



Bay Area Regional Climate Change Preparedness

Attachment 4

BUDGET

Association of Bay Area Governments
Proposition 84
Integrated Regional Water Management
2015 Implementation Grant Application





Introduction..... 1

Proposal Budget 1

Project Budgets..... 3

Budget Summaries: Water Supply – Drought Preparedness Projects 4

 Project 1 – Bay Area Advanced Quantitative Precipitation Information (AQPI) System 5

 Project 2 – Anderson Dam Seismic Retrofit Project 7

 Project 3 – Marin 2020 Turf Replacement Project 9

Budget Summaries: Human Right to Water Projects..... 11

 Project 4 – East Palo Alto Groundwater Supply Project 12

 Project 5 – Coastal San Mateo County Drought Relief Phase II..... 14

Budget Summaries: Shoreline Resilience – Sea Level Rise Preparedness Projects 16

 Project 6 – San Francisquito Creek Flood Protection and Ecosystem Restoration Project 17

 Project 7 – Mountain View Shoreline Portion of SBSPR Project 19

 Project 8 – Eden Landing Portion of SBSPR Project..... 21

 Project 9 – Novato Creek Flood Protection and Habitat Enhancement Project..... 23

Budget Summaries: Grant Administration..... 25

 Project 10 – Grant Administration..... 26

Introduction

The Bay Area Regional Climate Change Preparedness Program is a diverse set of well-considered, widely vetted, and cost-effective solutions to water supply and drought-related issues/needs around the San Francisco Bay Area. In funding this effort, the California Department of Water Resources (DWR) will support the significant investments of the Bay Area's water agencies, public agencies, and non-governmental organizations.

Proposal Budget

The requested amount under the Proposition 84 2015 Integrated Regional Water Management (IRWM) Implementation Grant is **\$41,305,435**, which is the remaining amount left for the San Francisco Bay IRWM Funding Region.

The total cost of implementing this Proposal is **\$298,409,722**. Of this amount, **\$228,352,306** is non-state match funding, and **\$28,751,981** is other state funding.

Project 4, the City of East Palo Alto Groundwater Supply Project, is requesting a Disadvantaged Community (DAC) funding match waiver, and as such, the Project 4 cost of \$3,780,074 is removed from the total Proposal project cost calculation for the funding match requirement.

This proposal exceeds the minimum requirement of at least 25% of the total costs is matched by non-state funds; this proposal provides **77% Funding Match**.

The Proposal budget is shown in **PSP Table 8**, below.

PSP Table 8. Summary Budget						
Proposal Title: Bay Area Regional Climate Change Preparedness Program						
Individual Project Title		(a)	(b)	(c)	(d)	(e)
		Requested Grant Amount	Cost Share: Non-State Fund Source (Funding Match)	Cost Share: Other State Funding Sources	Total Cost	% Funding Match (Col b/Col d)
(a)	Project 1 - Bay Area Advanced Quantitative Precipitation Information (AQPI) System	\$19,000,000	\$7,450,000	\$0	\$26,450,000	28%
(b)	Project 2 - Anderson Dam Seismic Retrofit Project	\$4,090,000	\$184,472,000	\$0	\$188,562,000	98%
(c)	Project 3 - Marin 2020 Turf Replacement Project	\$781,563	\$261,000	\$0	\$1,042,563	25%
(d)	Project 4 - East Palo Alto Groundwater Supply Project	\$1,506,050	\$2,274,024	\$0	\$3,780,074	60%
(e)	Project 5 - Coastal San Mateo County Drought Relief Phase II	\$1,400,000	\$499,573	\$50,000	\$1,949,573	26%
(f)	Project 6 - San Francisquito Creek Flood Protection and Ecosystem Restoration Project	\$1,044,351	\$19,747,949	\$8,000,000	\$28,792,300	69%
(g)	Project 7 - Mountain View Shoreline Portion of SBSPR Project	\$4,807,998	\$9,867,760	\$1,812,937	\$16,488,695	60%
(h)	Project 8 - Eden Landing Portion of SBSPR Project	\$3,265,121	\$2,000,000	\$7,955,651	\$13,220,772	15%
(i)	Project 9 - Novato Creek Flood Protection and Habitat Enhancement Projects	\$3,551,607	\$1,780,000	\$10,933,393	\$16,265,000	11%
(l)	Project 10 - Grant Administration	\$1,858,745	\$0	\$0	\$1,858,745	0%
(n)	Proposal Total	\$41,305,435	\$228,352,306	\$28,751,981	\$298,409,722	76%
(o)	DAC Funding Match Waiver Total (<i>Project 4</i>)	-	-	-	\$3,780,074	-
(p)	Grand Total	\$41,305,435	\$228,352,306	\$28,751,981	\$294,629,648	77%

Project Budgets

The Bay Area Regional Climate Change Preparedness Program consists of grant administration and nine projects geographically spanning all four regions of the Bay Area. Budget summaries for each project included in the proposal are grouped by project benefit type:

- Water Supply – Drought Preparedness
- Human Right to Water
- Shoreline Resilience – Sea Level Rise Preparedness

Project budget summaries are presented below for each of the 9 projects included in this Proposal, and for Grant Administration (Project 10). Project budget tables (**PSP Table 7**) illustrate project costs, requested grant support, and funding matches by task category.

For each project, a Budget Summary is provided and PSP Table 7 is completed. The project budgets are consistent with the project work plans presented in Attachment 3 and project schedules presented in Attachment 5. Budget summaries include a brief summary of the following budget categories, cost sharing (funding matches), and a discussion of how the budgets were derived, and why they are reasonable. Budget summaries do not exceed the 2-page limit identified in the PSP.

- a) Direct Project Administration,
- b) Land Purchase/Easement,
- c) Planning/Design/Engineering/Environmental Documentation, and
- d) Construction/Implementation.

To facilitate review, the projects are grouped by primary benefit type, as listed below.

Primary Project Benefit	Project ID#	Project Proponent	Project Title
Water Supply – Drought Preparedness	1	San Francisco Estuary Partnership (SFEP)	Bay Area Advanced Quantitative Precipitation Information (AQPI) System
	2	Santa Clara Valley Water District (SCVWD)	Anderson Dam Seismic Retrofit Project
	3	Marin Municipal Water District (MMWD)	Marin 2020 Turf Replacement Project
Human Right to Water	4	City of East Palo Alto	East Palo Alto Groundwater Supply Project
	5	San Mateo County RCD	Coastal San Mateo County Drought Relief Phase II
Shoreline Resilience – Sea Level Rise Preparedness	6	State Coastal Conservancy	San Francisquito Creek Flood Protection and Ecosystem Restoration Project
	7	State Coastal Conservancy	Mountain View Shoreline Portion of SBSPR Project
	8	State Coastal Conservancy	Eden Landing Portion of SBSPR Project
	9	State Coastal Conservancy	Novato Creek Flood Protection and Habitat Enhancement Project
Administration	10	Association of Bay Area Governments (ABAG)/ SFEP	Grant Administration

Budget Summaries: Water Supply – Drought Preparedness Projects

This section presents budget summaries for the projects listed below.

Project ID#	Project Proponent	Project Title
1	SFEP	Bay Area Advanced Quantitative Precipitation Information (AQPI) System
2	SCVWD	Anderson Dam Seismic Retrofit Project
3	MMWD	Marin 2020 Turf Replacement Project

Project 1 – Bay Area Advanced Quantitative Precipitation Information (AQPI) System

Overview

The total cost of the Bay Area AQPI System is \$26,450,000, of which the Association of Bay Area Governments/San Francisco Estuary Partnership (ABAG/SFEP) and partners are requesting \$19,000,000 from this grant. The remaining \$7,450,000 of the total amount consists of cost-share funds (\$6,750,000 from the National Oceanic and Atmospheric Administration and the balance from Bay Area partner agencies). The project will take four years to implement.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 1 - Bay Area Advanced Quantitative Precipitation Information (AQPI) System					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$950,000	\$0	\$0	\$950,000
(b)	Land Purchase/Easement		\$20,000	\$0	\$20,000
(c)	Planning/Design/Engineering/ Environmental Documentation	\$137,500	\$7,180,000	\$0	\$7,317,500
(d)	Construction/Implementation	\$17,912,500	\$250,000	\$0	\$18,162,500
(e)	Grand Total	\$19,000,000	\$7,450,000	\$0	\$26,450,000
*Source of funding: Matching funds will be provided by partner water agencies, including Sonoma County Water Agency, Santa Clara Valley Water District, and the San Francisco Public Utilities Commission. Additionally, NOAA planning efforts to complete Phase I of the AQPI system (\$6,750,000) are non-state cost share.					

Justification

Are the costs presented reasonable for this project type and the current stage of the project? Costs are very reasonable. No other entity in the U.S., public or private, is as knowledgeable or has the infrastructure to build, design and deliver a project of this scope and magnitude. Private weather companies such as Weather.com and others, all rely on forecasting information from NOAA. There are really no other sources for improved weather monitoring and forecasting in the U.S. NOAA has over 150 NEXRAD radars installed in the U.S.; each radar costs roughly 12 to 15 million dollars and are not providing good storm forecasting data for the Bay Area. The cost of the AQPI system is 26 million dollars, and will provide a much larger benefit for the Bay Area. Installation of X- and C-band radar systems in Texas and Japan cost roughly the same as the proposed Bay Area AQPI system.

Explanation of project contingency amount (i.e., contingency percentage) applied to the project budget. A contingency amount of 2.5% is included in the construction/implementation task to account for uncertainty in purchase of equipment and installation, and is conventional in similar projects.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration – ABAG/SFEP will administer this project over 4 years. ABAG/SFEP will contract with NOAA, USGS, CW3E to implement the tasks described in the work plan. Seven ABAG/SFEP staff will work part-time on the project over 4 years for \$750,000. NOAA staff will also spend \$200,000 over 4 years administering the grant. Combined, roughly 6,500 hours will be spent to ensure the project is accomplished on time and in budget, and according to grant terms. The total costs of \$950,000 are to be reimbursed by the grant.

Row b: Land Purchase – No land will be purchased for this project. Any easements or land use agreements will be paid by partner water agencies, and is estimated at \$20,000 in matching funds.

Row c: Planning/Design/Engineering/Environmental Documentation – Total costs for this budget category are \$7,317,500, all but \$137,500 of which are matching funds spent by NOAA or partner agencies (or anticipated to be spent by partner agencies). \$7,180,000 in estimated matching funds are explained below.

Task 5: Feasibility Studies. The total matching funds for planning and feasibility studies is \$6,900,000, as described below:

- Phase I of the AQPI System is complete and the cost was \$6,750,000 paid by NOAA and partner water agencies.
- Radar siting studies: NOAA completed radar siting studies for two of the radar units (\$60,000 in matching funds paid by San Francisco Public Utilities Commission). The three remaining radar siting studies, estimated at \$90,000, will be paid by partner agencies hosting the radar units. Surface monitoring siting studies are incorporated into the budget for the radar siting studies.

Task 6: CEQA Documentation. CEQA/NEPA documentation is estimated at \$50,000 per site or \$250,000 for all 5 sites (based upon professional experience with similar levels of effort). These funds will be matching funds paid for by the partner agencies.

Task 7: Permitting. Permitting costs are estimated as \$10,000 per stream gauge site based upon professional experience with similar levels of effort (assume 3 gauges for total of \$30,000). These funds will be matching funds paid for by the partner agencies.

Task 8: Design. The site designs for the radars and surface monitoring equipment are known based on past experience. The equipment layout will be adjusted to fit the selected site, as determined in Task 5. The cost for final design is minimal and built into the construction/implementation tasks (Tasks 10, 11, 12) described below.

Task 9: Project Performance Monitoring Plan. Anticipated grant funds for this task are \$12,500.

Row d: Construction/Implementation – The total Construction/Implementation budget for Tasks 10, 11, and 12 is \$18,163,000, almost all of which will be funded by the grant. These costs are broken down into three categories.

Hardware Costs over the four years of the project:

- 1) *One-C-band radar system:* The C-band radar costs \$2,250,000 (based upon NOAA/CSU knowledge of similar radar systems installed around the world); the tower \$250,000; the concrete pad \$50,000. NOAA and CSU staff to install, calibrate, adjust the system over four years to ensure that data is properly transmitted: \$750,000 (5,000 hours). Total C-band radar cost is \$3,300,000 (\$3,250,000 grant funds; \$50,000 water agency match for the concrete pads.)
- 2) *Four-X-band radar systems:* Each X-band radar costs \$1,150,000 each (based upon the cost of similar radar systems installed in Texas and other locations by the NOAA/CSU team); and concrete pads \$50,000 each. NOAA and CSU staff to install, calibrate, adjust the system over 4 years to ensure that data is properly transmitted: \$800,000 (roughly 5,500 hours). Total X-band costs are \$5,600,000 – \$5,400,000 in grant funds and \$200,000 for concrete pads paid by water agencies (match funds).
- 3) *Four-Surface monitoring Systems:* Surface monitoring systems consist of a variety of sensors: rain gauges, temperature probes, humidity sensors, wind speed probes, disdrometers (measure raindrop size and number), and soil moisture probes. Each system costs \$47,000 (based upon similar surface monitoring systems procured by NOAA). NOAA staff to install, calibrate, and tie in the systems to the AQPI over 4 years: \$552,000 (roughly 3,700 hours). Total surface monitoring system costs are \$740,000, all of which will be paid for by the grant.
- 4) *Three-Stream gauges:* Each stream gauge system costs \$12,000. NOAA and USGS staff to install the systems and link the existing stream monitoring systems with the AQPI system: \$400,000 (roughly 2,600 hours). Total stream gauge system installation is estimated at \$436,000, all of which will be paid for by the grant.

Data Systems Costs. Total data systems costs are estimated at \$6,240,000, all of which will be funded by the grant. These costs include the purchase of various computers (\$240,000) and staff costs (\$6,000,000) as listed below:

- Integration of existing and new meteorological information into NOAA forecasting systems. 4 part-time positions: lead scientist, research scientist I, research scientist II, and electrical engineer (roughly 3,000 hours) over 4 years - \$500,000
- High-resolution rainfall mapping: 6 part time positions over 4 years (roughly 4,600 hours) - \$700,000
- Precipitation forecasts: 25 staff, including lead scientist, research scientist I, research scientist II, IT, and electrical engineers at NOAA, and principal researchers at Scripps part-time over 4 years (roughly 20,000 hours) - \$3,000,000
- Stream flow and storm surge prediction modeling: 6 staff, part time over 4 years (roughly 12,000 hours) - \$1,800,000

User Interface Costs. The user interface costs are primarily software design and development costs, as well as hardware integration. The total cost for the user interface is \$1,846,500 over 4 years and involves 24 part-time staff over 4 years (roughly 12,500 hours). This cost will be requested for reimbursement from the grant.

Project 2 – Anderson Dam Seismic Retrofit Project

Overview

The Anderson Dam Seismic Retrofit Project (ADSRP) has a total estimated budget of \$188,562,000. The Santa Clara Valley Water District (SCVWD) is requesting \$4,090,000 in grant funding to support construction of the project. Of this total amount, the District has already expended about \$9,600,000, which is excluded from the summary tables contained herein.

The total budget includes project planning, design, land acquisition, and construction, as well as all of the supporting activities required to execute and administrate the project.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 2 - Anderson Dam Seismic Retrofit Project					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$0	\$111,000	\$0	\$111,000
(b)	Land Purchase/Easement	\$0	\$4,020,000	\$0	\$4,020,000
(c)	Planning/Design/Engineering/Environmental Documentation	\$0	\$19,392,000	\$0	\$19,392,000
(d)	Construction/Implementation	\$4,090,000	\$160,949,000	\$0	\$165,039,000
(e)	Grand Total	\$4,090,000	\$184,472,000	\$0	\$188,562,000
<p><i>*Source of funding:</i></p> <p>SCVWD Water Utility Enterprise Funds will support \$115,950,000 of the project costs. Of this amount, approximately \$9,600,000 has been spent to date.</p> <p>The Santa Clara County Safe, Clean Water Program was approved by voters on November 6, 2012 as a Countywide special parcel tax for 15 years with a sunset date of June 30, 2028. The ADSRP is one of the projects identified for funding under this program (Project C1). In 2012, \$45 million in Safe, Clean Water funds were allocated to offset the ADSRP project cost. The fund allocation of \$45M is subject to inflation.</p>					

Justification

Are the costs presented reasonable for this project type and the current stage of the project?

The costs are reasonable for this project type at this planning stage of the project. Project construction costs were developed by an independent consultant in accordance with guidelines established by the Association for the Advancement of Cost Engineering (AACE) as a Class 3 Estimate (HDR, 2013).

Project contingency amount (i.e., contingency percentage) applied to the project budget, and an explanation on how that amount/percentage was developed.

Project construction and implementation is estimated to cost \$165,039,000, of which, \$19,821,000 is estimated administration and contract costs (construction contracting, construction management and inspections, engineering support during construction, and close-out), and \$145,218,000 is for actual project construction.

Of the \$145,218,000 construction cost estimate, \$16,218,000 accounts for escalation. The construction cost estimate includes a 30% contingency (about \$24,326,000), which is appropriate for this stage of the project (HDR, 2013).

Supplemental Detailed Cost Justification (Note that the cost detail provided below is rounded to the nearest thousand):

Row a: Direct Project Administration – Direct Project Administrative tasks are estimated to cost \$111,000. This cost is for District staff (estimated at a cost of \$220/hour, for a total of 504 hours) to provide contract management, review of consultant and contractor invoices, labor compliance monitoring, and quarterly and final reporting for the project. This cost is less than 1% of the total project cost.

Row b: Land Purchase – The cost for land purchase or permanent easement/right-of-way is estimated to be \$4,020,000, which includes \$3,800,000 for the purchase of property as well as \$220,000 in administrative and other costs.

Row c: Planning/Design/Engineering/Environmental Documentation –The District staff budget for the planning, design, engineering and environmental documentation tasks is about \$5,632,000, which is based on a total of 25,600 staff hours at an average hourly rate of \$220/hour. The District has retained consultant staff to assist with Project Management, CEQA compliance, Permitting, and Design. Total consultant professional service costs approved to date for these services are approximately \$25,417,000. Feasibility studies have been completed for the project (June 2013). Project management services have been ongoing since 2012. The design consultant is in the data gathering and analysis phase. Thus, expended consultant costs (through the third quarter of the current fiscal year) are \$11,657,000 and the current cost estimate for Budget Category (c) is \$19,392,000 (\$5.632M + \$25.417M - \$11.657M).

Row d: Construction/Implementation – Consultant professional service costs for construction management, administration, support and oversight of the project is estimated to be \$18,600,000, and District Staff costs estimated to be \$1,221,000 (based on 5,550 hours at an average rate of \$220/hour).

Construction costs are conceptual in nature given the current status of the project, and estimated to be \$129,000,000. Adjusting for inflation (\$16,220,000) yields the total anticipated construction cost of \$145,218,000.

Construction oversight and implementation is anticipated to require a total of \$165,039,000.

Project construction funds will originate from SCVWD Water Utility Enterprise Funds (\$115,950,000), Santa Clara County parcel tax funds from the Safe, Clean Water measure (\$45,000,000) and IRWM grant funds (\$4,090,000).

References

HDR Engineering, Inc. (2013b), "*Planning Study Report, Anderson Dam Seismic Retrofit Project*," Prepared For: Santa Clara Valley Water District, July 9 2013.

Project 3 – Marin 2020 Turf Replacement Project

Overview

The total cost of the Marin 2020 Turf Replacement Project is \$1,042,563. Requested grant funds are \$781,563.

All funding match, consisting of \$261,000 in-kind and cash cost share, will be provided by Marin Municipal Water District (MMWD). These funds will be included in the MMWD Operating Budget over the project implementation time frame of four years. MMWD labor, including indirect/benefits cost, accounts for \$151,384 of the total cost share amount of \$261,000 and will be provided as an in-kind contribution towards project implementation. The balance of \$109,616 in cost share consists of cash which will cover \$5,000 in marketing materials and \$104,616 towards funding consumer incentives. This \$104,616 in MMWD cash contribution, in addition to the \$781,563 in grant funding, provides a total budget of \$886,179 to fund the consumer rebates/incentives, MMWD cash contribution of \$5,000 will fund marketing/outreach materials, and MMWD in-kind contribution of \$151,384 will fund labor, for a total project cost of \$1,042,563.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 3 - Marin 2020 Turf Replacement Project					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$0	\$51,725	\$0	\$51,725
(b)	Land Purchase/Easement	\$0	\$0	\$0	\$0
(c)	Planning/Design/Engineering/ Environmental Documentation	\$0	\$36,839	\$0	\$36,839
(d)	Construction/Implementation	\$781,563	\$172,436	\$0	\$953,999
(e)	Grand Total	\$781,563	\$261,000	\$0	\$1,042,563
*Source of funding: MMWD Operating Budget					

Justification

Are the costs presented reasonable for this project type and the current stage of the project? Are the costs significantly higher or lower than industry standard?

Estimated project costs are reasonable and realistic. The project budget has been developed using actual salary rates and recent materials estimates, and the \$2 per square foot incentive program, which accounts for the bulk of the project implementation budget, is generous enough to be effective and within industry standards.

Project contingency amount (i.e., contingency percentage) applied to the project budget, and an explanation on how that amount/percentage was developed.

Contingency funds as a percent of estimated project costs have not been included in this project budget for the following reasons:

1. The primary project element consists of an incentive program, which will include a fixed amount of funding to provide \$2 per square foot rebates for eligible turf conversion activities. Contingency funding for this primary

project element is unnecessary, as both the total program amount and the individual rebate amounts are by definition constrained.

2. All other project activities (planning, design, project implementation, management and administration, etc.) will be accomplished by MMWD staff as an in-kind cost share. MMWD labor is fully funded under the district’s operating budget for the duration of this project time frame, therefore any additional staff effort which may be required to complete the project is already funded, and so a contingency set-aside for this work is also unnecessary.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration - Direct Project Administration cost estimates have been developed based upon MMWD’s past experience administering IRWM Planning and Implementation grants under Propositions 50 and 84. This work will be conducted entirely by MMWD staff. The budget assumes a four-year project, and involvement of key MMWD grant management, project management, and finance staff to accomplish Direct Project Administration activities. A total of \$51,725, or 4.96% of the total project budget, is included for this work.

Row b: Land Purchase - Not applicable for this project.

Row c: Planning/Design/Engineering/Environmental Documentation - This is not a construction project and will not require engineered design, CEQA review/documentation, or permitting. Planning and Design will be accomplished in-house by MMWD staff, and cost estimates have been developed based upon MMWD Water Conservation staff experience with developing and implementing similar incentive programs. Total estimated cost for this phase of work is \$36,839, or 3.53% of the total project budget.

Row d: Construction/Implementation - Project implementation includes developing, marketing, and implementing an incentive program which will result in turf removal and habitat creation. This work, including managing and administering the incentive program and associated site inspections and technical assistance, will be accomplished in-house by MMWD staff. Labor cost estimates have been developed based upon MMWD Water Conservation staff experience with developing and implementing similar programs. The \$953,999 subtask total includes funding the incentives for \$886,179, marketing materials at \$5,000 (see detail below), and MMWD labor at \$62,820. The \$886,179 incentives funding includes \$781,563 in Proposition 84 IRWM Implementation Grant funding, plus \$104,616 in cash cost share provided by MMWD. The \$5,000 in marketing materials consist of a cash cost share provided by MMWD, and the \$62,820 in MMWD labor will be provided as an in-kind cost share contribution. Total estimated cost for this work is \$953,999, or 91.51% of the total project budget.

Equipment and Materials List and Costs

Equipment or Materials Description	Unit Costs (\$)	No. of Units	Total Cost
Marketing and outreach materials: Application form and brochure, 2,000 of each (includes graphic design, printing, postage) and advertising.	\$2.50	2,000	\$5,000
Total			\$5,000

Budget Summaries: Human Right to Water Projects

This section presents budget summaries for the projects listed below.

Project ID#	Project Proponent	Project Title
4	City of East Palo Alto	East Palo Alto Groundwater Supply Project
5	San Mateo County RCD	Coastal San Mateo County Drought Relief Phase II

Project 4 – East Palo Alto Groundwater Supply Project

Overview

The City of East Palo Alto’s proposed water supply treatment systems will directly provide water supply benefits to disadvantaged communities (DACs) in East Palo Alto. These Projects will also address DWR’s Human Right to Water Policy. Therefore, a Funding Match Waiver is being requested. Grant funds will support construction of the Gloria Way Well Treatment System and planning and design of the Pad D Well and Treatment System. The total cost to design and construct the Gloria Way Well Treatment System and to design of the Pad D Well is estimated to be \$3,780,074. This estimate is based on consultant invoices, consultant budgets, and vendor quotes. To date, the City had used general funds for the Project and has received grant funds from the USEPA State and Tribal Assistance Grant (STAG) program and U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) program. The City is requesting \$1,506,050 in Proposition 84 grant funds to complete design and construction of the Gloria Way Well Treatment System and to design the Pad D Well and Treatment System.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 4 - East Palo Alto Groundwater Supply Project					
Project serves a need of a DAC?: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Funding Match Waiver request? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	N/A	N/A	N/A	N/A
(b)	Land Purchase/Easement	N/A	N/A	N/A	N/A
(c)	Planning/Design/Engineering/Environmental Documentation	\$705,000	\$953,574	\$0	\$1,658,574
(d)	Construction/Implementation	\$801,050	\$1,320,450	\$0	\$2,121,500
(e)	Grand Total	\$1,506,050	\$2,274,024	\$0	\$3,780,074
*Sources of funding: EPA STAG Grant (\$1,061,000), HUD CDBG Grant (\$798,600), City General Fund and East Palo Alto Water Capital Improvement Surcharge (City Council Resolution 4629) (total local funds \$414,424).					

Justification

Are the costs presented reasonable for this project type and the current stage of the project?

The costs presented are based on monies spent to date by the City, approved consultant budgets and scope of work, and vendor quotes. Therefore, the costs are in-line with industry standards.

Project contingency amount (i.e., contingency percentage) applied to the project budget.

A contingency was only applied to the cost of construction of the Gloria Way Well Treatment System. The contingency used was 25% of total project construction cost, which is a typical contingency applied for projects at the 30% design phase.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration – No project costs apply to this budget category.

Row b: Land Purchase – No project costs apply to this budget category.

Row c: Planning/Design/Engineering/Environmental Documentation – The cost estimate is based on invoices and budgets from consultants for the work products. These include:

Groundwater Management:

Task 5 Feasibility Study - Groundwater Management Plan - \$ 113,724 City Match (consultant invoices)

Gloria Way Well Treatment System:

Task 5 Feasibility Study - Gloria Way Water Well Production Alternatives Analysis & East Palo Alto Water Security Feasibility Study - \$266,550 EPA STAG Grant Match (consultant invoices)

Task 6 CEQA - Joint Initial Study and Environmental Assessment - \$98,600 HUD CDBG Grant Match (consultant invoices)

Task 7 Permitting - \$150,000 Grant Request (EKI Budget for Assisting with Permitting of the Gloria Way Well and Treatment System)

Task 8 Design – Preliminary through Final Design - \$174,700 EPA STAG Grant Match (EKI Budget for Design of the Gloria Way Well Treatment System)

Pad D Well and Treatment System:

Task 5 Feasibility Study - Report on Drilling, Construction, and Testing of the Pad D Test Well - \$300,000 City Match (consultant invoices)

Task 6 CEQA – Forthcoming CEQA Compliance Document - \$100,000 Grant Request (based on cost for Gloria Way Well CEQA document)

Task 7 Permitting - \$155,000 Grant (Based on EKI Budget for Assisting with Permitting of the Gloria Way Well and Treatment System))

Task 8 Design – Preliminary through Final Design - \$300,000 Grant Request (EKI Opinion of Probable Cost for Pad D Well project. Assumed to be 15% of total project cost.)

Row d: Construction/Implementation – The cost estimate for Construction/Implementation for Gloria Way Well Treatment System is based on budgets from consultants for the identified scopes of work and work products. Note that a construction budget for the Pad D Well is not provided below because grant funding is only being requested for project design. Funding for the construction of the Pad D Well is being provided by the East Palo Alto Water Capital Improvement surcharge.

Task 10 Construction Contracting - \$16,500 EPA STAG Grant Match

Task 11 Construction Administration - \$300,000 Total EPA STAG Grant Match (\$225,000 construction management costs assumed to be 15% of the Gloria Way Well construction cost (approximately \$1,500,000); \$75,000 system startup cost assumed to be 5% of the Gloria Way Well construction cost).

Task 12 Construction/Implementation – \$1,795,000 Total (\$970,000 HUD CDBG, EPA STAG Grant, City Match; \$801,050 Grant Request) (EKI Opinion of Probable Cost from Gloria Way Well 30% design submittal. The total cost includes a 25% contingency on the total labor and materials cost (approximately \$1,200,000)). Costs include \$837,920 for equipment and materials that will be split 50/50 between Match and Grant funding.

Equipment and material costs include items such as, \$390,000 for the foundation, \$85,000 for a generator, \$53,000 for tanks, \$45,000 for meters and gages, \$40,000 for electrical controls, \$15,500 for the well pump, and other items.

References

- Filtronix, December 17, 2014.
- R.F. MacDonald, January 7, 2015.
- Ryan Process, January 7, 2015.
- TJC and Associates, January 9, 2015.
- Peterson Power Systems, January 12, 2015.
- R.S. Means Heavy Construction 2014.

Project 5 – Coastal San Mateo County Drought Relief Phase II

Overview

The grand total cost of the San Mateo County Resource Conservation District's (RCD's) Coastal San Mateo County Drought Relief Phase II is \$1,949,573, of which the San Mateo County RCD is requesting \$1,400,000. The remaining \$549,573 of the total amount consists of cost-share funds. Additional financial support for this project that is anticipated but not included in the cost-share total is additional leveraged funding, primarily from the NRCS Environmental Quality Incentives Program and private landowner contributions (cash and in-kind).

Repair costs (\$563,000) to the 1,500 feet of leaky pipelines (Project Element A) are estimates provided by the Public Works Manager of the Cuesta La Honda Guild. Of the total cost, RCD is requesting \$253,240 and the remainder will be funded by the Cuesta La Honda Guild. Construction of irrigation ponds (\$849,773) are based on engineers estimates and comparisons of similar projects within the project area. Construction contingencies will be provided by the landowners as needed.

Project planning, permitting, design, construction and administrative costs are based on costs already incurred, or are estimated utilizing the costs already incurred as the basis for estimating the costs for projects in Elements A and B. For these reasons, the budget amounts are believed to be reasonable. A 3% increase in wage is assumed each year for cost of living adjustments.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 5 - Coastal San Mateo County Drought Relief Phase II					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source**	Total Cost
(a)	Direct Project Administration	\$177,430	\$0	\$0	\$177,430
(b)	Land Purchase/Easement	\$0	\$0	\$0	\$0
(c)	Planning/Design/Engineering/Environmental Documentation	\$215,405	\$25,755	\$50,000	\$291,160
(d)	Construction/Implementation	\$1,007,165	\$473,818	\$0	\$1,480,983
(e)	Grand Total	\$1,400,000	\$499,573	\$50,000	\$1,949,573
*Sources of funding: Cuesta La Honda Guild, Peninsula Open Space Trust, USDA Natural Resources Conservation Service, Agricultural Landowners					
** Source of funding: Trout Unlimited					

Justification

Are the costs presented reasonable for this project type and the current stage of the project?

Costs for administering, planning and constructing these projects are based on the past five years of related projects the RCD and its partners have completed, and available cost estimates for projects currently being developed. The main project cost involves excavation of soil to construct ponds. Per unit cost of moving a cubic yard of earth within a project footprint similar to these projects ranges from \$7 to \$15. This range is within yearly averages reported by the California Department of Transportation for roadway excavation. Administration and planning costs are based on past projects administered by the

RCD and its partners similar to the ones proposed in this project, and projects funded via proposition 84. Based on the type of projects, the current stage of development and the rural setting of coastal San Mateo County, these project costs are reasonable.

Project contingency amount (i.e., contingency percentage) applied to the project budget.

There is no separate line item for contingency funding. Cost estimates used for construction estimates were adjusted to reflect conservative estimates and cover potential issues which have come up in similar projects in the past.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration – The \$177,430 in administrative costs are calculated as follows:

RCD labor costs for Category a (total \$116,430):

- Executive Director: 100 hrs at \$130/hr = \$13,000
- Finance Director: 45 hrs at \$100/hr = \$4,500
- Natural Resource Specialist: 520 hrs at \$67/hr = \$34,840
- Program Assistant: 450 hrs at \$63/hr = \$28,350
- Conservation Project Assistant: 130 hrs at \$52/hr = \$6,760
- Conservation Assistant: 420 hrs at \$34/hr = \$14,280
- Administrative Assistant: 300 hrs at \$49/hr = \$14,700

Contractual costs for Category a (total \$61,000):

- Labor Compliance Contractor: \$60,000 (lump sum estimate)
- Grant writer Contractor: \$250 (lump sum)
- Conference call service: \$750 (lump sum)

Row b: Land Purchase – N/A.

Row c: Planning/Design/Engineering/Environmental Documentation –

RCD Labor (total \$165,405):

- Executive Director: 99 hrs at \$130/hr = \$12,870
- Water Quality Coordinator 495 hrs at \$72/hr = \$35,640
- Natural Resource Specialist: 1,410 hrs at \$67/hr = \$94,470
- Program Assistant: 195 hrs at \$63/hr = \$12,285
- Conservation Project Assistant: 195 hrs at \$52/hr = \$10,140

Contractual costs (total \$125,755):

- Assessment and Feasibility Studies: \$15,480 (lump sum estimate for contract work)
- Environmental Permitting: \$50,000 (lump sum estimate for contract work)

Designs: \$60,275 (lump sum estimate for contract work)

Row d: Construction/Implementation – Total cost for implementation is \$1,480,983.

RCD labor costs (total \$68,210):

- Executive Director: 29 hrs at \$130/hr = \$3,770
- Water Quality Coordinator 134hrs at \$72/hr = \$9,648
- Natural Resource Specialist: 446 hrs at \$67/hr = \$29,882
- Conservation Project Assistant: 320 hrs at \$52/hr = \$16,640
- Conservation Assistant: 200 hrs at \$34/hr = \$6,800
- Administrative Assistant: 30 hrs at \$49/hr = \$1,470

Contractual costs:

- Construction Contractors: \$1,412,773 (Project Element A1: \$175,000, A2: \$98,000, A3: \$290,000, B1: \$259,773, B2: \$330,000, B3: \$260,000)

Project Element A cost estimates are based on previous experience fixing water lines. An example project, the Escondido Water Main project, was used as a reference and includes a request for quote, contractor bid, and plans. Project Element B cost estimates are based on similar projects in the design phase and are based mostly on a cost per cubic yard of earth moved.

Budget Summaries: Shoreline Resilience – Sea Level Rise Preparedness Projects

This section presents budget summaries for the projects listed below.

Project ID#	Project Proponent	Project Title
6	State Coastal Conservancy	San Francisquito Creek Flood Protection and Ecosystem Restoration Project
7	State Coastal Conservancy	Mountain View Shoreline Portion of SBSPR Project
8	State Coastal Conservancy	Eden Landing Portion of SBSPR Project
9	State Coastal Conservancy	Novato Creek Flood Protection and Habitat Enhancement Project

Project 6 – San Francisquito Creek Flood Protection and Ecosystem Restoration Project

Overview

All planning, design, permitting and easement acquisition costs for the project have been expended, and are not part of this grant proposal. The budget for the San Francisquito Creek Flood Protection and Ecosystem Restoration Project within this proposal is for construction and construction related tasks only. The grant request includes \$953,351 for marshplain restoration, \$50,000 for construction management, and \$41,000 in direct project administration. Funding includes \$8,000,000 for construction funding provided by the State through a Proposition 1E grant for flood protection elements and \$19,747,949 Non-State funding match from San Francisquito Creek Joint Powers Authority (SFCJPA) member agencies and a successful 2012 local ballot measure. The grant funds are needed to ensure that the project provides the greatest level of ecosystem restoration available within the project footprint and on adjoining lands.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 6 - San Francisquito Creek Flood Protection and Ecosystem Restoration Project					
Project serves a need of a DAC?: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$41,000	\$0	\$0	\$41,000
(b)	Land Purchase/Easement	\$0	\$0	\$0	\$0
(c)	Planning/Design/Engineering/Environmental Documentation	\$0	\$0	\$0	\$0
(d)	Construction/Implementation	\$1,003,351	\$19,747,949	\$8,000,000	\$28,751,300
(e)	Grand Total	\$1,044,351	\$19,747,949	\$8,000,000	\$28,792,300
*Source of funding: \$19,747,949 Non-State funding from SFCJPA member agencies and a successful 2012 local ballot measure. \$8,000,000 in construction funding provided by the State through a Proposition 1E grant for flood protection elements.					

Justification

Are the costs presented reasonable for this project type and the current stage of the project? Are the costs significantly higher or lower than industry standard?

The construction costs are reasonable for this project type. Since all of the planning, design and permitting work has been completed, there is less uncertainty about the final design and potential planning setbacks that other projects that are not shovel-ready could encounter. Cost estimating was performed by a licensed engineer familiar with the current construction bidding climate for similar projects and current costs for materials, equipment and labor.

Project contingency amount (i.e., contingency percentage) applied to the project budget, and an explanation on how that amount/percentage was developed.

A 10% contingency has been applied to all programmatic unit costs for construction costs. 10%, while lower than industry standard for this scale of construction project, covers a reasonable range of unexpected costs considering recent bid amounts compared to engineer's estimates for similar projects.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration – The \$41,000 in State Coastal Conservancy (SCC) administrative costs were calculated as follows:

SCC Staff	Hours	Billing rate	Total
Project Development Specialist	250	\$120.00	\$30,000
Legal	45	\$152.00	\$6,840
Program Manager	32	\$130.00	\$4,160
Administrative Costs Total			\$41,000

Row b: Land Purchase – N/A, all tasks completed outside of grant request.

Row c: Planning/Design/Engineering/Environmental Documentation – N/A, all tasks completed outside of grant request.

Row d: Construction/Implementation – Construction Management costs of \$100,000 were calculated as follows:

SFCJPA Staff	Hours	Billing rate	Total
Project Manager	500	\$100.00	\$50,000
Total CM costs	500	\$100.00	\$50,000

Construction Costs were provided by the project design engineer, HDR in their 90% Opinion of Probable Construction Costs (OPCC) Technical Memorandum from August 2012. Construction costs total \$28,751,300, as detailed below.

- Mobilization and Demobilization - \$1,606,400
- Friendship Bridge Boardwalk - \$297,000
- Excavation - \$5,932,400
- Levee Embankment Fill - \$3,924,800
- Floodwall Installation – \$11,313,500
- Other tasks including tree removal, site paving, fencing, marsh planting - \$5,677,200

References

San Francisquito Creek Early Implementation Project 90% Opinion of Probable Construction Costs, HDR Inc. 2012

Project 7 – Mountain View Shoreline Portion of SBSPR Project

Overview

The State Coastal Conservancy (SCC) estimates the total costs of the Mountain View Shoreline project to be \$16,488,695. The SCC requests \$4,807,998 from the 2015 IRWM grant program. The total requested funds are for construction except for \$126,680 for Direct Project Administration, which includes \$70,000 for a Labor Compliance Program and \$56,680 for SCC staff to administer the project. Federal matching sources will include \$3.3 million direct appropriation to the U.S. Fish and Wildlife Service (USFWS) as well as the SCC's \$956,260 grant request to the USFWS's National Coastal Wetland Conservation Grant Program. Other federal matching funds include \$190,500 in U.S. Environmental Protection Agency (USEPA) funding from a San Francisco Bay Water Quality Improvement Grant that the SCC received (and has already spent) to support design, environmental analysis, and permitting for the Mountain View project. The City of Mountain View will provide matching funds for levee improvements and relocations and upgrades of their infrastructure. The local flood protection district, the Santa Clara Valley Water District, and adjacent City of Palo Alto will provide matching funds for Palo Alto Flood Basin levee improvements. The other State of California funds include \$148,600 in SCC funds and staff time spent on design, environmental analysis, and permitting and an additional \$1 million from the SCC for construction. The SCC will also submit a Proposition 1 grant application to the California Department of Fish and Wildlife (CDFW) and pursue a number of other possible funding sources for the additional \$664,337 to complete the project.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 7 - Mountain View Shoreline Portion of SBSPR Project					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$126,680	N/A	N/A	\$126,680
(b)	Land Purchase/Easement	N/A	N/A	N/A	N/A
(c)	Planning/Design/Engineering/Environmental Documentation	N/A	\$190,500	\$148,600	\$339,100
(d)	Construction/Implementation	\$4,681,318	\$9,677,260	\$1,664,337	\$16,022,915
(e)	Grand Total	\$4,807,998	\$9,867,760	\$1,812,937	\$16,488,695
<p><i>*Source of funding:</i></p> <p>Non-state funds for planning were from USEPA San Francisco Bay Water Quality Grant (\$190,500) and state funds were from SCC (\$148,600).</p> <p>Non-state funds for construction are provided by USFWS direct appropriation (\$3,300,000) and USFWS's National Coastal Wetland Conservation Grant Program (\$956,260).</p> <p>Other non-state funds are from local flood protection agencies (SCVWD, Mountain View, and Palo Alto) (\$5,421,000). State funds are from SCC (\$1,000,000) and CDFW (\$664,337).</p>					

Justification

Are the costs presented reasonable for this project type and the current stage of the project? Estimated costs are based on URS’s design memo and represent typical costs for restoration projects of this type and scale.

Project contingency amount (i.e., contingency percentage) applied to the project budget. Since the project is only at a preliminary design level, a 30% contingency has been added to the construction estimate shown below.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration – The \$126,680 in administrative costs have been calculated as follows:

SCC Staff Position	Hours	Billing Rate	Total
Project Development Specialist	353	\$120	\$42,360
Legal	60	\$152	\$9,120
Program Manager	40	\$130	\$5,200
Total Staff Costs			\$56,680
Labor Compliance Plan			\$70,000
Total Administration Costs			\$126,680

\$70,000 is the estimated cost for a labor compliance plan based on SCC experience with similarly scaled projects.

Row b: Land Purchase – Land acquired in 2003. Construction rights-of-way to be negotiated; no anticipated costs.

Row c: Planning/Design/Engineering/Environmental Documentation – The activities in this task total \$339,100 and include feasibility studies, design plans, and CEQA/NEPA environmental documentation.

\$3,600 is expected for SCC staff time to complete Project Monitoring Plan. This estimate is based on 30 hours of SCC Project Development Specialist time at \$120/hour. The remaining funds for planning are from 1) a USEPA grant to the Conservancy for SBSPR Phase 2 planning for the Alviso-Mountain View Ponds Project and 2) SCC funds for Phase 2 Mountain View Ponds work.

Row d: Construction/Implementation – Construction costs were estimated by URS Corporation (now AECOM) as part of the 2014 Preliminary Design Memorandum for the project. There are no separate labor costs. These costs represent typical and reasonable earth moving, habitat creation and restoration for similar projects throughout the San Francisco Bay Area.

Construction Description (includes labor, equipment and materials)	Total Cost
Mobilization and Demobilization (15% of construction cost)	\$1,577,550
Pond A1 Improvements, including levee habitat, breaches, trails, and interpretive stations	\$486,000
Pond A2W Improvements, including levee habitat, breaches, trails, and interpretive stations	\$541,000
Charleston Slough Improvements, including levee habitat, breaches, trails, and interpretive stations	\$5,572,000
Other Improvements: PG&E levee, Coast Casey Forebay levee, new Sailing Lake pump station intake, railroad car bridge, Stevens Creek trail, and Permanente Creek interpretive station	\$3,918,000
Construction Contingency (30%)	\$3,628,365
Construction Subtotal	\$15,722,915
Contract Services/Construction Administration	\$300,000
Construction Total	\$16,022,915

References: *Alviso-Mountain View Ponds Restoration Preliminary Design Memorandum* (URS November 2014) at: <http://www.southbayrestoration.org/planning/phase2>.

Project 8 – Eden Landing Portion of SBSPR Project

Overview

The State Coastal Conservancy (SCC) estimates the total costs of the project to be \$13,220,772. The SCC requests \$3,265,121 from the 2015 IRWM grant program. The total requested funds are for construction except for \$103,200 for Direct Project Administration which includes \$70,000 for a Labor Compliance Program and \$33,200 for SCC staff to administer the project. Federal matching sources are expected to include up to \$2 million from the U.S. Fish and Wildlife Service's (USFWS) National Coastal Wetland Conservation (NCWC) and North American Wetlands Conservation Act (NAWCA) Grant Programs as well as the USEPA's San Francisco Bay Water Quality Improvement Program. The other State of California funds include \$295,150 in SCC funds and staff time that the SCC has spent on design and environmental analysis as well as an additional \$1 million from the SCC for construction. The SCC will also submit a Proposition 1 grant application to the CDFW and pursue a number of other possible funding sources for the additional \$6,660,501 to complete the project.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 8 - Eden Landing Portion of SBSPR Project					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$103,200	N/A	N/A	\$103,200
(b)	Land Purchase/Easement	N/A	N/A	N/A	N/A
(c)	Planning/Design/Engineering/Environmental Documentation	N/A	N/A	\$295,150	\$295,150
(d)	Construction/Implementation	\$3,161,921	\$2,000,000	\$7,660,501	\$12,822,422
(e)	Grand Total	\$3,265,121	\$2,000,000	\$7,955,651	\$13,220,772
*Source of funding: Federal grant programs including USFWS's National Coastal Wetland Conservation (NCWC) and North American Wetlands Conservation Act (NAWCA) Grant Programs as well as the USEPA's San Francisco Bay Water Quality Improvement Program.					

Justification

Are the costs presented reasonable for this project type and the current stage of the project? Are the costs significantly higher or lower than industry standard?

Estimated costs are based on a consultant (URS) design memo and represent typical costs for restoration projects of this type and scale.

Project contingency amount (i.e., contingency percentage) applied to the project budget, and an explanation on how that amount/percentage was developed.

Since the project is only at a preliminary design level, a 30% contingency has been added to the construction estimate shown below.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration – The \$103,200 in administrative costs have been calculated as follows:

Conservancy Staff	Hours	Billing rate	Total
Conservancy Project Development Specialist	200	\$120.00	\$24,000
Legal	35	\$152.00	\$5,320
Program Manager	30	\$130.00	\$3,900
Staff subtotal			\$33,200
Labor Compliance Program			\$70,000
Administrative Costs Total			\$103,200

Row b: Land Purchase – N/A. Land Acquisition Complete.

Row c: Planning/Design/Engineering/Environmental Documentation – The \$295,150 in planning funds is from SCC funds for Phase 2 Eden Landing planning work and will include a project monitoring plan, the cost of which is based on 15 hours of effort by a SCC Project Development Specialist at \$120/hour. Activities covered include feasibility studies, design plans, and CEQA/NEPA environmental documentation.

Row d: Construction/Implementation –

#	Line Item	Amount
1	Mobilization/Demobilization (15%)	\$1,235,260
2	Site Preparation	\$210,176
3	Flood Control Levee (outboard @E1 & E2) Raise & Upland Transition Zone	\$3,780,000
4	Mid-Complex Levee Improvement	\$852,889
5	Breaches & Starter Channels	\$1,960,000
6	Public Access	\$1,432,000
	Subtotal	\$9,470,325
	Construction Contingency (30%)	\$2,841,097
	Subtotal Construction Cost	\$12,311,422
	Contract Services/Construction Administration	\$511,000
	Construction Cost Total	\$12,822,422

Preliminary construction cost estimate prepared by URS based on Eden Landing Alternatives Analysis. These costs represent typical and reasonable earth moving, habitat creation and restoration costs for similar projects throughout the San Francisco Bay Area. Additional details for each construction line item are available, but would could not be provided within the page limitations for the grant application.

Expected matching funds are anticipated state bond funds as well as anticipated federal grants from programs where the Conservancy has a consistent record of success, such as the National Coastal Wetland Conservation, North American Wetlands Conservation Act, and USEPA Water Quality Improvement grants.

Project 9 – Novato Creek Flood Protection and Habitat Enhancement Project

Overview

The total cost of the Novato Creek Flood Protection and Habitat Enhancement Project is \$16,265,000. Requested grant funds are \$3,551,607. Funding match consists of a total of \$12,713,393 of in-kind and cash cost share to be provided by Marin County Flood Zone 1, County of Marin, U.S. EPA (non-state total of \$1,780,000), State Coastal Conservancy (SCC) (other state funds \$33,393), and California Habitat Conservation Funds (other state funds \$10,900,000).

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 9 - Novato Creek Flood Protection and Habitat Enhancement Project					
Project serves a need of a DAC?: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$96,607	N/A	\$33,393	\$130,000
(b)	Land Purchase/Easement	N/A	N/A	N/A	N/A
(c)	Planning/Design/Engineering/ Environmental Documentation	N/A	\$1,400,000	\$1,400,000	\$2,800,000
(d)	Construction/Implementation	\$3,455,000	\$380,000	\$9,500,000	\$13,335,000
(e)	Grand Total	\$3,551,607	\$1,780,000	\$10,933,393	\$16,265,000
*Source of funding:					
Marin County Flood Zone 1 Funds: \$730,000					
County of Marin Watershed Funds (Marin County general fund): \$780,000					
U.S. EPA Flood Control 2.0 project: \$270,000					
Other State Funding (\$10,933,393) includes SCC in-kind and California Habitat Conservation Fund (secured).					

Justification

Are the costs presented reasonable for this project type and the current stage of the project? The costs contained in this proposal are reasonable for the type of work proposed. Proposed project design costs were compared to overflow weirs constructed by the Santa Clara Valley Water District at Permanente Creek and the South Bay Salt Pond Project at Ponds A6/A8. For example, the Consultant for SCVWD recommended a unit concrete cost of \$800 to \$1000 per cubic yard poured, and we used \$1,100 per cubic yard (10% more) for our weir construction estimate for this project (Element B). Levee cost estimates were compared to adjacent costs for the Hamilton Wetland Preserve and found to be reasonable.

Project contingency amount: An approximate 10 percent contingency was built into the significant cost numbers by assuming costs at the high end of the range of known similar project type costs. At this level of cost estimating, we have assumed cost of approximately 10 percent higher than other projects unit costs of this type.

Supplemental Detailed Cost Justification:

Row a: Direct Project Administration – The SCC will administer the project for an expected total of \$130,000. All DWR required grant contracting, tracking, budgeting, reporting and invoicing will occur under this task using standard SCC hourly billing rates. Total costs are estimated at 3% of grant expenses based on previous experience with grant administration.

Element A: Bel Marin Keys Wetlands Restoration Project Phase I: Project management and reporting staff costs for Element A, Tasks 1 and 3 of the work plan are estimated at \$55,000 per the table below. The grant request for this task is \$51,607.

Project 9 – Novato Creek Flood Protection and Habitat Enhancement Project

Matching costs will include \$3,393 of in-kind labor and \$30,000 for a Labor Compliance Plan for the project (Task 2); the Element A total is \$85,000. SCC staff costs for Element A are below:

SCC Staff Position	Hours	Billing rate	Total
Project Development Specialist	339	\$120	\$40,680
Legal	60	\$152	\$9,120
Program Manager	40	\$130	\$5,200
Total	439		\$55,000

Element B: Novato Creek Phase I Flood Reduction and Wetlands Enhancement Project: Project management and reporting staff costs for Element B Tasks 1 and 3 of the work plan costs are estimated at \$45,000 per the table below. For Element B, the County of Marin has a Labor Compliance Plan in-place and additional costs are expected to be minimal. SCC staff costs for Element B are below:

SCC Staff Position	Hours	Billing rate	Total
Project Development Specialist	326	\$120	\$39,120
Legal	25	\$152	\$3,800
Program Manager	16	\$130	\$2,080
Total	367		\$45,000

Row b: Land Purchase – There are no land purchase costs associated with this project.

Row c: Planning/Design/Engineering/Environmental Documentation – *Element A:* Planning, design and permitting estimates of \$1,400,000 are based on known contract estimates of approximately \$800,000 for final levee design and permitting, and preliminary wetland concepts. Seasonal wetlands components are estimated to add \$400,000 to design and permitting costs. Current estimate for supplemental feasibility studies and environmental documentation is \$50,000 and \$150,000, respectively.

Element B: Total costs of \$1,400,000 include work spent to-date since 2011 on conceptual and preliminary design studies and monies to be spent by the County, Flood Zones, and using U.S. EPA federal funds to complete final design and plans and specifications for construction. Labor breakdowns have been assumed using \$150/hour for planners and engineers to match the total known amount spent to-date and anticipated to be spent under this category.

Row d: Construction/Implementation - *Element A:* Total estimated cost of \$11,500,000. Grant funds requested are \$2,000,000. Expected matching funds of \$9,500,000 are available from California Habitat Conservation Funding. Construction estimates were developed by consultants Moffat & Nichols, using the preliminary design concepts already developed for the project. The levee costs are estimated to be approximately \$9,800,000 based on the project length (9,600 linear feet) and required 98,000 cy of fill which costs \$10 per cy. The construction estimate for the seasonal wetland component is \$11,050,000 based on the assumption that creation of 25 acres costs \$1,250,000 from similar projects in Marin County and implemented by Caltrans. This includes grading and planting costs to create seasonal wetland habitat. Construction contracting and administration costs (\$450,000) were estimated from projects of similar scale and scope within the San Francisco Bay Area, including SCC experience at the adjacent Hamilton Wetlands project. These costs represent typical and reasonable earth moving, habitat creation and restoration costs for similar Bay Area projects.

Element B: Total estimated cost is \$1,835,000, with \$1,455,000 in grant funding requested and \$380,000 in non-state match. Construction and implementation costs of \$1,700,000 are based on our review of available information from similar projects. For this effort, we reviewed completed projects (SCVWD's Permanente Creek project) and talked with their design consultants. We also reviewed the structure design for Pond A6 constructed by Ducks Unlimited for the SBSPR Project. Construction monitoring and assessment costs (\$135,000) are based on Marin County experience with similar projects in the North Bay, including the Marin Audubon Bahia Project.

References

- County of Marin Engineering Staff Preliminary Construction Estimates, June 2015.
- Moffat & Nichols Preliminary Rough Cost Estimate, June 2015.

Budget Summaries: Grant Administration

This section presents the budget summary for the project listed below.

Project ID#	Project Proponent	Project Title
10	ABAG/SFEP	Grant Administration

Project 10 – Grant Administration

Overview

The total cost of Grant Administration is \$1,858,745 and does not exceed 5% of the overall proposal budget. The Administration budget is intended to cover all administrative costs of the Bay Area Regional Climate Change Preparedness proposal, from oversight of the grant application to negotiation of the Association of Bay Area Government (ABAG)-DWR contract, negotiation the ABAG-Local Project Sponsor Agreements, and managing the various projects until their conclusion. The budget includes staff time for ABAG’s legal and accounting departments, as well as several project managers who will coordinate with Local Project Sponsors, assuring the timely completion of reporting tasks noted in the work plan. Further, ABAG will be responsible for record-keeping to respond to audits long after all projects are complete.

PSP Table 7. Project Budget					
Proposal Title: Bay Area Regional Climate Change Preparedness Program					
Project Title: Project 10 - Grant Administration					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source	Total Cost
(a)	Direct Project Administration	\$1,858,745	\$0	\$0	\$1,858,745
(b)	Land Purchase/Easement	\$0	\$0	\$0	\$0
(c)	Planning/Design/Engineering/ Environmental Documentation	\$0	\$0	\$0	\$0
(d)	Construction/Implementation	\$0	\$0	\$0	\$0
(e)	Grand Total	\$1,858,745	\$0	\$0	\$1,858,745

Justification

Are the costs presented reasonable for this project type and the current stage of the project? Are the costs significantly higher or lower than industry standard?

The Grant Administration budget are considered reasonable as it does not exceed five percent of the overall proposal budget and is consistent with DWR’s Proposition 84 2015 IRWM Guidelines. This cost estimate is considered standard and was developed based on ABAG’s experience managing IRWM projects in recent years.

Project contingency amount (i.e., contingency percentage) applied to the project budget, and an explanation on how that amount/percentage was developed.

No contingency funds are included or necessary for Grant Administration.

Row a: Direct Project Administration

The Bay Area Regional Climate Change Preparedness proposal includes nine projects that integrate multiple water supply, recycled water, and drought preparedness benefits to residents of the San Francisco Bay Area. The Program Administration provided by ABAG/SFEP oversees the implementation of grant funding and is the liaison between DWR and participating agencies. These tasks ensure that projects are completed, DWR receives Quarterly and Final Project Reports, invoicing and record-keeping are current, and other grant administrative functions are completed.

The Administration budget keeps to DWR’s guidance not-to-exceed five percent of the total program cost. The budget includes staff time for ABAG’s legal department and accounting department, as well as several project managers who will coordinate with Local Project Sponsors, assuring the timely completion of reporting tasks noted in the work plan. If needed, a consultant may be added to assist the project team. There is no project match cost associated with Project Administration.

The Grant Administration budget is broken down by budget category and staff classifications as follows:

Budget Category/ Staff Classification	Hourly Rate	Total Hours	Other	Total
<i>Labor</i>				
Principal Environmental Planner	\$147	1440		\$212,271
SFEP Director	\$190	300		\$57,088
Communications Officer	\$123	2000		\$246,578
Environmental Planner II	\$122	1900		\$231,800
Environmental Planner I	\$100	3010		\$299,645
Legal Counsel	\$237	200		\$47,439
Finance Director	\$182	200		\$36,451
Accounting Staff	\$102	2000		\$203,587
<i>Indirect</i>			\$123,885	
<i>Consultant Support</i>			\$400,000	
Total				\$ 1,858,745

Legal and contracting staff costs are \$294,017. Accounting costs are \$240,038. Project management costs are \$1,200,805, which includes consultant support. ABAG has a federally approved indirect cost rate of 44.95 percent on staff located in the ABAG offices, including legal and accounting staff. There is no indirect cost rate charged on SFEP staff who are located at the Regional Water Quality Control Board. Indirect costs are \$123,885. The indirect cost plan can be provided upon request.