SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION
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TO: Commissioners and Alternates

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SUBJECT: Staff Report and Recommendation for Contract Authorization to Implement the Commission's Contract with the San Francisco Estuary Partnership for Flood Control 2.0
(For Commission consideration on October 4, 2012)

Summary and Recommendation

In August 2012, the US Environmental Protection Agency (EPA) awarded $1.6 million to the San Francisco Estuary Partnership (SFEP) from their San Francisco Bay Water Quality Improvement Funds to implement "*Flood Control 2.0*," a joint project of the SFEP, San Francisco Estuary Institute (SFEI), the San Francisco Bay Joint Venture (SFBJV), the Bay Area Flood Protection Association (BAFPA) and The Commission. The staff recommends that the Commission authorize the Executive Director to execute a contract necessary to accept and expend $105,000 from the SFEP to perform an institutional analysis of policies and procedures, guidance development, sediment matching tools, project design and public outreach to support innovative flood protection and sediment management.

Staff Report

Background. In 2012, the EPA solicited proposals for projects that restore and protect the water quality, habitat and environment of the San Francisco Bay and its watersheds through comprehensive approaches to water quality management focused on six priorities, including: invasive species management; reduction of trash in waterways; innovative wetlands restoration; stormwater management; reductions of pollutants identified in Total Maximum Daily Loads (TMDLs); and climate change impacts on water quality. Releasing coarse grain sediment trapped in flood protection channels so that it moves downstream to the Bay provides a significant opportunity to support marsh and shoreline habitats that are affected by sea level rise and decreasing sediment supplies to the Bay from its tributaries. It also may potentially reduce maintenance costs for flood protection agencies. Recognizing shared interests and the desire to further the knowledge of the Bay sediment system, SFEP (project lead), SFEI, BCDC, SFBJV and the BAFPA joined together to develop *Flood Protection 2.0*. In August 2012, the EPA awarded $1.6 million to the San Francisco Estuary Partnership (SFEP) and collaborating organizations to implement the project.

Flood Control 2.0 will develop and implement a set of innovative approaches to flood protection management along the San Francisco Bay shoreline. The interface between flood protection channels and the San Francisco Bay shoreline is one of the most ecologically important and societally challenging components of the Bay system. Historically, these were the Bay's natural deltas and were places of high ecological diversity and complexity. Then, as now, they were critically important as reliable rearing habitat for juvenile steelhead. These locations play a disproportionately important role in the sustenance of the Bay's tidal marshlands, as the delivery points for watershed carbon and sediment.

Flood protection channels were designed to move water quickly to the Bay, with less consideration for sediment transport. As a result, coarser sediments often drop out of suspension and remain in many channels, requiring costly periodic maintenance removal. Resulting impacts include increased flood risk, frequent habitat disturbance, Bay marshes that are less resilient to sea level rise, and shoreline development that is more vulnerable to sea level rise effects. From a human and economic hazard perspective, these areas face increasingly high flood risk because of climate change and the predicted increases in storm intensity and sea level.

This project recognizes the environmental benefits and cost-savings that would be generated through recognition of coarse-grained sediment in flood protection channels as a resource rather than waste. By redesigning the flood channel-Bay interface so that coarse-grain sediment is dispersed to missing points of connectivity such as historic delta wetlands and mudflats, critical habitat features can be recreated along marsh fronts, historic tributary deltas, and beaches, while simultaneously improving flood conveyance and re-establishing more resilient shorelines. The project will integrate regional datasets on coarse sediment availability/quality and a regional historical ecology stream-shoreline analysis with the results of local demonstration projects into a regional strategy that addresses the economic and regulatory benefits of these new approaches, defining opportunities and a path forward. It will also include three pilot projects in various stages of design and implementation in collaboration with Marin County Flood Control and Water Conservation District, Contra Costa County Public Works Department, and the San Francisquito Creek Joint Powers Authority. The Commission's staff contribution to this four-year project is to perform an institutional analysis of policies and procedures to support innovative flood protection and sediment management; assist in developing guidance for the flood protection agencies; assist in pilot project design; work with SFBJV to develop a sediment/restoration project matching program; and assist with public outreach. The Commission's sediment management team will implement the majority of this work described in these tasks.

Consistency with the Commission's Strategic Plan. *Flood Control 2.0* is a component of the Commission's regional sediment management program, and is consistent with several goals in the Commission's strategic plan in that it will: (1) promote optimum and sustainable use and management of Bay resources; (2) improve and implement BCDC's program for protection, use and restoration of Bay resources; (3) improve coordination and interaction with other agencies to improve the Bay; and (4) assist the Commission in playing an integral role in developing and implementing a regional proactive strategy for dealing with global climate change. While much of the activities of the grant reach beyond the Commission's jurisdictional boundaries, flood protection channels enter into the Bay, and are tidally active. Activities further up the watershed are the purview of the Regional Water Quality Control Board (Water Board) and SFEP. Commission staff continues to coordinate with the Water Board on these issues and expects their staff to be closely involved with this project.

This work will also help the Commission advance its strategic goal of improving coordination and interaction with other agencies to improve the Bay. This proposal, as well as the Coastal Impact Assistance Program and the Department of Boating and Waterways proposals presented to the Commission in 2011 and earlier this year, will assist the Commission in moving forward in the overall Regional Sediment Management program for San Francisco Bay, whose components include: dredging, aggregate mining, habitat restoration, watershed management and flood protection. Further, as part of the state-wide effort to complete regional sediment management plans, the Commission's actions would be consistent with the Ocean Protection Council's goals, the Comprehensive Conservation Management Plan for San Francisco Bay, the West Coast Governor's Agreement and Governor Schwarzenegger's California Action Plan.

Recommendation. The staff recommends that the Commission authorize the Executive Director to execute an interagency agreement necessary to accept and expend $105,000 from the SFEP, to perform an institutional analysis of policies and procedures to support innovative flood protection and sediment management, assist development of a guidance document for the flood protection agencies pilot project design, collaborate on development of a sediment/restoration project matching program and conduct public outreach. The staff also recommends that the Commission authorize the Executive Director to make minor, non-substantive changes to these contracts.