November 13, 2018

Board of Supervisors
Marin County Flood Control and Water Conservation District
3501 Civic Center Drive
San Rafael, CA 94903


Dear Board Members:

RECOMMENDATION: Staff recommends that after a brief presentation of the proposed Corte Madera Creek Flood Risk Management Project (Project), alternatives, and a summary of the principal findings of the Draft EIS/EIR by staff and the EIS/EIR consultant, your Board open the public hearing to public comment. At the conclusion of all public testimony, staff recommends that your Board:

1. Close the public hearing on the Draft EIS/EIR;
2. Discuss those issues regarding the Project's impacts that are of primary concern to your Board and provide recommendations to the US Army Corps of Engineers (USACE), the Marin County Flood Control and Water Conservation District (District) staff, and the EIS/EIR consultant on any additional items which should be addressed in the Final Joint EIS/EIR; and
3. Recommend that the USACE direct the EIS/EIR consultant to prepare a Final Joint EIS/EIR based upon the written responses to all of the oral and written comments received at the Draft EIS/EIR hearing, as well as all of the written comments received during the public review and comment period.

BACKGROUND:

National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) Requirements:

The NEPA applies to all federal agencies and to most of the activities they manage, regulate, or fund that affect the environment. It requires all agencies to consider and to publicly disclose the environmental implications of their proposed actions through the preparation of appropriate documents. The NEPA requires that every federal agency prepare an EIS for proposed legislation or other major federal actions "significantly affecting the quality of the human environment" (42 USC 4332; 40 CFR 1501). The USACE is the lead agency under NEPA.
The CEQA requires state and local agencies to estimate and evaluate the environmental implications of their actions and aims to prevent adverse environmental impacts of those actions by requiring those agencies, when feasible, to avoid or reduce significant environmental impacts. The CEQA requires that the lead agency prepare an EIR when the lead agency determines that a project may have a significant effect on the environment (Public Resources Code, Division 13, Section 21000 et seq). The District is the lead agency under CEQA.

The USACE and the District determined that the proposed Project could significantly affect the environment, and therefore, have prepared a joint Draft EIS/EIR. In 2015, USACE selected and contracted with the environmental consultant firm, Burleson Consulting, Inc. to prepare the EIS/EIR.

Public Involvement Process:

A Notice of Intent (NOI) was published in the Federal Register to formally initiate the scoping process under NEPA on December 18, 2015. A Notice of Preparation (NOP) was submitted to the California State Clearinghouse to formally initiate the CEQA scoping process on December 28, 2015. A joint public scoping meeting was held on January 28, 2016. Input on the proposed Project and its potential impacts were received at the public scoping meeting and additional comments were received by mail and email. Responses to the NOI, NOP, and scoping comments are contained in the Draft EIS/EIR Appendix E.

On October 12, 2018, copies of the Draft EIS/EIR and a notice of the date and place of the public hearing on the adequacy of the Draft EIS/EIR were distributed to members of the Board of Supervisors, State Clearinghouse, federal, state and local agencies and special districts, surrounding property owners, and other interested groups and individuals. A Notice of Completion was submitted to the California State Clearinghouse and a Notice of Availability was published in the Federal Register and local newspapers to begin a 45-day public review and comment period, which concludes on November 27, 2018.

Project Background:

Congress authorized the evaluation of possible solutions to flooding along Corte Madera Creek under Section 11 of the Flood Control Act of 1944. The Corte Madera Creek Flood Control Project (CMCFCP) was authorized by Congress in the Flood Control Act (FCA) of 1962 (Public Law [PL] 87-874, Section 203), and amended by Section 204, FCA 1966, [PL89-789], and Section 823, Water Resources Development Act (WRDA) 1986 [PL 99-862] in response to numerous flooding events in the Corte Madera Creek. The CMCFCP extends from San Francisco Bay upstream to the intersection of Corte Madera Creek and Sir Francis Drake Boulevard in the Town of Ross. The USACE completed three flood control study units by 1971 (Units 1, 2, and 3). Unit 1 is located from the bay extending upstream to the Bon Air Road Bridge in Larkspur. Unit 2 continues upstream to College Avenue Bridge in Kentfield. Unit 3 extends to the upstream end of the concrete channel in Ross and Unit 4 continues further upstream to the Sir Francis Drake Boulevard Bridge in Ross.

The USACE, San Francisco District and the non-federal sponsor, the District, began the planning for construction of Unit 4 as a concrete-lined channel in 1972, but further implementation of the CMCFCP beyond Units 1, 2, and 3 was delayed by litigation. In 1982, a storm event resulted in up to 5 feet depth of out of bank water that caused considerable
damage in San Anselmo, Ross, Kentfield, and Larkspur, and the third largest flood of record occurred the following year in 1983. Following another major flood event in 1986, Congress authorized the USACE under the WRDA 1986 (PL 99-862, Section 823) to proceed with the CMCFCP improvements to Unit 4 and eliminate channel modifications upstream of Sir Francis Drake Boulevard (Unit 5 and Unit 6) from further consideration.

The proposed Project was re-named the Corte Madera Creek Flood Risk Management Project (CMCFRMP) whose purpose is to manage flood risk from Corte Madera Creek associated with Unit 4, as currently authorized by Congress. Studies identified the abrupt transition between Units 3 and 4 created by the existing Denil fish ladder (fish ladder), the narrow channel condition on the east and west bank, and the Lagunitas Road Bridge as constrictions to flood flow. The Town of Ross replaced the Lagunitas Road Bridge in 2010 with a higher bridge profile of greater flow capacity, approximately 5,400 cfs. The need for the proposed actions is to reduce or remove existing water flow impediments and constrictions within Unit 4, thus providing a greater level of flood protection in the watershed. The CMCFRMP would address channel modifications to Unit 4, from the upstream end of the existing Unit 3 concrete channel to Sir Francis Drake Boulevard at the border of Ross and San Anselmo, and any induced flooding downstream in Units 2 and 3 resulting from these modifications.

The CMCFRMP is being formulated to reduce the risk of flooding commercial, residential, and public infrastructure along the creek. This plan formulation is consistent with protecting the nation’s environment, pursuant to national environmental statutes, with applicable executive orders and with other federal planning requirements.

The primary objectives for the proposed project are:

- Reduce the likelihood and consequences of flooding on human life and safety;
- Reduce the risk of flood damages, including critical infrastructure within the area;
- Develop and implement environmentally sustainable flood risk management (FRM) features consistent with natural geomorphic processes and ecological functions of the study area;
- Improve fish habitat conditions for salmonids;
- Use environmentally sustainable designs and construction methodologies, which would minimize environmental impacts from future operation and maintenance actions in the study area;
- Address the abrupt transition between Units 3 and 4 created by the existing fish ladder, the narrow channel condition on the east and west bank, and the Lagunitas Road Bridge as constrictions to flood flow;
- Ensure that proposed Project is consistent and compatible with the District’s Ross Valley Flood Protection and Watershed Program, the purpose of which is to manage flood risk in the Ross Valley watershed.

Identified Impacts

A list of all impacts for each of the five action alternatives and the no-action alternative is provided in Table 3-8 in the Draft EIS/EIR. The Draft EIS/EIR also identifies numerous avoidance and minimization measures that would apply to each of the action alternatives.
These measures, which are listed in Table 3-7 of the Draft EIS/EIR, are built-in to the project to avoid or lessen environmental impacts.

The Draft EIS/EIR identifies, for each of the five action alternatives, seven to eight significant impacts that could be mitigated to a less-than-significant level with implementation of specified mitigation measures. These impacts are in the following areas: noise and vibration, transportation and circulation, health and safety, cultural resources, biological resources, and geology.

The five action alternatives could all result in significant unavoidable impacts as well. The Draft EIS/EIR identifies between five and twelve impacts for each of the action alternatives that could not be mitigated to a less-than-significant level. These significant and unavoidable impacts would affect water quality, aesthetics, biological resources, noise and vibration, transportation and circulation, land use, and socioeconomics. Mitigation for these impacts to a level of less-than-significant is not feasible.

For Alternative J, the Tentatively Selected Plan (TSP) and Preferred Alternative, the Draft EIS/EIR identifies five significant unavoidable impacts. These impacts would be from construction of as-yet unspecified stormwater drainage facilities to relieve flooding from behind floodwalls; construction noise; and traffic impacts during construction of the bypass culverts beneath Sir Francis Drake Boulevard. The EIS/EIR also identifies eight significant impacts for Alternative J that could be mitigated to a less-than-significant level.

**Cumulative Impacts**

The Draft EIS/EIR evaluates the potential for the Project to contribute to cumulative impacts. These impacts are analyzed for whether they are “cumulatively considerable” (i.e., whether the incremental effects of this individual Project are considerable when viewed in connection with the effects of related past, current, and probable future projects). That analysis identifies the potential for one cumulative impact, to traffic and circulation. This impact would occur if construction of the Project were to occur simultaneously with other projects in the area. Following construction, the Project would not contribute to cumulative impacts. No other cumulative impacts are identified in the Draft EIS/EIR.

**Alternatives:**

Five action alternatives, and one no-action alternative, are analyzed in the Draft EIS/EIR:

**Alternative A: Top of Bank Floodwall.** This alternative would construct top-of-bank floodwalls along the length of the creek for the length of the proposed Project area. Setback floodwalls (floodwalls located away from channel) would be constructed around the Kent Middle School athletic fields. These floodwalls would tie into high ground so that floodwaters would not overtop and flow behind the walls. The fish ladder would be removed, and the stream channel regraded upstream of the fish ladder to create a smooth transition between Units 3 and 4. This alternative would require the full purchase of 30 parcels. Purchase of residential parcels would require relocation of residents and the land would be purchased at fair market value. Permanent easements would total 13.62 acres and temporary easements would affect 3.14 acres. Permanent easements may be required for operations and maintenance roads, flowage (to flood or submerge), utility, and channel improvement, and temporary easements would be for access or staging during construction. The need for
real estate purchase results from the location of floodwalls on private property and the requirement for clearance around floodwalls.

Alternative B: Top-of-bank Floodwall/Partial Sylvan Lane Setback/College of Marin Widening. This alternative would utilize a combination of top-of-bank and setback floodwalls. The fish ladder would be removed, and the stream channel regraded upstream of the fish ladder to create a smooth transition between Units 3 and 4. For College of Marin Widening, a portion of the existing concrete channel would be removed (approximately 2,740 feet) around the College of Marin and Kent Middle School, and replaced with features that replicate a natural tidal creek. Box culverts would be installed under College Avenue. This alternative would require purchase of 18 parcels. Permanent easements would total 13.54 acres and temporary easements would affect 3.07 acres.

Alternative F: Bypass/Allen Park Riparian Corridor/College of Marin Widening. This alternative would utilize a combination of top-of-bank and setback floodwalls, an underground bypass, Allen Park Riparian Corridor, and College of Marin Widening. Alternative F would include an underground bypass culvert along Sir Francis Drake Boulevard to convey flow from the upstream portion of the proposed Project area to the Allen Park Riparian Corridor downstream from the Denil fish ladder. The underground bypass would alleviate the need to construct any floodwalls in the natural channel upstream of Lagunitas Road Bridge. The Denil fish ladder would be removed, and the stream channel regraded upstream of the fish ladder to create a smooth transition between Units 3 and 4. Downstream of the Allen Park Riparian Corridor, the channel would be identical to Alternative B, including removal of 2,740 feet of concrete channel to restore natural features, construction of floodwalls, and construction of box culverts at College Avenue Bridge. Alternative F would also include replacement and improvement of the bicycle-pedestrian path adjacent to the creek. This alternative would not require purchase of any parcels. Permanent easements would total 12.18 acres and temporary easements would affect 3.17 acres.

Alternative G: Floodwall/Allen Park Riparian Corridor/College of Marin Widening. This alternative would utilize a combination of floodwalls, Allen Park Riparian Corridor, and College of Marin Widening. This alternative is identical to Alternative F downstream of the fish ladder, but would construct floodwalls instead of a bypass upstream of Lagunitas Road Bridge. Top-of-bank floodwalls would be constructed similar to Alternative A. The fish ladder would be removed, and the stream channel regraded upstream of the fish ladder to create a smooth transition between Units 3 and 4. Alternative G would also include replacement and improvement of the bicycle-pedestrian path. This alternative would require the purchase of 18 parcels. Permanent easements would total 14.44 acres and temporary easements would affect 2.98 acres.

Alternative J: Bypass/Allen Park Riparian Corridor/Floodwall. This alternative would utilize a combination of an underground bypass, Allen Park Riparian Corridor, and floodwalls. Alternative J would be identical to Alternative F in Unit 4 and include an underground bypass culvert along Sir Francis Drake Boulevard to the Allen Park Riparian Corridor. The fish ladder would be removed, and the stream channel regraded upstream of the fish ladder to create a smooth transition between Units 3 and 4.

Downstream of the Allen Park Riparian Corridor, floodwalls would be constructed near the Granton Park neighborhood and adjacent to College Avenue. Alternative J would not
include box culverts at College Avenue. This alternative would not require purchase of any parcels. Permanent easements would total 3.44 acres and temporary easements would affect 3.87 acres.

**Alternative I: No Action.** The no action alternative represents the expected future condition if none of the action alternatives are approved and there is no change from the current channel configuration. For the no action alternative, the current conditions and flood capacity would remain unchanged. The capacity ranges from 3,300 cubic feet per second (cfs) at the upstream end to greater than 6,900 cfs downstream (USACE, 2010). Under these existing conditions, flood flows in excess of these capacities would continue to pass outside the channel onto a developed residential/urban floodplain. The fish ladder would not be removed and fish passage would not be improved through Corte Madera Creek. Over time, the fish ladder would likely continue to degrade. Moreover, the transition point between the natural Unit 4 and concrete lined Unit 3 stream reaches would remain a pinch point (constricted section) or a flood flow breakout zone.

**Preferred Project Alternative**

Alternative J, with a 4 percent annual exceedance probability (AEP) (synonymous with a 25-year recurrence or 25-year flood) option is both the Tentatively Selected Plan (TSP) and the Preferred Plan. Alternative J consists of a combination of floodwalls, an underground bypass (along Sir Francis Drake Boulevard), and the creation of Allen Park Riparian Corridor. The underground bypass would alleviate the need to construct any floodwalls in Unit 4, allowing the creek within Unit 4 to remain a natural channel. The draft EIS/EIR provides a full description of flood risk management features for Alternative J, the TSP, in Section 3.7.

The TSP achieves the following:
- Provides protection up to the 4 percent AEP event (25-year flood) for 164 structures
- Removes critical infrastructure from the 4 percent AEP event flood plain, including a fire station, a police department, and two schools
- Reduces urban damages by approximately 69 percent compared to the no action alternative
- Achieves $2,556,000 reduction in estimated damages on an annualized basis
- Reduces depth of flooding during a 1 percent AEP event (100-year flood)

**COMMENTS RECEIVED** Comment letters received prior to the hearing will be forwarded to your Board at or prior to the hearing date.

**PUBLIC HEARING.** The purpose of the public hearing is for your Board to receive oral and written comments on the adequacy of the Draft EIS/EIR. Following the public hearing and the close of the public review and comment period on November 27, 2018, the USACE will compile written responses to all comments, which, along with the Draft EIS/EIR and any resulting changes to the draft document, will represent the Final EIS/EIR, expected in Fall 2019. The Final EIS/EIR will then be circulated for further review for a minimum 30-day period, limited to the adequacy of the response to comments, prior to consideration of the final EIR for certification by your Board. The Draft EIS/EIR is available for viewing at the
Marin Civic Center, San Anselmo, Fairfax and Larkspur libraries, and Ross Town Hall, and on the Project webpage at:

**FISCAL IMPACT:** There is no net county cost impact to the General Fund by approving this action.

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Respectfully submitted,

Tony Redfield  
Program Manager

C:  
Cynthia Fowler, USACE, San Francisco District  
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