

Flooding and the Ross Valley Watershed Program

by Sandy Guldman

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Friends have been involved with two separate groups that have been active in the fall and winter of 2006-2007 working to advance the Ross Valley Watershed Program: the Technical Working Group and the Financial Working Group. Both groups include County and town personnel, outside consultants, and community volunteers. The main elements of the program are described below. Please visit [http:// www.rossvalleywatershed.org/](http://www.rossvalleywatershed.org/) for updates on the groups' work.

Technical Issues The Technical Working Group (TWG) is gathering information and providing guidance for several related technical topics.

Hydraulic Modeling: The primary focus has been developing a suite of numerical models, including a hydrology model that computes flow in the upper watershed based on the magnitude and duration of rainfall and a hydraulic model that will facilitate analysis of constrictions such as bridges and culverts in the lower watershed. A California Coastal Conservancy grant for \$100,000 enabled a partnership to begin work with a local firm, Stetson Engineers; an additional \$30,000 funded land surveys of the watershed. The models are predictive tools that will assist personnel to develop designs for and to evaluate the effectiveness of various flood protection projects. A tentative list of priority projects will be available at a community meeting which is currently scheduled for February 10, 2007.

Flood Forecasting: The hydrologic and hydraulic models will also be used as a foundation for a flood forecasting system that will improve early-warning systems. A flood forecasting system encompassing these models will provide tool to predict flood inundation (depth and aerial extent) based on rainfall forecasts and antecedent conditions. With this new tool staff will gain crucial time to inform the community and first responders

Creek Clearing: Although it is the responsibility of property owners along creeks and waterways to keep their property clear of debris and vegetation that could impede water flow, the County and incorporated communities decided to fund a one-time major clean up to help prevent flooding this season. Marin Conservation Corps crews removed hundreds of cubic yards of debris and vegetative material, improving the drainage system and its conveyance capacity. Regular creek clearing is a necessary part of proper urban creek maintenance. However, this work must be carefully done, so that vegetation that stabilizes creek banks and provides important habitat is left in place.

Building Elevation Program: The steepness of the upper watershed, the extensive development of the floodplain, and the intense rainfall that occurs here guarantee future flood events; however it is possible to reduce their frequency and the severity of flood damage. Some homes and businesses in the floodplain that have suffered repeated flood damage would benefit from being elevated. A full grant proposal was submitted in early November to the California Office of Emergency Services for grant money to assist owners to raise buildings in the incorporated communities of Fairfax, Ross, and Larkspur as well as the county area of Kentfield. The Town of San Anselmo is also proceeding with a grant proposal. If awarded, funding would be available to cover up to 75% of costs for those property owners who are participating in the program.

Long-Term Solutions: With the hydrologic and hydraulic modeling complete and constrictions identified, work can begin on design and construction efforts to replace culverts and bridges, stabilize banks, and identify potential floodplain storage basins. The TWG will recommend bridge and culvert replacements, projects to improve fish passage, riparian enhancement projects, and flood proofing of critical utilities as soon as the models are available

to the engineers. One challenge in this effort will be to obtain the constructive involvement of private property owners. Recent experience suggests that some property owners are reluctant to recognize the value of the recommended actions and to allow work on their property.

Funding The Financial Working Group (FWG) is developing a comprehensive funding mechanism to share with the community at the meeting scheduled for February 10, 2007. In 2006, Flood Control District Zone 9 revenues provided only \$140,000 a year for flood prevention and creek maintenance—far less than is needed. Furthermore, the assessment cannot be increased without a vote. This year, the County and local governments contributed an additional \$660,000 to fund critical flood prevention projects. But those emergency funds are a one-time collaboration and a stable, long-term funding mechanism must be developed. An early estimate for proposed projects suggests they would cost about \$100 million. Virtually all state and federal funding sources now require a local matching source, usually a tax or assessment. For example, \$100- a-year per parcel would raise about \$2.5 million a year locally, which could then be leveraged to gain both state and federal funding. San Anselmo and Fairfax are rejoining the Flood Control District in January 2007 to facilitate watershedwide planning and funding. The FWG conducted a survey of residents to analyze community attitudes and support for a potential tax. Among the options the FWG is exploring are a special purpose parcel tax (all parcels would pay the same, assuming 2/3 of the voters approved) or a storm drain user fee (based on the size of the parcel and the amount of it that is developed impervious surface; the fee would require 50% of property owners to approve). All jurisdictions and community members will reach a consensus on the most favored mechanism to raise funds, and the community will be asked to vote on a measure in 2007.

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