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**MEETING TITLE:** Marin County, CA PMR Flood Study Review Meeting

**DATE AND TIME:** October 20, 2011, 9:50 AM – 10:50 AM Pacific

**LOCATION:** Town of San Anselmo Council Chambers  
525 San Anselmo Avenue, San Anselmo, CA 94960

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**ATTENDEES:** Kathleen Schaefer, Engineer, FEMA Region IX  
Michael Hornick, Planner, FEMA Region IX  
Patricia Rippe, Planner, FEMA Region IX  
Patrick Clancey, Technical Specialist, Michael Baker Jr., Inc.  
Lisa Messano, Communications & Outreach Specialist, Michael Baker Jr., Inc.  
Bob Hemati, Director of Public Works, Town of Ross  
Linda Neal, Senior Planner, Town of Fairfax  
Mark Lockaby, Building Official, Town of Fairfax  
Jeff Ohmart, Engineer, Marin Municipal Water District  
Nick Salcedo, GIS, Marin Municipal Water District  
Bryan Little, Civil Engineer, City of Mill Valley  
Bill Voigt, GIS Analyst, City of San Rafael  
Michael Rock, Public Works Director, Town of Fairfax  
Sean Condry, Public Works Director, Town of San Anselmo  
Joanne Kessel, Deputy Clerk, Town of San Anselmo  
Nader Mansourian, Public Works Director, City of San Rafael  
John Semerad, Engineer, Marin County  
Kevin McGowan, Assistant Director, City of San Rafael  
Ellen Ellsworth, Senior Engineer, City of Novato  
Amber El-Hajj, Associate Planner, City of Mill Valley  
Mary Archer, Senior Transit Planner, Marin Transit  
Barry Hogue, Director of Public Works, Town of Corte Madera  
Hamid Shamsapour, Director of Public Works, City of Larkspur

## **OVERVIEW:**

Kathy Schaefer initiated the meeting by welcoming the attendees and thanking them for their interest in the Ross Valley and Mill Valley FEMA study. She noted that this is a new study underway and the purpose of the meeting was to present the analysis, methodology and results. The meeting provided an opportunity for attendees to discuss technical issues, community concerns, needs, and coordination issues. A summary of the flood study review meeting is provided below.

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## MEETING HIGHLIGHTS

Discussion topics included the following:

- Ross Valley and Mill Valley Study Overview
- Study Timelines
- Multi-study Integration and Challenges
- 5- Stages of a FEMA Map Change
- Questions/Concerns from Community Members

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## ROSS VALLEY AND MILL VALLEY STUDY OVERVIEW

Patrick Clancey presented the hydrologic and hydraulic study results as shown on engineering topographic work maps for the Mill Valley and Ross Valley studies. The presentation included the limits of the study reaches, specific details about the hydrologic and hydraulic analyses, methods, and results.

The Ross Valley study was originally performed by Phillip Williams Associates (PWA) under contract with FEMA, however it was not completed under contract and FEMA's current mapping contractor, Michael Baker Jr., Inc, is finishing the study. The hydrology is a rainfall-runoff model and the hydraulics is a 1-dimensional, steady flow HEC-RAS version 4.1 model.

Baker is incorporating the Mill Valley study originally performed by Stetson Engineers for the City of Mill Valley, who provided it to FEMA. Hydrology for Mill Valley is based primarily on stream gage analysis and hydraulics is a 1-dimensional, steady flow HEC-RAS version 4.1 model. The delineation was made on topography from Marin County topo-bathy surface model provided by the Marin County Community Development Agency / GIS Division. Topography was turned into a 5-ft by 5-ft DEM.

This Physical Map Revision that incorporates the study data will add a floodway. The floodway was computed for all the main streams and the overflow branches. The floodway computation was first performed using equal conveyance reduction on the overbanks. The work maps are currently in review to refine the floodway and to incorporate comments and better data.

To date, the following data has been received:

- As-Built data for Lagunitas Bridge
- High Water Mark information from 2005 & 1982 floods
- Preliminary modeling from Flood Zone 9 Capital Improvement Plan base model. This model does not meet FEMA specifications, and FEMA will incorporate to the extent possible.

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## STUDY TIMELINES

Kathy Schaefer acknowledged that FEMA continues to encourage feedback and will accommodate requests for additional dialogue with the communities on the study results. She noted that the mapping process is a slow and deliberate process on purpose. FEMA is seeking comments at this stage of the process while developing the preliminary FIRM panels. After the preliminary FIRM panels and updated Flood Insurance Study Report is distributed, there will be a Community Coordination and Outreach (CCO) meeting. Following the CCO meeting, the statutory processes of adopting the maps will begin.

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The formal appeal process will be initiated for proposed Base Flood Elevations (BFEs) in the areas where there is a BFE change. After the proposed BFEs publish in the Federal Register, the BFE notice will publish twice in the legal section of the local newspaper. The 90-day appeal period starts on the second newspaper publication date. The appeal process applies only to areas where FEMA formally establishes new BFEs and in order to file an appeal, better technical data must be provided. Re-delineations are not eligible for the appeal process; however, a community can file a protest.

It is FEMA's hope that all comments and concerns related to the study will be addressed before formal the appeal period. Impacted communities have the right to submit protests or appeals during the 90-day period.

Following the appeal period, FEMA will respond to and finalize any appeals received and incorporate necessary changes to finalize the DFIRM database. Once the DFIRM database is finalized and the appropriate quality reviews have taken place, the Letters of Final Determination (LFD) will be issued to the Chief Executive Officer of the County and all incorporated communities. The LFD starts the six month compliance period during which time communities may need to update their floodplain management ordinance to remain compliant with the requirements of the National Flood Insurance Program. The addition of the floodway will require a 60.3(d) level of compliance. Six months from the LFD date, the maps will be effective.

It was stressed that once the LFD is issued, the effective date of the new FIRM panels is set. The six month compliance period is an important time for the communities to reach out to their constituents and conduct outreach efforts to inform them of the upcoming changes.

FEMA and the mapping contractor will coordinate with the communities that are not considered compliant at LFD to facilitate ordinance compliance prior to the DFIRM effective date.

The two-fold purpose of the LFD is to give communities the heads-up about the six month compliance period and the ordinance requirements, as well as to give the heads-up regarding building permits, particularly due to the building restrictions that will be in place once the communities impacted by this

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study have floodways. Once the LFD is issued, FEMA strongly encourages use of the maps as best available data. Once the DFIRM is effective, communities must enforce the new map.

## **MULTI-STUDY INTEGRATION AND CHALLENGES**

FEMA's San Francisco Bay and Open Pacific coastal studies were discussed briefly and concurrent mapping timelines were presented. The Marin County web page (<http://www.bakeracom.com/index.php/california/marin-county/>) was displayed and it was noted that this page would be kept up to date with the mapping activities for all three of FEMA's studies in Marin County.

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## **5-STAGES OF A FEMA MAP CHANGE**

Following the mapping process and timeline discussion, Kathy spoke to the psychology of FEMA maps. FEMA maps are tools to help communities understand their flood risk and protect citizens from flood-related hazards. FEMA allocates a considerable amount funding annually to develop maps that more precisely represent flood risk. FEMA sees these efforts in a positive light however oftentimes, FEMA maps are perceived negatively by communities because one of the outcomes of more precise mapping may be that property and business owners have to purchase flood insurance or spend money to elevate their homes above the new Base Flood Elevation. Communities tend to move through this process following five fairly predictable stages. The first stage is denial and people will claim that their property has never flooded, though we all know what the New Years Eve flood of 2005 looked like, and those results were close to the 1% annual chance flood – this will be useful in explaining issues to constituents. The next stage is anger followed by negotiation when there will be requests to delay the maps. Negotiation is followed by depression which is followed by acceptance, the final stage. Kathy also noted the psychology of processing risk and risk homeostasis.

It is important to note that the study is based on specific criteria, and unique circumstances during known floods may differ from the study results. Kathy noted that it is advisable for community officials to work with city or town councils and boards to explain this study early. Community officials can explain to elected officials that choosing to enforce the preliminary map data, particularly post-LFD, as best available data will benefit homeowners in the long run, even if it is perceived as unpopular in the short term. It was acknowledged that Marin County has a head start with the master plan.

Lisa Messano spoke about materials available to help the communities navigate the outreach process. The work maps and a Community Outreach Plan template are posted to the Marin County web page to help communities start to think about how they will reach out to the property owners impacted by the study. FEMA and Baker are available to provide support as requested.

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Kathy stated that she wants all communities to review the work maps on the website. If the community requests that the study results be reviewed by an independent consultant, FEMA will work with the County and communities to accommodate this request. The intent is not to slow down the study and to remain flexible in the process.

## QUESTIONS/CONCERNS FROM COMMUNITY MEMBERS

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Questions from community representatives directed at the FEMA engineer Kathy Schaefer and supporting staff and topics varied. A list of the topics discussed during the meeting in question and answer format is provided, as follows:

- 1) When are the preliminary FIRM panels and updated Flood Insurance Study Report scheduled to be distributed?
  - Currently, the preliminary FIRM is scheduled to be distributed between February and May 2012.
- 2) What is the significance of floodways?
  - For the communities in Ross Valley & Mill Valley, regulatory floodways will be added to the maps, which guarantee adequate conveyance of floodwaters, and will cause special zoning/development restrictions. The floodways on the maps are still crude, but will be refined before the preliminary maps are issued. Communities will likely need to update ordinances as a result of addition of floodways. Make sure to look at floodway boundaries very closely and provide feedback. Property owners will have special restrictions. This is not anticipated to be an issue due to the fact that all communities are built out and current property owners should be fine with their current footprint, however they will be restricted from expanding towards the streams and creeks. Kathy will forward technical data including modeling and maps to those who request it.
- 3) The public has difficulty identifying structures on the current countywide FIRM – will the base mapping be updated?
  - FEMA has new mapping standards and intends to making the maps look better. There are new options to help communities visualize the flood risk.
- 4) Why were Ross Valley and Mill Valley selected for study, and not other watersheds?
  - The Ross and Mill Valley watersheds were chosen for study because during the countywide mapping effort, there was a significant disconnect between the maps and flooding from the 2005 storm in San Anselmo. FEMA had to change the area to Zone A as a result on the 2009 countywide map, which complicates floodplain management for local officials. Statistically, some of the highest losses in the state of California have occurred in San Anselmo. Mill Valley was included because they were already conducting their own study, FEMA provided a Cooperating Technical Partner grant to complete the work (leveraged data was available

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from community from the Stetson Engineering study). FEMA will look at other stream systems in the future.

## 5) What is the intent of the SF Bay study?

- The SF Bay study will be based on existing conditions and does not look at sea level rise. Coastal studies are very difficult, expensive, and require large amounts of computing power previously not available. Results are currently based on a 1990 USACE study which only addresses still water elevations. New study uses new technology, the latest surveying, and storm surge and wave run-up data using a 30-year hindcast model to develop the 1% annual chance flood. Our modeling techniques and capacity has grown significantly. It takes three weeks to run the hydrodynamic model for the SF Bay coastal study.

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## **ACTION ITEMS**

None