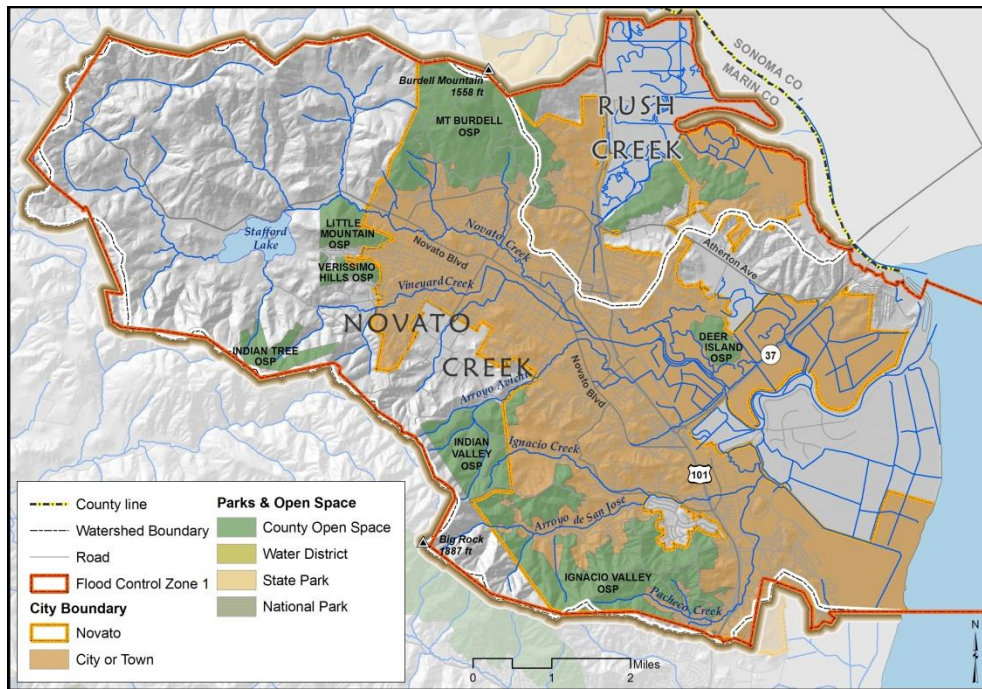


# Novato Watershed Program

[www.marinwatersheds.org](http://www.marinwatersheds.org)



## Purpose

The purpose of the Novato Watershed Program is to identify opportunities to integrate flood protection goals with creek and wetland restoration elements. This process includes evaluating alternatives that would reduce flood protection maintenance costs and impacts and be resilient to sea level rise. This first phase of work would produce a unified hydrology and hydraulics model to evaluate alternatives. Once the multi-benefit alternatives are identified, it is anticipated a revenue measure would be proposed to fund implementation. This work would also support efforts to secure grant funds.

## Background

In 2006, the Marin County Flood Control District completed the final phase of a 15 year, multi-phase flood control project that provides protection from the 50-year storm event along the lower reaches of Arroyo Avichi, Warner, and Novato Creeks. The floods of 2006 revealed that additional work along lower Novato Creek could reduce potential flooding impacts to Nave Gardens and downtown Novato. During the 2006 floods, downtown Novato would have experienced flooding had the levee at Deer Island basin not been breached. Flood protection in downtown Novato is currently predicated on an expensive sediment removal program that must be performed every four years within a 1.2 mile reach of lower Novato Creek at a cost of \$1M+. This approach is not economically or ecologically sustainable and this watershed program process seeks to reduce the scope and frequency of this sediment removal while maintaining the level of flood protection. This program seeks to provide the County and its partner agencies, Flood Control Zone 1 Advisory Board, City of Novato, North Marin Water District and the Novato Sanitary District, with alternatives that reduce sediment input from upstream sources and rely on the inherent ability of Novato Creek to scour its channel and transport more sediment to the bay.

Bank erosion along Novato Creek is extensive above Grant Avenue. This reach exhibits active erosion and many property owners are requesting a comprehensive approach to stabilization work. This study would provide the modeling tools to assess long term solutions that are consistent with work completed to date and that would improve habitat conditions.

### **Stakeholder Outreach**

The watershed program will utilize a collaborative, iterative process to develop an integrated flood protection and habitat restoration program. The Marin County Board of Supervisors recommended establishing stakeholder committees at three levels to support community outreach and to provide overall program direction. A broad community outreach program is also recommended.

Community outreach will be developed around these key messages:

- Working at the watershed scale acknowledges the mutually dependent interactions and linkages between our ridgetops, the valley floor, creeks, wetlands and San Pablo Bay.
- The watershed approach acknowledges the need to work collaboratively to identify solutions to reducing flood hazards, maintain local water supply, recycled water operations, and improving fish and wildlife habitat.
- Implementation at the watershed scale takes time and is implemented in tandem with both public and private projects and the maintenance and rehabilitation of aged existing infrastructure.

### **Description of Watershed Stakeholder Committees**

***Policy Advisory Committee*** - This group of elected officials is comprised of the District County Supervisor, two representatives from the participating city council, and two representatives from each of the Board of Directors of the participating agencies. This committee provides policy input on program direction and community issues and will meet 1-2 times per year.

***Operations and Finance Committee*** - The participating District managers and/or city manager and the Marin County Public Works director will use these meetings to evaluate progress and prioritize funding strategies and will meet 1-2 times per year.

***Technical Working Group (TWG)*** - This group includes technical experts and community members with science and technical backgrounds from local watershed groups, homeowners' associations, and conservation organizations, and staff of participating state, federal and local regulatory and participating agencies. The group is responsible for reviewing watershed products and will provide input on issues, needs and watershed priorities. The TWG aims to meet at least quarterly to provide input and to review the development of work products.

### **Community Outreach**

Watershed newsletters, targeted community meetings, presentations at various local boards, homeowners associations, and other organizations and utilization of the watershed program website (<http://www.marinwatersheds.org/novato.html>) will support communication to the community at large. The program website provides dedicated information about the watershed and is regularly updated with notices about workshops, meetings, proposals and projects.

### **Project Description and Outcomes**

Novato is home to the Flood Control District's largest flood control zone, and the largest flood control project in the County was completed in 2006. In Novato, the District has commitment and financial support from all the agencies representing flood control, stormwater, water supply and recycled water as the County of Marin, Flood Control Zone 1 Advisory Board, the City of Novato, North Marin Water District, and the Novato Sanitary District have agreed to partner on this process. However, infrastructure in the lower reaches is aging, the lower channel must be dredged every four years at a cost of \$1 million, bank erosion is extensive on the main stem of Novato Creek and the 1984 flood fee sunset years ago. Currently, the District collects maintenance fees (\$9/parcel for single family homes) that generate about \$250,000 annually. This fee was approved by the voters in 1984 and is scheduled to be collected in perpetuity.

This program will seek opportunities watershed-wide to improve our operations and maintenance in a manner that is informed by sea level rise projections while we identify alternatives that would improve the creek's ability to transport sediment to the bay. The process considers the restoration of watershed health and function as a basic tenet to ensure our projects are eligible for the broadest range of funding at the State and Federal levels.

This phase of the program will produce planning tools to guide the development of viable flood reduction alternatives:

- **Hydrology and hydraulics (H&H) study**  
This deliverable will provide a unified hydrology and hydraulics model of Novato Creek and limited major tributaries, storm drain modeling for the Nave Gardens neighborhood, hydrologic modeling of the Novato Creek watershed and the development of conceptual project alternatives modeled for their benefits (including sea-level rise scenarios), Technical input will be provided via the technical work group. A RFP was released in August 2011. We received 11 proposals and shortlisted four. Initial contract was awarded to KHE (Kamman Hydrology & Engineering). Due to the complexity of the project and model creation, the contract was subsequently divided into three separate contracts. **Status: KHE completed Phases I and II in June 2014.**
- **Alternatives Analysis**  
This deliverable will provide criteria and evaluation of three alternatives that support multiple benefits such as flood protection, water quality improvements and habitat restoration. A contract for alternatives development and modeling has been awarded to KHE and will run throughout 2015. **Status: Draft scenarios are expected in Summer 2015 with the final report due by the end of 2015.**
- **GIS-based mapping and database development**  
Staff will use existing GIS data (publicly-owned parcels, existing creek restoration sites, STRAW sites, stream data, fishery data) to develop a watershed-scale database and maps to assist with project prioritization. **Status: Ongoing**

**Program Budget****Expenditures**

Watershed Hydraulic Study and Alternatives Analysis	\$350,000
Surveying	\$100,000
HEC-HMS Hydrology Model	\$100,000
Creek Habitat Assessment	\$50,000
GIS Database Development and Mapping	\$75,000
Outreach and Stakeholder process	\$105,000
<b>Total</b>	<b>\$780,000</b>

**Revenue**

County of Marin	\$340,000
Flood Control Zone 1 Advisory Board	\$100,000
City of Novato	\$140,000
North Marin Water District	\$100,000
Novato Sanitary District	\$100,000
<b>Total</b>	<b>\$780,000</b>

**EPA Flood 2.0 Grant**

Science Review Team	\$15,000
Historical Ecology Report	\$100,000
Final Design for Chosen Alternative Project	\$270,000
QAPP/Pre-project monitoring	\$15,000
<b>Total</b>	<b>\$400,000</b>

## **Novato Watershed Program Staffing: Roles and Responsibilities**

### **Liz Lewis, Program Manager**

- Manage overall schedule, budget and support team delivery of technical and outreach products
- Coordinate and ensure timely delivery of program elements including technical studies, stakeholder and community outreach
- Coordinate communication and funding with partners
- Organize PAC and Operations and Finance Meetings
- Coordinate input and review of technical studies and other Program deliverables with Division Manager, Assistant Director, Agency Partners and County Counsel

### **Laurie Williams, Project Manager**

- Lead development of the Watershed Plan (WP) Framework
- Oversee contract deliverables for Alternatives Analysis and Assessment
- Coordinate review and facilitate discussion of draft documents with County staff, agency partners and stakeholders
- Lead regular team coordination meetings
- Organize and implement stakeholder and community meetings
- Lead outreach efforts including development of newsletters, web site, and presentations
- Lead development of GIS database to support restoration project planning and prioritization

### **Roger Leventhal, P.E. QA/QC Lead for Engineering Adaptation**

- Lead development and review of hydrology model
- Oversee and review contract deliverables and approaches for hydraulic modeling
- Coordinate and lead review of technical studies and other deliverables including FCZ1 projects relating to Watershed Program
- Provide briefings and updates to staff, partners, AB, and local jurisdictions
- Participate in watershed team meetings, TWGs and other meetings
- Support grant writing efforts related to implementation of all of the above

### **Dave Nicholson, Zone 1 Engineer**

- Review WP technical memoranda and other deliverables
- Provide watershed updates to FCZ1AB

### **Chris Choo, Resource Planner**

- Review work products for grant opportunities to support Novato projects
- Lead habitat assessment for restoration project planning