

Novato Watershed Hydraulic Study Request for Proposals

Response to Questions

September 16, 2011

1) We understand from the Vineyard Creek report provided in the bibliography that Kamman developed a hydraulic model of a reach of Vineyard Creek that is included in the model extent for the Novato Creek project. Will the Vineyard Creek model be made available to the Novato Creek consultant team?

Response: Yes. The Kamman Hydrology model for Vineyard creek can be provided to the winning consultant.

2) Is there a manual or other written guidance regarding the operation and maintenance of the Novato Flood Control Project? (e.g. guidelines for conveyance capacity, levee maintenance, dredging etc.)

Response: There is no formal O&M manual for Novato Creek. The closest document would be the District's draft Routine Maintenance Agreement (RMA) with DFG which contains only some general details of the system. The RMA will be provided to the winning bidder but will likely be of limited value. The District Zone engineer (Pat Balderama) has many years of experience in the system and will be available for questions and a site tour to the winning consultant.

3) The RFP indicates that the District and City of Novato have existing information that may be used to calibrate the Nave Gardens urban drainage system model (Task 4). Can you clarify what calibration data are available?

Response: Part of Task 4 will be to collect and evaluate any existing data that can be used for calibration. The only specific data of this type we are aware of is in the 1984 CDM report which has figures showing the extent of flooding from various storm events that may be useful. We believe that any other calibration data would be in the form of high water marks. While we do not have any specific additional data at this time, the District will work with the winning bidder to obtain any high water mark data that may be available from the City of Novato and others.

4) Are there any calibration data available for the hydraulic model of Novato Creek and its tributaries? Can you describe these data in terms of which storm events they are associated with, the number of points available, and the general location they apply to?

Response: The District maintains a tipping bucket rain gauge and creek stage recorder gauge on Novato Creek and this data is available through the Marin Alert website: <http://marin.onerain.com/home.php>. The stage recorder currently provides a digital measurement twice daily when the creek isn't changing much and every 0.1 foot when the creek water level changes more rapidly, i.e. during storm events. The digital data for this gauge is available from approximately the present back to approximately 1994 and we believe that scanned paper copies of old strip charts are available for older data sets (availability and

dates to be confirmed). We have not reviewed the stage-level data for completeness and usefulness, and this work should be included as part of the RFP. There is no rating curve for the District's Novato Creek stage gauge. The USGS also maintains a stream gauge on Novato creek (USGS 11459500 NOVATO C A NOVATO CA) and this data is available through their website.

Note that Noble Consultants did some tide level measurements and calibration for their model study of Lower Novato Creek and that data is described in their reports.

A recent review by District staff of the tipping bucket rain gauge data for the January 2008 storms showed that the rain gauge was not working properly and providing unrealistically high precipitation intensities, possibly due to wind effects. Digital data is available for inspection on the Alert website for the stage recorder and the rain gauge and the Consultant can evaluate the associated storm events and number of points available and location of the recorder.

Also note that the US Army Corps of Engineers did a report entitled..."Report on the Floods of 4-6 January 1982 in the San Francisco and Monterey Bay Areas, December 1983" that contains numerous high water marks for this storm event in Novato Creek.