

**ROSS VALLEY FLOOD PROTECTION AND WATERSHED PROGRAM  
COSTS AND REVENUES ESTIMATES  
DRAFT**

Last Updated:  
3-15-17

FLOOD CONTROL/FLOOD RISK MGMT MEASURES	Implementing Agency	Cost Estimate without Contingency <sup>(c)(f)</sup>	Year basis for Cost Estimate	Assumed Year of Construction	Cost Estimate Escalated To Year of Construction at Annual Rate:	ACE Estimate Class (see table below)	Cost Estimate Range Including Contingency (see ACE Guidelines below)		Non-FZ9 Funds		Funds Needed based on High Estimate - Grant \$ - Other \$ (Col 1 - Col 2 - Col 3)	Current Fee Allocations (subject to change)
							Low	High <sup>(c)</sup> Column 1	Grant <sup>(g)</sup> Column 2	Other Column 3		
<b>BASELINE MEASURES</b>					<b>3%</b>							
<b>San Anselmo Flood Protection Project</b>												
Memorial Park Grant Migration Study (previously spent)	FC District	\$53,903	n/a	n/a	\$53,903	n/a	\$53,903	\$53,903				
Lower Sleepy Hollow Creek Study (previously spent)	FC District	\$38,421	n/a	n/a	\$38,421	n/a	\$38,421	\$38,421				
Former Nursery Site Detention Basin (including acquisition)	FC District	\$8,310,000	2018	2019	\$8,559,300	4	\$7,275,405	\$10,699,125	\$8,720,500	\$0	\$9,831,035	\$9,831,035
Bike lane along SFD Blvd.	FC District	\$355,000	2020	2019	\$344,660	5	\$258,495	\$482,524				
San Anselmo Creek Improvements	FC District	\$1,900,000	2016	2019	\$2,076,181	5	\$1,557,136	\$2,906,654				
Building Bridge #2 Removal [046](including acquisition)	FC District	\$3,200,000	2016	2019	\$3,496,726	4	\$2,972,217	\$4,370,908				
<b>Subtotal</b>		<b>\$13,857,324</b>			<b>\$14,569,192</b>		<b>\$12,155,578</b>	<b>\$18,551,535</b>				
<b>Phoenix Lake IRWM Project (Prop 1E Scope+Past Grant Application Costs+PEIR)</b>	FC District	\$16,609,150	2013	2019	\$19,832,194	5	\$14,874,145	\$27,765,071	\$7,661,000	\$0	\$20,104,071	\$20,104,071
<b>Lefty Gomez Field Dual-Use Facility</b>	FC District	\$16,276,000	2015	2020	\$18,868,345	4	\$16,038,093	\$23,585,431	\$0	\$0	\$23,585,431	-
<b>Loma Alta Detention Basin (backup site)</b>	FC District	\$1,485,000	2012	2020	\$1,881,154	5	\$1,410,865	\$2,633,615	\$0	\$0	\$2,633,615	-
<b>Deer Park Detention Basin</b>	FC District	\$3,609,000	2015	2020	\$4,183,820	5	\$3,137,865	\$5,857,348	\$0	\$0	\$5,857,348	-
<b>Azalea Ave Bridge Replacement [135]<sup>(b)</sup></b>	Fairfax	\$2,340,325	2013	2019	\$2,794,470	5	\$2,095,853	\$3,912,259	\$3,814,452	\$0	\$97,806	\$97,806
<b>Nokomis Ave Bridge Replacement [083]<sup>(b)</sup></b>	San Anselmo	\$2,181,167	2013	2019	\$2,604,427	4	\$2,213,763	\$3,255,534	\$3,144,846	\$0	\$110,688	\$110,688
<b>Madrone Ave Bridge Replacement [077]<sup>(b)</sup></b>	San Anselmo	\$2,175,167	2013	2019	\$2,597,263	4	\$2,207,674	\$3,246,579	\$2,775,825	\$0	\$470,754	\$470,754
<b>Sycamore Ave (Center Blvd) Bridge Replacement [063](includes appraisal &amp; purchase of Acorn Bldg)<sup>(b)</sup></b>	San Anselmo	\$5,925,375	2013	2020	\$7,287,464	5	\$5,465,598	\$10,202,449	\$9,549,493	\$0	\$652,957	\$652,957
<b>Winship Ave Bridge Replacement [005]<sup>(b)</sup></b>	Ross	\$2,124,925	2013	2019	\$2,537,272	4	\$2,156,681	\$3,171,589	\$3,060,584	\$0	\$111,006	\$111,006
<b>Sir Francis Drake Blvd. Bridge [001]</b>	Ross	\$6,125,000	2011	2020	\$7,991,736	5	\$5,993,802	\$11,188,430	\$0	\$0	\$11,188,430	-
<b>Lower Corte Madera Creek Improvement Project - (Includes Past Grant Application Costs)</b>												
-Berens Slough Culvert Replacement & McAllister Slough Culvert Enhancement (previously spent)	FC District	\$185,542	n/a	n/a	\$185,542	n/a	\$185,542	\$185,542	\$0	\$0	\$185,542	\$185,542
-Pump Station & Storm Drain Improvements in Hillview Neighborhood	Larkspur	\$2,525,000	2017	2017	\$2,525,000	4	\$2,146,250	\$3,156,250	\$1,437,426	\$330,074	\$1,388,750	\$1,388,750
-Kentfield Gardens Drainage Study	FC District	\$50,000	n/a	n/a	n/a	n/a	\$50,000	\$50,000	\$0	\$0	\$50,000	-
-Kentfield Gardens Drainage Project	FC District	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$0	\$0	TBD	-
-Evaluate hydrology & hydraulics and geotechnical investigations of banks/levees along Lower Corte Madera Creek (from downstream end of concrete channel to Larkspur Plaza Dr) <sup>(a)</sup>	FC District	\$461,353	n/a	n/a	\$461,353	5	\$346,015	\$645,894	\$253,520	\$0	\$392,374	\$392,374
-Lower Corte Madera Creek Bank/Levee Repair Project	FC District	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$0	\$0	TBD	-
-Geomorphic Dredge Study (previously spent)	FC District	\$25,000	n/a	n/a	n/a	5	\$25,000	\$25,000	\$0	\$0	\$25,000	\$25,000
-Geomorphic Sediment Removal	FC District	\$4,416,000	2015	2020	\$5,119,354	5	\$3,839,516	\$7,167,096	\$0	\$0	\$7,167,096	-
<b>Subtotal</b>		<b>\$7,662,895</b>			<b>\$8,291,249</b>		<b>\$6,592,322</b>	<b>\$11,229,782</b>	<b>\$1,690,946</b>	<b>\$330,074</b>	<b>\$9,208,762</b>	<b>\$1,991,666</b>

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							Low	High <sup>(c)</sup> Column 1	Grant <sup>(g)</sup> Column 2	Other Column 3		
<b>Corte Madera Creek Units 3 and 4 Project (Assumptions)<sup>(d)</sup></b>												
- Planning and Feasibility Design (Includes Past Grant Application Costs)	FC District/USACE	\$2,842,000	2014	2018	\$3,198,696	4	\$2,718,892	\$3,998,370	\$2,791,766	\$1,099,057	\$107,547	\$107,547
- Final Design and Construction	FC District/USACE	\$6,560,000	2012	2025	\$9,633,581	5	\$7,225,186	\$13,487,014	\$8,766,559	\$0	\$4,720,455	\$4,720,455
- Real Estate, Easements and Disposal Areas	FC District	\$4,500,000	2012	2025	\$6,608,402	5	\$4,956,301	\$9,251,762	\$9,251,762	\$0	\$0	\$0
<b>Subtotal</b>		<b>\$13,902,000</b>					<b>\$14,900,379</b>	<b>\$26,737,146</b>	<b>\$20,810,087</b>	<b>\$1,099,057</b>	<b>\$4,828,002</b>	<b>\$4,828,002</b>
<b>SUBTOTAL - Baseline Measures</b>		<b>\$94,273,328</b>			<b>\$112,879,265</b>		<b>\$89,242,618</b>	<b>\$151,336,770</b>	<b>\$61,227,733</b>	<b>\$1,429,131</b>	<b>\$88,679,906</b>	<b>\$38,197,985</b>
<b>% of TOTAL Cost Estimate High Range</b>							<b>100%</b>		<b>40%</b>	<b>1%</b>	<b>59%</b>	<b>25%</b>
<b>ADDITIONAL BASELINE MEASURES</b>												
Merwin Avenue Bridge Replacement and adjacent walls <sup>(e)</sup> [124][121][122][123][125][126][127][128][142][143][144]	TBD	\$3,133,000	2012	2022	\$4,210,490	5	\$3,157,868	\$5,894,686	\$0	\$0	\$5,894,686	-
Taylor Avenue Bridge Replacement and adjacent walls[203][209][213][216][219][220]	TBD	\$2,162,000	2012	2022	\$2,905,547	5	\$2,179,160	\$4,067,766	\$0	\$0	\$4,067,766	-
Broadmoor Avenue Bridge Replacement and adjacent walls[224][225][227][228]	TBD	\$1,758,000	2012	2022	\$2,362,605	5	\$1,771,954	\$3,307,647	\$0	\$0	\$3,307,647	-
All (22) Flood Control Measures (including Bridge Ave. bridge replacement) in Corte Madera Creek from Bridge Ave. to Calumet Ave., Floodwalls (2) at 634 San Anselmo Ave., & Floodwall (1) at 800 San Anselmo Ave.	TBD	\$9,284,000	2012	2022	\$12,476,920	5	\$9,357,690	\$17,467,688	\$0	\$0	\$17,467,688	-
<b>SUBTOTAL - Additional Baseline Measures</b>		<b>\$16,337,000</b>			<b>\$21,955,562</b>		<b>\$16,466,671</b>	<b>\$30,737,787</b>	<b>\$0</b>	<b>\$0</b>	<b>\$30,737,787</b>	<b>\$0</b>
<b>MORNINGSIDE/SLEEPY HOLLOW CREEK IMPROVEMENTS</b>												
Replace Mountain View Bridge	FC District	\$1,700,000	2016	2020	\$1,913,365	5	\$1,435,024	\$2,678,711	\$0	\$0	\$2,678,711	-
Morningside/ Lower Sleepy Hollow Flood Barriers	FC District	\$5,600,000	2016	2020	\$6,302,849	5	\$4,727,137	\$8,823,989	\$0	\$0	\$8,823,989	-
<b>SUBTOTAL - Morningside/Sleepy Hollow Creek</b>		<b>\$7,300,000</b>			<b>\$8,216,214</b>		<b>\$6,162,161</b>	<b>\$11,502,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,502,700</b>	<b>\$0</b>
<b>ANNUAL PROGRAM MEASURES</b>												
House Floor Elevation Survey Allowance (partially spent)	FC District	\$200,000				n/a	\$200,000	\$200,000	\$0	\$0	\$200,000	\$200,000
Creek Maintenance Program												
- 2008 Streamside Management for Landowners (previously spent)	FC District	\$50,000				n/a	\$50,000	\$50,000	\$0	\$0	\$50,000	\$50,000

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- 2012-2016 Creek Maintenance Agreements and Creek Assessments with Towns (previously spent)	FC District	\$200,000				n/a	\$200,000	\$200,000	\$0	\$0	\$200,000	\$200,000
- 2017-2027 Creek Maintenance Agreements and Creek Assessments with Towns (\$65,000 each year for 10 years)	FC District	\$650,000				n/a	\$650,000	\$650,000	\$0	\$0	\$650,000	\$650,000
<b>Subtotal</b>		<b>\$900,000</b>					<b>\$900,000</b>	<b>\$900,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$900,000</b>	<b>\$900,000</b>
<b>Rain and Stream Gauge Network Program (12 yrs @ \$35k/yr for O&amp;M + DWR Flood Emergency Planning Grant for installations)</b>	FC District	\$468,600				n/a	\$468,600	\$468,600	\$48,600	\$0	\$420,000	\$420,000
<b>SUBTOTAL - Annual Program Measures</b>		<b>\$1,568,600</b>					<b>\$1,568,600</b>	<b>\$1,568,600</b>	<b>\$48,600</b>	<b>\$0</b>	<b>\$1,520,000</b>	<b>\$1,520,000</b>
<b>PROGRAM MANAGEMENT and PUBLIC OUTREACH</b>												
County Staff (July 1st, 2008 to June 30th 2011) (previously spent)	FC District	\$388,939				n/a	\$388,939	\$388,939	\$0	\$0	\$388,939	\$388,939
County Staff (July 1st, 2011 to June 30th 2014) (previously spent)	FC District	\$1,199,708				n/a	\$1,199,708	\$1,199,708	\$0	\$0	\$1,199,708	\$1,199,708
County Staff (July 1st, 2014 to June 30, 2027) = \$420,000 initially increasing 3% each year for 13 years (partially spent)	FC District	\$6,559,472				n/a	\$6,559,472	\$6,559,472	\$0	\$0	\$6,559,472	\$6,559,472
2010 Capital Improvement Study and Public Outreach (previously spent)	FC District	\$778,125				n/a	\$778,125	\$778,125	\$0	\$0	\$778,125	\$778,125
2012 Ten Year Work Plan Study (previously spent)	FC District	\$18,670				n/a	\$18,670	\$18,670	\$0	\$0	\$18,670	\$18,670
Annual Updates to Storm Drainage Fee Report (FY 2007/08 - 2026/27) (partially spent)	FC District	\$334,000				n/a	\$334,000	\$334,000	\$0	\$0	\$334,000	\$334,000
Flow Reduction Study (for Program) (previously spent)	FC District	\$158,265				n/a	\$158,265	\$158,265	\$0	\$0	\$158,265	\$158,265
Hydraulic & Hydrologic Engineering, Future Grant Application Prep (\$120,000 every 2 years for 8 Years) (July 1st 2011 through June 30th 2019)	FC District	\$480,000				n/a	\$480,000	\$480,000	\$0	\$0	\$480,000	\$480,000
Outreach Services (previously spent)	FC District	\$93,330				n/a	\$93,330	\$93,330	\$0	\$0	\$93,330	\$93,330
Website Updates (FY 14/15, 15/16 & 16/17) (partially spent)	FC District	\$25,000				n/a	\$25,000	\$25,000	\$0	\$0	\$25,000	\$25,000
<b>SUBTOTAL - Program Management and Public Outreach</b>		<b>\$10,035,509</b>					<b>\$10,035,509</b>	<b>\$10,035,509</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,035,509</b>	<b>\$10,035,509</b>
<b>GRAND TOTAL <sup>(h)</sup></b>		<b>\$129,514,437</b>					<b>\$123,475,559</b>	<b>\$205,181,365</b>	<b>\$61,276,333</b>	<b>\$1,429,131</b>	<b>\$142,475,901</b>	<b>\$49,753,494</b>
<b>Expected Fee Revenue (2007-2027) - With 3% Rise in Fee Amounts:</b>											<b>\$49,804,351</b>	<b>\$49,804,351</b>
<b>Deficit(-)/Surplus(+) with an annual 3% rise in fee amount</b>											<b>-\$92,671,550</b>	<b>\$50,857</b>

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AACE Estimating Guidelines				
Estimate Class	Phase	Design Approximate % Complete	Cost Estimate Range	
			Low	High
5	Conceptual	0-2	-25%	+40%
4	Schematic	2-15	-15%	+25%
3	Design Development	15-40	-10%	+20%
2	Semi-detailed	40-75	-10%	+15%
1	Prebid	75-100	-5%	+10%

**FOOTNOTES:**

- (a) Scope/cost from Department of Water Resources Proposition 1E Local Levee Evaluation grant award.
- (b) Project awarded a Caltrans grant. If project cost increases, a Caltrans grant maintains % and increases the amount paid. Assumes Caltrans will approve the cost increase.
- (c) Contingency for each project has been deleted from the Cost Estimate column and is included in the AACE Cost Estimate Range column.
- (d) Units 3 and 4 Costs for Planning & Feasibility Design from Corps Agreement, for Final Design & Construction from Corps' estimate, and for Real Estate, Easements, & Disposal Areas from County's estimate. Cost Estimate Assumptions: USACE Cost Share is 50% for Planning and Feasibility Design, and assumed to be 65% for Final Design & Construction. USACE cost shares not secured beyond Planning and Feasibility Design. Assumes Congressional authorization and funding is obtained for all future phases of the project. CA Subvention Fund Cost Share is assumed to be 100% for Real Estate, Easement, & Disposal Areas. CA Subvention Funds not secured at this time.
- (e) Pending review and certification of environmental documents and alternatives to the listed project.
- (f) Cost Estimates include grant application costs spent to date for Phoenix Lake IRWM Retrofit and San Anselmo Flood Protection Project. Operations and Maintenance costs are not included and will be updated when the final design is known. Estimates reflect current knowledge of projects. Costs are refined through the design and environmental process.
- (g) Includes executed grant agreements, receipt of Caltrans E76, or notified the grant application was selected.
- (h) GRAND TOTAL does not include annual zone operation and maintenance costs such as that needed for: Utilities, Maintenance & Repair Services, Land & Buildings, Rent & Operating Leases, Office Supplies, Maintenance & Repair Supplies & Equipment, Land & Building Supplies, and Miscellaneous Supplies.

**GENERAL NOTES:**

1. Attachment A does not include Flood Control Zone 9 creek maintenance work in unincorporated Ross Valley funded by ad valorem taxes nor ad valorem tax revenue.
2. 5 Year Work Plan is completion of projects with grants: Phoenix Lake and San Anselmo Flood Protection Project.
3. Cost estimates will be updated as new information is available.