

Watershed Studies Underway Progress on Hydrology and Hydraulics Models



Our Public Works staff and consultant are currently working on developing a watershed hydrology model and a hydraulic flow model for Novato Creek from San Pablo Bay to Stafford Lake. This summer, the focus has been on organizing channel and topographic survey data to support the development of the watershed and creek flow models. Additional channel surveys and sediment assessments are helping the project team to refine and build the creek flow model.

Work completed to-date includes:

County staff has developed a draft hydrology model using the new and improved Golden Gate Light Detection and Ranging (LiDAR) mapping data to better define sub-basins or catchments in the project area. Staff is currently working with our consultant to calibrate the model.

The consultant has assembled all available topographic and bathymetric data for the Novato Creek flow model and is presently evaluating the accuracy of this data. This process has been aided from the contributions of survey data from our partners and other local agencies including the Bel Marin Keys Community Service District (and their consultants CLE Engineering), the City of Novato and Novato Sanitary District. The consultants will use this survey data to create and calibrate a new “existing conditions” flow model for Novato Creek.

An urban drainage Storm Water Management Model (SWMM) model for the stormdrain system in the Nave Gardens neighborhood is also under development. Nave Gardens is a low-lying area between Highway 101 and South Novato Boulevard along Novato Creek.

Preliminary field reconnaissance of Novato Creek from Stafford Lake to Bel Marin Keys was completed and incorporates photos, identifies survey elevation control datum and inspections of bridge structures for flow capacity. This work also includes a preliminary assessment of significant sediment sources, bank erosion and the categorization of sediment transport and storage reaches.

Water level monitoring equipment will be installed in lower Novato Creek this fall to provide water level data to calibrate the model.

A preliminary “existing conditions” hydraulics model should be up and running by early 2013. This model will be used to analyze and evaluate project alternatives.



KRCB video

The Novato Creek Watershed is prominently featured in a watershed series for KRCB. The short videos were developed to educate the public about the importance of our watersheds and to highlight the watersheds of Marin, Napa, and Sonoma Counties. [Visit KRCB's website](#) or tune in to KRCB Channel 22 to view the spots between your favorite shows.

FEMA map revisions

FEMA is updating flood zone maps for coastal, tidally influenced areas in Novato. Preliminary Flood Insurance Rate Maps (FIRM) will be released in 2013. [For more information, visit the FEMA website.](#)

Watershed Work Plan

[Click here to view the detailed work plan proposal for the Novato Watershed Program.](#)

US Army Corps of Engineers San Pablo Bay Watersheds Program

The Army Corps of Engineers through a contract with the State Coastal Conservancy will fund \$250,000 in studies to support the Watershed Program. The Corps studies will focus on lower Novato Creek. The funding will support creek and wetland restoration design planning in lower Novato Creek (downstream of Hwy 101).

Specific tasks include vegetation and habitat mapping and the review of hydrology and hydraulic models developed through the Novato Watershed Program. Ultimately, this work by the Army Corps and Coastal Conservancy will allow the identified preferred restoration alternatives for Lower Novato Creek to be eligible for federal construction funding through a future WRDA (Water Resources Development Act).

EPA awards Flood Control 2.0 Grant

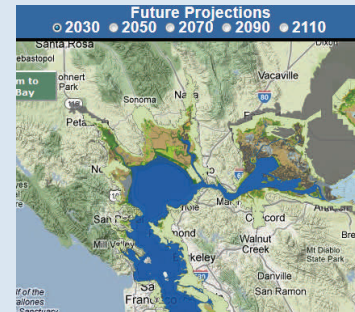
The Flood Control 2.0 grant will fund innovative approaches to dealing with sediment, flood protection, and habitat restoration in Bay Area creeks. A \$1.5 million grant from the Environmental Protection Agency (EPA) has been awarded to the San Francisco Estuary Institute, San Francisco Bay Joint Venture, Bay Area Flood Protection Agencies Association, Bay Conservation and Development Commission, and the Marin County Flood Control and Water Conservation District to redesign flood control channels to restore wetlands, improve water quality, and shoreline resiliency at 3 locations in the Bay Area including Novato Creek.

We will leverage \$400,000 in funds already committed to tasks in the Novato Watershed work program as the Marin County match. The grant will provide \$270,000 towards preparation of a final design for creek and marsh restoration along lower Novato Creek. In addition, the San Francisco Estuary Institute will contribute a historical ecology analysis for the Novato Creek watershed (~\$150,000 value).

Bay Area Integrated Regional Water Management Plan 2013 Update

Several potential Novato projects were submitted for the 2013 Bay Area Integrated Regional Water Management Plan update. The Plan is a nine-county effort to coordinate and improve water supply reliability, protect water quality, manage flood protection, maintain public health standards, protect habitat and watershed resources, and enhance the overall health of the Bay Area. Projects submitted will be scored and ranked in the 2013 Plan and will be prioritized for funding through Prop 84-funded Integrated Regional Water Management funds. www.bairwmp.org

To view a list of North Bay projects, [please click this link](#).



PRBO Sea Level Rise workshops

Point Reyes Bird Observatory (PRBO) has developed a web-based tool to evaluate North Bay sea level rise impacts. PRBO is in the process of updating their online tool. The beta version of an updated website will be available in November. [View the tool by clicking this link.](#)

Caltrans Hwy 37 Study

The purpose of the study is to ensure that transportation planning for Highway 37 is based upon stewardship principles and will meet Caltrans' triple bottom line: preserving the environment, supporting a robust economy and promoting transportation equity. This study signals a long-term commitment by Bay Area transportation and environmental agency partners and resources protection agencies to finding a context-appropriate solution to the challenges of building in extremely sensitive environments. The project is funded by the Transportation Research Board, Strategic Highway Research Program 2. [Click here to read more.](#)