

**San Francisquito Creek Joint Powers Authority**

**September 24, 2009 Board Meeting**

**Agenda Item 7**

**Informational Items**

- a) Presentation by a professor and a graduate student from Stanford University: Using advanced technology to better understand San Francisquito Creek flooding patterns

Earlier this year, Philippe Cohen, Trish Mulvey and Len Materman met to discuss how LIDAR (Light Detection and Ranging) technology can be used to see the topographic contours of the lower San Francisco Creek watershed and how that knowledge might help the JPA understand and communicate flooding patterns in that area. LIDAR is an optical remote sensing technology used to gather information about a target; in this case, it can be used from an airplane to observe slight variations in a highly urbanized and canopied area. In other words, LIDAR can be used to see what the eye cannot – small and sometimes subtle changes in the landscape that might contribute to flooding in certain areas. Ideally, this will become one of the resources in the JPA’s toolbox to make policy and project decisions.

Over the course of the summer, Philippe brought on Stanford University Civil and Environmental Engineering Professor David Freyberg and his former graduate student Kasey Hurlbutt to develop a presentation that explains the capabilities of LIDAR and uses it to examine the flood prone area between Middlefield and the SF Bay. We hope that this presentation provides insights into how this technology helps us see topographic features that are hidden, and in a general sense, how that relates to flooding patterns along San Francisquito Creek. We intend for the relationship between the JPA and David Freyberg’s program initiated for this project to expand in mutually beneficial ways.

- b) Emergency preparedness and communication

Over the past several years, the JPA has been working with local police, fire, and emergency services departments that serve the constituents of the JPA member agencies to provide an Early Warning System (EWS) for imminent flooding from San Francisquito Creek during periods of sustained rainfall coupled with high tides.

The City of Palo Alto currently collects storm and rainfall data from its weather station in Foothills Park, and displays this data alongside real-time data collected from water-surface-elevation sensors installed at the upstream face of bridges within the San Francisquito Creek floodplain.

San Mateo County’s Office of Emergency Services (OES) collects rainfall data from multiple weather stations operated throughout San Mateo County, and has recently undertaken an effort to update their weather stations and add new collection sites consistent with their County-wide response program.

Working with the JPA, San Mateo County OES has installed a new weather station in Huddart Park to collect rainfall data and feed the data in to the County’s system. The new rainfall gauge and data collected will be managed by DEC Data Systems, a consultant to the County that has proposed operating the JPA’s proposed Early Warning System at a cost to the JPA of \$2,000.

DEC Data Systems will build and host a website, exclusive to the San Francisquito Creek watershed, that will compile data collected from the new Huddart Park weather station and the existing Palo Alto Foothills Park weather station. It will be used to improve the capabilities of the emergency response agencies during times of imminent flooding. JPA staff intend to have this website ready for public and agency comments in October.

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Additionally, in early September Executive Director Len Materman submitted a letter to the Association of Bay Area Governments (ABAG) indicating the JPA's interest in participating in ABAG's Multi-jurisdictional Local Hazard Mitigation Plan. This Plan, which was last updated in 2005, includes approximately 100 jurisdictions throughout the Bay Area. In addition to the benefit of being part of this regional effort, participation in the Plan would make the JPA eligible to receive pre-disaster mitigation funding from FEMA.

ABAG's most recent listing of jurisdictions expressing an interest in participating in the new plan included the Santa Clara Valley Water District, San Mateo County, and the City of Palo Alto. In order to participate in the Plan, the JPA is required to review and comment on the Plan, both in general terms and as it specifically relates to the JPA's interests, formulate mitigation goals compatible with the Plan, provide opportunities for community input into the JPA mitigation priorities and strategies, and later, formally adopt the overall Plan by Board resolution. These activities will be completed this fall.

c) Annual maintenance walk

The purpose of the annual maintenance walk on San Francisquito Creek is to identify debris and potential flow obstructions in the main channel that need addressing prior to the rainy season. This year, the maintenance walk took place on two days: the group hiked the "upstream" reach between Sand Hill Road and El Camino Real on September 15<sup>th</sup> and the "downstream" reach between El Camino Real and Highway 101 on September 16<sup>th</sup>.

All work items identified during the maintenance walk have been catalogued and assigned to the appropriate agency, including:

- Illegal encampments have been reported to the appropriate police departments for follow up.
- Dumping sites and areas of high trash incidence have been forwarded to NGOs sponsoring volunteer clean-up events to maximize their efforts.
- In general, the creek is in good condition and is in need of relatively little maintenance this year. Perhaps due to the mild rainy season, there were only a limited number of fallen trees and tree limbs of the size that would require attention to prevent a public safety hazard.
- All work assigned during the maintenance walk is in accordance with the California Department of Fish and Game's guidelines for stream maintenance.
- A report on work completed in the channel pursuant to the maintenance walk will be prepared for the October 22, 2009 JPA Board meeting.