

The Ross Valley Floods!

by Sandy Goldman
2015

Anyone who was in the Ross Valley on December 31, 2005 knows that the Ross Valley floods. Newcomers may be surprised that the sleepy little streams, barely a trickle in the summer, can quickly become muddy torrents when it rains heavily. When they overtop banks, often with little warning, the floods are damaging and dangerous. So what is being done to deal with the flooding?

After the devastating flood of New Year's Eve 2005, property owners voted for a flood fee to identify the causes and solutions for this perennial problem. The stakes are high, the problem complex and solutions will be expensive.

After two years of field research and analysis, the Flood Control District developed a 10-Year Work Plan to provide a watershed-wide program for flood mitigation. The 13 key projects comprising this plan include detention basins, bridge modifications, creek widening, erosion control and habitat enhancement. Collectively, these projects will reduce the annual level of flood risk to 4% (the 25-year flood level) and will significantly reduce flooding in the 1% annual chance flood (the 100-year flood), the level reached in 2005. The 10-year plan is also the first phase of a 20-year program to protect against the 100 year flood, without compromising the beauty and the natural environment of the watershed.

There has been vocal criticism of the pace of progress in flood mitigation. However, many of the “obvious” mitigation actions—such as removing obstructions—would serve mainly to move flooding risk around the watershed without providing benefits to the whole community. The 10-year plan reflects careful and rigorous field studies and analysis to ensure that the mitigation implemented serves everyone in the Ross Valley. It will be worth the time to get it right.

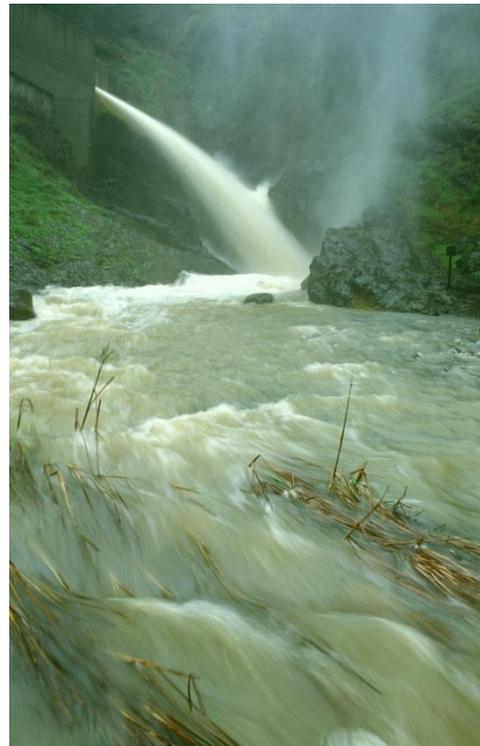
Since the Flood Zone 9 Advisory Board adopted the 10-year plan in 2012, local agencies have pursued feasibility studies for the specific project sites and sought outside funding to augment the limited funding from the annual storm drainage fee. The studies are needed to inform legally mandated environmental review and to support the detailed designs and cost estimates required to obtain the grants essential to fund construction.

The studies that are now in progress include:

1. Detention Basins: These provide temporary water storage to prevent immediate flooding from very heavy rain. They hold water until

creek levels have subsided enough to permit the stored water to be safely released. Basins in Fairfax and San Anselmo will retain their primary purpose as community parks and will be enhanced for improved recreational use. They will only be used for floodwater storage during what would otherwise be major flood events. The use of Phoenix Lake for floodwater detention will provide increased usable water storage and also enhanced recreational use. Detention basins are widely used elsewhere in the U.S. and abroad for flood management. The storage provided by each of the basins is needed to meet the flood-risk reduction proposed. Not constructing any one basin will leave vulnerable areas more vulnerable.

2. Bridge and Creek Modifications: Many existing bridges, culverts, bank protection structures and buildings along the creeks impede water flow. The proposed modifications will reduce flow constraints and



When flooding is imminent, a temporary barrier will raise the spillway level of Phoenix Lake. Photo by Charles Kennard

enhance riparian vegetation. Bridge replacement projects are being pursued on Fairfax Creek (Azalea Avenue) and San Anselmo Creek (Nokomis Avenue, Sycamore Avenue, Madrone Avenue, Sir Francis Drake Blvd. and Winship Avenue). These bridge replacement projects are expected to get partial to full grant funding for environmental review and actual construction. The environmental review and public participation processes are expected to get under way in 2015, lasting 18 months. Construction should start in 2017 and be completed in 2 years. Efforts are also underway to raise funds to remove Building Bridge 2, which also blocks flow in downtown San Anselmo.

3. Corte Madera Creek Flood Control Project, Units 3 and 4

in Ross and Kentfield: The U.S. Army Corps of Engineers is the lead on needed improvements to creek capacity in this part of Corte Madera Creek. There is local support for specific improvements, but the Corps can only proceed if Congress funds the project. Supervisor Katie Rice traveled to Washington in July 2014 to urge the agencies and legislators to support implementation in the Corps' 2015 Work Plan and 2016 Budget. More recently, Supervisor Rice met with the newly appointed head of the Corps

in San Francisco to stress the importance and urgency of action by the Corps.

4. Corte Madera Creek Flood Control Project, Units 1 and 2

in Ross and Kentfield: The Flood Control District performed bathymetric surveys in 2014 along Lower Corte Madera Creek to determine channel bed changes since the last survey in 2010. The 2014 survey shows that there is slightly less sediment in the earthen channel than in 2010. Dredging is not necessary to provide enough capacity for the channel to convey the one percent annual chance flood. However, there are local drainage and erosion problems that should be addressed. While these are not part of the Corps of Engineers project and not covered by the 10-year plan, they are problems that need to be addressed in the broader context of the Ross Valley Watershed Program and planning is underway.

The work now in progress is allowing key program components to move forward. Each of these projects when implemented will help to reduce the risk of flooding in the Ross Valley, but they are all needed to provide the Ross Valley with a significant risk of flooding. In a heavily developed watershed this is extremely difficult and expensive. No one should be surprised that it takes a lot of time (and effort) to make it work. The 10-year plan deserves the community's support.



'Building Bridge 3' in San Anselmo seriously restricts high flows in San Anselmo Creek. The Town's water level gauge is located beneath the building. Photo by Charles Kennard

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