CEQA requirements. It is assumed up to two alternatives will be considered for each project reach, except for the Dumbarton Corridor where up to three alternatives may be considered.
- The Draft Project Description will be posted on the SFCJPA website in the interests of public disclosure and interest.

### ***Task 1.4 - Existing Conditions Assessment -Technical Reports / California Environmental Quality Act Documentation***

The HDR Team will prepare the documents listed below containing environmental information to support evaluation of the project under CEQA. These documents will also be provided to FEMA for use in NEPA documentation.

#### **1.4.1 Wetland Delineation**

The EIR, NEPA documentation (assumed to be prepared by FEMA), and future permit applications will require an assessment of impacts to waters of the U.S. and waters of the State based upon an accurate map of the existing distribution of waters of the U.S. and waters of the State. Therefore, the HDR Team will delineate the boundaries of wetlands and other waters that are expected to be regulated by the U. S. Army Corps of Engineers (USACE) as waters of the U.S. and by the San Francisco Bay Regional Water Quality Control Board (RWQCB) as waters of the State. The HDR Team will delineate the boundaries of these features according to methodologies outlined in the USACE Wetland Delineation Manual and other USACE guidance such as the 2008 Arid West Supplement, and the 2016 Updated Map and Drawing Standards for the South Pacific Division Regulatory Program.

#### **1.4.2 Existing Biological Resources Report**

The HDR Team will prepare a report describing existing biological resources conditions, including a discussion of existing habitats, locations, and types of regulated habitats (e.g., wetlands and aquatic habitats), dominant plant and animal species, and special-status species. Maps depicting the locations and extent of these resources will also be included. This report will be prepared to inform project design (e.g., to allow impacts to sensitive habitats and species to be minimized) and to inform CEQA and NEPA evaluation of project impacts on biological resources.

#### Deliverables:

- Wetland Delineation Technical Memorandum (draft and final, pdf only)
- Existing Biological Resources Report (draft and final, pdf only)
- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

Assumptions:

- The SFCJPA will secure site access
- The SFCJPA will submit all documents to FEMA

### **1.4.3 California Environmental Quality Act Documentation**

#### **1.4.3.1 Draft Environmental Impact Report**

The sub-applicant will prepare a Draft EIR in compliance with CEQA. If significant impacts are identified, mitigation measures will be proposed to reduce those impacts to the extent feasible to do so. The EIR will also include other statutory sections as required by CEQA (e.g., alternatives, summary). The sub-applicant will prepare administrative draft, screen-check draft, and public draft versions of the EIR as part of this task. The Draft EIR will be published and made available for comment for 45 days during which time the sub-applicant will prepare for and participate in one public meeting. The sub-applicant will also prepare a Notice of Availability and Notice of Completion for the Draft EIR.

Deliverables:

- Administrative Draft EIR, Screen-check Draft EIR, Public Draft EIR
- Notice of Availability and Notice of Completion (draft and final)
- Public meeting materials

Assumptions:

- There will be no changes in the EIR Project Description once investigations for the administrative draft EIR technical investigations are underway. Changes to the Project Description could affect the EIR scope and schedule.
- The evaluation of aesthetic impacts will be based on design drawings, consideration of state and local policies pertaining to visual quality (e.g., designated scenic routes, effects on publicly accessible viewpoints (consistent with CEQA requirements) and identification of key observation points.
- The analysis of transportation impacts (including impacts to roads and trails) will rely on readily available data regarding existing traffic volumes; traffic counts are not expected to be needed and thus are not included in the proposed as part of this scope of work, nor are counts of pedestrian usage of trails.
- This scope of work does not include preparation of sections not required by CEQA (e.g., an environmental justice analysis).
- Work on the administrative draft EIR will not be slowed or stopped by others.
- For each review cycle, the JPA will consolidate all comments and address conflicting comments from multiple reviewers prior to submittal to ESA
- No cultural resources field work will be required by ESA beyond brief site visits. Once delineated, the cultural resources area of potential effect will not change
- This scope assumes preparation of one screening level HRA conducted using U.S. EPA's screening model AERSCREEN to assess health risk impacts
- This scope assumes that all deliverables will be electronic; Five hard copies of the EIR will be prepared for

local libraries.

- The level of effort for responding to comments will not exceed 588 hours

#### **1.4.3.2 - Final EIR and Mitigation Monitoring Program**

Following the close of the comment period the sub-applicant will respond to comments and prepare the Final EIR. The Final EIR will include comment letters and responses to comment received, text revisions made in response to comments, and a Mitigation Monitoring and Reporting Program prepared in accordance with CEQA. The sub-applicant will prepare administrative draft, screen-check draft, and public versions of the Final EIR as part of this task.

Deliverables:

- Administrative Draft, Screen-check Draft, Public Final EIR including responses to comments and Mitigation Monitoring Program

#### **Task 1.4.3.2 - Findings of Fact, Statement of Overriding Consideration, Notice of Determination**

Following publication of the Final EIR the sub-applicant will prepare draft Findings of Fact and Statement of Overriding Considerations (if required). The sub-applicant will attend a Board meeting to consider EIR certification. If the Board certifies the EIR as complete and adequate, the sub-applicant will prepare a Notice of Determination.

Deliverables:

- Draft Findings of Fact and Statement of Overriding Considerations (if required)
- Notice of Determination

#### **Task 1.5- Meetings and Coordination - Environmental Outreach**

The project will affect ecological resources (i.e., wetlands, aquatic habitats, and special-status species) regulated by the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and Bay Conservation and Development Commission (BCDC). The HDR Team will actively coordinate with the BRRIT early in the planning process to obtain BRRIT input on the programmatic project, help verify that the preferred project description addresses BRRIT concerns, and to streamline the regulatory permitting process.

As requested by the SFCJPA, the HDR Team will support outreach to the project's non-regulatory environmental stakeholders involved in the nexus between the proposed project and the South Bay Salt Pond Restoration Project (SBSPRP), including the SBSPRP Project Management Team (PMT), the USFWS Don Edwards National Wildlife Refuge, Midpeninsula Open Space District, Caltrans, San Francisco Public Utilities Commission, and State Lands Commission.

This task includes up to 2 meetings with the BRRIT and up to 2 meetings with other stakeholders and related preparatory meetings with the internal SFCJPA team. This task also includes email and telephone communications with stakeholders and agencies throughout the duration of the regulatory permitting process, as requested by the SFCJPA.

For the TO4 Amendment, this task also includes the following additional stakeholder and public meetings. It also includes the HDR team's assistance in preparation of slide deck presentation materials, and the JPA coordination meetings to prepare for these meetings:

- Up to 2 meetings with JPA member agencies to present a summary of the preliminary findings from the ADEIR and mitigation measures
- 2 public meetings for the DEIR via Zoom or similar platform.
- 2 BRRIT meetings
- 2 Refuge/SBSP/and/or other stakeholder meetings
- 1 JPA Board of Director’s Meeting for certification of the EIR

Deliverables:

- Meeting agendas and presentation materials

Assumptions:

- Three virtual meetings and one in-person meetings assumed
- SFCJPA to schedule all meetings

## **Task 2 – Engineering and Design**

### ***Task 2.1 - Data Collection***

The HDR Team will collect existing and proposed redevelopment plans relevant to the project area and include relevant information in the design drawings.

Data collection may include:

- As-built or proposed redevelopment plans of impacted facilities, including water, sanitary sewer, electric and gas
- Assessor’s parcel maps and boundaries
- Survey records
- Internal drainage and hydraulics studies

Deliverables:

- Information to be stored on project SharePoint

Assumptions:

- Data is readily available in electronic format from local jurisdictions and/or will be provided by the SFCJPA

### ***Task 2.2 - ~~Ground Survey and Utility Location~~ Land and Airborne Surveying Services***

Additional aerial survey and topographic mapping is needed for the SAFER Bay project to supplement the 2019 survey, which was limited to approximately south of Bay Road and ponds R1 and R2. With the new direction to provide an increased level of design from between 10% and 30% in all reaches, additional survey is required.

#### **Task 2.2.1 – Survey Ground Control**

The HDR Team will establish and target approximately eighteen (18) horizontal and vertical ground control points necessary for topographic mapping (see Exhibit A). Each point will be set with a semi-permanent monument, such as rebar with a cap, PK nail with a washer, survey spike, 1-1/8" brass disk, or equivalent. Control targets will be painted with white latex paint on paved surfaces or PVC panels for areas of grassland/dirt. Please note that our proposal assumes that The HDR Team will not be required

to remove control targets following acquisition of the aerial photography. A combination of global positioning system (GPS) technology and conventional land surveying equipment and techniques (traversing using a total station instrument and differential leveling using an automatic or digital level) will be employed to establish horizontal and vertical control. For this project, the HDR Team will establish horizontal coordinates referenced to the California Coordinate System of 1983 (NAD83), Zone 3 Epoch (2017.5), and elevations referenced to the North American Vertical Datum of 1988 (NAVD88)- Geoid 18. If another coordinate system or vertical datum is desired, it will be stated at NTP.

#### **Task 2.2.2 – Airborne LiDAR and Imagery Collection**

The flight plan will be designed to collect LiDAR data at a density of 12 points per square meter (12 PPM<sup>2</sup>) and imagery with a 0.25ft resolution for the complete study area.

#### **Task 2.2.3 – Topographic Mapping**

Vector data will be collected using a softcopy stereoplotter interfaced directly with an AutoCAD workstation. Planimetric features – such as buildings, roads, fences, vegetation, and the like – will be digitized at elevations that provide sufficient horizontal accuracy (which may or may not be at ground level). Planimetric features digitized will be typical for a map scale of 1" = 100'. The LiDAR data will be classified to differentiate “bare-earth” ground vs. non-ground features. Canals, sloughs, and other water bodies 50 feet in width or greater will be hydro-flattened. The LiDAR data will be used to develop Civil 3D surfaces suitable for generating one-foot contours.

#### **Task 2.2.4 – Digital Orthophotography**

We will prepare natural color digital orthophotography covering the Project area. DTM data collected under Task 3 will be used to rectify the aerial photography. In accordance with typical mapping practice, images will be rectified at ground level; therefore, the top of above-ground features (rooftops, tops of tanks, etc.) may not necessarily appear in their correct horizontal positions. The orthophotography will be delivered in a single orthophoto tile at 1" = 100' with a 0.25' ground pixel resolution. We will deliver the digital orthophotography in uncompressed TIFF files. We will also create a MrSID compressed image of the orthophotography.

#### **Task 2.2.5 - Hydrographic Survey**

The HDR Team will conduct hydrographic surveying to inform tidal restoration design of Ponds R1 and R2. The survey will consist of two field days for a two-person crew, as well as field preparation and data post-processing. The survey will focus on submerged channels within and adjacent to the restoration site that are likely sites for earthwork, hydraulically significant, and/or potentially affected by the restoration design.

#### **Task 2.2 Deliverables:**

- Survey Control Report
- AutoCAD Civil 3D surface with one-foot contours
- AutoCAD Civil 3D file with planimetric features (The HDR Team Layers)
- Hydrographic survey data, in standard digital file format, e.g. a PENZD .csv file

#### **Task 2.2 Assumptions:**

- Areas of dense vegetation where the ground is obscured from clear view in the aerial photography, DTM data and contours may deviate from their correct elevations and planimetric features may not be shown.
- Outside traffic control services will not be required to conduct the services described in this Scope of

**Work.**

- All permits, licenses, and other fees not specifically described herein are not included in this proposal.
- Appraisal Maps are included in this scope of work for this project.
- This proposal does not include the cost to prepare temporary construction easements or permanent easements for the structures being constructed. If this service is requested, the creation of legal descriptions and plats, may be charged on a time-and materials-basis.
- No ground topographic surveys will be performed with the exception of those described in 2.2.5.
- No utility surveys will be performed.
- Access to the project site and locations within will be coordinated by the client.
- Project schedule is contingency on the weather. The client will be notified if any weather delays impact the schedule. Local benchmark information for rectifying with other project survey data will be provided
- There are risks associated with field data collection, especially in the marine environment. HDR subconsultant ESA maintains insurance for instruments, and therefore takes the risk of damage to the hardware or loss. ESA also applies quality control procedures to reduce the possibility of malfunction. However, ESA cannot guarantee that data collection will be complete. ESA will endeavor to complete the scope of work within the estimated fee and schedule with the data actually collected. ESA’s policy is to notify clients if a problem arises and results in the need for added effort or schedule revision, so that the appropriate remedy can be identified and implemented. ESA reserves the right to not re-deploy instruments if the risk of damage or loss, especially due to theft or vandalism, appears high.
- This collection of hydrographic data to augment traditional surveying services are for the purposes of geomorphic interpretation, monitoring of project performance, and other specific uses consistent with Geologic and Landscape Surveys as defined in the Professional Land Surveyors’ Act (California Business and Professionals Code).

***Task 2.3 – Geomorphic Marsh Evolution Projections Analysis (R1, R2, SF2, Faber, Laumeister, Cooley Marsh)***

The HDR Team will conduct a habitat evolution assessment of the proposed (Pond R1, Pond R2, and SF2) and existing (Faber, Laumeister, Ravenswood Open Space Preserve) tidal marshes along the levee alignment.

This assessment will address multiple questions raised by the BRRIT in prior design consultation meetings. Assuming Pond R1 and R2 were breached to fully re-connect tidal exchange with San Francisco Bay, the assessment will project the future sedimentation and time to vegetation establishment of these proposed restoration areas. In doing so, the assessment would forecast the likelihood and timeframe for the restoration to achieve mitigation for tidal marsh impacts elsewhere along the levee alignment. For the existing tidal marshes (Faber, Laumeister, and Cooley), the assessment will project these marshes’ resilience and vulnerability in response to sea-level rise. This assessment will inform the timing and design of T-zone options for the landward side of the existing marshes (Task 2.4).

The assessment will include the following steps:

- Review of accretion data from nearby restoration sites in the South Bay, specifically south of the Dumbarton narrows.
- Assess the usability of Harvest provided Comprehensive Site Management Plan (2014) marsh survey data

- Calibrate the mudflat accretion model to match accretion data from the nearby sites
- Use the accretion model to project future habitat evolution of the sites, starting from the existing bed elevations. Results of the modeling will include maps depicting future land surface elevations and habitat, as well as projected tidal marsh area over time.
- Conduct a sensitivity analysis of the evolution projects to potential variations in sea-level rise and representative suspended sediment concentration
- Describe the modeling results with figures and text incorporated into a technical memorandum

Deliverables:

- Technical Memorandum - Geomorphic Marsh Evolution Projections Analysis – Draft and Final; pdf only

Assumptions:

- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

***Task 2.4 - Refugial Habitat Assessment and T-Zone Configuration (Faber, Laumeister, Cooley Marsh)***

Faber Marsh and Laumeister Marsh provide high quality habitat for California Ridgway's rail and salt marsh harvest mice and are known to support a relatively high California Ridgway's rail abundance. Moreover, high tide refugial habitat is known to be a limiting factor for population abundance of the Ridgway's rail and salt marsh harvest mouse. Therefore, the BRRIT requested an assessment of the quality and distribution of high-tide refugial habitat for these species in Faber, Laumeister, and Cooley Marshes along with an assessment of the resilience of these marshes to sea level rise to inform the slope and width of SAFER Bay's created T-zone (e.g., to balance short term marsh habitat impacts of T-zone construction with long-term ecosystem benefits). This task will leverage the results of the above geomorphic marsh evolution projections. The project team's wildlife and restoration ecologists will collaborate to assess the quality and quantity of high-tide refugial habitat within Faber, Laumeister, and Cooley Marshes via a combination of field and desktop habitat assessment. Existing high tide refugial habitat quality will be rated (high, medium, low) for each of the three marshes as-a-whole, based on professional judgement after field reconnaissance and review of aerial imagery. In addition to this "whole marsh assessment", the ecologists will map individual patches of refugial habitat that could be potentially impacted by T-zone construction and rate the habitat quality of each patch (high, medium, low). Conceptual T-zone design recommendations (i.e., spatial layout, slope) will then be developed by integrating the refugial habitat assessment with the geomorphic marsh evolution projections (Task 2.3) for each of these marshes from the above geomorphic marsh evolution task.

Deliverables:

- Technical Memorandum Draft and Final– Refugial Habitat Assessment and Conceptual T-zone Configuration Recommendations for Faber, Laumeister, and Cooley Marshes

Assumptions:

- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

***Task 2.5 – Wetland Habitat and Western Snowy Plover Mitigation Approach Development-***



### ***Ponds R1/R2 Restoration Options Assessment and Western Snowy Plover Habitat Enhancement Options Development***

The HDR Team will develop the overall wetland and western snowy plover habitat mitigation approach for the SAFER Bay project to a preliminary conceptual level for preparation of the habitat mitigation section of the future DEIR. The Team will compare four conceptual restoration options for Ponds R1 and R2 and will coordinate collaboratively with the SFCJPA and PMT (with BRRIT input) to select a preferred option for Ponds R1/R2. The conceptual restoration options will be developed for incorporation into the DEIR's impact analysis, with the assumption that the SFCJPA and PMT may not be ready to decide on the preferred option prior to completion of the DEIR. Based on prior communications with PMT members, it is likely that these options will constitute the following, however, the options will be developed collaboratively with the PMT.

- Option 1: Pond R2-restored tidal marsh/ Pond R1- no action
- Option 2: Pond R2- managed pond/Pond R1 restored tidal marsh
- Option 3: Ponds R1 and R2- restored tidal marsh
- Option 4: Pond R1 and R2 – managed ponds

The project team's restoration ecologists and hydrologists will develop a preliminary conceptual plan (e.g., 10% plans) for each restoration option that the SFCJPA and PMT select for inclusion in the DEIR. The conceptual plans will identify the locations and rationale for target habitats (tidal marsh, T-zone, managed pond), the target hydrology, and the types and locations of the key design elements including potential berm breach locations (to reintroduce tidal action), potential channel excavation (to provide hydraulic connectivity and minimize fish stranding potential), potential borrow ditch block locations, created T-zone/high tide refugial habitat locations and footprints, managed pond target hydroperiod, managed pond water control structures, and other managed pond habitat features. These conceptual options will be summarized in a concise report for review and comments by the PMT and BRRIT.

This task also includes development of a menu of mitigation options for the project's impacts on western snowy plover; this would include potential mitigation actions in Ponds R2, R3, and SF2. It is understood that the magnitude of plover impacts will depend, in part, on the selected tidal marsh restoration option. Therefore, this task includes snowy plover mitigation approaches that are calibrated for each of the tidal marsh restoration options above.

#### **Deliverables:**

- Draft **and Final** SAFER Bay Wetland and Western Snowy Plover Conceptual Habitat Mitigation Options Report (to include 10% drawings)
- 
- Four meeting agendas and meeting minutes

#### **Assumptions:**

- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

### ***Task 2.5.1 Ponds R1/R2 Restoration and Managed Pond Basis of Design Report***

Once the PMT reviews the Ponds R1/R2 Options Assessment (Task 2.5) and selects the preferred option for Ponds R1/R2, the project’s restoration hydrologists and restoration ecologists will develop the basis of design for Ponds R1 and R2 leveraging the 10% conceptual plans developed in the previous task. This will include proposing exterior breach locations and extents, habitat T-zone locations, T-zone conceptual grading and soil preparation approaches, and T-zone re-vegetation. The basis of design will also propose interpond berm breach locations and/or create high tide refugial habitat slough channel berms. This effort will be documented in a Basis of Design Report to provide the basis for the plans, specifications and estimates (PS&E) deliverables described below. The Basis of Design Report will articulate the design rationale for the various restoration elements/actions.

The task includes evaluation of the coastal hydraulics conditions including Pond R1 and R2 hydraulic conditions on the waterside of the levee, review and summarize available sources on water levels, sea level rise, waves, run-up and overtopping from published reports, studies and maps, including the U. S. Army Corps of Engineers (USACE) South San Francisco Bay Shoreline Study, state, and federal sea level rise planning guidance. These existing data and information sources will be used to develop a project-specific hydraulic model to predict water levels and flow velocities likely to result from the proposed tidal restoration design.

### **Hydraulic Modeling of Proposed Restoration Conditions**

The HDR Team will develop a hydraulic model to assess the likely changes in water levels and flow velocities for the preferred tidal restoration design. These model simulations will be used to inform design of restoration elements (breach, interior channels) and adjacent flood control measures.

### **High Tide Refuge Habitat and Transition Zone Conceptual Design**

The HDR Team’s restoration ecologists and landscape architects will develop the basis of design to restore high tide refuge habitat both within the restored marshes (e.g., refugial islands and/or slough channel berms) and on T-zones along the upland fringes of the restored marshes. Native dominated transition zone/high tide refugial habitat on the outboard levee slopes adjacent to Ponds R1 and R2. , This will include concise text and conceptual plan view and cross section drawings, summarizing the conceptual approach to slope configuration, soil preparation, revegetation installation, and plant establishment maintenance. This task also includes analysis of horticultural soils data obtained in the geotechnical investigations to assess the horticultural suitability of existing levee and levee subgrade soils for reuse in T-zone creation.

### **Managed Pond Conceptual Design**

If the PMT selects Option 2-hybrid tidal marsh/managed pond, then the team will develop the basis of design for enhancement of Pond R2 as a managed pond for shorebirds in collaboration with the PMT. They will define the target shorebird species for pond management and the associated target hydroperiod and habitat conditions to support those species. The managed pond basis of design will include a conceptual plan for hydroperiod management (e.g., water control structure types and potential locations, water level targets by season) and any other pertinent shorebird habitat features (e.g., nesting islands, substrate treatments to facilitate nesting).

Deliverables:

- Memorandum summarizing hydraulic modeling of preferred restoration alternative
- Draft and Final Restoration Basis of Design Report
- Draft and final schematic design packages representing the preferred design alternative, containing a plan view schematic, typical cross-section(s), matching level of detail of basis of design report

**Assumptions:**

- Preferred restoration alternative will be selected based on prior subtasks and in consultation with client, cities, USFWS, SBSP PMT, and other agencies.
- A single round of comments is assumed, and SFCJPA will compile all comments

**Task 2.6 - Coastal Hydraulics Analysis**

The HDR Team will describe the extent and general character of hydrological conditions; identify local and coastal flood hazard zones using FEMA maps; review and summarize available sources on water levels, sea level rise, wave run-up and overtopping from published reports, studies and maps, including the USACE South San Francisco Bay Shoreline Study and the California Ocean Protection Council. The regulatory setting will include obtaining and reviewing standard requirements (flood criteria, etc.), and input from agencies.

**Deliverables:**

- Draft Coastal Hydraulics Summary Report (pdf only)
- Final Coastal Hydraulics Summary Report (pdf only)

**Assumptions:**

- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

**Task 2.7 - Interior Drainage Analysis**

The HDR Team will describe the extent and general character of hydrological conditions; identify interior flood hazard zones using FEMA maps; assess existing runoff conditions and character of storm water drainage system and surface water features; discuss effectiveness of existing interior drainage; and consider effects of sea level rise on future interior drainage, including groundwater hazards under Task 2.8. The regulatory setting will include obtaining and reviewing standard requirements (FEMA interior drainage accreditation criteria, storm drainage criteria, proposed drainage improvements, etc.), and input from agencies, e.g. City of East Palo Alto. This task will include an initial assessment of potential impacts of proposed levee alignment and footprint on the existing storm water drainage system. Based on this assessment, the opportunities and constraints for potential improvements to the interior drainage system will be identified, as well as recommendations for next steps to inform future hydrologic analyses, conceptual design, and selection of preferred alternative.

The HDR Team will provide alignment, hydraulics sizing, and hydraulic design for interior drainage collection channel along proposed levee footprint. These recommendations will be coordinated with client and local cities for compatibility with their stormwater drainage systems.

**Deliverables:**

- Draft Interior Drainage Summary Report (pdf only)
- Final Interior Drainage Summary Report (pdf only)

**Assumptions:**

- A single round of comments is assumed, and SFCJPA will compile all comments

- **ESA and HDR to provide alignment recommendations. ESA to provide hydraulic sizing recommendations. HDR to provide hydraulic design.**
- No new hydrologic and/or hydraulic modeling of storm water drainage system
- No hard copy deliverable

### ***Task 2.8 - Groundwater Analysis***

The HDR Team will describe the extent and general character of the existing and future groundwater conditions underlying the parcels landward of the proposed coastal levee. Existing conditions will be characterized using previously collected data from existing wells in the area. Future conditions will be based on projections of sea level rise for the Bay and assumptions regarding the relationship between Bay water levels and adjoining groundwater levels. Projected future groundwater levels will be considered in relation to ground surface elevations, and the storm drain network, to assess the potential for increasing flood hazards from emergent groundwater. The effects of elevated groundwater on contaminant transport will not be analyzed, as this is assumed to be the responsibility of individual parcel landowners.

Deliverables:

- Draft and Final Groundwater Summary Report (pdf only)

Assumptions:

- No new analysis will be performed
- Existing groundwater well data is available and adequate
- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

### ***Task 2.9 - Geotechnical Investigation and Evaluation***

**The geotechnical investigation and evaluation effort described below is focused on the portion of the project between Marsh Road and Bay Road. In the Pond SF2 area, the proposed geotechnical scope will be focused on one of the potential project alignments, which will be determined after consultation with the refuge. The goal is to advance the 2016 feasibility level analysis up to a 30 percent design level, or to the extent possible if a 30 percent level cannot be achieved. Work will include the items described in the subtasks below.**

#### **Review of Geotechnical Information and Site Reconnaissance**

This task will include a review of additional geologic and geotechnical published information, and information collected by the HDR Team in the project area, including geotechnical reports and logs of subsurface explorations. The HDR Team will perform a site reconnaissance of the selected alignment and note physical site features that could impact the project from a geotechnical perspective.

#### **Field Investigation**

This task will include a subsurface exploration program along the proposed alignment to supplement available existing subsurface data. The proposed subsurface exploration program will take into consideration information from others, and information previously collected by HDR under the feasibility phase. The goal will be to perform geotechnical field exploration and laboratory testing to a level that is sufficient for 30 percent design. Our

proposed field exploration program consists of advancing up to 16 test borings and 11 cone penetrometer tests (CPTs) typically to depths of about 60 to 70 feet. Selected explorations may be advanced to greater depths, depending on the anticipated subsurface conditions and/or anticipated project structures at those locations. Prior to conducting the field work, we will prepare a Field Work Plan and Health and Safety Plan, obtain the applicable encroachment and drilling permits, check site access, and check for the presence of underground utilities by contacting Underground Service Alert (USA). The HDR team will retain and coordinate with appropriate exploration subcontractors to select suitable exploration equipment to access the desired exploration locations, to the extent that is reasonable and practical.

From our experience with previous explorations, access to some exploration locations may be difficult/not possible or limited to only certain times of the year. Explorations for such areas would need to be deferred to a later time when site access is granted, perhaps to a later phase in the project. This scope and fee do not include measures such as mobilizing barges or rafts, or preparing temporary pads to explore hard-to-access and potentially sensitive areas such as marshes or ponds. Drill cuttings and fluids will be generated from the borings. Drill cuttings and fluids in drums will be contained and transported to a nearby temporary storage area provided by SFCJPA. Following chemical testing of samples of the drummed materials, we will arrange to have the materials transported to a suitable disposal facility. This scope and fee assume that the subsurface materials encountered are free of contaminants. If that is not the case, additional scope and fee would be needed for soil handling and disposal.

### **Geotechnical Engineering Analysis and Evaluation**

Engineering analysis to develop conceptual to preliminary geotechnical conclusions and recommendations for the portion of the project between Marsh Road and Bay Road will be performed. Stability and seepage analyses for up to 14 cross sections will be performed.

For each cross section location, stability, and seepage analyses will be performed for one levee geometry (or one alternative flood protection scheme such as a flood wall) and one design water surface elevation for the following conditions: 1) Stability at the end of levee construction, 2) Stability under the design water surface elevation, 3) Stability under rapid drawdown loading conditions (when floodwaters recede), 4) Seepage (both levee through seepage and underseepage), and 5) Stability under seismic loading, including estimated magnitudes of liquefaction induced levee settlement and lateral deformation. Analyses to estimate magnitudes of levee settlement over time will also be performed. It is assumed that measures to mitigate the potential for liquefaction and liquefaction-induced ground displacements, such as soil improvement, will not be required.

The proposed scope will also include the development of conceptual level foundation recommendations for support of associated flood protection structures such as flood gates.

#### **Deliverables:**

- Preliminary Geotechnical Report ~~for South of Bay~~ (draft and final, pdf only)
- ~~Conceptual Geotechnical Report for Ponds R1 and R2 (draft and final, pdf only)~~

#### **Assumptions:**

- Stability and seepage analyses will be performed up to 14 cross sections
- The subsurface explorations indicate that there is the potential for liquefaction in some soil zones but not widespread liquefaction. It is anticipated that soil improvement measures to densify and/or strengthen potentially liquefiable soil zones would be relatively costly and

therefore cost prohibitive. It is assumed that instead of mitigating the potential for liquefaction with soil improvement, the approach that would be taken is that in the event of earthquake-induced liquefaction leading to levee settlement and lateral deformation, the levee would be repaired afterward. This approach follows typical practice for levee design and construction.

- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

### **Task 2.10 - Engineering Support for ~~Project Description~~ CEQA Documentation**

This task includes the engineering analyses required to develop the project description. The HDR Team will prepare a written descriptions of the improvements to be completed, define approximate project work limits, anticipated construction equipment that may be used along with anticipated usage durations, approximate material quantities, borrow source locations, and estimated truck trips to and from points of uses and to the project site. Anticipated construction phasing and duration will also be developed as part of this task.

Deliverables:

- Figures that identify the construction limits, staging areas, and access routes
- Planning level material quantities
- Equipment list and anticipated durations of usage
- Written descriptions of the improvements to be completed

Assumptions:

- Engineering analyses information will be included in the deliverables described in Task 1.3 above.
- Air quality calculations will not be performed as part of this task

### **Task 2.11 - Design Criteria Memorandum**

A Technical Memorandum will be prepared that describes the technical approach for the project, including loading conditions, establishment of the design water surface elevation to set top of levee/floodwall elevations, criteria for levee design, criteria for appurtenant facilities, and the level to which the project will be evaluated and designed. The Design Criteria will be reviewed and approved by the SFCJPA prior to moving forward into design.

Deliverables:

- Draft and Final Design Criteria TM, pdf only

Assumptions:

- The Design Criteria TM will be approved by SFCJPA prior to start of design related efforts
- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

### **Task 2.12 - Design**

#### **Task 2.12.1 – Meetings and Coordination - Design**

The HDR Team will support the SFCJPA in the design coordination by attending meetings with the Cities of East Palo Alto and Menlo Park, utility owners such as Pacific Gas and Electric (PG&E), East Palo Alto Sanitary District, San Francisco Public Utilities Commission (SFPUC), private property owners such as Harvey, 2020 Bay Road, and Emerson Collective, as well as the Environmental Protection Agency (EPA) to discuss contaminated parcels along the proposed alignment alternatives. The goal of these meetings is to work collaboratively to select the LEPDA. Coordination support includes attending meetings (virtually), sharing SAFER project data (with the permission of the SFCJPA) and reviewing received data.

Deliverables:

- Attend up to **eight (8)** 2-hour virtual meetings with City of East Palo Alto – assumes three (3) staff attend each meeting
- Attending up to **six (6)** 2-hour virtual meetings with each private developer (Harvest, 2020 Bay Road, and Emerson Collective) – assumes 2 (two) staff attend each meeting
- Attend up to **fifteen (15)** 2-hour virtual meetings with other utility owners and/or agencies requested by the SFCJPA – assumes two (2) staff attend each meeting
- Meeting agenda and minutes to be drafted by HDR Team

Assumptions:

- All meetings will be virtual.

**Task 2.12.2 – Programmatic/project Level 10% to 30% Design, Specifications, Estimates, and Construction Schedule (North of Bay Road)**

The HDR Team will prepare 10% designs and associated drawings for the project-specific reaches North of Bay Road (as shown in Table 1). Drawings will be prepared using AutoCAD 2018, or newer software and include levee plan and profile sheets and typical section sheets representative of each different design footprint. Levee plan and profile sheets will depict the levee alignment, associated improvements footprint, and will show relevant topographic and planimetric information previously obtained. Quantity take-off calculations and an Opinion of Probable Construction Costs will be prepared and include appropriate contingency corresponding to Class 3 as defined by AACE.

Deliverables:

- 10% Plans (half-size drawings only, PDF)
- Opinion of Probable Construction Costs (PDF)
- Responses to review comments; comments on the 10% design will be physically addressed in the 30% design package not included in this scope of work

Assumptions:

- Deliverables will be provided digitally and in pdf format
- Quantity takeoffs and the OPCC will be prepared in Microsoft Excel
- Revegetation planning, seeding, and plant establishment landscape design is not included in this task
- Cost estimates will be prepared consistent with AACE 18R-97.

- No hard copy deliverable

The HDR Team will prepare 30% designs and associated drawings for the project-specific reaches North of Bay. Drawings will be prepared using AutoCAD 2018, or newer, software and will include at a minimum the following types of sheets, which are generally consistent with the list shown in theMSA:

- Title, sheet index, legend and symbology, notes
- Overall site plan sheet and construction limit sheets
- Survey sheets
- Levee plan and profile sheets
- Levee typical section sheets

Drawings will be developed to a 30% level generally depicting alignments, footprints for improvements, and identifying types of improvements.

The 30% design will include a technical specifications table of contents. General specification, bid forms, and required standard forms would be developed as part of later phases of design (not a part of this Task Order).

Quantity take-off calculations and an Opinion of Probable Construction Costs will be prepared and include appropriate contingency corresponding to Class 3 or Class 4 as defined by AACE as appropriate. A preliminary construction schedule will also be prepared.

A Design Documentation Report will be prepared to document the criteria and technical approach, the design process, key technical elements, and assumptions made during design.

Effective revegetation of the levee slopes is an important levee design element. For example, the DEIR will require active revegetation of marsh-upland habitat along the bayward slopes for all reaches adjacent to existing marshes. Levee slopes adjacent to managed ponds and landward levee slopes will also require active revegetation with vegetation targets that vary from the habitat targets for bayward slopes adjacent to existing marshes. Therefore, the HDR team’s restoration ecologists and landscape architects will prepare a Conceptual Levee Slope Revegetation Report for all levee slopes for both the programmatic and project-specific reaches. This includes levee slopes of any slope angle (e.g., 3H:1 V or gentler). Unique revegetation design goals, criteria, and topsoil preparation/revegetation concepts will be developed for the various types of levee slope landscape positions (e.g., bayward levee slopes adjacent to marshes, bayward levee slopes adjacent to managed ponds, landward levee slopes). This report will inform design development for future landscape construction documentation, which is outside of this scope. Note that task 2.6 above (R1/R2 BOD) covers the revegetation design basis for T-zones in those restored pond(s).

Deliverables:

- 10% Plans (half-size drawings only, PDF)
- 30% Plans (half-size drawings only, PDF)
- Specifications Table of Contents
- Engineering Design Documentation Report and Conceptual Levee Slope Revegetation Report (Draft and Final, PDF)
- Opinion of Probable Construction Costs and construction schedule



- Responses to review comments; comments will be addressed in the 60% design package that is not included in this scope of work

**Assumptions:**

- Deliverables will be provided digitally and in pdf format
- Quantity takeoffs and the Opinion of Probable Construction Costs will be prepared in Microsoft Excel
- Landscape design drawings and specifications for revegetation is not included in this task
- Cost estimates will be prepared consistent with AACE 18R-97.
- No hard copy deliverable
- Utilities will be assessed and designed to a 10-30% level of completion as dictated by reach in the scope of work. Utilities will be designed using existing information only. No utilities will be surveyed as part of this task order. The design memorandum will document data gaps and required information for further design under a separate task order to be developed.
- Ability to reach 30% design on reaches North of Bay Road is heavily dependent of communication and cooperation with other agencies and interested parties

**Task 2.12.3 – Project Level 30% Design, Specifications, Estimates, and Construction Schedule (South of Bay Road)**

The HDR Team will prepare 30% designs and associated drawings for the project-specific reaches South of Bay. Drawings will be prepared using AutoCAD 2018, or newer, software and will include the following types of sheets:

- Title, sheet index, legend and symbology, notes
- Overall site plan sheet and construction limit sheets
- Survey sheets
- Levee plan and profile sheets
- Levee typical section sheets

Drawings will be developed to a 30% level generally depicting alignments, footprints for improvements, and identifying types of improvements.

The 30% design will include a technical specifications table of contents. General specification, bid forms, and required standard forms would be developed as part of later phases of design (not a part of this Task Order).

Quantity take-off calculations and an Opinion of Probable Construction Costs will be prepared and include appropriate contingency corresponding to Class 3 as defined by AACE. A preliminary construction schedule will also be prepared.

**A Design Documentation Report will be prepared to document the criteria and technical approach, the design process, key technical elements, and assumptions made during design.**

**Deliverables:**

- 30% Plans (half-size drawings only, PDF)
- Specifications Table of Contents
- Opinion of Probable Construction Costs and construction schedule

- **Design Documentation Report (Draft and Final, PDF)**
- Responses to review comments; comments will be addressed in the 60% design package that is not included in this scope of work

Assumptions:

- Deliverables will be provided digitally and in pdf format
- Quantity takeoffs and the Opinion of Probable Construction Costs will be prepared in Microsoft Excel
- Revegetation planning, seeding, and plant establishment landscape design is not included in this task
- **Utilities will be assessed and designed to a 10-30% level of completion as dictated by reach in the scope of work. Utilities will be designed using existing information only. No utilities will be surveyed as part of this task order. The design memorandum will document data gaps and required information for further design under a separate task order to be developed.**
- **Federal Highway Administration- Subsurface Utility Engineering Level D will be used**
- Cost estimates will be prepared consistent with AACE 18R-97.
- No hard copy deliverable

#### **Task 2.12.4 – Data Gaps Memorandum**

At the completion of the 10% and 30% design tasks, a data gaps memorandum will be developed summarizing information that will be required to forward the project to future design phases.

Deliverables:

- Data Gaps Memorandum (Draft and Final, pdf only)

Assumptions:

- A single round of comments is assumed, and SFCJPA will compile all comments
- No hard copy deliverable

### **Task 3 - Right of Way and Easements**

***Task 3.1 – Existing Conditions Boundary Land Net Basemap (This work relies heavily on the work described in task 2.2)***

Prior to field surveys for the Land Net Basemap, research will be conducted to identify boundary monuments that may affect the property lines within the project limits. Said research will be conducted at the San Mateo County Surveyor's office, Caltrans District 4 Right of Way Survey offices, at the City of East Palo Alto, at the City of Menlo Park, and at the City of Redwood. Documents that will be acquired include Subdivision maps, Parcel Maps, Records of Surveys, Rights of Way Maps, any Menlo Park Street maps, any City of East Palo Alto Street maps, and any City of Redwood City Street maps. With this information, identified boundary monuments will be searched for and located along the project alignment. This may include section/rancho corners, property corners, street monuments, and other evidence of ownership that may support the calculated position of boundary lines. In the office, this information will be reviewed under the supervision of a Licensed Land Surveyor, and the property lines along the project alignment will be calculated and drawn in an AutoCAD drawing. This process utilizes

all the research done to date and requires that title reports be ordered by The HDR Team (assumed 13) to properly identify ownership of impacted properties and to show easements identified in said provided title reports. The resulting Land Net Basemap will be created in Civil 3D 2022 or newer (The HDR Team CAD Standards) and will be on the same coordinate system as all the other survey deliverables. Note: It is assumed that a Record of Survey Map will not be filed to support this project. California State Law states that if a 'material discrepancy' is found with information shown on existing filed maps that the surveyor is obligated to file a Record of Survey map with the San Mateo County Surveyor. While we do not anticipate finding a 'material discrepancy', if one is identified, we will notify the client immediately to discuss the supplemental scope and cost to minimally comply with State Law (California BPC § 8762). Map accuracy will meet specifications published in the U.S. Department of Transportation's "Reference Guide Outline".

**Deliverables:**

- AutoCAD Civil 3D file with Land Net Basemap

**Assumptions:**

- The HDR Team will assume plotting 25 easements total from the title reports for the purpose of this proposal.

**ATTACHMENT A – RESUMES FOR KEY STAFF**

**Elizabeth K. Mesbah, PE**  
Project Manager



Libby is a registered civil engineer with more than 18 experience in the fields of hydraulics, flood control planning and design, riverine and coastal erosion protection, and shoreline engineering. She has worked extensively in the San Francisco Bay area providing planning and design level expertise in coastal flood protection. Her experience includes protecting shorelines against erosive wind and wave conditions, evaluating the impacts of changing tidal conditions (including sea level rise), and recommending near-term and long-term coastal flood protection solutions to remove individual critical facilities up to large cities out of the coastal floodplain.

**SELECT RELEVANT EXPERIENCE**

**EDUCATION**

Bachelor of Science,  
Civil Engineering,  
University of California,  
Davis, 2004

**Strategy to Advance Flood Protection, Ecosystems, and Recreation Along the Bay (SAFER Bay) | San Francisquito Creek Joint Powers Authority (SFCJPA), Palo Alto, California**

Project manager for planning, design, environmental documentation, and permitting for the SAFER Bay program with the SFCJPA. This program provides tidal flood protection from the south end of Redwood City to Mountain View City boarder. Libby is not only an integral member of the design team, but also manages all invoicing, progress reporting, sub-consultant coordination, scheduling and managing the deliverable process. The program currently includes flood risk management, recreation, and habitat restoration. Features include levees, floodwalls, flood/tide gates, marsh restoration, utility relocations, real estate support, pump stations, and conveyance. Activities include hydrologic and hydraulic modeling, interior drainage evaluations, geotechnical evaluations and coastal flood protection.

**REGISTRATION**

Professional Engineer -  
Civil, California #73078

**San Francisquito Creek Flood Improvement Project | San Francisquito Creek Joint Powers Authority (SFCJPA), Palo Alto, California**

The San Francisquito Creek Flood Improvement Project provides one percent annual chance riverine flood protection from San Francisquito Creek to homes, businesses, and facilities in the Cities Palo Alto and East Palo Alto downstream of Highway 101 to the confluence with the San Francisco Bay. Libby has been involved since the beginning of the project providing lead hydraulic and civil design services to the SFCJPA. Developed the project 1-D steady state hydraulic HEC-RAS model that included proposed channel geometry features, such as the levees, floodwalls, Caltrans Highway 101/East Bayshore Road bridge replacement geometry, and levee segment removal optimization while considering tidal impacts. Was responsible for the development of erosion protection measures along the channel.

**HDR TENURE**

18 Years

**INDUSTRY TENURE**

18 Years

**California Department of Water Resources (DWR) | Division of Operations and Maintenance, Dam Safety Services, California**

Libby has served as the contract manager for DWR’s Engineering and Engineering Geologic Services contract for the evaluation, analysis and inspection of structures associated with the California State Water Project. HDR has executed 60+ individual task orders for a wide-ranging list of facilities and types of engineering services.

### **FEMA, Region IX IDIQ Contract, CA, AZ, and NV**

Libby was the project manager for over 15 task orders under this contract, which included collecting and entering map needs assessment parameters into the national database; conducting hydrologic and hydraulic modeling; determining flood hazard areas; producing flood insurance studies including Digital Flood Insurance Rate Maps; coordinating with local community officials, FEMA, and FEMA review contractors; participating in public outreach meetings; developing flood disaster recovery maps; developing post-fire emergency evacuation maps; and implementing FEMA's provisionally accredited levee process.

### **North Base Preliminary Erosion Assessment | San Mateo County Transit District (SamTrans), San Mateo County, California**

Libby performed an erosion assessment of the shoreline surrounding the north base maintenance facility. The north base is located on an island (formerly known as Belle Air Island) in the City of South San Francisco. She provided adaptation planning to reduce their vulnerability to negative impacts of sea level rise. The erosion assessment provided recommendations to reduce near-term erosion risk while aligning SamTrans's efforts with the actions outlined in San Mateo County's 2017 Sea Level Rise Vulnerability Assessment. She also performed quality control of the erosion assessment deliverables.

### **Water Pollution Control Plant Master Plan and Primary Treatment Facility | City of Sunnyvale, California**

HDR provided master and site planning services and design of primary treatment renovation improvements for the 14 mgd water pollution control plant. To properly protect the plant, Libby identified the necessary flood protection measured necessary to obtain Federal Emergency Management Agency (FEMA) accreditation of the proposed floodwall surrounding plant protecting against San Francisco Bay flooding, as well as the Sunnyvale West Channel riverine flooding. She served as the hydraulic lead for the project. She also provided an assessment of tidal and riverine flooding at the plant, and determined wind and wave loading on  
Elizabeth K. Mesbah, PE

the proposed floodwall. These force parameters are then used in the development of the floodwall and foundation design.

### **Coastal Wetland Feasibility and Design | U.S. Department of Veteran's Affairs (VA), Alameda, California**

The VA will be constructing a VA Outpatient Clinic and National Cemetery Complex across 112 acres located on the former Naval Air Station on Alameda Point. The VA is required to mitigate impacts caused to seasonal wetlands and northern coastal salt marsh habitat. Conducted a feasibility assessment and provided design of coastal wetlands along the southern end of Alameda Point. As coastal hydraulic lead, Libby was responsible for evaluating the shoreline impacts to the existing sea rock wall and the design of the inter-wetland areas. She led the hydraulics team developing input hydrographs reflecting a range of tidal conditions and the development of a HEC-RAS 2D hydraulic model to simulate the filling and draining of the marsh under a range of tidal conditions. The inlet, apron, and sea wall transitions were evaluated to verify that all hydraulic design parameters were appropriately satisfied before moving forward in the development of the plans, specifications, and estimates.

### **Peyton Slough 1D/2D Hydraulic Model Development and Alternatives Analysis | Mt. View Sanitary District, Martinez, California**

Mt. View Sanitary District is interested in improving the tidal and freshwater flow exchange in and out of McNabney Marsh to support future environmental restoration efforts in the project area. Libby developed a HEC-RAS 1D/2D hydraulic model to compare various alternatives for the Union Pacific Railroad (UPRR) crossing and channel modifications to determine which proposed improvements provide the greatest tidal and freshwater exchange in McNabney Marsh. This modeling effort included advance tidal gate operations scenarios to optimize the greatest tidal and freshwater exchanges throughout the marsh complex. She presented the findings at multiple meetings, including the Peyton Slough Wetlands Advisory Committee and the San Francisco Bay Regional Water Quality Control Board.

**Kenric Jameson, PG, PMP**  
Senior Project Manager



Kenric is a California licensed Professional Geologist with more than 20 years of experience in the fields of project management, program management, government administration, construction management and project implementation. For the past 13 years, he has worked exclusively in water resources, both as General Manager of two local government agencies, and as project and construction manager for several multidisciplinary flood risk reduction projects.

**SELECT RELEVANT EXPERIENCE**

**Department of Water Resources (DWR) | California Aqueduct Subsidence Program (CASP), Sacramento, California**

Kenric served as the project manager for the HDR team currently supporting the DWR CASP management and project delivery team within the Division of Engineering to conduct risk-informed long-term planning studies for how to address potential future impacts to the California Aqueduct from future subsidence. HDR is co-leading a process with a blended consulting team to conduct the integrated and risk-informed systems planning and analyses, and provide the necessary associated services, necessary to fulfill federal planning processes and to support sound decision-making regarding State and water contractor investments by identifying potential non-structural and structural actions to address subsidence and its negative effects and evaluating the long-term costs and benefits of those potential actions. This includes development of draft reports and studies, development of analytical methods and tools, formulating alternatives, analyzing alternatives, and supporting strategic communications and engagement. Kenric Jameson is responsible for coordination, progress tracking, scheduling, and budget tracking to help the CASP Core Team meet their program goals.

**United States Army Corps of Engineers (USACE) | American Rivers Common Features (ARCF), Sacramento Weir Widening, Design Support, Sacramento, California**

HDR provided design support to the USACE and was responsible for development of plans, specifications, and cost estimates for the Sacramento Weir Widening Project. Kenric acted as civil design lead, assistant project manager and technical advisor on this project, working directly with the USACE project manager and technical lead.

**USACE | ARCF, Natomas Basin Reach I Contract 2, Sacramento, California**

Reach I, Contract 2 is a continuation of Contract 1, which provided cutoff walls for seepage mitigation in the levees for the entire reach of Natomas Reach I, extending from Northgate Boulevard to Gateway Oaks Drive along the American River levee. Contract 2 includes flattening the landside slope to 2H:1V, relocation of utilities, and installing a 12-foot maintenance road at the landside toe. Kenric was the Project Manager for this project.

**EDUCATION**

Bachelor of Arts, Humboldt State University, Geology and Anthropology, 2001

**REGISTRATIONS**

Professional Geologist, California, No. 8497

**CERTIFICATIONS**

Project Management Professional  
No. 3344402

**INDUSTRY TENURE**

21 years

**HDR TENURE**

3 years

**San Joaquin Area Flood Control Agency (SJAFC) | Smith Canal Closure Structure Project, Stockton, California**

HDR developed the final plans and specifications for the floodwall and floodgate structure between January of 2016 and November of 2019. As the Engineers of Record for the structures it was necessary to support SJAFC with engineering services during construction (EDC) that will include engineering during advertisement or bid phase services (EDA - contractor questions, RFIs and potential amendments), construction phase services (contractor submittal/shop drawing reviews, RFIs, periodic site visits, weekly construction meetings/coordination, etc.), as well as post-construction services (final DDR and EDC appendix, as-built drawings, commissioning support, final O&M development, as-built foundation report). Kenric is the project Manager for the EDC portion of this project.

**USACE | ARCF, Natomas Basin Reach B I-5 Window, Sacramento, California**

Reach B is the segment of the Natomas Basin extending from West Elverta Road to Farm Road, which is a distance of 50,000 linear feet (9.5 miles). This project included preparation of the Reach B I-5 Window 65%, 90%, 100%, and Final plans, specifications, Design Documentation Report, MCACES Cost Estimate, bid schedule, and Engineering Considerations for Field Personnel. It also includes producing the draft and final Real Estate Mapping. Kenric was the Project Manager for this project.

**Reclamation District 900 | Manager, West Sacramento, California**

As manager of RD 900, Kenric was responsible for the day-to-day operations of the District, which included general administration, preparing and administering budgets, fiscal controls, capital improvement program preparation and implementation, emergency operations, project management, human resources, public relations, and interagency communications. He worked extensively with both Fire and Police on issues of public safety. RD 900 sole purpose is to provide flood protection to the City of West Sacramento

through the operations and maintenance of its facilities, which include: 9 pumping plants containing 33 pumps, 6 detention basins, 40 miles of ditches and canals, and 14 miles of levees.

**West Sacramento Area Flood Control Agency (WSAFCA) | General Manager, West Sacramento, California**

As general manager of WSAFCA, Kenric oversaw agency activities to ensure WSAFCA's primary goal of providing flood protection was met without being compromised by competing interests. He actively oversaw the following tasks: planning and design of levee improvement projects, project funding, agency administration and budgeting, Board of Director communications, property acquisition and condemnation, environmental consultation, tribal consultation, project mitigation, and construction.

Kenric was directly involved in multiple flood risk reduction projects, including: The South Port Levee Improvement Project, The Rivers EIP, CHP Academy EIP, and the I Street Bridge EIP.



**Edwin P. Woo, PE, GE**  
 Geotechnical Engineer



Ed has more than 35 years of experience supervising, managing and performing geotechnical investigations and construction observation services for a wide range of projects. He has been project manager or project engineer for numerous public and private sector projects, including water and wastewater facilities, buildings, slopes, levees, waterfront structures, airport facilities, bridges, roadways, and landfills. His responsibilities have included performing and overseeing field explorations, geotechnical instrumentation installation and monitoring, laboratory testing, geotechnical engineering analyses, construction monitoring, and preparing reports, contract drawings and specifications.

**SELECT RELEVANT EXPERIENCE**

**EDUCATION**

Master of Science, Civil Engineering, University of California at Berkeley, 1987

Bachelor of Science, Civil Engineering, University of California at Berkeley, 1985

**REGISTRATIONS**

Professional Engineer - Geotechnical, California, No. 2342

Professional Engineer, Civil, California,

No. C53781

**HDR TENURE**

9 Years

**INDUSTRY TENURE**

35 Years

**SAFER Bay (Redwood City to Mountain View) | San Francisquito Creek Joint Powers Authority, Menlo Park, East Palo Alto and Palo Alto, California**

Ed is the lead geotechnical engineer for the feasibility study, planning, environmental documentation, permitting, and design of tidal flood protection improvements and ecosystem restoration and recreation enhancement along the southwestern portion of San Francisco Bay. The project involves the design of elements such as levees and flood walls along the shoreline to protect the communities of Menlo Park, East Palo Alto, and Palo Alto from coastal flooding. Consideration is also given to additional water heights due to sea level rise.

The project extends from the Redwood City/Menlo Park border to the north, to the Palo Alto/Mountain View border to the south. The new levee/flood wall system will be designed to meet the standards needed for FEMA certification, plus additional height for consideration of sea level rise. Geotechnical issues include settlement of the new levees due to consolidation of the underlying soft, Young Bay Mud, and narrow right-of-way and easement constraints. A goal is to seek flood protection improvements that can complement ecosystem restoration and recreation enhancement.

**USACE | South San Francisco Bay Shoreline Project, Alviso, San Jose, California**

Ed is the project manager and lead geotechnical engineer for the geotechnical investigation, surveying, and design of 3.8 miles of levee and tidal and seasonal habitat in the southern end of San Francisco Bay. Work included performing geotechnical field explorations, and topographic and aerial surveying along the project levees. Geotechnical analysis and design of new levees was performed along the first mile long segment of the project.

### **USACE | San Francisco, Upper Guadalupe River Flood Risk Management Project, San Jose, California**

As the Project Manager and Geotechnical Lead, Ed worked with USACE to develop the Bypass Design for reaches 7 and 8 of the Limited Reevaluation Report (LRR): Proposed Project Modifications Upper Guadalupe River into 65% documents consisting of plans, specifications, and estimate (PS&E). In addition to the bypass channel, the work included the 65% design of two new street bridges and a railroad bridge that will span across the bypass channel, and preparation of PS&Es for a vegetation management plan.

### **Ducks Unlimited, Inc. | Ducks Unlimited Cullinan Ranch Wetland Restoration Geotechnical Support**

Ed provided geotechnical services in support of the addition of an acceleration/deceleration lane to the existing State Route 37, including a field investigation program, laboratory testing of collected soil samples, engineering analysis, development of geotechnical recommendations, and preparation of a report summarizing our conclusions and recommendations for the proposed project. HDR worked with Caltrans District 4 to obtain design approval.

### **Truckee River Flood Management Authority | Truckee River Flood Management Authority Planning and Design Services, Reno, Nevada**

Ed served as senior reviewer of geotechnical engineering performed in support of preliminary engineering planning and design services for the development of a 100-year flood protection plan along the Truckee River. The work includes the design of flood protection features including flood walls and levees in Reno and other nearby communities.

### **City of Sunnyvale | Oxidation Pond Levee Improvements at Water Pollution Control Plant, Sunnyvale, California**

As part of the primary treatment renovation improvements for the City's 14 mgd water pollution control plant, Ed served as principal geotechnical engineer for the assessment and upgrade of approximately one mile of levees that form a portion of the oxidation ponds at the plant. The levees are underlain by soft, compressible Young Bay Mud soil. Improvements included raising and widening

the levees, adding erosion protection, and rehabilitating 24 transfer pipes. The scope of services included performing subsurface field investigation, laboratory testing, engineering analysis including stability and erosion analysis, preparation of a geotechnical report presenting recommendations for the upgrade of the levees, preparation of project plans and specifications, and construction observation.

### **TRLIA | 200-Year Urban Levee Compliance Determination, Yuba County, California**

Ed provided geotechnical support and senior review for this project to investigate and evaluate 7.1 miles of levee along the Bear River and Western Pacific Interceptor Canal (WPIC) to assess whether it provides flood protection for the 200-year design water levels. The levees were evaluated using the State of California, Department of Water Resources Urban Levee Design Criteria (ULDC). Based on the evaluation, it was determined that 5.2 miles of levee meet ULDC and 1.9 miles will need remediation.

HDR analyzed a number of remediation measures including cutoff walls, seepage berms, drained stability berms, pressure relief wells, and filling of low areas on the landside of the levee.

Geotechnical evaluation has been completed and the project is entering the design phase to produce construction documents for the project.

### **Hamilton Wetlands Restoration Project, Marin County, California**

Ed served as principal-in-charge and project manager for the geotechnical aspects of this project, which covers a 988-acre area that includes the former Hamilton Army Airfield and State Lands Commission property. The project involves raising and constructing levees to receive over 10 million cubic yards of hydraulically placed dredge material, to convert the site from the former airfield to a seasonal wetland. Prior to development, the site was tidal marsh habitat underlain by thick deposits of soft, weak and compressible Young Bay Mud.

The scope included geotechnical reconnaissance, field exploration, laboratory testing, design and construction testing and consultation services for various elements of the project, primarily through USACE IDIQ contracts and a design-build contract.



**Daniel Teak, PE**  
Senior Civil Engineer

Daniel has 11 years of experience in water resources engineering. He provides design and support services on flood control and transportation projects for a variety of local, state, and federal clients. His experience includes designing levees, flood walls, and other flood protection features. He also designs ecosystem and watershed rehabilitation and restoration projects, including preliminary engineering and alternatives analyses, planning formulation reports, and feasibility studies. Daniel also provides geotechnical and civil analyses, environmental review in support of the California Environmental Quality Act and the National Environmental Policy Act (CEQA/NEPA), permitting support, and develops plans, specifications, and cost estimates.

**EDUCATION**

Bachelor of Science, Civil Engineering, California State University, Sacramento, 2009

**REGISTRATIONS**

ISI Envision Sustainability Professional, United States National Registration

Professional Engineer, California, No. 81245

**INDUSTRY TENURE**

15 years

**HDR TENURE**

13 years

**SELECT RELEVANT EXPERIENCE**

**U.S. Army Corps of Engineers (USACE) | San Francisco District, South Bay Shoreline, Reach 1 Levee Design, Alviso, California**

Daniel was the project manager for the design of the first levee reach, which consists of approximately 4,200 feet of flood risk management (FRM) levee in South San Francisco Bay, as an integral part of an expansive salt pond restoration program.

**USACE, San Francisco District | Drift Removal Facility, Sausalito, California**

Daniel is the project manager for the San Francisco Bay Navigation Drift Removal Facility. The project is located at the USACE San Francisco District Base Yard and serves as a receiving and processing platform for debris and other floating hazards collected from the San Francisco Bay. The project consisted of a geotechnical analysis of the underlying soils and the design for a replacement facility.

**Santa Clara Valley Water District | Anderson Dam Seismic Retrofit Planning and Environmental Consultant Services, Morgan Hill, California**

Daniel assisted in the development and preparation of planning study documents, including the Problem Definition Report, Planning Study Report, and CEQA/NEPA documents, as well as permitting. The ultimate outcome of the planning services will be to recommend a preferred alternative to: resolve the seismic deficiencies in the dam embankment from the maximum creditable earthquake; resolve and remediate, if necessary, the outlet works for the potential fault rupture risk from a maximum creditable earthquake; and review and revise, as needed, the Probable Maximum Flood (PMF) and routing study to address possible deficiencies with the spillway.

**USACE, Sacramento District | Central Valley Integrated Flood Management System (CVIFMS), California**

The CVIFMS (or watershed study) is a companion document to California's Central Valley Flood Protection Plan (CVFPP) and Draft Conservation Strategy. The CVIFMS assesses the problems, needs, opportunities, and potential solutions to flood risk management, ecosystem restoration, and water supply in the watershed through analysis of existing information. Daniel was

the HDR lead in assisting USACE with development of screening criteria, sorting, and ranking of suites of features in the Sacramento Watershed.

**City of Sunnyvale | Operations and Maintenance (O&M) Implementation Plan Sunnyvale, California**

Daniel was the lead engineer on this project, which involved development of an O&M Implementation Plan to assist the City of Sunnyvale in managing repairs and maintenance efforts for the existing levees surrounding the City's oxidation ponds. The Plan will be used by City staff and includes general plans, details, and specifications for levee repairs.

**City of West Sacramento | West Sacramento Flood Control Implementation Design, West Sacramento, California**

Daniel provided engineering design services for the design, environmental review and permitting, and preparation of plans, specifications, and estimates for the Early Implementation Plan (EIP) Levee Repair Project for the West Sacramento Levee Improvement Program, which may encompass 13,500 feet of levee improvements, including the construction of seepage barriers and/or relief wells along four reaches of the West Sacramento levee system. This project has the objective to improve flood protection for residents and businesses in the community by completing levee repairs and providing a 200-year level of protection that meet federal and USACE requirements and receive accreditation from FEMA for a 100-year level of protection.

**City of West Sacramento | West Sacramento Levee Evaluation Project - Environmental Compliance and Risk Analysis Service, West Sacramento, California**

Daniel provided environmental compliance and risk analysis engineering support services for the proposed program to improve the levees protecting the City, which included describing the activities required to manage the development of several supplemental technical products by subcontractors for levees system protecting the City. These supplemental technical products included a programmatic environmental document and an economic and risk analysis evaluation.

**DWR | Central Valley Flood Protection Plan, Sacramento River Basin and San**

Daniel Teak, PE

**Joaquin Basin Feasibility Studies, California**

Daniel served as a water resources engineer for completing the Sacramento River Basin and the San Joaquin Basin Feasibility Studies, providing senior advice and planning services. The studies are being prepared under FloodSAFE, a multifaceted initiative to improve integrated flood management in the State. The broad goals of the CVFPP include reducing the chance of flooding, reducing the consequences of flooding, sustaining economic growth, protecting and enhancing ecosystems, promoting the sustainability of the flood management system. Daniel assisted with establishing the plan formulation process, developing the basis of design report, establishing the hydraulic impact assessment process and thresholds, as well as formulating and refining alternatives. The planning process is considering existing conditions, sea level rise, and climate change. The systemwide approach will consist of local regional plans coupled with improvements to DWR's State Plan of Flood Control and associated Programs.

**Sutter Butte Flood Control Agency | Engineering Design Services, California**

Daniel completed geotechnical and civil analyses and generated a Pre-Design Formulation Report

(PFR) for the west bank of the Feather River West Levee (FRWL). He identified project improvements and developed 30% design for the rehabilitation, restoration, and necessary improvements to 44 miles of the FRWL.

**USACE, San Francisco District | South Bay Shoreline Study, Alviso, California**

Daniel assisted in design tasks and preparation of environmental documents (NEPA/CEQA) for the San Francisco District's study, which involves evaluating measures, including construction of new levees and berms, replacement and installation of in-stream structures, creation of new tidal salt marshes, importing and placement of dredged material, tidal wetland creation and restoration, and creation of recreation facilities. The federal feasibility study that will address ecosystem restoration and flood risk management features.



# Jill Hamilton

Director, Bay Area Water Group - Oakland



Jill Hamilton has 3 decades of experience as an environmental analyst and project manager in the preparation of environmental documents to meet CEQA and requirements. Her focus project is on water resources: master plans, infrastructure, treatment, flood control, and restoration. She has managed dozens of CEQA and NEPA documents since joining ESA in 1990. She specializes in the evaluation of alternatives, and has taught seminars at UC Berkeley and Hastings College of Law on alternatives screening and assessment under CEQA and NEPA

## EDUCATION

B.A., Political Science,  
University of California,  
Los Angeles

Advanced Environmental  
Law and Management  
Program, UC Berkeley  
Extension

Certificate Elementaire  
and Certificate Superieur  
Universite de la Sorbonne,  
Paris, France

## 31 YEARS' EXPERIENCE

## Relevant Experience

### **Searsville Watershed Restoration Project, San Mateo and Santa Clara Counties, CA.**

**Project Manager.** Jill is managing environmental compliance (CEQA, NEPA and permitting) for Stanford University's Searsville Watershed Restoration Project. The Project addresses sediment, fish passage, and water supply issues at the Searsville Reservoir in San Mateo County. The preferred alternative involves constructing a tunnel and gate at the base of the dam and flushing accumulated sediment downstream through San Francisquito Creek to San Francisco Bay. The tunnel and downstream modifications to the creek are being designed to facilitate the passage of steelhead to the creeks above the dam. Following construction of the tunnel and sediment flushing, the modified dam would attenuate peak storm flows. The project includes enhancement of the watershed ecosystem upstream of the Searsville Dam: the natural "pre-dam" creek channels, and aquatic, riparian and upland habitat would be restored through an adaptive management approach. ESA is currently conducting environmental studies to support development of the Project's Environmental Impact Report and engaging in consultation with resource agencies.

### **San Francisco Public Utilities Commission Biosolids Digester Facilities Project EIR.**

**Project Manager.** Jill managed the EIR and related environmental services for construction of new solids processing, energy recovery and odor control facilities at and adjacent to San Francisco's Southeast Water Pollution Control Plant. The Southeast WPCP treats 80 percent of San Francisco's combined wastewater and stormwater flows. Key issues addressed in the EIR and related reports included criteria air pollutant emissions, toxic air contaminant emissions, odor, and environmental justice. The EIR was certified in 2018 and received an award for Outstanding Environmental Analysis from the Association of Environmental Professionals.

### **Pajaro Valley Water Management Agency College Lake Integrated Resources**

**Management Project, Santa Cruz CA. Project Manager.** College Lake is a managed seasonal water body that provides spawning and rearing habitat for steelhead. Currently, growers pump College Lake dry each spring to farm the lake bottom. The Pajaro Valley Water Management Agency (PV Water) plans to construct a new weir and operate the lake as a water supply reservoir, to store and divert water to coastal farms to help balance the



## Jill Hamilton (Continued)

Director, Bay Area Water Group - Oakland

Valley's Groundwater Basin and prevent further seawater intrusion. Key issues include flooding, effects on special status species and wetlands, and loss of prime agricultural land. PV Water has worked with resource agencies to incorporate improvements to steelhead habitat through provision of a fish passage structure and minimum flows to facilitate adult and smolt migration. The project also includes development of an adaptive management plan to support continued waterfowl and shorebird use given anticipated changes in lake levels. Jill oversees environmental compliance for the Project and served as Project Manager for the EIR (certified in 2019).

**Pajaro Valley Water Management Agency Watsonville Slough System Managed Aquifer Recharge and Recovery Projects.** Project Manager. The Pajaro Valley Water Management Agency (PV Water) is pursuing two surface water diversion projects to divert water from the slough system for recharge in the local groundwater basin for subsequent recovery for irrigation in lieu of pumping. The projects are intended to help balance the groundwater basin and halt sea water intrusion. ESA is managing aspects of project development (environmental constraints, modeling), CEQA, and permitting for these projects. Ms. Hamilton is managing overall environmental services for these projects including the EIR, which was certified in 2020.

**State Coastal Conservancy, Terminal Four Wharf, Warehouse, and Piling Removal Project, Richmond, CA.** *CEQA Project Manager.* Jill led the environmental team in preparing CEQA documentation for the safe removal/demolition of the derelict Terminal Four structure on Point San Pablo in Richmond, California. This large structure has approximately 2,500 piles and large areas of decking and structures to be removed. The project includes protection of the coastline and protecting and enhancing existing resources (eelgrass beds) following removal of the pilings. Jill managed CEQA compliance (a Mitigated Negative Declaration) for the project.

**Sunnyvale Water Pollution Control Plant Master Plan, CEQA Compliance.** *Project Manager.* Jill managed the team providing input on environmental issues for Master Plan development and managed CEQA compliance, including a Program EIR for the master plan and Mitigated Negative Declaration for new Headworks and Primary Treatment facilities. The City of Sunnyvale is developing a master plan for its Water Pollution Control Plant, located on the San Francisco Bay shoreline, in order to repair or replace aging infrastructure, comply with future regulatory and permit requirements and provide for future treatment and reuse of the City's wastewater. The Master Plan will consolidate wastewater operations onto 51 acres, freeing up 400 acres for habitat restoration. Key issues included flood protection, and impacts to shoreline habitat and trails. The EIR was certified in 2016. Jill serves as Project Director for ongoing environmental compliance for Master Plan CIP projects, advising on compliance strategies and providing senior review.

**San Jose/Santa Clara Water Pollution Control Plant Master Plan Program EIR, San Jose, CA.** *Project Manager.* Jill managed this Program/Project EIR for the City of San Jose's master plan to rebuild the San Jose/Santa Clara wastewater facility and convert land uses on the plant's 2,700-acre site on the South Bay's shoreline. The WPCP treats most of the wastewater generated in the Santa Clara Valley. The Master Plan addresses many issues, including aging infrastructure, changing regulations, flood control and sea level rise, odors, promoting renewable resources, and habitat protection.

The PMP includes \$2.2 billion in improvements to plant facilities; restoration and preservation of over 1,000 acres of tidal marsh (within a former salt production pond), freshwater wetland, riparian, and upland habitats; a general plan amendment to allow 160 acres of economic development; and 9 miles of trails. ESA prepared the EIR with joint venture partner ICF. Key areas of investigation for the EIR include direct and indirect effects on sensitive habitats, air quality impacts, flood hazards (the master plan is being implemented in parallel with the South Bay Shoreline Project), traffic, and odor control. The EIR was certified in 2013. ESA continues to provide CEQA services for projects at the regional wastewater facility (including e.g., yard piping, headworks, and cogeneration facility projects), with oversight by Jill.



## Jill Hamilton (Continued)

Director, Bay Area Water Group - Oakland

**Concord Reuse Project Specific Plan, Concord, CA.** Task Manager. The Specific Plan Area is comprised of three properties: an approximately 2,248-acre portion of the former Concord Naval Weapons Station (CNWS) Inland Area, the approximately 20-acre North Concord/Martinez BART Station, and the approximately 59-acre Coast Guard Housing Complex. The Project includes: up to 13,000 dwelling units and 8,400,000 gross square feet of Commercial/Campus/Institutional uses along with extensive open spaces, bicycle and pedestrian networks, and streets. ESA is preparing the evaluation of hydrology and water quality impacts for the Project's environmental impact report; Jill is overseeing this effort.

**East Bay Municipal Utility District, Central Reservoir Replacement Project, Oakland, CA.** *Project Director.* Jill is overseeing preparation of the CEQA document for the replacement of EBMUD's existing 154-million-gallon (MG) open-cut Central Reservoir with three, 17 MG pre-stressed concrete tanks. As Project Director Jill's role includes providing senior guidance and review of technical evaluations for the EIR. Key environmental issues include views of the project site from nearby residences, architectural/landscape design, construction noise, and drainage.

**East Bay Municipal Utility District, Orinda Water Treatment Plant UV/Chlorine Disinfection Project, Oakland, CA.** *Project Director.* ESA prepared a supplemental EIR for the improvement of post-filtration disinfection at the Orinda WTP. Key environmental issues include removal of trees on-site and hydro-geologic considerations associated with construction and operation of the new facilities adjacent to the creek. The EIR was certified in 2021. Jill provided senior review and strategic guidance on CEQA compliance.

**San Francisco Bay Area Integrated Regional Water Management Plan.** *Analyst.* Completed in 2013, the Bay Area IRWMP is a nine-county effort to coordinate and improve water supply reliability and water quality, manage flood protection, maintain public health standards, protect habitat and watershed resources, and enhance the overall health of the San Francisco Bay. The Plan served as a vehicle for securing funding from the California Department of Water Resources for a variety of water resources programs and projects. Jill was the primary author of chapters (12 and 13) establishing congruence between regional water resources planning and local water resources and fostering enhanced communication with land use planning agencies, particularly with regard to climate change. She was also a contributing author to chapters describing water resources management strategies and the impacts and benefits of Plan implementation. ESA was a subcontractor to Kennedy/Jenks, under contract to Marin Municipal Water District.

**East Bay Municipal Utility District, Pump Station R3000, City of San Ramon, CA.** *Project Director.* ESA prepared an Initial Study and architectural/landscape renderings for the recycled water pump station R3000 project. Key environmental issues included proximity to residences and architectural integration with surrounding land uses. As Project Director, Jill provided senior review and strategic guidance on CEQA compliance.

**Santa Susana Field Laboratory, Ventura County, CA.** *Senior Reviewer.* ESA prepared the combined project-program EIR for cleanup of soil and groundwater contamination at the Susana Field Laboratory (SSFL), a former rocket engine test, nuclear, and liquid metals research facility located on a 2,849-acre portion of the Simi Hills in Simi Valley, California. Jill conducted senior review of responses to hundreds of public and agency comments pertaining to archeological resources, air quality, health risk, and CEQA compliance topics in accordance with the Department of Toxic Substances Control's fast-track schedule.

**Marin County Flood Control and Water Conservation District, San Anselmo Flood Risk Reduction Project, Marin County, CA.** Senior CEQA review. The Project includes construction of a flood diversion and storage basin, diversion structure, removal of a building and other structures within San Anselmo Creek, and creek bank stabilization, all



## Jill Hamilton (Continued)

Director, Bay Area Water Group - Oakland

designed to reduce flooding in Downtown San Anselmo. Jill guided evaluation of project alternatives and conducted senior review of select technical sections of the Environmental Impact Report (EIR).

**Zone 7 Stream Management Master Plan Update.** Senior Project Associate. Jill assisted with updating the Stream Management Master Plan (SMMP) for Zone 7 of the Alameda County Flood Control and Water Conservation District. The SMMP utilizes a multidisciplinary approach to manage the streams and arroyos in the Zone 7 service area by focusing on several resources affected by stream management including water supply, water quality, flood control, habitat and environment, and erosion and sedimentation. This report was prepared as a functionally equivalent document to support flood protection funding pursuant to the Proposition 1 Storm Water Grant Program. Jill assisted with QA/QC for the SMMP and managed conversion of SMMP documentation to ensure functional equivalency in support of Proposition 1 Storm Water Grant Program requirements

**Bay Delta Conservation Plan EIR/EIS, Sacramento, CA.** *Technical Analyst.* The state of California, U.S. Bureau of Reclamation and partner agencies prepared the Bay Delta Conservation Plan: a comprehensive conservation strategy for the Sacramento-San Joaquin Delta designed to restore and protect ecosystem health, water supply and water quality within a stable regulatory framework. Jill prepared the Growth Inducement analysis (Chapter 30) of the Bay Delta Conservation Plan (BDCP) EIR/EIS, the purpose of which was to determine the potential for implementation of the BDCP to foster population and development in those parts of the state that could receive increased water deliveries, and the magnitude and nature of environmental effects associated with such growth. The Draft EIR/EIS was published in 2013.

**West County Wastewater District Master Plan CEQA Compliance, Richmond, CA.** *Project Director.* The District-wide Master Plan identifies projects needed over the next 20 years to repair/replace aging infrastructure, meet future water quality regulations, improve collection system facilities, and provide new operations and maintenance facilities. Jill oversaw contract performance and provided senior guidance and review for the preparation of the Program EIR and CEQA compliance strategies for the District's State Revolving Fund applications.

**East Bay Municipal Utility District, West of Hills Northern Pipelines Project EIR, Alameda and Contra Costa Counties, CA.** *Project Director.* Jill provided guidance on approach; resolution of scope, schedule and budget issues; senior QA/QC review; and contract oversight for this EIR. This project includes the construction and operation of approximately 10 miles of large-diameter water transmission pipelines through the cities of Richmond, San Pablo, El Cerrito, and Berkeley. The EIR was certified in 2013. As of 2018, ESA has continued to provide environmental services (supplemental CEQA, archeological resources investigation and monitoring, transportation planning) as segments of the project near construction.

**San Francisco Public Utilities Commission. Calaveras Dam Replacement Project.** *Project Manager.* Jill co-managed and authored numerous sections of the Final EIR. The project involves the replacement of the Calaveras Reservoir Dam to respond to DSOD requirements and long-term operation and maintenance. The 97,000-acre-foot reservoir provides drinking water to SFPUC customers throughout the Bay Area. At the City of San Francisco's request, ESA+Orion agreed to manage the responses to comments/Final EIR phase for this controversial project. The Draft EIR received thousands of public and agency comments. Key issues included anadromous fisheries and hydrologic effects, biological resources, the baseline used in the environmental analysis, greenhouse gas emissions, traffic, and effects on nearby recreational areas from naturally occurring asbestos. In response to comments and input from permitting agencies, a new alternative was developed, presented in the Final EIR, and ultimately adopted in lieu of the original project. Construction was completed in 2019.





## Jill Hamilton (Continued)

Director, Bay Area Water Group - Oakland

**SFPUC Westside Recycled Water Project EIR.** *Project Director.* Jill served as Project Director for the EIR for the San Francisco Westside Recycled Water Project, providing senior review and overseeing contract performance. Part of the SFPUC's San Francisco Water Supply Improvement Program, the Westside Recycled Water project includes recycled water treatment, storage, and distribution facilities to serve Golden Gate Park users located on the west side of San Francisco.

**SFPUC WSIP San Antonio Backup Pipeline Project.** *Project Director.* As Project Director, Jill provided senior guidance and review for the EIR and permit documents for the San Antonio Backup Pipeline Project. The project includes installation of a backup pipeline and construction of a discharge facility and a chemical facility. The goal of the SABPL Project is to provide a means of discharging the full Hetch Hetchy flow in the event of an emergency water quality event or an outage of the transmission system and to reduce adverse impacts of current operations on San Antonio Creek. Construction began in 2013 and is projected to be completed in 2015.

**EBMUD Main Wastewater Treatment Plant Land Use Master Plan and Program/Project EIR.** *Senior Technical Advisor.* As a subconsultant, ESA assisted in the development of a Land Use Master Plan and EIR for EBMUD's Main Wastewater Treatment Plant (MWWTP) site. The purpose of the master plan was to coordinate future expansion and determine an appropriate plan for use of available land at the MWWTP. ESA's work involved providing assistance with master plan development EIR preparation. Jill provided as-needed advice to the team on a variety of topics (master plan objectives, general CEQA compliance strategy, air quality analysis pursuant to [then] recent guidelines, permitting requirements for food waste pre-processing facility) and reviewed EIR sections. The EIR was certified in 2011.

**Harding Park Recycled Water Project EIR, Daly City, CA.** *Project Director.* The San Francisco Public Utilities Commission and Daly City jointly proposed this project. Under contract to Carollo Engineers, Jill served as EIR Project Director, providing senior review, coordinating with Daly City and the SFPUC, and overseeing contract performance. The project included a recycled water pipeline and storage tank to convey recycled water from Daly City's wastewater treatment plant to the Harding Park Golf Course in San Francisco. Project construction is complete.

**SFPUC Water System Improvement Program – Program EIR.** *CEQA Analyst.* Jill oversaw preparation of the Growth Inducement chapter, drafted select sections of the Draft EIR (e.g., consistency with plans and policies, sections of the alternatives chapter), and help guide and respond to comments for the WSIP PEIR. ESA, as part of the ESA+Orion Joint Venture, prepared a Program EIR on proposed improvements to the regional water system that serves 2.4 million people in the San Francisco Bay Area. Aging facilities, susceptibility to earthquakes, increasingly stringent water quality regulations, and projected deficits in dependable water supply have resulted in a voter-approved bond measure to fund a \$4.3 billion capital improvement program. The SFPUC's Water System Improvement Program (WSIP) proposed improvements to the water supply system to meet water delivery needs in the service area through the year 2030 and would implement a proposed water supply option, modify system operations, and construct a series of facility projects. The EIR was certified in 2008.

**EBMUD Water Treatment and Transmission Improvements Program (WTTIP) EIR.** *Project Manager.* Jill managed environmental review for the program through conceptual design and EIR process. The WTTIP consists of improvements at 5 water treatment plants (including, for one of the alternatives, construction of a new large-diameter tunnel) and 19 other projects involving reservoirs, pumping plants, and pipelines. The WTTIP improvements are driven by a variety of overlapping needs: meeting existing and future water demands in central Contra Costa County; meeting future water quality standards; complying with permit conditions; and replacing aging infrastructure. The EIR evaluated two



## Jill Hamilton (Continued)

Director, Bay Area Water Group - Oakland

alternatives at an equal level of detail: Alternative 1 – Supply from Orinda and Lafayette WTPs, and Alternative 2 – Supply from Orinda WTP. Key issues included community disruption during construction, impacts to scenic resources, and impacts to biological resources. Jill was able to complete the entire five-volume EIR, including responses to 1,000 comments, in 15 months. The EIR was certified in 2006.

**EBMUD Moraga Road Pipeline Construction Monitoring.** *Project Director.* ESA prepared a supplemental EIR (SEIR) and provided permitting, restoration planning, pre-construction surveys, and construction and long-term monitoring services for EBMUD's Moraga Road Pipeline. This project included construction of a three-mile pipeline through upland, wetland and riparian habitats and an arterial roadway. Subsequent to certification of the SEIR, ESA assisted EBMUD in obtaining permits from various resource agencies, conducting habitat suitability assessments for threatened and endangered species, wetland delineations, and a biological assessment. ESA conducted planning and prepared the mitigation monitoring plan for freshwater wetland and riparian habitat restoration. ESA conducted various pre-construction surveys, training, construction and long-term monitoring, and agency reports in compliance with applicable permits. Construction was completed in 2008; long-term monitoring concluded in 2013.

**EBMUD Claremont Corridor Seismic Improvements Project Alternatives Screening Report and EIR.** *Project Manager.* Jill managed preparation of an EIR for a seismic retrofit of EBMUD's Claremont Tunnel, which provides potable water to 800,000 residents in the East Bay. Completed in 1929, the 9-foot diameter Claremont Tunnel crosses the Hayward Fault beneath Tunnel Road in Berkeley. The tunnel is expected to be severely damaged from fault offset (estimated at 7.5 feet) and groundshaking in a major earthquake on the fault. EBMUD had adopted a Mitigated Negative Declaration for the project in 2001, but a legal challenge resulted in a court ruling requiring an EIR. The EIR evaluated the preferred project (a new bypass tunnel through the fault zone) as well as a second alternative in equal detail. Key environmental issues include consideration of project alternatives, possible damage to historic residences from vibration caused by blasting, landslides induced by blasting, loss of trees and raptor habitat, aesthetics, noise, and traffic. The EIR was preceded by an alternatives screening effort that evaluated nine system alternatives to meeting the need for potable water in the service area after a major earthquake. The project is in operation.

**North Bay Water Reuse Authority, San Pablo Bay Restoration and Reuse Project EIR/EIS.** *Senior Technical Advisor.* Jill advised on NEPA compliance (required due to federal funding), developed detailed compliance schedules, and drafted the Record of Decision on behalf of Reclamation. Proposed by the North Bay Water Reuse Authority, the project is the product of a number of local recycled water project planning efforts to create a regional recycling program. The project includes regional cooperation of multiple local agencies and organizations to use treated wastewater from the wastewater treatment plants within the North San Pablo Bay area.

**SFPUC Baden and San Pedro Valve Lots Improvement Project IS/MND.** *Project Director.* Provided oversight of CEQA compliance documentation and permitting for reliability improvements to several regional water system facilities.

**SFPUC Recycled Water Master Plan Update.** *Contract Manager.* Managed contract, budget compliance for preparation of plan to update City's recycled water master plan.

**Pajaro Valley Water Management Agency's Revised Basin Management Plan EIR, EIS, and Permitting.** *Project Manager.* The EIR and EIS evaluated alternative approaches to correcting seawater intrusion problems and groundwater basin overdraft in the 79,000-acre Pajaro Valley service area. The EIR evaluated the following at an equal level of detail: import of CVP water (construction of a 23-mile long pipeline to import water from the Central Valley); water recycling; local supplies (3 projects for diverting water from sloughs and creeks); and storage (aquifer storage and recovery and



## Jill Hamilton (Continued)

Director, Bay Area Water Group - Oakland

construction of a 4,600-acre-foot reservoir). Key issues included impacts to prime farmland, water quality, impacts to numerous threatened/endangered species (Ca. red-legged frog, steelhead, Ca. tiger salamander, western pond turtle, Santa Cruz long-toed salamander), and cumulative impacts. Jill adhered to a tight schedule to meet the client's objective of placing the project before the voters in March 2002. The EIS was published in 2003. Jill also oversaw permitting for aspects of the project, including obtaining approvals from the California Coastal Commission, California Department of Fish and Wildlife, US Fish and Wildlife Service and National Marine Fisheries Service.

**EBMUD Walnut Creek San Ramon Valley Improvement Project Siting and EIR.** *Project Manager.* Jill managed environmental review for the project through the master plan and EIR processes. The project involved short- and long-term water system improvements needed to serve parts of Contra Costa County. She prepared an environmental constraints analysis for water supply, treatment, transmission and storage facilities, the results of which were used with engineering, geotechnical, and economic analyses to select the preferred project: expansion of the Walnut Creek WTP, construction of a 69-inch diameter pipeline, new pumping plant, and numerous other improvements. The program/project EIR evaluated three alternatives in equal detail, including the large-diameter tunneled ultimately constructed. Key issues included secondary effects of growth, disruption during construction, and impacts to scenic resources. The project is in operation.

**Contra Costa Water District Multi-Purpose Pipeline (MPP) Project Siting, EIR/EIS and Permitting.** *Deputy Project Manager/Project Manager.* The Bureau of Reclamation was the federal co-lead for NEPA compliance. The project involved pipelines and pumping plants. The 20-mile MPP pipeline passes through multiple cities in northern Contra Costa County; the EIR/EIS evaluated multiple alignment alternatives. Jill's managed EIR/EIS preparation, environmental services during design (securing permits from California Department of Fish and Game, US Army Corp of Engineers, and Regional Water Quality Control Board), developing a multi-project, multi-permit mitigation monitoring and reporting database, and multiple tiered CEQA documents. The project is in operation.

**EBMUD Southern Loop Pipeline Siting, Permitting and EIR.** *Project Manager.* The project involves construction of a 12-mile pipeline to connect the San Ramon and Castro Valley areas of Contra Costa and Alameda Counties. The EIR evaluated four alternative alignments in equal detail. Key issues included community acceptance, water service and growth inducement, impacts to wetlands and special status species, and disruption of transportation. Jill managed environmental services during design, including preparation of a tiered Negative Declaration; assistance in complying with EIR mitigation measures; and securing permits from the US Army Corps of Engineers, Department of Fish and Game, Regional Water Quality Control Board. The project is in operation.

**DSRSD EBMUD Recycled Water Authority (DERWA) San Ramon Valley Recycled Water Project (SRVRWP) Environmental Services.** *Project Manager.* DERWA is a Joint Powers Authority formed in 1995 between the Dublin San Ramon Services District and EBMUD. The purpose of the SRVRWP is to provide a recycled water supply to the San Ramon Valley. The Program consists of the treatment, distribution, storage, and use of highly-treated recycled wastewater for the landscape irrigation within the study area. The DERWA Board of Directors approved and certified an EIR on the San Ramon Valley Recycled Water Program in 1996. Since 2001, Jill has managed the provision of the following services to DERWA:

- Supplemental Water Supply Alternative Evaluation Report
- Tank R-100 Mitigated Negative Declaration
- Tank R-200 Mitigated Negative Declaration
- EIR Addendum for Pipeline Alignment Changes



## Jill Hamilton (Continued)

Director, Bay Area Water Group - Oakland

- EIR Addendum for Pump Station 2A
- Streambed Alteration Agreements, Nationwide Permits—Pipelines

**EBMUD San Ramon Pressure Zone Improvements Project.** *Project Manager.* Jill managed preparation of an environmental constraints and opportunities analysis and CEQA Initial Study (1995) for this distribution reservoir and pumping plant expansion.

**Dublin San Ramon Services District's Clean Water Revival Project EIR.** *Author, Alternatives Analysis.* Jill prepared the complex alternatives analysis for this project, which included evaluating alternative reverse osmosis (RO) treatment sites and injection well sites, pipeline route alternatives, brine disposal alternatives, injection into an alternative groundwater basin, recharge via lakes and streams, and an alternative involving export for discharge or reuse of the wastewater. The project involved advanced treatment of wastewater to produce recycled water, followed by injection into the local groundwater basin and subsequent potable reuse.

**Bay Area Regional Water Recycling Program Regional Recycling Master Plan.** *Analyst.* The Bay Area Regional Water Recycling Program (BARWRP) Master Plan was a multi-agency study effort to assess regional water recycling opportunities and develop a plan to facilitate reuse in a five-county region. ESA assisted in a review of potential reuse for wetland and stream enhancement and restoration. The ESA team reviewed potential wetland and stream sites within the five-county area, refined potential reuse demands, and evaluated the potential environmental benefits of all types of reuse, including preservation of greenbelt open space and regional habitat, reduction of delta water demand, and restoration of aquatic habitats that may support endangered species. ESA contributed to implementation strategies to help project sponsors move reuse projects forward in the future, addressing environmental implementation issues such as how to maximize endangered species benefits.

**Sanitary Fill Recycling and Solid Waste Systems Plan EIR.** *Project Manager.* The project involved the expansion and upgrading of a recycling and solid waste transfer facility on the San Francisco-San Mateo County line. The systems plan consisted of several projects intended to upgrade and consolidate existing functions of Sanitary Fill and its affiliates.

Major elements included relocating the facility's main entry road and constructing a new scale house; upgrading and consolidating recycling operations; expanding the Hazardous Waste Management Facilities; and modifying the Transfer Station. Key environmental issues included noise and odor impacts, potential accidental release of hazardous chemicals, traffic, and seismic safety concerns.

**Other Relevant Experience.** Jill has managed, directed, or contributed as a technical analyst to numerous other CEQA documents, including San Leandro Recycled Water Plan and Union Sanitary District Master Plan Program EIR.



# Matthew Brennan, PhD, PE

Coastal Hydrologist & Restoration Engineer



## EDUCATION

Ph.D., and MS, Civil and Environmental Engineering, Stanford University, Stanford, CA

BS, Civil and Environmental Engineering, Princeton University

## 20 YEARS' EXPERIENCE

## CERTIFICATIONS/ REGISTRATION

Civil Engineer, State of California, C72551

Dr. Brennan is a water resources engineer with 20 years of experience specializing in estuarine flood management and restoration. His strengths include evaluating flood management and restoration scenarios from hydrologic and geomorphic perspectives to support multi-objective project goals. To implement these perspectives, Dr. Brennan has developed and applied a wide range of hydrodynamic and transport process numeric models. In conjunction with these technical skills, his project management experience includes active client communication, teaming with biologists, integrating input from expert advisors, overseeing technical tasks and managing subcontractors.

## Relevant Experience

**City of Burlingame, Burlingame Sea Change Shoreline Adaptation, Burlingame, CA.** *Project Engineer.* With over five miles of Bay shoreline and several tidal creeks, the city of Burlingame faces increasing flood hazard from sea-level rise. Matt is serving as the project engineer for this effort to develop an implementable sea-level rise adaptation plan that protects property and residents. Matt has helped assess baseline flood risk that includes future sea-level rise projections, develop reasonable and feasible sea level rise adaptations appropriate to Burlingame's setting, evaluate range of adaptation measures to inform the selection of recommended measures, and integrate recommended measures into phased adaptation plan to guide implementation.

**City of Mountain View, Mountain View Shoreline Sea Level Rise Study, Mountain View, CA.** *Project Manager, Coastal Engineer.* Matt managed ESA's work for the City to develop a comprehensive sea level rise vulnerability and adaptation assessment. The study addressed the potential for increased flooding directly from coastal sources as well as upstream sea level rise impacts to creek flooding and stormwater drainage. The study identified opportunities for integrating City objectives with other multi-objective projects such as tidal marsh restoration and regional-scale flood protection. ESA quantified the City's future flood risk and developed a draft Capital Improvement Program and cost estimates to meet the long-term flood protection needs of the Shoreline Community. Matt continues to advise the City on its implementation of the study.

**San Francisquito Creek Joint Powers Authority, Strategy to Advance Flood protection, Ecosystems and Recreation along the Bay (SAFER Bay) Levee Evaluation, Menlo Park, East Palo Alto, and Palo Alto, CA.** *Project Manager.* Matt assisted the San Francisquito Creek JPA with its successful grant application for the California Department of Water Resources (DWR) Local Levee Assistance Program to fund the project. Presently, the project is evaluating and designing over 7 miles of the coastal levee along the Menlo Park and East Palo Alto, and Palo Alto shoreline. Matt is the project manager for the coastal flooding and sea level rise vulnerability assessments, interior drainage, restoration design, and CEQA environmental review. He also assisted the SFCJPA with its successful grant applications for FEMA and San Francisco Bay Restoration Authority funding.



## Matthew Brennan, PhD, PE (Continued)

Project Director

**City of San Rafael, Sea Level Rise Vulnerability Study, San Rafael, CA.** *Project Manager & Coastal Engineer.* To plan for existing and future shoreline flood hazards, the City's Department of Public Works initiated the San Rafael Sea Level Rise Vulnerability Study, with the goal of developing an implementable sea-level rise adaptation plan for the City's shoreline and its residents. Matt assisted the City by assessing baseline flood risk that includes future sea-level rise projections, developing reasonable & feasible sea level rise adaptations appropriate to San Rafael's setting, evaluating a range of adaptation measures to inform the selection of recommended measures, and integrating recommended measures into a phased adaptation plan to guide implementation.

**City of Richmond, Shoreline Sea Level Rise Planning, Richmond, CA.** *Coastal Hydrology and Floodplain Policy.* Matt is assisting the City with several aspects of shoreline planning, including its Climate Adaptation Plan, its South Shoreline Specific Plan, and review of individual development projects. Across this range of scales, from City-wide to site permitting, Matt has conducted sea level rise vulnerability assessments and reviewed adaptation measures. Based on his analysis and review, he has recommended refined approaches to facilitate the planning and permitting process.

**City of Sunnyvale Sea Level Rise Adaptation Strategy, Sunnyvale, CA.** *Project Manager.* To support the Moffett Park Specific Plan, the City of Sunnyvale needed to develop an adaptation strategy for the plan area's Bay shoreline.

Leveraging his involvement with Valley Water, City of Sunnyvale, and local stakeholders collaboration, Matt drafted the city's adaptation plan. The basis for the adaptation planning was an assessment of flood hazards that Matt led. This assessment considered coastal, fluvial, and groundwater flood sources, as well as the increased threat of flooding due to sea level rise. Based on these hazards, Matt developed strategies for the city's sea level response that integrate city-led measures with the regional Shoreline Project measures being led by Valley Water and USACE.

**San Mateo County, Navigable Slough Flood Hazard Mitigation, South San Francisco, CA.** *Project Manager & Hydraulic Engineer.* San Mateo County is partnering with the Cities of San Bruno and South San Francisco to evaluate flood management measures for Navigable Slough. This slough serves as a flooding source for developed areas mapped into the FEMA floodplain from a combination of San Francisco Bay water levels and local runoff. For the current study, Matt oversaw collection of additional data to characterize the slough's hydraulics and development of a hydraulic model.

Flood management measures currently under consideration include tide gates for stormwater outfalls that drain to the slough, floodwalls along the slough's banks, and tide gates across the entire slough channel. As part of the feasibility study for the flood management measures, the potential impacts to wetlands and wetlands wildlife are being assessed.

**City of Redwood City, Inner Harbor Specific Plan, Redwood City, CA.** *Coastal Hydrology and Floodplain Policy.* Matt conducted a coastal flooding and sea level vulnerability assessment for this waterfront development site. He presented this assessment to public task force and authored the corresponding section of the Specific Plan. He assisted the City with developing the flood management strategy for the site that would facilitate a phased and flexible to increasing vulnerability due to sea level rise. Matt also developed design guidelines for the Plan that can be integrated with the Floodplain Management sections of the City's building code. As an outgrowth of this effort, Matt provided design input and environmental compliance analysis for Jay Paul's Harbor View development.

**Edgerly Island & Ingersoll Tract Flood Study, Napa County, CA.** *Project Manager & Hydraulic Engineer.* This flood study is quantifying the current and future flood risks, and identifying alternative solutions along the lower Napa River. Matt is addressing the Napa River Reclamation District's (NRRD) and the Napa County Flood Control and Water Conservation District's (NCFCWCD) concerns regarding the increasing threat of sea-level rise (SLR), while considering multiple objectives consistent with the setting and community.



# Max J. Busnardo, MS

## Principal, Restoration Ecologist

mbusnardo@harveyecology.com  
408.458.3222



H. T. HARVEY & ASSOCIATES

Ecological Consultants

### HIGHLIGHTS

- 30+ years of experience
- Ecosystem restoration and long-term, post-restoration monitoring
- Tidal wetland ecology and restoration
- Sea level rise adaptation strategies in San Francisco Bay tidal marshes

### EDUCATION

MS, Ecology, San Diego State University

MS, Biochemistry, University of California, San Diego

BS, Environmental Studies and Chemistry, Stockton State College

### PROFESSIONAL EXPERIENCE

*Principal*, H. T. Harvey & Associates, 1996–present

*Wetlands scientist*, Marine Ecological Consultants 1994–95

*Biology/chemistry instructor*, U.S. Peace Corps, Benin West Africa, 1992–93

*Wetlands scientist*, Pacific Estuarine Research Lab, 1988–92

### PROFESSIONAL AFFILIATIONS/CERTIFICATIONS

Society for Ecological Restoration—California

California Rapid Assessment Method (CRAM) for estuarine and riverine habitats

### PUBLICATIONS/PRESENTATIONS

Busnardo, M. 2017. Techniques to Restore Coastal Scrub at a Reclaimed Quarry in Central California. *Ecological Restoration Journal*. 35: 354–361.

Busnardo, M. 2014. Habitat Restoration Challenges and Solutions on Remediated Army Landfills in the Presidio of San Francisco. Presentation at SERCAL Annual Conference.

Busnardo, M. 2012 and 2013. San Francisco Estuary Invasive Spartina Project- High Tide Refuge Islands Design, Construction, Lessons Learned. Presentations at Technical Advisory Committee Meetings.

Zedler, J., et al. 1994. Pulsed-discharge wastewater wetlands: the potential for solving multiple problems by varying hydroperiod. In *Global Wetlands: Old World and New*.

*Complete list of publications available upon request.*

### PROFESSIONAL PROFILE

Max Busnardo is a principal and restoration ecologist at H. T. Harvey & Associates and leads the firm's restoration ecology group. He specializes in ecosystem restoration, the ecology and restoration of San Francisco bayland habitats, and ecological adaptation strategies to sea level rise. His graduate school research and training focused on tidal wetland ecology at the Pacific Estuarine Research Laboratory in San Diego, California. He has 26 years of experience with H. T. Harvey leading interdisciplinary teams on ecosystem restoration projects for both public and private clients and has managed more than 200 restoration/mitigation projects. Max leads projects through all phases of the restoration process from design, through permitting, construction and long-term monitoring. Max designs successful bayland restoration projects by combining his academic training in wetland ecology with cutting-edge sea level rise adaptation strategies and lessons learned from long-term baylands restoration monitoring.

### PROJECT EXAMPLES

As principal-in-charge for restoration work for the USACE South San Francisco Bay Shoreline Study, **leads the development of the Basis of Design for earthwork and revegetation to create 90 acres of tidal marsh-upland ecotone habitat** for endangered species on a horizontal, living levee. Led preparation of the Conceptual Revegetation Plan for 3.5 miles of engineered levee slopes. Analyzed tidal habitat changes among shoreline levee alternatives over a 5,857-acre study area in the Alviso Salt Pond Complex.

Principal-in-charge, for the South Bay Salt Pond restoration project's quality assurance project plan (QAPP). The project **restores a mix of tidal marsh and managed pond habitats in 15,100 acres of former salt ponds**. H. T. Harvey, in collaboration with USFWS, prepared and is implementing a RWQCB-approved QAPP for import of clean fill for salt pond maintenance and ecotone/horizontal levee creation.

Project manager for the ecological aspects of the SAFER Bay Project. **The project integrates coastal flood protection with tidal marsh restoration and sea level rise adaptation** for 9 miles of the South San Francisco Bay shoreline in collaboration with the South Bay Salt Pond Restoration Project.

Managed the ecological monitoring for the **Sonoma Baylands tidal marsh restoration/demonstration project**, a 300-acre U.S. Army Corps of Engineers project along the Petaluma River in **San Pablo Bay**. Led completion of the Year-18 monitoring report elucidating the trajectory and factors limiting tidal marsh vegetation establishment.

Principal-in-charge for the San Francisquito Creek Flood Protection Project's tidal salt marsh transition zone mitigation, which included design and construction of **14 acres of tidal marsh habitat, 6 acres of salt marsh transition zone revegetation and 5 high tide habitat refuge islands at the Faber Marsh in the Palo Alto Baylands**.



# Stephen C. Rottenborn, PhD

## Principal, Wildlife Ecology

srottenborn@harveyecology.com  
408.458.3205



H. T. HARVEY & ASSOCIATES

Ecological Consultants

### HIGHLIGHTS

- Avian ecology
- Wetlands and riparian systems ecology
- Endangered Species Act consultations and compliance
- Environmental impact assessment
- Management of complex projects

### EDUCATION

PhD, Biological Sciences, Stanford University  
BS, Biology, College of William and Mary

### PROFESSIONAL EXPERIENCE

*Principal*, H. T. Harvey & Associates, 1997–2000, 2004–present

*Ecology Section Chief/Environmental Scientist*,

Wetland Studies and Solutions, Inc., 2000–04

*Independent Consultant*, 1989–97

### MEMBERSHIPS AND AFFILIATIONS

*Scientific Associate/Scientific Advisory Board*, San Francisco Bay Bird Observatory, 1999–2004, 2009–present

*Member*, Board of Directors, Western Field Ornithologists, 2014–present

*Chair*, California Bird Records Committee, 2016–present

*Member*, Board of Directors, Virginia Society of Ornithology, 2000–04

### PUBLICATIONS

Rottenborn, S. C. 2000. Nest-site selection and reproductive success of red-shouldered hawks in central California. *Journal of Raptor Research* 34:18-25.

Rottenborn, S. C. 1999. Predicting the impacts of urbanization on riparian bird communities.

*Biological Conservation* 88:289-299. Rottenborn, S. C. and E. S. Brinkley. 2007.

Virginia's Birdlife. Virginia Society of Ornithology, Virginia Avifauna No. 7

*Complete list of publications available upon request.*

### PROFESSIONAL PROFILE

Dr. Steve Rottenborn is a principal in the Wildlife Ecology group at

H. T. Harvey & Associates. He specializes in resolving issues related to special-status wildlife species and in meeting the requirements of federal and state environmental laws and regulations. Combining his research and training as a wildlife biologist and avian ecologist, Steve has built an impressive professional career that is highlighted by a particular interest in wetland and riparian communities, as well as the effects of human activities on bird populations and communities. Steve's experience extends to numerous special-status animal species, including all special-status species of the South San Francisco Bay area. The breadth of his ecological training and project experience enables him to expertly manage multidisciplinary projects involving a broad array of biological issues.

Steve has contributed to more than 600 projects involving wildlife impact assessment, NEPA/CEQA documentation, biological constraints analysis, endangered species issues (including California and Federal Endangered Species Act consultations), planning, permitting, and restoration. Steve has conducted surveys for a variety of wildlife taxa, including a number of threatened and endangered species, and contributes to the design of habitat restoration and monitoring plans. In his role as project manager and principal-in-charge for numerous projects, he has supervised data collection and analysis, report preparation, and agency and client coordination.

### PROJECT EXAMPLES

Served as principal-in-charge for H. T. Harvey's work **assessing biological impacts from, and identifying appropriate construction methods for, the renovation of the Lucy Evans Baylands Nature Interpretive Center at the Palo Alto Baylands.**

Served as **senior wildlife ecologist on the South Bay Salt Pond restoration project** — the largest (~15,000-acre) restoration project of its kind in the western United States.

Served as principal-in-charge for H. T. Harvey's preparation of a **Biological Assessment for Federal Endangered Species Consultation and preparation of agency permit applications** for the Corps' San Francisco Bay Shoreline Study Phase 1 project.

Served as principal-in-charge for H. T. Harvey's work **preparing long-term management plans for several Santa Clara Valley Water District habitat reserves.**

Spearheaded **biological planning and permitting** for several large redevelopment projects involving both development and habitat enhancement, restoration, and management around San Francisco Bay, including the Candlestick Point – Hunters Point Shipyard project, Alameda Point project, and Concord Reuse project.



## **ATTACHMENT B – PROJECT SCHEDULE**

ID	April 2023 Notes	Task Name	Duration	Start	Finish
1		<b>TASK ORDER 4 - CEQA EXISTING CONDITIONS AND PRELIMINARY DESIGN FOR COASTAL REACHES OF MENLO PARK, EAST PALO ALTO, AND PONDS R1/R2</b>	502 days	Mon 1/30/23	Wed 1/8/25
2		<b>Task 1 - CEQA Existing Conditions Documentation &amp; Regulatory Agency Communication</b>	104.6 wks?	Mon 1/30/23	Thu 2/6/25
3		1.1: Team Coordination & Meetings	99 wks	Mon 1/30/23	Mon 12/30/24
4	Schedule TBD	1.2: NEPA Support	99 wks	Mon 1/30/23	Mon 12/30/24
5		<b>1.3 - Project Description</b>	<b>84.6 wks</b>	<b>Mon 6/19/23</b>	<b>Thu 2/6/25</b>
6		<b>1.3.1 EIR project description</b>	<b>8 wks</b>	<b>Wed 7/12/23</b>	<b>Tue 9/5/23</b>
7		<b>Technical studies</b>	<b>8 wks</b>	<b>Wed 7/12/23</b>	<b>Tue 9/5/23</b>
8	Predecessor: task needs max footprint, max depth of excavation by reach	Cultural Resources Survey Report	4 wks	Wed 7/12/23	Tue 8/8/23
9		JPA review	2 wks	Wed 8/9/23	Tue 8/22/23
10		Revise Cultural Resources Survey Report	2 wks	Wed 8/23/23	Tue 9/5/23
11		EIR Project Description	15.6 wks	Mon 6/19/23	Wed 10/4/23
12	requires completion of best effort at 30% by 7/12. Libby: Add that predecessor here and then reduce duration to 2 weeks.	Prepare project description	7 wks	Mon 6/19/23	Fri 8/4/23
13		Design team review	5 days	Mon 8/7/23	Fri 8/11/23
14		revise project description	5 days	Mon 8/14/23	Fri 8/18/23
15		JPA Review	1 wk	Mon 8/21/23	Fri 8/25/23
16		Revise Project Description	1 wk	Mon 8/28/23	Fri 9/1/23
17		Produce Public Project Description	1 day	Mon 9/4/23	Mon 9/4/23
18		30-day public posting	30 edays	Mon 9/4/23	Wed 10/4/23
19		JPA does PD meetings	10 edays	Mon 9/4/23	Thu 9/14/23
20		<b>1.3.2 Administrative Draft, Draft, Final EIR</b>	<b>59.8 wks</b>	<b>Thu 9/21/23</b>	<b>Fri 11/15/24</b>
21	Shortened. Schedule assumes no changes to PD.	Prepare Administrative Draft EIR	3.9 mons	Thu 9/21/23	Thu 1/11/24
22		Design team briefing	1 day	Fri 1/12/24	Fri 1/12/24
23	Briefings with EPA, MP [CONFIRM NO OTHERS] need to happen within this window.	JPA review	4 wks	Mon 1/15/24	Fri 2/9/24
24		Screencheck Draft EIR	8 wks	Mon 2/12/24	Fri 4/5/24



ID	April 2023 Notes	Task Name	Duration	Start	Finish
52		2.3 - Geomorphic Marsh Evolution Projections Analysis (R1/R2, Faber, Laumeister, Cooley)	4 wks	Mon 4/24/23	Fri 5/19/23
53		2.4 - Refugial Habitat Assessment & T-Zone Configuration (Faber, Laumeister, Cooley)	4 wks	Mon 5/22/23	Fri 6/16/23
54		<b>2.5 - Wetland Habitat &amp; Snowy Plover Mitigation Approach</b>	<b>19 wks</b>	<b>Mon 4/3/23</b>	<b>Fri 8/11/23</b>
55	new - fixed task	Initiate Wetland Habitat & Snowy Plover Mitigation Approach	4 wks	Mon 4/3/23	Fri 4/28/23
56	new	Incorporate geomorphic marsh evolution projections analysis, Refugial Habitat Assessment & T-zone config.	4 wks	Mon 6/19/23	Fri 7/14/23
57	new	Incorporate final footprint, complete wetland habitat, Snowy Plover mit. Approach	4 wks	Mon 7/17/23	Fri 8/11/23
58		sx	4 wks	Mon 5/22/23	Fri 6/16/23
59		2.7 - Interior Drainage Analysis	4 wks	Mon 6/19/23	Fri 7/14/23
60		2.8 - Groundwater Analysis	4 wks	Mon 6/19/23	Fri 7/14/23
61		2.9 - Geotechnical Investigations and Evaluations	<b>14 wks</b>	<b>Mon 5/8/23</b>	<b>Fri 8/11/23</b>
62		2.9.1 - Review of Information and Site Reconnaissance	4 wks	Mon 5/8/23	Fri 6/2/23
63		2.9.2 Field Explorations	4 wks	Mon 6/5/23	Fri 6/30/23
64		2.9.3 - Geotechnical Engineering Analyses and Evaluation Report	6 wks	Mon 7/3/23	Fri 8/11/23
65		2.10 - Engineering Support for Project Description / Alignment Refinement	30 wks	Mon 6/19/23	Wed 1/17/24
66		2.11 - Design Criteria Report	8 wks	Wed 12/13/23	Wed 2/7/24
67		2.12 - Design	<b>99.2 wks</b>	<b>Mon 1/30/23</b>	<b>Tue 12/31/24</b>
68		2.12.1 - Meetings and Coordination - Design	493 days	Thu 2/2/23	Tue 12/31/24
69		2.12-2 - Programmatic Level 10% Design	20 wks	Mon 1/30/23	Fri 6/16/23
70	Must have best effort at 30% complete by July 12th	2.12.3 - Project Level 30% Design, Specs, Estimates & Schedule	25 wks	Mon 6/19/23	Tue 12/12/23
71		2.12.3.1 - footprint, sections, quantities for DEIR	3.5 wks	Mon 6/19/23	Wed 7/12/23
72	deleted predecessor, redefined ta	<b>2.14.4 - Design Charettes, Addressing Data Gaps</b>	<b>10 wks</b>	<b>Mon 4/10/23</b>	<b>Fri 6/16/23</b>
73	new task - fixed date	Design charette Mtg 1	1 day	Fri 4/14/23	Fri 4/14/23
74	new task - fixed date	Design charette Mtg 2	1 day	Mon 5/8/23	Mon 5/8/23
75	New task	JPA Briefing & confirmation of final footprint assumptions	0 days	Tue 5/9/23	Tue 5/9/23
76	new task - fixed date	ESA prepares data gaps memo	4 wks	Mon 4/10/23	Fri 5/5/23
77		JPA, HDR prepares responses to RFI	6 wks	Mon 5/8/23	Fri 6/16/23

## ATTACHMENT D – PROPOSED FEE ESTIMATE





San Francisquito Creek Joint Powers Authority  
HDR Project Team Fee  
TO4

HTH	Principal, Restoration Ecology Busnardo	Prinicpal, Wildlife Ecology Rottenborn	Associate, Restoration Ecologist Archbald	Senior Wildlife Ecologist Pearl	Senior Restoration Ecologist Drake	Restoration Biologist Shikuzawa	Principal, Plant Ecologist Hardwicke	Principal Landscape Achitect Howard	Restoration Landscape Designer Truelsen	Landscape Achitect Richards	Principal, Fish Ecology Kramer	Plant Biologist Morales	Wildlife Ecologist Lien	Senior GIS Analyst TBD	GIS Analyst TBD	Technical Support TBD	Task Totals Hrs	Task Totals \$	ODC Total \$	TOTAL FEE
		\$ 310.00	\$ 310.00	\$ 249.00	\$ 204.00	\$ 226.00	\$ 136.00	\$ 299.00	\$ 299.00	\$ 156.00	\$ 226.00	\$ 299.00	\$ 136.00	\$ 177.00	\$ 167.00	\$ 142.00	\$ 109.00			
<b>Task Order 4 -</b>																				
<b>Task 1 - CEQA Existing Conditions Documentation &amp; Regulatory Agency</b>	<b>247</b>	<b>192</b>	<b>24</b>	<b>332</b>	<b>160</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>40</b>	<b>0</b>	<b>40</b>	<b>60</b>	<b>24</b>	<b>1167 hrs</b>	<b>\$ 283,562</b>	<b>\$ 1,417</b>	<b>\$ 284,979</b>
Team Coordination and Meetings	88	36		32	32												188 hrs	\$52,200	\$	\$ 52,200
National Environmental Policy Act Support																	-	\$0	\$	\$ -
Project Description	12	4			8												24 hrs	\$6,768	\$	\$ 6,768
Existing Conditions Assessment - Technical Reports / California Environmental Quality Act Documentation																				
Wetland Delineation																	-	\$0	\$	\$ -
Existing Biological Resources Report																	-	\$0	\$	\$ -
CEQA Documentation																				
Draft EIR	40	80	16	180	80		24				24	40		16	48	24	572 hrs	\$127,880	\$ 894	\$ 128,774
Final EIR and Mitigation Monitoring Program	32	32	8	60	16										12		160 hrs	\$39,392	\$ 132	\$ 39,524
Findings of Fact, Statement of Overriding Consideration, Notice of Determination																	-	\$0	\$	\$ -
Meetings and Coordination - Environmental Outreach	75	40		60	24									24			223 hrs	\$57,322	\$ 391	\$ 57,713
<b>Task 2 - Engineering and Design</b>	<b>145</b>	<b>44</b>	<b>208</b>	<b>323</b>	<b>248</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>88</b>	<b>64</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>18</b>	<b>1242 hrs</b>	<b>\$ 284,152</b>	<b>\$ 3,132</b>	<b>\$ 287,284</b>
Data Collection																	-	\$0	\$	\$ -
Land and Airborne Surveying Services																	-	\$0	\$	\$ -
Geomorphic Marsh Evolution Projections Analysis (R1, R2, Faber, Laumeister, Cooley Marsh)																	-	\$0	\$	\$ -
Refugial Habitat Assessment and T-Zone Configuration (Faber, Laumeister, Cooley Marsh)																	-	\$0	\$	\$ -
Wetland Habitat and Snowy Plover Mitigation Approach Development - Ponds R1/R2																				
Restoration Options Assessment and Western Snowy Plover Habitat Enhancement Options Development	24	12	48	36											16	8	144 hrs	\$33,600	\$ 176	\$ 33,776
Ponds R1/R2 Restoration Basis of Design Report	60	16	80	60	120		16	48	32	16						8	456 hrs	\$108,000	\$ 1,713	\$ 109,713
Coastal Hydraulics Analysis																	-	\$0	\$	\$ -
Interior Drainage Analysis																	-	\$0	\$	\$ -
Groundwater Analysis																	-	\$0	\$	\$ -
Geotechnical Investigation & Evaluation																				
Bio Oversight During Geotech Investigations																	-	\$0	\$	\$ -
Environmental Awareness Training		2		12												4	20 hrs	\$3,854	\$ 76	\$ 3,930
Biological Monitoring (assumes 23 Days)	1	10		207													218 hrs	\$45,638	\$ 727	\$ 46,365
Review of Geotechnical Information and Site Reconnaissance																	-	\$0	\$	\$ -
Geotechnical Engineering Analysis and Evaluation																	-	\$0	\$	\$ -
Engineering Support for Project Description / Alignment Refinement																	-	\$0	\$	\$ -
Design Criteria Memorandum and Conceptual Levee Slope Revegetation Report (for all reaches (except for R1/R2 covered in Task 2.5.1))	40	4	80	8	128			12	40	32					40		384 hrs	\$86,860	\$ 440	\$ 87,300
Design																				
Meetings and Coordination - Design	20																20 hrs	\$6,200	\$	\$ 6,200
Program/Project Level 10% to 30% Design, Specs, Estimates, & Construction Schedule (North of Bay Rd)																	-	\$0	\$	\$ -
Project Level 30% Design, Specs, Estimates, & Construction Schedule (South of Bay Rd)																	-	\$0	\$	\$ -
Data Gaps Memo																	-	\$0	\$	\$ -
<b>Total Basic Services Hours</b>	<b>392</b>	<b>236</b>	<b>232</b>	<b>655</b>	<b>408</b>	<b>0</b>	<b>24</b>	<b>28</b>	<b>88</b>	<b>64</b>	<b>40</b>	<b>40</b>	<b>0</b>	<b>40</b>	<b>120</b>	<b>42</b>	<b>2409 hrs</b>			
<b>Total Basic Services Fee</b>	<b>\$ 121,520.00</b>	<b>\$ 73,160.00</b>	<b>\$ 57,768.00</b>	<b>\$ 133,620.00</b>	<b>\$ 92,208.00</b>	<b>\$ -</b>	<b>\$ 7,176.00</b>	<b>\$ 8,372.00</b>	<b>\$ 13,728.00</b>	<b>\$ 14,464.00</b>	<b>\$ 11,960.00</b>	<b>\$ 5,440.00</b>	<b>\$ -</b>	<b>\$ 6,680.00</b>	<b>\$ 17,040.00</b>	<b>\$ 4,578.00</b>	<b>\$ -</b>	<b>\$567,714</b>	<b>\$4,549</b>	<b>\$572,263</b>



## **Agenda Item 7.D. – Authorize Executive Director to Negotiate and Execute a Contract Amendment with Environmental Science Associates (ESA) for Reach 2 Permit Support**

### **Background**

In Spring of 2020 the SFCJPA advertised for a new consultant contract and hired Environmental Science Associates (ESA) to develop a Mitigation and Monitoring Plan, Landscape Designs, and modifications to the civil engineering design to respond to regulatory requests at four of the five sites of our planned channel widening improvements upstream of Highway 101.

The ESA contract has been amended 4 times to adjust to the unique and complex regulatory, property owner and engineering challenges of the Reach 2 project.

### **Discussion**

The U.S. Army Corps of Engineers has taken over the permitting requirements for channel widening in Reach 2, and the SFCJPA supporting its work. Due to this separation, and the need of the City of Palo Alto to obtain construction permits for the Newell Road Bridge replacement in the context of the accompanying Reach 2 project elements, the City of Palo Alto has requested that the SFCJPA and our consultant to assist in securing permits. The SFCJPA and its consultant can likely secure construction permits for the faster and at a lower cost than the City of Palo Alto. Therefore, staff recommends adding the tasks detailed in the exhibits to draft Amendment 5 to the ESA contract.

Exhibits A, B, and C detail the scope, schedule, and budget resultant from Amendment 5, respectively. Amendment 5 represents an increase in the total not-to-exceed amount of the contract by \$56,801, but the additional costs may be covered in part or in total by Caltrans.

### **Recommendation**

Accept the proposed general conditions of the amendment and authorize the Executive Director to negotiate and execute Amendment 5 to the ESA consultant agreement, by approving resolution 23-05-25-C.

### **Attachments**

ESA Contract Amendment 5 with Exhibits A, B, and C

Draft Resolution to authorize the Executive Director to execute Amendment 5

ESA Contract

Amendment 4 and Exhibits

Amendment 3 and Exhibits

Amendment 2 and Exhibits

Amendment 1 and Exhibits



**AMENDMENT NO. 5 TO AGREEMENT**  
**Mitigation and Monitoring Plan, Restoration Elements of Civil Design, and Landscape**  
**Design**  
**for the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation**  
**Project Upstream of Highway 101**

**BETWEEN THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY**  
**AND ENVIRONMENTAL SCIENCE ASSOCIATES**

This Amendment No.5 (“Amendment”), effective as of the date it is fully executed by the parties, amends the terms of the Consultant Agreement (“Agreement”) between THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY (“Authority”) and Environmental Science Associates, a California corporation. (“Consultant”), dated April 23, 2020, and amended on November 13, 2020, through the execution of Amendment No. 1, and again amended on January 29, 2021, through the execution of Amendment No. 2, and again amended on April 29, 2021, through the execution of Amendment No. 3, and again amended February 17, 2022 through the execution of Amendment No. 4. Capitalized terms not otherwise defined will have the meaning set forth in the Agreement.

**WHEREAS**, the parties desire to amend the Agreement to modify the Scope of Services, Schedule, and Compensation to include the preparation of permit application materials and permitting support specific to Newell Road Bridge.

**NOW, THEREFORE**, in consideration for the mutual promises and agreements contained herein and notwithstanding anything to the contrary in the Agreement, Consultant and the Authority hereby agree as follows:

1. Exhibit A, Scope of Services, shall be replaced in full by the 5<sup>th</sup> Amended Scope of Services described in Attachment A.
2. Exhibit B, Schedule, shall be amended to include the Task Schedule in Attachment B.
3. Exhibit C, Compensation, shall be replaced in full by the 5<sup>th</sup> Amended Compensation in Attachment C.
4. All other terms and conditions stated in the original Agreement remain in full force and effect.

**AUTHORITY**

**CONSULTANT**

---

By: Margaret Bruce  
Title: Executive Director  
Date:

---

By: Christie Beeman  
Title: Business Group Director  
Date:

APPROVED AS TO FORM:

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Lori Liu

General Counsel

Date: 05/25/2023



## **Exhibit A – Scope of Services**

### **San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project**

#### ***Tasks 1-10: Scope and Effort Unchanged***

#### ***Task 11: USACE CAP Permitting Support***

A stand-alone set of documents will be prepared to support the USACE in securing regulatory agency approvals for Channel Widening Sites 1-4. The project description will be provided by the USACE. This scope assumes expedited support is needed to secure permits and approvals as quickly as possible.

- a. Prepare Clean Water Act (CWA) Section 401 Application form and supplemental word file focused on Channel Widening Sites 1-4 only.
- b. Assistance to respond to comments and participation in meetings within the allotted budget

#### ***Assumptions:***

- No new impact calculations (i.e., permanent, temporary, fill volumes by material type)
- No Site 2 revegetation plan updates
- No compensatory mitigation support
- No additional technical report updates (i.e., no revisions to the aquatic resources delineation report, cultural resources report, tree inventory, or mitigation and monitoring plan)

#### ***Deliverables (one round):***

- CWA Section 401 application form and supplemental word file

#### ***Task 12: City of Palo Alto Newell Bridge Permitting Support***

A stand-alone set of permit application packages for USACE, RWQCB, and CDFW will be prepared to support the City of Palo Alto with securing approvals to implement the Newell Bridge Replacement Project. The project description will include the SFCJPA's Reller Restoration Site to balance impacts incurred by the Newell Bridge Site. This scope assumes expedited support is needed to secure permits and approvals in time for construction in Summer 2024, pending timely action of the regulatory agencies.

- a. Create project figures showing just the bridge and Reller Restoration Site
- b. ESA to support the City to prepare impact calculations based on wetland delineation report (i.e., permanent, temporary, fill volumes by material type)
- c. Prepare USACE CWA Section 404 application (may use NWP 14 Linear Transportation Projects – ½ acre or less impacts)



April 21, 2023

Page 2

- d. Prepare RWQCB CWA Section 401 Certification application (may use Statewide General Order for NWP 14 Linear Transportation Projects)
- e. Prepare CWA Section 404b1 alternatives analysis for USACE and RWQCB – start from scratch based on City’s EIR alternatives and design basis provided by City
- f. Prepare CDFW LSAA Notification for upload to EPIMS.
- g. Biological Assessment Report for NMFS and USFWS
- h. Prepare mitigation and monitoring plan – revised from previous, focus on Reller Restoration Site.
- i. Assistance to respond to comments and participation in meetings within the allotted budget

Assumptions:

- City to update Project Description and provide ESA with CAD/GIS files
- No compensatory mitigation support beyond description of Reller Restoration Site
- No additional design updates to Reller Restoration Site
- No additional technical report updates (i.e., no revisions to aquatic resources delineation report, cultural resources report, tree inventory)
- No CESA incidental species take permit needed

*Deliverables (one version of each):*

- Project Description figures
- Impact calculations
- CWA Section 404 application package
- CWA Section 401 application package
- CWA Section 404b1 alternatives analysis
- CDFW LSAA application
- Biological Assessment report
- Mitigation and Monitoring Plan



180 Grand Avenue  
Suite 1050  
Oakland, CA 94612  
510.839.5066 phone  
510.839.5825 fax

esassoc.com

## Exhibit B – Schedule

### San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project

<b>Task</b>	<b>Estimate deliverable date from receipt of Notice to Proceed</b>
<b>11. USACE CAP 401 Application</b>	1 week
<b>12. Newell Bridge Permitting</b>	
Project Description and Impact Calculations	2 weeks
Permit Application Packages	4 weeks
Regulatory Agency Coordination Support	6 months

## Exhibit C - Budget Estimate

Project San Francisquito Creek to Highway 101

Project No. D202000175.00

**5/18/2023 Modification #5 budget estimate**

Original Task #	Name	<i>Amendment 5</i>		
		Prior Budget	Budget Change	New Budget
1	Mitigation and Monitoring Plan	\$ 18,800	\$ -	\$ 18,800
2	Landscape Plans	\$ 29,190	\$ -	\$ 29,190
3	Design Modifications			\$ -
3.1	Hydraulic Analysis	\$ 22,240	\$ -	\$ 22,240
3.2	Engineering Design	\$ 47,300	\$ -	\$ 47,300
3.3	Revise Project Description & Impact Figures	\$ 4,400	\$ -	\$ 4,400
4	PM & Meetings	\$ 29,630	\$ -	\$ 29,630
5	Optional Agency Meetings	\$ 15,280	\$ -	\$ 15,280
6	LEDPA Analysis	\$ 15,340	\$ -	\$ 15,340
7	Regulatory Permit Applications	\$ 27,400	\$ -	\$ 27,400
8	Post Application Modifications	\$ 5,020	\$ -	\$ 5,020
9	Tree Inventory Mapping	\$ 8,500	\$ -	\$ 8,500
10	Archaeological Testing Program			\$ -
10.1	Tribal Cultural and Archaeological Testing Plan	\$ 5,500	\$ -	\$ 5,500
10.2	Implement TCATP	\$ 7,800	\$ -	\$ 7,800
10.3	Results Report and Finding of Effect	\$ 8,000	\$ -	\$ 8,000
10.4	Tribal Cultural and Archaeological Monitoring Plan	\$ 3,500	\$ -	\$ 3,500
<b>11</b>	<b>USACE CAP Permitting Support</b>	\$ -	\$ <b>4,651</b>	\$ <b>4,651</b>
<b>12</b>	<b>Newell Bridge Permitting Support</b>	\$ -	\$ <b>52,150</b>	\$ <b>52,150</b>
<b>TOTAL</b>		\$ 229,100	\$ 56,801	\$ 285,901





SAN FRANCISQUITO CREEK  
JOINT POWERS AUTHORITY

**RESOLUTION NUMBER 23-05-25-C**

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY**

**AUTHORIZING THE EXECUTIVE DIRECTOR TO  
NEGOTIATE AND EXECUTE AN AMENDMENT TO THE  
CONTRACT WITH ENVIRONMENTAL SCIENCE  
ASSOCIATES (ESA) FOR SERVICES RELATED TO THE  
REACH 2 PROJECT**

RECITALS

Whereas, the SFCJPA entered into a contract with Environmental Science Associates (“ESA”) to provide permitting and design support for the Reach 2 project on April 23, 2020 (“Contract”); and,

Whereas, the Contract allows for periodic amendments to the scope, budget and schedule of the consultant tasks to support emerging needs of the project; and,

Whereas, the Contract was amended on November 13, 2020, through the execution of Amendment No. 1, and again amended on January 29, 2021, through the execution of Amendment No. 2, and again amended on April 29, 2021, through the execution of Amendment No. 3, and again amended February 17, 2022 through the execution of Amendment No. 4; and

Whereas, due to proposed timing and construction of the project elements, it has become necessary to obtain construction permits for the replacement of the Newell Road Bridge separately from the other project elements; and

Whereas, the City of Palo Alto and Caltrans are leading the design of the Newell Road Bridge project; and

Whereas, the SFCJPA and ESA are well positioned to expedite the permit application materials and negotiations with the regulatory agencies; and

Whereas, adding tasks specific to securing permits for the Newell Road Bridge requires an amendment to the Contract with ESA.

**NOW THEREFORE, BE IT RESOLVED** by the Board of Directors of the San Francisquito Creek Joint Powers Authority hereby authorizes the Executive Director to negotiate and execute an amendment to the contract between the SFCJPA and ESA to reflect current Reach 2 work elements expediting project permit applications.

APPROVED AND ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:



SAN FRANCISQUITO CREEK  
JOINT POWERS AUTHORITY

ABSTAIN:

ATTEST:

APPROVED:

\_\_\_\_\_  
Vice Chairperson

Date: 05/25/2023

\_\_\_\_\_  
Chairperson

Date: 05/25/2023



SAN FRANCISQUITO CREEK  
JOINT POWERS AUTHORITY

APPROVED AS TO FORM:

\_\_\_\_\_  
Legal Counsel

Date: 05/25/2023

## AGREEMENT FOR

### Mitigation and Monitoring Plan, Restoration Elements of Civil Design, and Landscape Design for the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Project Upstream of Highway 101

THIS AGREEMENT is made as of April 23, 2020, by and between the San Francisquito Creek Joint Powers Authority, a body corporate and politic (“Authority”), and Environmental Science Associate, a California corporation (“Consultant”).

#### RECITALS

A. The purpose of this Agreement is the development of work products related to design and regulatory permitting of the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project, Highway 101 to El Camino Real

B. Authority desires to utilize the services of Consultant as an independent contractor to provide a Mitigation and Monitoring Plan, Landscape Design, and Restoration Elements of Civil Design to Authority.

C. 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 and Level of Services. The nature, scope, and level of the specific services to be performed by Consultant are as set forth in Exhibit A attached hereto.

B. Time of Performance. The services shall be performed on a timely, regular basis in accordance with the Schedule of Performance attached hereto as Exhibit B.

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 Agreement, and will perform the services to a standard of reasonable professional care.

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 required hereunder have been completed satisfactorily by Consultant unless earlier terminated pursuant to Section 13.

#### 3. Compensation.

Authority agrees to compensate Consultant for its services according to the fee schedule set forth in Exhibit C. Authority also agrees to compensate Consultant for its out-of-pocket expenses to the extent authorized in Exhibit C. In no event shall the total compensation and costs payable to Consultant under this Agreement exceed the sum of \$99,500.00 unless specifically approved in advance, in writing, by Authority.

#### **4. Representatives.**

A. **Project Manager.** Scott Stoller, Senior Managing Engineer, is hereby 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 Agreement. Therefore, the foregoing Project Manager shall be responsible during the term of this Agreement 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.

B. **Contract Administrator.** The Contract Administrator and Authority's representative shall be the Authority's Senior Project Manager, or in his or her 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 assure that the Contract Administrator is kept 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. Ownership of Work Product.** All reports, documents or other written material developed by Consultant in the performance of this Agreement shall be and remain the property of Authority without restriction or limitation upon its use or dissemination by Authority.

**6. 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.

**7. 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 are deemed confidential and 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.

**8. 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.

## **9. Indemnification.**

A. Consultant shall, 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 claim, demand, damage, liability, loss, cost or expense, including defense costs, for any damage whatsoever, including but not limited to death or injury to any person and injury to any property, to the extent actually resulting from willful misconduct, negligent acts, errors or omissions of Consultant or any of its officers, employees, or agents.

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 covenant under this section shall survive the termination of this Agreement.

## **10. 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).
- (2) Insurance Services Office form number CA 0001 (Ed. 1/87) covering Automobile Liability, code 1 (any auto).
- (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:

- (1) Indemnitees are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of Consultant; products and completed operations of Consultant; premises owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to Authority, its officers, employees and agents.
- (2) 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.
- (3) 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.
- (4) 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.
- (5) Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, or cancelled by either party, or reduced in coverage or in limits 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 Risk Manager.

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's insurer may provide complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by these 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.

**11. 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.

**12. Termination.** Authority shall have the right to terminate the services of Consultant at any time or for any reason 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.

**13. Suspension.** Authority may, in writing, order Consultant to suspend all or any part of the Consultant's services under this Agreement for the convenience of Authority or for work stoppages beyond the control of Authority or Consultant. 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.

**14. Notices.** Any notices, bills, invoices, or reports required by this Agreement shall be deemed received on (a) the day of delivery if delivered by hand during receiving party's regular business hours or by facsimile before or during receiving party's regular business hours; or (b) on the second business day following deposit in the United States mail, postage prepaid, to the addresses heretofore below, or to such other addresses as the parties may, from time to time, designate in writing pursuant to the provisions of this section.

Authority:

San Francisquito Creek Joint Powers Authority  
615-B Menlo Avenue  
Menlo Park, CA 94025  
Attention: Kevin Murray, Senior Project Manager

Consultant:

Environmental Science Associates  
550 Kearny Street  
Suite 800  
San Francisco, CA 94108  
Attention: Scott Stoller, Senior Managing Engineer

**15. 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.

**16. Assignability; Subcontracting.** Consultant shall not assign, transfer, or subcontract any interest in this Agreement or the performance of any of Consultant's obligations hereunder, without the prior written consent of Authority, and any attempt by Consultant to so assign, transfer, or subcontract any rights, duties, or obligations arising hereunder shall be void and of no effect.

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



**18. 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.

**19. 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.


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


**21. 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.

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

"Authority"  
San Francisquito Creek Joint Powers Authority

"Consultant"  
Environmental Science Associates

By:   
\_\_\_\_\_  
Len Materman, Executive Director

By:   
\_\_\_\_\_  
Christie Beeman  
Name and Title: Director

## **Exhibit A Scope of Services**

### **San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project Scope**

#### ***Task 1: Mitigation and Monitoring Plan***

ESA will review relevant background information from prior compensatory mitigation planning efforts. This may include spreadsheets, tables, documents, GIS data, and previously drafted mitigation plans (conceptual or otherwise), including any regulatory agency correspondence related to the adopted mitigation ratios. Following the review, ESA will communicate to the client any outstanding needs for the preparation of a Mitigation and Monitoring Plan. We understand that the SFCJPA has already quantified the temporary and permanent impacts of the proposed construction, adopted mitigation ratios for those impacts, and identified locations for the implementation of those mitigation activities. It is assumed that no further agency coordination is needed to complete the compensatory mitigation planning effort.

Once the background material has been acquired and assessed, ESA will then develop a Draft Compensatory Mitigation and Monitoring Plan (Mitigation Plan) that builds upon the work already completed to date and describes those compensatory mitigation actions to be enacted as part of the proposed project. It is anticipated that the Mitigation Plan will address both terrestrial and aquatic habitat needs. The Mitigation Plan will include all the elements required to assist in regulatory compliance (impact summary, proposed actions and projected habitat acreages, planting plan, maintenance requirements, success criteria, and monitoring protocols and frequency).

ESA will revise the Draft Mitigation Plan based on one set of consolidated comments from the client.

Our team will be available to participate in up to three (3) progress meetings. The project kickoff and the two meetings with regulators will be tracked under Task 4.

#### *Deliverables:*

- Draft Mitigation and Monitoring Plan
- Final Mitigation and Monitoring Plan

#### *Assumptions:*

- Relevant background information will be provided by SFCJPA staff.
- Regulatory coordination will be limited to the two meetings scheduled by SFCJPA.
- Input from regulators will not materially impact the scope of the Mitigation Plan.
- Habitat impacts, mitigation ratios and locations, and conceptual approach have already been determined.
- Any re-design of creek elements will not result in substantive changes to the mitigation acreage needs, mitigation locations selected, or overall regulatory approach.
- ESA will respond to one (1) set of consolidated comments from the client on the draft document.

#### ***Task 2: Landscape Plans***

ESA will develop 60% and 90% Landscape Plans for the two mitigation sites, consisting of native planting, seed, and soil amendment plans, schedules, notes, and details for revegetating approximately one (1) acre of

April 27, 2020  
Page 2

land adjacent to the creek. We propose the 90% plans as the final submittal for this contract to provide leeway in the event that the plans require fine tuning prior to construction due to regulatory input or in response to changes in the engineering plans.

ESA's landscape architect and wetland ecologist will conduct a site visit to assess site opportunities and constraints relating to the planting sites, and they will base plant palettes off of a nearby reference site with strong riparian habitat value.

The 60% and 90% landscape plan deliverables will include a planting layout that will support improved native riparian habitat, will perform well during and after flood events, and will enhance riparian habitat and aesthetics of San Francisquito Creek. The Landscape Plans will incorporate elements pertinent for mitigation accounting and regulatory requirements such as providing a balance of understory and overstory plantings and incorporating best practices for limiting the spread of Phytophthora.

The landscape plans will be suitable for inclusion with the overall construction document plan set for this reach. We expect these plans will also be included as an attachment to the Mitigation Plan developed in Task 1.

We anticipate the following sheets to be included: Planting Plans (2), Plant and Seeding List (1), and Planting Details (1). The 60% and 90% submittals will include cost estimates and technical specifications. We will issue 90% landscape plans and specifications incorporating one round of consolidated comments from the client on the 60% Submittal.

We have budgeted for up to three (3) progress meetings. The project kickoff meeting will be tracked under Task 4.

*Deliverables:*

- 60% Landscape Plan Set, Cost Estimate, and Technical Specifications
- 90% Landscape Plan Set, Cost Estimate, and Technical Specifications

*Assumptions:*

- A performance specification for irrigation will be sufficient and that no irrigation plans will be developed.
- Landscape areas will not change between the 60% and 90% deliverables.

**Task 3: Design Modifications**

We understand that the previous design plans developed by Valley Water require modification to meet the SFCJPA's vision and anticipated regulatory requirements for stream and habitat function. Only specific design sheets will be revised during the present effort to support the permitting process.

The changes to the existing armored channel banks (sacked concrete) presented in the Valley Water plan set include setting back and steepening the banks at discrete locations to create additional flow capacity and constructing concrete walls with riprap toe protection. We understand that the purpose of this task is to modify the Valley Water design to introduce habitat elements to the extent possible while preserving the desired channel conveyance capacity (7,650 cfs).

April 27, 2020  
Page 3

ESA will conduct a detailed review of the Valley Water design sheets, supporting design documentation, and available reports and hydraulic models. We recognize that maximizing flood conveyance and adding habitat elements may represent competing project goals. Our team will work with the SFCJPA to develop and document criteria for project success, such as identifying the minimum habitat enhancement that can be considered a project success.

The ESA team will conduct a site visit to evaluate site constraints and opportunities and meet with the project team and stakeholders to better understand the project objectives and how the proposed design modifications would meet project objectives.

Our team will review hydraulic objectives and requirements for the project reach and conduct hydraulic modeling to compare model results for up to two alternative project geometries with results for the existing conditions and the Valley Water design. For this analysis, we will apply hydraulic roughness values for proposed vegetation types and densities consistent with values ESA developed for Santa Clara Valley Water District's stream maintenance guidelines. Through review meetings we will work with the project team to select a preferred alternative. We have budgeted up to three (3) status meetings,

We anticipate issuing up to 11 plan sheets for the 60% Design including: Plan and Profile (4), Typical Sections (3), and Grading Sections (4). We will issue an estimate of probable construction cost for the project elements proposed by our team. The basis of design, including the hydraulic modeling effort will be summarized in a succinct memorandum.

*Deliverables:*

- Draft 60% Plans and Estimate of Probable Construction Cost
- Final 60% Plans and Estimate of Probable Construction Cost
- Draft and Final Hydraulic Modeling and Basis of Design Memorandum
- Electronic copies of the hydraulic model files and Autocad files

*Assumptions:*

- Design flows (Q<sub>2</sub>, Q<sub>10</sub>, Q<sub>100</sub>, Bankfull) for San Francisquito Creek will be provided to the Consultant.
- A functioning hydraulic model that includes existing and proposed conditions (including new bridge geometries) is available and that electronic files will be transmitted to Consultant.
- Electronic base files in Autocad format, including an existing conditions surface, are available and will be transmitted to Consultant.
- Technical specifications will not be included.
- Estimate of probable construction cost is limited to proposed channel modifications. We assume that estimating costs for project elements carried forward from Valley Water's design will be conducted by others.

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Page 4

#### ***Task 4: Meetings and Project Management***

ESA proposes to track effort for project management and client/agency meetings under this task. We have assumed that ESA's project manager will allocate up to 2 hours per month, for the 6-month project duration, for client communications, progress reports, and billing.

This task will track the project kickoff meeting, to be attended by the Project Manager, Project Director and each of the Task Leads. In addition, we have allocated time for engineering and permitting support staff to attend one meeting with regulatory agencies, to be scheduled by the SFCJPA.

We have budgeted for bi-monthly progress meetings where relevant task leaders would be present to discuss progress to date and next steps. We have assumed that each task lead would be present at approximately half of the progress meetings. The progress meetings will occur by web-conferencing, and tracked in Tasks 1 through 3.

#### ***Task 5: Optional Agency Meeting(s)***

ESA staff is available for further regulatory coordination and consultation as deemed appropriate, and specifically authorized, by the SFCJPA. We estimate that the preparation, attendance, and follow-up to close out a consultation meeting will require approximately 6 hours of staff time (\$1,200). We assume that graphics and materials will be taken from deliverables from other tasks and that no new graphics or materials need to be produced to support meetings.

## Exhibit B Schedule of Performance

### Provisional Schedule for San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Project, Upstream of Highway 101

Deliverable	May	June	July	August	September	October
<b>Task 1 - Mitigation and Monitoring Plan</b>						
Draft Mitigation and Monitoring Plan				X		
Client Review						
Final Mitigation and Monitoring Plan						X
<b>Task 2 - Landscape Plans</b>						
60% Plans, Specifications, and Cost			X			
Client Review						
90% Plans, Specifications, and Cost					X	
<b>Task 3 - Design Modifications</b>						
Draft 60% Plans, Cost, and Basis of Design Report				X		
Client Review						
Final 60% Plans, Cost, and Basis of Design Report						X
<b>Task 4 - Meetings and Project Management</b>						
Kickoff Meeting	X					
Bi-Monthly Coordination		X	X	X	X	X
Agency Meetings				X		X

## Exhibit C Compensation

### ESA Labor Detail and Expense Summary

<i>Labor Category</i>		Director III	Managing Associate III	Managing Associate II	Senior Associate II	Senior Associate I	Associate III	<i>Subtotal (Rounded)</i>	<i>Reimbursibles</i>	<i>Labor Price</i>
<b>Task #</b>	<b>Task Name/Description</b>	<b>\$ 240</b>	<b>\$ 205</b>	<b>\$ 190</b>	<b>\$ 160</b>	<b>\$ 150</b>	<b>\$ 135</b>			
1.0	Mitigation and Monitoring Plan	18	3	2	10	57		\$ 15,500	\$ 100	\$ 15,600
2.0	Landscape Plans	2	15		119			\$ 22,600	\$ 900	\$ 23,500
3.0	Design Modifications	14	31	32	141		85	\$ 49,800	\$ 100	\$ 49,900
3.1	Hydraulic Analysis	6	1	24	67			\$ 16,900		
3.2	Engineering Design	8	30	8	74		85	\$ 32,900	\$ 100	
4.0	Project Management and Meetings	16	18	3	7			\$ 9,200	\$ 100	\$ 9,300
Total Hours		50	67	37	277	57	85	573		
<b>Total Fee</b>								<b>\$ 97,100</b>	<b>\$ 1,200</b>	<b>\$ 98,300</b>

**AMENDMENT NO. 1 TO AGREEMENT**  
**Mitigation and Monitoring Plan, Restoration Elements of Civil Design, and Landscape Design**  
**for the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Project Upstream of Highway 101**

**BETWEEN THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY  
AND ENVIRONMENTAL SCIENCE ASSOCIATES**

This Amendment No.1 (“Amendment”), effective as of the date it is fully executed by the parties, amends the terms of the Consultant Agreement (“Agreement”) between THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY (Authority) and Environmental Science Associates, a California corporation. (“Consultant”), dated April 23, 2020. Capitalized terms not otherwise defined will have the meaning set forth in the Agreement.

**WHEREAS**, the parties desire to amend the Agreement to modify the Scope of Services, Schedule, and Compensation such that the final work products best meet the requirements and requests of State and Federal regulatory agencies that must issue permits for project construction.

**NOW, THEREFORE**, in consideration for the mutual promises and agreements contained herein and notwithstanding anything to the contrary in the Agreement, Consultant and the Authority hereby agree as follows:


1. Exhibit A, Scope of Services, shall be replaced in full by the 1<sup>st</sup> Amended Scope of Services described in Attachment A.
2. Exhibit B, Schedule, shall be replaced in full by the 1<sup>st</sup> Amended Schedule in Attachment B.
3. Exhibit C, Compensation, shall be replaced in full by the 1<sup>st</sup> Amended Compensation in Attachment C.
4. All other terms and conditions stated in the original Agreement remain in full force and effect.

**AUTHORITY**

---

By: Margaret Bruce  
Title: Executive Director  
Date:

**CONSULTANT**

---

By Christie Beeman  
Title: Director  
Date: November 13, 2020



## **Attachment A – 1<sup>st</sup> Amended Scope of Services**

### **San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project**

#### ***Task 1: Mitigation and Monitoring Plan***

ESA will review relevant background information from prior compensatory mitigation planning efforts. This may include spreadsheets, tables, documents, GIS data, and previously drafted mitigation plans (conceptual or otherwise), including any regulatory agency correspondence related to the adopted mitigation ratios. Following the review, ESA will communicate to the client any outstanding needs for the preparation of a Mitigation and Monitoring Plan. We understand that the SFCJPA has already quantified the temporary and permanent impacts of the proposed construction, adopted mitigation ratios for those impacts, and identified locations for the implementation of those mitigation activities. It is assumed that no further agency coordination is needed to complete the compensatory mitigation planning effort.

Once the background material has been acquired and assessed, ESA will then develop a Draft Compensatory Mitigation and Monitoring Plan (Mitigation Plan) that builds upon the work already completed to date and describes those compensatory mitigation actions to be enacted as part of the proposed project. It is anticipated that the Mitigation Plan will address both terrestrial and aquatic habitat needs. The Mitigation Plan will include all the elements required to assist in regulatory compliance (impact summary, proposed actions and projected habitat acreages, planting plan, maintenance requirements, success criteria, and monitoring protocols and frequency).

ESA will revise the Draft Mitigation Plan based on one set of consolidated comments from the client.

Our team will be available to participate in up to three (3) progress meetings. The project kickoff and the two meetings with regulators will be tracked under Task 4.

#### *Deliverables:*

- Draft Mitigation and Monitoring Plan
- Final Mitigation and Monitoring Plan

#### *Assumptions:*

- Relevant background information will be provided by SFCJPA staff.
- Regulatory coordination will be limited to the two meetings scheduled by SFCJPA.
- Input from regulators will not materially impact the scope of the Mitigation Plan.
- Habitat impacts, mitigation ratios and locations, and conceptual approach have already been determined and will be provided to ESA.
- Any re-design of creek elements will not result in substantive changes to the mitigation acreage needs, mitigation locations selected, or overall regulatory approach.

October 13, 2020

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- ESA will respond to one (1) set of consolidated comments from the client on the draft document.

### **Task 2: Landscape Plans**

ESA will develop 60% and 90% Landscape Plans for the two mitigation sites, consisting of native planting, seed, and soil amendment plans, schedules, notes, and details for revegetating approximately one (1) acre of land adjacent to the creek. We propose the 90% plans as the final submittal for this contract to provide leeway in the event that the plans require fine tuning prior to construction due to regulatory input or in response to changes in the engineering plans.

ESA's landscape architect and wetland ecologist will conduct a site visit to assess site opportunities and constraints relating to the planting sites, and they will base plant palettes off of a nearby reference site with strong riparian habitat value.

The 60% and 90% landscape plan deliverables will include a planting layout that will support improved native riparian habitat, will perform well during and after flood events, and will enhance riparian habitat and aesthetics of San Francisquito Creek. The Landscape Plans will incorporate elements pertinent for mitigation accounting and regulatory requirements such as providing a balance of understory and overstory plantings and incorporating best practices for limiting the spread of Phytophthora.

The landscape plans will be suitable for inclusion with the overall construction document plan set for this reach. We expect these plans will also be included as an attachment to the Mitigation Plan developed in Task 1.

We anticipate the following sheets to be included: Planting Plans (2), Plant and Seeding List (1), and Planting Details (1). The 60% and 90% submittals will include cost estimates and technical specifications. We will issue 90% landscape plans and specifications incorporating one round of consolidated comments from the client on the 60% Submittal.

We have budgeted for up to three (3) progress meetings. The project kickoff meeting will be tracked under Task 4.

ESA will also prepare one (1) illustrative concept rendering showing a representative eye-level perspective view of the proposed Project improvements, to be accompanied by one (1) existing eye-level photograph of the existing site taken by the Consultant on their previous May 2020 site visit, or a photo taken by the SFCJPA if the SFCJPA and Consultant do not identify a good representative existing site photograph taken by the Consultant during their previous May 2020 site visit. The rendering will be developed at a level of detail appropriate for permitting review, similar to Image 3.1-2 (of the Pope-Chaucer Bridge) from the Project's Final EIR. Rock toe, graded slope, and new plantings would be included in this rendering. Rendering of the top-of-bank parklet is out of scope. Bird's-eye view of the project is out of scope. Scope to include one (1) digital meeting with the Client to select the existing conditions site photograph and one (1) digital meeting with the Client to review Client feedback on the draft concept drawing. Consultant to incorporate one (1) round of compiled revisions from the Client's review of the draft concept drawing into the final deliverable.

October 13, 2020

Page 3

*Deliverables:*

- 60% Landscape Plan Set, Cost Estimate, and Technical Specifications
- 90% Landscape Plan Set, Cost Estimate, and Technical Specifications
- One (1) draft in-progress black-and-white linework concept drawing and one (1) final colored illustrative concept rendering in PDF and JPG formats, letter-sized or tabloid-sized, landscape (horizontal) orientation

*Assumptions:*

- A performance specification for irrigation will be sufficient and that no irrigation plans will be developed.
- Landscape areas will not change between the 60% and 90% deliverables.

***Task 3: Design Support***

We understand that the previous design plans developed by Valley Water require modification to meet the SFCJPA's vision and anticipated regulatory requirements for stream and habitat function. Only specific design sheets will be revised during the present effort to support the permitting process.

The changes to the existing armored channel banks (sacked concrete) presented in the Valley Water plan set include setting back and steepening the banks at discrete locations to create additional flow capacity and constructing concrete walls with riprap toe protection. We understand that the purpose of this task is to modify the Valley Water design to introduce habitat elements to the extent possible while preserving the desired channel conveyance capacity (7,650 cfs).

ESA will conduct a detailed review of the Valley Water design sheets, supporting design documentation, and available reports and hydraulic models. We recognize that maximizing flood conveyance and adding habitat elements may represent competing project goals. Our team will work with the SFCJPA to develop and document criteria for project success, such as identifying the minimum habitat enhancement that can be considered a project success.

The ESA team will conduct a site visit to evaluate site constraints and opportunities and meet with the project team and stakeholders to better understand the project objectives and how the proposed design modifications would meet project objectives.

Our team will review hydraulic objectives and requirements for the project reach and conduct hydraulic modeling to compare model results for up to two alternative project geometries with results for the existing conditions and the Valley Water design. For this analysis, we will apply hydraulic roughness values for proposed vegetation types and densities consistent with values ESA developed for Santa Clara Valley Water District's stream maintenance guidelines. Through review meetings we will work with the project team to select a preferred alternative and provide guidance to Valley Water engineers as they update the plan set. We have budgeted up to three (3) status meetings,

October 13, 2020

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We anticipate issuing up to 5 typical detail sheets for inclusion in the plan set, including: Engineered Streambed Material toe scour protection, bioengineered toe scour protection, hydraulic breaks for fish passage, and willow staking in soil and within ESM. We will issue an estimate of probable construction cost for the typical detail features by unit for incorporation in to Valley Water's Opinion of Probable Construction Costs. The basis of design, including the hydraulic modeling effort will be summarized in a succinct memorandum. ESA will make recommendations for spacing, location, and layout of the biotechnical elements in the Basis of Design Memorandum.

*Deliverables:*

- Draft typical detail sheets
- Final typical detail sheets
- Final Basis of Design Memorandum
- Electronic copies of the hydraulic model files and Autocad files

*Assumptions:*

- Design flows (Q2, Q10, Q100, Bankfull) for San Francisquito Creek will be provided to the Consultant.
- A functioning hydraulic model that includes existing and proposed conditions (including new bridge geometries) is available and that electronic files will be transmitted to Consultant.
- Electronic base files in Autocad format, including an existing conditions surface, are available and will be transmitted to Consultant.
- ESA will recommend locations of the biotechnical elements and provide as a GIS shapefile. We assume we are not drafting or editing any of Valley Water's CAD plan-view sheets.
- The client will be responsible for updating the tree inventory and calculating the tree removal quantities.
- Technical specifications will not be included.
- Estimate of probable construction cost is limited to proposed channel modifications. We assume that estimating costs for project elements carried forward from Valley Water's design will be conducted by others.

***Task 4: Meetings and Project Management***

ESA proposes to track effort for project management and client/agency meetings under this task. We have assumed that ESA's project manager will allocate up to 2 hours per month, for the 6-month project duration, for client communications, progress reports, and billing.

This task will track the project kickoff meeting, to be attended by the Project Manager, Project Director and each of the Task Leads. In addition, we have allocated time for engineering and permitting support staff to attend one meeting with regulatory agencies, to be scheduled by the SFCJPA.

We have budgeted for bi-monthly progress meetings where relevant task leaders would be present to discuss progress to date and next steps. We have assumed that each task lead would be present at approximately half

October 13, 2020

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of the progress meetings. The progress meetings will occur by web-conferencing, and tracked in Tasks 1 through 3.

### ***Task 5: Optional Agency Meeting(s)***

ESA staff is available for further regulatory coordination and consultation as deemed appropriate, and specifically authorized, by the SFCJPA. We estimate that the preparation, attendance, and follow-up to close out a consultation meeting will require approximately 6 hours of staff time (\$1,200). We assume that graphics and materials will be taken from deliverables from other tasks and that no new graphics or materials need to be produced to support meetings.

### ***Task 6: LEDPA Analysis***

We understand that an alternatives analysis consistent with the U.S. Army Corps of Engineers' required compliance with the Clean Water Act section 404(b)1 has been completed for the project and is available for ESA's review. ESA will expand the 404(b)1 analysis to include Waters of the State of California and other additional analyses as needed to satisfy the Regional Water Quality Control Board's requirement that the project represent the Least Environmentally Damaging Practicable Alternative (LEDPA). We understand that an example of what the Regional Water Quality Control Board considers an acceptable LEDPA analysis has been requested and will be provided to ESA to reference for format and completeness.

#### *Deliverables:*

- Map showing the approximate 70-year floodplain under existing conditions
- Map showing the approximate resultant 100-year floodplain post-project
- Draft LEDPA Analysis Report
- Final LEDPA Analysis Report

#### *Assumptions:*

- 404(b)1 alternatives analysis, completed by the SFCJPA and other consultants, will be provided.
- Example LEDPA analysis submittal will be provided by RWQCB.

### ***Task 7: Revise and Finalize Regulatory Permit Applications***

We understand that permit applications based on the Valley Water project design have been completed by the SFCJPA and other consultants. ESA will revise and finalize the existing applications to incorporate the additional restoration features to be included in the design and updated information based on development of the LEDPA Analysis and MMP.

#### *Deliverables:*

- Revised and finalized CWA Section 404 application
- Revised and finalized CWA Section 401 Water Quality Certification application

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- Revised and finalized CDFW Streambed Alteration Notification

*Assumptions:*

- Draft permit applications, completed by the SFCJPA and other consultants, will be provided.
- The client will be responsible for updating the tree inventory and calculating the tree removal quantities.

***Task 8: Optional Post Application Modifications***

The SFCJPA and ESA anticipate that agency meetings as described in Task 5 and other agency correspondence after permit applications are submitted will likely lead to minor modifications to the work products of this contract. These modifications could be driven by the Biological Opinions issued by U.S. Fish and Wildlife Service or National Marine Fisheries Service resultant from Section 7 consultations to the U.S. Army Corps of Engineers or by direct request by any of the regulatory agencies with jurisdiction. When possible, charges for these activities will be on a time and materials basis and will not proceed without the approval and direction of the SFCJPA.



Exhibit C – 1<sup>st</sup> Amended Compensation

Original Tasks	Name	Original Budget	Amendment 1 budget change	New Budget
1	Mitigation and Monitoring Plan	\$ 15,600	\$ 3,200	\$ 18,800
2	Landscape Plans	\$ 23,500	\$ 5,690	\$ 29,190
3	Design Modifications			
3.1	Hydraulic Analysis	\$ 16,900	\$ (6,660)	\$ 10,240
3.2	Engineering Design	\$ 33,000	\$ -	\$ 33,000
4	PM & Meetings	\$ 9,300	\$ 1,930	\$ 11,230
	<b>subtotal</b>	<b>\$ 98,300</b>	<b>\$ 4,160</b>	<b>\$ 102,460</b>
<b>New Tasks</b>				
5	Optional Agency Meetings		\$ 9,480	\$ 9,480
6	LEDPA Analysis		\$ 9,940	\$ 9,940
7	Regulatory Permit Applications		\$ 11,400	\$ 11,400
8	Post Application Modifications		\$ 5,020	\$ 5,020
	<b>subtotal</b>		<b>\$ 35,840</b>	<b>\$ 35,840</b>
	<b>TOTAL</b>	<b>\$ 98,300</b>	<b>\$ 40,000</b>	<b>\$ 138,300</b>



**AMENDMENT NO. 2 TO AGREEMENT**  
**Mitigation and Monitoring Plan, Restoration Elements of Civil Design, and Landscape Design**  
**for the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Project Upstream of Highway 101**

**BETWEEN THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY  
AND ENVIRONMENTAL SCIENCE ASSOCIATES**

This Amendment No.2 ("Amendment"), effective as of the date it is fully executed by the parties, amends the terms of the Consultant Agreement ("Agreement") between THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY (Authority) and Environmental Science Associates, a California corporation. ("Consultant"), dated April 23, 2020, and amended on November 13, 2020, through the execution of Amendment No. 1. Capitalized terms not otherwise defined will have the meaning set forth in the Agreement.

**WHEREAS**, the parties desire to amend the Agreement to modify the Scope of Services, Schedule, and Compensation such that the final work products are responsive to the requests and requirements of Member Agencies of Authority.

**NOW, THEREFORE**, in consideration for the mutual promises and agreements contained herein and notwithstanding anything to the contrary in the Agreement, Consultant and the Authority hereby agree as follows:

1. Exhibit A, Scope of Services, shall be replaced in full by the 2<sup>nd</sup> Amended Scope of Services described in Attachment A.
2. Exhibit B, Schedule, shall be replaced in full by the 2<sup>nd</sup> Amended Schedule in Attachment B.
3. Exhibit C, Compensation, shall be replaced in full by the 2<sup>nd</sup> Amended Compensation in Attachment C.
4. All other terms and conditions stated in the original Agreement remain in full force and effect.

**AUTHORITY**

\_\_\_\_\_  
By: Margaret Bruce  
Title: Executive Director  
Date:

**CONSULTANT**



\_\_\_\_\_  
By: Christie Beeman  
Title:  
Date:



Exhibit C

Project San Francisquito Creek to Highway 101  
 Project No. D202000175.00  
 1/29/2020 Modification #2 budget estimate

<b>Original Tasks</b>	<b>Name</b>	<b>Prior Budget</b>	<b>Amendment 2 budget change</b>	<b>New Budget</b>
1	Mitigation and Monitoring Plan	\$ 18,800		\$ 18,800
2	Landscape Plans	\$ 29,190		\$ 29,190
3	Design Modifications			
3.1	Hydraulic Analysis	\$ 10,240		\$ 10,240
3.2	Engineering Design	\$ 33,000		\$ 33,000
4	PM & Meetings	\$ 11,230		\$ 11,230
	<b>subtotal</b>	<b>\$ 102,460</b>		<b>\$ 102,460</b>
<b>Amendment 1 Tasks</b>				
5	Optional Agency Meetings	\$ 9,480		\$ 9,480
6	LEDPA Analysis	\$ 9,940		\$ 9,940
7	Regulatory Permit Applications	\$ 11,400		\$ 11,400
8	Post Application Modifications	\$ 5,020		\$ 5,020
	<b>subtotal</b>	<b>\$ 35,840</b>		<b>\$ 35,840</b>
<b>Amendment 2 Tasks</b>				
8	Tree Inventory Mapping	\$ -	\$ 8,500	\$ 8,500
<b>TOTAL</b>		<b>\$ 138,300</b>	<b>\$ 8,500</b>	<b>\$ 146,800</b>

**AMENDMENT NO. 3 TO AGREEMENT**

**Mitigation and Monitoring Plan, Restoration Elements of Civil Design, and Landscape Design  
for the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation  
Project Upstream of Highway 101**

**BETWEEN THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY  
AND ENVIRONMENTAL SCIENCE ASSOCIATES**

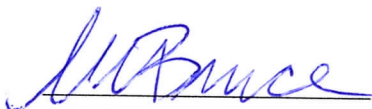
This Amendment No.3 ("Amendment"), effective as of the date it is fully executed by the parties, amends the terms of the Consultant Agreement ("Agreement") between THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY (Authority) and Environmental Science Associates, a California corporation. ("Consultant"), dated April 23, 2020, and amended on October 22, 2020, through the execution of Amendment No. 1, and again amended on January 29, 2021, through the execution of Amendment No. 2. Capitalized terms not otherwise defined will have the meaning set forth in the Agreement.

**WHEREAS**, the parties desire to amend the Agreement to modify the Scope of Services, Schedule, and Compensation such that the final work products are responsive to the requests and requirements of Regulatory Agencies and Member Agencies of Authority.

**NOW, THEREFORE**, in consideration for the mutual promises and agreements contained herein and notwithstanding anything to the contrary in the Agreement, Consultant and the Authority hereby agree as follows:

1. Exhibit A, Scope of Services, shall be replaced in full by the 3<sup>rd</sup> Amended Scope of Services described in Attachment A.
2. Exhibit B, Schedule, shall be replaced in full by the 3<sup>rd</sup> Amended Schedule in Attachment B.
3. Exhibit C, Compensation, shall be replaced in full by the 3<sup>rd</sup> Amended Compensation in Attachment C.
4. All other terms and conditions stated in the original Agreement remain in full force and effect.

**AUTHORITY**



By: Margaret Bruce

Title: Executive Director

Date: 4/29/2021

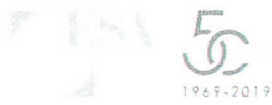
**CONSULTANT**



By: Christie Beeman

Title: Director

Date: 4/27/2021



180 Grand Avenue  
Suite 1050  
Oakland, CA 94612  
510.839.5066  
510.839.5825

## **Exhibit A – Scope of Services**

### **San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project**

#### ***Task 1: Mitigation and Monitoring Plan***

ESA will review relevant background information from prior compensatory mitigation planning efforts. This may include spreadsheets, tables, documents, GIS data, and previously drafted mitigation plans (conceptual or otherwise), including any regulatory agency correspondence related to the adopted mitigation ratios. Following the review, ESA will communicate to the client any outstanding needs for the preparation of a Mitigation and Monitoring Plan. We understand that the SFCJPA has already quantified the temporary and permanent impacts of the proposed construction, adopted mitigation ratios for those impacts, and identified locations for the implementation of those mitigation activities. Regulatory agency permits and approvals have not been secured. However, it is assumed that no further agency coordination is needed to prepare the Draft Mitigation and Monitoring Plan.

Once the background material has been acquired and assessed, ESA will then develop a Draft Compensatory Mitigation and Monitoring Plan that builds upon the work already completed to date and describes those compensatory mitigation actions, including post-construction monitoring, to be enacted as part of the proposed project. It is anticipated that the Mitigation Plan will address both terrestrial and aquatic habitat needs. The Mitigation Plan will include all the elements required to assist in regulatory compliance (impact summary, proposed actions and projected habitat acreages, planting plan, maintenance requirements, success criteria, and monitoring protocols and frequency).

ESA will revise the Draft Mitigation Plan based on one set of consolidated comments from the client. The revised Draft Plan will be submitted for review by Valley Water, who is the implementing entity for the Plan. This task does not include effort to respond to comments from Valley Water or further revisions to the Plan.

#### *Deliverables:*

- Draft Mitigation and Monitoring Plan
- Revised Draft Mitigation and Monitoring Plan (for Valley Water review)

#### *Assumptions:*

- Relevant background information will be provided by SFCJPA staff.
- Pre-application input from regulators will not materially impact the scope of the Mitigation Plan.
- Habitat impacts, mitigation ratios and locations, and conceptual approach have already been determined and will be provided to ESA.
- Any re-design of creek elements will not result in substantive changes to the mitigation acreage needs, mitigation locations selected, or overall regulatory approval approach.



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- ESA will respond to one (1) set of consolidated comments from the client on the draft document.

### **Task 2: Landscape Plans**

ESA will develop 60% and 90% Landscape Plans for the two mitigation sites, consisting of native planting, seed, and soil amendment plans, schedules, notes, and details for revegetating approximately one (1) acre of land adjacent to the creek. We propose the 90% plans as the final submittal for this contract to provide leeway in the event that the plans require fine tuning prior to construction due to regulatory input or in response to changes in the engineering plans.

ESA's landscape architect and wetland ecologist will conduct a site visit to assess site opportunities and constraints relating to the planting sites, and they will base plant palettes off of a nearby reference site with strong riparian habitat value.

The 60% and 90% landscape plan deliverables will include a planting layout that will support improved native riparian habitat, will perform well during and after flood events, and will enhance riparian habitat and aesthetics of San Francisquito Creek. The Landscape Plans will incorporate elements pertinent for mitigation accounting and regulatory requirements such as providing a balance of understory and overstory plantings and incorporating best practices for limiting the spread of Phytophthora.

The landscape plans will be suitable for inclusion with the overall construction document plan set for this reach. We expect these plans will also be included as an attachment to the Mitigation Plan developed in Task 1.

We anticipate the following sheets to be included: Planting Plans (2), Plant and Seeding List (1), and Planting Details (1). The 60% and 90% submittals will include cost estimates and technical specifications. We will issue 90% landscape plans and specifications incorporating one round of consolidated comments from the client on the 60% Submittal.

We have budgeted for up to three (3) progress meetings. The project kickoff meeting will be tracked under Task 4.

ESA will also prepare one (1) illustrative concept rendering showing a representative eye-level perspective view of the proposed Project improvements, to be accompanied by one (1) existing eye-level photograph of the existing site taken by the Consultant on their previous May 2020 site visit, or a photo taken by the SFCJPA if the SFCJPA and Consultant do not identify a good representative existing site photograph taken by the Consultant during their previous May 2020 site visit. The rendering will be developed at a level of detail appropriate for permitting review, similar to Image 3.1-2 (of the Pope-Chaucer Bridge) from the Project's Final EIR. Rock toe, graded slope, and new plantings would be included in this rendering. Rendering of the top-of-bank parklet is out of scope. Bird's-eye view of the project is out of scope. Scope to include one (1) digital meeting with the Client to select the existing conditions site photograph and one (1) digital meeting with the Client to review Client feedback on the draft concept drawing. Consultant to incorporate one (1) round of compiled revisions from the Client's review of the draft concept drawing into the final deliverable.



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*Deliverables:*

- 60% Landscape Plan Set, Cost Estimate, and Technical Specifications
- 90% Landscape Plan Set, Cost Estimate, and Technical Specifications
- One (1) draft in-progress black-and-white linework concept drawing and one (1) final colored illustrative concept rendering in PDF and JPG formats, letter-sized or tabloid-sized, landscape (horizontal) orientation

*Assumptions:*

- A performance specification for irrigation will be sufficient and that no irrigation plans will be developed.
- Landscape areas will not change between the 60% and 90% deliverables.

***Task 3: Design Support***

We understand that the previous design plans developed by Valley Water require modification to meet the SFCJPA's vision and anticipated regulatory requirements for stream and habitat function. Only specific design sheets will be revised during the present effort to support the permitting process.

The changes to the existing armored channel banks (sacked concrete) presented in the Valley Water plan set include setting back and steepening the banks at discrete locations to create additional flow capacity and constructing concrete walls with riprap toe protection. We understand that the purpose of this task is to modify the Valley Water design to introduce habitat elements to the extent possible while preserving the desired channel conveyance capacity (7,650 cfs).

ESA will conduct a detailed review of the Valley Water design sheets, supporting design documentation, and available reports and hydraulic models. We recognize that maximizing flood conveyance and adding habitat elements may represent competing project goals. Our team will work with the SFCJPA to develop and document criteria for project success, such as identifying the minimum habitat enhancement that can be considered a project success.

The ESA team will conduct a site visit to evaluate site constraints and opportunities and meet with the project team and stakeholders to better understand the project objectives and how the proposed design modifications would meet project objectives.

ESA will conduct hydraulic modeling to support the development of an 'optimized' design. The 'optimized' design will become Alternative 4 in the LEDPA analysis (see Task 6). Our team will review hydraulic objectives and requirements for the project reach to guide the site-by-site design elements in the 'optimized' design. We understand that the 'optimized' design will include the bridge replacements at Pope-Chaucer and Newell Road and consist of a combination of widening, restoration, and top of bank treatments at the remaining Sites 1 through 5. The 'optimized' design will minimize impacts to trees and sensitive resources while containing the design flood conveyance capacity within 0.5-feet of top of bank. The design elements will be evaluated in the model at a spatial resolution similar to that of the current model cross section resolution. For this analysis, we will apply hydraulic roughness values for proposed vegetation types and densities



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consistent with values ESA developed for Santa Clara Valley Water District (Valley Water)'s Stream Maintenance Guidelines. ESA has included one additional site visit for up to two (2) ESA design team members to meet with the JPA and the Engineer of Record (assumed to be Valley Water) to evaluate site-specific feasibility of the Alternative 4 'optimized design.' For the LEDPA analysis, ESA will compare model results for the Alternative 4 'optimized design' with results for the existing conditions (Alternative 1 No-Project) and the Valley Water designs from the EIR (Alternative 2 and Alternative 3).

Following the completion of the LEDPA Analysis, ESA will work with the project team to select a preferred alternative. ESA will provide guidance on location of widening, restoration, and top of bank treatments to Valley Water engineers as they update the plan set. We have budgeted up to six (6) status meetings.

We anticipate issuing up to 5 typical detail sheets for inclusion in the plan set, including: Engineered Streambed Material toe scour protection, bioengineered toe scour protection, hydraulic breaks for fish passage, and willow staking in soil and within ESM. We will issue an estimate of probable construction cost for the typical detail features by unit for incorporation in to Valley Water's Opinion of Probable Construction Costs. The basis of design, including the hydraulic modeling effort will be summarized in a succinct memorandum. ESA will make recommendations for spacing, location, and layout of the biotechnical elements in the Basis of Design Memorandum.

*Deliverables:*

- Draft typical detail sheets
- Final typical detail sheets
- Final Basis of Design Memorandum
- Electronic copies of the hydraulic model files and Autocad files

*Assumptions:*

- Design flows (Q2, Q10, Q100, Bankfull) for San Francisquito Creek will be provided to the Consultant.
- A functioning hydraulic model that includes existing and proposed conditions (including new bridge geometries) for Alternatives 2 and 3 are available and that electronic files will be transmitted to Consultant.
- ESA has not included sediment transport modeling in our scope. ESA will use the hydraulic modeling results and grain size mobilization thresholds to qualitatively compare sediment transport capacity of Alternatives in the LEDPA analysis
- Electronic base files in Autocad format, including an existing conditions surface, are available and will be transmitted to Consultant.
- ESA will recommend locations of the biotechnical elements and provide as a GIS shapefile. We assume we are not drafting or editing any of Valley Water's CAD plan-view sheets.
- Technical specifications will not be included.





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- Estimate of probable construction cost is limited to proposed channel modifications. We assume that estimating costs for project elements carried forward from Valley Water's design will be conducted by others.

#### ***Task 4: Meetings and Project Management***

ESA proposes to track effort for project management and client meetings under this task. The budget for this task assumes that ESA's project manager will allocate up to 4 hours per month for client communications, progress reports, and billing through August 2021, one month following the permit application target submittal date of July 2021.

This task will track the project kickoff meeting, to be attended by the Project Manager, Project Director and each of the Task Leads. In addition, we have allocated time for engineering and permitting support staff to attend one meeting with regulatory agencies, to be scheduled by the SFCJPA.

We have budgeted for bi-monthly progress meetings where relevant task leaders would be present to discuss progress to date and next steps. We have assumed that each task lead would be present at approximately half of the progress meetings. The progress meetings will occur by web-conferencing, and tracked in Tasks 1 through 3.

#### ***Task 5: Optional Agency Meeting(s)***

ESA staff is available for regulatory coordination support as deemed appropriate, and specifically authorized, by the SFCJPA. This task includes support for the preparation, attendance, and follow-up for regulatory agency meetings and coordination support within the allotted task budget. Specifically, as of September 2020, the USACE and RWQCB require a pre-application meeting request at least 30-days prior to submitting permit applications. Although the agencies can decline the meeting request, this task includes support for one (1) interagency pre-application meeting. This task includes support for one (1) additional follow-up interagency meeting to discuss comments and action items from the initial meeting. We assume that graphics and materials will be taken from deliverables from other tasks and that no new graphics or materials need to be produced to support meetings.

#### ***Task 6: LEDPA Analysis***

We understand that an alternatives analysis consistent with the U.S. Army Corps of Engineers' required compliance with the Clean Water Act section 404(b)1 has been drafted for the project and is available for ESA's review. ESA will expand the 404(b)1 analysis to include Waters of the State of California and other additional analyses as needed to satisfy the State Water Resource Control Board's Procedures for the Discharge of Dredged or Fill Material to Waters of the State (Procedures) which became effective on May 28, 2020, that the project represents the Least Environmentally Damaging Practicable Alternative (LEDPA). ESA will also evaluate up to two new and/or revised alternatives developed as an outcome of Task 3 and as advised by the SFCJPA. We understand that an example of what the Regional Water Quality Control Board considers an acceptable LEDPA analysis has been requested and will be provided to ESA to reference for format and completeness.



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ESA will revise the draft document based on one set of consolidated comments from the client. The revised draft document will be revised once and submitted with the permit applications in Task 7. This task does not include effort to respond to comments from regulatory agencies or further revisions to the document.

*Deliverables:*

- Map showing the approximate 70-year floodplain under existing conditions
- Map showing the approximate resultant 100-year floodplain post-project
- Revised maps showing alternatives analyzed
- Draft LEDPA Analysis Report
- Final LEDPA Analysis Report

*Assumptions:*

- 404(b)1 alternatives analysis, completed by the SFCJPA and other consultants, will be provided.
- Example LEDPA analysis submittal will be provided by RWQCB.

***Task 7: Revise and Finalize Regulatory Permit Applications***

We understand that permit applications to request permits and approvals from the USACE (CWA Section 404/RHA Section 10), RWQCB (CWA Section 401/WDRs), and CDFW (FGC Section 1600) based on the project designs completed by the SFCJPA and other organizations/consultants. ESA will revise and finalize the existing applications to incorporate the additional restoration features to be included in the design, new project components, and updated project information based on development of the LEDPA Analysis and MMP.

A separate project description document, including project figures, will be prepared and included as an attachment to all the application documents and associated technical reports. The draft project description will be submitted for SFCJPA review. ESA will revise the draft document based on one set of consolidated comments. The final project description will be submitted with the permit applications.

A draft Biological Assessment report covering species and habitats regulated by the U.S. Fish and Wildlife Service and National Marine Fisheries Service was prepared by other consultants, but does not reflect the current project and will need to be revised based on outcomes of other project updates described in other tasks. The draft Biological Assessment report will be updated to reflect the current project description and associated effects. Associated figures will also be updated. The revised draft report will be submitted for SFCJPA review. ESA will revise the document based on one set of consolidated comments. The final biological assessment will be submitted with the permit applications.

*Deliverables:*

- Revised and finalized project description
- Revised and finalized CWA Section 404 application



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- Revised and finalized CWA Section 401 Water Quality Certification application
- Revised and finalized CDFW Streambed Alteration Notification
- Revised and finalized Biological Assessment report

*Assumptions:*

- Draft permit applications, completed by the SFCJPA and other consultants, will be provided.
- SFCJPA will submit permit applications and application fees.
- The Aquatic Resources Delineation report prepared by other consultants includes all project elements and is adequate to submit to regulatory agencies as-is.
- Documents developed in Task 10 will be submitted to the USACE with the 404 application.
- This task does not include effort to respond to Valley Water comments or their requested revisions to documents.

***Task 8: Optional Post Application Modifications***

The SFCJPA and ESA anticipate that agency meetings as described in Task 5 and other agency correspondence after permit applications are submitted will likely lead to minor modifications to the work products of this contract. These modifications could be driven by requests from the U.S. Fish and Wildlife Service or National Marine Fisheries Service resultant from FESA Section 7 consultations with the U.S. Army Corps of Engineers, requests from the State Historic Preservation Officer resultant from NHPA Section 106 consultations with the U.S. Army Corps of Engineers, or by direct request by any of the regulatory agencies with jurisdiction. Charges for these activities will be on a time and materials basis up to the amount of the Task budget, and will not proceed without the approval and direction of the SFCJPA.

***Task 9: Tree Inventory Mapping***

We understand that the SFCJPA is requesting additional ESA assistance during negotiations with the City of Palo Alto and permitting agencies regarding Project tree preservation and demolition plans. ESA will prepare tree inventory maps for use in permit applications and permit figures. ESA will compile Draft Tree Inventory figures by January 27, for use in an upcoming Board meeting. Due to the tight schedule, the draft figures will include approximate project work footprints based on ESA's understanding of the Project.

ESA will coordinate with the specific design engineers (NV-5 for the Pope-Chaucer Bridge Replacement; Valley Water for remaining sites) to refine the project work footprints. NV-5 and Valley Water input is critical for revising the access and staging limits and identifying whether trees on the work limit boundary may be preserved. ESA has included up to 8 hours of staff time for coordination meetings with SFCJPA, NV-5, and Valley Water. ESA will revise the draft tree inventory maps and provide the Final Tree Inventory figures.

*Deliverables:*

- Draft Tree Inventory figures (pdf)
- Final Tree Inventory figures (pdf)
- Tree Inventory (.dwg, .shp, excel table)



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*Assumptions:*

- ESA will use the tree information and approximate tree locations collected by HortScience | Bartlett Consulting and provided by the SFCJPA. ESA understands the HortScience tree mapping supersedes the tree information from Valley Water and the two datasets do not require reconciliation. No additional field visits will be conducted.
- SFCJPA will provide jurisdictional boundaries, if tree demolition is to be mapped for separate municipalities and agencies
- We assume a single round of comments and edits on the Draft Inventory Maps.
- SFCJPA will provide introduction and points of contact for Valley Water and NV-5. Meetings will be virtual and conducted via phone or video conference.
- Final construction drawings, including tree demolition and environmental protection, will be prepared by Valley Water and NV-5. ESA will provide the final tree inventory as a CAD drawing file, a GIS shapefile, and an Excel table for use in the design drawings.

***Task 10: Archaeological Testing Program***

Based on the results of the previous studies completed for the proposed project (Reach 2), ESA recommends that an additional cultural resources investigation be completed to comply with the identification and evaluation efforts required by Section 106 of the National Historic Preservation Act and the State Historic Preservation Officer (SHPO). A previously recorded prehistoric archaeological site (CA-SCL-583) is mapped in the Area of Potential Effects (APE) for Site 5 of Reach 2. In addition, Far Western indicated that the entire reach has a high to very high sensitivity for deeply buried archaeological resources.

To assist with the USACE's NHPA Section 106 compliance requirements and coordination with the SHPO to issue the CWA Section 404 permit, ESA will complete the following four subtasks:

**Sub-task 10.1 Tribal Cultural and Archaeological Testing Plan.** ESA will prepare a Tribal Cultural and Archaeological Testing Plan (TCATP) to detail the scope of archaeological subsurface investigation in the vicinity of prehistoric archaeological site CA-SCL-583. The TCATP is consistent with Mitigation Measure CULT-2 of the Draft EIR and will include the methods to assess for the potential presence of prehistoric cultural materials in the APE. The TCATP will include the following components:

- Background and anticipated resource types
- Research themes and questions
- Field methods and procedures
- Cataloging and laboratory analysis, as warranted

**Sub-task 10.2 Implement TCATP.** ESA will implement the testing program outlined in the TCATP. ESA will conduct hand augering and shovel test pits in the vicinity of prehistoric archaeological site CA-SCL-528; no mechanical coring or trenching will be completed. ESA assumes the investigation will require two



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archaeologists, two days in the field; the area will be accessible and will not require permits for the investigation; and no cultural materials will be identified. If cultural materials are encountered, additional effort may be required for data recovery, artifact processing, cataloging, curating, and reporting, which can be completed by ESA under a separate scope and budget.

**Sub-task 10.3 Results Report and Finding of Effect.** Upon completion of the testing program, ESA will prepare a report to comply with the identification requirements of Section 106. The report will include appropriate photographs, maps, and graphics, and will include the following components:

- Summary of previous studies in the APE. This scope assumes that the surface survey of the APE completed by ICF was adequate and that no additional surface survey will be required.
- Summary of cultural resources in the APE, including archaeological and architectural resources. This scope assumes that the architectural resources in the APE have been previously evaluated as not eligible for the National Register and that no additional evaluation will be required.
- Summary of Native American consultation completed for the project. This scope assumes that the Native American consultation efforts completed for the Draft EIR are adequate and that no additional Native American outreach efforts will be required.
- Results of the implementation of the TCATP.
- Finding of Effect. This scope assumes a finding of No Historic Properties Affected with Conditions (Archaeological Monitoring during Construction). If the finding is Historic Properties Affected, additional tasks not included in this scope, such as a Memorandum of Agreement and a Historic Properties Treatment Plan, may be required. ESA can complete these tasks under a separate scope and budget.

**Sub-task 10.4 Tribal Cultural and Archaeological Monitoring Plan.** Based on the results of the previous cultural resources studies, the APE has a high to very high potential for buried archaeological resources. In compliance with Mitigation Measure CULT-3 and the anticipated finding of No Historic Properties Affected with Conditions (Archaeological Monitoring during Construction), ESA will draft a Tribal Cultural and Archaeological Monitoring Plan (TCAMP). The TCAMP will include:

- Training program for all construction and field workers involved in site disturbance (Mitigation Measure CULT-1);
- Person(s) responsible for conducting monitoring activities, including Native American monitors;
- Person(s) responsible for overseeing and directing the monitors;
- Schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;
- Procedures and construction methods to avoid sensitive cultural resource areas;
- Physical monitoring boundaries;
- Protocol for notifications in case of encountering of cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation);
- Methods to ensure security of cultural resources sites; and



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- Protocol for notifying local authorities (e.g., Sheriff, Police) should site looting and other illegal activities occur during construction.

If cultural materials are encountered, all soil-disturbing activities within 100 feet of the find shall cease until the find is evaluated. The archaeological monitor shall immediately notify the lead agency of the encountered archaeological resource and implement the provisions of the TCAMP.

*Deliverables:*

- Tribal Cultural and Archaeological Testing Plan (pdf)
- Cultural Resources Report (pdf)
- Tribal Cultural and Archaeological Monitoring Plan (pdf)

Exhibit B

Provisional Schedule for San Francisco Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project, Highway 101 to El Camino Real

Deliverable	March	April	May	June	July	August
<b>Task 1 - Mitigation and Monitoring Plan</b>						
Draft Mitigation and Monitoring Plan			X			
Client Review						
Final Mitigation and Monitoring Plan						
<b>Task 2 - Landscape Plans</b>						
60% Plans, Specifications, and Cost			X			
Client Review						
90% Plans, Specifications, and Cost						X
<b>Task 3 - Design Modifications</b>						
Draft 60% Plans, Cost, and Basis of Design Report				X		
Client Review						
Final 60% Plans, Cost, and Basis of Design Report						
<b>Task 4 - Meetings and Project Management</b>						
Kickoff Meeting	X					
Bi-Monthly Coordination		X	X	X	X	X
Agency Meetings			X			X
<b>Amendment 1 - new Tasks</b>						
<b>Task 5 - Optional Agency Meetings (as needed)</b>						
<b>Task 6 - LEDPA Analysis</b>			X			
<b>Task 7 - Regulatory Permit Applications</b>						X
<b>Task 8 - Post Application Modifications</b>						
<b>Amendment 2 - new Tasks</b>						
<b>Task 9 - Tree Inventory Mapping</b>						
<b>Amendment 3 - new tasks</b>						
<b>Task 10 - Archaeological Testing Program</b>				X		

complete

Exhibit C

Project San Francisquito Creek to Highway 101  
 Project No. D202000175.00  
 3/25/20210 Modification #3 budget estimate

Original Tasks	Name	Prior Budget	Amendment 3 budget change	New Budget
1	Mitigation and Monitoring Plan	\$ 18,800	\$ -	\$ 18,800
2	Landscape Plans	\$ 29,190	\$ -	\$ 29,190
3	Design Modifications			
3.1	Hydraulic Analysis	\$ 10,240	\$ 12,000	\$ 22,240
3.2	Engineering Design	\$ 33,000	\$ 6,000	\$ 39,000
4	PM & Meetings	\$ 11,230	\$ 8,000	\$ 19,230
	<b>subtotal</b>	<b>\$ 102,460</b>	<b>\$ 26,000</b>	<b>\$ 128,460</b>
<b>Amendment 1 Tasks</b>				
5	Optional Agency Meetings	\$ 9,480	\$ 5,800	\$ 15,280
6	LEDPA Analysis	\$ 9,940	\$ 5,400	\$ 15,340
7	Regulatory Permit Applications	\$ 11,400	\$ 16,000	\$ 27,400
8	Post Application Modifications	\$ 5,020	\$ -	\$ 5,020
	<b>subtotal</b>	<b>\$ 35,840</b>	<b>\$ 27,200</b>	<b>\$ 63,040</b>
<b>Amendment 2 Tasks</b>				
9	Tree Inventory Mapping	\$ 8,500	\$ -	\$ 8,500
<b>Amendment 3 Tasks</b>				
10	Archaeological Testing Program			
10.1	Tribal Cultural and Archaeological Testing Plan	\$ -	\$ 5,500	\$ 5,500
10.2	Implement TCATP	\$ -	\$ 7,800	\$ 7,800
10.3	Results Report and Finding of Effect	\$ -	\$ 8,000	\$ 8,000
10.4	al Cultural and Archaeological Monitoring Plan	\$ -	\$ 3,500	\$ 3,500
	<b>subtotal</b>	<b>\$ -</b>	<b>\$ 24,800</b>	<b>\$ 24,800</b>
<b>TOTAL</b>		<b>\$ 146,800</b>	<b>\$ 78,000</b>	<b>\$ 224,800</b>



**AMENDMENT NO. 4 TO AGREEMENT**  
**Mitigation and Monitoring Plan, Restoration Elements of Civil Design, and Landscape Design**  
**for the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Project Upstream of Highway 101**

**BETWEEN THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY**  
**AND ENVIRONMENTAL SCIENCE ASSOCIATES**

This Amendment No.4 (“Amendment”), effective as of the date it is fully executed by the parties, amends the terms of the Consultant Agreement (“Agreement”) between THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY (Authority) and Environmental Science Associates, a California corporation. (“Consultant”), dated April 23, 2020, and amended on October 22, 2020, through the execution of Amendment No. 1, and again amended on January 29, 2021, through the execution of Amendment No. 2, and again amended on April 29, 2021, through the execution of Amendment No. 3. Capitalized terms not otherwise defined will have the meaning set forth in the Agreement.

**WHEREAS**, the parties desire to amend the Agreement to modify the Scope of Services, Schedule, and Compensation such that the final work products are responsive to the requests and requirements of Regulatory Agencies and Member Agencies of Authority.

**NOW, THEREFORE**, in consideration for the mutual promises and agreements contained herein and notwithstanding anything to the contrary in the Agreement, Consultant and the Authority hereby agree as follows:

1. Exhibit A, Scope of Services, shall be replaced in full by the 4<sup>th</sup> Amended Scope of Services described in Attachment A.
2. Exhibit B, Schedule, shall be replaced in full by the 4<sup>th</sup> Amended Schedule in Attachment B.
3. Exhibit C, Compensation, shall be replaced in full by the 4<sup>th</sup> Amended Compensation in Attachment C.
4. All other terms and conditions stated in the original Agreement remain in full force and effect.

**AUTHORITY**

**CONSULTANT**

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By: Margaret Bruce  
Title: Executive Director  
Date:

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By: Christie Beeman  
Title: Business Group Director  
Date:



## Exhibit A – Scope of Services

### San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project

#### ***Task 1: Mitigation and Monitoring Plan***

ESA will review relevant background information from prior compensatory mitigation planning efforts. This may include spreadsheets, tables, documents, GIS data, and previously drafted mitigation plans (conceptual or otherwise), including any regulatory agency correspondence related to the adopted mitigation ratios. Following the review, ESA will communicate to the client any outstanding needs for the preparation of a Mitigation and Monitoring Plan. We understand that the SFCJPA has already quantified the temporary and permanent impacts of the proposed construction, adopted mitigation ratios for those impacts, and identified locations for the implementation of those mitigation activities. Regulatory agency permits and approvals have not been secured. However, it is assumed that no further agency coordination is needed to prepare the Draft Mitigation and Monitoring Plan.

Once the background material has been acquired and assessed, ESA will then develop a Draft Compensatory Mitigation and Monitoring Plan that builds upon the work already completed to date and describes those compensatory mitigation actions, including post-construction monitoring, to be enacted as part of the proposed project. It is anticipated that the Mitigation Plan will address both terrestrial and aquatic habitat needs. The Mitigation Plan will include all the elements required to assist in regulatory compliance (impact summary, proposed actions and projected habitat acreages, planting plan, maintenance requirements, success criteria, and monitoring protocols and frequency).

ESA will revise the Draft Mitigation Plan based on one set of consolidated comments from the client. The revised Draft Plan will be submitted for review by Valley Water, who is the implementing entity for the Plan. This task does not include effort to respond to comments from Valley Water or further revisions to the Plan.

#### *Deliverables:*

- Draft Mitigation and Monitoring Plan
- Revised Draft Mitigation and Monitoring Plan (for Valley Water review)

#### *Assumptions:*

- Relevant background information will be provided by SFCJPA staff.
  - Pre-application input from regulators will not materially impact the scope of the Mitigation Plan.
  - Habitat impacts, mitigation ratios and locations, and conceptual approach have already been determined and will be provided to ESA.
  - Any re-design of creek elements will not result in substantive changes to the mitigation acreage needs, mitigation locations selected, or overall regulatory approval approach.
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- ESA will respond to one (1) set of consolidated comments from the client on the draft document.

### **Task 2: Landscape Plans**

ESA will develop 60% and 90% Landscape Plans for the two mitigation sites, consisting of native planting, seed, and soil amendment plans, schedules, notes, and details for revegetating approximately one (1) acre of land adjacent to the creek. We propose the 90% plans as the final submittal for this contract to provide leeway in the event that the plans require fine tuning prior to construction due to regulatory input or in response to changes in the engineering plans.

ESA's landscape architect and wetland ecologist will conduct a site visit to assess site opportunities and constraints relating to the planting sites, and they will base plant palettes off of a nearby reference site with strong riparian habitat value.

The 60% and 90% landscape plan deliverables will include a planting layout that will support improved native riparian habitat, will perform well during and after flood events, and will enhance riparian habitat and aesthetics of San Francisquito Creek. The Landscape Plans will incorporate elements pertinent for mitigation accounting and regulatory requirements such as providing a balance of understory and overstory plantings and incorporating best practices for limiting the spread of Phytophthora.

The landscape plans will be suitable for inclusion with the overall construction document plan set for this reach. We expect these plans will also be included as an attachment to the Mitigation Plan developed in Task 1.

We anticipate the following sheets to be included: Planting Plans (2), Plant and Seeding List (1), and Planting Details (1). The 60% and 90% submittals will include cost estimates and technical specifications. We will issue 90% landscape plans and specifications incorporating one round of consolidated comments from the client on the 60% Submittal.

We have budgeted for up to three (3) progress meetings. The project kickoff meeting will be tracked under Task 4.

ESA will also prepare one (1) illustrative concept rendering showing a representative eye-level perspective view of the proposed Project improvements, to be accompanied by one (1) existing eye-level photograph of the existing site taken by the Consultant on their previous May 2020 site visit, or a photo taken by the SFCJPA if the SFCJPA and Consultant do not identify a good representative existing site photograph taken by the Consultant during their previous May 2020 site visit. The rendering will be developed at a level of detail appropriate for permitting review, similar to Image 3.1-2 (of the Pope-Chaucer Bridge) from the Project's Final EIR. Rock toe, graded slope, and new plantings would be included in this rendering. Rendering of the top-of-bank parklet is out of scope. Bird's-eye view of the project is out of scope. Scope to include one (1) digital meeting with the Client to select the existing conditions site photograph and one (1) digital meeting with the Client to review Client feedback on the draft concept drawing. Consultant to incorporate one (1) round of compiled revisions from the Client's review of the draft concept drawing into the final deliverable.

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*Deliverables:*

- 60% Landscape Plan Set, Cost Estimate, and Technical Specifications
- 90% Landscape Plan Set, Cost Estimate, and Technical Specifications
- One (1) draft in-progress black-and-white linework concept drawing and one (1) final colored illustrative concept rendering in PDF and JPG formats, letter-sized or tabloid-sized, landscape (horizontal) orientation

*Assumptions:*

- A performance specification for irrigation will be sufficient and that no irrigation plans will be developed.
- Landscape areas will not change between the 60% and 90% deliverables.

**Task 3: Design Support**

We understand that the previous design plans developed by Valley Water require modification to meet the SFCJPA's vision and anticipated regulatory requirements for stream and habitat function. Only specific design sheets will be revised during the present effort to support the permitting process.

The changes to the existing armored channel banks (sacked concrete) presented in the Valley Water plan set include setting back and steepening the banks at discrete locations to create additional flow capacity and constructing concrete walls with riprap toe protection. We understand that the purpose of this task is to modify the Valley Water design to introduce habitat elements to the extent possible while preserving the desired channel conveyance capacity (7,650 cfs).

ESA will conduct a detailed review of the Valley Water design sheets, supporting design documentation, and available reports and hydraulic models. We recognize that maximizing flood conveyance and adding habitat elements may represent competing project goals. Our team will work with the SFCJPA to develop and document criteria for project success, such as identifying the minimum habitat enhancement that can be considered a project success.

The ESA team will conduct a site visit to evaluate site constraints and opportunities and meet with the project team and stakeholders to better understand the project objectives and how the proposed design modifications would meet project objectives.

ESA will conduct hydraulic modeling to support the development of an 'optimized' design. The 'optimized' design will become Alternative 4 in the LEDPA analysis (see Task 6). Our team will review hydraulic objectives and requirements for the project reach to guide the site-by-site design elements in the 'optimized' design. We understand that the 'optimized' design will include the bridge replacements at Pope-Chaucer and Newell Road and consist of a combination of widening, restoration, and top of bank treatments at the remaining Sites 1 through 5. The 'optimized' design will minimize impacts to trees and sensitive resources while containing the design flood conveyance capacity within 0.5-feet of top of bank. The design elements will be evaluated in the model at a spatial resolution similar to that of the current model cross section resolution. For this analysis, we will apply hydraulic roughness values for proposed vegetation types and densities

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consistent with values ESA developed for Santa Clara Valley Water District (Valley Water)'s Stream Maintenance Guidelines. ESA has included one additional site visit for up to two (2) ESA design team members to meet with the JPA and the Engineer of Record (assumed to be Valley Water) to evaluate site-specific feasibility of the Alternative 4 'optimized design.' For the LEDPA analysis, ESA will compare model results for the Alternative 4 'optimized design' with results for the existing conditions (Alternative 1 No-Project) and the Valley Water designs from the EIR (Alternative 2 and Alternative 3).

Following the completion of the LEDPA Analysis, ESA will work with the project team to select a preferred alternative. ESA will provide guidance on location of widening, restoration, and top of bank treatments to Valley Water engineers as they update the plan set. We have budgeted up to six (6) status meetings.

We anticipate issuing up to 5 typical detail sheets for inclusion in the plan set, including: Engineered Streambed Material toe scour protection, bioengineered toe scour protection, hydraulic breaks for fish passage, and willow staking in soil and within ESM. We will issue an estimate of probable construction cost for the typical detail features by unit for incorporation in to Valley Water's Opinion of Probable Construction Costs. The basis of design, including the hydraulic modeling effort will be summarized in a succinct memorandum. ESA will make recommendations for spacing, location, and layout of the biotechnical elements in the Basis of Design Memorandum.

The budget for this task includes an allowance of 24 hours for engineering support for the permitting process, including updating the Project Description and project impact figures and calculations.

*Deliverables:*

- Draft typical detail sheets
- Final typical detail sheets
- Final Basis of Design Memorandum
- Electronic copies of the hydraulic model files and Autocad files

*Assumptions:*

- Design flows (Q2, Q10, Q100, Bankfull) for San Francisquito Creek will be provided to the Consultant.
  - A functioning hydraulic model that includes existing and proposed conditions (including new bridge geometries) for Alternatives 2 and 3 are available and that electronic files will be transmitted to Consultant.
  - ESA has not included sediment transport modeling in our scope. ESA will use the hydraulic modeling results and grain size mobilization thresholds to qualitatively compare sediment transport capacity of Alternatives in the LEDPA analysis
  - Electronic base files in Autocad format, including an existing conditions surface, are available and will be transmitted to Consultant.
  - ESA will recommend locations of the biotechnical elements and provide as a GIS shapefile. We assume we are not drafting or editing any of Valley Water's CAD plan-view sheets.
-



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- Technical specifications will not be included.
- Estimate of probable construction cost is limited to proposed channel modifications. We assume that estimating costs for project elements carried forward from Valley Water's design will be conducted by others.

#### ***Task 4: Meetings and Project Management***

ESA proposes to track effort for project management and client meetings under this task. The budget for this task assumes that ESA's project manager will allocate up to 4 hours per month for client communications, progress reports, and billing through August 2021, one month following the permit application target submittal date of July 2021.

This task will track the project kickoff meeting, to be attended by the Project Manager, Project Director and each of the Task Leads. In addition, we have allocated time for engineering and permitting support staff to attend one meeting with regulatory agencies, to be scheduled by the SFCJPA.

We have budgeted for bi-monthly progress meetings where relevant task leaders would be present to discuss progress to date and next steps. We have assumed that each task lead would be present at approximately half of the progress meetings. The progress meetings will occur by web-conferencing, and tracked in Tasks 1 through 3.

#### ***Task 5: Optional Agency Meeting(s)***

ESA staff is available for regulatory coordination support as deemed appropriate, and specifically authorized, by the SFCJPA. This task includes support for the preparation, attendance, and follow-up for regulatory agency meetings and coordination support within the allotted task budget. Specifically, as of September 2020, the USACE and RWQCB require a pre-application meeting request at least 30-days prior to submitting permit applications. Although the agencies can decline the meeting request, this task includes support for one (1) interagency pre-application meeting. This task includes support for one (1) additional follow-up interagency meeting to discuss comments and action items from the initial meeting. We assume that graphics and materials will be taken from deliverables from other tasks and that no new graphics or materials need to be produced to support meetings.

#### ***Task 6: LEDPA Analysis***

We understand that an alternatives analysis consistent with the U.S. Army Corps of Engineers' required compliance with the Clean Water Act section 404(b)1 has been drafted for the project and is available for ESA's review. ESA will expand the 404(b)1 analysis to include Waters of the State of California and other additional analyses as needed to satisfy the State Water Resource Control Board's Procedures for the Discharge of Dredged or Fill Material to Waters of the State (Procedures) which became effective on May 28, 2020, that the project represents the Least Environmentally Damaging Practicable Alternative (LEDPA). ESA will also evaluate up to two new and/or revised alternatives developed as an outcome of Task 3 and as advised by the SFCJPA. We understand that an example of what the Regional Water Quality Control Board

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Page 6

considers an acceptable LEDPA analysis has been requested and will be provided to ESA to reference for format and completeness.

ESA will revise the draft document based on one set of consolidated comments from the client. The revised draft document will be revised once and submitted with the permit applications in Task 7. This task does not include effort to respond to comments from regulatory agencies or further revisions to the document.

*Deliverables:*

- Map showing the approximate 70-year floodplain under existing conditions
- Map showing the approximate resultant 100-year floodplain post-project
- Revised maps showing alternatives analyzed
- Draft LEDPA Analysis Report
- Final LEDPA Analysis Report

*Assumptions:*

- 404(b)1 alternatives analysis, completed by the SFCJPA and other consultants, will be provided.
- Example LEDPA analysis submittal will be provided by RWQCB.

***Task 7: Revise and Finalize Regulatory Permit Applications***

We understand that permit applications to request permits and approvals from the USACE (CWA Section 404/RHA Section 10), RWQCB (CWA Section 401/WDRs), and CDFW (FGC Section 1600) based on the project designs completed by the SFCJPA and other organizations/consultants. ESA will revise and finalize the existing applications to incorporate the additional restoration features to be included in the design, new project components, and updated project information based on development of the LEDPA Analysis and MMP.

A separate project description document, including project figures, will be prepared and included as an attachment to all the application documents and associated technical reports. The draft project description will be submitted for SFCJPA review. ESA will revise the draft document based on one set of consolidated comments. The final project description will be submitted with the permit applications.

A draft Biological Assessment report covering species and habitats regulated by the U.S. Fish and Wildlife Service and National Marine Fisheries Service was prepared by other consultants, but does not reflect the current project and will need to be revised based on outcomes of other project updates described in other tasks. The draft Biological Assessment report will be updated to reflect the current project description and associated effects. Associated figures will also be updated. The revised draft report will be submitted for SFCJPA review. ESA will revise the document based on one set of consolidated comments. The final biological assessment will be submitted with the permit applications.

*Deliverables:*

---



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- Revised and finalized project description
- Revised and finalized CWA Section 404 application
- Revised and finalized CWA Section 401 Water Quality Certification application
- Revised and finalized CDFW Streambed Alteration Notification
- Revised and finalized Biological Assessment report

*Assumptions:*

- Draft permit applications, completed by the SFCJPA and other consultants, will be provided.
- SFCJPA will submit permit applications and application fees.
- The Aquatic Resources Delineation report prepared by other consultants includes all project elements and is adequate to submit to regulatory agencies as-is.
- Documents developed in Task 10 will be submitted to the USACE with the 404 application.
- This task does not include effort to respond to Valley Water comments or their requested revisions to documents.

***Task 8: Optional Post Application Modifications***

The SFCJPA and ESA anticipate that agency meetings as described in Task 5 and other agency correspondence after permit applications are submitted will likely lead to minor modifications to the work products of this contract. These modifications could be driven by requests from the U.S. Fish and Wildlife Service or National Marine Fisheries Service resultant from FESA Section 7 consultations with the U.S. Army Corps of Engineers, requests from the State Historic Preservation Officer resultant from NHPA Section 106 consultations with the U.S. Army Corps of Engineers, or by direct request by any of the regulatory agencies with jurisdiction. Charges for these activities will be on a time and materials basis up to the amount of the Task budget, and will not proceed without the approval and direction of the SFCJPA.

***Task 9: Tree Inventory Mapping***

We understand that the SFCJPA is requesting additional ESA assistance during negotiations with the City of Palo Alto and permitting agencies regarding Project tree preservation and demolition plans. ESA will prepare tree inventory maps for use in permit applications and permit figures. ESA will compile Draft Tree Inventory figures by January 27, for use in an upcoming Board meeting. Due to the tight schedule, the draft figures will include approximate project work footprints based on ESA's understanding of the Project.

ESA will coordinate with the specific design engineers (NV-5 for the Pope-Chaucer Bridge Replacement; Valley Water for remaining sites) to refine the project work footprints. NV-5 and Valley Water input is critical for revising the access and staging limits and identifying whether trees on the work limit boundary may be preserved. ESA has included up to 8 hours of staff time for coordination meetings with SFCJPA, NV-5, and Valley Water. ESA will revise the draft tree inventory maps and provide the Final Tree Inventory figures.

*Deliverables:*

- Draft Tree Inventory figures (pdf)
-





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- Final Tree Inventory figures (pdf)
- Tree Inventory (.dwg, .shp, excel table)

*Assumptions:*

- ESA will use the tree information and approximate tree locations collected by HortScience | Bartlett Consulting and provided by the SFCJPA. ESA understands the HortScience tree mapping supersedes the tree information from Valley Water and the two datasets do not require reconciliation. No additional field visits will be conducted.
- SFCJPA will provide jurisdictional boundaries, if tree demolition is to be mapped for separate municipalities and agencies
- We assume a single round of comments and edits on the Draft Inventory Maps.
- SFCJPA will provide introduction and points of contact for Valley Water and NV-5. Meetings will be virtual and conducted via phone or video conference.
- Final construction drawings, including tree demolition and environmental protection, will be prepared by Valley Water and NV-5. ESA will provide the final tree inventory as a CAD drawing file, a GIS shapefile, and an Excel table for use in the design drawings.

***Task 10: Archaeological Testing Program***

Based on the results of the previous studies completed for the proposed project (Reach 2), ESA recommends that an additional cultural resources investigation be completed to comply with the identification and evaluation efforts required by Section 106 of the National Historic Preservation Act and the State Historic Preservation Officer (SHPO). A previously recorded prehistoric archaeological site (CA-SCL-583) is mapped in the Area of Potential Effects (APE) for Site 5 of Reach 2. In addition, Far Western indicated that the entire reach has a high to very high sensitivity for deeply buried archaeological resources.

To assist with the USACE's NHPA Section 106 compliance requirements and coordination with the SHPO to issue the CWA Section 404 permit, ESA will complete the following four subtasks:

**Sub-task 10.1 Tribal Cultural and Archaeological Testing Plan.** ESA will prepare a Tribal Cultural and Archaeological Testing Plan (TCATP) to detail the scope of archaeological subsurface investigation in the vicinity of prehistoric archaeological site CA-SCL-583. The TCATP is consistent with Mitigation Measure CULT-2 of the Draft EIR and will include the methods to assess for the potential presence of prehistoric cultural materials in the APE. The TCATP will include the following components:

- Background and anticipated resource types
  - Research themes and questions
  - Field methods and procedures
  - Cataloging and laboratory analysis, as warranted
-

**Sub-task 10.2 Implement TCATP.** ESA will implement the testing program outlined in the TCATP. ESA will conduct hand augering and shovel test pits in the vicinity of prehistoric archaeological site CA-SCL-528; no mechanical coring or trenching will be completed. ESA assumes the investigation will require two archaeologists, two days in the field; the area will be accessible and will not require permits for the investigation; and no cultural materials will be identified. If cultural materials are encountered, additional effort may be required for data recovery, artifact processing, cataloging, curating, and reporting, which can be completed by ESA under a separate scope and budget.

**Sub-task 10.3 Results Report and Finding of Effect.** Upon completion of the testing program, ESA will prepare a report to comply with the identification requirements of Section 106. The report will include appropriate photographs, maps, and graphics, and will include the following components:

- Summary of previous studies in the APE. This scope assumes that the surface survey of the APE completed by ICF was adequate and that no additional surface survey will be required.
- Summary of cultural resources in the APE, including archaeological and architectural resources. This scope assumes that the architectural resources in the APE have been previously evaluated as not eligible for the National Register and that no additional evaluation will be required.
- Summary of Native American consultation completed for the project. This scope assumes that the Native American consultation efforts completed for the Draft EIR are adequate and that no additional Native American outreach efforts will be required.
- Results of the implementation of the TCATP.
- Finding of Effect. This scope assumes a finding of No Historic Properties Affected with Conditions (Archaeological Monitoring during Construction). If the finding is Historic Properties Affected, additional tasks not included in this scope, such as a Memorandum of Agreement and a Historic Properties Treatment Plan, may be required. ESA can complete these tasks under a separate scope and budget.

**Sub-task 10.4 Tribal Cultural and Archaeological Monitoring Plan.** Based on the results of the previous cultural resources studies, the APE has a high to very high potential for buried archaeological resources. In compliance with Mitigation Measure CULT-3 and the anticipated finding of No Historic Properties Affected with Conditions (Archaeological Monitoring during Construction), ESA will draft a Tribal Cultural and Archaeological Monitoring Plan (TCAMP). The TCAMP will include:

- Training program for all construction and field workers involved in site disturbance (Mitigation Measure CULT-1);
  - Person(s) responsible for conducting monitoring activities, including Native American monitors;
  - Person(s) responsible for overseeing and directing the monitors;
  - Schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;
  - Procedures and construction methods to avoid sensitive cultural resource areas;
  - Physical monitoring boundaries;
-



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- Protocol for notifications in case of encountering of cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation);
- Methods to ensure security of cultural resources sites; and
- Protocol for notifying local authorities (e.g., Sheriff, Police) should site looting and other illegal activities occur during construction.

If cultural materials are encountered, all soil-disturbing activities within 100 feet of the find shall cease until the find is evaluated. The archaeological monitor shall immediately notify the lead agency of the encountered archaeological resource and implement the provisions of the TCAMP.

*Deliverables:*

- Tribal Cultural and Archaeological Testing Plan (pdf)
  - Cultural Resources Report (pdf)
  - Tribal Cultural and Archaeological Monitoring Plan (pdf)
-

Exhibit B

2021

2022

Project Schedule - updated 2/8/2022

San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Capital Project, Highway 101 to El Camino

Deliverable	2021				2022								
	July	August	September	October	November	December	January	February	March	April	May		
<b>Task 1 - Mitigation and Monitoring Plan</b>													
Draft Mitigation and Monitoring Plan		X											
Client Review													
Final Mitigation and Monitoring Plan										X			
<b>Task 2 - Landscape Plans</b>													
60% Plans, Specifications, and Cost		X											
Client Review													
90% Plans, Specifications, and Cost					X								
<b>Task 3 - Design Modifications</b>													
Draft 60% Plans, Cost, and Basis of Design Report							X						
Client Review													
Final Basis of Design Report & Permitting Support								X					
<b>Task 4 - Meetings and Project Management</b>													
Kickoff Meeting													
Bi-Monthly Coordination	X	X	X	X	X	X	X	X	X	X	X		
Agency Meetings					X			X					
<b>Amendment 1 - new Tasks</b>													
<b>Task 5 - Optional Agency Meetings (as needed)</b>													
<b>Task 6 - LEDPA Analysis</b>											X		
<b>Task 7 - Regulatory Permit Applications</b>											X		
<b>Task 8 - Post Application Modifications</b>													
<b>Amendment 2 - new Tasks</b>													
<b>Task 9 - Tree Inventory Mapping</b>								X					

Project San Francisquito Creek to Highway 101  
 Project No. D202000175.00  
 1/28/2022 Modification #4 budget estimate

**Name**

**Amendment 4**

**Original Tasks**

**Prior Budget**

**budget change**

**New Budget**

1	Mitigation and Monitoring Plan	\$ 18,800	\$ -	\$ 18,800
2	Landscape Plans	\$ 29,190	\$ -	\$ 29,190
3	Design Modifications			\$ -
3.1	Hydraulic Analysis	\$ 22,240	\$ -	\$ 22,240
3.2	Engineering Design	\$ 39,000	\$ 8,300	\$ 47,300
3.3	Revise Project Description & Impact Figures	\$ -	\$ 4,400	\$ 4,400
4	PM & Meetings	\$ 19,230	\$ 10,400	\$ 29,630
5	Optional Agency Meetings	\$ 15,280	\$ -	\$ 15,280
6	LEDPA Analysis	\$ 15,340	\$ -	\$ 15,340
7	Regulatory Permit Applications	\$ 27,400	\$ -	\$ 27,400
8	Post Application Modifications	\$ 5,020	\$ -	\$ 5,020
9	Tree Inventory Mapping	\$ 8,500	\$ -	\$ 8,500
10	Archaeological Testing Program			\$ -
10.1	Tribal Cultural and Archaeological Testing Plan	\$ 5,500	\$ -	\$ 5,500
10.2	Implement TCATP	\$ 7,800	\$ -	\$ 7,800
10.3	Results Report and Finding of Effect	\$ 8,000	\$ -	\$ 8,000
10.4	Tribal Cultural and Archaeological Monitoring Plan	\$ 3,500	\$ -	\$ 3,500
<b>TOTAL</b>		<b>\$ 224,800</b>	<b>\$ 23,100</b>	<b>\$ 247,900</b>

## **Agenda Item 6.B. Executive Director's Report**

### **Project Updates –**

#### Reach 1 –

- Signs and benches – Design and text for the interpretive signs have been finalized and the signs will be fabricated and installed this summer.
- O&M – We continue to care for the mitigation plantings. A post-storm survey will be conducted this summer and included in a five-year report to the regulatory agencies prior to the end of the year.

#### Reach 2 –

- USACE CAP205 – Draft Feasibility Report anticipated by Mid-June. SFCJPA team are working in close coordination with USACE real estate, engineering, and other technical staff.
- Reach 2 Regulatory Permitting – The USACE has taken on the permitting for their Channel Widening/CAP205 portion of the Reach 2 work. Therefore, we are once again separating the project components in our permit application. We are expediting the Newell Bridge permit elements.
- Construction Schedule –
  - Newell Bridge is planned for replacement/construction in 2024.
  - USACE CAP205/Channel Widening is planned for construction in 2025.
  - Top-of-Bank is planned for 2025 and/or 2026.
  - Pope-Chaucer Bridge is planned for 2026.
- Hydraulic Modeling/Surveying –
  - We anticipate receiving a Technical Memorandum from Valley Water by the end of May 2023. We have scheduled a Special Board Meeting on June 8, 2023, to update the Board on the Valley Water 'Technical Memorandum'.
  - Planning for channel surveys has progressed with additional coordination with Stanford University and Valley Water. The survey will include two phases- review and compilation of existing topographical data from Valley Water, with additional in-channel survey work once the channel is dry. This information will add to our understanding of channel dynamics and how (or if) those dynamics change our project approach.
- Funding –

San Francisquito Creek Joint Powers Authority

May 25, 2023, Regular Board Meeting,

Executive Director's Report

- Pope-Chaucer Bridge HMGP grant. In 2017, Valley Water applied for an HMGP grant from CalOES for design and construction of the Pope-Chaucer Bridge. This grant was awarded in December 2021 with a 36-month completion requirement. The CalOES HMGP grant does not allow for ANY pre-conditions or project dependencies – such as the need to complete other project elements or activities prior to the HMGP-funded work. We are discussing with CalOES how we might make use of at least a portion of the awarded grant for planning and design costs, but accessing the full grant award may no longer be possible.
  
- Given the lag of four-years from application to award for HMGP, re-applying for another HMGP grant may not be timely. We are actively looking for other funding opportunities, including earmarks, grant funds and infrastructure loans to supplement our funding shortfall.

Reach 3 –

- A temporary hold has been placed on the evaluation of upstream detention while we await Valley Water's technical memorandum and channel survey results (anticipated later this summer) to inform the best configuration of any upstream detention under anticipated changing future conditions.

SAFER Bay –

- Two items will be presented for Board action at the May 25<sup>th</sup> meeting- first an amendment to the HDR Master Service Agreement, followed by an amendment to Task Order 4. These two amendments enable us to implement the work made possible by the additional \$3,980,000 in grant funding from the San Francisco Bay Restoration Authority that was approved in March 2023, and update the MSA with current administrative contacts and related information. The original MSA, proposed changes, and redline Task Order 4 are included in your board packet.
- We are on track to deliver a Public Draft Project Description in the Fall.
- Community educational outreach events were held March 18 and April 29 along the Bay Trail in East Palo Alto. We are planning for additional community project update events this summer and fall.

**Community Engagement –**

Community Support - We have reached out to some community members who have expressed an interest in supporting the Reach 2 project. We provided model support language, and several community members sent letters of support and appreciation to the Valley Water board of directors for Valley Water's continued Capital funding support for the Reach 2 project through the Safe Clean Water program.

Newsletter - We are looking ahead to the summer newsletter in July, and welcome suggestions for topics.

Presentations to Councils and Boards – We are planning for these in later summer, working around council recesses, and preparing to share the progress and updates on hydraulics, permitting, survey plans, and related schedules.

Community Advisory Committee - Thanks to suggestions from community and board members, we will be drafting a framework for a SFCJPA community advisory committee (name to be determined). The objective of such a committee is to provide a conduit of two-way communication about the SFCJPA's projects and their progress. This may overlap some with the established SAFER Bay community committee, so we'll be working on making sure they are distinct and complementary.

## **Operations/Administration**

### Conflict of Interest Form 700

Reminder\* Please submit your Form 700 to the SFCJPA. Thank you to all who have submitted. All Board members, Alternates and SFCJPA staff are required to submit the conflict of interest Form 700 annually to the SFCJPA.

### Committees of the Board -

*Finance Committee* - The Finance Committee was unable to meet as scheduled. Finance committee members provided their input on the proposed budget to the Executive Director individually.

*Personnel* – The personnel committee met to discuss the process for the Executive Director's annual review.

### Website –

*Domain change* - We have begun the process of changing domains from .org to .gov. to ensure we are implementing current best practices. The .gov domain is more secure. We will keep the board updated on our progress. We understand this is a slow process, so it may be several months before we complete the transition.

As a follow-on from the April Community Meeting, we have received helpful suggestions for improvements to the SFCJPA's website and have implemented those.

We are also looking forward to tapping the assistance of a future intern to review the website for ADA compliance and to begin making improvements to content accessibility.

### Banking –

Although the immediate potential for a crisis with First Republic Bank may have passed, out of an abundance of caution we have reached out to three other banks to compare



San Francisquito Creek Joint Powers Authority  
 May 25, 2023, Regular Board Meeting,  
 Executive Director's Report

services. U.S. Bank was the only one to respond to our outreach. We met with U.S. Bank representatives who shared their business services and banking platform for our consideration. Both Miyko and Margaret were very favorably impressed by the functionality of their banking platform, services, and costs. We are planning for a banking transition to U.S. Bank over the next couple of months.

SFCJPA Members Agreement –

*Ratification status by SFCJPA member -*

<b>Date</b>	<b>Member</b>	<b>Outcome</b>
4/18/23	City of East Palo Alto	Approved on consent
Agendized 6/26/23	OneShoreline	Carried forward to June 26 meeting agenda. Pending.
Agendized 5/23/23	Valley Water	Pending
Agendized 6/5/23	City of Palo Alto	Pending
5/9/23	City of Menlo Park	Approved on consent

**Forward view of upcoming agendas**

SPECIAL MEETING – June 8, Hosted by Menlo Park	Hydraulic analysis technical memo briefing.
June 22 – Hosted by Menlo Park	Tbd – may be cancelled due to multiple directors' anticipated absences.
July – no meeting	Board Recess – no planned regular board meeting
August 24 – Hosted by East Palo Alto	SAFER update
September 28 – Hosted by Palo Alto	Reach 2 update

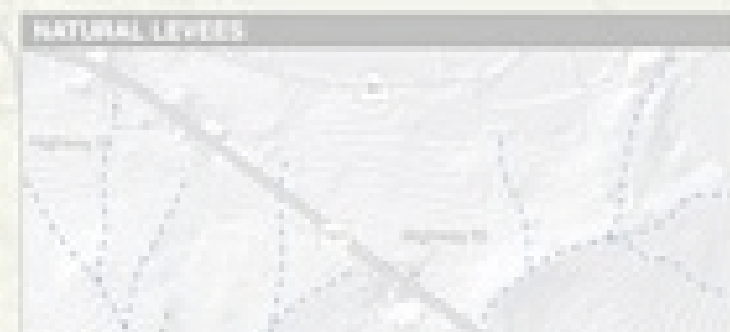


Artificial bodies of water, modern



# SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY

Regular Meeting of the Board of Directors  
May 25, 2023





Artificial bodies of water, modern

# 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 Special Board Meeting Minutes: April 27, 2022.

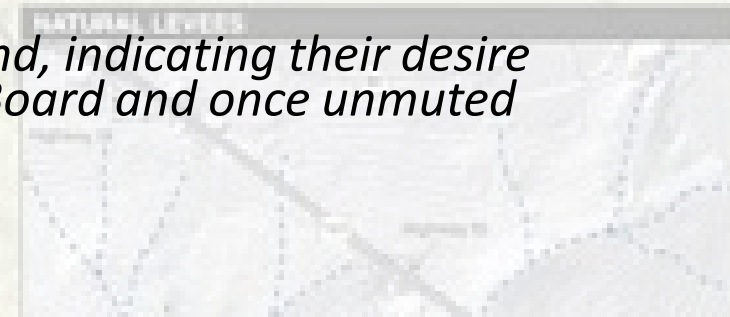
4. PUBLIC COMMENT: Individuals may speak on a non-agendized topic for up to three minutes on a topic within the SFCJPA's jurisdiction.

*Members of the public speaking in person should submit a speaker card to the Clerk of the Board, indicating which agenda item or items they wish to speak about, in order to be recognized. When the agenda item is called, please stand at the podium and speak clearly.*

*Members of the public speaking via video conference should raise their hand, indicating their desire to ask a question or comment. They will be recognized by the Clerk of the Board and once unmuted and recognized, please speak clearly.*

Corte Madera Creek subwatershed

Los Trancos Creek subwatershed



A topographic map of the San Francisco Bay Area, showing various watersheds and cities. The map is overlaid with text and a legend. A legend in the top left corner identifies 'Artificial bodies of water, modern' with a blue square. The map shows the San Francisco Bay, San Francisco, and surrounding areas. Labels include 'SAN FRANCISCO CREEK WATERSHED BOUNDARY', 'Alhambra', 'East Palo Alto', 'Mountain View', 'Palo Alto', 'San Francisco Creek', 'Woodside', 'San Mateo', 'Santa Monica', 'Bear Creek subwatershed', 'Corte Madera Creek subwatershed', 'Piedmont Valley', and 'Los Trancos Creek subwatershed'.

# Agenda Item 5 – Guest Speaker, Dr. Suckale

Please welcome Dr. Jenny Suckale, Assistant Professor of Geophysics and Woods Hole Institute Center Fellow.

Dr. Suckale will present a summary of her research paper “Increasing equity in flood-risk mitigation planning. Lessons from San Francisquito Creek, California.”

*Dr. Suckale’s research group studies disasters to reduce the risks they pose. The group approaches this challenge by developing customized mathematical models that can be tested against observational data and are informed by community needs through a scientific co-production process.*

*The research group intentionally works on extremes across different natural systems rather than focusing on one specific natural system to identify both commonalities in the physical processes driving extremes and in the best practices for mitigating risk at the community level.*

A topographic map of the San Francisco Bay Area showing various watersheds and subwatersheds. The map is color-coded by elevation, with higher elevations in shades of brown and lower elevations in shades of green and blue. Key features include the San Francisco Bay, the Golden Gate, and several major creeks and rivers. A legend in the top left corner identifies 'Artificial bodies of water, modern' with a blue icon. A box in the top right corner contains the text 'Modern engineered channel'. A box in the bottom right corner is titled 'NATURAL LEVELS' and shows a topographic map of the same area with dashed lines indicating natural drainage patterns. The map also shows various cities and towns, including Alhambra, East Palo Alto, Mountain View, and San Jose. A box in the center of the map is labeled 'San Francisco Creek subwatershed'. Other boxes on the map include 'Bear Creek subwatershed', 'Corte Madera Creek subwatershed', 'Los Trancos Creek subwatershed', and 'Portola Valley'. A box in the top left corner is labeled 'SAN FRANCISCO CREEK WATERSHED BOUNDARY'. A box in the top right corner is labeled 'Abandoned channel'. A box in the top right corner is labeled 'Modern engineered channel'. A box in the top right corner is labeled 'East Palo Alto'. A box in the top right corner is labeled 'Alhambra'. A box in the top right corner is labeled 'Mountain View'. A box in the top right corner is labeled 'San Jose'. A box in the top right corner is labeled 'San Francisco Creek subwatershed'. A box in the top right corner is labeled 'Bear Creek subwatershed'. A box in the top right corner is labeled 'Corte Madera Creek subwatershed'. A box in the top right corner is labeled 'Los Trancos Creek subwatershed'. A box in the top right corner is labeled 'Portola Valley'. A box in the top right corner is labeled 'SAN FRANCISCO CREEK WATERSHED BOUNDARY'. A box in the top right corner is labeled 'Abandoned channel'. A box in the top right corner is labeled 'Modern engineered channel'. A box in the top right corner is labeled 'East Palo Alto'. A box in the top right corner is labeled 'Alhambra'. A box in the top right corner is labeled 'Mountain View'. A box in the top right corner is labeled 'San Jose'.

# Agenda Item 6 – Closed Session

## A. PUBLIC EMPLOYEE PERFORMANCE EVALUATION

Title: Executive Director

## B. CONFERENCE WITH LABOR NEGOTIATOR

Agency designated representative: Board Member Ruben Abrica

Unrepresented employee: Executive Director

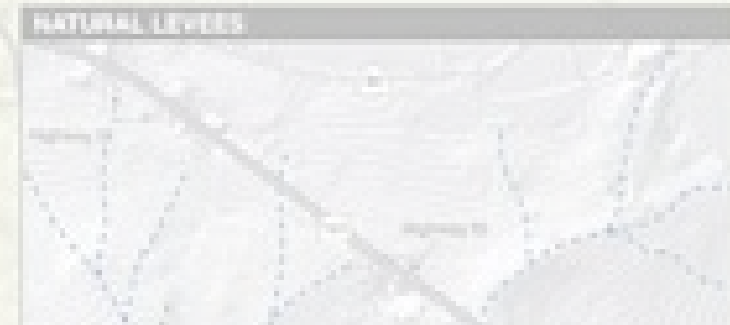


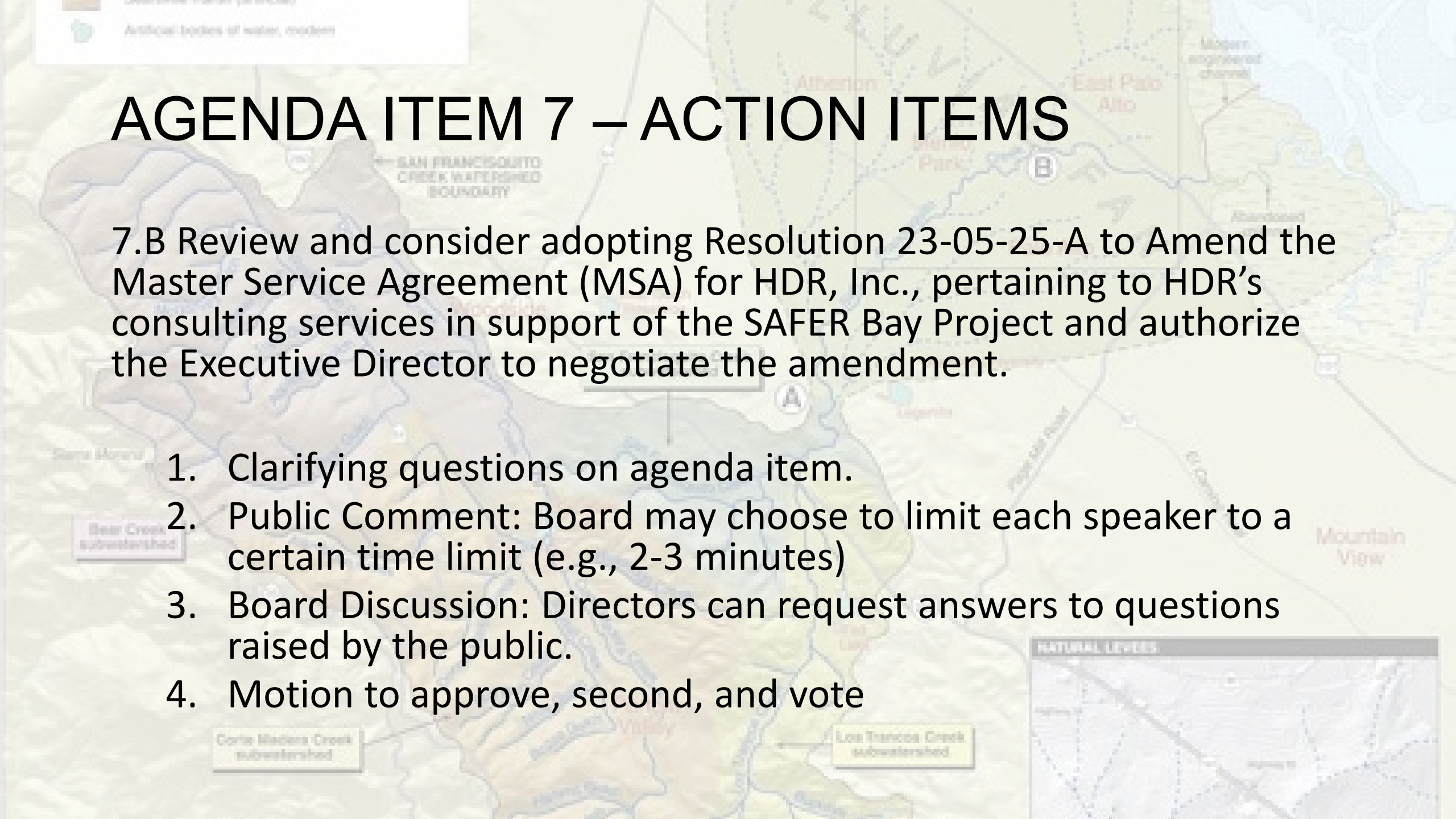
Artificial bodies of water, modern

# AGENDA ITEM 7 – ACTION ITEMS

## 7.A. Review and consider adopting the proposed Fiscal Year 2023/2024 SFCJPA Operations Budget

1. Clarifying questions on agenda item.
2. Public Comment: Board may choose to limit each speaker to a certain time limit (e.g., 2-3 minutes)
3. Board Discussion: Directors can request answers to questions raised by the public.
4. Motion to approve, second, and vote

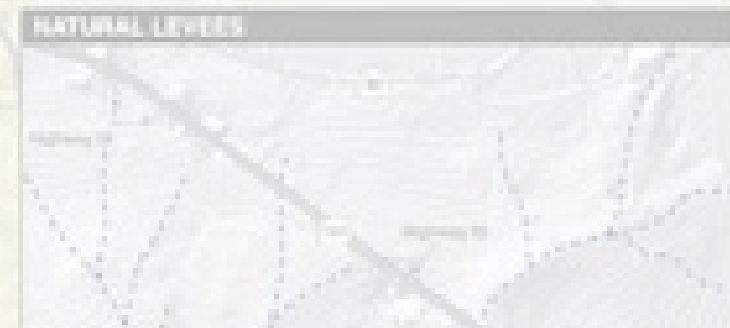


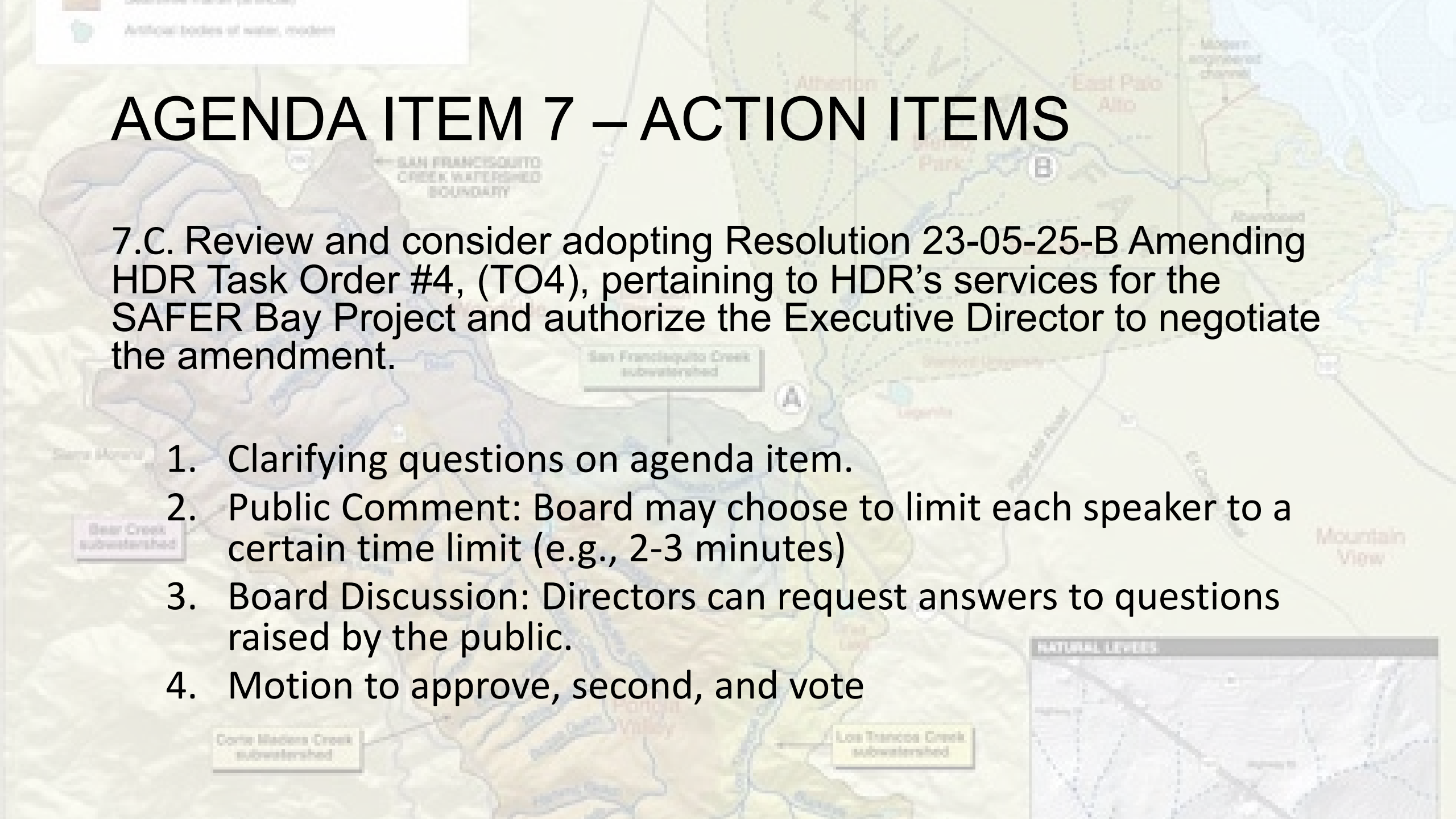


# AGENDA ITEM 7 – ACTION ITEMS

7.B Review and consider adopting Resolution 23-05-25-A to Amend the Master Service Agreement (MSA) for HDR, Inc., pertaining to HDR's consulting services in support of the SAFER Bay Project and authorize the Executive Director to negotiate the amendment.

1. Clarifying questions on agenda item.
2. Public Comment: Board may choose to limit each speaker to a certain time limit (e.g., 2-3 minutes)
3. Board Discussion: Directors can request answers to questions raised by the public.
4. Motion to approve, second, and vote



A topographic map of the San Francisco Peninsula, showing various watersheds and subwatersheds. A legend in the top left corner indicates that blue-green areas represent 'Artificial bodies of water, modern'. Several subwatersheds are labeled with callout boxes: San Francisco Creek subwatershed, Bear Creek subwatershed, Corte Madera Creek subwatershed, and Los Trancos Creek subwatershed. The map also shows major cities like San Francisco, Albany, and Mountain View, and features like the Golden Gate Bridge and the San Francisco Bay. A dashed line indicates the 'SAN FRANCISCO CREEK WATERSHED BOUNDARY'.

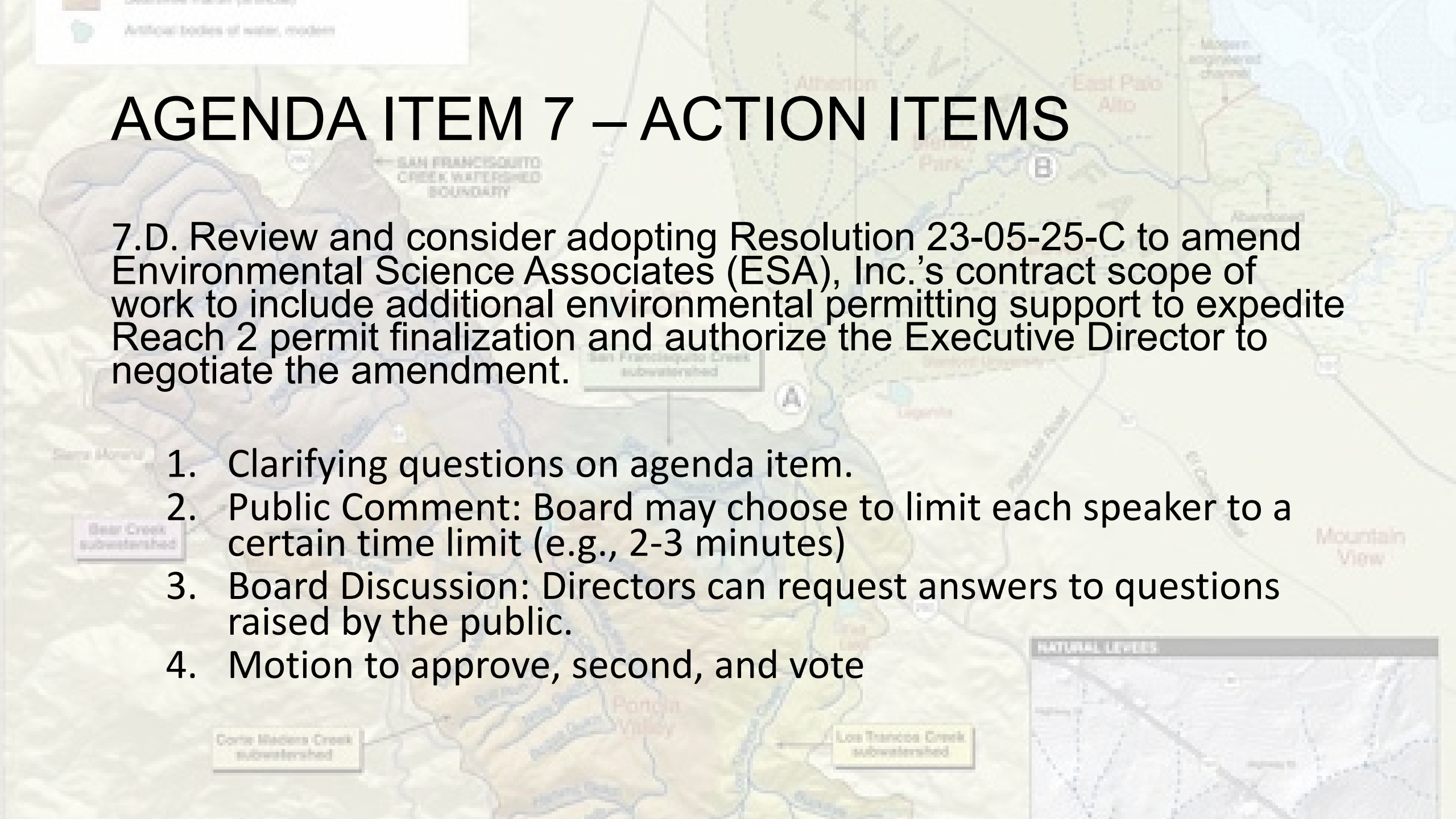
# AGENDA ITEM 7 – ACTION ITEMS

7.C. Review and consider adopting Resolution 23-05-25-B Amending HDR Task Order #4, (TO4), pertaining to HDR’s services for the SAFER Bay Project and authorize the Executive Director to negotiate the amendment.

1. Clarifying questions on agenda item.
2. Public Comment: Board may choose to limit each speaker to a certain time limit (e.g., 2-3 minutes)
3. Board Discussion: Directors can request answers to questions raised by the public.
4. Motion to approve, second, and vote







Artificial bodies of water, modern

# AGENDA ITEM 7 – ACTION ITEMS

SAN FRANCISCO QUINTO CREEK WATERSHED BOUNDARY

Alhambra  
Park  
East Palo Alto  
Mountain View

Santa Monica  
Bear Creek subwatershed  
Corte Madera Creek subwatershed  
Los Trancos Creek subwatershed

NATURAL LEVELS

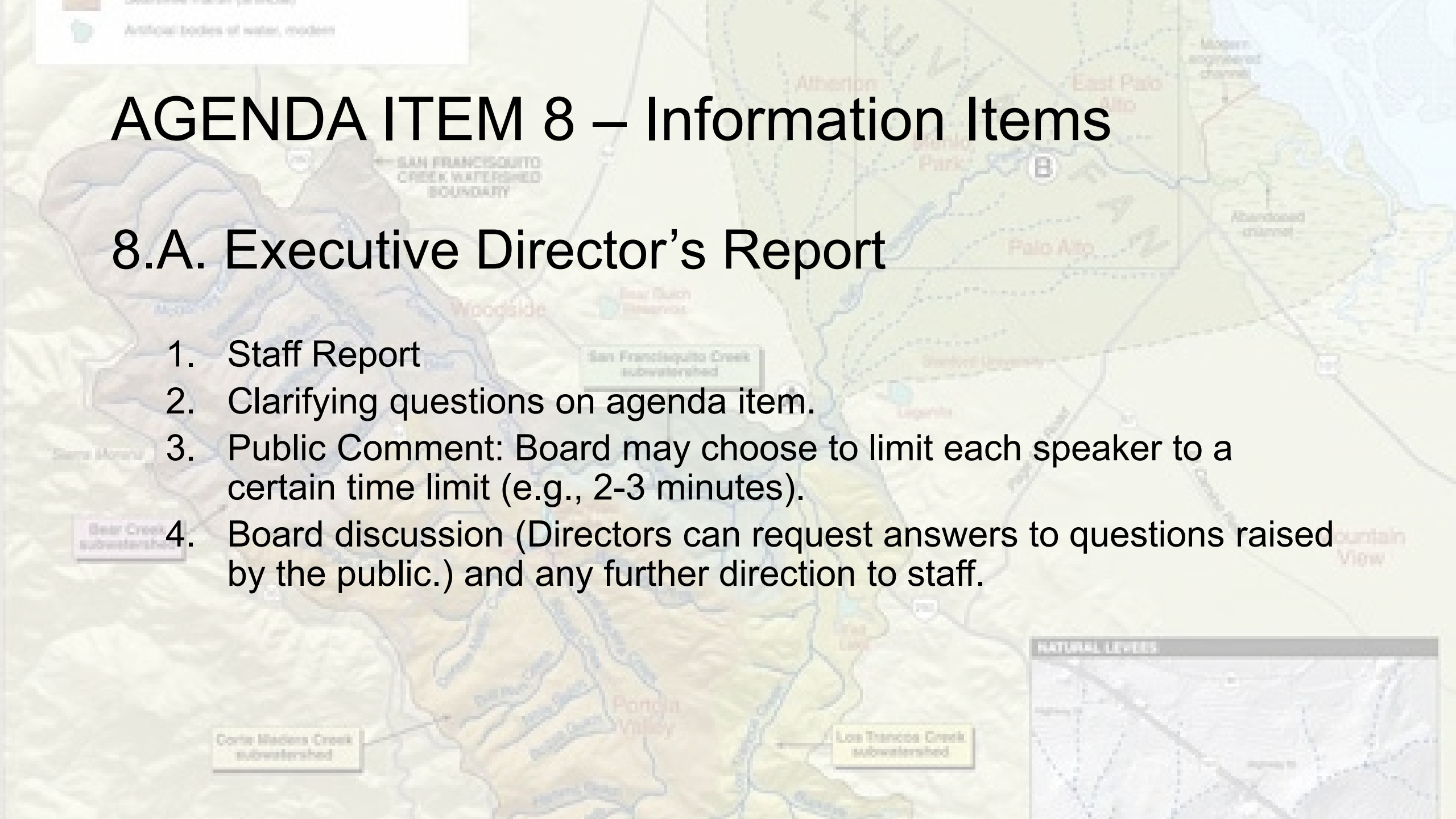
7.D. Review and consider adopting Resolution 23-05-25-C to amend Environmental Science Associates (ESA), Inc.'s contract scope of work to include additional environmental permitting support to expedite Reach 2 permit finalization and authorize the Executive Director to negotiate the amendment.

1. Clarifying questions on agenda item.
2. Public Comment: Board may choose to limit each speaker to a certain time limit (e.g., 2-3 minutes)
3. Board Discussion: Directors can request answers to questions raised by the public.
4. Motion to approve, second, and vote

# AGENDA ITEM 8 – Information Items

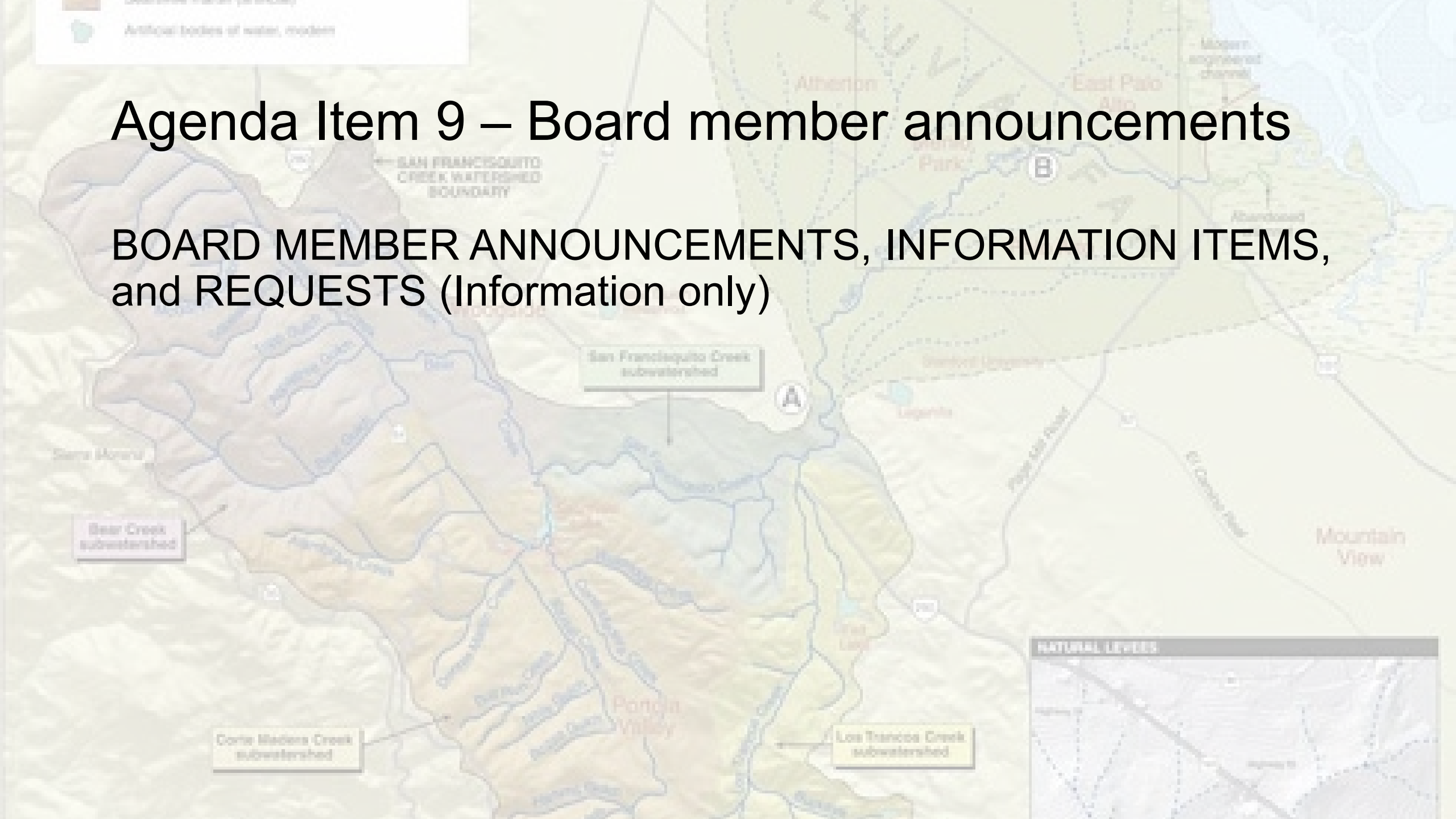
## 8.A. Executive Director’s Report

1. Staff Report
2. Clarifying questions on agenda item.
3. Public Comment: Board may choose to limit each speaker to a certain time limit (e.g., 2-3 minutes).
4. Board discussion (Directors can request answers to questions raised by the public.) and any further direction to staff.



# Agenda Item 9 – Board member announcements

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



# Agenda Item 10

## ADJOURNMENT

