



August 1, 2013

Margarete Beth  
Water Quality Certification  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

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

Dear Ms. Beth:

Enclosed is SFCJPA's response to the Incomplete Application for Water Quality Certification CIWQS Place No. 757384 of the San Francisquito Creek Joint Powers Authority San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project located in San Mateo and Santa Clara Counties, California. The application was submitted to the Regional Water Quality Control Board (Waterboard) on March 12, 2013. The Application was determined by the Waterboard to be incomplete on March 29, 2013. The response package includes all information requested in the incomplete application letter including a response letter, and associated attachments.

The following documents/enclosures comprise the notification package in this binder:

- Response Letter addressing each question, including figures showing the project location, impacts to waters of the State and riparian vegetation, and plan, profile, and cross sectional views of the proposed boardwalk
- Attachments
  - A: 95% Plan Set with Cross Sections
  - B: 95% Plan Set Landscape Sheets
  - C: 95% Plan Set Boardwalk Sheets
  - D: Monitoring and Mitigation Plan
  - E: Temporary Water Diversion Plan and Santa Clara Valley Water District's Best Management Practices Handbook
  - F: Erosion Protection Analysis and Design Report
  - San Francisquito Creek Flood Reduction Alternatives Analysis

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If you require additional information, or have any additional questions regarding this response, 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,

A handwritten signature in blue ink, appearing to read 'Matthew Jones', with a stylized flourish at the end.

Matthew Jones  
Project Manager

cc: Kevin Murray, SFCJPA, Project Manager/Applicant  
Michael Martin, SCVWD, Environmental Planner

# Responses to Incomplete Application for Water Quality Certification for the San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project, City of Palo Alto, Santa Clara and San Mateo Counties

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## Project Description

1. The application materials only describe impacts to waters of the U.S. under the jurisdiction of the U.S. Army Corps of Engineers (Corps). The application needs to be revised to also include jurisdictional waters of the State.

**Response.** Waters of the U.S. as mapped for this Project are inclusive of all Waters of the State and equivalent within the project footprint (See Attachment G, Wetland Delineation Report and Map; also see Attachment D Mitigation and Monitoring Plan, 5.1 Impacts to Waters). The Corps has issued a Preliminary Jurisdictional Determination inclusive of all water mapped within the Project.

2. The Project is considered a linear design project. As such, the impacts (permanent and temporary) need to be listed in linear feet, as well as acres, for all linear features (e.g. floodwalls, levees, boardwalk, channel rock slope protection, etc.) throughout the total Project footprint.

**Linear Impacts:**

Right Levee Degrade 1054 linear feet

Right Levee 2846 linear feet

Left Levee 2727 linear feet

Right floodwall 2154 linear feet

Left floodwall 2729 linear feet

Wetlands/Waters	Earthwork		FILL		Total Total Impact Area (sf)	Total Impact Volume (cy)
	CUT					
	Total Impact Area (sf)	Impact Volume (cy)	Total Impact Area (sf)	Impact Volume (cy)		
<b>Diked Marsh</b>	<b>10,306</b>	<b>457</b>	<b>105,374</b>	<b>18,269</b>	<b>115,680</b>	<b>17,811</b>
DM 1	0	0	19	0	19	0
DM 10	7	0	35,336	2,169	35,343	2,169
DM 11	1	0	10,307	2,303	10,308	2,303
DM 12			4,412	1,337	4,412	1,337
DM 3			22	1	22	1
DM 4			12	0	12	0
DM 8	10,297	457	47,572	11,247	57,869	10,790
DM 9			7,694	1,212	7,694	1,212
<b>Freshwater Marsh</b>	<b>33</b>	<b>0</b>	<b>14,101</b>	<b>1,610</b>	<b>14,135</b>	<b>1,610</b>
FM 1			8,110	883	8,110	883
FM 2	33	0	5,992	727	6,025	727
<b>Freshwater Pond</b>			<b>49,074</b>	<b>5,601</b>	<b>49,074</b>	<b>5,601</b>
FP 1			49,074	5,601	49,074	5,601
<b>Tidal Channel and Bay Waters</b>	<b>5,042</b>	<b>396</b>	<b>24,903</b>	<b>2,329</b>	<b>29,946</b>	<b>1,933</b>
TC 2	5,042	396	24,903	2,329	29,946	1,933
<b>Tidal Salt Marsh</b>	<b>93,791</b>	<b>4,700</b>	<b>34,786</b>	<b>3,816</b>	<b>128,577</b>	<b>883</b>
TSM 1	51,160	3,119	16,761	1,220	67,921	1,900
TSM 10	94	7			94	7
TSM 11	1,264	172			1,264	172
TSM 12	606	50			606	50
TSM 3	2,002	153	12	0	2,014	153
TSM 4	2,350	23	5,416	925	7,766	903
TSM 7	5,337	96			5,337	96
TSM 9	30,978	1,080	12,596	1,671	43,574	592
<b>Grand Total</b>	<b>109,172</b>	<b>5,553</b>	<b>228,239</b>	<b>31,626</b>	<b>337,411</b>	<b>26,072</b>

3. The Additional Pages for Box 12 of the application refers to the Biological Assessment (BA) for more detailed information on each project element. The Project description as presented in the BA does not include sufficient details to clearly understand all the Project elements. Therefore, it is difficult to determine if the Project as proposed will be protective of water quality and beneficial uses. The application needs to provide more in-depth details related the following Project elements.

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- i. The right bank levee at the Faber Tract marsh will be lowered from a 5-year rain event overflow to a 2.5-year rain event overflow to allow flood flows to enter the marsh. Please provide the total height the overflow area will be lowered and the volume of sediment to be removed.

**Response:** The right bank levee alterations would begin approximately 250 feet inland from the San Francisco Bay. The existing levee would be lowered to an elevation of 8 feet from its current elevation of between 11 and 13 feet. The reduction in the levee elevation would continue upstream at this constant elevation to approximately 200 feet downstream of Friendship Bridge. At this point, the levee cut would change to an upward angle of 3:1 and would continue at this slope until it reaches the existing levee, which would remain unchanged.

Fluvial flows above the 5-year event (20% chance of happening once in any given year) currently access the Faber Tract under average tidal conditions. When the project is built, this frequency would increase to roughly the 2-3 year event, or a roughly 40% chance of happening once in any given year, when this Project and when future projects upstream are built. This is because constrictions upstream (such the Pope-Chaucer Bridge, Highway 101 and the channel near Highway 101) do not allow enough flow to reach the Faber Tract area to significantly increase the frequency of overtopping, even with a degraded levee on the north side of the creek. Additionally, the 5 to 10-year tide would connect the channel to the Faber Tract.

- ii. The application materials state that the proposed boardwalk will be constructed to extend from the existing Friendship Bridge into the area where marsh restoration is proposed, and will be constructed of timber with concrete pilings. The description does not indicate the dimensions of the boardwalk and pilings, including the number of concrete pilings to be located in the proposed marsh restoration area. The application needs to fully describe the boardwalk design and associated impacts to waters of the State, as well as any avoidance and minimization measures.

**Response:** The Project would include the addition of a new public boardwalk extending from the eastern footing of Friendship Bridge, across the new marshplain terrace, to the relocated left bank levee. The boardwalk would be the same width as Friendship Bridge and would be constructed of timber deck and concrete piles. The elevation of the low mark of the boardwalk would be set above the highest anticipated flood elevation, with the lowest point of the bridge a minimum of 5 feet above the marshplain terrace beneath it. The boardwalk would be designed in accordance with the Palo Alto Baylands Nature Preserve Design Guidelines (City of Palo Alto 2005) and the San Francisco Bay Trail Design Guidelines (Association of Bay Area Governments 1999). These Guidelines are intended to help provide a consistent approach to design, placement, and construction of common

landscape elements that respects the landscape character, established a distinctive identity, and sets a standard of quality within the Baylands. The boardwalk would provide views similar to views from Friendship Bridge. The boardwalk would appear to be a visual extension of the Bridge and would not substantially alter the visual character of the Project site; therefore, impacts would be less than significant (See Figure 6, Public Access, following this response document).

The boardwalk is overall 202 feet long and 10 feet wide with 21 by 26 foot platforms at each end. Construction of the bridge will require 20, 18 inch diameter Cast In Drilled concrete piles. The proposed boardwalk does not cross existing waters or wetlands. The existing Friendship Bridge, which crosses existing waters and wetlands, is 140 feet long and 10 feet wide.

Page 13:

- i. The Project activities listed under “Additional Construction” do not include sufficient design details or identify resulting impacts to waters of the State. Provide a detailed description of all activities listed under “Additional Construction” that will impact waters of the State, including, but not limited to, specifications related to each activity, associated impacts to waters of the State (in linear feet and acres), impact avoidance and minimization measures, and mitigation measures. Associated activities required to complete the Project include the following.

**Response:** Tie-ins are the engineered transitions at levee and floodwall connections and connections to Caltrans and Friendship Bridge abutments. All of these tie-ins are within the construction footprint already accounted for in the impact calculations. Details for these transitions are shown within the Plan Sheets in Attachment A

Construction of Friendship Bridge boardwalk is shown in detail in Attachment C and discussed in detail above.

Installation of channel rock slope protection is also shown in detail in Sheets C-1 through C-17 of the Plan Set in Attachment A. Rock slope protection is only used in areas where necessary due to channel velocities at the ultimate design flow. See Attachment F San Francisquito Creek Draft Erosion Protection Analysis and Design Report for additional rock slope protection detail and justification.

- ii. The Project proposes to place a significant amount of rock slope protection (RSP) as shown in the Figure 2.x series. The Water Board considers the RSP to be a permanent impact. Since the Project proposes to widen the channel with the intent to accommodate flood flows and reduce velocity, the application needs to include sufficient engineering calculations demonstrating the rock slope protection is necessary to avoid and minimize channel erosion and that other more natural bio-technical methods would not be feasible to achieve erosion control.

**Response:** See Attachment F San Francisquito Creek Draft Erosion Protection Analysis and Design Report for additional RSP detail. In addition, linear feet and dimensions of RSP are detailed on Sheets C-1 through C-17 of the Plan Set (Attachment A).

Values				
Row Labels	Average of AVG_DEPTH	Sum of Area_sf		
ROAD-GRAV	0.5	50125		
ADD	0.5	50125		
ROAD-PAVE	0.5	44864		
ADD	0.5	44864		
ROCK-2FT	2	69037		
ADD	2	69037		
ROCK-3FT	3	21978		
ADD	3	21978		
ROCK-FLDWALL	4.7	42684		
SUBSURF	4.7	42684		
ROCK-LEVEETOE	3.7	97350		
SUBSURF	3.7	97350		
<b>Grand Total</b>	<b>1.903333333</b>	<b>326038</b>		
<b>Rock/Paths</b>	<b>Volume Relative to Earthwork</b>	<b>Average Depth (ft)</b>	<b>Total Area (ac)</b>	<b>Volume (CY)</b>
Gravel Road	Additional	0.5	1.2	928
Paved Road	Additional	0.5	1.0	831
Rock Slop Protection (2ft)	Additional	2	1.6	5,114
Rock Slope Protection (3ft)	Additional	3	0.5	2,442
Rock - Floodwall Toe	Subsurface	4.7	1.0	7,430
Rock - Leveee Toe	Subsurface	3.7	2.2	13,341

Page 14: The application states that large vehicles are not allowed on roadways that will be used to access two of the three staging areas. How will these vehicles access all the staging areas and haul routes?

**Response:** Site access and a construction staging area would be located at the end of O'Connor Street near the intersection with Daisy Lane in East Palo Alto. The haul route would be along O'Connor Street to Pulgas Avenue, East Bayshore Road, and Embarcadero Road to U.S. 101. This is the designated route for large vehicles, including dump trucks and flatbed trucks, in the City of East Palo Alto. Large vehicles will not need to access the other staging areas.

- i. The Project description states that excavated sediment will be reused within the Project site. The application needs to also explain that the reuse of sediment will be subject to sediment characterization to identify any pollutants that may impact water quality and beneficial uses.

**Response:** The Best Management Practices Handbook, found with the diversion plan in Attachment E, defines sediment removal and reuse BMP's

Page 15: The application states that PG&E Tower T13 will be located in the creek after the channel is widened. The application needs to include sufficient details of the design specifications and associated impacts to waters of the State, and avoidance measures related to the PG&E tower.

**Response:** T3 would be located approximately 25 feet north of T2 and would replace T2. T3 would be 25 feet taller than T2, but would otherwise have the same design. Following completion of the Project, T3 would be located within the Creek. Therefore, there would be a fortified concrete pier supporting each leg of the tower. A shoo-fly structure would be built to allow for the construction of the new tower. The shoo-fly structure would have two wooden poles; one pole would be approximately 25 feet south of the existing tower and the second pole would approximately 75 feet north of the existing tower. The shoo-fly poles would be placed in the toe of the existing levee and would be removed once the new tower is fully operational (Figure 2-4, from the EIR).

a. Page 19-22

- i. Provide a definition for "significant rainfall" related to implementing BMPs to stabilize the Project site in the event of rain.

**Response:** Significant rainfall is defined as a forecast of 30% chance of rain, or at the onset of any precipitation. The 72 hour forecast from the National Weather Service will be monitored.

- ii. The application needs to also clarify that the Project will be subject to the requirements of the construction general NPDES permit.

**Response:** The Project will be subject to the requirements of the construction general NPDES permit, which is currently being developed



4. The application needs to include figures that identify waters of the State as well as Corps jurisdictional waters. In addition, the following figures contain minor errors with the legend/labeling.

- a. Figure 2.2 appears to be part of the Figure 4.x series and not the Figure 2.x series.

**Response:** See Updated Figure 2.2

- b. Figure 4.2 show two TSM 1 and TSM 9 areas.

**Response:** Figure 4.2 was tiled across the project site makes it appear that there are two TSM1 areas when in fact they are connected, as are TSM9. Additionally, at the time of the wetland delineation, there were disconnected section TSM1 and TSM9.

- c. Figure 1.3 shows existing and simulated view, but doesn't show the restored marsh.

**Response:** This figure shows the restored marsh area on the simulated view between the open water and levee walls. Because the restored plan palette consists of salt marsh grasses and other non-woody vegetation, visual simulations do not do a good job of showing vegetation.

5. The proposed Project will impact an existing mitigation area established as part of separate projects previously constructed adjacent to the City of Palo Alto Pump Station. The application needs to include specific details related to the impacts to the mitigation area, including, but not limited to, (1) Project name(s) and mitigation requirements for the existing mitigation site to be impacted; (2) proposed areal extent and type of impact(s); and (3) detailed description of proposed mitigation design to compensate for the impacts to the pre-existing mitigation areas.

**Response:** See the Mitigation and Monitoring Plan Section 5.2 (Attachment D) *Impacts to Riparian Habitat* discuss impacts to riparian habitat along San Francisquito Creek which constitute a portion of two mitigation areas; one for Santa Clara Valley Water District for impacts along Matedero Creek in 2004 and the other for a storm water pump station constructed adjacent to San Francisquito Creek in 2009.

6. The application materials need to include a dewatering plan that details how the channel will be dewatered including, but not limited to, the following information:

- a. Design specifications including the size of storm event for which it will be designed, special considerations for tidal and freshwater environments, groundwater, and wildlife habitats
- b. Method of dewatering:
- c. Discharge features to avoid and minimize water quality impacts
- d. BMPs
- e. Contingency plan
- f. Water quality monitoring plan that clearly explains the process of monitoring and treatment methods to ensure water quality objectives identified in the Basin Plan will be met.

**Response:** Refer to the dewatering plan and BMP handbook in Attachment E.

## Project Alternatives

The Water Board requires that the least damaging practicable alternative (LEDPA) be defined for the Project in accordance with the EPA's 404(b)(1) Guidelines.

**Response:** The LEDPA Analysis was included in Chapter 6, *Alternatives*, of the Draft and Final EIR under the discussion of the "Identification of Environmentally Superior Alternative". While relative costs associated with alternatives were considered, no alternative was eliminated or selected over any other because of cost. The Proposed Project was selected as it was the least environmentally damaging alternative that met the purpose and need.

While the Golf Course Bypass Alternative did meet the purpose and need, the impacts associated with that alternative were similar to or worse than those associated with the Proposed Project. The Golf Course Bypass Alternative does not perform as well as channel widening for hydraulic conveyance. The assertion that the Bypass Alternative would reduce impacts to State Waters is inaccurate, as channel excavation, impacts to state waters on the Golf Course, and lowering of the Faber Tract Levee would all also occur under the Bypass Alternative and while potentially slightly lessened, these impacts roughly similar in overall impact to that of the Proposed Project. Additionally, the Bypass Alternative would have significantly greater traffic, air quality, and greenhouse gas emission impacts do to the extensive nature of earthwork necessary to build the bypass and would have significant recreational impacts associated with the impacts on the Golf Course.

As shown in Table 6-1 in the Final EIR (reprinted below), the overall impacts associated with the Golf Course Bypass Alternative are greater than those associated with the Proposed Project. As such, the Proposed Project was selected as the least damaging practicable alternative.

**Table 6-1. Anticipated Environmental Impacts of Alternative 1 and the No Project Alternative**

Resource	Alternative 1 (Golf Course Bypass)	No Project
	<p>Direct bypass channel from Geng Road terminus to edge of Palo Alto Municipal Airport.</p> <p>Allows for existing channel to largely be retained with floodwalls in upper reach.</p> <p>Reduced overflow into Faber Tract Baylands in comparison to the proposed Project.</p>	<p>No flood protection improvements to San Francisquito Creek.</p>
	<i>Approach to Analysis</i>	<i>Approach to Analysis</i>
	<p>The key difference between Alternative 1 and the proposed Project is that Alternative 1 would not widen the existing channel, but rather would divert flows across the existing Golf Course and input flow closer to San Francisco Bay, resulting in reduced overflow fluvial inputs into Faber Tract in comparison to the proposed Project.</p> <p>For the most part, impact mechanisms and construction durations would be similar under Alternative 1 to those identified for the proposed Project. Floodwalls would still be necessary upstream of Geng Road, and all levees would still need to be rebuilt to USACE standards.</p> <p>Analysis therefore concentrated on new impacts created by the bypass channel and the effects of moving flood flows away from residences and reduced fluvial flows into Faber Tract.</p>	<p>Under the No Project Alternative, no new flood protection infrastructure would be installed in San Francisquito Creek.</p> <p>For the immediately foreseeable future, the channel would remain in its present condition, and operations and maintenance (i.e., inspections and minimal vegetation management) would be similar to current activities. Over the longer term, properties within the floodplain would continue to be at risk regardless of upstream improvements. The full timing, details, and outcomes of future upstream projects are not foreseeable at this time.</p> <p>Analysis therefore concentrated primarily on the impacts that would be avoided by not constructing new flood protection infrastructure.</p>
<b>Aesthetics</b>	<p>For the most part, aesthetic impacts of the elements included in Alternative 1 would be the same as those identified for the proposed Project. Overall visual impacts would be similar under Alternative 1 to those described for the proposed Project but could be somewhat greater on balance due to the new bypass channel proposed under Alternative 1. Both Alternative 1 and the proposed</p>	<p>The No Project Alternative would not alter the visual characteristics of the Project corridor. If the proposed Project is not implemented, existing infrastructure in the Project corridor would continue to age, becoming less visually intact</p>

Resource	Alternative 1 (Golf Course Bypass)	No Project
<b>Air Quality</b>	<p>Project include floodwalls.</p> <p>Air quality impacts would be similar under Alternative 1 to those described for the proposed Project. Both would result in significant NO<sub>x</sub> emissions.</p>	<p>and eventually requiring repair or replacement under separate project efforts. However, although it is reasonable to project that repairs or replacements may be needed, the timing, details, and visual outcomes of such projects cannot be foreseen at this time.</p> <p>Under the No Project Alternative, no new flood protection infrastructure would be installed in San Francisquito Creek. There would be no new impact on air quality under the No Project Alternative.</p>
<b>Biological Resources</b>	<p>Impacts on biological resources would be similar under Alternative 1 to those identified for the proposed Project. The potential for impacts to mammals and birds that occur in the Faber Tract would be lessened due to the greater fluvial flow being diverted down the bypass channel and overflow into the Faber Tract could potentially be lessened. Alternative 1 would likely result in greater creation of waters resulting from the new bypass channel, but these waters would not be as beneficial as in channel creation. Overall, Alternative 1 would be slightly superior to the proposed Project.</p>	<p>Under the No Project Alternative, no new flood protection infrastructure would be installed in San Francisquito Creek. There would be no new or substantially altered impact on biological resources under the No Project Alternative.</p>
<b>Cultural and Paleontological Resources</b>	<p>Impacts on cultural and paleontological resources would be similar under Alternative 1 to those identified for the proposed Project. Because Alternative 1 would have a similar overall footprint to the proposed Project (with the exception that it would result in a large new bypass channel), all of the areas subject to ground disturbance under Alternative 1 have some level of sensitivity for buried cultural resources. Significant impacts on cultural resources are therefore possible under this alternative and would be mitigated by the same strategy identified for the Project.</p> <p>Because of the overall similarity in footprint and geologic substrate, impacts on paleontological</p>	<p>Under the No Project Alternative, there would be no immediate Project-related ground disturbance. Over the long-term, repair and/or piecemeal replacement of aging flood protection infrastructure could result in ground disturbance, with some potential to disturb buried cultural and paleontological resources. The extent and severity of disturbance are not foreseeable at this time, but there would likely be some potential for significant impacts</p>

Resource	Alternative 1 (Golf Course Bypass)	No Project
<b>Geology and Soils</b>	<p>resources under Alternative 1 would be similar to those described for the proposed Project.</p> <p>Impacts related to geology, soils, and geologic hazards would be similar under Alternative 1 to those identified for the proposed Project. Impacts for Alternative 1 would be the same as those described for the proposed Project, and the same mitigation approaches would apply.</p>	<p>on cultural and paleontological resources, although it is unclear whether this potential would increase relative to the current baseline.</p> <p>Under the No Project Alternative, no new flood protection infrastructure would be installed in San Francisquito Creek. There would be no impact related to geology or soils.</p>
<b>Greenhouse Gases and Climate Change</b>	<p>Greenhouse gas and climate change impacts would be similar under Alternative 1 to those described for the proposed Project.</p>	<p>Under the No Project Alternative, no new flood protection infrastructure would be installed in San Francisquito Creek. There would be no new or substantially altered impact on greenhouse gases or climate change.</p>
<b>Hazardous Materials and Public Health</b>	<p>Public health and safety impacts under Alternative 1 would be similar to those described for the proposed Project, and the same mitigation strategies would apply. The principal concerns related to known hazardous materials contamination focus on the floodwall reach upstream of Geng Road. Alternative 1 would entail the same activities in this area as would the proposed Project.</p>	<p>The No Project Alternative would not result in any foreseeable activities expected to release hazardous materials or change public health conditions relative to the current baseline.</p>
<b>Hydrology and Water Quality</b>	<p>Although the Project footprint would differ somewhat, overall impacts related to hydrology and water quality would be similar under Alternative 1 to those described for the proposed Project.</p>	<p>Under the No Project Alternative, no new flood protection infrastructure would be installed in San Francisquito Creek. There would be no new or substantially altered impact on hydrologic function or water quality under the No Project Alternative. Under the No Project Alternative, flood protection would not be improved, and the Project area would not have the capacity to accommodate proposed future improvements.</p>

Resource	Alternative 1 (Golf Course Bypass)	No Project
<b>Land Use</b>	Alternative 1 land use impacts are greater, potentially substantially greater, than overall impacts for the proposed Project. Alternative 1 would involve more significant impacts at the Palo Alto Municipal Golf Course and thus would require substantial evaluation of land use in the vicinity of the Project, including the long term viability of recreation within the designated land use area occupied by the Golf Course.	Under the No Project Alternative, no new flood protection infrastructure would be installed in San Francisquito Creek. There would be no new or substantially altered impact on land uses in the Project Area.
<b>Noise and Vibration</b>	Alternative 1 construction noise impacts are likely to be similar to or slightly greater than impacts for the proposed Project. Alternative 1 would affect impact the same sensitive receptors as the proposed Project. However, the duration of impacts resulting from bypass construction would be longer than under the proposed Project because of the expanded facility footprint.	Over the short-term, there would be no new construction and thus no impact on noise generation under the No Project Alternative. Over the longer term, as existing infrastructure continues to age, more extensive and frequent maintenance, repairs, and/or replacement are likely to be needed, and noise generation would increase. As with traffic, increases could be less than under the proposed Project, until or unless replacement of facilities becomes necessary.
<b>Public Services</b>	Overall impacts related to public services would be very similar under Alternative 1 to those described for the proposed Project.	The No Project Alternative would not place any immediate demands on public services. If the proposed Project is not implemented, existing infrastructure in the Project corridor would continue to age, becoming less viable over time and eventually requiring emergency repair or result in emergencies from future floods that require increased public service response. However, although it is reasonable to project that repairs or emergencies may occur, the timing, details, and visual outcomes of such projects cannot be foreseen at this time.

Resource	Alternative 1 (Golf Course Bypass)	No Project
<b>Recreation</b>	<p>Overall Alternative 1 recreation impacts would be substantially greater than overall impacts for the proposed Project.</p> <p>Alternative 1 would involve more significant construction and requisite mitigation at the Palo Alto Municipal Golf Course. Alternative 1, as with the proposed Project, would result in significant and unavoidable impacts to recreation resulting from impacts to the Golf Course for which replacement would ultimately be the responsibility of another agency.</p> <p>Further, impacts related to construction staging at the Baylands Athletic Center and disruption of that facility's use would likely be increased somewhat due to the larger bypass channel and longer construction window.</p>	<p>The No Project Alternative would have no foreseeable impact on recreational facilities or uses and thus would have reduced recreational impacts in comparison with the proposed Project.</p>
<b>Transportation and Traffic</b>	<p>In general, impacts on traffic and transportation would be similar under Alternative 1 to those described for the proposed Project. Traffic impacts related to construction staging at the Baylands Athletic Center would likely be increased somewhat due to the larger bypass channel and longer construction window.</p>	<p>Over the short-term, the No Project Alternative would have no impact on traffic or transportation because there would be no new construction and thus no construction-related traffic. Over the longer term, as existing infrastructure continues to age, more extensive and frequent maintenance, repairs, and/or replacement are likely to be needed, so traffic related to flood protection operations could increase by comparison with the current baseline condition. Increases could be less than under the proposed Project, until replacement of facilities becomes necessary. Future replacement of aging facilities could generate enough construction traffic to result in significant impacts on traffic and transportation, but details are not foreseeable at this time.</p>
<b>Utilities and Service</b>	<p>Although the Project footprint would differ between Alternative 1 and the proposed Project,</p>	<p>The No Project Alternative would have no foreseeable</p>

<b>Resource</b>	<b>Alternative 1 (Golf Course Bypass)</b>	<b>No Project</b>
<b>Systems</b>	overall impacts related to utilities and service systems would be similar under Alternative 1 to those described for the proposed Project.	impact on utilities and service facilities and thus would reduce impacts by comparison with the proposed Project.

## **Mitigation and Monitoring Plan**

**Response:** The MMP is included in Attachment D

## **Hydraulic Study by PWA**

**Response:** The Alternatives Analysis, including Project Hydraulic Modeling are included in Attachment H. Of equal value is the Erosion Protection Analysis and Design included in Attachment F.