

**FLOOD ZONE 9 ADVISORY BOARD MEETING**  
**DECEMBER 16, 2014**  
**LARKSPUR CITY HALL**  
**STAFF REPORT**

**Item 1. Approval of meeting minutes for September 16, 2014**

**Action by Board:** Advisory Board members will review meeting minutes from the September 16, 2014 meeting, make corrections, and approve the minutes as corrected.

**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. Observations From Recent Storms (December 3<sup>rd</sup> & December 11<sup>th</sup> Events)**

Staff and Advisory Board will discuss observations from recent December 3<sup>rd</sup> and December 11<sup>th</sup> storm events.

**Item 4. Ross Valley Flood Protection and Watershed Program Update**

a) **Ross Valley Flood Protection and Watershed Open House**

The Ross Valley Flood Protection and Watershed Open House was held at the Ross Valley Fire Station in San Anselmo on December 13<sup>th</sup> in coordination with the San Anselmo High Water Mark Campaign, and the Breakfast with Santa. The High Water Mark Campaign is part of FEMA's "Know Your Line" initiative to develop community awareness of local flood risks. The campaign featured posting of new signs throughout the downtown corridor indicating the height of historic floods. The event was held outdoors and included seven stations manned by community members and District Staff. The stations included exhibit boards, hands-on activities, and videos that provided information about the Ross Valley watershed, local flooding history, flood protection, and the Ross Valley Flood Protection and Watershed Program (Program).

b) **Annual Report**

The 2013 Annual Report has been completed and a copy is included as an attachment to this Staff Report

c) **Technical Working Group (TWG)**

A TWG meeting was held on December 3 and the subject matter included the Lower Corte Madera Creek Improvement Project located within the Larkspur City limits. The goal of the meeting was to gain consensus from the group on the Feasibility/Scoping Phase process for the project and begin discussing stakeholder issues and opportunities. The proposed process is currently being revised to incorporate input from the TWG members and will be shared with the Advisory Board once it is finalized. The TWG members were asked to prepare a list of issues and opportunities relevant to the project and submit their list to the District by January 16. The next TWG meeting is scheduled for January 28 where we'll review the compiled list of issues and opportunities.

d) **Strategic Communications Plan Update**

## ***Marin County Flood Control and Water Conservation District***

The Draft Strategic Communications Plan is currently being developed. The Draft Plan will come back to the Advisory Board in early 2015 for review and input. The Plan is designed to serve as a “communications blueprint” for the Flood Protection and Watershed Program, with the intention of identifying target audiences, providing clear and consistent messaging, and outlining communications tools to help reach broader audiences going forward. The Plan will serve as a living document, which can be revised and updated based upon Program and Project needs.

### **Item 5. Project Status Updates (Information Item):**

The Current Cost Estimate covering environmental and feasibility studies, design and construction of 10-year Work Plan Baseline Measures is included as **Attachment A** to this Staff Report. A summary of project descriptions, cost estimates, and grant funding sources is included as **Attachment B** to this Staff Report.

Staff would like the Advisory Board to consider a formatting change to the Attachment A spreadsheet. Staff recommends that the order of the Baseline Measures listed in the spreadsheet be rearranged to follow the order listed in the Staff Report. This would provide consistency between the two documents. It should be noted that the order is not based on prioritization but rather by groupings (i.e. detention basins, bridges, and in-creek measures).

#### **a) Phoenix Lake Integrated Regional Water Management (IRWM) Retrofit Project**

URS Corporation has completed their geotechnical boring exploration work on the Phoenix Lake Dam. They are in the process of readying their equipment to perform reservoir bottom sediment sampling. Laboratory analyses will be performed next on both sets of sample data.

Other feasibility studies in process include the Hydrologic Study of Long-Term Yield of Phoenix Lake, the Phoenix Lake Coordinated Operations Plan, the Ross Creek In-Stream Flow Study, and the Water Quality Baseline Study for both Phoenix Lake and Ross Creek. Results of these studies will be available on [www.rossvalleywatersheds.org](http://www.rossvalleywatersheds.org) next year.

At the last Advisory Board meeting, District staff discussed the development of an environmental compliance strategy to best serve the Phoenix Lake Project and the entire Ross Valley Watershed Flood Protection and Watershed Program (Program). We have invited CH2M Hill today to present an overview of the CEQA process and the recommended strategy for the Phoenix Lake project and the Program.

On November 25, the Board of Supervisors approved an addendum to the Professional Services Agreement with CH2M Hill to perform a review of the geotechnical investigation and feasibility design to be performed by URS Corporation and a review of the process used to select the detention basins included in the program. These items were also discussed at the last Advisory Board meeting.

The detention basin site selection review process is a key component of a CEQA environmental compliance strategy for the detention basins and other proposed program elements. The scope of services for this task order will include review of flow reduction elements other than detention basins (includes review of public suggestions), research for potential new detention basin sites, hydrologic and hydraulic analyses for recommended sites, conceptual plans and cost estimates for recommended sites. At the same time, District staff is looking at ways to share information between

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projects during the environmental assessment phase of work and to conduct compliance activities as cost effectively as possible. The results of the detention basin site selection review and environmental compliance strategy will be summarized in a report and presented to the Advisory Board.

b) Memorial Park Dual-Use Facility

The Town of San Anselmo had submitted a grant application to California Office of Emergency Services in May 2014 for \$3 million. The Town was recently informed by FEMA that they were not selected for this grant.

c) Lefty Gomez Field Dual-Use Facility

Preliminary investigations into the feasibility of a detention basin at the Lefty Gomez Field site are underway. URS has completed the installation of groundwater monitoring wells and the collection of soil samples. Monitoring of groundwater levels will occur between October 2014 and May 2015. District staff will use the groundwater data to prepare a preliminary concept plan of the proposed subdrain system for Lefty Gomez detention basin.

URS has completed laboratory analyses of the soil samples and is preparing boring logs, sediment loading analyses, conceptual design, and a construction cost estimate. The goal of this work is to determine if the detention basin is feasible in this location, and to gather information and to prepare a preliminary cost estimate in order to pursue grant funds.

Staff will present draft geotechnical findings and sediment loading calculations performed by URS.

Staff will provide summary of outreach efforts performed at various neighborhood Homeowners Associations adjacent to the proposed Lefty Gomez basin.

d) Loma Alta Dual-Use Facility

Staff is currently discussing alternate locations for the Loma Alta detention basin with Marin County Parks & Open Space District and with the Ross Valley School District. Staff will summarize results of a recent presentation to the Ross Valley School District Facilities Executive Planning Committee.

e) Bridge Replacements in Town of San Anselmo

***Building Bridge 2***

The Town of San Anselmo received notice that the Building Bridge #2 project was not approved to receive funding from the California Office of Emergency Services (CalOES) for either the Flood Mitigation Assistance 2013 or 2014 grants nor the 2014 Hazard Mitigation Grant Program. The Town recently submitted a Notice of Interest for the Building Bridge #2 project to be considered for the latest grant program offered by CalOES. This grant is intended to primarily fund mitigation for damage caused by the 2014 Napa Earthquake but other projects around California will also be considered for funding.

***Nokomis, Madrone, Sycamore/Center Boulevard Bridge Replacements***

A Notice of Intent to undertake four bridge replacement projects in Flood Control Zone 9 will be presented to the Board of Supervisors on December 16, 2014. These projects include three bridges in the Town of San Anselmo, as well as the Winship Avenue Bridge in the Town of Ross. Following a public hearing at the Board of Supervisor's meeting on January 6, 2015, Staff

## ***Marin County Flood Control and Water Conservation District***

anticipates that the Board of Supervisors will adopt a resolution to undertake the projects. On the same date, Staff intends to present a cost sharing agreement between the Town of San Anselmo and the District for the Board to approve and execute. The District will be contributing matching Flood Fee funds totaling \$624,824 for all three bridges. The kick-off project meeting for the San Anselmo bridges is planned in December after which work will proceed on the Preliminary Engineering phase of the projects.

f) Winship Avenue Bridge Replacement in Town of Ross

A cost sharing agreement for the Winship Avenue Bridge between the Town of Ross and the District will be presented to the Board of Supervisors on January 6, 2015 for their approval and signing. The District will be contributing matching Flood Fee funds totaling \$83,735 for the Winship Avenue Bridge. The Preliminary Engineering is currently underway and the Town's consultant, Quincy Engineering, has completed the topographic survey that will be used for the hydraulic analysis. Upcoming work will include the completion of the geotechnical investigation and foundation recommendations, hydraulic analysis, preparation of preliminary layouts, traffic impact analysis and development the Area of Potential Effects (APE) map for the environmental review process.

g) Azalea Avenue Bridge Replacement in Town of Fairfax

The Town of Fairfax is still awaiting allocation of funding for the project by Caltrans.

h) Corte Madera Creek Units 3 and 4 Project

The District organized and led a meeting on November 13, 2014 with the newly appointed Lieutenant Colonel at the USACE San Francisco branch. Supervisor Rice, and representatives from the Towns of Ross and San Anselmo, Senator Feinstein's, Senator Boxer's, and Congressman Hoffman's offices also participated in the meeting. Staff presented an overview of the Ross Valley Watershed Program and the Units 3 & 4 Project. Staff also provided a summary of Supervisor Rice and Craig Tackabery's trip to Washington D.C. where they met with USACE Headquarters, Office of Management and Budget, Congressman Huffman and the Senators staff. District anticipates finding out in the next couple of months whether the project has been included in the FY15 Work Plan and the FY16 Budget will be negotiated in Congress in March 2015.

i) Lower Corte Madera Creek Improvement Project

Project status covered under Agenda Item 3.b) Technical Working Group.

### **Item 6. Set Meeting Schedule for 2015**

Need to set Advisory Board meeting dates for 2015.

**ATTACHMENT A  
ROSS VALLEY FLOOD PROTECTION AND WATERSHED PROGRAM  
COSTS AND REVENUES ESTIMATES**

								Last Updated: December 11, 2014
FLOOD CONTROL MEASURES - 10-Year Work Plan*	Implementing Agency	Current Cost Estimate**	Grants Secured***	Grants In Pursuit****	Current Cost Estimates minus Secured Grants	70% Outside Funding Target	% of Funding Target	Current Work Program
<b>BASELINE MEASURES 10 YWP</b>								
Lower Corte Madera Creek Improvement Project (Dredge)	FC District	\$6,210,000	\$0		\$6,210,000	\$4,347,000	0%	\$6,210,000
Loma Alta	FC District	\$1,900,000	\$0		\$1,900,000	\$1,330,000	0%	\$1,900,000
Lefty Gomez	FC District	\$6,400,000	\$0		\$6,400,000	\$4,480,000	0%	\$6,400,000
Memorial Park (Prop 1E Scope)	San Anselmo	\$17,441,000	\$8,720,500		\$8,720,500	\$12,208,700	71%	\$8,720,500
Phoenix Lake (Prop 1E Scope)	FC District	\$19,691,150	\$7,661,000		\$12,030,150	\$13,783,805	56%	\$12,030,150
Azalea Ave - FX [135]	Fairfax	\$2,326,520		\$2,326,520	\$2,326,520	\$1,628,564	0%	\$2,326,520
Nokomis Ave SA [083]	San Anselmo	\$2,493,917	\$2,409,042	\$64,500	\$84,875	\$1,745,742	138%	\$84,875
Madrone Ave SA [077]	San Anselmo	\$2,487,917	\$2,127,413	\$57,102	\$360,504	\$1,741,542	122%	\$360,504
Sycamore Ave (Center Blvd) SA [063]	San Anselmo	\$5,930,375	\$5,131,752	\$84,104	\$798,623	\$4,151,263	124%	\$798,623
Winship Ave RS [005]	Ross	\$2,413,075	\$2,329,340		\$83,735	\$1,689,153	138%	\$83,735
Sir Francis Drake Blvd Bridge RS [021]	Ross	\$6,125,000	\$0	PENDING	\$6,125,000	\$4,287,500	0%	\$6,125,000
Bldg Bridge #2 [046]	San Anselmo	\$3,308,000	\$0	\$2,481,000	\$3,308,000	\$2,315,600	0%	\$3,308,000
<b>Corte Madera Creek Units 3 and 4 Project</b>								
- Planning and Design	FC District/USACE	\$2,800,000	\$0	\$1,400,000	\$2,800,000	\$1,960,000	0%	\$2,800,000
- Construction	FC District/USACE	\$6,560,000	\$0	\$6,560,000	\$6,560,000	\$4,592,000	0%	\$6,560,000
- Real Estate, easements and disposal areas	FC District	\$4,500,000	\$0	PENDING	\$4,500,000	\$3,150,000	0%	\$4,500,000
<b>TOTAL - Baseline Measures</b>		<b>\$90,586,954</b>	<b>\$28,379,047</b>	<b>\$12,973,225</b>	<b>\$62,207,907</b>	<b>\$63,410,868</b>		<b>\$62,207,907</b>
<b>% of TOTAL Current Cost Estimates</b>		<b>100%</b>	<b>31%</b>	<b>14%</b>	<b>69%</b>	<b>70%</b>	<b>45%</b>	<b>69%</b>
<b>ADDITIONAL MEASURES 10 YWP</b>								
<b>Merwin Avenue Bridge Replacement [124]*</b>	TBD	\$989,000	\$0	\$741,750	\$989,000	100%	0%	\$0
Channel Modifications at Merwin Bridge Area [121][122][123][125][126][127][128]	TBD	\$957,000	\$0		\$957,000	100%	0%	\$0
Install new wing wall [142]	TBD	\$126,000	\$0		\$126,000	100%	0%	\$0
Install new wing wall [143]	TBD	\$136,000	\$0		\$136,000	100%	0%	\$0
Install Floodwall/Berm as wing wall extension [144]	TBD	\$70,000	\$0		\$70,000	100%	0%	\$0
Supplement: Floodwall <3.6' RS662-700 (35 ft long)	TBD	\$50,000	\$0		\$50,000	100%	0%	\$0
Supplement:Floodwall <3.3' RS662-791 (129 ft long)	TBD	\$655,000	\$0		\$655,000	100%	0%	\$0
Supplement:Floodwall <2.0' RS956-1283 (327 ft long)	TBD	\$150,000	\$0		\$150,000	100%	0%	\$0
<b>Taylor Avenue Bridge Replacement [203]</b>	TBD	\$991,000		\$991,000	\$991,000	100%	0%	\$0
Replace Existing Retaining Wall [209]	TBD	\$216,000	\$0		\$216,000	100%	0%	\$0
Retrofit/Replace Existing Retaining Wall [213]	TBD	\$77,000	\$0		\$77,000	100%	0%	\$0
Construct new retaining wall [216]	TBD	\$99,000	\$0		\$99,000	100%	0%	\$0
Supplement: Floodwall<1.0' RB RS2762-2796 (34 ft long)	TBD	\$10,000	\$0		\$10,000	100%	0%	\$0
Construct new retaining wall as wingwall [219]	TBD	\$382,000	\$0		\$382,000	100%	0%	\$0
Construct new retaining wall [220]	TBD	\$387,000	\$0		\$387,000	100%	0%	\$0
<b>Broadmoor Avenue Bridge Replacement [224]</b>	TBD	\$1,354,000	\$0		\$1,354,000	100%	0%	\$0
Channel Modifications RS3400-3442 [225][227][228]	TBD	\$249,000	\$0		\$249,000	100%	0%	\$0
Floodwall <2.0' LB RS3646 +/- 80' (160 ft long)	TBD	\$65,000	\$0		\$65,000	100%	0%	\$0
Floodwall <2.0' LB RS4085 +/- 120' (240 ft long)	TBD	\$90,000	\$0		\$90,000	100%	0%	\$0
All Flood Control Measures (22) from RS437000-45970	TBD	\$9,214,000	\$0		\$9,214,000	100%	0%	\$0
Floodwall <1.0' RB RS43397-43512 (115 ft long)	TBD	\$15,000	\$0		\$15,000	100%	0%	\$0
Supplement:Floodwall <3.0' RB RS43716-43773 (57 ft long)	TBD	\$50,000	\$0		\$50,000	100%	0%	\$0
Supplement:Floodwall <32.5' RB RS43828-43838 (10 ft long)	TBD	\$5,000	\$0		\$5,000	100%	0%	\$0
<b>ADDED MEASURES - SUPPLEMENT TO 10YWP</b>								
<b>SUBTOTAL - Additional Measures</b>								
		<b>\$16,337,000</b>	<b>\$0</b>	<b>\$1,732,750</b>	<b>\$16,337,000</b>			<b>\$0</b>
<b>PROGRAM MANAGEMENT and PUBLIC OUTREACH</b>								
Staff = 10 Years @ \$346,951	NA	\$3,469,513			\$3,469,513			\$3,469,510
Hydraulic & Hydrologic Engineering, Grant Application Prep (3 years @ \$100K per year max)	NA	\$300,000			\$300,000			\$300,000
<b>SUBTOTAL</b>		<b>\$3,769,513</b>			<b>\$3,769,513</b>			<b>\$3,769,510</b>
<b>GRAND TOTAL</b>		<b>\$110,693,467</b>	<b>\$28,379,047</b>	<b>\$14,705,975</b>	<b>\$82,314,420</b>			<b>\$65,977,417</b>
<b>Deficit/Surplus with an annual 3% rise in fee amount</b>					<b>-\$32,510,069</b>			<b>-\$16,173,066</b>
<b>Expected Revenue - With No Rise in Fee Amounts:</b>		<b>\$43,146,194</b>						
<b>Expected Revenue - With 3% Rise in Fee Amounts:</b>		<b>\$49,804,351</b>						
<b>NOTES:</b>								
* Pending review and certification of environmental documents and alternatives to the listed project.								
** Operations and Maintenance costs are not included and will be updated when the final design is known.								
*** Executed grant agreements, E76, or notified the grant application was selected.								
**** In grant application process, or working with ACOE on obtaining federal funding.								

**ATTACHMENT B**

<b>BASELINE MEASURE</b>	<b>DESCRIPTION</b>	<b>GRANT AMOUNT</b>
<i>Phoenix Lake IRWM Retrofit Project</i> <i>Implementing Agency: Marin County Flood Control and Water Conservation District</i> <i>Cost Estimate: \$19,691,150 (Source –DWR Prop 1E Grant Agreement 5/8/2013)</i>	The proposed Phoenix Lake Integrated Regional Water Management (IRWM) Retrofit Project involves modifying the Phoenix Lake reservoir, dam, spillway and outlet works to increase water storage capacity in order to reduce or prevent flooding within the Ross Valley watershed during large storms.	\$7,661,000
<i>Memorial Park Dual-Use Detention Project</i> <i>Implementing Agency: Town of San Anselmo</i> <i>Cost Estimate: \$17,441,000 (Source – DWR Prop 1E Grant Application 9/20/2013)</i>	The proposed Memorial Park Dual-Use Facility will provide a new detention basin and restoration and improvement of the park recreational facilities.	\$8,720,500
<i>Lefty Gomez Field Dual-Use Facility</i> <i>Implementing Agency: Marin County Flood Control and Water Conservation District</i> <i>Cost Estimate: \$6,400,000 (Source – Ross Valley Capital Improvement Plan, May 2011)</i>	The proposed Lefty Gomez Field Dual-Use Facility could include conversion of the existing Lefty Gomez Field at White Hill Middle School to a dual-use facility allowing the field to be used to detain high creek flows during infrequent, large flood events. The proposed project also could include recreation improvements to the existing field at the site.	NOT GRANT READY
<i>Loma Alta Detention Basin Project</i> <i>Implementing Agency: Marin County Flood Control and Water Conservation District</i> <i>Cost Estimate: \$1,900,000 (Source – Ross Valley Capital Improvement Plan, May 2011)</i>	The proposed Loma Alta Dual-Use Facility could convert a 3-acre portion of the existing Loma Alta open space area into a dual-use facility that will temporarily detain high creek flows during infrequent, large flood events. The project could also include improvements to the existing trail network at the site.	NOT GRANT READY
<i>Building Bridge 2</i> <i>Implementing Agency: Town of San Anselmo</i> <i>Cost Estimate: \$3,308,000 (Source – Grant Application Proposal for FEMA Hazard Mitigation Grant Program, 6/12/14)</i>	This project proposes the removal of Building Bridge #2 and a commercial building spanning the San Anselmo Creek in downtown San Anselmo.	PENDING
<i>Nokomis Avenue Bridge</i> <i>Implementing Agency: Town of San Anselmo</i> <i>Cost Estimate: \$2,493,917 (Source –Town of San Anselmo)</i>	This project proposes the removal and replacement of the Nokomis Avenue Bridge over San Anselmo Creek in the Town of San Anselmo.	\$2,409,042
<i>Madrone Avenue Bridge</i> <i>Implementing Agency: Town of San Anselmo</i> <i>Cost Estimate: \$2,487,917 (Source –Town of San Anselmo)</i>	This project proposes the removal and replacement of the Madrone Avenue Bridge over San Anselmo Creek in the Town of San Anselmo.	\$2,127,413
<i>Sycamore Avenue/Center Boulevard</i> <i>Implementing Agency: Town of San Anselmo</i> <i>Cost Estimate: \$5,930,375 (Source –Town of San Anselmo)</i>	This project proposes the removal of the bridge at Sycamore Avenue and replacement with a new bridge at Center Boulevard over San Anselmo Creek in the Town of San Anselmo.	\$5,131,752
<i>Winship Avenue Bridge</i> <i>Implementing Agency: Town of Ross</i> <i>Cost Estimate: \$2,413,075 (Source – Town of Ross)</i>	This project proposes the removal and replacement of the Winship Avenue Bridge over San Anselmo Creek in the Town of Ross.	\$2,329,340
<i>Azalea Avenue Bridge</i> <i>Implementing Agency: Town of Fairfax</i> <i>Cost Estimate: \$2,326,520 (Source – Town of Fairfax)</i>	This project proposes the removal and replacement of the Azalea Avenue Bridge over Fairfax Creek in the Town of Fairfax.	PENDING
<i>Corte Madera Creek Units 3 and 4 Project</i> <i>Implementing Agency: Marin County Flood Control and Water Conservation District</i> <i>Cost Estimate – Environmental, Permitting, Design &amp; Construction: \$9,360,000 (Source – USACE), Right-of-way Acquisition: \$4,500,000 (Source: District)</i>	The proposed Corte Madera Creek Units 3 and 4 Project would improve the existing concrete channel and the earthen channel up to the Sir Francis Drake Boulevard bridge in Ross including removing the old wooden fish ladder that is currently in the creek. The proposed project is part of a prior U.S. Army Corps of Engineers (USACE) Flood Control Project and therefore the USACE is our partner and potential funding source.	PENDING
<i>Lower Corte Madera Creek Improvement Project (Dredge)</i> <i>Implementing Agency: Marin County Flood Control and Water Conservation District</i> <i>Cost Estimate: \$6,210,000 (Source - Flood Zone 9/Ross Valley 10-Year Work Plan)</i>	This proposed project will remove accumulated sediment from the lower sections of Corte Madera Creek in Kentfield, Larkspur, and Greenbrae. As the design moves forward, Staff will consider habitat improvements and beneficial sediment reuse opportunities that complement the project.	NOT GRANT READY