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## San Francisco Bay Regional Water Quality Control Board

February 27, 2014  
CIWQS Place No. 757384 (MB)

*Sent via email: No hardcopy to follow*

Board of Directors  
San Francisquito Creek Joint Powers Authority  
1231 Hoover Street  
Menlo Park, CA 94025

**SUBJECT: Response to the Application for Water Quality Certification for the San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project, Santa Clara and San Mateo Counties**

Dear Board of Directors:

The San Francisquito Creek Joint Powers Authority (JPA) has applied for a federal Clean Water Act (CWA) section 401 water quality certification for the proposed San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project (Project). The JPA is proposing to increase flood flow capacity to contain the one percent flood by (1) excavating sediment within the channel; (2) installing flood walls; (3) rebuilding and, in some cases, setting back existing levees; (4) constructing a boardwalk at the existing Friendship Bridge; and (5) planting marshplain vegetation along the excavated sections of the creek.

This letter serves as notification that, at this time, the Regional Water Board has insufficient information on which to issue water quality certification, and, accordingly, cannot certify that the Project, as proposed, will not violate State water quality standards. Therefore, to preserve the Regional Water Board's ability to act on a certification for the Project, water quality certification for the Project is hereby denied without prejudice.

We recognize the significance of the Project to the community and the JPA's urgency in securing all permits for the Project and proceeding to construction. This letter is intended to provide guidance to the JPA on how best to move forward to secure permits from the Regional Water Board and other regulatory agencies. Further, the Regional Water Board is committed to working with the JPA on coordinating and streamlining the permitting process.

The Regional Water Board first received an application for certification for the Project on March 12, 2013. Our determination to deny water quality certification without prejudice is based on the CWA one-year statutory deadline approaching on March 12, 2014, and our inability to certify the Project by that date based on the information the Regional Water Board has received to date. When the JPA pursues water quality certification in the future, the Regional Water Board will need at least the following additional data to be able to

DR. TERRY F. YOUNG, CHAIR | BRUCE H. WOLFE, EXECUTIVE OFFICER

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consider certifying the Project: (1) a complete set of technical reports and corresponding data (e.g., hydrology and modeling reports); (2) an alternatives analysis consistent with U.S. EPA's Section 404(b)(1) Guidelines that demonstrates that the Project is the Least Environmentally Damaging Practicable Alternative (LEDPA) to the designated beneficial uses; and (3) an adequate description of water quality measures that will be implemented to address potentially polluted urban stormwater runoff entering the creek and the Faber Tract Marsh at higher flows. These materials are explained in further detail below.

### **Application History to Date**

Due to the lack of design details contained in the initial application materials received by the Regional Water Board on March 12, 2013, we were not able to determine whether the Project as proposed would violate State water quality standards and sent a letter to the JPA on March 29, 2013, identifying the information the Regional Water Board would need to process the application. Regional Water Board staff also reviewed supplemental application materials submitted on August 1, 2013, and January 28, 2014, which responded to some of the deficiencies staff had noted. Regional Water Board staff discussed the remaining application deficiencies with the JPA and/or its staff during meetings/conference calls on August 29, September 18, November 7, and December 12, 2013; and February 3 and February 11, 2014.

### **Future Application Guidance**

#### Hydraulic Design

The JPA must demonstrate that the Project design, as proposed, constitutes the LEDPA, consistent with U.S.EPA's Section 404(b)(1) Guidelines. There appear to be alternative designs not presented in the January 28, 2014, or prior application materials that could effectively reduce the threat of flooding with less adverse impact on the environment and endangered wildlife species. The future application should include a full evaluation of the feasibility of additional alternatives, some of which may have already been considered and possibly modeled by the JPA's consultants and staff. Examples of the types of alternatives that should be presented include: a) the feasibility of widening the hydraulic constriction at the north end of the airport and golf course to improve the hydraulic conveyance of flood flows to the Bay while reducing flood flow impacts on the Faber Marsh {refer to PWA's Alternative No. 3}; and b) constructing a bypass channel that would divert some of the flow from the San Francisquito Creek channel to the ball fields near the upstream end of the proposed flood wall, continue on down along the southern boundary of the golf course, and discharge to the tidal marsh at the southern end of the airport runway.

Different modeling assumptions and techniques have been used by the two consulting firms hired by the JPA for the Project, Philip Williams and Associates (PWA) and HDR, Inc. (HDR). The modeling work provided by these two consulting firms has produced different results and conclusions. Future application materials should provide sufficient information regarding the various models that have been conducted to determine whether or not the proposed Project design avoids impacts to the extent practicable and constitutes the LEDPA.

HDR's modeling indicates that the discharge into the Faber Tract marsh will be maintained at an 8-year recurrence interval. Even though the design proposal submitted January 28, 2014, did not include a change in the elevation of the Faber Tract or northern levee, the upcoming addition of a fourth bore for San Francisquito Creek under Highway 101 will result in a substantial increase in flood flows in the creek channel downstream of Highway 101. Under the January 28, 2014, design proposal, flows that would overtop the Faber Tract levee and flow into the marsh would significantly increase. The January 28, 2014, design proposal would increase the discharge into the Faber Tract marsh for the 30 and 100 year discharges by 5 to 7 times, respectively.

HDR's modeling supporting the January 28, 2014, design proposal uses an extreme high tide event as a boundary condition and concludes that high fluvial flood flows into the Faber Tract marsh will have a negligible impact on the marsh's habitat because the marsh will be submerged under several feet of tidal water. While impacts to marsh habitat may be negligible during extreme high tide events, the future application must provide an evaluation of potential adverse impacts resulting from any increased discharges into the Faber Tract marsh during tidal events more commonly experienced.

In July 2009, JPA staff reported to the JPA's Board of Directors that the PWA model indicated that widening the levees in the downstream area and creating a wide marsh plain provided the flood benefit necessary to meet FEMA standards. In contrast, the 2014 HDR modeling indicates no benefits from widening the levees. The HDR model indicates that, under the current Project design, the flood water surface elevation of the creek rises through the golf course instead of falling in elevation. The future application must provide and explain all of the hydrologic and hydraulic modeling performed for the various alternatives evaluated for the Project. Additionally, the future application must provide a specific plan describing how habitat improvements will be realized by any increase in discharge into the Faber Tract marsh.

We are also concerned that the January 28, 2014, design proposal may not provide suitable protection to the residents of East Palo Alto. It appears that the levees on the East Palo Alto side and on the golf course side of the creek channel are designed to be approximately the same elevation, with the golf course levee potentially being a little higher than that on the East Palo Alto side. As such, the proposed Project seems to allow avoidable risks to the community of East Palo Alto. One of the possible alternatives that should be evaluated in the future application is to consider making the levee on the golf course side lower than on the East Palo Alto side.

#### Faber Tract Marsh

One of the beneficial uses of the waters of the State and the United States in and around the Project area is for endangered species habitat. The U.S. Fish and Wildlife Service (Service) has recently indicated to us that the tidal marsh of the Faber Tract has consistently supported the largest population of the endangered California clapper rail rangewide as well as a population of the endangered salt marsh harvest mouse. One of the primary threats to the California clapper rail and salt marsh harvest mouse is predation by mammal and avian predators, especially during flooding events when suitable marsh

and upland refugia cover is submerged and unavailable. Therefore, due to the current status of the California clapper rail (only about 1,500 individuals are present rangewide) and the salt marsh harvest mouse, the Service is concerned about any changes to the hydrology within the Faber Tract that would increase the frequency of inundation of the Faber Tract marsh and upland refugia vegetation or increase the quantity or velocity of flows into the Faber Tract marsh relative to the existing (pre-Caltrans Highway 101 culvert installation) conditions. Thus, the future application should present Project design alternatives that would minimize any increases in the frequency of inundation of marsh and upland refugia vegetation within the Faber Tract and avoid any increases in the quantity or velocity of flows into the Faber Tract marsh relative to the existing (pre-Caltrans Highway 101 culvert installation) conditions.

### Water Quality

Any future application should address water quality impacts related to urban stormwater runoff into the creek and the adjacent Faber Tract marsh habitats. The January 28, 2014, design proposal would allow a significant increase in the discharge of fluvial discharges into the Faber Tract marsh. The increase in flow would also increase the loads of urban runoff pollutants, such as trash, pathogens, heavy metals, pesticides, petroleum hydrocarbons, fertilizers, and other pollutants of concern, into sensitive endangered species marsh habitat. The future application must include a proposal to implement effective measures designed to improve water quality both upstream and within the Project reach by reusing, detaining, infiltrating, and treating urban runoff.

In general, all successful flood control projects in the Bay Area over the past 15 to 20 years have included a mix of up-watershed detention/peak reduction, bypasses around major constrictions, expansion of the low-watershed floodplain, and channel modification where appropriate. The January 28, 2014, design proposal seems to rely predominately on channel modification with some expansion of the low-watershed floodplain. Since it does not appear possible to expand the Project's low-watershed floodplain into the Faber Tract, the future application should present significant up-watershed detention/peak reduction alternatives. LID and associated up-watershed detention/peak reduction appears necessary to be able to minimize both flow and its associated pollutants into the Faber Tract marsh while maintaining the same level of flood protection. Other alternatives may include the use of pump stations to reduce runoff and pollutant loads, such as diverting first flush flows to publicly owned treatment works (POTW).

The JPA has a unique opportunity to coordinate with the cities of Palo Alto, Menlo Park, and East Palo Alto; San Mateo County; and the Santa Clara Valley Water District to develop a plan to implement regional LID measures consistent with Municipal Regional Permit (MRP) requirements to address polluted urban stormwater runoff within the watershed upstream of Highway 101 and within the Project reach. The future application should indicate how such a plan would also identify the LID projects that have been implemented already, are in the process of being implemented, and will be implemented in the future to achieve flood control, water quality improvement, and habitat and species protection.

The Project as proposed in the January 28, 2014, design proposal reflected a single purpose design of conveying flood flows quickly to the Bay. The future application should

present alternatives for the Project that have multi-objective incorporating features that (1) convey flows in a manner that is protective of both the community and the environment, such as through the use of multiple conveyance features to split flows and reduce velocities; (2) protect water quality; (3) protect endangered species; and (4) protect habitat along San Francisquito Creek and in the Faber Tract marsh.

The JPA should reapply for water quality certification by submitting a new application for CWA section 401 water quality certification to the Regional Water Board. In that application, please indicate what application materials previously submitted are part of the new application.

If you have any questions, please contact me at 510-622-2314 or ([bwolfe@waterboards.ca.gov](mailto:bwolfe@waterboards.ca.gov)) or Maggie Beth at 510-622-2338 or ([mabeth@waterboards.ca.gov](mailto:mabeth@waterboards.ca.gov)).

Sincerely,

Bruce H. Wolfe  
Executive Officer

Sent via email to the following:

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