



March 8, 2013

Ian Liffmann
U.S. Army Corps of Engineers
Regulatory Division, 16th Floor
1455 Market Street
San Francisco, CA 94103

Subject: Application for a Section 404 Individual Permit for SFCJPA's San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project San Francisco Bay to Highway 101

Dear Mr. Liffmann:

On behalf of San Francisquito Creek Joint Powers Authority (SFCJPA), we are submitting an application package to support your issuance of an Individual Permit for the construction of the proposed San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project San Francisco Bay to Highway 101, located in San Mateo and Santa Clara counties.

The project proposes to increase the Creek's capacity by degrading a portion of an unmaintained levee downstream of Friendship Bridge, excavating sediment deposits within the channel, rebuilding levees and relocating a portion of the southern levee, and constructing floodwalls in the upper reach of the Creek. The goal of the project is to improve flood protection, habitat, and recreational opportunities within the Project reach. The Project would ultimately improve channel capacity for creek flows coupled with the influence of the tides of San Francisco Bay, including projected Sea Level Rise (SLR), from the downstream face of East Bayshore Road to San Francisco Bay. It would reduce local fluvial flood risks in the Project area during storm events, provide the capacity needed for future upstream improvements, increase and improve ecological habitat, and provide for improved recreational opportunities.

The project will be funded entirely with state funds. The SFCJPA has submitted a Biological Assessment (BA) and Essential Fish Habitat (EFH) Assessment to U.S. Fish and Wildlife (USFWS) and the National Marine Fisheries Service (NMFS) for review.

The Proposed project would directly affect 8.56 acres of water of the United States. Permanent impacts would total 7.96 acres and temporary impacts would total 0.60 acres. The SFCJPA proposes to create 14.63 acres of marshplain habitat within San Francisquito Creek adjacent to the Faber-Laumeister Tract to the north. Best Management Practices will be employed to protect water quality and a 401 Water Quality Certification Application has been sent to the San Francisco Bay Regional Water Quality Control Board. Other applications have been sent to the California Department of Fish and Wildlife, and San Francisco Bay Conservation and Development Commission.

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The following documents/enclosures comprise the application package sent with this letter:

- ENG Form 4345, including attachment sheets and:
 - figures showing the project location, impacts to waters of the U.S., plan, profile, and cross sectional views of the proposed bridge
 - Representative photographs of the project
- Historic Property Survey Report
- Compact disc containing:
 - EIR
 - Copy of 401 Water Quality Certification Application sent to the San Francisco Bay Regional Water Quality Control Board.
 - Copy of Notification for Streambed Alteration Agreement sent to the Department of Fish and Game
- Compact Disc containing:
 - Hydraulic Study
 - Mitigation and Monitoring Plan
 - Biological Assessment
 - Wetland Delineation

If you require additional information or have any questions regarding this request, please contact Kevin Murray (Project Applicant) at (650) 324-1972 or me at (408) 216-2815. Thank you for your assistance with this project.

Sincerely,



Matthew Jones
Project Manager

cc: Kevin Murray, SFCJPA, Project Manager/Applicant

**SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY—SAN
FRANCISQUITO CREEK FLOOD REDUCTION, ECOSYSTEM
RESTORATION, AND RECREATION PROJECT SAN FRANCISCO BAY
TO HIGHWAY 101**

APPLICATION FOR SECTION 404 INDIVIDUAL PERMIT

SUBMITTED TO:

U.S. Army Corps of Engineers
San Francisco District, Regulatory Division
1455 Market Street, 16th Floor
San Francisco, CA 94103-1398
Contact: Ian Liffmann
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Appendix C: Copy of Application for Section 401 Water Quality Certification

Appendix D: Copy of Notification of Streambed Alteration Agreement

Appendix E: Proof of Filing Fee (PENDING)

This package also includes two Compact Discs:

Disc 1:

- Final Environmental Impact Report
- Notice of Preparation

Disc 2:

Biological and Essential Fish Habitat Assessment
Preliminary Delineation of Wetlands and Other Waters of the United States
Hydraulic Review Technical Memorandum

Supplemental Information

Box 15-Location of Project

Table 1. Location Information for the San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project

Project Area	Latitude	Longitude	Township/ Range/ Section	USGS Map
East Bayshore Road and US 101	37°27'11" N	122°07'39"W	N/A	Palo Alto
San Francisco Bay	37°27'157" N	122°06'57"W	N/A	Mountain View

Project Location

The San Francisquito Creek (Creek) watershed encompasses a 45-square-mile basin, extending from Skyline Boulevard to San Francisco Bay. The watershed encompasses public and private lands in the Cities of East Palo Alto, Menlo Park, Palo Alto, Portola Valley, and Woodside; the unincorporated areas of San Mateo and Santa Clara counties; and Stanford University. The San Francisquito Creek floodplain, which has almost no overlap with the watershed, comprises almost 5 square miles.

The Creek represents the boundary between San Mateo and Santa Clara counties in the lower watershed. The last relatively unaltered urban creek system in the South Bay, San Francisquito Creek begins at the confluence of Corte Madera Creek and Bear Creek, just below Searsville Lake in Stanford University's Jasper Ridge Biological Preserve. The mouth of the Creek opens to the San Francisco Bay adjacent to Palo Alto Airport of Santa Clara County (Palo Alto Airport) to the south and the Baylands Nature Preserve to the north. The system contains more than 71 miles of Creek bed; the mainstem is approximately 14 miles long.

Figure 1 displays the Project location and Project site. The Project site is located along the mainstem of the Creek, which stretches from San Francisco Bay to East Bayshore Road (Highway 101). For description purposes, the Project is divided into three reaches. A reach is a continuous part of the Creek between two specified points. The lower reach is from San Francisco Bay to Friendship Bridge, the middle reach from Friendship Bridge to Daphne Way, and the upper reach from Daphne Way to East Bayshore Road. Additionally, the right bank refers to the San Mateo County (East Palo Alto) side of the Creek and the left bank refers to the Santa Clara County (Palo Alto) side of the Creek.

Action Area

The action area includes "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action" (50 Code of Federal Regulations [CFR] §402.02). For this Project,

the action area includes the channel banks and bottom from approximately 200 feet upstream of East Bayshore and Highway 101 Bridge to approximately 500 feet into San Francisco Bay. It is assumed that suspended sediments generated during the construction and breaching of levees would settle or become diluted in the channel at a distance of approximately 500 feet downstream of the levee degrade.

The action area is located in southeastern San Mateo County and northwestern Santa Clara County, on the eastern edge of East Palo Alto. The 210.0-acre action area is situated in an alluvial plain, alluvial fan, and tidal marsh area. The Palo Alto Municipal Golf Course (Golf Course) and Palo Alto Airport are adjacent to the eastern and southern boundaries of the action area. San Francisco Bay is to the east, and residential areas and tidal marshes are to the north. The western edge is formed by East Bayshore Road. San Francisquito Creek enters the action area immediately east of U.S. 101. Consistent with its setting, much of the Creek's length within the action area has been straightened, channelized, or otherwise improved for flood protection, although it remains unlined within constructed levees.

Box 18-Nature of Activity

The San Francisquito Creek Joint Powers Authority (SFCJPA) proposes the San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project San Francisco Bay to Highway 101 (Project).

Project Elements

The Project would increase conveyance and retention capacity of floodwaters from runoff and San Francisco Bay tides to protect residents and property from flood events along the lower section of the Creek, from East Bayshore Road to the San Francisco Bay. An Environmental Impact Report (EIR) was approved October 25th, 2012. Figures 2.1-2.5 show the project site plan and all project components. Work within the project boundary includes the following activities.

- Degrading a portion of an unmaintained levee downstream of Friendship Bridge to allow flood flows from the Creek channel into the Palo Alto Baylands Preserve north of the Creek.
- Excavating sediment deposits within the channel to maximize conveyance.
- Rebuilding levees and relocating a portion of the southern levee to widen the channel to reduce influence of tides and increase channel capacity.
- Constructing floodwalls in the upper reach to increase capacity and maintain consistency with Caltrans' enlargement of the U.S. 101/East Bayshore Road Bridge over San Francisquito Creek (Caltrans facility).

Major Project elements include:

- An overflow terrace at marsh elevation adjacent to the Baylands Preserve.
- Levee setback and improvements to widen the channel and increase levee height and stability between East Palo Alto and the Palo Alto Golf Course.
- Floodwalls in the upper reach downstream of East Bayshore Road.
- Extension of Friendship Bridge via a boardwalk across new marshland within the widened channel.
- Marshplain creation and restoration

The Project has two main components: Levee and Floodwall Construction and Marshplain Restoration. Each component contains multiple elements summarized in Table 2 below.

Table 2. Summary of Project Elements

Project Component	Description
Levee and floodwall construction	
Levee lowering on right bank	From the mouth of the Creek at San Francisco Bay to 200 feet downstream of the existing Friendship Bridge. This would allow floodwaters to flow into the Baylands north of San Francisquito Creek.
Levee raising on right bank	From the O'Connor Pump Station tie-in near Friendship Bridge to the floodwall.
Floodwall on right bank	The right floodwall would extend from just downstream of Daphne Way to the end of the Project reach where it would connect with the Caltrans U.S. 101/East Bayshore Road facility.
Levee raising on left bank and levee relocation	Levee relocation of the middle reach and a small portion of the upper and lower reaches. The levee would be relocated inland (currently occupied by the Golf Course), creating space on the left bank for a marshplain terrace. Except for a section around the eastern footings of Friendship Bridge, the existing levee along this stretch would be removed.
Floodwall on left bank	The left floodwall would extend from the end of the left levee, along the streambed, around the Palo Alto Pump Station, to the end of the Project reach where it would connect with the Caltrans facility.
Downstream access road on right bank	The right bank downstream access road would be approximately 16 feet wide and extend from the crown of the right levee to street level to just downstream of Daphne Way.
Upstream access road on right bank	The right bank upstream access road would be approximately 12 feet wide and would extend from just downstream of Verbena Drive to the Caltrans facility at East Bayshore Road.
Access road on left bank	The left bank access road would be generally 12 feet wide and would extend from a point downstream of the International School of the Peninsula to the Palo Alto Pump Station. The access road would also be used as a public trail within the City of Palo Alto and would connect to the Baylands Athletic Center.
Friendship Bridge	The existing Friendship Bridge would be retained and extended as a boardwalk from the retained eastern footing across the new marshplain terrace to the relocated left bank levee.
Marshplain restoration	
Downstream of Friendship Bridge on right bank	High-marsh and transitional vegetation would be planted from the edge of the Creek channel to the toe of the levee from just upstream of San Francisco Bay to just downstream of Friendship Bridge.
Upstream of Friendship Bridge on right bank	High-marsh and transitional vegetation would be planted from the edge of the Creek channel to the toe of the levee from just upstream of Friendship Bridge to East Bayshore Road.
Left bank	High-marsh and transitional vegetation would be planted from the edge of the Creek channel to the base of the floodwall or the toe of the levee. In this area the

Project Component	Description
	marsh would be planted adjacent to the toe of the cut-and-fill area. The marsh would extend from the point at which the new levee would diverge inland from the existing levee to East Bayshore Road.

More detailed information for each project element can be found in the Biological Assessment (November 2012), Compact Disc 2.

Utility Relocation

Project activities would require relocation or removal of electricity transmission towers and poles; abandonment of existing and construction of new gas transmission lines; and realignment or relocation of sewer lines and storm drains. These activities described in more detail can be found in the Biological Assessment (November 2012), Compact Disc 2.

Construction

Construction of Project elements would likely occur over three construction seasons. Phase One construction would begin in 2013 and be completed by 2015. Construction would begin with building the new levee structure outside of the existing levee, during or after completion of PG&E and EPASD modifications to existing utilities and modifications to the PAGC, and would proceed at Friendship Bridge and upstream with the excavation of the channel up to East Bayshore Road being the final Project activity. Phase Two construction of upstream floodwalls and associated maintenance roads would occur once funding was secured.

Construction activities would take place between 8 a.m. and 6 p.m. on weekdays, and 9 a.m. and 5 p.m. on Saturdays, in accordance with City of Palo Alto and City of East Palo Alto municipal codes. Final construction permits issued for the Project may place additional constraints on construction timing. Table 2 shows the Project elements, when construction on each is expected to begin, construction activities, and construction duration.

A summary of the anticipated construction methodology, the proposed starting date and duration of each activity, and the equipment to be used during each phase is listed in Table 3.

Table 3. Summary of Construction Methodology, Timing, and Equipment

Project Component	Proposed Starting Date	Activity	Proposed Duration	Equipment
Phase One—Utility Relocation				
PG&E Electricity Transmission	9/2013	Site and road preparation: Trees and brush trimmed in work areas	2 weeks	1 dump truck 1 grader 1 four-door pickup
	9/2013	Wood pole relocation	4 weeks	1 flat-bed truck

	10/2013	Demolition of wood poles and secondary wire removal	6 days	3 four-door pickups 3 bucket trucks 3 line trucks 1 rope truck 1 tensioner (on a trailer) 1 pickup
	10/2013	Tower raises (T1 and T4)	2 weeks (1 week per tower)	1 four-door pickup 1 2-ton tool truck with air compressor
	3/2013	Tower (T2)	4 weeks	1 dump truck 1 70-ton crane 1 caterpillar (pile driver) 1 back hoe 1 concrete truck 1 pump truck
	9/2013	Gas line work	6 weeks	2 4-door pickups 1 backhoe 2 flatbed truck
PG&E Gas Transmission	4/8/2013	directional drilling	2 weeks	1 directional drill rig
	9/2013	export of material	1 week	2 dump trucks 1 flatbed truck
	4/25/2013	concrete	2 days	1 concrete truck
	4/27/2013	Demobilization	1 week	2 4-door pickups 1 flatbed truck
	Phase Two—Levees and Excavation			
Site Preparation	1/2014	Mobilization Tree Removal Clearing and Grubbing Stripping Demolition	6 weeks	4 four-door pickups 1 backhoe 1 loader 1 jackhammer 1 flat-bed truck
Construction of new left bank levee	4/2014	Site excavation Levee construction Seeding for erosion control	5 weeks	4 four-door pickups 3 excavators 1 backhoe 2 loaders 4–6 dump trucks (20 cy each) 2 water trucks

Removal of old left bank levee	6/2014	Site excavation	3 weeks	4 four-door pickups 3 excavators 1 backhoe 2 loaders 4–6 dump trucks (20 cy each) 2 water trucks
Removal of right bank levee	6/2014	Site excavation Relocation of East Palo Alto sewer line and siphon	2 weeks	4 four-door pickups 3 excavators 1 backhoe 2 loaders 4–6 dump trucks (20 cy each) 2 water trucks
Construction of right bank levee	7/2014	Levee construction Seeding for erosion control	3 weeks	4 four-door pickups 3 excavators 1 backhoe 2 loaders 4–6 dump trucks (20 cy each) 2 water trucks
Construction of downstream access road on right and left banks	8/2014	Site preparation and paving	4 weeks	4 four-door pickups 1 dump truck 1 grader 1 four-door pickup 2 concrete trucks 1 asphalt paver 1 compactor
Friendship Bridge	9/2014	Site excavation Boardwalk construction	6 weeks	4 four-door pickups 1 backhoe 1 loader 1 flat-bed truck
Channel widening and marshplain terracing	6/2014	Site excavation Terracing	10 weeks	4 four-door pickups 3 excavators 1 backhoe 2 loaders 4–6 dump trucks (20 cy each) 2 water trucks
Revegetation	9/2014	Installation of irrigation system Revegetation	6 weeks	2 four-door pickups
Phase Three—Floodwalls				
Site Preparation	5/2015	Mobilization Clearing and grubbing	3 weeks	4 four-door pickups 1 backhoe 1 loader 1 jackhammer 1 flat-bed truck

Installation of right and left bank floodwalls	6/2015	Site excavation Preparation of foundation Construction of floodwalls	5 months	4 four-door pickups 1 excavator 1 trencher 1 backhoe 1 loader 1 dump truck 1 grader 2 concrete trucks 1 flat-bed truck
Construction of upstream access road on right and left banks	10/2015	Site preparation and paving	4 weeks	4 four-door pickups 1 dump truck 1 grader 1 four-door pickup 2 concrete trucks 1 asphalt paver 1 compactor
Site Restoration	11/2015	Demobilization	2 weeks	2 four-door pickups 1 loader 1 flat-bed truck

Detailed information for the construction and purpose of each element of the project can be found in the Biological Assessment (November 2012), Compact Disc 2.

Water Bodies within the Project Area

Wetlands and other waters affected by the San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project include San Francisquito Creek, Faber-Laumeister Tract, one freshwater pond in the Golf Course, and associated wetlands, which include diked marsh, freshwater marsh, and tidal salt marsh habitat. All affected water bodies were determined to be waters of the United States. Table 3 provides a summary of all water bodies within the project area and associated temporary and permanent impacts.

Table 3. Summary of Water Bodies and Impacts

Water Body Type	ID	Wetlands (acres)	Other Water Bodies (acres)	Temporarily Impacted by Proposed Project (acres)	Permanently Impacted by Proposed Project (acres)
Diked Marsh	DM-1	0.53		0.15	0.001
Diked Marsh	DM-2	0.22		0.01	
Diked Marsh	DM-3	0.03		0.03	0.001
Diked Marsh	DM-4	0.02		0.01	0.001
Diked Marsh	DM-5	0.05			
Diked Marsh	DM-6	0.11			
Diked Marsh	DM-7	0.02			

Diked Marsh	DM-8	1.33		1.33
Diked Marsh	DM-9	0.68		0.18
Diked Marsh	DM-10	0.80		0.80
Diked Marsh	DM-11	0.24		0.24
Diked Marsh	DM-12	0.10		0.10
Freshwater Marsh	FM-1	0.19		
Freshwater Marsh	FM-2	0.14		0.14
Tidal Salt Marsh	TSM-1	1.99		1.52
Tidal Salt Marsh	TSM-3	0.08		0.06
Tidal Salt Marsh	TSM-4	81.09	0.38	0.34
Tidal Salt Marsh	TSM-5	13.08		0.0003
Tidal Salt Marsh	TSM-6	0.04		
Tidal Salt Marsh	TSM-7	1.58	0.002	0.08
Tidal Salt Marsh	TSM-8	9.98		
Tidal Salt Marsh	TSM-9	3.39		1.21
Tidal Salt Marsh	TSM-10	0.11		0.002
Tidal Salt Marsh	TSM-11	0.09		0.04
Tidal Salt Marsh	TSM-12	0.12		0.01
Subtotal Wetlands and Impacts		116.01	0.58	6.05
Freshwater Pond	FP-1		1.13	1.13
Tidal Channel and Bay Waters	TC-1		0.57	0.02
Tidal Channel and Bay Waters	TC-2		21.82	0.78
Tidal Pan	TP-1		0.02	
Tidal Pan	TP-2		0.13	
Tidal Pan	TP-3		0.22	
Subtotal Other Water Bodies			23.89	1.9
PROJECT TOTAL			139.90	0.60
				7.96

During July 6,7, 8, 2010 and February 22, 2012, an ICF soil and wetland scientist and ICF botanist delineated a total of 140.11 acres of potential waters of the United States within the project area, including 13 diked marsh wetlands (4.34 acres), two freshwater marsh wetlands (0.33 acre), 11 tidal salt marsh wetlands (112.26 acres), one freshwater pond (1.13 acres), three tidal channel and bay waters (1.13 acres), and three tidal pans (0.37 acre), see Figures 3.1-3.5 of Appendix A, using the routine onsite determination method described in the 1987 USACE Wetlands Delineation Manual (Environmental Laboratory 1987) and where applicable, criteria specified in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Supplement)(U.S. Army Corps of Engineers 2008).

On February 5, 2013, Ian Liffmann from the USACE, San Francisco District, conducted a field visit to verify the results of the delineation, accompanied Joel Butterworth of ICF International.

Box 19-Project Purpose

The Project would ultimately improve channel capacity for creek flows coupled with the influence of the tides of San Francisco Bay, including projected Sea Level Rise (SLR), from the downstream face of East Bayshore Road to San Francisco Bay. It would reduce local fluvial flood risks in the Project area during storm events, provide the capacity needed for future upstream improvements, increase and improve ecological habitat, and provide for improved recreational opportunities.

The SFCJPA, formed in 1999 following the flood of 1998, is a regional government agency whose members include the Cities of Palo Alto, Menlo Park, and East Palo Alto; the San Mateo County Flood Control District, and the Santa Clara Valley Water District (District). The SFCJPA implements flood management, ecosystem restoration and recreational enhancements throughout the San Francisquito Creek watershed and floodplain.

Flooding from the Creek is a common occurrence. The most recent flood event occurred as a result of extremely high creek flows in December 22-23, 2012, when the Creek overtopped its banks in several areas. The maximum instantaneous peak flow recorded at USGS Gage 11164500 during the December 2012 event was 5,400 cubic feet per second (cfs). An even larger event occurred in February 1998, with a maximum instantaneous peak flow recorded during the February 1998 event was 7,200 (cfs). The U.S. Army Corps of Engineers (USACE) estimates that the 1998 flood was a 45-year flood event. A 100-year flood event is anticipated to result in flows of 9,400 cfs at the mouth of the Creek. These flows would exceed the existing capacity of the Creek (San Francisquito Creek Joint Powers Authority 2009).

The Project's goals are to improve flood protection, habitat, and recreational opportunities within the Project reach, with the following specific objectives:

- Protect properties and infrastructure between East Bayshore Road and the San Francisco Bay from Creek flows resulting from 100-year fluvial flood flows occurring at the same time as a 100-year tide that includes projected Sea Level Rise through 2067.
- Accommodate future flood protection measures that might be constructed upstream of the Project.
- Enhance habitat along the Project reach, particularly habitat for threatened and endangered species.
- Enhance recreational uses.
- Minimize operational and maintenance requirements.

The Project would increase conveyance and retention capacity of floodwaters from runoff and San Francisco Bay tides to protect residents and property from flood events along the lower section of the Creek, from East Bayshore Road to the San Francisco Bay.

Box 21-Types of Material Being Discharged and the Amount of Each Type in Cubic Yards

Table 4 provides the amount and type of fill to be discharged into Waters of the U.S. in the proposed project.

Table 4. Amount and Type of Fill to Be Discharged

	Levee Fill	Rock	Gravel	Pavement
Amount in Cubic Yards (cy)	32,286 cy	5,202 cy	16 cy	88 cy

Box 22-Surface Area of Wetlands and Other Waters Filled

Approximately 8.56 acres of wetlands would be permanently or temporarily affected by Project construction: approximately 4.43 acres of tidal salt marsh and other tidal waters, 2.85 acres of diked marsh, and 1.27 acre of freshwater marsh/pond. Levee and floodwall construction activities would temporarily and permanently affect diked marsh and tidal salt marsh habitat. Figures 4.1-4.5 of Appendix A, show impacts of the Project to wetlands and other waters.

However, as described in Chapter 2, *Project Description* of the Final EIR (October 2012), Compacts Disc 1, marshplain restoration would result in creation and restoration of approximately 14.63 acres of tidal salt marsh habitat. Construction requiring removal of wetlands would be subject to USACE jurisdiction under Section 404 of the Clean Water Act (CWA), and CDFW and RWQCB (state) jurisdiction under CWA Sections 401 and 402. Wetland disturbance and/or removal would represent a less-than-significant impact given the creation and restoration of 14.63 acres of tidal wetlands. Implementation of multiple mitigation measures, described in the Final EIR, would further minimize impacts on wetlands not within the grading footprint, including the low-flow channel.

Box 23-Avoidance and Minimization Measures

In addition to the Best Management Practices (BMPs) covered under the Districts’ Stream Maintenance Program, the Project would also incorporate multiple measures, listed below, during the construction of the proposed project to avoid and minimize impacts to Water of the United States and species habitat. Refer to the Biological Assessment (November 2012), Compact Disc 2, for a detailed explanation of all proposed measures.

Techniques Used to Prevent Sediments from Entering Water Courses

1. The following measures will be implemented as necessary to reduce and minimize stormwater pollution during ground disturbing maintenance activities:
 - Soils exposed due to maintenance activities will be seeded and stabilized using hydroseeding, straw placement, mulching, and/or erosion control fabric. These measures will be implemented such that the site is stabilized and water quality protected prior to significant rainfall.
 - The preference for erosion control fabrics will be to consist of natural fibers.
 - Appropriate measures include, but are not limited to, the following:
 - Silt Fences.
 - Straw Bale Barriers.
 - Brush or Rock Filters.
 - Storm Drain Inlet Protection.
 - Sediment Traps.
 - Sediment Basins.
 - Erosion Control Blankets and Mats.
 - Soil Stabilization (i.e. tackified straw with seed, jute or geotextile blankets, etc.).
 - Wood chips.
 - Straw mulch.
 - All temporary construction-related erosion control methods will be removed at the completion of the Project (e.g., silt fences). (Santa Clara Valley Water District Water Quality BMP 41)
2. The following measures will be implemented to ensure sediments will be stored and transported in a manner that minimizes water quality effects:
 - Wet sediments may be stockpiled outside of a live stream or may be stockpiled within a dewatered stream so water can drain or evaporate before removal.
 - This measure applies to saturated, not damp, sediments and depends on the availability of a stockpile site.
 - For those stockpiles located outside the channel, water draining from them will not be allowed to flow back into the Creek or into local storm drains that enter the Creek, unless water quality protection measures recommended by RWQCB are implemented.
 - Trucks may be lined with an impervious material (e.g., plastic), or the tailgate blocked with dry dirt or hay bales, for example, or trucks may drain excess water by slightly tilting their loads and allowing the water to drain out.
 - Water will not drain directly into channels (outside of the work area) or onto public streets without providing water quality control measures
 - Streets and affected public parking lots will be cleared of mud and/or dirt by street sweeping (with a vacuum-powered street sweeper), as necessary, and not by hosing down the street. (Santa Clara Valley Water District Water Quality BMP 4)

3. Oily, greasy, or sediment-laden substances or other material that originate from the Project operations and may degrade the quality of surface water or adversely affect aquatic life, fish, or wildlife will not be allowed to enter, or be placed where they may later enter, any waterway.
4. The following measures will be implemented to ensure the Project will not increase the turbidity of any watercourse flowing past the construction site by taking all necessary precautions to limit the increase in turbidity as follows:
 - Where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases will not exceed 5 percent.
 - Where natural turbidity is greater than 50 NTU, increases will not exceed 10 percent.
 - Where the receiving water body is a dry creek bed or storm drain, waters in excess of 50 NTU will not be discharged from the Project.
 - Water turbidity changes will be monitored. The discharge water measurements will be made at the point where the discharge water exits the water control system for tidal sites and 100 feet downstream of the discharge point for non-tidal sites. Natural watercourse turbidity measurements will be made in the receiving water 100 feet upstream of the discharge site. Natural watercourse turbidity measurements will be made prior to initiation of Project discharges, preferably at least 2 days prior to commencement of operations. (Santa Clara Valley Water District Water Quality BMP 40)
5. No washing of vehicles will occur at job sites. (Santa Clara Valley Water District Hazards & Hazardous Materials BMP 9).
6. No fueling will be done in a waterway or immediate flood plain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators).
 - For stationary equipment that must be fueled on the site, containment will be provided in such a manner that any accidental spill of fuel will not be able to enter the water or contaminate sediments that may come in contact with water.
 - Any equipment that is readily moved out of the waterway will not be fueled in the waterway or immediate flood plain.
 - All fueling done at the job site will provide containment to the degree that any spill will be unable to enter any waterway or damage riparian vegetation. (Santa Clara Valley Water District Hazards & Hazardous Materials BMP 10)
7. No equipment servicing will be done in a stream channel or immediate flood plain, unless equipment stationed in these locations cannot be readily relocated (i.e., pumps, generators).
 - Any equipment that can be readily moved out of the channel will not be serviced in the channel or immediate flood plain.
 - All servicing of equipment done at the job site will provide containment to the degree that any spill will be unable to enter any channel or damage stream vegetation.
 - If emergency repairs are required in the field, only those repairs necessary to move equipment to a more secure location will be done in a channel or flood plain.
 - If emergency repairs are required, containment will be provided equivalent to that done for fueling or servicing.
8. Measures will be implemented to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means.

- Prior to entering the work site, all field personnel will know how to respond when toxic materials are discovered.
 - The discharge of any hazardous or nonhazardous waste as defined in Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations (CCR) will be conducted in accordance with applicable state and federal regulations.
 - In the event of any hazardous material emergencies or spills, personnel will call the Chemical Emergencies/Spills Hotline at 1 800 510 5151. (Santa Clara Valley Water District Hazards & Hazardous Materials BMP 12)
9. Prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water.
- Field personnel will be appropriately trained in spill prevention, hazardous material control, and cleanup of accidental spills.
 - No fueling, repair, cleaning, maintenance, or vehicle washing will be performed in a creek channel or in areas at the top of a channel bank that may flow into a creek channel. (Santa Clara Valley Water District Hazards & Hazardous Materials BMP 13)
10. Spill prevention kits appropriate to the hazard will always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations).
- Prior to entering the work site, all field personnel will know the location of spill kits on crew trucks and at other locations within District facilities.
 - All field personnel will be advised of these locations and trained in their appropriate use. (Santa Clara Valley Water District Hazards & Hazardous Materials BMP 14)
11. Runoff from soil stockpiles will be avoided. If soil is to be stockpiled, no runoff will be allowed to flow to a creek.
12. Cofferdams will be used for tidal work areas. For tidal areas, a downstream cofferdam will be constructed to prevent the work area from being inundated by tidal flows. By isolating the work area from tidal flows, water quality effects are minimized. Downstream flows continue through the work area and through pipes within the cofferdam.
- Installation of coffer dams will begin at low tide.
 - Waters discharged through tidal coffer dam bypass pipes will not exceed 50 NTU over the background levels of the tidal waters into which they are discharged.
 - Cofferdams shall not be constructed of earthen fill due to potential adverse water quality impacts in the event of a failure.
 - Cofferdams constructed of gravel shall be covered by a protective covering (e.g., plastic or fabric) to prevent seepage.
13. Groundwater will be managed at work sites. If high levels of groundwater in a work area are encountered, the water will be pumped out of the work site. If necessary to protect water quality, the water will be directed into specifically constructed infiltration basins, into holding ponds, or onto areas with vegetation to remove sediment prior to the water re-entering a receiving water body. Water pumped into vegetated areas will be pumped in a manner that will not create erosion around vegetation.
14. Sanitary/septic waste will be managed. Temporary sanitary facilities will be located on jobs that last multiple days in compliance with California Division of Occupational Safety and Health (Cal/OSHA)

regulation 8 CCR 1526. All temporary sanitary facilities will be placed outside of the Creek channel and flood plain and removed when no longer necessary.

15. In addition, as part of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) and the San Mateo Countywide Stormwater Pollution Prevention Program (SM-STOPPP), required under San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (Order R2-2009-0074), all construction sites are required to have site-specific and seasonally and phase-appropriate effective BMPs (San Francisco Bay Regional Water Quality Control Board 2009). SFCJPA will be responsible for ensuring compliance with all local and State regulations, including the RWQCB NPDES permits and local BMPs for jurisdictions adjoining the Project site. The Project specifications require that the Project construction contractor prepare a SWPPP and erosion control and sedimentation plan showing placement of BMPs at various stages of construction in conformance with requirements, and all SWPPP documents and plans will be stamped by a State-certified Qualified SWPPP Developer (QSD). The Project will implement measures to accomplish objectives specified in SFCJPA's San Francisquito Creek Watershed Analysis and Sediment Reduction Plan, which fulfills NPDES permit provisions that require the co-permittees of the SCVURPPP and SM-STOPPP within the Creek watershed to assess and implement sediment management measures in the watershed (San Francisquito Creek Joint Powers Authority 2004). Water quality protection standards during construction will comply with the most protective BMPs of the local jurisdictions and the State of California.

Measures to Protect Fish and Wildlife Resources

1. Prior to construction, Worker Awareness Training must be conducted to inform construction Project workers of their responsibilities regarding sensitive environmental resources. The training will include environmental education about the western pond turtles, nesting raptors and migratory birds, western burrowing owl, California clapper rail, California black rail, salt marsh harvest mouse, salt marsh wandering shrew, California least tern, western snowy plover, California red-legged frog, San Francisco garter snake, and steelhead, as well as sensitive habitat (e.g., in-stream habitat, riparian habitat, wetlands). The training will include visual aids to assist in identification of regulated biological resources, actions to take should protected wildlife be observed within the action area, and possible legal repercussions of affecting such regulated resources.
2. Existing access ramps and roads to waterways will be used where possible. If temporary access points are necessary, they will be constructed in a manner that minimizes effects on waterways:
 - Temporary Project access points will be created as close to the work area as possible to minimize running equipment in waterways and will be constructed so as to minimize adverse effects.
 - Any temporary fill used for access will be removed upon completion of the Project. Site topography and geometry will be restored to pre-Project conditions to the extent possible. (Santa Clara Valley Water District Biological Resources BMP 4)
3. Migratory bird nesting surveys will be performed prior to any Project-related activity that could pose the potential to affect migratory birds during the nesting season. Inactive bird nests may be

removed, with the exception of raptor nests. No birds, nests with eggs, or nests with hatchlings will be disturbed. (Santa Clara Valley Water District Biological Resources BMP 8)

4. Nesting exclusion devices may be installed to prevent potential establishment or occurrence of nests in areas where construction activities would occur. All nesting exclusion devices will be maintained throughout the nesting season or until completion of work in an area makes the devices unnecessary. All exclusion devices will be removed and disposed of when work in the area is complete. (Santa Clara Valley Water District Biological Resources BMP 10)
5. Effects on native aquatic vertebrates will be avoided or minimized. Native aquatic vertebrates (fish, amphibians and reptiles) are important elements of stream ecosystems. Native aquatic vertebrates may or may not be able to rapidly recolonize a stream reach if the population is eliminated from that stream reach. If native aquatic vertebrates are present when cofferdams, water bypass structures, and silt barriers are to be installed, an evaluation of the project site and the native aquatic vertebrates will be conducted by a qualified biologist. The qualified biologist will consider:
 - Native aquatic species present at the site.
 - The ability of the species to naturally recolonize the stream reach.
 - The life stages of the native aquatic vertebrates present.
 - The flow, depth, topography, substrate, chemistry and temperature of the stream reach.
 - The feasibility of relocating the aquatic species present.
 - The likelihood the stream reach will naturally dry up during the work season.

Based on consideration of these factors, the qualified biologist may make a decision to relocate native aquatic vertebrates. The qualified biologist will document in writing the reasons to relocate native aquatic species, or not to relocate native aquatic species, prior to installation of cofferdams, water bypass structures or silt barriers.

If the decision is made to relocate the native aquatic species, then the operation will be based on the District's Fish Relocation Guidelines. If steelhead or other fish species are present, the measures in number 8 (below) will be followed.

6. Local ecotypes of native plants will be planted and appropriate erosion-control seed mixes will be chosen. Whenever native species are prescribed for installation on District fee properties or easements, the following steps will be taken by a qualified biologist or vegetation specialist:
 - Evaluate whether the plant species currently grows wild in Santa Clara County.
 - If the plant species currently grows wild in Santa Clara County, the qualified biologist or vegetation specialist will determine whether the plant installation must include local natives, i.e. grown from propagules collected in the same or adjacent watershed, and as close to the Project site as feasible.
 - A qualified biologist or vegetation specialist will be consulted to determine which seeding option is ecologically appropriate and effective. The following guidelines will inform the biologist or vegetation specialist's determination.

- For areas that are disturbed, an erosion control seed mix may be used. Seed selection will be ecologically appropriate as determined by a qualified biologist.
- In areas with remnant native plants, the qualified biologist or vegetation specialist may choose an abiotic application instead, such as an erosion control blanket or seedless hydro-mulch and tackifier to facilitate passive revegetation of native species.
- Temporary earthen access roads may be seeded when site and horticultural conditions are suitable.
- If a gravel or wood mulch has been used to prevent soil compaction per BI-11, this material may be left in place [if ecologically appropriate] instead of seeding.

7. Animal entry and entrapment will be avoided.

- All pipes, hoses, or similar structures less than 12 inches diameter will be closed or covered to prevent animal entry. All construction pipes, culverts, or similar structures, greater than 2-inches diameter, stored at a construction site overnight, will be inspected thoroughly for wildlife by a qualified biologist or properly trained construction personnel before the pipe is buried, capped, used, or moved.
- If inspection indicates presence of sensitive or state- or federally-listed species inside stored materials or equipment, work on those materials will cease until a qualified biologist determines the appropriate course of action.
- To prevent entrapment of animals, all excavations, steep-walled holes or trenches more than 6-inches deep will be secured against animal entry at the close of each day. Any of the following measures may be employed, depending on the size of the hole and method feasibility.
 - Holes will be securely covered (no gaps) with plywood or similar materials at the close of each working day, or any time the opening will be left unattended for more than one hour.
 - In the absence of covers, the excavation will be provided with escape ramps constructed of earth or untreated wood, sloped no steeper than 2:1, and located no farther than 15 feet apart.
 - In situations where escape ramps are infeasible, the hole or trench will be surrounded by filter fabric fencing or a similar barrier with the bottom edge buried to prevent entry.

8. Implement avoidance measures for steelhead trout prior to construction activities. No in-channel construction activities will occur during the steelhead migration period (October 1–May 30), to reduce the likelihood that steelhead are present during construction activities.

- A qualified fisheries biologist, approved by the National Marine Fisheries Service (NMFS), will survey the construction area 1 to 2 days before work on the Project begins. If water is present in the immediate construction area, the following procedures will be implemented.
- Before a work area is dewatered, fish will be captured and relocated to avoid injury and mortality and minimize disturbance.

- Before fish relocation begins, a qualified fisheries biologist will identify the most appropriate release location(s). Release locations should have water temperatures similar to the capture location and offer suitable habitat (migratory and rearing) for released fish, and should be selected to minimize the likelihood that fish will reenter the work area or become impinged on the exclusion net or screen. At this time the open reach below the Project site is anticipated to have suitable conditions for relocation.
- Seining or dip netting will be utilized to keep stress and injury to fish at a minimum. Given the salinity of the Project reach, electrofishing would be ineffective and not utilized.
- To the extent feasible, relocation will be performed during morning periods. Water temperatures will be measured periodically (every hour or so), and relocation activities will be suspended if water temperature exceeds 20°C.
- Handling of salmonids will be minimized. When necessary to touch the fish, personnel will wet hands or nets before touching a fish.
- Fish will be held temporarily in cool, shaded Creek water in a container with a lid. Overcrowding in containers will be avoided. Fish will be relocated promptly. If water temperature reaches or exceeds NMFS limits, fish will be released and relocation operations will cease.
- If fish are abundant, capture will cease periodically to allow release and minimize the time fish spend in holding containers.
- Fish will not be anesthetized or measured. However, they will be visually identified to species level, and year classes will be estimated and recorded.
- Reports on fish relocation activities will be submitted to the California Department of Fish and Wildlife (CDFW) and NMFS within 30 days of completion.
- If mortality during relocation exceeds 5 percent or mortality of any state or federally listed species occurs, relocation will cease, and CDFW and NMFS will be contacted immediately or as soon as feasible.
- Fish relocation efforts will be performed concurrent with the installation of the diversion and will be completed before the channel is fully dewatered. The fisheries biologist will perform a second survey 1 to 2 days following the installation of the diversion to ensure that fish have been excluded from the work area and spot checks will be performed at least biweekly while the diversion is in place.

9. Identify and protect riparian habitats. To avoid unnecessary damage to or removal of riparian habitat, the SFCJPA will retain a qualified biologist or ecologist to survey and demarcate riparian habitat on or adjacent to the proposed areas of construction in the upper reach of San Francisquito Creek. Riparian areas not slated for trimming or removal to accommodate Project construction will be protected from encroachment and damage during construction by installing temporary construction fencing to create a no-activity exclusion zone. Fencing will be brightly colored and highly visible, and installed under the supervision of a qualified biologist to prevent damage to riparian habitat during installation. The fencing will protect all potentially affected riparian habitat consistent with

International Society of Arboriculture tree protection zone recommendations and any additional requirements of the resource agencies with jurisdiction. Fencing will be installed before any site preparation or construction work begins and will remain in place for the duration of construction. Riparian vegetation that must be trimmed will be trimmed by an International Society of Arboriculture certified arborist who will minimize stress and potential damage to trees and shrubs. Construction personnel will be prohibited from entering the exclusion zone for the duration of Project construction. Access and surface-disturbing activities will be prohibited within the exclusion zone.

Mitigation and Compensation Measures

The SFCJPA will be responsible for restoring affected tidal marsh, diked marsh, freshwater marsh, and riparian habitat with the proposed enlarged tidal marshplain and would represent a combination of in-kind and out-of-kind mitigation for habitat impacts. Figures 5.1-5.5 of Appendix A, show the components of the marshplain creation. This enhancement will result in the creation of approximately 14.63 acres of marshplain habitat as opposed to the XX acre net impacts to wetlands, waters, and riparian zones associated with the project. Permanently affected habitat will be restored at a mitigation-to-effect ratio of 2:1, and temporarily affected habitat will be restored at a minimum effect-to-mitigation ratio of 1:1. A small 0.5 acre patch of riparian habitat exists along San Francisquito Creek in the southwestern portion of the project area, but will represent a less-than-significant impact given the amount of marshplain creation along the creek and would represent a better ecological context within the tidal reach.

In-kind restoration options don't exist in the study area if the ultimate goal is to retain the natural functions and values of San Francisquito Creek. Out-of-kind restoration will occur on-site, and will result in a greater net acreage of habitat creation than in-kind, off-site restoration and result in an overall net benefit to the ecosystem. The SFCJPA will develop a Mitigation and Monitoring Plan (MMP) to ensure that all removed habitat is replaced with native marshplain species to maintain structural complexity and habitat value. The MMP will be developed in the context of the federal and state permitting processes under the CWA and California Department of Fish and Wildlife Code, and will include success criteria as specified by the permitting agencies. The MMP will also include adaptive management guidelines for actions to be taken if the success criteria are not met. The success criteria will be met if 80 percent of the marshplain plantings become established after ten years. Monitoring will occur, at a minimum, during years 1, 2, 3, 5, 7, and 10, with the plantings taking place in year 0. The initial annual monitoring will assess progress of the plantings according to predetermined success criteria. If progress is not satisfactory, adaptive management actions (including replanting, nonnative species removal, etc.) could be implemented. The MMP will remain in force until the success criteria are met.

Marshplain Creation and Restoration

Marshplain creation and restoration will effectively restore tidal influence in the Project reach. Marshplain will be created so that it spans the entire Project extent on both banks from East Bayshore Road to San Francisco Bay on the right bank and from East Bayshore Road to the end of the existing left levee on the left bank. Both sides of the channel would be planted from the toe of the levee or base of the floodwall to the edge of the Creek channel.

After Phase One levee construction is complete, the tidal marsh area would be terraced and revegetated with high-marsh plants. The high-marsh planting area would total 5.79 acres and the high-marsh transition planting area would total 8.84 acres. Additionally, in areas where rock slope protection is required, 10-foot vegetated shrub bands would be installed to provide refugia and promote long term vegetated protection and stability across the rock slope protection areas.

Native marsh plants would be used to revegetate the terraced land. Plants appropriate to the high marsh would be planted near the stream channel. Plants native to marsh transition areas would be planted in areas more distant from the Creek channel. The SFCJPA, or its designated contractor, will be responsible for the acquisition of plant material. All container stock will be propagated from native stock collected within the south San Francisco Bay and tidally influenced creeks in coordination with Santa Clara Valley Water District staff.

Special-Status Species

Conservation Measure BIO1—Develop and Implement Worker Awareness Training

Prior to construction, Worker Awareness Training must be conducted to inform construction Project workers of their responsibilities regarding sensitive environmental resources. The training will include environmental education about nesting raptors and migratory birds, California clapper rail, salt marsh harvest mouse, California least tern, western snowy plover, California red-legged frog, San Francisco garter snake, and steelhead, as well as sensitive habitat (e.g., in-stream habitat, riparian habitat, wetlands). The training will include visual aids to assist in identification of regulated biological resources, actions to take should protected wildlife be observed within the action area, and possible legal repercussions of affecting such regulated resources.

Conservation Measure BIO2—Implement Survey and Avoidance Measures for California Red-Legged Frog and San Francisco Garter Snake Prior to Construction Activities

SFCJPA will retain a permitted biologist to conduct a survey of the freshwater ponds and surrounding upland habitat prior to initiation of construction activities. The surveys will be conducted according to applicable protocols and will be performed during optimal observation periods of the day when detection potential for these species is maximized. The survey will be conducted prior to initiation of construction, but such that enough time is allowed to coordinate with USFWS and CDFW to develop a species avoidance plan if needed. If California red-legged frog or San Francisco garter snake individuals are observed or heard during the survey, proposed Project activities within 500 feet of the observation will be postponed. A species avoidance plan will be developed in coordination with USFWS and CDFW and implemented during construction and maintenance. If no individuals are observed during the surveys, no further action will be necessary.

Conservation Measure BIO3—Implement Survey and Avoidance Measures for California Least Tern and Western Snowy Plover Prior to Construction Activities

Construction work, including site preparation, will be avoided to the extent possible within and near (500 feet) suitable habitat for these species during their breeding seasons (March 1 to August 31). Western snowy plover may be present within suitable habitat year-round. Prior to the initiation of work within 500 feet of suitable habitat (regardless of the time of year), a permitted biologist will be retained to conduct surveys of

appropriate habitat for California least tern and western snowy plover and their nests. The surveys will be conducted no more than 48 hours prior to commencement of construction activities and will be performed during optimal observation periods when these species are most active. If active nests for California least tern or western snowy plover are observed during the survey, Project activities within 500 feet of the observation will be postponed until young have fledged. If individuals are observed outside of the breeding season within 500 feet of the work area, a biologist will establish a no-disturbance buffer. No work will occur within the buffer until the biologist verifies that individuals have left the area. If individuals are routinely observed in or within 500 feet of the work area or do not leave the work area, species avoidance plan will be developed in coordination with USFWS and CDFW. If no individuals are observed in accordance with the survey protocols, no buffers will be required.

Conservation Measure BIO4—Produce and Implement Habitat Monitoring Plan for Habitat within the Faber Tract Prior to Construction Activities

The SFCJPA or its approved designee will be responsible for the development and implementation of a habitat monitoring plan for existing (i.e., pre-Project) habitat within the Faber Tract that will document baseline conditions prior to Project implementation. The plan will include routine monitoring of the habitat within the Faber Tract to document changes resulting from the hydrologic reconnection of San Francisquito Creek and potential subsequent flooding into the Faber Tract. The habitat monitoring plan will include adaptive management measures to rectify potential conversion of habitat types and other issues that might arise in the Faber Tract as a result of Project implementation. Additionally, contingency measures will be developed and included in the plan in the event of habitat conversion or loss resulting from the Project. Plan approval by USFWS will be necessary before implementation of activities recommended by the plan. Routine monitoring reports will be submitted to the appropriate agencies following their completion.

Conservation Measure BIO5—Implement Survey and Avoidance Measures for California Clapper Rail Prior to Construction Activities

Work activities within 50 feet of California clapper rail habitat will not occur within 2 hours before or after extreme high tides (6.5 feet or above) when the marsh plain is inundated, which could prevent individuals from reaching available cover.

If work is to be conducted during the species' breeding and rearing seasons (February 1st–August 31) within 700 feet of suitable habitat, a permitted biologist will be retained to conduct protocol level surveys at the Project site including rail call surveys and rail-track surveys in appropriate habitat for California clapper rail (California Coastal Conservancy 2011). The surveys will be conducted no more than 48 hours prior to commencement of construction and maintenance activities and will be performed at dawn or dusk, the vocalization periods of highest intensity. Project activities occurring within 700 feet of active nests will be postponed until after young have fledged.

Outside of breeding season, a permitted biologist will be retained to conduct surveys of appropriate habitat for California clapper rail within the work area, including all staging and access routes, no more than seven days prior to initiation of work within suitable habitat. If individuals are observed during this survey, a biologist will conduct an additional survey immediately prior to initiation of construction activities. If individuals are observed within or near the work area, a no-disturbance buffer (minimum 50 feet) will be

implemented. If the daily work area is expanded, then a qualified biologist will survey the suitable habitat prior to initiation of work and movement of equipment that day. No work will occur within the buffer until the biologist verifies that California clapper rail individuals have left the area.

If individuals are routinely observed in the work area, a species avoidance plan will be developed in coordination with USFWS and CDFW. If no individuals are observed in accordance with the survey protocols, no buffers will be required. All vegetation removal within suitable habitat of these species, as determined by a biologist, will be done by hand to the extent possible. If movement of heavy equipment is necessary in suitable habitat or within 50 feet of habitat, then a biological monitor will observe the area in front of the equipment from a safe vantage point. If these species are detected within the area in front of the equipment, then the equipment will stop and the biologist will direct the equipment on an alternative path. If this is not possible, then equipment will stop until a clear path can be identified.

Additional conservation measures during the construction period will include:

- An annual search for and subsequent destruction of any cat feeding stations along public walkways shall be conducted
- Before the onset of winter high tides, an annual capture and removal effort of feral cats and rats in the surrounding disturbed areas shall be conducted.

Conservation Measure BIO6—Implement Survey and Avoidance Measures for Salt Marsh Harvest Mouse Prior to Construction

Construction and maintenance work, including site preparation, will be avoided to the extent possible within suitable habitat for this species during their breeding seasons (February 1 to November 30). As work during the species breeding seasons will be necessary, a species avoidance plan will be developed in consultation with USFWS and CDFW and implemented. The avoidance plan, at a minimum, will include the following.

- Hand vegetation removal shall start at the edge farthest from the largest contiguous salt marsh area and work its way towards the salt marsh, providing cover for salt marsh harvest mice and allowing them to move towards the salt marsh as vegetation is being removed.
- In consultation with CDFW and USFWS, exclusion fencing shall be placed around a defined work area immediately following vegetation removal and before Project activities begin. The final design and proposed location of the fencing shall be reviewed and approved by CDFW and USFWS prior to placement.
- Prior to initiation of work each day within 300 feet of tidal or pickleweed habitats, a qualified biologist shall thoroughly inspect the work area and adjacent habitat areas to determine if saltmarsh harvest mice are present. The biologist shall ensure the exclusion fencing has no holes or rips and the base remains buried. The fenced area will be inspected daily to ensure that no mice are trapped.

Prior to initiation of work within suitable habitat, a permitted biologist will be retained to monitor the hand removal of pickleweed to avoid effects on salt marsh harvest mouse. Monitoring will occur for the duration of all clearing work within suitable habitat. If salt marsh harvest mouse are observed during clearing activities, clearing will cease and workers will move to a new area. Clearing work may begin in the area of the observation one day or more after the observation date.

During the survey, if salt marsh harvest mouse individuals are observed, or if active nests of these species are observed, proposed Project activities within 100 feet of the observation will be postponed and a no-disturbance buffer will be established. The buffer will remain in place until the biologist determines that the individuals have left the area and are not present in or near (100 feet) of the work area. If no individuals are observed in accordance with the survey protocols, no buffers will be required.

Work activities within 50 feet of salt marsh harvest mouse habitat will not occur within two hours before or after extreme high tides (6.5 feet or above) when the marsh plain is inundated, which could prevent individuals from reaching available cover.

Conservation Measure BIO7—Conduct Botanical Surveys

SFCJPA will retain a qualified botanist to survey suitable habitat in the action area for California seablite. Surveys will be preferentially conducted from July to August the year before construction will begin, as the blooming period for the species is July to October. Exact timing of surveys should account for annual variations in climate and weather; surveys should be timed to coincide with blooming periods of known local populations whenever possible

Surveys will follow the CNPS Botanical Survey Guidelines (California Native Plant Society 2001). Special-status plants identified during the surveys will be mapped using a handheld global positioning system unit and documented as part of the public record. A report of occurrences will be submitted to SFCJPA and the CNDDDB. Surveys will be completed before ground-disturbing activities begin; survey timing will allow for follow-up mitigation, if needed. If it is determined that identified individuals could be affected by construction traffic or activities, Conservation Measure BIO7 and, if necessary, Conservation Measure BIO8, will be implemented.

Conservation Measure BIO8—Confine Construction Disturbance and Protect California Seablite Individuals during Construction

Construction disturbance will be confined to the minimum area necessary to complete the work, and will avoid encroachment on adjacent habitat. If California seablite individuals are found, a setback buffer will be established around individuals or the area occupied by the population, based on judgment of a qualified botanist. The plants and a species-appropriate buffer area determined in consultation with USFWS staff will be protected from encroachment and damage during construction by installing temporary construction fencing. Fencing will be brightly colored and highly visible. Fencing will be installed under the supervision of a qualified botanist to ensure proper location and prevent damage to plants during installation. Fencing will be installed before site preparation or construction work begins and will remain in place for the duration of construction. Construction personnel will be prohibited from entering these areas (the exclusion zone) for the duration of Project construction. Fencing installation will be coordinated with fence installation required by other conservation measures protecting wetlands, riparian habitat, and mature trees.

Conservation Measure BIO9—Compensate for Loss of California Seablite

If California seablite individuals are present and cannot be effectively avoided through implementation of Conservation Measure BIO7, SFCJPA will develop and implement a compensation plan. The compensation

plan will preserve an offsite area containing individuals of the species. The plan will be implemented so that there is no net loss of California seablite. If an offsite population is not located or is not available for preservation, SFCJPA will employ a qualified nursery to collect and propagate the affected species, collected at the appropriate time of year, prior to population disturbance at the affected areas of the Project. Transplantation will also be implemented if practicable for the species affected, including mature native plants to the extent feasible.

The compensation plan will be developed by a qualified botanist in coordination with and approval of USFWS. The compensation area will contain a population and/or acreage equal to or greater than that lost as a result of Project implementation and will include adjacent areas as needed to preserve the special-status plant population in perpetuity. Compensation of the affected population will occur in an amount equal to or greater than the amount lost as a result of the Project to ensure that genetic diversity is preserved and no net loss of the number of individuals occurs. The quality of the population preserved will also be equal to or greater than that of the affected population, as determined by a qualified botanist retained by the SFCJPA. Compensation sites and populations will be subject to USFWS approval. The SFCJPA will be responsible for ensuring that the compensation area is acquired in fee or in conservation easement, maintained for the benefit of the special-status plant population in perpetuity, and funded through the establishment of an endowment.

A monitoring and adaptive management plan will be developed for each compensation site, subject to CDFW and USFWS approval. This plan will establish success criteria for the site and will include protocols for annual monitoring of the site. The goal of monitoring will be to assess whether the plan has successfully mitigated Project effects; monitoring will be designed to ensure that the required number of plants and/or plant acreage is being sustained through site maintenance. Factors to be monitored could include density, population size, natural recruitment, and plant health and vigor. If monitoring indicates that special-status plant populations are not maintaining themselves, adaptive management techniques will be implemented. Such techniques could include reseeding/replanting, nonnative species removal, and other management tools. The site will be evaluated at the end of the monitoring period to determine whether the mitigation has met the goal of this conservation measure to preserve a population the same size as that affected and of equal or greater quality as that lost as a result of Project activities at the site. Criteria by which this determination will be made will be established in the monitoring plan. The monitoring plan will also address adaptive management strategies to be adopted if the evaluation determines that the site does not meet the success criteria. In that case, a monitoring plan will stay in place until the success criteria are met.

Box 25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody.

APN	OWNER	ADDRESS	CITY	STATE	ZIP
063521140	Acosta Jose A	1344 Camellia Drive	East Palo Alto	CA	94303-
063521100	Aguilera Juana Martha	1360 Camellia Ave	East Palo Alto	CA	94303-
063571060	American Storage Associates	1985 E Bayshore Blvd	E Palo Alto	CA	94303-
063540270	American Storage Associates	1985 E Bayshore Blvd	E Palo Alto	CA	94303-
063540250	Ashufta Baryalay	223 Daphne Way	East Palo Alto	CA	94303-
063531230	Ballinger Debbi	104 Daphne Way	East Palo Alto	CA	94303--2634
063531220	Bar-Am Paz	P O Box 64365	Sunnyvale	CA	94088--4365
063521090	Barber Warren Cotr	1364 Camellia Dr	Palo Alto	CA	94303--2631
063531050	Branch Gracie Tr	176 Jasmine Way	E Palo Alto	CA	94303-
063521180	Bravo Hugo Tr	1038 Garden St	Palo Alto	CA	94303-
063531200	Breckenridge Wayne A	116 Jasmine Way	East Palo Alto	CA	94303--2642
063540160	Brown Nathan	285 Oxford Ave	Palo Alto	CA	94306-
063540190	Bryant Alfredo J & Laverne	215 Daphne Way	East Palo Alto	CA	94303--2639
063521040	Caisero Alfredo V & Lilia H	1384 Camellia Dr	East Palo Alto	CA	94303--2631
063521060	Campbell Edward E Sr	Po Box 3260	San Jose	CA	95156--3260
063521010	Campbell Robert E & Cynthia A	1404 Camellia Dr	Palo Alto	CA	94303--2632
063540060	Centeno Claudia M	123 Daphne Wy	East Palo Alto	CA	94303-
063580100	City Of Palo Alto	250 Hamilton Ave	Palo Alto	CA	94301--2531
063540090	Damon Johnny Jr	135 Daphne Way	East Palo Alto	CA	94303--2635
063540100	Deras Manuel D & Rina Noemi	139 Daphne Way	East Palo Alto	CA	94303--2635
063391010	Durr Joseph & Mary	1174 Oconnor St	Palo Alto	CA	94303--2047
063531170	Dutt Ramesh	1808 Dale Ave	San Mateo	CA	94401-
063580040	East Palo Alto Cy	2415 University Ave	E Palo Alto	CA	94303-
063521050	Eke Siaoisi	1380 Camellia Dr	East Palo Alto	CA	94303--2631
063390160	Finley Honey Tr	621 No Circle Dr	Diamond Springs	CA	95619-
063390210	Finley Honey Tr	621 No Circle Dr	Diamond Springs	CA	95619-
063390220	Finley Honey Tr	621 No Circle Dr	Diamond Springs	CA	95619-
063580050	Finley Honey Tr Et Al	621 No Circle Dr	Diamond Springs	CA	95619-
063390320	Finley Scott T	621 North Circle Dr	Diamond Springs	CA	95619-
063531150	Ford-Morton Latora Tr	136 Jasmine Way	East Palo Alto	CA	94303--2642
063521020	Gardner Nathan Willie	1396 Camellia Dr	East Palo Alto	CA	94303--2631

063540030	Gibson Calvin & Betty E	111 Daphne Way	Palo Alto	CA	94303--2635
063540130	Gonzalez Baudelia	151 Daphne Way	East Palo Alto	CA	94303--2635
063521200	Grnejo Aniceto	1320 Camellia Drive	East Palo Alto	CA	94303-
063521120	Haji Karim I & Asha K	1352 Camellia Dr	East Palo Alto	CA	94303--2631
063531120	Harris Karen	148 Jasmine Way	East Palo Alto	CA	94303-
063540080	He Meiqing	3743 Fulmar Terrace	Fremont	CA	94555-
063540010	Hughes Blossom L	103 Daphne Way	Palo Alto	CA	94303--2635
063531090	Irby Ulysses Jr & C B Trs	160 Jasmine Way	East Palo Alto	CA	94303--2642
063531130	Jett Gordon L & Itaskia	144 Jasmine Way	Palo Alto	CA	94303--2642
063531210	Johnson Juanita T	112 Jasmine Way	Palo Alto	CA	94303--2642
063531190	Juarez Luis	120 Jasmine Way	East Palo Alto	CA	94303--2642
063540120	Lavulo Elizabeth	147 Daphne Way	East Palo Alto	CA	94303-
063521190	Le Grand Sawyer Alfred Tr	2791 Gonzaga St	East Palo Alto	CA	94303--1224
063531110	Lindsey Opal M Tr	152 Jasmine Way	East Palo Alto	CA	94303--2642
063540170	Louie Betty Jean Tr	667 Grant Ave	San Francisco	CA	94108-
063521170	Martinez Hector M	1195 Cypress St	East Palo Alto	CA	94303--2631
063540150	Mc Nair-Knox Faye	161 Daphne Way	Palo Alto	CA	94303--2635
063531080	Melendez Israel & Blanca M	164 Jasmine Way	East Palo Alto	CA	94303--2642
063531040	Merten Eileen M Tr	173 Dolton Ave	San Carlos	CA	94070--1662
063521160	Narayan Rup	1336 Camellia Dr	East Palo Alto	CA	94303--2631
063521070	Nock Steffen R	251 Hillsdale Wy	Redwood City	CA	94062-
063540290	Ong Frank & Ellen	1331 Schooner St	Foster City	CA	94404--3211
063540280	Ong Frank & Ellen	1331 Schooner St	Foster City	CA	94404--3211
063531010	Osby Luvadie Tr	2047 Flintcrest Dr	San Jose	CA	95148-
063521030	Pacheco Sara Z	1388 Camelia Dr	East Palo Alto	CA	94303--2631
063521150	Paez Angel A & Blanca N Trs	2911 Louis Rd	Palo Alto	CA	94303--3904
063531030	Rivas Danilo	184 Jasmine Way	East Palo Alto	CA	94303--2642
063411020	Robbins Ruby J	1412 Camellia Dr	East Palo Alto	CA	94303--2632
063531070	Roberts Tommie B & Mamie	168 Jasmine Way	Palo Alto	CA	94303--2642
063531060	Roberts Tommie B & Mamie	172 Jasmine Way	Palo Alto	CA	94303--2642
063521110	Rodriguez Salvador	1356 Camellia Dr	East Palo Alto	CA	94303--2631
063540140	Sagrero Efrain Et Al	159 Daphne Way	East Palo Alto	CA	94303--2635
063540040	Santiago Alberto & Maria	115 Daphne Way	East Palo Alto	CA	94303--2635
063521080	Segura Jose	1368 Camellia Dr	East Palo Alto	CA	94303--2631
063531160	Shuman Ramsey	Po Box 7236	Fremont	CA	94537--7236
063540180	Sims Curtis Tr	211 Daphne Way	East Palo Alto	CA	94303--2639

063521130	Sutherland Lynda	1348 Camellia Dr	East Palo Alto	CA	94303--2631
063531180	Taylor Ron A	124 Jasmine Wy	East Palo Alto	CA	94303-
063540050	Thomas Audree M Et Al	119 Daphne Drive	East Palo Alto	CA	94303--2635
063540020	Thompson Huey P & Plocerfina B	107 Daphne Way	Palo Alto	CA	94303--2635
063540110	Tomlin Zola M Tr	143 Daphne Way	Palo Alto	CA	94303--2635
063531100	Toole David M Tr	810 Anita Ave	Belmont	CA	94002-
063531140	Toole David M Tr	810 Anita Ave	Belmont	CA	94002-
063390230	Van Elderen Daniel Tr	25601 Fernhill Dr	Los Altos Hills	CA	94024-
063411010	Vargas-Rosales Virginio	1408 Camellia Dr	East Palo Alto	CA	94303--2632
063531020	Waters Angelina Tr	188 Jasmine Way	Palo Alto	CA	94303--2642
063540070	Williams Alice M Tr	127 Daphne Way	East Palo Alto	CA	94303--2635
008-06-001	City of Palo Alto Real Estate - Hamid Ghaemmaghani	250 Hamilton Avenue	Palo Alto	CA	94301
008-01-049	United States Postal Service	2085 East Bayshore Road	Palo Alto	CA	94303
008-01-050	International School of the Peninsula	151 Laura Lane	Palo Alto	CA	94303
008-01-014	Santa Clara Valley Water District	5750 Almaden Expwy	San Jose	CA	95118
008-01-015	Scott Yeaman & Mitchel Johnson	2025 East Bayshore Road	Palo Alto	CA	94301

404(b)(1) Alternatives Analysis

Section 404 of the CWA generally requires project proponents to obtain a permit from the USACE for activities that involve the placement of dredged or fill material into waters of the United States, including wetlands (33 USC 1344). When considering an individual permit application, the USACE follows the U.S. Environmental Protection Agency's (EPA) guidelines for implementing Section 404(b)(1) of the CWA. For water-dependent and non-water-dependent projects, the EPA Guidelines prohibit the discharge of dredged or fill material into waters of the United States if a practicable alternative to the proposed project exists that would have fewer adverse impacts on the aquatic ecosystem, and would not have other significant environmental consequences (40 CFR 230.10[a]). The California Environmental Quality Act requires that an EIR evaluate a "reasonable range" of alternative to a proposed project. The EIR evaluates three project alternatives against flood management objectives within the infrastructure and habitat constraints of the Project area. The Least Environmentally Damaging Practicable Alternative (LEDPA) was chosen in the EIR and advanced as the Project. The complete alternatives analysis is available in Chapter 6 of the EIR.

General Compliance Information

1. Navigation

The Project will not affect navigation.

2. Proper Maintenance

Maintenance will be provided for all authorized fill/structures.

3. Erosion and Siltation Controls

In-water work will be done during low-flow periods. SWPPP in preparation. Permanent stabilization at earliest practicable date.

4. Aquatic Life Movements

The project will implement avoidance measures for all aquatic species with the potential to occur in the project area. Avoidance measures are described in full detail in the Biological Resource Protection Section of the Biological and Essential Fish Habitat Assessment (November 2012), Compact Disc 2.

5. Equipment

If heavy equipment is required to work in wetlands, mats or other measures will be taken to minimize soil disturbance

6. Wild and Scenic Rivers

Not Applicable

7. Tribal Rights

Project will not affect tribal rights.

8. Water Quality 401 Certification

Application Pending. SWPPP in preparation.

9. Coastal Zone Management

Not Applicable. The Coastal Act cedes jurisdictional in the San Francisco Bay to San Francisco Bay Conservation and Development Commission.

10. Endangered Species

See the Biological and Essential Fish Habitat Assessment for a full list of federally-listed species in the project area.

11. Historic Properties

No NRHP-eligible resources are present in non-jurisdictional areas of the proposed construction footprint. Resources document in Section 106 Report submitted to USACEs. Cultural Resources Mitigation Plan in preparation.

12. Water Supply Intake

The project does not occur in proximity of a public water supply intake.

13. Shellfish Beds

Shellfish beds are not present in the project area.

14. Suitable Material

No unsuitable material will be used during construction. Material will be free of toxic pollutants in toxic amounts.

15. Mitigation

Refer to the Project Description , Biological and Essential Fish Habitat Assessment, and EIR.

16. Spawning Areas

No in-channel construction activities will occur during the steelhead migration period (October 1–May 30), to reduce the likelihood that steelhead are present during construction activities.

17. Management of Water Flows

In-water work will be done during low-flow periods. SWPPP and Diversion Plan in preparation.

18. Adverse Effects from Impoundment

The project will not impound water.

19. Migratory Bird Breeding Areas

Migratory bird nesting surveys will be performed prior to any Project-related activity that could pose the potential to affect migratory birds during the nesting season. Inactive bird nests may be removed, with the exception of raptor nests. No birds, nests with eggs, or nests with hatchlings will be disturbed. Nesting exclusion devices may be installed to prevent potential establishment or occurrence of nests in areas where construction activities would occur. All nesting exclusion devices will be maintained throughout the nesting season or until completion of work in an area makes the devices unnecessary. All exclusion devices will be removed and disposed of when work in the area is complete.

20. Removal of Temporary Fill

Construction fill will be removed. Temporarily filled areas will be returned to pre-existing elevation.

21. Designated Critical Waters

Critical habitat for Central California Coast ESU steelhead and Green sturgeon is present. This is addressed in the Biological and Essential Fish Habitat Assessment (November 2012), Compact Disc 2.

22. Fills within 100-Year Floodplains

Project activities comply with all applicable FEMA-approved floodplain management regulations. The project's goals are to decrease flood events to protect residents and property and increase the capacity of San Francisquito Creek.

23. Construction Period

Construction begins September of 2013 and be completed by 2015. Construction would begin with building the new levee structure outside of the existing levee, during or after completion of PG&E and EPASD modifications to existing utilities and modifications to the Golf Course, and would proceed at Friendship Bridge and upstream with the excavation of the channel up to East Bayshore Road being the final Project activity. Phase Two construction of upstream floodwalls and associated maintenance roads would occur once funding was secured.

Appendix A: Figures

Appendix B: Representative Photographs

Appendix C: Copy of Application for Section 401 Water Quality Certification

Appendix D: Copy of Notification of Streambed Alteration Agreement

Appendix E: Proof of Filing Fee (PENDING)
