F I N A L

Bay Area IRWMP Coordinating Committee

Agreements and Action Items from January 25, 2010 Meeting

1. Roll Call—Appointed FA representatives present

WS-WQ	WW-RW	FP-SW	Watershed	Other
	Brian Campbell, EBMUD	Mark Boucher, CCCFCWCD	Harry Seraydarian, NBWA; Jennifer Krebs, SFEP	Paul Helliker, Chair, MMWD

Others present:

Mitch Avalon (CCCFCD)
Amy Chastain (BACWA)
Chris Choo (MCFCWCD)
Thomasin Grim (MMWD)
Tracy Hemmeter (SCVWD)
Carol Mahoney (Zone 7 Water)
Carl Morrison (Morrison Assoc/SCWA, Z7)
Ann Riley (SF Water Board)
Harry Seraydarian (NBWA)
Joanne Siew (RMC)
Renee Webber (North Bay Water Reuse Authority)

2. Review Agreements/Action Items from December 7, 2009 meeting (Discussion, led by CC)

- Ann Riley will work on drafting a letter from the CC to Senator Boxer regarding the Boxer-Kerry Climate Bill.
- Joanne Siew will coordinate with Paul Helliker to extend an invitation to Ted Droettboom to give a presentation on Bay Area climate change issues/perspectives at the next CC meeting.

3. Status of Prop 50 Supplemental PSP and Prop 84 Guidelines (Discussion, led by CC)

- Based on updates from DWR staff, the timeline for Prop 84 guidelines is on schedule.
- The draft guidelines will include grant program process issues, the IRWM plan standards, a planning grant PSP, an implementation PSP, and how the Prop 1E stormwater funding will be integrated with the IRWM program.
- There would be $130 million available under Prop 84 - $100 million for implementation grants and $30 million for planning grants.
- DWR will be finalizing the Prop 50 Supplemental Funding Program package, but will not issue application due dates until the funding is secured and available.
- Brian Campbell noted that if Federal bonds are being used to fund part of Prop 50 Supplemental Funding program, then there could some capital requirements (e.g. Build America Bonds can only be used for new capital expenditure).

4. Update on Roundtable of Regions (Information, led by Tracy Hemmeter)

- Tracy Hemmeter provided a summary of key points from the Roundtable of Regions meeting held on January 13, 2010 (please refer to RoR meeting notes in CC meeting package for details).
- Comments from the CC on key points from the RoR meeting are noted below:
    - The RoR questioned if it was fair that regions without an IRWM plan would qualify for a maximum planning grant award of $1 million while established regions with a plan would get $500,000. Mitch Avalon noted that this could be arguable because the Bay Area region is a result of several merged sub-regions and has a higher level of complexity, so it would make more sense that the region would obtain a larger Planning grant.
    - The finalization of the Prop 84 guidelines and the issuance of the PSP will depend on bond sales and how the bond funds are allocated among departments. The CC noted that DWR would need to clarify the kind of work that would be eligible for implementation funding, based on the requirements tied to the bonds (if applicable).
    - DWR is required to allocate grants on a competitive basis with each funding area. However, regions within a funding area can coordinate their applications. The CC discussed if DWR would defer to the Bay Area Region's project selection process, and agreed that since the Bay Area Region has demonstrated that it has an adequate project selection process through RAP and the Project Screening subcommittee, that it should not be an issue for DWR.
- Brian Campbell queried if there would be a date for matching funds for the Planning grant. He noted that this would be an important driver for many agencies since they have to provide a match of 25% by a certain date, and would need to start planning for the availability of these matching funds. It was uncertain if this requirement would be apply to both Planning and Implementation grants, and it is likely that the matching date would be tied to the date when the funds for Prop 84 is appropriated.

5. Project Screening Subcommittee Update (Discussion, led by CC/Project Screening SC)

- Brian Campbell reported that the BACWA Board met in December 2009 and indicated that they supported the submission of the proposal with BACWA as the proposed lead applicant, but that BACWA would reserve the right to review the proposal before providing their official confirmation.
- Brian provided a status update on each of the nine Regional projects, and noted that there are three additional projects which were added to the list for the Prop 50 Supplemental PSP. These three projects are existing projects that received partial funding from the previous Prop 50 rounds.
- Specific project comments are as follows:
    - **Project 3 – Regional Green Infrastructure Project**: Carl Morrison to send Brian Campbell information on a proposed Sonoma County green infrastructure project to include in the Regional project under Prop 84.
    - **Project 7 – Evaluate Regional Ecosystem Restoration using Steelhead Trout**: Harry Seraydarian pointed out that CEMAR has scaled down the program to one year instead of three years for the Prop 50 Supplemental PSP and added funding for Alameda and Santa Clara tributaries for a total request of $371K.
- Partially-funded projects under Prop 50 were solicited and collected via email. It was noted that the budget requested for the partially-funded projects exceeds the funds available ($3.75 million) under Prop 50 Supplemental PSP.

- The CC discussed and came up with three conceptual approaches to consider in the evaluation and ranking of the projects in terms of eligibility and competitiveness for the Prop 50 Supplemental PSP:

  1) Emphasize existing partially-funded projects
  - Focus on scoring existing partially-funded projects because the projects are already well-defined and would be less complicated and administratively easier to manage. Since the partially-funded existing projects already exceed the available funding of $3.75 million, it would not be feasible to add in Regional projects.

  2) Emphasize equitable allocation among functional areas
  - Score all projects based on Prop 50 Supplement PSP criteria but ensure that all functional areas would receive the same level of benefit from the selected projects. Functional areas would need to cut back proportionately on grant requests since only $3.75 million is available through Prop 50. In addition, because of specific allocations (%) determined for sub-regions for the Prop 84 funds, should the Prop 50 Supplemental funds be counted towards the bottom line of the Prop 84 allocation?

  3) Emphasize best-scoring Regional project
  - Score all Regional projects competitively against Prop 50 Supplemental PSP criteria and select the top-scoring Regional project and submit only one project in the Prop 50 application.

- The CC agreed on several follow-up actions while Prop 50 guidelines are being finalized:
  - Hold off on scoring projects until final Prop 50 guidelines are issued, and DWR has appropriated the funds.
  - Decide whether to apply the Prop 84 project selection process in addition to the scoring for Prop 50 Supplemental PSP.
  - The CC should hold a meeting with DWR staff after the release of the Prop 50 final guidelines, to seek DWR's input on the recommended projects to ensure that they are in line with DWR's objectives and expectations.
  - CC to coordinate with RMC to understand the level of effort involved in scoring the projects for Prop 50 criteria, as well as possible participation in an interview and presentation to DWR if required. RMC to provide a preliminary scope and budget for the scoring task to the CC.

Action Item(s):

- RMC to provide preliminary scope and budget to the CC for project scoring for the Prop 50 Supplemental Funding PSP, and interview and presentation preparation.

6. Discuss funding for consultant services for CC support (Discussion, led by CC)

- RMC provided a preliminary scope and budget for the remaining $20,000 authorized by the Coastal Conservancy for continued support of CC/PnP/PSC meetings.
- It was noted that the Coastal Conservancy previously indicated that they would prefer not to manage the next consultant contract. Paul Helliker will confirm this with the Conservancy, and also asked for potential volunteers for the next round of contract management.
- Functional areas will need to begin planning how much money they would need for the next contract and their contributions to the CC.

- Mitch Avalon noted that BAFPAA is currently reviewing its mechanisms for fund collection and distribution to the CC.

Action Item(s):

- Paul Helliker will check with BAWAC on their budget status and how much they would be willing to contribute to the Bay Area CC.
- All functional areas should planning and budgeting how much money they would need for the next contract and their contributions to the CC.

7. Succession of CC Chair and Vice-Chair (Discussion, led by CC)

- There was consensus among the CC for Paul Helliker to extend his term as CC Chair by another term to June 2011, following which a call for nominations for the Chair will be released. (The Chair and Vice-Chair both serve two year terms in accordance to guidelines established in June 2007).
- Mitch Avalon noted that Ann Draper (SCVWD, Assistant Officer, Office of Stewardship Planning) indicated that she would be willing to consider a position in the CC. He will follow up with Ann on whether she would be interested to take on the Vice-Chair role.

Action Item(s):

- Mitch Avalon to follow up with Ann Draper regarding Vice-Chair position.

8. Other Additional Items (Discussion, led by CC)

- The CC discussed the role of the Bay Area Watershed Forum (BAWF) and how their activities and agenda could be better coordinated with the CC's, noting that it would be a mutually beneficial relationship, and that maintaining a profile in BAWF's activities would allow for the CC to disseminate information to non-profit organizations and other elected officials who might not be as actively involved in the CC's activities.
- Carol Mahoney suggested that it would be useful for the CC to work with BAWF to obtain Federal funding for localized water projects.
- Paul Helliker asked the CC on when the sub-regional process would need to be restarted, in terms of moving towards Prop 84 guidelines. The sub-regional process would enable for decision-making at the project implementer's scale, and make it easier to interact with non-profits (e.g. watershed groups). Harry Seraydarian noted that the watershed groups are currently very active in the NBWA Watershed Council meetings and have been involved in the decision-making process via this platform.

Action Item(s):

- Paul Helliker will contact Cynthia Murray to discuss potential opportunities for collaboration between BAWF and the CC.

9. Announcements (Information, led by CC)

- Ann Riley announced that the Bay Area Watershed Network Annual meeting will be held on February 10, 2010 from 9.45 am to 12 noon at the State Elihu Harris Building, Room 1.
- Harry Seraydarian announced that the North Bay Watershed Conference will be held on April 9, 2010. The website link for registration is: http://nbwatershed.org/pages/2010conf.php

- Brian Campbell announced that the old purchase order for the web consultant has expired and BACWA has created a new purchase order for $5,000 with the consultant, David Sieband to provide services for maintenance of the Bay Area IRWMP website and troubleshooting.

10. Agenda Items for the next CC meeting

- The next CC meeting is scheduled for February 22, 2010.
- Potential agenda items include:
    - Presentation by Ted Droettboom on the Joint Policy Committee and Climate Change issues in the Bay Area
    - Update on preparation and project recommendations for Prop 50 Supplemental Funding Grant application.
    - Update on scoping of project scoring for the Prop 50 Supplemental Funding PSP.

Project Screening/PnP Subcommittee
March 11, 2010
Meeting Notes

1. Meeting participation

In Person:
Brian Campbell (WW/RW, East)
Thomasin Grim (for Marin, North)
Carol Mahoney (FC/SW & WS/WQ, East)
Mark Boucher (FC/SW, East)
Jennifer Krebs (SFEP – Watershed/Habitat)
Melanie Denninger (Watershed/Habitat)
Harry Seraydarian (Watershed/Habitat, North)
Teresa Eade (StopWaste.org)
Cynthia Havstad (StopWaste.org)
Joanne Siew (RMC)

By Phone:
Molly Petrick (WS/WQ, West)
Tracy Hemmeter (WS/WQ, South)
Marie Valmores (CCWD, East)
Dale Hopkins (RWQCB - Watershed/Habitat)
Carl Morrison (for Sonoma CWA, North)
Dave Richardson (RMC)

2. Recap of DWR Draft Prop 50 PSP and Final PSP Schedule (PSC)

- The group queried if the timeline for the preparation of the application would stay the same at 21 days (based on draft PSP guidelines). RMC received information that DWR may consider changing the turnaround time by pushing the schedule out a little in view of the Prop 84 meetings/draft comments planned for April.
- The group reviewed the 3 classes that a project must fall within in order to be eligible under the Prop 50 Supplemental Program:
  - A project that was not submitted in either the Prop 50 IRWM Implementation Grant Rounds 1 or 2 application but is included in the IRWM Plan.
  - A completely distinct or separate phase of a project that was awarded as part of the Prop 50 IRWM Implementation Grant Round 1 or 2 grant agreements
  - A project that was included as part of the Prop 50 IRWM Implementation Grant Round 1 or 2 application, but was not included in the grant agreement due to partial fund.
- It was also noted that DWR has not yet responded on whether new projects (previously not in the IRWM Plan) added into the IRWM Plan before the release of the final PSP would be considered eligible or not.

3. Review Prop 50 PSP Notes from 1/25 CC Meeting (PSC)

- At the 1/25 CC meeting, the CC discussed and came up with three conceptual approaches to consider in the evaluation and ranking of the projects in terms of eligibility and competitiveness for the Prop 50 Supplemental PSP:

i. Discuss partially funded projects approach
   - *Focus on scoring existing partially-funded projects because the projects are already well-defined and would be less complicated and administratively easier*

to manage. Since the partially-funded existing projects already exceed the available funding of $3.75 million, it would not be feasible to add in Regional projects.

Partially Funded Projects in the IRWM Plan	**Level of Interest/Agency Priority**
A. NMWD Recycled Water Project	- Harry Seraydarian noted that North Marin Water District is highly supportive of this project and recycled water programs in general.
B. South Bay Advance Recycled Water Treatment Plant	- Tracy Hemmeter noted that SCVWD is highly supportive of this project and the regional recycling outreach project.
C. MMWD High Efficiency Toilets, Direct Install	- This is a high priority project for MMWD as a single-agency project but they would not be able to provide support for a regional project. - **PSC subcommittee members to check with their respective relevant agencies on whether they would be interested in this project. If they are, the scale and cost of the project may need to be redefined.**

- Melanie Denninger noted that since these projects have already met and are consistent with the 2007 Prop 50 guidelines, they are likely to be consistent with the Prop 50 Supplemental Program guidelines and may stand a higher chance for getting funded.
- Brian Campbell informed the group that agencies would be responsible for preparing and submitting their Prop 50 Supplemental Program applications in the case of partially-funded projects.

ii. Discuss equitable allocation among functional areas
- *Score all projects but ensure that all functional areas would receive the same level of benefit from the selected projects. Functional areas would need to cut back proportionately on grant requests since only $3.75 million is available through Prop 50.*
- Melanie commented that she did not think it is defensible to emphasize functional area equity in the selection of projects. Project selection should be based on selecting the best project(s) that fit the criteria and would create benefits across the region.
- Thomasin Grim noted that this approach may add too much complexity to the task when the available funds are limited. This approach may be more appropriate for projects under Prop 84, which has $138 million available for the Bay Area.
- Brian Campbell also noted that projects not considered for the Prop 50 Supplemental Program will be placed for consideration under Prop 84.

iii. Discuss best scoring project(s) approach
- *Score all Regional projects and select the top-scoring Regional project and submit only one project in the Prop 50 application.*
- There are 5 new projects that have not been scored against the IRWMP criteria yet, and so are not directly comparable to the other projects in the list.

- The PSC agreed that RMC will conduct a preliminary scoring of the new projects based on the criteria in the IRWMP so that projects can be compared on a common baseline. **RMC will email scores to the PSC for review on March 18, before the CC meeting on March 22.**
- It was also agreed that scoring of projects for the Prop 50 Supplemental Program will not occur until the final guidelines have been released and DWR has confirmed that new projects can been added into the IRWM Plan.
- Melanie noted that scoring of the new projects would be important in providing justification for projects that did not make the cut for the project(s) selected for the Prop 50 Supplemental Program.

<u>General comments on Projects</u>

a. The group discussed the process of adding new projects into the IRWM Plan. Thomasin Grim circulated a flowchart documenting the process, which was finalized by the PnP in October 2007 and reviewed and approved by the CC in November 2007.
b. The group discussed the details of updating projects in the IRWM Plan – the preferred approach is to develop an addendum to the Plan instead of updating existing sections in the Plan. New projects would be added into the scoring table and highlighted as having been added. The map showing locations of all projects would be updated. The group also asked for RMC guidance to identify additional aspects of adding in new projects into the IRWMP.
c. The group agreed that if the partially-funded projects approach was chosen, then agencies would be responsible for developing their own presentations to DWR; if a regional project(s) is selected, then RMC may provide assistance on the presentation.
d. Tracy Hemmeter commented that the group would need to figure out if RMC's assistance is needed for regional project application submittal, or if not, agencies will need to start coordinating with each other to allocate responsibilities for the preparation of the application.

<u>Specific comments on Projects</u>

a. Brian Campbell noted that parts a. and b. of Project 6: Disadvantaged Communities Watershed Program are complementary, but part c. appears to be more of a standalone project.
b. Carol Mahoney noted that Project 5: Mercury and PCB Risk Reduction Project appears like it has more benefits because it is dovetailing a project that is currently receiving State funding, and the Project is also oriented towards DACs.

4. Discuss draft material released by DWR on 3/8/10 (PnP)

a. The group acknowledged the release of the guidance and PSPs and respective subcommittee members volunteered to review the documents and develop a list of comments for DWR, to be reviewed by the CC prior to submittal:
    1) IRWM Grant Program Guidelines for Prop 84 and 1E (Thomasin, Tracy)
    2) PSP – Prop 84 IRWM Planning Grants (Jennifer, Melanie)
    3) PSP – Prop 84 IRWM Implementation Grants (Brian, Carl)
    4) PSP – 1E IRWM Storm Water Flood Management Grants (Mark, Carol)
b. Thomasin Grim agreed to consolidate comments from the four documents into a draft CC comment letter to be sent to DWR.

c. Melanie Denninger queried if there would be a Roundtable of Regions (RoR) session to discuss comments. Tracy Hemmeter responded that Tracie Billington from DWR indicated that conducting the roundtable after the DWR workshops would be better since the discussion would be more substantive.
d. Some initial questions and comments on the guidelines raised by the group are as follows:
    - How do the Prop 84 guidelines differ from the Prop 50 guidelines? (Joanne Siew will contact Christy Spector from DWR to check if there is any comparison information available).
    - The Bay Area region will need to sign an agreement to update its IRWM Plan within 2 years to be eligible for the implementation grant.
    - Should the guidelines be reviewed from the perspective of looking out into the future when the Bay Area subregional process would be implemented when more funds are made available?

5. Establish Process for Preparing and Submitting Comments to DWR (PnP)

a. The schedule for reviewing the PSPs, and preparing and submitting comments to DWR is as follows:

Action	**Deadline**	**Responsible Party**
PnP/PSC to inform and request for CC to take action adding projects to the IRWM Plan.	March 22	PnP/PSC
Volunteer reviewers to send consolidated comments to Thomasin.	April 6	Volunteer reviewers identified in 4a.
Consolidate comments from the PSPs and guidance and draft letter of comments to DWR. Email letter to PSC/PnP for review.	April 9	Thomasin Grim
Finalize draft letter of comments to the CC for review and consensus.	April 16	Thomasin Grim
Sign off letter of comments and send letter to DWR.	April 23	Paul Helliker

6. Next Meeting

a. The date and time of the next Project Screening/PnP subcommittee meeting will be decided at a later date.

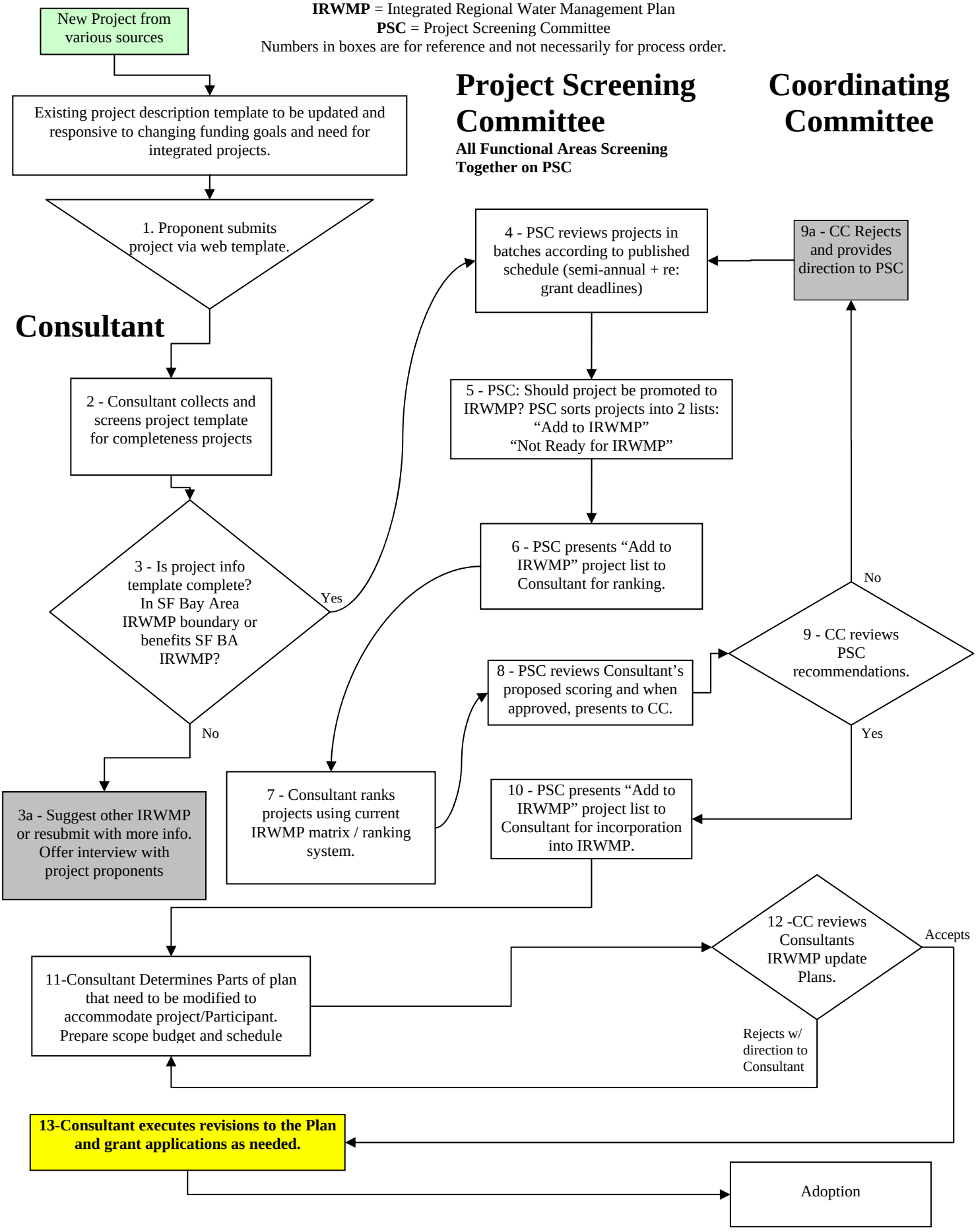
7. Immediate Action Item(s)

a. PSC subcommittee members to check with their respective relevant agencies on whether they would be interested in the direct install project (see 3i).
b. RMC to score new projects and email scores to the PSC for review on March 18, before the CC meeting on March 22 (see 3iii).
c. Volunteer members to review PSPs and guidance, consolidate comments and email comments to Thomasin Grim by April 6 (see 4a).

S.F. BAY AREA INTEGRATED REGIONAL WATER MANAGEMENT PLAN
DRAFT List of Regional and Sub-Regional Projects for PROP 50 Supplemental PSP

#	IRWMP Proj No.	Project Summary	Location	Lead Entity	Total	Grant	Match	DAC Ben?	Notes
1	11 (Updated)	**Landscape Irrigation Calculator.** Create a computer based tool to calculate the amount of water needed to irrigate landscapes in the Bay Area and provide other benefits. Primary goals are to conserve potable water, reduce urban irrigation runoff, maintain a healthy urban forest and preserve property values.	Regional	Marin MWD	$500,000	$375,000	$125,000	No	• New Phase of PROP 50 Project. • Advisory Committee to be incorporated. • IRWMP Score = 28? (new Ecosys element)
2		**Drought Relief and Water Conservation Innovation Project.** Expansion or addition of new rebate programs to enhance current programs covereed by Prop 50 grant, including: 1. Landscape Efficient Irrigation, and 2. Residential and Commercial Device Rebate Programs.	Regional	?	$1,250,000	$1,000,000	$250,000	?	• New Phase of PROP 50 Project. • Device rebate allocation & admin tbd. • IRWMP Score = 28 (reason to update?)
3	New	**Regional Green Infrastructure Project.** A program to implement innovative green infrastructure projects in one or more Bay Area counties. Water management techniques may involve green streets, rainwater harvesting, bio-infiltration systems, water conserving landscapes, small and large scale low impact development (LID) techniques, and flood control projects that restore habitat and riparian areas.	Regional	S.F. Estuary Partnership (ABAG)	$1,250,000	$1,000,000	$250,000	Yes	• Program is scalable; $1M is a placeholder.
4	New (helps 20+ projects)	**Regional Recycling Outreach Project.** Multi-agency project to develop appropriate messages to relevant communities to reinforce the the value of recycled water, including involvement of key stakeholders such as those concerned about recylced use in parks/schools and for streamflow augmentation.	Regional	SCVWD	$300,000	$225,000	$75,000	No	SCVWD to lead w/San Jose support.
5	26 (Updated)	**Mercury and PCB Risk Reduction Project.** This project will identify and implement strategies to reduce exposure to mercury and PCB from consumption of fish from S.F. Bay.	Regional	BACWA	$400,000	$300,000	$100,000	Yes	IRWMP Score = 38
6	DISADVANTAGED COMMUNITIES WATERSHED PROGRAM				$1,745,800	$1,195,000	$550,800	Total Costs for a,b and c.	
	New	a. **Bay Area Watershed Network Technical Assistance.** Enhance capacity for restoring wetlands, river and stream corridors, and watersheds in four Bay Area communities (Richmond Shoreline, Pescadero Watershed, San Francisquito Creek, and Marin City) by partnering with grassroots watershed groups, including DACs.	Regional	S.F. Estuary Partnership (ABAG)	*$835,800*	*$530,000*	*$305,800*	Yes	• Agreement details will be important. • Cash flow issues may be resolvable.
		b. **Stream Channel Shapes and Floodplain Restoration Guidance.** Collect data to develop a stream restoration design tool, including San Francisquito Creek, Wildcat & San Pablo Creeks, and Pescadero Creek. The primary benefit of regional stream design curves are restoration of natural creek functions and watersheds.			*$150,000*	*$120,000*	*$30,000*		same comment as 4a.
		c. **Stream Restoration -- Historical Ecology Restoration Objectives Data.** Synthesize information about how Bay Area watersheds naturally capture, recharge, and distribute water to reveal sustainable strategies for improving ecosystem functions through natural flood protection and well-designed water management protocols.			*$760,000*	*$545,000*	*$215,000*		same comment as 4a.
7	New	**Evaluate Regional Ecosystem Restoration Using Steelhead Trout.** Measure the production of steelhead smolt in key Bay Area watersheds as a measure of the success of IRWMP implementation. Monitoring locations may include two or three North Bay waterhseds, Alameda Creek and one or more watersheds in Santa Clara County.	Regional	Center for Ecosystem Mgt & Restoration, Inc.	$413,000	$371,000	$42,000	No	
8	New	**Floodplain Infrastructure and Needs Assessment.** Mapping of flood potection structures and flood prone areas to fill gaps or update existing mapping to better plan for future flood protection actions.	Regional	SFEI	$1,000,000	$750,000	$250,000	?	
9	84	**Regional Desalination Project - Brine Discharge Feasibility Study.** Technical study to document that brine discharge through a new or existing outfall near Mallard Slough can be feasibly implemented.	Regional (3 of 4 Quads)	EBMUD	$300,000	$250,000	$50,000	?	IRWMP Score = 27
		TOTAL REGIONAL PROJECTS			$7,158,800	$5,466,000	$1,692,800		
A	79	**NMWD Recycled Water Project - Phase 2, North Service Area.** Extend recycled water distribution over 13,000 ft.	North	NMWD	$7,675,000	$1,333,200	$6,341,800	No	New Phase of PROP 50 Proj (Score = 34)
B	104	**South Bay Advanced Recycled Water Treatment Plant.** 8 mgd reverse osmosis/micro-filtration facility.	South	SCVWD	$57,000,000	$1,700,000	$55,300,000	No	PROP 50 Proj. Phase dropped at Agr. Stage (IRWMP Score = 46)
C	11	**MMWD High Efficiency Toilets, direct install.** New phase to double number of toilets covered by Prop 50 grant.	North	MMWD	$421,800	$366,800	$55,000		New Phase of PROP 50 Project. (Similar to No. 2, IRWMP Score = 28)
		Total for Partially Funded Grantee Approach			$65,096,800	$3,400,000	$61,696,800		

Project Process flow chart – as of October 30, 2007
FA = Functional Area, **BA** = Bay Area, **CC** = Coordinating Committee
IRWMP = Integrated Regional Water Management Plan
PSC = Project Screening Committee
Numbers in boxes are for reference and not necessarily for process order.



		Bay Area IRWMP Regional Goals							Bay Area Regional Assessment Criteria				Prop 50 Program Preferences					Prop 50 Statewide Priorities								
Project Number	Project Name	Sustainability	Supply Reliability	Hydrologic Function	Water Quality - Drinking Water	Water Quality - Receiving Water	Env. Resources	Public Health, Safety, Property	Funding Match	Regionalism	Partnerships	Meets Objective of Multiple FADs	Integration	Supply Reliability	Water Quality	Pollution to Habitat	DAC Benefits	Reduce Conflict	TMDL	WMI	NPS Pollution Control	Bay/Delta Water Quality	Task Forces	Env. Justice	CALFED Goals	Listed Functional Area
11	Bay Area Regional Water Conservation Program (SCVWD)	◖	●	·	○	○	·	·	●	●	◖	·	·	●	·	·	○	○	○	○	○	○	·	○	●	1 WS-WQ
26	Developing and Implementing Options for Mitigating Risks of Public Health Impacts of Eating Fish (Clean Estuary Partnership)	◖	·	·	·	◖	○	●	·	●	●	●	●	·	◖	●	●	·	◖	●	·	◖	·	●	○	2 WW-RW
79	Recycled Water Program for North Marin WD & Novato Sanitary District – Phase 1 (North Marin Water District)	◖	●	·	·	◖	○	◖	●	○	○	●	○	●	○	○	·	○	○	○	·	○	●	·	●	2 WW-RW
84	Regional Desalination Feasibility Study (EBMUD)	·	●	·	◖	◖	·	○	●	●	◖	·	·	●	◖	·	·	·	·	·	·	·	●	·	●	1 WS-WQ
104	South Bay Advanced Recycled Water Treatment Facility Project (SCVWD)	◖	◖	·	·	●	◖	◖	●	◖	◖	●	●	●	●	●	○	●	○	○	·	○	●	·	●	2 WW-RW
N3	Green Infrastructure Sub-Regional Capacity Building Project	◖	○	○	·	●	◖	◖	●	●	●	●	●	○	●	●	●	○	○	●	●	·	●	●	◖	3 FP-SM
N4	Regional Water Recycling Outreach Project	◖	◖	○	·	○	○	·	●	●	◖	●	●	◖	○	○	·	·	○	·	·	·	●	·	●	2 WW-RW
N6	Disadvantaged Communities Watershed Program	●	○	○	·	○	○	○	●	●	●	●	●	○	○	◖	●	·	○	●	○	·	●	●	·	4 WM-HP&R
N7	Evaluating Regional Ecosystem Restoration Using Steelhead Trout	○	·	○	·	◖	●	·	●	●	●	●	●	·	◖	●	·	·	○	●	·	·	●	·	●	4 WM-HP&R
N8	Flood and Waterways Infrastructure Analysis and Communication Tool	○	○	·	○	·	○	●	●	●	◖	●	●	○	○	○	○	·	·	○	·	·	●	○	·	3 FP-SM

Group	Criteria	Criteria Description	Project 3 Green Infrastructure		Project 4 Regional Water Recycling		Project 6 DAC Watershed Program		Project 7 Evaluating Regional Ecosystem		Project 8 Flood and Waterways	
			Score	Explanation	Score	Explanation	Score	Explanation	Score	Explanation	Score	Explanation
IRWMP Regional Goals	Sustainability	Contribution to the promotion of economic, social and environmental sustainability.	◖	The project will generate economic benefits through increased energy efficiency and cost savings; social/community benefits through improved aethetics, and environmental benefits by reducing urban temperatures, and moderating the impacts of climate change.	◖	The project will consolidate regional recycling water messages which are more cost effective than multiple single agency efforts, reduce the need for imported water resources, and create a social benefit through improving public acceptance of a sustainable resource.	●	The primary objective of the program is to create economic, social and environmental benefits to DACs through watershed community programs in underserved areas.	○	The project will contribute environmental sustainability benefits indirectly through the information it provides to stream restoration/habitat protection programs.	○	The project will contribute to economic and social sustainability indirectly through the information developed to assess the flood risk in communities in the Bay Area.
	Supply Reliability	Contribution to improved supply reliability (potable and irrigation supplies).	○	Green stormwater projects provide groundwater recharge benefits through infiltration; rainwater harvesting and reuse conserves potable water supplies.	◖	This is an outreach project to promote acceptance of recycled water projects which will contribute to supply reliability, therefore it indirectly addresses the regional goal.	○	The program could indirectly create a supply reliability benefit through potential implementation of watershed projects that include rainwater harvesting.	·	Not Applicable.	○	The project indirectly addresses supply reliability through the information developed which will help determine the flood protection strategies needed to protect water supply infrastructure.
	Hydrologic Function	Contribution to the protection and improvement of hydrologic function.	○	The project would reduce stormwater runoff volume to San Francisquito Creek and also hydromodification impacts.	○	This is an outreach project to promote acceptance of recycled water projects which can be used to augment flows in creeks, therefore it indirectly addresses the regional goal.	○	The program would provide guidance on how to reduce stormwater runoff volumes to streams in the watersheds and hydromodification impacts.	○	The project will indirectly address this regional goal by providing inputs for the improvement of stream restoration programs.	·	Not Applicable.
	Water Quality - Drinking Water	Contribution to the protection and improvement of the quality of water resources.	·	Non-potable water project.	·	Not applicable.	·	Non-potable water project.	·	Not Applicable.	○	The project indirectly addresses supply reliability through the information developed which will help determine the flood protection strategies needed to protect water supply infrastructure and water quality.
	Water Quality - Receiving Water	Contribution to the protection and improvement of the quality of water resources.	●	Primary objective of the project is reduce urban runoff impacts on the water quality of San Francisquito Creek.	○	The use of recycled water would reduce discharge of pollutants to receiving water through higher quality treatment.	○	The program would provide support to local watershed projects to reduce urban runoff impacts and improve water quality in receiving streams.	◖	The project will also address this regional goal by providing inputs for the improvement of stream water quality improvement programs.	·	Not applicable.
	Environmental Resources	Contribution to the creation, protection, enhancement and maintenance of environmental resources and habitats (wetlands, aquatic and riparian habitats).	◖	The project contributes to the protection/enhancement of San Francisquito Creek.	○	This is an outreach project to promote acceptance of recycled water projects which can be used to create/enhance wetlands, therefore it indirectly addresses the regional goal.	○	The program involves development of design guidelines for multi-objective stream restoration projects to enhance and protect wetland habitat and anadromous fish populations.	●	The primary objective of the project is to monitor production of steelhead smelt to provide a measure of the performance of restoration programs, to enable the improvement and continuation of restoration efforts.	○	The project will provide baseline information and data to inform the design and implementation of potential non-infrastructure flood protection strategies such as wetland/riparian habitat restoration or enhancement.
	Protect Public Health, Safety, Property	Contribution to the protection of public health, safety, property. Protection from flooding, water quality impairments, and other water resources hazards.	◖	The project will reduce stormwater runoff into the creek and manage flooding.	·	Not applicable.	○	The program will provide support to local projects aimed at managing stormwater and reduce flood damages.	·	Not Applicable.	●	The primary objective of the project is to compile information on flood protection infrastructure, flood-prone areas, and other relevant information to guide regional and local floodplain management, flood risk assessments and community protection strategies.
Regional Assessment Criteria	Funding Match	Having a funding match in place generally increases the likelihood that a project will proceed.	●	The project has a funding match of at least 10%.	●	The project has a funding match of at least 10%.	●	The project has a funding match of at least 10%.	●	The project has a funding match of at least 10%.	●	The project has a funding match of at least 10%.
	Regionalism	The participating entities recognize the importance of highlighting projects that are broad in geographic scope.	●	This project benefits 2 or more Bay Area counties.	●	This project benefits 2 or more Bay Area counties.	●	This project benefits 2 or more Bay Area counties.	●	This project benefits two or more major Bay Area watersheds.	●	This project benefits 2 or more Bay Area counties.
	Partnerships	As an integrated planning effort, the participating entities determined that the IRWMP should showcase projects with multiple partners.	●	The project involves 3 or more partners, including governmental and non-governmental organizations.	◖	The project involves 3 or more governmental agencies.	●	The project involves 3 or more partners, including governmental and non-governmental organizations.	●	The project involves 3 or more partners, including governmental and non-governmental organizations.	◖	The project involves 3 or more governmental agencies.
	Meets Objectives of Multiple FADs	In an effort to identify projects that are truly integrated across functional areas, the participating entities have selected to highlight those projects that meet objectives of multiple functional area documents.	●	The project meets objectives of multiple FADs.	●	The project meets objectives of multiple FADs.	●	The project meets objectives of multiple FADs.	●	The project meets objectives of multiple FADs.	●	The project meets objectives of multiple FADs.
Prop 50 Program Preferences	Integration	Include and integrate projects with multiple benefits.	●	The project utilitizes multiple water management strategies across 3 or 4 FAs.	●	The project utilitizes multiple water management strategies across 3 or 4 FAs.	●	The project utilitizes multiple water management strategies across 3 or 4 FAs.	●	The project utilitizes multiple water management strategies across 3 or 4 FAs.	●	The project utilitizes multiple water management strategies across 3 or 4 FAs.
	Supply Reliability	Support and improve local and regional water supply reliability.	○	The project addresses this P50 preference as an incidental benefit.	◖	The project addresses the P50 preference as a secondary objective.	○	The project addresses the P50 preference as an incidental benefit.	·	Not Applicable.	○	The project addresses this P50 preference as an incidental benefit.
	Water Quality	Contribute expeditiously and measurably to the long-term attainment and maintenance of water quality standards.	●	The project addresses this P50 preference as a primary objective.	○	The project addresses the P50 preference as an incidental benefit.	○	The project addresses this P50 preference as an incidental benefit.	◖	The project addresses this P50 preference as a secondary objective.	○	The project addresses this P50 preference as an incidental benefit.
	Pollution/Habitat	Eliminate or significantly reduce pollution in impaired waters and sensitive habitat areas, including areas of special biological significance.	●	The project addresses this P50 preference as a primary objective.	○	The project addresses the P50 preference as an incidental benefit.	◖	The project addresses the P50 preference as secondary objective.	●	The project addresses this P50 preference as a primary objective.	○	The project addresses this P50 preference as an incidental benefit.
	DAC Benefits	Include safe drinking water and water quality projects that serve disadvantaged communities.	●	The project addresses this P50 preference as a primary objective.	·	Not applicable.	●	The project addresses this P50 preference as a primary objective.	·	Not Applicable.	○	The project addresses this P50 preference as an incidental benefit.
Prop 50 Statewide Priorities	Reduce Conflict	Reduce conflict between water users or resolve water rights disputes, including interregional water rights issues.	○	The project addresses this P50 statewide priority as an incidental benefit.	·	Not applicable.	·	Not applicable.	·	Not applicable.	·	Not applicable.
	TMDL	Implementation of Total Maximum Daily Loads that are established or under development.	○	The project addresses the P50 statewide priority as an incidental benefit.	○	The project addresses the P50 statewide priority as an incidental benefit.	○	The project addresses the P50 statewide priority as an incidental benefit.	○	The project addresses the P50 statewide priority as an incidental benefit.	·	Not applicable.
	WMI	Implementation of Regional Water Quality Control Board (RWQCB) Watershed Management Initiative Chapters, plans and policies.	●	The project addresses this P50 statewide priority as a primary objective.	·	Not applicable.	●	The project addresses this P50 statewide priority as a primary objective.	●	The project addresses this P50 statewide priority as a primary objective.	○	The project addresses this P50 statewide priority as an incidental benefit.
	NPS Pollution Control	Implementation of the SWRCB's Non-point Source (NPS) Pollution Plan.	●	The project addresses this P50 statewide priority as a primary objective.	·	Not applicable.	○	The project addresses this P50 statewide priority as an incidental benefit.	·	Not applicable.	·	Not applicable.
	Delta Water Quality	Assist in meeting Delta Water Quality Objectives.	·	Not applicable.	·	Not applicable.	·	Not applicable.	·	Not applicable.	·	Not applicable.
	Task Forces	Implementation of recommendations of the floodplain management task force, desalination task force, recycling task force, or state species recovery plan.	●	The project addresses this P50 statewide priority as a primary objective.	●	The project addresses this P50 statewide priority as a primary objective.	●	The project addresses this P50 statewide priority as a primary objective.	●	The project addresses this P50 statewide priority as a primary objective.	●	The project addresses this P50 statewide priority as a primary objective.
	Environmental Justice	Address environmental justice concerns	●	The project addresses this P50 statewide priority as a primary objective.	·	Not applicable.	●	The project addresses this P50 statewide priority as a primary objective.	·	Not applicable.	○	The project addresses this P50 statewide priority as an incidental benefit.
	CALFED Goals	Assist in achieving one or more goals of the CALFED Bay-Delta Program	◖	The project addresses this P50 statewide priority as a secondary objective.	●	The project addresses this P50 statewide priority as a primary objective.	·	Not applicable.	●	The project addresses this P50 statewide priority as a primary objective.	·	Not applicable.

Bay Area IRWMP Project Information Sheet

Project Name:

Green Infrastructure Sub-Regional Capacity Building Project

Responsible Agency:

Please identify <u>one</u> agency that is involved in the project and is responsible for providing information for inclusion in the Bay Area IRWMP.

San Francisco Estuary Partnership

Other Participating Agencies:

Please identify other agencies that are involved in the project, if applicable.

San Francisco Estuary Institute; BAFPAA; BAASMA agencies; Stopwaste.org

Summary Description:

Please provide a one paragraph description of the project. If you would like to include additional information, please do so under "Detailed Description" at the end of this form.

Green Infrastructure is an evolving set of water management techniques that includes green streets, rainwater harvesting, bio-infiltration systems, water conserving landscaping, small and large scale low-impact development (LID) techniques, and the new generation of flood control projects that restore stream channel habitat, riparian areas, and provide flood risk reduction. What green infrastructure techniques share is a preference for using or enhancing natural water features to conserve the resource, rather than routing the water quickly through an impermeable feature to an outfall. Expanding the region's Green Infrastructure capacity is a critical step towards building drought preparedness and climate change resiliency in the region's watersheds. Low Impact Development Projects are required of cities and counties under the Regional Board's recent Municipal Regional Permit. The costs and benefits of the Green Infrastructure Sub-Regional Capacity-Building Project and the environmental benefits would be compiled by SFEP and SFEI, who are tracking the success of such projects. SFEP will coordinate with county, city, special district staff and watershed groups to develop and implement one sub-regional green infrastructure project (likely in East Palo Alto/Palo Alto along San Francisquito Creek at its mouth).

Water Management Strategies Addressed:

Please select the water management strategies addressed by this project. Check all that apply.

- ☒ Ecosystem Restoration
- ☒ Environmental and habitat protection and improvement
- ☒ Water Supply Reliability
- ☒ Flood management
- ☒ Groundwater management
- ☒ Recreation and public access
- ☒ Storm water capture and management
- ☒ Water conservation
- ☒ Water quality protection and improvement
- ☐ Water recycling
- ☒ Wetlands enhancement and creation

- ☒ Conjunctive use
- ☐ Desalination
- ☐ Imported water
- ☒ Land use planning
- ☒ NPS pollution control
- ☒ Surface storage
- ☒ Watershed planning
- ☒ Water and wastewater treatment
- ☐ Water transfers

Primary Water Strategy:

Please list the primary water management strategy to facilitate project classification. Please select only ONE of the water management strategies listed above.

Stormwater capture and management

Purpose and Need:

Please provide a detailed description of the purpose and need for the project. Include discussion of the project's goals and objectives and of the critical impacts that will occur if the project is not implemented.

The IRWMP RAP defines Green Infrastructure as the "use of natural channels, drainages, and depressions for runoff conveyance and detention, and reductions in impervious surfaces and innovative stormwater management techniques." Replacing pavement with permeable pavers, reducing impermeable surfaces, harvesting rainwater in cisterns of various capacities, establishing water-smart landscaping, restoring stormwater culverts to creeks and/or more naturalistic flood control channels are all projects implemented somewhere within the nine county region by a local government, water/wastewater agency, private developer, or homeowner somewhere within the region. The IRWMP describes such strategies as multi-benefit, integrated programs to meet regional priorities. Today, however, such programs are scattered. We have yet to build a database of success stories, share cost information, maintanance requirements, and, in the case of rainwater harvesting, analyze the amount of water conserved (or potentially conserved). We have yet to conduct the robust analysis and make a case to policy makers as to the amount of funds needed to implement green infrastructure, and what the long term benefits of such an investment would be under our changing climate patterns.
There are a number of drivers to increase the number of regional Green Infrastructure projects and increase awareness/capacity to make these practices central to a forward thinking water portfolio. The Municipal Regional Permit of the San Francisco Regional Water Quality Control Board which will ask counties to increase the number of low impact development projects, including "green streets" as a way to improve stormwater quality. Water conservation is critical as the Bay Area evaluates responses to altered precipitation patterns due to climate change. Creek and wetland habitat restoration/preservation efforts rely on a source of clean water to support flora and fauna. Using a combination of rainwater harvesting to mimic pre-development watershed functions, slow peak storm flows and then releasing clean flows to natural habitats will augment spring and summer base flows to meet sediment TMDL requirements and fisheries enhancement goals. Lastly, green infrastructure techniques may be integrated into local and plans developed pursuant to AB 32 and SB375, which call for local climate change and sustainable communities strategies.

Project Status and Schedule:

Please provide the actual or projected start and finish dates for each of the following project stages. If any stage does not apply to the project please enter N/A.

Stage	Duration	Start Date	Finish Date
Planning		project award	six months after award
Demonstration Project		6 months after project starts	month 36
Design		month 6-12	month 13
Construction		month 7-14	month 33

Additional Notes:

Integration with Other Activities:

Please identify any linkages between the schedule of this project and the schedules of other projects, if applicable. Please discuss the integration of the project with other Bay Area IRWMP projects.

Many counties and cities throughout the Bay Area already have green infrastructure installations within their jurisdictions. US EPA has funded on-the-ground green infrastructure projects in San Francisco, an analysis of San Mateo County's Green Streets Program, and a Green Solution analysis in one Bay Area County of storm water treatment needs to improve water quality. (These are through three grants to SFEP & could be used as matching funds to this proposal.) Moreover, related planning and assessment projects designed to inform alternative agricultural and urban management measures to reduce pollutants in streams and restore aquatic life uses, especially salmonid fisheries, are suggesting a variety of uses and locations of water harvesting projects for multiple purposes (e.g., spring-flow augmentation and fine sediment removal, crop and landscape irrigation, recovery of overdrafted groundwater basins). EPA is funding (through SFEP) the development of irrigation BMPs for vinyards in the North Bay.

Cost and Financing:

Please identify the capital cost and operation and maintenance cost of the proposed project. Please indicate the base year (e.g. CCI) for all costs. Please identify the beneficiaries, potential funding/financing options for project implementation, and ongoing support and financing for operation and maintenance of the project once implemented.

Capital costs for various green infrastructure installations vary, as will the in-kind and matching funds. This project is scaled based upon available funds. Recipients of the funds would be required to provide a capitol or in-kind match commesurate with DWR guidelines. SFEP would provide a project coordinator to help develop the project, report to the state and IRWMP CC, and conduct outreach throughout the region; SFEI staff would evaluate various environmental and economic analyses to predict the outcomes of large-scale implementation of green infrastructure throughout the region.

Benefits and Impacts:

Please provide a detailed discussion of the projected benefits and impacts of the project, both locally and for the region. Please include an evaluation of impacts/benefits to other resources, such as air quality or energy.

EPA's "Managing Wet Weather with Green Infrastructure Action Strategy 2008" suggests the following environmental and economic benefits to Green Infrastructure in addition to reducing the volume of sewer overflows and runoff.

- Cleaner Water – Vegetation, green space and water reuse reduce the volumes of stormwater runoff and, in combined systems, the volume of combined sewer overflows, as well as reduce concentrations of pollutants in those discharges.
- Enhanced Water Supplies – Most green infiltration approaches involve allowing stormwater to percolate through the soil where it recharges the groundwater and the base flow for streams, thus ensuring adequate water supplies for humans and more stable aquatic ecosystems. In addition, capturing and using stormwater conserves water supplies.
- Cleaner Air – Trees and vegetation improve air quality by filtering many airborne pollutants and can help reduce the amount of respiratory illness. Transportation and community planning and design efforts that facilitate shorter commute distances and the ability to walk to destinations will also reduce vehicle emissions.
- Reduced Urban Temperatures – Summer city temperatures can average 10ºF higher than nearby suburban temperatures. High temperatures are also linked to higher ground level ozone concentrations. Vegetation creates shade, reduces the amount of heat absorbing materials and emits water vapor – all of which cool hot air. Limiting impervious surface and using light colored impervious surfaces (e.g., porous concrete) also mitigate urban temperatures.
- Moderate the Impacts of Climate Change – Climate change impacts and effects vary regionally, but green infrastructure techniques provide adaptation benefits for a wide array of circumstances, by conserving and reusing water, promoting groundwater recharge, reducing surface water discharges that could contribute to flooding. In addition, there are mitigation benefits such as reduced energy demands and carbon sequestration by vegetation.
- Increased Energy Efficiency – Green space helps lower ambient temperatures and, when incorporated on and around buildings, helps shade and insulate buildings from wide temperature swings, decreasing the energy needed for heating and cooling. Further, diverting stormwater from wastewater collection, conveyance and treatment systems reduces the amount of energy needed to pump and treat the water. Energy efficiency not only reduces costs, but also reduces generation of greenhouse gases.
- Source Water Protection – Green infrastructure practices provide pollutant removal benefits, thereby providing some protection for both ground water and surface water sources of drinking water. In addition, green infrastructure provides groundwater recharge benefits.
- Community Benefits – Trees and plants improve urban aesthetics and community livability by providing recreational and wildlife areas. Studies show that property values are higher when trees and other vegetation are present.
- Cost Savings – Green infrastructure may save capital costs associated with paving, creating curbs and gutters, building large collection and conveyance systems, and digging big tunnels and centralized stormwater ponds; operations and maintenance expenses for treatment plants, pumping stations, pipes, and other hard infrastructure; energy costs for pumping water around; cost of treatment during wet weather; and costs of repairing the damage caused by stormwater, such as streambank restoration. (document from 1/08, pages 5 & 6 http://www.epa.gov/npdes/pubs/gi_action_strategy.pdf)

Disadvantaged Communities / Environmental Justice:

Please include a specific discussion of how the project will benefit or impact disadvantaged communities or environmental justice goals.

The Green Infrastructure Sub-Regional Capacity-Building Project will take place in an area with disadvantaged community.

Environmental Compliance Strategy:

Please provide a detailed description of how the project will comply with all applicable environmental review requirement, including CEQA and/or (if applicable) NEPA. For ongoing CEQA/NEPA work, indicate when

required documentation would be completed. Also, include discussion of how compliance with local, county, State and federal permitting requirements will be achieved.

This project lends itself to assisting new and redevelopments to comply with the installation of Municipal Stormwater Program requirements for Post-Construction BMPs for stormwater pollution minimization. Certain harvesting installations for existing sites do not require CEQA/NEQA reviews, e.g., anyone can place a rain barrel next to their house, or obtain a building permit for cistern installation underneath their driveway.

Statewide Priorities:

Please select the statewide priorities that are addressed by this project. Check all that apply.

- ☒ Reduce conflicts between water rights users
- ☒ Implement TMDLs
- ☒ Implement RWQCB's Watershed Management Initiatives
- ☒ Implement SWRCB's NPS Pollution Plan
- ☐ Assist in meeting Delta Water Quality Objectives
- ☒ Implement recommendations of the floodplain, desalination, and recycling task forces, or of the state species recovery plan
- ☒ Address environmental justice concerns
- ☒ Assist in meeting the CALFED Bay-Delta Program goals

Additional Notes:

Stakeholder Involvement and Coordination:

Please describe any coordination with stakeholders, land use agencies, or other state and local agencies. Please include a list of proposed stakeholders, how they have/will participate in the planning and implementation of the project, and how their involvement will influence the implementation of the project. Discuss efforts to address environmental justice concerns.

The project stakeholders include local, state, regional and federal agencies, developers, private landowners, as well as watershed stewardship groups, Resource Conservation Districts, and members of the scientific community.The proposed project coordinator would work to ensure stakeholder partcipation throughout the project.

Documentation of Feasibility:

Please identify any studies that document the technical and economic feasibility of the proposed project. If study is still in progress please indicate this next to its citation. If no studies exist, please type "N/A".

EPA has a website devoted to Green Infrastructure that includes documents on the technical feasibility of Green Infrastructure (http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm). Low Impact Development is a requirement under the Regional Board's recently approved Municipal Regional (Stormwater Permit). Local governments need assistance with developing such projects.

Detailed Project Description:

If desired, please provide a detailed description with additional information about the project.

San Francisco Estuary Project and San Francisco Estuary Institute are collaborating on several projects funded by USEPA to assist local governments in building green infrastructure projects. Among the goals of these projects are to improve the region's stormwater quality, increase the health and resiliency of creeks and wetlands, and to move green infrastructure projects from the local to the regional scale. SFEP and SFEI would collaborate further as project leads to implement The Green Infrastructure Sub-Regional Capacity-Building Project . The project has the following components:
1) Develop green infrastructure demonstration project among city, county, and watershed stakeholders near East Palo Alto.
2) Project Evaluation: Evaluate the success of the demonstration project regarding: a) Performance of selected technology(ies) in relation to site characteristics and large-scale implementation benefits throughout Bay Area climate zones.b) Assessment of Economic Benefits of the Project (flood protection, potential carbon reduction credits, deferred water supply infrastructure investments, water conservation savings) c) Assessment of the environmental benefits of the project(pollution reduction, habitat restoration, water self-reliance enhancements, greenhouse gas emission reductions) on the watershed scale and across traditional program boundaries, based on empirical data collected as part of implementation. d) Evaluation of options for large-scale regional implementation of project by type (i.e costs and benefits of hundreds of rainwater harvesting systems in a particular watershed) e) Assessment of operations and maintenance issues based on post-implementation lessons learned & comparison to non-green infrastructure techniquies.
3) Project Management: SFEP would receive the grant from DWR, contract with local agencies, perform reporting to DWR, and coordinate with the IRWMP CC and local agencies.

Possible project for Green Infrastructure Sub-Regional Capacity-Building Project from San Mateo and Santa Clara Counties Stormwater Programs:
Plan/Implement LID at a Watershed Scale in the San Francisquito Creek Watershed

Purpose:
Investigate and demonstrate potential benefits of a comprehensive LID strategy in the San Francisquito Creek watershed to address urban runoff impacts on known water quality and hydromodification concerns in San Francisquito Creek. The project would implement high priority LID measures within the watershed to reduce stormwater runoff volume and duration and improve water quality, provide financial incentives for LID implementation on private properties, monitor receiving waters for priority pollutants, and provide public outreach and education.

Context:
The project would place the LID strategy in the context of an ongoing, regional effort to protect the San Francisquito Creek watershed and manage flooding. This has been a priority watershed for the Regional Water Board, which previously committed resources to the San Francisquito Watershed Council's project to make recommendations to improve policies, codes, ordinances, and practices of its partner municipalities and retrofit two existing properties with LID improvements. San Francisquito Creek sustains a run of steelhead trout, and it has been designated by state and federal agencies as "impaired" by sediment under Section 303(d) of the Clean Water Act. The watershed includes portions of San Mateo and Santa Clara counties, five cities and towns, and Stanford University.

The San Francisquito Watershed Council has undertaken numerous projects to restore habitat, monitor water quality and observe creek trends, raise awareness about the watershed, and provide policy support for local governments to keep the creek healthy and safe, while local jurisdictions have also implemented

projects that serve to benefit the creek. In 2008, the City of Palo Alto established a Stormwater Measures Rebate Program, offering rebates to property owners who purchase and install rain barrels, cisterns, permeable paving or green roofs. In 2005 and 2008, the City/County Association of Governments of San Mateo County was successful in getting legislation approved to institute a countywide vehicle license fee that helps fund stormwater pollution prevention projects related to vehicle infrastructure. In January 2009, the San Mateo Countywide Water Pollution Prevention Program published its Sustainable Green Streets and Parking Lots Guidebook, to help municipalities identify opportunities for retrofitting streets and parking lots with landscape-based stormwater treatment measures and to improve their skills in designing low impact vehicle infrastructure projects.

Project Components:
• Prior to submitting the application we will evaluate potential project sites in the San Francisquito Creek watershed and identify key opportunities and locations to construct specific, prioritized LID projects to maximize water quantity and quality benefits. This investigation will be planned to meet the geomorphic project requirements of Provision C.8.e.iii, Option (2), to inventory locations for potential retrofit projects. The project concept plan will be designed to satisfy the MRP Provision C.3 requirements for Green Streets Pilot Projects.

• The identified high priority LID projects will be constructed within funding limitations of grant, with a focus on maximum water quality and quantity benefits.
• Within the limits of the grant, funding will also be provided for incentivized programs for private LID implementation, such as rain barrels, green roofs, pervious paving, cisterns, etc., as is currently done in Palo Alto.
• A public education and outreach campaign will be initiated to link constructed LID projects to expected water quality and quantity benefits to San Francisquito Creek. The education campaign will include information on recommended LID actions for residential property owners and opportunities for funding assistance.

• Water quality monitoring of pollutants of concern will be initiated, per the requirements of the Proposition 84 guidelines. The monitoring program will also be designed to satisfy the BMP effectiveness investigation required in Provision 8.e.ii of the MRP.

Potential Partners:
• SMCWPPP and SCVURPPP
• Cities of Palo Alto, Menlo Park, East Palo Alto, Towns of Woodside and Portola Valley, and unincorporated San Mateo County, Santa Clara Valley Water District
• San Francisquito Creek Watershed Council (http://sanfrancisquito.org/index.htm)
• San Francisquito Creek Joint Powers Authority
• Stanford University
• Other groups in the selected watersheds
• BayKeeper or Save the Bay
• San Francisco Estuary Partnership
• Transportation agencies (Caltrans, Samtrans, VTA)
• San Francisco Bay Trail

Bay Area IRWMP Project Information Sheet

Project Name:

Regional Water Recycling Outreach Project

Responsible Agency:

Please identify <u>one</u> agency that is involved in the project and is responsible for providing information for inclusion in the Bay Area IRWMP.

Santa Clara Valley Water District

Other Participating Agencies:

Please identify other agencies that are involved in the project, if applicable.

BAY AREA RECYCLED WATER COALITION AGENCIES - To be confirmed by 3/20/10:
-City of San Jose, South Bay Water Recycling
-City of Mountain View
-City of Palo Alto
-City of Petaluma
-City of Redwood City
-City of Antioch
-City of Pittsburg
-Central Contra Costa Sanitary District
-Delta Diablo Sanitation District
-Dublin San Ramon Services District
-North Coast County Water District
-South Bayside System Authority
-Ironhouse Sanitary District
-City of Hayward
-Coastside County Water District
-Zone 7 Water Agency

AND THE BAY AREA CLEAN WATER AGENCIES:
-City of San Jose
-San Francisco PUC
-East Bay Municipal Utility District
-Central Sanitation Water District
-Contra Costa Water District
-City of Redwood City

"Recycle Water... It's too valuable to use just once!"

Summary Description:

Please provide a one paragraph description of the project. If you would like to include additional information, please do so under "Detailed Description" at the end of this form.

The Regional Recycled Water Outreach Project will use mass media strategies to bring easily understood information on recycled water and its safety to the large and diverse population of the Bay Area. The ultimate goal is to significantly expand recycled water uses in the region. An informed public or voter constituency is more likely to support water recycling projects. Much of the general public has misconceptions on what recycled water is, often confusing it with grey water, or untreated wastewater. Some Bay Area agencies have faced opposition to water recycling projects. Per the 2006 IRWM Plan, in section D-20, the Bay Area plans on doubling the recycled water used by year 2020. This project will help achieve this goal by facilitating public acceptance for recycled water.

Water Management Strategies Addressed:

Please select the water management strategies addressed by this project. Check all that apply.

- ☐ Ecosystem Restoration
- ☐ Environmental and habitat protection and improvement
- ☒ Water Supply Reliability
- ☐ Flood management
- ☐ Groundwater management
- ☐ Recreation and public access
- ☐ Storm water capture and management
- ☐ Water conservation
- ☐ Water quality protection and improvement
- ☒ Water recycling
- ☒ Wetlands enhancement and creation
- ☐ Conjunctive use
- ☐ Desalination
- ☒ Imported water
- ☐ Land use planning
- ☐ NPS pollution control
- ☐ Surface storage
- ☐ Watershed planning
- ☐ Water and wastewater treatment
- ☐ Water transfers

Primary Water Strategy:

Please list the primary water management strategy to facilitate project classification. Please select only ONE of the water management strategies listed above.

Water Recycling

Purpose and Need:

Please provide a detailed description of the purpose and need for the project. Include discussion of the project's goals and objectives and of the critical impacts that will occur if the project is not implemented.

Need for Project:
This project will address misconceptions about recycled water and help in expanding its use. Recycled water is a locally available water supply that is relatively immune from changes in hydology or weather patterns. Use of recycled water contributes to local water supply reliability. Use of this resource is proven less energy intensive that importing water from the Delta region, thereby making recycled water a greener alternative. Some recycled water projects faced public opposition because the local community had misconceptions about the safety of recycled water, how it is monitored and regulated and what the various treatment steps used to purify wasteater to make it recyclable are. This project will provide accurate information to the maximum achievable regional audience.

Goal for the Project:
Expand recycled water use by gaining public support and acceptance of recycled water.

Objectives:
1. Minimize public opposition to recycled water projects, by providing accurate and clear information on recycled water and its safety for intended uses.
2. Broadcast effective messages to the largest number of people possible. (e.g., an Internet and mass media advertising campaign).
3. Help achieve two goals of the IRWMP in supporting expansion of recycled water which adds to reliability and contributes to the promotion of social and environmental sustainability. Recycled water is both more sustainable and environmentally senstive than some other water supplies in the region.

Critical Impacts if the project is not implemented:
With recent Biological Opinions constraining the amount of water that can be imported from the Delta region, and climate change impacts to local hydrology, water supplies for the Bay Area region are not as reliable nor plentiful as once thought. The need for robust, local supplies like recycled water is critical. Per the recommendations of the state of California's Recycled Water Task Force (page 22, #6), the public needs adequate and understanable information on recycled water, and it needs to be disseminated in many forums.

Project Status and Schedule:

Please provide the actual or projected start and finish dates for each of the following project stages. If any stage does not apply to the project please enter N/A.

Stage	Duration	Start Date	Finish Date
Planning		1) July 2010	December 2010
Demonstration Project		3) July 2011	on-going use of the regional messages after that
Design		2) January 2011	June 2011
Construction		Implementation July 2011	should continue thereafter through agency outreach efforts

Additional Notes:

Integration with Other Activities:

Please identify any linkages between the schedule of this project and the schedules of other projects, if applicable. Please discuss the integration of the project with other Bay Area IRWMP projects.

N/A

Cost and Financing:

Please identify the capital cost and operation and maintenance cost of the proposed project. Please indicate the base year (e.g. CCI) for all costs. Please identify the beneficiaries, potential funding/financing options for project implementation, and ongoing support and financing for operation and maintenance of the project once implemented.

Cost Table for the Regional Water Recycling Outreach Project

BUDGET CATEGORIES	NON STATE SHARE	STATE GRANT REQUEST	TOTAL
Direct Project administration			
Agency coordination	$25,000		$25,000
Planning			
Public opinion survey		$15,000	$15,000
Focus group testing		$25,000	$25,000
Design			
Advertising materials development		$75,000	$75,000
Website design		$25,000	$25,000
Implementation			
Website launch and maintenance		$10,000	$10,000
Placement of media	$50,000	$950,000	$1,000,000
Post campaign survey		$15,000	$15,000
TOTAL	$75,000	$1,115,000	$1,190,000

Benefits and Impacts:

Please provide a detailed discussion of the projected benefits and impacts of the project, both locally and for the region. Please include an evaluation of impacts/benefits to other resources, such as air quality or energy.

This project can help secure an increase in recycled water used in the region. Therefore the benefits of this regional recycled water outreach project are:
- increases public support for recycled water infrastructure projects both locally and regionally
- increases water supply reliability both locally and regionally
- allows for creation of a new water supply for the local areas and the region
- water recycling lowers the discharge of wastewater into recieving water bodies
- lowers energy footprint for recycled water compared to imported Delta supplies or supplies coming from outside the region (less carbon footprint, less energy requirements, less carbon footprint may result in better air quality in the region)

This project contributes to the promotion of social and environmental sustainability, which was a goal stated in section C.4.1. for the Bay Area IRWMP.

Disadvantaged Communities / Environmental Justice:

Please include a specific discussion of how the project will benefit or impact disadvantaged communities or environmental justice goals.

Communities that are economically disadvantaged generally have less access to accurate information about publicly funded projects and programs. As a result, they may be less able to make informed decisions about the appropriateness of proposed recycled water use, and more prone to misconceptions

about its safety, reliability and relative cost. This project will strive to overcome this barrier by incorporating specific strategies to increase the dissemination of accurate information, including translation of key messages and materials and the use of multi-cultural focus groups.

Environmental Compliance Strategy:

Please provide a detailed description of how the project will comply with all applicable environmental review requirement, including CEQA and/or (if applicable) NEPA. For ongoing CEQA/NEPA work, indicate when required documentation would be completed. Also, include discussion of how compliance with local, county, State and federal permitting requirements will be achieved.

CEQA/NEPA work is not required for this project. No local, county, State or Federal permits are required.

Statewide Priorities:

Please select the statewide priorities that are addressed by this project. Check all that apply.

- ☒ Reduce conflicts between water rights users
- ☐ Implement TMDLs
- ☐ Implement RWQCB's Watershed Management Initiatives
- ☐ Implement SWRCB's NPS Pollution Plan
- ☐ Assist in meeting Delta Water Quality Objectives
- ☒ Implement recommendations of the floodplain, desalination, and recycling task forces, or of the state species recovery plan
- ☒ Address environmental justice concerns
- ☒ Assist in meeting the CALFED Bay-Delta Program goals

Additional Notes:

Stakeholder Involvement and Coordination:

Please describe any coordination with stakeholders, land use agencies, or other state and local agencies. Please include a list of proposed stakeholders, how they have/will participate in the planning and implementation of the project, and how their involvement will influence the implementation of the project. Discuss efforts to address environmental justice concerns.

Documentation of Feasibility:

Please identify any studies that document the technical and economic feasibility of the proposed project. If study is still in progress please indicate this next to its citation. If no studies exist, please type "N/A".

N/A

Detailed Project Description:

If desired, please provide a detailed description with additional information about the project.

On a regional basis, the Bay Area is planning to double recycled water produced by year 2020 (IRWMP Section D-20). An informed constituency who understands the need for a reliable local supply such as recycled water; who understands what is involved in the treatment processes that purify wastewater; and who understand the safety of this water for the intended uses, will be an informed constintuency who will enable multiple recycled water projects to be implemented with ease, thereby meeting the Bay Area goal of doubling recycled water used. The project strategies include developing effective messages using past survey information data supplemented by new data if necessary, developing the platforms for various information propagation (website, ads, etc), and implementing these strategies regionally.

Bay Area IRWMP Project Information Sheet

Project Name:

Disadvantaged Communities Watershed Program

Insert Project Photo

Select box then go to:
Insert → Picture

Responsible Agency:

Please identify <u>one</u> agency that is involved in the project and is responsible for providing information for inclusion in the Bay Area IRWMP.

San Francisco Estuary Partnership (formerly S.F. Estuary Program)

Other Participating Agencies:

Please identify other agencies that are involved in the project, if applicable.

Bay Area Flood Protection Agencies Association, Bay Area Watershed Network, Contra Costa County, San Mateo County, San Francisquito Creek Joint Powers Authority, City of East Palo Alto, Committee for Green Foothills, Wildcat-San Pablo Creeks Watershed Council, North Richmond, Parchester Village, North Richmond Shoreline Open Space Alliance, City of San Pablo, City of Richmond, Town of Pescadero, San Francisco State University, University of California at Berkeley, Marin County Stormwater Pollution Prevention Program, Conservation Corps of the North Bay, Students and Teachers Restoring a Watershed (STRAW), Willow Creek Academy (Marin City), U.S. E.P.A., Stillwater Sciences, San Francisco Estuary Institute, FarWest Engineering, Watershed Sciences

Summary Description:

Please provide a one paragraph description of the project. If you would like to include additional information, please do so under "Detailed Description" at the end of this form.

This is a disadvantaged communities (DACs) and underserved watershed community program that serves four different communites as well as a broad-based Bay Area network of watershed organizations. The four DACs are located in low lying floodplains and tidal areas: Parchester Village and North Richmond and parts of the City of San Pablo in Contra Costa County; the City of East Palo Alto in bayside San Mateo County; Marin City in Marin County; and the community of Pescadero in coastal San Mateo County. Restoration design tools (regional curves and historical ecology) will be developed to help the watershed partnerships located in these communities to start the design of multi-objective stream restoration projects to manage stormwater, reduce flood damages and enhance and protect wetland habitat and anadromous fish populations. One of the projects will focus on a creative collaboration between a county stormwater program, a community organization, the Conservation Corps and a local school to develop a stormwater inventory and identify green stormwater project proposals. All four projects are being developed to also serve a wider Bay Area watershed community, because the restoration tools developed for these areas can be applied and used both in the subregions where they are located and as part of a wider Bay Area effort to develop this information for broad use.

The program also includes technical assistance and organizational assistance to the Bay Area Watershed Network (BAWN) to: 1) help its working groups coordinate Bay Area wide priorities for watershed assessments, monitoring and development of restoration design tools; 2) coordinate and cross-pollinate watershed education, outreach and training programs; 3) particpate in the Integrated Regional Water Management Plan (IRWMP) process; and 4) help specific multi-objective projects for stormwater, flood damage reduction, water quality and habitat restoration reach the design stage so they can be eligible for funding. The program will contain an outreach component to increase the involvment of watershed groups, fishing groups, community organizations, Resource Conservation Districts, recreational organizations, environmental organizations, universites and colleges, and scientific organizations.

Water Management Strategies Addressed:

Please select the water management strategies addressed by this project. Check all that apply.

- ☐ Ecosystem Restoration
- ☒ Environmental and habitat protection and improvement
- ☒ Water Supply Reliability
- ☒ Flood management
- ☐ Groundwater management
- ☒ Recreation and public access
- ☒ Storm water capture and management
- ☐ Water conservation
- ☒ Water quality protection and improvement
- ☐ Water recycling
- ☒ Wetlands enhancement and creation
- ☐ Conjunctive use
- ☐ Desalination
- ☐ Imported water
- ☒ Land use planning
- ☐ NPS pollution control
- ☐ Surface storage
- ☒ Watershed planning
- ☐ Water and wastewater treatment
- ☐ Water transfers

Primary Water Strategy:

Please list the primary water management strategy to facilitate project classification. Please select only ONE of the water management strategies listed above.

The primary strategy is to develop some basic restoration tools to enable the design of stream and habitat restoration projects, develop a working model of a community-based stormwater infrastructure inventory and potential future stormwater projects assessments, and develop information to guide priority habitat restoration projects.

Purpose and Need:

Please provide a detailed description of the purpose and need for the project. Include discussion of the project's goals and objectives and of the critical impacts that will occur if the project is not implemented.

Disadvantaged communities located in baylands and coastal wetlands areas are organizing for flood damage reduction, stormwater management, protection of open space and recreational opportunites, environmental education and environmental jobs training, water pollution control, toxics management and clean up, and restoration of fish habitat.This program is intended to provide technical and organizational capacity building to facilitate the implementation of multi-objective watershed management projects. Three of the four communites served by this program are urban and are mostly composed of people of color; these communities originated because "minorities" and lower income populations were segregrated into floodplain and wetland areas. These communities are the last served by federal flood control projects (or not assisted at all) because of the low value of the real estate and the difficulty of achieving cost sharing requirements. The fourth community is a rural disadvantaged community plagued with sub-standard septic systems and flood damages, and has the need to manage for endangered salmonid habitat.

All the communities are engaged in a watershed partnership approach to protect and enhance wetlands, streams, and anadromous fish habitat.

This program also serves a broad network of under-served and under-represented watershed organizations and partnerships, including community organizations, non-profits, Resource Conservation Districts, etc., who need to engage in the IRWM program and to qualify for federal stimulus funds and other resource grant and low interest loan programs.

Project Status and Schedule:

Please provide the actual or projected start and finish dates for each of the following project stages. If any stage does not apply to the project please enter N/A.

Stage	Duration	Start Date	Finish Date
Planning		as soon as approved	
Demonstration Project		" "	18 months
Design		" "	18 months
Construction			

Additional Notes:

Integration with Other Activities:

Please identify any linkages between the schedule of this project and the schedules of other projects, if applicable. Please discuss the integration of the project with other Bay Area IRWMP projects.

Cost and Financing:

Please identify the capital cost and operation and maintenance cost of the proposed project. Please indicate the base year (e.g. CCI) for all costs. Please identify the beneficiaries, potential funding/financing options for project implementation, and ongoing support and financing for operation and maintenance of the project once implemented.

1. Bay Area Watershed Network Technical Assistance Project
a. Technical assistance to working groups for assessments, restoration tools, IRWMP project planning and implementation: $ 150,000
b. Stipends to watershed and community organizations to advance projects that assist drought response, water conservation, habitat restoration, and response to climate change disruption: $250,000
Total Request :$400,000

2. Stream Channel Shapes and Floodplain Restoration Guidance : $120,000.
Match from EPA: $ 30,000
Total request: $120,000

3.Stream Restoration Ecological Restoration Objectives Data: $950,000
Match SFEI : $316,000
Total request: $950,000

4.Community Based Stormwater Mapping and Management Alternatives Identification
Conservation Corps North Bay: $75,000
STRAW: $25,000
Marin County Stormwater Pollution Prevention Program: $20,000
Willow Creek Academy: $10,000
Marin County match: $50,000
Total Request: $130,000

Total IRWMP request: $ 1,600,000

Benefits and Impacts:

Please provide a detailed discussion of the projected benefits and impacts of the project, both locally and for the region. Please include an evaluation of impacts/benefits to other resources, such as air quality or energy.

Stormwater management and water conservation: The program will enable projects that support drought and climate change disruption resilience and that encourage conservation, i.e., green stormwater retrofits, rain harvesting, neighborhood stormwater and rain gardens, and stream and wetland enhancement projects. Funds will be made available to local watershed organizations to strengthen their capacity to develop and complete projects.

Ecosystem and Habitat Restoration: The program will produce three comprehensive reports (one for each of the watershed communities of the Richmond shoreline, East Palo Alto, and Pescadero) with design concepts for restoring streams and wetlands based on the historic ecology, hydrology, and floodplain and landscape features of the subregion. The reports will be presented though public presentations to community organizations and local agencies, and outreach materials will be provided. The program will advance the return of functioning ecosystems.

Multi-objective projects and reduction of conflicts: The program will produce regional stream restoration "curves", which will guide the development of multi-objective stream restoration projects. This tool is particularly useful for designing multi-objective floodplain and channel restoration projects that restore the environmental values of streams while reducing flood damages. This avoids the problem of flood control becoming a trade-off with environmental values. This design tool, which guides the proper dimensions of channel shapes, is a valuable tool to assist water quality because it helps avoid excessive erosion and sedimentation caused by incorrect channel shapes. This contributes to TMDL sediment control implementation projects.

Climate change resiliency: The coastal fish habitat data collection achieved by the restoration curves project will help scientists prepare for climate disruption to anadromous fish habitat. Because inland habitat will probably be disproportionately affected by warmer, drier summers, the importance of fog belt coastal areas will increase as critical refugia for salmonid species. The focus of the Pescadero project is to assist in the development of more critical coastal habitat.

Disadvantaged Communities / Environmental Justice:

Please include a specific discussion of how the project will benefit or impact disadvantaged communities or environmental justice goals.

It is typical for DACs to be located in low lying, badly drained floodplains and tidal areas and wetlands. It is also typical for these communties to have the least resources from all levels of government to address the conflicts between their community development and flood and stormwater management. The conflicts between their developed areas and wetlands often reflects a legacy of low income and minority communities being segrated into flood hazard areas during the 1930-1950s. In some cases the occupation of these hazard areas occurred because of the low land values and their proximity to blue collar jobs. Federal cost-sharing policies and cost benefit analyses of projects have made these areas ineligible for help from some of the federal programs.These DACs are now leading the way to achieve a new generation of multi-objective projects that combine flood damage reduction, stormwater management with environmental restoration and habitat restoration, and "green" strategies.

The areas selected to benefit from this program meet the State's definiton of DACs: the flatlands of the Cities of San Pablo and Richmond, North Richmond and Parchester Village; East Palo Alto; Marin City; and rural Pescadero.These areas are already engaged in improving their watersheds through the use of watershed partnerships. The funding strategy for implementing projects must necessarily use a varied combination of federal, state and local programs. The proposed projects -- stormwater mapping, stream restoration curves, and historic landscape inventory -- will help these communities reach the next stage of project development to achieve on-the-ground results.

The Bay Area Watershed Network (BAWN), which will also be a beneficiary of the work under this project, hopes to use the model developed by the Cosumnes, American, Bear and Yuba Rivers (CABY) and the North Coast IRWMPs to use IRWMP funds to supplement outreach and organizing of watershed partnerships, community organizations and NGOs in IRWMP project planning and development. The Bay Area IRWMP wants to remove the "play to pay" stigma associated by some with the IRWMP by assisting the partners that have the least resources to participate. The other IRWMP functional areas are represented by well-organized and funded associations including the Bay Area Clean water Agencies, Bay Area Regional Water Recycling Program, Bay Area Stormwater Management Agencies Association, Bay Area Water Agencies Coalition, Bay Area Flood Control Agencies Association, and others. The watershed community has started to organize to correct for this imbalance but of course is at a huge disadvantage because it does not have a built-in funding mechanism via public revenues. The BAWN is at a critical stage, in which viable working groups exist but the long term stability of the network is contingent upon permanently locating this effort in an organization committed to helping it thrive.

Environmental Compliance Strategy:

Please provide a detailed description of how the project will comply with all applicable environmental review requirement, including CEQA and/or (if applicable) NEPA. For ongoing CEQA/NEPA work, indicate when required documentation would be completed. Also, include discussion of how compliance with local, county, State and federal permitting requirements will be achieved.

All project planning with comply with NEPA and CEQA, and federal and state regulatory programs as appropriate.

Statewide Priorities:

Please select the statewide priorities that are addressed by this project. Check all that apply.

- ☐ Reduce conflicts between water rights users
- ☒ Implement TMDLs
- ☒ Implement RWQCB's Watershed Management Initiatives
- ☒ Implement SWRCB's NPS Pollution Plan
- ☐ Assist in meeting Delta Water Quality Objectives
- ☒ Implement recommendations of the floodplain, desalination, and recycling task forces, or of the state species recovery plan
- ☒ Address environmental justice concerns
- ☐ Assist in meeting the CALFED Bay-Delta Program goals

Additional Notes:

Stakeholder Involvement and Coordination:

Please describe any coordination with stakeholders, land use agencies, or other state and local agencies. Please include a list of proposed stakeholders, how they have/will participate in the planning and implementation of the project, and how their involvement will influence the implementation of the project. Discuss efforts to address environmental justice concerns.

All the technical assistance projects will be coordinated through existing watershed partnerships: the Wildcat-San Pablo Creeks Watershed Council; the San Francisquito Creek Joint Powers Authority; and Pescadero Creek partners (San Francisco Bay Water Board, California Department of Fish and Game, State Parks, NOAA Fisheries, San Francisco State University, U.C. Berkeley, fishing organizations.) BAWN will be involved through its working groups: watershed outreach and education; policy; watershed assessments, monitoring,and restoration tools; and IRWMP watershed committee. Stakeholders include: federal and state agencies, Resource Conservation Districts, local governments, community organizations, recreationists, schools, universities and colleges, property owners, fishing groups, neighborhood organizations, environmental groups, water agencies, park districts, and environmental justice organizations.

Documentation of Feasibility:

Please identify any studies that document the technical and economic feasibility of the proposed project. If study is still in progress please indicate this next to its citation. If no studies exist, please type "N/A".

The San francisco Estuary Partnership (SFEP) has the expereince, knowledge and skills necessary to successfully manage and implement this project. The SFEP has managed similiar large-scale multi-agency projects funded by government grants and contracts designed to improve the quality of regional streams, rivers and the Estuary. The SFEP has strong relationships with the stakeholders listed in this program. BAWN has sustained itself since 2006 through the efforts of two state agencies and a number of NGOs and consulting firms.

All the technical assitance tools being advanced by this project have already proven their important utility in other parts of the Bay Area. The Marin City stormwater project is a pilot project but is using partners with proven experience and results.

Detailed Project Description:

If desired, please provide a detailed description with additional information about the project.

There are four technical assistance projects composing this Bay Area Disadvantaged Communities Watershed Program:
1. BAWN Technical Assistance Project
The San Francisco Estuary Partnership will provide some organizational assistance to the Bay Area Watershed Network working groups. These groups are: providing a watershed community involvement component to the Bay Area IRWMP; facilitating the process for identifying Bay Area priorities for the support and development of watershed assessments, monitoring programs and restoration design tools; coordinating watershed education organizations and projects with the environmental education, and service and conservation corps communities; and assisting watershed organizations impacted by the state bond freeze to establish new funding and programatic strategies. This project will provide direct financial assistance as seed money to non-profits and DACs to develop and design projects and programs to help them realize actions that will benefit their local watersheds.The objective is to enable these watershed partnerships to advance to the project design stages necessary to be eligible for federal and state grants and loans.

2. Stream Channel Shapes and Floodplain Restoration Design Guidance
Assist with the design stage of multi-objective flood damage education and stream restoration projects by developing stream restoration design "curves" that help guide the design of channel shapes and floodplains so that they can be in equilibrium, avoid erosion and sedimentation problems, and support fish and wildlife habitat while accommodating flood flows.These design curves will be used to advance the design of projects on Rheem Creek, San Pablo and Wildcat Creeks, San Francisquito Creek and Pescadero Creek. All these creeks have anadromous fish populations that are in strong need of protection and population enhancement. The creek restoration design curves can also be applied to other watersheds in similiar regions of the Bay Area. This work will be done by scientists at FarWest Engineering and Watershed Sciences who are involved in developing this restoration tool for Bay Area wide use. They currently have some funding from the Environmental Protection Agency to develop stream restoration design curves for the North Bay.

3. Stream Restoration -- Historical Ecology Restoration Objectives Data
The other stream restoration design tool which is applied at the beginning of a multi-objective stream restoration design process is the identifcation of the historic regional ecological landscape. The historic landscape guides the restoration design even if it is not possible to reproduce a landscape that existed before current land use changes. The project works with stakeholders in local watershed councils to identify their needs for re-establishing watershed functions such as flood damage reduction, public access, recreation, wildlife habitat, etc. This project will produce technical reports that describe how these areas have functioned ecologically before they were degraded. The project develops information for public education that is well illustrated via GIS files, maps and a website.The San Francisco Estuary Institute has been developing these historic landscape inventories for a wide variety of stakeholders around the Bay Area and has the recognized expertise to assist these underserved areas.

4. Community Based Stormwater Managment Mapping and Project Alternatives Identification

The Marin City storm drain and watershed mapping project is needed to provide the basic information to help this area advance stormwater management project plans and designs. The project will use an innovative approach that we expect can be replicated in other DACs. The Marin County Stormwater Pollution Prevention Program (MCSTOPPP) will work with the Conservation Corps of the North Bay (AmeriCorps) program to train the corps members in the use of GIS/GPS technology to produce watershed maps and stormdrain maps. The training will support conservation corps training and education objectives and give its participants access to tools and software to increase their marketable skills.They will also be trained in stormwater management strategies including green infrastructure improvements. Potential stormwater projects will be identified. The project will involve a community outreach and education component in which STRAW, a non-profit group already involved in the community, will work with the local Willow Creek Academy, and also reach out to the larger community.

Bay Area IRWMP Project Information Sheet

Project Name:

Evaluating regional ecosystem restoration using steelhead trout

Responsible Agency:

Please identify <u>one</u> agency that is involved in the project and is responsible for providing information for inclusion in the Bay Area IRWMP.

Center for Ecosystem Management and Restoration, Inc.

Other Participating Agencies:

Please identify other agencies that are involved in the project, if applicable.

North Bay Watersheds Association, Napa County Resource Conservation District, Santa Clara Valley Water District, San Francisco Public Utilities Commission, Marin Municipal Water District, Marin County Public Works, Southern Sonoma County Resource Conservation District, Department of Fish and Game, National Marine Fisheries Service

Summary Description:

Please provide a one paragraph description of the project. If you would like to include additional information, please do so under "Detailed Description" at the end of this form.

This project will measure the production of steelhead smolt in key Bay Area watersheds for use in measuring the success of IRWMP implementation. A diverse array of agencies are pursuing multiple objectives under IRWMP through modifications to water supply infrastructure and operations, reduction of pollution, restoration of stream geomorphology and biological productivity, and control of erosion. Measuring the production of steelhead smolts allows for an integrated, quantitative comparison of baseline and future watershed conditions (including IRWMP project implementation) that can be easily interpreted by stakeholders. By focusing on a threatened and charismatic species this program will maximize public impact and involvement, as well as development of regional partnerships and capacity.

Water Management Strategies Addressed:

Please select the water management strategies addressed by this project. Check all that apply.

- ☒ Ecosystem Restoration
- ☒ Environmental and habitat protection and improvement
- ☐ Water Supply Reliability
- ☐ Flood management
- ☐ Groundwater management
- ☐ Recreation and public access
- ☐ Storm water capture and management
- ☐ Water conservation
- ☒ Water quality protection and improvement
- ☐ Water recycling
- ☐ Wetlands enhancement and creation
- ☐ Conjunctive use
- ☐ Desalination
- ☐ Imported water
- ☒ Land use planning

- ☒ NPS pollution control
- ☐ Surface storage
- ☒ Watershed planning
- ☐ Water and wastewater treatment
- ☐ Water transfers

Primary Water Strategy:

Please list the primary water management strategy to facilitate project classification. Please select only ONE of the water management strategies listed above.

Ecosystem Restoration

Purpose and Need:

Please provide a detailed description of the purpose and need for the project. Include discussion of the project's goals and objectives and of the critical impacts that will occur if the project is not implemented.

A diverse array of agencies are pursuing multiple objectives in Bay Area watersheds through modifications to water supply infrastructure and operations, reduction of nonpoint pollution, restoration of stream geomorphology and biological productivity, and control of erosion. These activities are taking place under the auspices of IRWMP, as part of TMDL implementation, and purusant to a variety of watershed management plans, local initiatives, and permit conditions. There is not at present an easily understood and accepted regional measure that can be used to track the effectiveness of these activities in an integrated fashion. Yet such a measure is essential for demonstrating progress toward the goals of Prop 50(§79501), Prop 84 (§75026, 75055) and the objectives of the Bay Area IRWMP (§C.4.6), and to verify that exisiting water supply and other operations can be conducted in a manner that is consistent with restoration of valued species and ecosystems.

We propose to monitor production of steelhead smolt in key Bay Area locations to provide an integrated, quantitative measure of our regional success. By focusing upon a threatened and charismatic species this program will maximize public impact and involvement, as well as build regional partnerships and capacity. Support for monitoring in two or three north Bay watersheds can be integrated with monitoring activities in Alameda Creek and Santa Clara County streams to develop a regional assessment. Without this project the IRWMP and other agencies will not have a quantitative assessment of the overall success of restoration and pollution reduction activities, and will lack vital baseline data that will be required to sensibly implement the Central Coast Steelhead Recovery Plan that will soon be produced by the National Marine Fisheries Service.

Project Status and Schedule:

Please provide the actual or projected start and finish dates for each of the following project stages. If any stage does not apply to the project please enter N/A.

Stage	Duration	Start Date	Finish Date
Planning		9/1/10	11/1/10
Demonstration Project		N/A	N/A
Design		11/1/10	1/15/10
Construction		2/1/10	6/1/10

Additional Notes:

The vast majority of the planning and design of the monitoring program has been funded by the North Bay Watersheds Association, and a demonstration project has been conducted by the Napa County Resource Conservation District during 2009 and 2010 (documenting the production of hundreds of steelhead smolts in the Napa River). After a 60 day planning period where remaining sites are determined and responsibilities assigned, the project will get underway ("design" and "construction") and collect data.

Integration with Other Activities:

Please identify any linkages between the schedule of this project and the schedules of other projects, if applicable. Please discuss the integration of the project with other Bay Area IRWMP projects.

This project will be performed concurrently with or in advance of important with stream restoration projects in the subject watersheds. The program will provide vital, easily interpreted evidence that restoration efforts are working to the extent smolts production is being enhanced. The monitoring may be repeated and/or expanded in the future to provide IRWMP, along with related efforts in the Bay Area, an assessment of whether "ecosystem health is increasing or decreasing."

Cost and Financing:

Please identify the capital cost and operation and maintenance cost of the proposed project. Please indicate the base year (e.g. CCI) for all costs. Please identify the beneficiaries, potential funding/financing options for project implementation, and ongoing support and financing for operation and maintenance of the project once implemented.

The project is estimated to cost $371,000 to implement for five watersheds. As work in each watershed will be implemented with a local partner, this project will develop the capacity to be self sustaining with moderate funding due to the existence of a set of trained volunteers to continue the project. As it is expected that steelhead monitoring will inevitably be required by the National Marine Fisheries Service, this project will develop local capacity that can then be used very cost-effectively to meet future permit conditions.

Benefits and Impacts:

Please provide a detailed discussion of the projected benefits and impacts of the project, both locally and for the region. Please include an evaluation of impacts/benefits to other resources, such as air quality or energy.

For the first time, we will have an estimate of steelhead production in Bay Area watersheds. This easily understood indicator of watershed health can be tracked quantitatively over time to provide an integrated assessment of the effectiveness of regional efforts to improve watershed health, and will serve as an organizing concept for regional restoration efforts. We will strengthen watershed-scale partnerships throughout the region, enhance public interest in watershed restoration, provide opportunities for public

involvement, build local technical capacity, and contribute to the protection and restoration of a valued threatened species.

An integrative ecological indicator like steelhead smolt production is also vital for use by water supply agencies and other organizations seeking to demonstrate that their existing activities in a watershed are consistent with restoration of a key threatened species. Understanding the baseline of smolt production will also be valuable when working with the National Marine Fisheries Service in the future regarding implementation of the Central Coast Steelhead Recovery Plan. This information will also be essential for tracking and evaluating the success of sediment TMDL implementation for the Napa River and Sonoma Creek.

Disadvantaged Communities / Environmental Justice:

Please include a specific discussion of how the project will benefit or impact disadvantaged communities or environmental justice goals.

N/A

Environmental Compliance Strategy:

Please provide a detailed description of how the project will comply with all applicable environmental review requirement, including CEQA and/or (if applicable) NEPA. For ongoing CEQA/NEPA work, indicate when required documentation would be completed. Also, include discussion of how compliance with local, county, State and federal permitting requirements will be achieved.

This project does not involve activities subject to environmental review through CEQA or NEPA. The completion of the demonstration project allows for very specific and easily approved applications for permits required to place and operate the traps in accordance with provisions of the federal Endangered Species Act.

Statewide Priorities:

Please select the statewide priorities that are addressed by this project. Check all that apply.

- ☐ Reduce conflicts between water rights users
- ☒ Implement TMDLs
- ☒ Implement RWQCB's Watershed Management Initiatives
- ☐ Implement SWRCB's NPS Pollution Plan
- ☐ Assist in meeting Delta Water Quality Objectives
- ☒ Implement recommendations of the floodplain, desalination, and recycling task forces, or of the state species recovery plan
- ☐ Address environmental justice concerns
- ☒ Assist in meeting the CALFED Bay-Delta Program goals

Additional Notes:

Stakeholder Involvement and Coordination:

Please describe any coordination with stakeholders, land use agencies, or other state and local agencies. Please include a list of proposed stakeholders, how they have/will participate in the planning and implementation of the

project, and how their involvement will influence the implementation of the project. Discuss efforts to address environmental justice concerns.

There are many local agencies with the skills, resources, and interest to serve as partners for this project. They include the Santa Clara Valley Water District, San Francisco Public Utilities Commission, Alameda County Water District, Marin Municipal Water District, East Bay Regional Park District, Napa County Resource Conservation District, Southern Sonoma Resource Conservation District, Sonoma Ecology Center, National Resource Conservation Service, East Bay Regional Park District, and the North Bay Watersheds Association. There are many local watershed organizations that will serve as productive sources of volunteers for this effort including the Alameda Creek Alliance, Santa Clara Creeks, Friends of Corte Madera Creek, and Trout Unlimited.

For each watershed covered by the program, the lead biologists and the program coordinators have or will select methods, locations, and responsibilities for monitoring. Constructing the traps and monitoring and maintenance will be conducted by the lead biologists with support from volunteers. All participants will receive training in smolt trapping techniques and data collection to ensure consistency and validity of data produced by the project.

The program will provide important, new information to the resource conservation agencies useful in managing and recoverying steelhead. Letters of support for this project likely can be obtained from the National Marine Fisheries Services, the Department of Fish and Game, and the San Francisco Bay Regional Water Quality Control Board.

Documentation of Feasibility:

Please identify any studies that document the technical and economic feasibility of the proposed project. If study is still in progress please indicate this next to its citation. If no studies exist, please type "N/A".

The project design has been developed and peer reviewed by the North Bay Watersheds Assocation. A pilot project has successfully operated, demonstrating the feasibility of the methods, in the Napa River during 2009.

Detailed Project Description:

If desired, please provide a detailed description with additional information about the project.

Approach (how we will do this): Steelhead smolts will be trapped at strategic locations in several anchor watersheds in the Bay Area. The program will follow the peer-reviewed design developed by CEMAR for the North Bay Watersheds Association, as informed by the pilot project being conducted by the Napa County Resource Conservation District.

In each watershed, a local stakeholder will be identified as the lead partner, and will help coordinate site access and staffing at each trapping site. Each watershed will require at least two well-trained individuals who will be permitted by the National Marine Fisheries Service and the California Department of Fish and Game to handle steelhead. Local volunteers, who over the course of the project will develop the skills necessary to lead the trapping in later years, will support these trained individuals (previous monitoring conducted by the San Francisco Public Utilities Commission has served as a model for integrating volunteers, as has the Napa RCD project). CEMAR and the local lead stakeholder will provide overall

management and coordination for the project, establish and implement quality assurance procedures, and conduct data analysis, project reporting, and public outreach.

Outputs (what we will do): Prepare and implement watershed specific plans with local partners; develop and train volunteers in each watershed; install, operate, and maintain smolt traps; synthesize and report results; prepare and disseminate public outreach materials; and develop earned media opportunities.

Bay Area IRWMP Project Information Sheet

Project Name:

Flood and Waterways Infrastructure Analysis and Communication Tool

Flood and Waterways Infrastructure Analysis and Communication Tool

Responsible Agency:

Please identify <u>one</u> agency that is involved in the project and is responsible for providing information for inclusion in the Bay Area IRWMP.

San Francisco Estuary Institute (SFEI)

Other Participating Agencies:

Please identify other agencies that are involved in the project, if applicable.

Bay Area Flood Protection Agencies Association (BAFPAA)
Santa Clara Valley Water District
Contra Costa County Flood Control District
Alameda County Flood Control District
Zone 7 Water District
Marin County Flood
Sonoma County Water Agency
San Mateo County Public Works
Solano County Public Works
City and County of San Francisco
Bay Area Stormwater Management Agencies Association (BASMAA)

Summary Description:

Please provide a one paragraph description of the project. If you would like to include additional information, please do so under "Detailed Description" at the end of this form.

The Flood and Waterways Infrastructure Analysis and Communication Tool will provide managers in the SF Bay region planning and assessment tools as well as provide a foundation for the Statewide Flood Needs Assessment. It will compile information on existing and planned Bay Area flood protection infrastructure, flood-prone areas and other water infrastructure overlaid with known riparian and wetland areas and disadvantaged community information. This data will help answer regional and local floodplain managemnet, flood risk, and community protection questions and guide planning and needs assessments. The information gathered would build on the existing Statewide Levee Database and the existing Army Corps of Engineers Levee Database, but would document a broader range of facilities and information. Because incorporating local data can strain agency resources, this project will provide monetary resources to local agencies to produce a regionally standardized, comprehensive and current flood infrastructure dataset. It will also provide communication and outreach with a single point of access to primary flood and waterways, disadvantaged communities and habitat datasets in an interactive format to allow agency

staff as well as the general public to quickly and easily access information about local areas of flood risk, infrastructure needs and improvement projects.

Water Management Strategies Addressed:

Please select the water management strategies addressed by this project. Check all that apply.

- ☒ Ecosystem Restoration
- ☒ Environmental and habitat protection and improvement
- ☒ Water Supply Reliability
- ☒ Flood management
- ☒ Groundwater management
- ☒ Recreation and public access
- ☒ Storm water capture and management
- ☐ Water conservation
- ☐ Water quality protection and improvement
- ☐ Water recycling
- ☒ Wetlands enhancement and creation
- ☐ Conjunctive use
- ☐ Desalination
- ☐ Imported water
- ☒ Land use planning
- ☒ NPS pollution control
- ☐ Surface storage
- ☒ Watershed planning
- ☒ Water and wastewater treatment
- ☐ Water transfers

Primary Water Strategy:

Please list the primary water management strategy to facilitate project classification. Please select only ONE of the water management strategies listed above.

Flood Management

Purpose and Need:

Please provide a detailed description of the purpose and need for the project. Include discussion of the project's goals and objectives and of the critical impacts that will occur if the project is not implemented.

In the Bay Area there is no comprehensive inventory of flood protection infrastructure, the condition of that infrastructure, and the level of protection the infrastructure provides. As the San Francisco Bay region faces major flood planning issues current infrastructure becomes outdated, regional climate patterns change and sea level and Bay waters rise there is a need to compile this information to provide the ability to determine the flood protection needs in the Bay Area and to identify and develop projects to bring all communities up to a base level of protection. A recent report by the Pacific Institute California Climate Change Center, using a reasonable Scripps Institution of Oceanography sea level rise scenario of 1.4m (the 2100 estimate), updated risk projections for the 21st century Bay Area. Due to coastal wetland migration and localized flooding, at-risk resources are predicted to include 270,000 people during the 100-year coastal flood (19% of the effected households earn less than $30,000), 22 wastewater treatment plants, the San Francisco and Oakland Airports, 81 schools, 42 health care facilities, 11 fire and train stations, 9 police stations, 180 highway miles, 1,600 road miles, 170 railway miles, 14 power plants, and $62 billion of property and contents. In order to protect this infrastructure, the Pacific Institute estimated that 232 miles of levees will need to be raised, 338 miles of new levees will need to be built, and 71 miles of new sea walls will be needed at a total estimated cost of $5.3 billion amortized over the next 100 years. Although these Pacific Institute estimates are consistent with local concerns, there has been no systematic regional analysis of the issue, and therefore, similar to State and Federal needs, there is an impending need to understand the current flood risk for Bay Area communities, including an inventory and thorough assessment of flood-prone areas and flood-protection infrastructure.

After massive flooding from both Hurricane Katrina and Rita in 2006, the Army Corps of Engineers (ACOE) at the Federal level and the Department of Water Resources (DWR) at the State level saw a need and began efforts to inventory their flood control infrastructure. From this effort emerged two primary, but linked datasets, the National Levee Dataset (ACOE) and the California State Levee Dataset (DWR). While these datasets provide a template for regional efforts, their coarse scale and data gaps limit their use in regional planning. Furthermore, there are many other types of flood-protection infrastructure, other than levees, such as stomwwater pump stations, railroad beds, tidal flood gates, sea walls, and natural wetland and riparian vegetative bariers that should be integrated into a regional analysis of flood protection needs. As recognized by both the State and Federal governments, assessments and mapping of flood protection structures and systems and flood-prone areas are the necessary baseline to understand how flooding is currently managed, a baseline that is currently lacking for the Bay Area. Furthermore, combined with updated mapping of the Region's hydrologic network and floodplain based on current conditions through NHD and WRMP (see Integration with Other Activities) much needed improvements to FEMA's flood risk maps can be made on a regional scale. Another issues highlighted by the Katrina tragedy was tendancy for levee failure to occur at jurisdictional boundaries where infrastructure failure in one area would allow flooding behind and in some case damagge to the adjacent flood infrastructure even when it was well maintained and opperating to specification. This is an issue of particular concern in the Bay Area where there are literally dozens of flood agencies and cities responsible for flood infrastructure on the Bay margin alone. The benefits of the proposed project include:

1. To allow for a regional analysis of where populations may be un-necessarily at risk of flooding
2. To demonstrate whether there has been regional disparity in providing flood protection to disadvantaged communities (DAC)
3. To identify infrastructure weaknesses at jurisdictional boundaries
4. To facilitate regional prioritization for repair, replacement or new infrastructure
5. To facilitate regional mutual aid under NEMS in cases of large-scale flooding disaster
6. To identify significant flood risks throughout the Bay Area
7. To document needs and opportunities to improve integrated flood management
8. To provide community outreach for flood protection project development

Combining locally generated maps of flood protection infrastructure with the recently released Federal Emergency Management Agency's Digital Flood Insurance Rate Maps (DFIRMs), the State's Flood Awareness Mapping, and other locally-produced map layers such as flood hazard, historical flood and sea-level rise maps, and storm drainage infractucture maps will provide managers with the tools to analyze the needs of local communities for reliable flood protection. An additional layer providing information on the demographics of low lying Disadvantaged Communities will offer a broader look at potential impacts of flooding on some very specific communities. The following information will be generated or compiled using a geographic information system (GIS):

- Inventory of existing infrastructure, programs, policies, projects, responsible agencies,
- Flood hazard areas which have been mapped but not assessed or addressed by a planned project
- Parcels/ neighborhoods/ economic and human health and safety potential impacts of flooding
- Locations where flood hazards are known or suspected but which have not been mapped
- Areas with significant repetitive losses caused by local flooding, including municipal storm drainage systems.
- Planned projects, including all flood control projects budgeted in the Capital Improvement Program's of regional flood control agencies

There are a number of keys to success of this project. The first is spatial analysis that has never before been possible in the Bay Area. For example, through data layering we will combine:

- Flood-prone areas, with
- Existing flood management infrastructure and condition – type and age (i.e. replacement needs), with
- Updated hydrology (stream and storm drain network), with
- Locations of disadvantaged communities, with
- Population densities

The second key to success is regional coordination. SFEI and BAFPAA with, support from BASMAA, are ideal parters because all have the common mission to coordinate and generate regional infromation and concensus. Competent data management will also be a key component to the success of the project.

The third key to success is an online tool that will let mangers upload new data, toggle data layers on and off, pan around the region, and zoom in to specific features (i.e. watersheds, creeks, flood protection features). Flood protection infrastructure, mapped floodplains and ancillary data can be queried on the attributes associated with the feature (i.e. watershed name, infrastructure ownership, infrastructure age) or queried based on spatial parameters (i.e. total length of levees in Contra Costa County, total dam capacity on San Francisquito Creek, total acreage of floodplain in Alameda County). For more in- depth analysis, managers will be able to download the data in both open source and proprietary formats for use in spatial software packages.

The anticipated project products are:

- identification of communities at a disadvanatage to flood risk
- identification of residential and commercial properties, roads and infrastructure at risk of flooding under current and sea level rise conditions
- identification and prioritization (ranking) of flood infrastructure maintenance and repair
- identification of Capital Improvement projects for regional multi-use planning
- integrated, on-line map for analysis of flood risk and infrastructure planning at the regional, watershed or creek scale
- tool for education of flood effects on local and regional communities

Project Status and Schedule:

Please provide the actual or projected start and finish dates for each of the following project stages. If any stage does not apply to the project please enter N/A.

Stage	Duration	Start Date	Finish Date
Planning		award date	Month 12
Demonstration Project		n/a	n/a
Design		month 12	month 18
Construction		month 18	month 36

Additional Notes:

Integration with Other Activities:

Please identify any linkages between the schedule of this project and the schedules of other projects, if applicable. Please discuss the integration of the project with other Bay Area IRWMP projects.

1. Statewide Flood Needs Assessment:

The data developed or compiled in this project will directly suppoprt the Statewide Flood Needs Assessment by providing the information needed to create regional and local preliminary project plans. This information includes location and condition of existing infrastructure, flood hazard areas with and without associated project plans, areas with significant repetitive loss and/or disadvantaged communities, and planned projects (including CIPs).

2. Green Infrastructure and other multi-objective planning efforts:

The on-line interactive analysis tool generated from this project will identify potential flood and waterways infrastructure sites that may benefit from green infrastructure or other multi-objective planning solutions in the reduction of flood hazards.

3. State and federal flood infrastructure inventories; California State Levee dataset, National Levee Dataset, National Hydrographic Dataset:

The San Francisco Estuary Institute (SFEI), as an authorized Regional Data Steward to both the National Hydrography Dataset (USGS) and National Wetland Inventory (USFWS), has the proven experience and recognized capacity to coordinate with State and Federal governments in the development of regional datasets that are tailored to local needs, while seamlessly enhancing state and national datasets with quality-assured local data. Standardizing regional data to meet the local needs and also integrate into State and Federal efforts will improve datasets for both DWR and ACOE and highlight the Bay Area as a pilot regional effort in this multi-faceted water resource coordination. Other similar SFEI efforts include the Wetland Regional Monitoring Project (WRMP) and California Rapid Assessment Method (CRAM) for Wetlands (www.wrmp.org and www.cramwetlands.org).

4. Wetland Regional Monitoring Project (WRMP):

The Flood and Waterways Infrastructure Analysis and Communication Tool will be compatible with other Bay Area-wide SFEI efforts to map wetlands and riparian areas, and thus provide opportunities to identify potential creek projects with multiple benefits such as riparian enhancement, flood management and recreation. This tool will also provide water and wastewater managers information to identify further integration opportunities.

5. Regional Hydraulic Geometry Curves:

Regional curves developed in an ongoing project for the San Francisco Bay Regional Water Quality Control Board will be an additional dataset included in the Flood and Waterways Analysis and

Communication Tool. The regional curves indicate the appropriate width and depth of a stable stream channel (based on drainage area) that will achieve equilibrium stability and avoid excessive erosion, deposition, and flooding. This information will help managers plan stream restoration projects and identify minimum dimensions of engineered hydraulic structures.

Cost and Financing:

Please identify the capital cost and operation and maintenance cost of the proposed project. Please indicate the base year (e.g. CCI) for all costs. Please identify the beneficiaries, potential funding/financing options for project implementation, and ongoing support and financing for operation and maintenance of the project once implemented.

The Flood and Waterways Infrastructure Analysis and Communication Tool has four main components; data gathering, local infrastructure mapping, interactive analysis and communication tool development and education and outreach. The estimated regional cost for the proposed project is $805,000. The majority of this funding is allocated to providing monetary resources to local agencies/partners for training on the mapping protocols and to assist in the mapping of their local infrastructure. Local partners are necessary for the success of this project and the ongoing maintenance of the datasets. Existing regional datasets will be leveraged to help minimize the project's cost including WRMP wetland and riparian habitat layer, city storm drain data, census data and state and federal levee datasets. However, data gaps will need to be identified and filled and additional datasets acquired and standardized. A preliminary data list can be found in the Project Details section.

1. Technical Advisory Committee (TAC) – 2 meetings; 8-10 members; $30k
2. Data Gathering – 10-12 datasets, 9-12 local partners, protocol development; $75k
3. Infrastructure Mapping – 10-12 datasets, training, QAQC, coordination; $350k
4. Interactive Website Development - $300k
5. Education and Outreach - $50k

Benefits and Impacts:

Please provide a detailed discussion of the projected benefits and impacts of the project, both locally and for the region. Please include an evaluation of impacts/benefits to other resources, such as air quality or energy.

1. A regional analysis of where populations may be un-necessarily at risk of flooding

2. Demonstration whether there has been regional disparity in providing flood protection to disadvantaged communities (DAC)

3. Identification of infrastructure weaknesses at jurisdictional boundaries

4. Facilitation of regional prioritization for repair, replacement or new infrastructure

5. Facilitation of regional mutual aid under NEMS in cases of large-scale flooding disaster

6. Identification of significant flood risks throughout Bay Area

7. Documentation of needs and opportunities to improve integrated flood management

8. Community outreach for flood protection project development

Disadvantaged Communities / Environmental Justice:

Please include a specific discussion of how the project will benefit or impact disadvantaged communities or environmental justice goals.

Many of the region's disadvantaged communities exist in flat areas along the bayshore that are flood-prone due to excessive upstream erosion, outdated infrastructure and lack of natural infiltration that causes the streams and flood control channels in these communities to lose capacity to convey floodwaters. A map that accurately depicts drainage networks, flood infrastructure, disadvantaged communities, population densities and flood prone areas will help identify flood risk and prioritize flood management actions. By overlaying mappable information available for disadvantaged communities, the map project will highlight areas of need and identify potential partnerships for future flood protection efforts.

Environmental Compliance Strategy:

Please provide a detailed description of how the project will comply with all applicable environmental review requirement, including CEQA and/or (if applicable) NEPA. For ongoing CEQA/NEPA work, indicate when required documentation would be completed. Also, include discussion of how compliance with local, county, State and federal permitting requirements will be achieved.

Complete- No CEQA clearance will be needed for this activity.

Statewide Priorities:

Please select the statewide priorities that are addressed by this project. Check all that apply.

☐ Reduce conflicts between water rights users
☐ Implement TMDLs
☒ Implement RWQCB's Watershed Management Initiatives
☒ Implement SWRCB's NPS Pollution Plan
☐ Assist in meeting Delta Water Quality Objectives
X Implement recommendations of the floodplain, desalination, and recycling task forces, or of the state species recovery plan
☒ Address environmental justice concerns
☐ Assist in meeting the CALFED Bay-Delta Program goals

Additional Notes:

Stakeholder Involvement and Coordination:

Please describe any coordination with stakeholders, land use agencies, or other state and local agencies. Please include a list of proposed stakeholders, how they have/will participate in the planning and implementation of the project, and how their involvement will influence the implementation of the project. Discuss efforts to address environmental justice concerns.

The compilation and standardization of regional flood infrastructure data layers will require heavy coordination among the Bay Area's cities, counties, flood control districts and other special districts. Through BAFPAA and the Technical Advisory Committee (representing nine counties and individual cities around the San Francisco Bay Area), local agencies will have active participation in the

identification of necessary data layers, the development of mapping standards and protocols, and the collection of infrastructure data in their area. In addition, coordination with DWR and USACOE will help facilitate the integration of local flood and waterways infrastructure data into state and federal data inventories.

The Bay Area Flood Protection Agencies Association (BAFPAA) will provide in-kind staff services and a forum for regional coordination to fill in data gaps and in partnership with SFEI develop standard mapping and quality control protocols. Regional standard mapping methods and protocols can then be transferred to local entities with on-the-ground knowledge for accurate and cost efficient mapping, with quality control and technical oversight provided by the San Francisco Estuary Institute (SFEI). This will set up a mechanism by which the regional map can easily be updated and remain current. BAFPAA will also provide a Technical Advisory Committee comprised of knowledgeable local flood protection managers to advise SFEI in the appropriate type and form of data to include, and in developing update protocols.

Documentation of Feasibility:

Please identify any studies that document the technical and economic feasibility of the proposed project. If study is still in progress please indicate this next to its citation. If no studies exist, please type "N/A".

This project essentially implements approaches and methodologies for mapping that are already being applied by federal and State agencies for levees (http://www.water.ca.gov/floodmgmt/lrafmo/fmb/fes/), (http://www.iwr.usace.army.mil/nfrmp/guidance.cfm#USACElevee). It will also draw from federal protocols for wetlands (http://www.fws.gov/wetlands/Data/Mapper.html), hydrography (http://nhd.usgs.gov/techref.html), and watershed boundaries (http://www.ncgc.nrcs.usda.gov/products/datasets/watershed/tools.html) where applicable. SFEI has demonsrated the necessary capacity to modify these methods as needed to meet regional needs (http://wrmp.org/protocols.html#protocols), and to develop and support web sites that deliver the exptectded kinds of outputs (http://www.wetlandtracker.org/tracker/).

Detailed Project Description:

If desired, please provide a detailed description with additional information about the project.

1. Technical Advisory Committee (TAC)
   A technical advisory committee will be established from members of BAFPAA and BASMAA representing the flood and storm water managers, engineers and planners from agencies and special districts around the Bay Area Region. The TAC will provide technical advice at key times throughout the project including identification of relevant primary datasets, development of mapping protocols, and development of key flood and waterways management questions. The TAC will contribute to the project through 2-3 meetings, email and direct communication.

2. Data Gathering
   With guidance from the TAC the project will identify datasets that best answer key flood and waterways management questions; where are the significant flood risks in the Bay Area?, is there a regional disparity in flood protection for DAC?, where do opportunities exist for integrated flood management?, what is the regional and local prioritization of improvement projects?
   A preliminary list of datasets needed to answer these questions includes levees, flood walls, detention/retention basins, by-pass channels, wastewater systems, sea level rise (SLR) scenarios,

stream and storm drain network, channel crossings, wetland and riparian habitats, existing State and Federal maps, FEMA Digital Flood Insurance Rate Map (DFIRM), DWR flood awareness maps, population densities, socio-economic levels, and capital improvement projects.
The project will gather all existing digital datasets outlined above through state, federal and local coordination. Once data has been gathered, the project will identify gaps in existing data. Data gaps include areas with incomplete or no data for the infrastructure datasets listed above. A standardized mapping protocol will be developed, compatible with state and federal infrastructure mapping standards (where applicable), and vetted by the TAC. The project will coordinate mapping efforts with local flood managers, planners and engineers and train partners on mapping methodology.

3. Local Infrastructure Mapping
   Using the TAC vetted mapping methodology; local partners will fill data gaps and produce standardized, current, and comprehensive infrastructure datasets for their areas. Data will be collected through field work, digitization of hard copy maps, and/or aerial photo interpretation. The datasets will undergo an independent Quality Assurance and Quality Control (QAQC) process with SFEI acting as the QAQC officers to ensure regional standardization. Mapping and QAQC protocols will include a mechanism for updates so the data can remain current.

4. Interactive Analysis and Communication Tool Development
   Once the data/information has been developed and compiled, it will be accessible through a centralized website for managers, planners, engineers, and the public. Various levels of access and password protection can be established so the appropriate level of information is accessible to each group. The project will develop an on-line interactive environment where users can view available data, select information of interest, perform on-the-fly queries and analyses, overlay various datasets and download selected datasets. This tool will provide information to guide management decisions through visual depiction of infrastructure location coupled with relevant data for analysis.

5. Education and Outreach
   The value of the Flood and Waterways Infrastructure Tool for outreach and education among management interests will be greatly increased by incorporating it into web sites focused on the Bay Area environment. The Flood and Waterways Infrastructure Tool might be incorporated into web sites as an image or link to the interactive map. A variety of map images of different detail but suitable for web site applications will be produced and made available to the public. These map images will be useful local outreach and education tools. For example, maps of a local watershed showing areas where flood risk is high and integrated flood management an opportunity will assist agencies in their effort to engage the public on flood management issues and environmental stewardship.

Coordinating Committee
San Francisco Bay Area
Integrated Regional Water Management Plan
c/o Marin Municipal Water District
220 Nellen Avenue
Corte Madera CA 94925
(415) 945-1446 (tel)
(415) 927-4953 (fax)

Draft letter re Boxer climate bill

For Coordinating Committee
San Francisco Bay Area Integrated Regional Water Management Plan

Senator Barbara Boxer
1700 Montgomery St. Suite 240
San Francisco, Ca 94111

March XX, 2010

Dear Senator Boxer,

The San Francisco Bay Area Integrated Regional Water Management Plan (IRWMP) coordinates the planning and implementation of projects among federal, state and local natural resources agencies, water and flood control districts, resource conservation districts, and non-profits to deliver a wide range of water supply and environmental management services. The IRWMP is part of a statewide initiative partially supported through State of California funds, to better integrate water supply, conservation, groundwater recharge, pollution control, stormwater management, flood risk reduction, and habitat restoration. The Coordinating Committee (CC) for this regional effort is writing to support S.1733, the Boxer-Kerry Clean Energy Jobs and American Power Act.

An important focus of this integrated effort is to combine resources to prepare for the impacts of climate change on water supplies, treatment facilities, flood control and wetlands and floodplains. The IRWMP CC therefore strongly supports Section 381 of the act addressing "Water System Mitigation and Adaptation Partnerships " (Part 1 Domestic Adaptation Subpart D Additional Climate Change Adaptation Programs) . The San Francisco Bay Area IRWMP CC is encouraged to see that the Senate version of the House 'Climate" bill also contains the "Natural Resources Climate Change Adaptation Account" which will provide funding to support various federal and state natural resource management programs. Other features of the Senate bill we support are Section 382 which provides funds to states for flood damage reduction and ecosystem restoration and Section 383 which serves to reduce risks from wild fires and Section 384, the coastal adaptation program.

The Bay Area is prepared to expand our local and state initiatives to the federal level and looks forward to a greater federal participation in these coordinated efforts.

The IRWMP CC suggests that the Department of Agriculture Natural Resources Conservation Service be a part of the federal Natural Resources Climate Change Adaptation panel and that this agency's popularly used programs for watershed projects be added to the Natural Resources Climate Change Adaptation Account, including the Environmental Quality Incentives Program and the Wildlife Habitat Incentives Program. The IRWMP CC also recommends that the Green Jobs section of the act create jobs in water conservation and reclamation, habitat restoration, water quality and watershed projects required for climate change adaptation. While there is no debate that alternative energy job creation is important, there is an equally compelling need to train and engage a new work force to respond to needs for water and resources conservation. State legislation requires California to achieve 20 percent reduction in water use by 2020. Floodplain management, stormwater management, pollution control, fish habitat restoration, erosion control, fire, range and forestry management will be needed to achieve practical on the ground results to build in resiliency to climate change.

Thank you for the addition of water resources management provisions in the Senate version of the climate bill. The act is a necessity for the Bay Area and the state to achieve a critically needed response to this most serious of our current challenges.

Sincerely,

Paul Helliker
Chair of the Coordinating Committee

Copy: Congresswoman Nancy Pelosi