



Ventura County
Watershed Protection District
Planning & Regulatory
Hydrology Section
MEMORANDUM

DATE: September 16, 2005
TO: Calleguas Watershed Stakeholders
FROM: Mark Bandurraga, Hydrology Section Manager
SUBJECT: **Calleguas Creek Watershed Model Results- VCRAT**

The model results provided on this webpage are from the existing condition VCRAT model of the Calleguas Creek Watershed developed for the Calleguas Creek Watershed Management Plan study by the District. The report providing background information about the model development is available at:

<http://www.calleguascreek.org/ccwmp/hydrologymodel.asp>

These model results can be used for projects requiring existing condition design flows for various frequency storms. A future condition model assuming development has occurred according to the cities' general plans has also been prepared but the final review has not been finished at this time. The Revolon Slough tributary to the Calleguas Creek mainstem, incorporating much of the City of Camarillo, was simulated with a separate submodel.

The existing condition model is based on 1997 land use information available from the cities as updated by aerial photography flown in 2000. The model uses the District's VCRAT modified rational method to simulate the 100-yr design storm peak flow. The peak flow results are modified using an areal reduction factor to account for spatial variability in rainfall. Areal reduction was not applied to any flow results from watershed areas less than 600 acres. Peak flows for other storm frequencies are calculated based on multipliers developed from stream gage information in the watershed.

The steps for finding the design peak flow for your area of interest are the following:

1. Download the pdf maps showing the model subareas and labels for the Calleguas Creek watershed. The Calleguas Creek mainstem has been divided into three maps for legibility. The maps show the street alignments and District jurisdictional channels to help in identifying project locations.
2. Find the model subarea and node id corresponding to your project location.
3. Download the model results matrix file, find the node id, and find the associated peak flows for the design storm of interest.
4. Subarea confluence points are not shown on the map, but are provided in the matrix. For example, subareas 38B and 39A are shown on the map, but their confluence node id of 40AB is not shown. The confluence node id 40AB is shown in the model results matrix to provide the results at that confluence point.

5. If a model node or confluence point corresponding to your project area is not contained in the model results matrix, please fill out a data request form found by following the links at:
<http://www.vcwatershed.org> and send it to hydrodata@ventura.org. You can also fax us your data request with a map of your project area at (805) 654-3350.
6. If you would like us to verify the design flows you have identified for your project area, please send us a data request as described in step 5.