Marin County Flood Control and Water Conservation District

FLOOD ZONE 1 ADVISORY BOARD MEETING
MAY 24, 2012

STAFF REPORT

Item 1. Approval of Meeting Minutes for May 16, 2011

Recommended Action: Approve minutes.

Item 2. Open Time for Items Not on the Agenda

Comments will be heard for items not on the agenda (limited to three minutes per speaker).

Item 3. Advisory Board Update

In November 2011, after 16 years of service to Zone 1, BM Ray Wrysinski has tendered his resignation from the Advisory Board. Supervisor Arnold wrote a thank you letter citing his pro-active and progressive ideas, personal sacrifice and professionalism towards the Zone's activities and programs. Mr. Jim Grossi applied for the vacated position and was appointed to the Advisory Board by the Board of Supervisors on December 6, 2011. BM Ray Wrysinski was also Vice Chair of the AB and subsequently the Advisory Board may select new officers or only elect a replacement for the Vice Chair position.

Recommended Action: Election of officers.

Item 4. Project Updates

a. Novato Flood Protection and Watershed Program

The Marin County Board of Supervisors approved a contract with Kamman Hydrology and Engineering to develop the Novato Watershed Hydraulic Study and Alternatives Analysis in February 2012.The County received 11 total proposals for the study and staff from the city, the water district and the sanitary district were involved in the RFP review and consultant selection process Their team will develop a unified hydraulic model of the watershed, assess sediment movement, model drainage and flooding within the Nave Gardens neighborhood and develop a suite of flood protection and habitat enhancement alternatives in concert with the Technical Working Group. County staff led by Roger Leventhal will develop the hydrology model in house.

The first step of the study will be a review of existing information including survey data to support model development. The link to the scope of work is available here: http://marinwatersheds.org/novato.html . A technical working group meeting to introduce and review the scope of work is planned for late June.

b. Regular Maintenance Agreement (RMA)

The Marin County Flood Control and Water Conservation District is currently applying for state and federal permits for its Routine Maintenance Activities (RMA) program. The RMA defines the types and scope of the District's routine maintenance activities conducted in and around flood control channels and facilities such as vegetation management, sediment removal, levee maintenance, and pump station maintenance. The program will direct County road maintenance staff, local conservation crews, and private contractors to conduct these activities while avoiding and minimizing impacts to water quality, special status plant and animal species, and other environmental and habitat resources. The RMA program permits will *not* include larger capital improvement projects requiring an individual 1600 Streambed Alteration Agreement, such as the periodic removal of sediment from Novato Creek.

The District has prepared an Initial Study under CEQA (available at: http://www.co.marin.ca.us/depts/CD/main/pdf/eir/RMA/RMA%20Neg%20Dec_IS%20_%2002_2012.pdf) that describes the program and its impacts.

c. Novato Creek Sediment Removal

Approximately once every four years the District removes sediment from Novato, Warner and Arroyo Avichi Creeks. The sediment removal occurs in the following locations:

1. *In Novato Creek* from just downstream (about 500 feet) of the existing SMART railroad bridge to the Novato Fair Shopping Center bridge,

2. *In Warner Creek* from the confluence with Novato Creek to Diablo Avenue,

3. *In Arroyo Avichi Creek* from the confluence to South Novato Boulevard.

The last sediment removal episode was done in 2008 and the next episode is scheduled for summer 2012. Field survey to determine sediment accumulation in Novato Creek was completed in February 2012 and plans and specifications generated by staff. The project was advertised for bids in May and is expected to be awarded to a contractor in June, 2012, after final permit approval. Construction is anticipated to start in early July and conclude in mid-October.

Applications for jurisdictional permits have been submitted and staff has been in communication with the various agencies regarding permit requirements, it is anticipated that permits will be awarded shortly. Through the diligent efforts by staff a requested permit fee of $59,000 by RWQCB was reduced to $5,250 and resulting in a cost savings of $53,750 to Flood Zone 1.

d. Cheda Pump Station

Structural repair and replacement of the pumps at the Cheda Pump Station was completed in December 2011. Work was done on time and within budget. The pumps have been tested successfully under the observation of County staff, engineering consultant, pump supplier and the contractor.

Item 5. Annual and Preventative Maintenance Plan

Zone 1 has approximately 18 miles of creek to maintain and every year performs brush trimming and debris removal. The zone spends around $200,000 per year on creek maintenance. The work is contracted through the North Bay Conservation Corps (formerly Marin Conservation Corps). Cleanup will be mostly completed in late Fall to avoid vegetation regrowth. Zone 1 also provides preventive maintenance at four pump stations and tide gates at Arroyo San Jose and Rush Creek.

Item 6. Novato Creek Sonoma Marin Area Rail Transit (SMART) Railroad Bridge

Staff and representatives from SMART are in the process of determining the most cost-effective option from several design alternatives for the new railroad bridge over Novato Creek. The factors affecting the final bridge designs include both hydraulics and cost.

Hydraulic issues include those caused by debris jams that have historically occurred at the existing bridge. Debris loading is dependent on the width of piers, pier spacing, and the bottom elevation (soffit) of the beams that span between the piers across the creek. Debris jams can result in increased flooding upstream of the bridge during flow periods.

SMART is currently in a design-build contract with Stacy and Witbeck/Herzog Joint Venture. This contract includes a bid item for the Novato Creek Bridge that raises the bridge by 4 feet and realigns the piers. The soffit of the new bridge is proposed at or above the 100-year flood elevation. This design retains the existing 14 feet spacing between piers and re-aligns the piers parallel with the direction of the flow. SMART has indicated that this design is included in their project. SMART indicates the estimated cost for this option is $2.1 Million.

Staff prepared an evaluation of debris loading at the Novato Creek Bridge using the approaches described in the U.S. Department of Transportation Federal Highways Administration, (FHWA) HEC Circular No 9, *Debris Control Structures Evaluation and Countermeasures,* to determine recommended pier spacing. Based on this evaluation, ideal bridge pier spacing would range from to 40 to 50.

Per our request, SMART has estimated that the cost to construct a bridge with 40 foot pier spacing would range from $4.2 to $4.5 Mil. Additional funds would be required to cover design cost and to address potentially more expansive wetland impacts associated with this alternative. This proposed bridge configuration would include five piers within the creek and the top of rail would be raised about 5 feet above existing. The structure would consist of steel beams and plate deck spanning concrete caps supported on steel pipe piles. The piles would be aligned parallel to the direction of the flow. The bridge soffit will be at the same elevation as the adjacent levees and would also be at or above the 100-year flood elevation. The proposed bridge would be located just upstream of the existing structure which would be demolished and removed from the channel. The rail approaches to the bridge will ramp down to meet the existing rail line at a slope of about 50:1(horizontal: vertical).

The change in construction cost for the 40 foot pier spacing option, *not* including design and habitat mitigation cost, ranges from $2.1M to $2.4M. SMART has requested that Flood Control District share the cost for the bridge modifications. We are in discussions with the City of Novato to determine if they can also participate in the project.

Recommended Action: Recommend that the District continue to work with SMART to identify the most cost effective bridge design with the least impact on upstream water surface elevation and debris loading as described above.

Item 7. Zone 1 Budget FY 12-13

The Zone 1 budget for FY 2012-2013 (begins July 1, 2012 and ends June 30, 2013) is attached and will be presented to the Board of Supervisors at a hearing this summer.

Recommended Action: Recommend that the Board of Supervisors adopt the budget.

Item 8. Schedule Next Meeting

Schedule the next meeting of the Zone 1 Advisory Board.

FY 2012 - 2013 Budget Report
FCZ #1 Novato
Fund 23710

Budget Summary			
Account Description	FY 2011-12 Budget	FY 2011-12 Projected	FY 2012-13 Budget
Fund Beginning Balance	**$2,077,732**	**$2,593,533**	**$606,494**
Expenses			
Salaries and Benefits	$975,500	$1,075,500	$1,011,500
Service and Supplies	$2,012,800	$2,354,741	$468,855
Loan Payment	$598,000	$598,000	$598,000
Total Expenditures	**$3,586,300**	**$4,028,241**	**$2,078,355**
Revenue			
Taxes	$2,006,000	$2,008,246	$1,986,000
Revenues From Use of Money and Property	$8,000	$8,000	$8,000
Intergovernmental Revenues	$40,000	$24,736	$24,477
Miscellaneous Revenues	$0	$220	$0
Total Revenue	**$2,054,000**	**$2,041,202**	**$2,018,477**
Fund Ending Balance	**$545,432**	**$606,494**	**$546,616**

Major "Services & Supplies" Expenditures			
Professional Services			
Vineyard Creek Geomorphic Monitoring	$15,000	$51,297	$0
Novato Dredge - Preliminary Planning	$25,000	$10,000	$0
Cheda Design and CM	$0	$12,153	$0
Shelterbelt Training CCNBs for Vineyard Crk	$0	$24,463	$0
Miscellaneous	$50,000	$95,687	$50,000
Total	**$90,000**	**$193,600**	**$50,000**
Maintenance & Repair Services - Equipment			
Cheda PS Outfall Pipe and Pumps	$0	$239,379	$0
Major Pump Maintenance	$0	$0	$25,000
Miscellaneous	$27,500	$47,507	$17,600
Total	**$0**	**$286,886**	**$42,600**
Maintenance & Repair Services - Land & Buildings			
CCNB (Conservation Corps North Bay)	$193,000	$193,000	$193,000
Levee Resurfacing	$0	$0	$0
Vineyard Ck Veg Maintenance & Monitoring	$10,000	$0	
Novato Ck Veg Maintenance & Monitoring	$10,000	$0	
Miscellaneous	$73,900	$92,000	$93,900
Total	**$286,900**	**$285,000**	**$286,900**
Construction			
Novato Dredging	$1,500,000	$1,500,000	$0
Total	**$1,500,000**	**$1,500,000**	**$0**
Other "Services & Supplies" Expenditures	**$144,400**	**$89,255**	**$89,355**