

NOTICE AND AGENDA
Regular Meeting

Board of Directors
Aquatic Science Center

To Be Held
September 23, 2009
11:30am-3:00pm

San Francisco Estuary Institute
7770 Pardee Lane
First Floor Conference Room

Oakland, CA 94621
Phone (510) 746-7334

The Regular Meeting will be preceded by an informational discussion session with the SFEI Board of Directors at 11:30, followed by lunch at 12:30pm

1. **Call to Order**
2. **Public Comments**
3. **Consent Items**
 - a) **Approval of Agenda**
 - b) **Approval of June 19, 2009, Meeting Minutes (Attachment 1)**
4. **Action Items**
 - a) **Appointment of new Executive Director**
5. **Information and Discussion Items**
 - a) **Project Update – *Information item about the status of funded, suspended, and proposed projects, financial status update (Attachments 2a and 2b)***
 - b) **Follow-up to Supplemental Environmental Project discussion (handout)**

7770 Pardee Lane
Second floor
Oakland, CA 94621
p: 510-746-7334
f: 510-746-7300

Board Members
CHAIR Bruce Wolfe
VICE-CHAIR, SEC. Dave Tucker
TREASURER Frank Leung
Michele Pla
Darrin Polhemus
Chuck Weir
Alexis Strauss
Pamela Creedon

6. **Future Meeting Agenda Items and Meeting Schedule**
7. **Adjournment**

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To: SFEI and ASC Boards of Directors

From: Meredith Williams and Josh Collins

Date: September 23, 2009

Re: Progress and Remaining Challenges for Support of State and Federal Wetlands Protection Policies and Programs

Summary:

The Institute and its partners have contributed to major progress in tool development in the last few years and completed a successful pilot in Region 2 of incorporating reporting tasks into the application process for the discharge of wastes into waters of the state. *Development* efforts of this kind need to continue. It is becoming clear at this stage, however, that in addition to tool *development* and setting up the appropriate infrastructure for the application of standardized protocols for mapping, rapid assessment, and intensive assessment, resources for *operation and maintenance* of this infrastructure are needed.

Desired Feedback: *How can SFEI's tool development, science underpinnings to policy, and data management best be employed in continuing support of these efforts?*

Background:

Governor Pete Wilson signed Executive Order W-59-93 policy in 1993, establishing a State Wetland Conservation Policy (SWCP). The order provided comprehensive direction for the interagency coordination of activities for the preservation and protection of wetland habitats throughout the state. The SWCP was the first statewide conservation policy of its type in the United States. Its goals are to:

- ***Ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship and respect for private property.***
- ***Reduce procedural complexity in the administration of State and Federal wetlands conservation programs.***
- ***Encourage partnerships to make landowner incentive programs and cooperative planning efforts the Primary focus of wetlands conservation and restoration.***

The Institute's wetland science program has done significant work to support this policy as well as national wetlands protection policies. We will describe the role that SFEI and its partners have played in supporting these policies. Most centrally, we will discuss SFEI's approach to tool development. We will discuss how this work has been done in collaboration with our partners around the state (SCCWRP, MLML, etc.) and expand our existing partnerships to areas of the state where capacity for tracking wetland acreage and condition is not yet available. The work has also involved internal SFEI coordinated efforts under the heading of the "Waterlands" group – Watersheds, Wetlands, Historical Ecology, and IT. These efforts have led to a critical juncture.

The state's development of a Wetland and Riparian Area Protection Policy has been guided by a scientific definition of wetlands that was developed by a Technical Advisory Team led by Josh Collins. Simultaneously, watershed-scale approaches have become more widely accepted and are finding their way into key policies and programs.

Progress and Highlights:

Demonstration of the Wetlands Monitoring and Assessment Framework and Toolkit

- A State of the State's Wetland report was completed using all elements of the 1-2-3 toolkit. http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/wetlands/ew_factsheet.pdf
- Development of a network of reference sites for CRAM is currently underway with 104(b)(3) funding
- A new vernal pool module for the California Rapid Assessment Method (CRAM) was developed
- In Santa Clara County, the Water District is seeking to bring its monitoring and assessment efforts under one umbrella to answer specific watershed management questions under its Integrated Ecological Monitoring & Assessment Program (SFEI, in collaboration with EOA is developing and testing a framework for the water district).
- Central Valley has requested training in the mapping standards and methods developed for the WRMP
- More than 100 people trained statewide in CRAM just since April
- Wetland Tracker is now statewide: projects are tracked for all of coastal California, and the Tracker infrastructure is in place for inland regions
- We continue to serve as NWI and NHD stewards
- Oversight and coordination among agencies and researchers through the Wetland Monitoring Workgroup and the Wetlands Monitoring Council
- Josh authored the Comprehensive Monitoring Program Strategy that has been endorsed by the California Water Quality Monitoring Council

Watershed-scale Monitoring and Management

- US ACE wetlands mitigation planning will soon be done by looking at impacted watersheds.
- The North Bay Watershed Association, via its indicator project, is approaching monitoring on a watershed scale.

As the state policy and regional monitoring programs come to fruition, SFEI seeks to continue to provide valuable support for environmental managers. We would like your feedback on how SFEI's tool development, science underpinnings to policy, and data management can best be employed in continuing support of these efforts.

Remaining Challenges:

- (a) there is no sustainable funding to receive, manage, report, and assess Level 1-2-3 data through the Regional Data Centers (SFEI being one of four at this time), nor to defray ongoing operations and maintenance costs for maintaining Wetland Tracker, CRAM and eCRAM. Despite that, SFEI has been asked to meet expectations for data maintenance and dissemination and tool refinement.
- (b) We anticipate that adoption of the state policy will require regional implementation of tools, but there is no regional wetlands monitoring on which to build. Currently SFEI, and by extension, this region and California, has a leadership position with regard to tool

development and, therefore can influence decisions regarding the toolkit. Should we fall behind in application and acceptance of the toolkit, we may have less opportunity to influence decisions and directions from Washington, D.C.

- (c) We are still lacking standardized methods for regional and national monitoring and assessment, and there are very limited regional requirements of project applicants for specific monitoring and assessment methods using the toolkit. This limits the amount of information (status and trends) available to environmental managers for decision-making.
- (d) There is no single agency with leadership and authority for wetlands protection in the state.

Key Questions:

What mechanisms should staff use to keep board members engaged with the wetlands and watersheds programs and their projects to help us address these challenges? Can board members either help to remove barriers or increase our understanding of the barriers that cannot easily be overcome?

What is the best way for the board to support the Regional Data Center and the help SFEI secure adequate funds to sustain its data management leadership and the needed resources?

How can board members help ensure that standardized performance assessment based on sound monitoring data becomes solidly embedded in the emerging wetlands protection policy by the State Water Board and at the regional level? Can board members endorse the coordinated use of these tools through existing regulatory programs and communicate their endorsement to the appropriate program managers?

DRAFT

**Minutes of the Aquatic Science Center Board of Directors
June 19, 2009
San Francisco Estuary Institute
7770 Pardee Lane, Floor 2
Oakland, CA 94621
1:30pm-3:30pm**

Members Present:

Bruce Wolfe, San Francisco Bay Regional Water Quality Control Board
Dave Tucker, Bay Area Clean Water Agencies
Darrin Polhemus, State Water Resources Control Board
Pamela Creedon, Central Valley Regional Water Quality Control Board
Dave Williams, Bay Area Clean Water Agencies
Karen Schwinn (Alternate), U.S. Environmental Protection Agency, Region 9
Rainer Hoenicke, San Francisco Estuary Institute
Frank Leung, San Francisco Estuary Institute

Non-Members Present:

Mike Connor, East Bay Dischargers Association
Irene Poche, San Francisco Estuary Institute

Others Present:

None

Call to Order

Mr. Wolfe, Board Chair, called the meeting to order at 1:10 p.m.

Public Comments

No members of the public attended the meeting.

Consent Items

Review and Approve Agenda

Mr. Wolfe made a motion to approve all consent items, including the December 1, 2008 meeting minutes and January 29, 2009 special meeting minutes. The motion was seconded by Mr. Tucker and passed unanimously.

Action Items

Appointment of new BACWA Representatives

The Board considered appointment of new BACWA representatives. Mr. Wolfe made a motion to approve the appointments. The motion was seconded by Mr. Tucker and passed unanimously. The Board unanimously voted to approve the appointment of Mr. Williams and Mr. Craig as new Board Members to replace Mr. Weir and Ms. Pla. Dr. Connor was designated as Mr. Craig's Alternate. Ms. Navarett was designated as Mr. Tucker's Alternate. Once the position has been filled, the BACWA ED will be designated as Mr. Williams' Alternate. The Board considered appointing Dr. Hoenicke as new

Executive Director of the Aquatic Science Center, but since the item wasn't included on the agenda, a vote was postponed until the next board meeting.

Approval of 2009/10 Program Plan and Anticipated Budget

The Board reviewed, discussed, and approved the 2009/10 Program Plan with the following amendments: (a) increase the amount authorized to be received by the ASC for the development of a clean-up strategy for San Leandro Bay to \$1M. (b) Add science support for the development of Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) with authorization to receive up to \$5M. The Board also approved and adopted Resolution #01-09 to authorize the Executive Director to negotiate and execute contracts and agreements on behalf of the Aquatic Science Center. Mr. Wolfe made a motion to approve the 2009/10 Program Plan, as amended. The motion was seconded by Ms. Creedon and passed unanimously.

Information and Discussion Items

Project Updates

Dr. Hoenicke provided a summary of the status of funded, suspended, and proposed projects, as well as a general financial status update to the Board.

Consideration of Joint ASC-SFEI Science Briefings

The Board agreed with the recommendation to have quarterly ASC Board meetings on the same day as SFEI Board meetings whenever possible and participate in joint scientific briefings, with regular business items to be taken up after lunch. This will allow for the joint discussion of new initiatives and regular interaction between Board Members of both organizations.

Consideration of Candidates for Supplemental Environmental Projects

The Board provided guidance to staff on fine-tuning candidate projects, categorizing them for easy linkage to different types of discharge violations, and following an appropriate process for vetting them with Water Board staff. The Board requested a one page concept proposal behind each project listed in Attachment 6b, as well as upcoming projects in the near future.

Future Meeting Agenda Items and Meeting Schedule

The Board discussed future focus items and suggested providing updates on the implementation status of Sediment Quality Objectives, items of interest in common between the Delta and the Bay, and causes of toxicity. Dr. Hoenicke mentioned that the SFEI Board has as a priority science discussion item on their next meeting agenda that deals with upcoming challenges associated with tracking the outcomes of the State's emerging Stream and Wetland Protection Policy. Dr. Hoenicke will consult with both SFEI and ASC Board Members in the near future about sequencing items of interest. The Board would like to continue to discuss the ASC Program Plan. The Board also expressed an interest to maintain a schedule of quarterly meetings.

Adjournment

The meeting was adjourned at 2:55 p.m. The next Board Meeting was tentatively scheduled for September 18, 2009.

Respectfully submitted,

Dave Tucker, Board Secretary

Date

ATTACHMENT 2a

To: SFEI/ASC Boards of Directors
From: Rainer Hoenicke
Date: September 23, 2009
Re: Executive Director's Report

NEWS AND NOTABLES

New Initiatives – Status and Desired Outcomes

Human Exposure to Flame Retardants – Sources and Pathways

Urban Ecology – science-based re-design of urban and sub-urban spaces to accommodate multiple objectives

Providing Support for Science-Based Climate Change Adaptation Strategies at Multiple Scales

Tool Development and Transfer to Local Government and Other Decision-Makers for Scenario-Planning and Evaluating Cumulative Outcomes

Regional Data Center Build-Out

On a related note, see:

http://www.mercurynews.com/businessheadlines/ci_13341707?nclick_check=1

SFEI in the Media

Bioaccumulation of mercury and chlorinated hydrocarbons in sport fish (lakes): KQED radio, San Francisco, August 20, 2009; Health Dialogues on “Food Safety” <http://www.kqed.org/epArchive/R908202000/>

Wetland Restoration:

September 14, 2009, KALW radio piece on South Bay Salt Pond Restoration Project with quote from Letitia Grenier on value of restoring tidal wetlands: http://www.crosscurrentsradio.org/features.php?story_id=3443

Pacific Herring:

September 6, 2009, San Jose Mercury News, http://www.mercurynews.com/breaking-news/ci_13278722

Delta Issues:

Robin and Alison were interviewed about the Delta Historical Ecology Study by Bay Nature magazine for their special issue on the Delta.

Publications in Press

Susan Klosterhaus et. al. (in press) *Detection of Organophosphate Flame Retardants in Furniture Foam and U.S. House Dust*. Environmental Science and Technology.

Manuscripts Submitted

Ben K. Greenfield and Andy Jahn. *Mercury in San Francisco Bay forage fish*. Submitted to Environmental Pollution. August 2009.

Nicole David, Lester McKee, et. al. *Mercury Concentrations and Loads in a Large River System Tributary to San Francisco Bay, California, USA*. Environmental Toxicology and Chemistry. September 2009

Reports

Erin Beller, Robin Grossinger, and Alison Whipple, draft. *Historical Ecology Reconnaissance for the Lower Salinas River*. Prepared for The Nature Conservancy. SFEI Contribution 581. 30 pages.

Robin Grossinger, Eric Stein, Kristen Cayce, Shawna Dark, Alison Whipple, and Ruth Askevold, draft. *Historical Wetlands of the Southern California Coast: An Atlas of US Coast Survey T-Sheets, 1851-1889*. Produced for the State Coastal Conservancy. SFEI Contribution 586. 57 pages.

Bruce Thompson, Aroon Melwani, Jennifer Hunt. (July 2009) *Estimated Sediment Contaminant Concentrations Associated with Biological Impacts at San Diego Bay Cleanup Sites*

Presentations at Scientific and Technical Conferences

Susan Klosterhaus gave a presentation at the Micropol and Ecohazard conference (June 8-10). The title of the presentation was 'Alternative Brominated Flame Retardants in San Francisco Bay Wildlife and Sediments'

Kristen Cayce gave a presentation "Georectification and Interpretation of Historical Maps on California Coast" at the Environmental Systems Research Institute (ESRI) GIS User Conference July 13-17 2009

AAAS meeting in San Francisco. Presentations by Josh, Robin, Jay, and Lester. Summary article on AAAS website:

http://www.aaas.org/news/releases/2009/0911_SF_Bay.shtml

Floodplain Management Association (FMA) annual conference, San Jose. Presentations by Lester, John O, Ruth, and Michelle.

Presentations at Other Forums

Letitia Grenier presented at Alviso Stakeholders Forum on results of 3-year South Baylands Mercury Project. Focus on how the project has answered questions for managers about restoration options for Pond A8 and the Alviso area, and how the findings relate to the larger South Bay Salt Pond Restoration Project.

Susan Klosterhaus gave a presentation on July 29 entitled 'Monitoring chemical contamination in San Francisco Bay' to high school students participating in a summer program at the Joint Bioenergy Institute called 'Introductory College Level Experience in Microbiology'. This is a program for underprivileged students interested in pursuing science careers.

Ben Greenfield was a co-presenter Sediment Quality Objectives Scientific Steering Committee review meeting July 23 – 24

The SFEI-Stanford collaboration on "Eco-History for Conservation Planning" was a case study for the 2009 Stanford Media X Visualization Vanguard Collaboratory titled Visualization for Collective, Connective & Distributed Intelligence

SFEI's new research showing the relative amounts and types of historical coastal wetlands in Southern California (carried out in collaboration with SCCWRP and CSUN) was a major focus of a daylong special training workshop for State Coastal Conservancy project managers and other selected agency representatives.

Robin Grossinger gave a presentation at Southern California Coastal Wetland Planning Workshop, July 2009: "Historical Wetlands of the South Coast: Initial Regional and Local Analysis."

Robin Grossinger and Josh Collins partnered with STRAW (Students and Teachers Restoring a Watershed – a program of The Bay Institute) to develop content for their Annual Watershed Week Teachers Training, August 2009: "Learning from the Bay Area's Hidden Past." Josh's gave a plenary address entitled "Our SF Bay in the Distant Past and the Recent Past" and Robin's presentation was entitled "Mapping the Bay's Hidden Past." This partnership was so successful that discussions are underway about other collaboration opportunities.

Robin Grossinger gave a presentation the Napa Watershed Information Center and Conservancy Board Meeting, August 2009: "Napa Valley Historical Ecology Atlas."

Robin Grossinger gave a presentation as part of the Randall Museum Natural History Series, August 2009: "Learning from the Past in a Time of Change."

Meetings and Workshops

Michelle Lent attended the CeNCOOS modeling workshop from August 6-7 to represent SFEI's interests to the CeNCOOS modeling community.

Kristen Cayce and Meredith Williams held meetings with local agencies in Napa and Contra Costa Counties with interest in the new WRMP maps. The meetings included an overview of stream network and wetland map products. Extensive discussions of the Riparian model were held. The Napa meeting was attended by a wide representation of agencies – flood control district, RCD, DPW. One outcome is that we are currently exchanging GIS data layers of interest to SFEI and to these organizations.

Kristen Cayce and Shira Bezalel attended the ESRI Conference in San Diego and covered a number of different technical workshops demonstrating new and existing GIS products and tools from ESRI. Focused on a number of ESRI products to enhance our GIS capabilities at SFEI through internal organization and optimization and application of new tools in projects.

- While there are beginning to be a number of different open source-GIS solutions, ESRI is still the dominant player and it is important to be current on the technology.
- Attending the conference is extremely invigorating. Being among approximately 10,000 GIS users to network and share solutions provides insight and energy not necessarily available on a day-to-day basis at work.
- Making face-to-face connections with ESRI employees is invaluable. We have direct contacts now for product issues/questions without having to go the Tech Support route.
- In addition to providing valuable product information, the ESRI conference offers a way to network with other organizations and agencies with similar missions and goals. Much is gained from understanding what GIS techniques are being used by others, their pitfalls and successes. This is a way to build on the work of others to gain efficiency, share outcomes and build partnerships.
- The conference is also a way to coordinate with existing GIS partners as 10,000 GIS professionals attend each year. Non-conference meetings were held with managers of academic GIS centers, USGS and non-profit GIS managers to discuss existing relationships touch base on projects face-to-face and plan for upcoming tasks, including proposals and field trips.
- At least 2 SFEI staff need to attend the conference each year to be able to make a dent in the information being offered. The ESRI conference is the main GIS conference of the year and therefore a concentrated source of GIS information on tool development and application, software/hardware administration, management, and proposal development. New ideas and solutions for GIS support to SFEI projects are generated at the conference.
- GIS work should be presented at more technology conferences as a display of our capability and research. SFEI is known for its science teams, but the tools and technical methodology being developed by the GIS and Informatics teams are becoming more advanced and sophisticated and should be highlighted at technical conferences.

Lester and Rainer met with Santa Clara County Parks and Recreation Department director and staff to discuss the possibility of strengthening a relationship with the Department in the context of helping to design and oversee/review products

associated with a recent 13267 letter that outlines requirements for further mercury abatement in the Almaden mining area.

Rainer met with SFEP staff to coordinate the development of the new Estuary 2100 proposal for Round 2 of funding made available via Senator Feinstein's special congressional appropriation for SF Bay in FFY 2009.

Upcoming Events

- State of the Estuary Conference, Oakland, CA; September 29-October 1, 2009. SFEI staff involved as panelists, speakers, and poster presenters
- RMP Annual Meeting, Oakland, CA, October 6, 2009
- NOAA Workshop on National Mussel Watch Re-tooling (by invitation only) – collaborative effort with SCCWRP. Oakland, CA; October 2009
- American Society of Civil Engineers, 2010 Low Impact Development Conference, San Francisco, April 11-14, 2010
- Josh Collins was invited to participate on the 2010 national wetlands condition assessment implementation committee

ADMINISTRATIVE ACTIVITIES

Personnel:

Rachel Allen accepted the vacant Environmental Analyst I position and started on September 14. She will work primarily on RMP tasks but will likely also be involved in several other contaminant monitoring and research projects. She joined us as a recent graduate in mathematics and chemistry from Williams College after having spent a summer at Woods Hole and teaching English on the island of Reunion.

Resource Planning and Tracking:

The transition from our old accounting system to the new, more versatile system (Deltek Vision) will be completed by October 2nd. Accounting features will be nearly identical. The resource planning feature however, will allow project managers to vastly improve staff allocation and planning efforts. Project managers will be able to identify who is available when, and improve communication among managers in specific functional areas and project team leaders. The system will be able to match skills and abilities of employees to specific project tasks and facilitate reporting.

Financial Status:

Of the \$1.39M of accounts receivable from work done in 2008 that had become a victim of the project freeze, \$738K have been paid as of September 14, 2009. Seven out of 15 projects have now officially been re-started. One of them was shifted from bond funds to federal stimulus funds (PCBs in Building Materials). One grant agreement that had become a victim of the freeze was recently signed but came with a suspension notice (Delta HE). The remaining labor balance for all re-started projects is \$407K. The remaining total labor balance of 54 active projects is \$3.2M. A new timeline of completion is outlined in Table 1.

Table 1. Timelines of Existing and Re-started Projects

FINANCIAL STATUS REPORT		Tentative end date		Balance	Projected
Proj#	Contract Name	Date Start	Date Complete	SFEI Labor	Monthly Labor
1	6523 GIS Services to MIG	6/28/2007	3/31/09	\$ 4,951	\$ -
2	4062 South Baylands Hg Monitoring	8/9/2006	9/30/2009	\$ 16,723	\$ 16,955
3	5061 Grasslands	10/1/2008	9/30/2009	\$ 25,778	\$ 26,136
4	6515.1 Wetland Project Tracker	4/1/2009	9/30/09	\$ 396	\$ 402
5	5058 NBWA Indicators	10/1/2008	10/31/09	\$ 6,878	\$ 3,430
6	1080 Risk Reduction Workshop	9/1/2008	11/30/2009	\$ 911	\$ 305
7	2500 Green Sturgeon & Longfin Smelt Symposia	7/7/2009	12/9/2009	\$ 33,100	\$ 10,068
8	7051 Support for HCP/NCCP Planning in SCC	10/27/2006	12/30/09	\$ 378	\$ 95
9	1084 Methyl Hg & Dredging Operations Symposiu	7/13/2009	12/31/2009	\$ 30,182	\$ 7,525
10	4044 Montezuma Phase 2	4/1/2004	12/31/2009	\$ 21,728	\$ 5,417
11	5036 Going Organic	6/20/2005	12/31/2009	\$ 14,401	\$ 3,590
12	5037 BMPS & Stone Fruit	9/1/2005	12/31/2009	\$ 18,826	\$ 4,694
13	5039 Napa River WS Decision Support for Management I	12/21/2005	12/31/09	\$ 14,114	\$ 3,519
14	5046 Alameda County Salt Pond Integration	7/24/2006	12/31/09	\$ 42,289	\$ 10,543
15	5062 Development of Estuarine Nutrient Numeric Endpoi	10/1/2008	12/31/2009	\$ 47,873	\$ 11,936
16	6504 Montezuma Data Management	10/10/2003	12/31/09	\$ (52)	\$ (13)
17	8600 General GIS Services to RWQCB	5/11/2009	12/31/09	\$ 10,830	\$ 2,700
18	7052 Trancas Crossing Park and Napa River Trail	2/16/2007	12/31/09	\$ 4,915	\$ 1,225
19	7054 Ano Nuevo GIS Products	8/23/2007	12/31/09	\$ 9,431	\$ 2,351
20	7055 HE of Eastern Contra Costa County	7/2/2007	12/31/09	\$ 10,646	\$ 2,654
21	7063 Napa Valley Historical Atlas (Vintners)	9/1/2008	12/31/09	\$ 6,587	\$ 1,642
22	1053 San Joaquin Monitoring Strategy	7/20/2006	1/31/2010	\$ 22,689	\$ 4,511
23	4066 Wetlands Regional Monitoring	3/1/2007	3/1/2010	\$ 326,412	\$ 54,551
24	1066.4 SWAMP Phase II (Web Portal Development)	5/29/2007	3/31/2010	\$ 3,529	\$ 506
25	1066.4 SWAMP Phase II (Lakes Survey Data Exploration)	5/29/2007	3/31/2010	\$ 20,000	\$ 2,869
26	1066.4 SWAMP Phase II (Wetlands Portal)	5/29/2007	3/31/2010	\$ -	\$ -
27	1067 CCC Marina Grant Program, Phase II	8/14/2007	3/31/2010	\$ 24,592	\$ 3,528
28	8100 Delta RMP Technical Support	4/1/2008	3/31/2010	\$ 81,501	\$ 11,693
29	5031 Urban Stormwater BMPS Prop 13	9/1/2004	3/31/2010	\$ 27,766	\$ 3,984
30	8500 Petaluma River & Tomales Bay WS TMDL	4/11/2008	3/31/10	\$ 84,811	\$ 12,168
31	1064 SQO Phase II (Sarah's Task)	5/1/2007	4/30/2010	\$ 47,790	\$ 6,007
32	1064 SQO Phase II (Ben's Task)	5/1/2007	4/30/2010	\$ 111,983	\$ 14,075
33	7060 Friends of Napa River Historical Atlas	5/1/2008	4/30/10	\$ 6,820	\$ 857
34	6509 SBSP GIS Coastal Conservancy	8/1/2004	7/31/10	\$ 129,377	\$ 11,782
35	5056 PCBs in Building Materials	6/1/2007	10/31/10	\$ 41,822	\$ 2,986
36	7061 S.F. Bay Creosote Assessment	6/20/2008	12/30/10	\$ 43,276	\$ 2,708
37	8400 Online 401 Application	10/1/2008	12/31/2010	\$ 257,327	\$ 16,072
38	5066 Guadalupe	7/1/2009	12/31/2010	\$ 112,622	\$ 7,034
39	7062 Alameda Creek HE Study	12/12/2008	12/31/10	\$ 299,180	\$ 18,686
40	1066.2 SWAMP Phase II (Bioaccumulation LY2)	5/29/2007	3/31/2011	\$ 31,574	\$ 1,664
41	1066.2 SWAMP Phase II (Data Center)	5/29/2007	3/31/2011	\$ 130,819	\$ 6,896
42	1066.2 SWAMP Phase II (Bioaccumulation CY1)	5/29/2007	3/31/2011	\$ 85,324	\$ 4,498
43	1066.3 SWAMP (Central Valley Web-Based Monitor)	3/1/2009	3/31/2011	\$ (3,283)	\$ -
44	4072 CRAM Reference Site Network	1/1/2009	3/31/2011	\$ 52,079	\$ 2,745
45	8401 Stream & WL System Protection Policy Sup	11/1/2008	3/31/2011	\$ 90,389	\$ 4,765
46	5060 Green Infill - Clean Stormwater	10/1/2008	3/31/2011	\$ 109,585	\$ 5,777
47	5067 Ecological Monitoring & Assessment Framework Pr	5/22/2009	3/31/2011	\$ 208,058	\$ 10,968
48	1078 McNabney Marsh - Benthos	8/13/2008	4/30/2011	\$ 10,458	\$ 524
49	7069 Southern CA Historic T-sheet Website	7/7/2009	7/7/11	\$ 10,291	\$ 464
50	2027 SF Bay Non-Native Oyster Eradication II	8/12/2008	9/30/2011	\$ 136,690	\$ 5,471
51	7027 SVP2c Historical Ecology	3/22/2004	11/21/11	\$ 87,773	\$ 3,288
52	5065 Estuary 2100	3/1/2009	1/31/2012	\$ 201,831	\$ 6,952
53	1082 Lindsey Slough Methyl Hg Study	12/1/2008	12/31/2013	\$ 46,692	\$ 897
54	4073 CRAM Training Cost Recovery	4/1/2009		\$ -	\$ -
TOTAL				\$ 3,160,662	\$ 344,102
TOTAL PROJECTED AFTER 2009				\$ 2,360,768	

New Contracts:

During the third quarter (up to September 20, 2009), SFEI/ASC received 13 signed contracts totaling \$792K (Table 2).

Table 2. New Contract Summary (since 2nd Quarter)

Contracts Signed Since Last Reporting Period		Amount to SFEI	AMOUNT OF AWARD	Funding Source/ Partners
CLOSED	FROZEN			
1	San Elijo Lagoon Historical Atlas	\$ 4,000	\$ 4,000	SCC
2	Napa Historical Ecology Atlas	\$ 5,000	\$ 5,000	Friends of Napa River
3	CRAM Training EPA	\$ 21,500	\$ 21,500	EPA/SCCWRP
4	Guadalupe River Project - Hg Mass Loading Monitoring Proj	\$ 178,993	\$ 178,993	SCVWD
5	Southern CA Historic T-sheet Website	\$ 12,000	\$ 12,000	USFWS
6	Green Sturgeon & Longfin Smelt Symposia	\$ 45,551	\$ 45,551	USACE
7	GIS Support for Regional Board	\$ 20,000	\$ 20,000	ABAG
8	Methyl Hg & Dredging Operations Symposium	\$ 30,182	\$ 30,182	USACE
9	SWAMP (WebPortal)	\$ 34,400	\$ 34,400	SWRCB/SJSURF
10	SWAMP (Lakes Y2 & Coast Y1)	\$ 88,000	\$ 88,000	SWRCB/SJSURF
11	SWAMP (Lakes Survey Data Exploration)	\$ 20,000	\$ 20,000	SWRCB/SJSURF
12	Sacramento-San Joaquin Delta HE	\$ 315,874	\$ 315,874	CDFG/ASC
13	Ano Nuevo GIS Products	\$ 10,000	\$ 16,500	UC Berkeley
TOTAL:		\$ 785,500	\$ 792,000	

In Negotiation:

SFEI/ASC is negotiating new awards for the third quarter totaling approximately \$278K (blue-shaded rows). Together with previous awards not yet executed as contracts, \$1.4M are expected to come online between the fourth quarter of 2009 and the first quarter of 2010 (Table 3).

Table 3. Contracts in Negotiation

NEW (since 2nd quarter)					
AWARDED CONTRACTS FOR SIGNATURE OR IN NEGOTIATIONS	AMOUNT SUBMITTED	Percent Awarded	DESIGNATED TO SFEI	Funding Source/ Partners	Ancipated Award Date
1 Ballona Creek HE Study	\$ 50,000	42%	\$ 21,000	SCCWRP / Santa Monica Bay R	September
2 Wetlands Data Portal	\$ 30,000	100%	\$ 30,000	SWRCB/SJSURF	December
3 El Cerrito Rain Garden	\$ 112,205	89%	\$ 100,000	SFEP/ARRA	2010
4 Bay Program Goals Workshop	\$ 45,000	22%	\$ 10,000	USFWS	August
5 SWAMP (Coast Y2)	\$ 117,000	100%	\$ 117,000	SWRCB/SJSURF	October
6 Focused Funding for Monitoring Directory	\$ 50,000	100%	\$ 50,000	Centra Valley RWB	June
7 Sediment Management Plan for the Alameda Creek Flood Control	\$ 300,000	192%	\$ 575,000	ACFC&WCD	June
8 South Santa Clara County HE Outreach Project	\$ 2,570	100%	\$ 2,570	Green Foothills	May
9 Montezuma Data Management	\$ 10,904	100%	\$ 10,904	Montezuma Wetlands LLC	July
10 South Baylands Hg Project/Estuary 2100	\$ 85,927	100%	\$ 85,927	EPA/SCC	2010
11 WL Monitoring Tool Kit	\$ 1,250,000	33%	\$ 412,000	CIAP	November
TOTAL: \$ 2,053,606 69% \$ 1,414,401					

Clients and Stakeholders

Client reviews are mostly good, and our proposal success has been strong so far this year. We have a productive mix of new proposals.

Project Close-out Survey Results (1 low - 5 high)

Project #	Project	Funding Agency	Project Manager	Value	End Date	PM Knowledge	PM Responsiveness	Timeliness	Completeness	Quality	Overall Satisfaction	SFEI Again?
7057	Central Coast HE	SJSURF	Striplen	\$ 8,500	4/30/2009	5	5	5	5	5	5	5
7065	Lower San Francisquito Creek HE Phase I	San Francisquito Creek JPA	Grossinger/Cayce	\$ 9,950	3/6/2009	5	5	5	5	5	5	5
4071	Structure & Metrics of a National Rapid WL Assessment Method	EPA	Collins	\$ 4,800	9/30/2008	5	5	3	5	5	5	5
1075	BDAT/CEDEN Technical Support	SJSURF	Lowe	\$ 50,000	6/30/2008	5	5			5	5	5
7058	Napa Historical Ecology Atlas	Napa County	Grossinger	\$ 10,000	6/30/2008	5	4	4	4	4	4	4
7048	South County Historical Ecology Study	Santa Clara Valley Water District	Grossinger	\$ 230,000	6/2/2008	5	5	4	5	5	5	5
TOTAL						30	29	21	24	29	29	29
POSSIBLE TOTAL SCORE						30	30	25	25	30	30	30
% TOTAL SCORE						100.00%	96.67%	84.00%	96.00%	96.67%	96.67%	96.67%
Project #	Comments											
1075	"Work is continuing to our satisfaction."											
7048	"All issues have been dealt with. We are very pleased with the study and report quality."											
4071	"I could not have asked for a more knowledgeable, responsive, and articulate source for this project than Dr. Collins. The final product was excellent and truly reflective of the vision we communicated to him. Dr. Collins also proved to be a strong defender of this work during the annual meeting of the National Wetlands Monitoring and Assessment Work Group. In all aspects of the project I am thoroughly satisfied."											
7065	"We weren't able to achieve all of the deliverables we had hoped for going in to the study, primarily due to our internal budget constraints. SFEI worked with us to customize our project scope and deliver a very useful product on-time, within our budget, and relevant to our needs. SFEI provided the SFCJPA a service and product that is of very high quality at a cost far below what it would have taken to hire a private consultant firm to do the same level of work. The presentation given to the SFCJPA Board of Directors was professional and informative. We are very happy with our experience with SFEI and would contract them again."											
7057	"Working with SFEI through Chuck was a pleasure. Chuck was very professional, knowledgeable, and helpful. I would, and have, recommend SFEI and Chuck to other entities interested in similar work."											

Continued

Clients and Stakeholders

Proposal Success (as of 9/15/09)

	2003	2004	2005	2006	2007	2008	2009
# Proposals Selected	27	34	21	34	35	36	37
# Solicited/ Renewed			17	22	28	27	31
\$ Proposals Selected	3.26M	10.5M	1.4M	3.0M	4.91M	2.70M	2.51M
\$ Solicited/ Renewed			997K	1.71M	2.52M	1.91M	1.71M
# Proposals Rejected	19	22	21	27	18	12	22
\$ Proposals Rejected	13.64M	1.6M	7.1M	7.5M	3.17M	1.44M	2.81M
# Proposals Pending	12	17	19	26	20	36	16
\$ Proposals Pending	7.16M	3M	2.90M	3.70M	4.98M	5.88M	4.38M

Rejected Proposals (2009)

CA Budget Cuts - 9 (\$1.04M)

Too much competition - 5 (\$1.01M)

Client withdrew RFP - 1 (\$30K)

Insufficient Budget - 1 (\$25K)

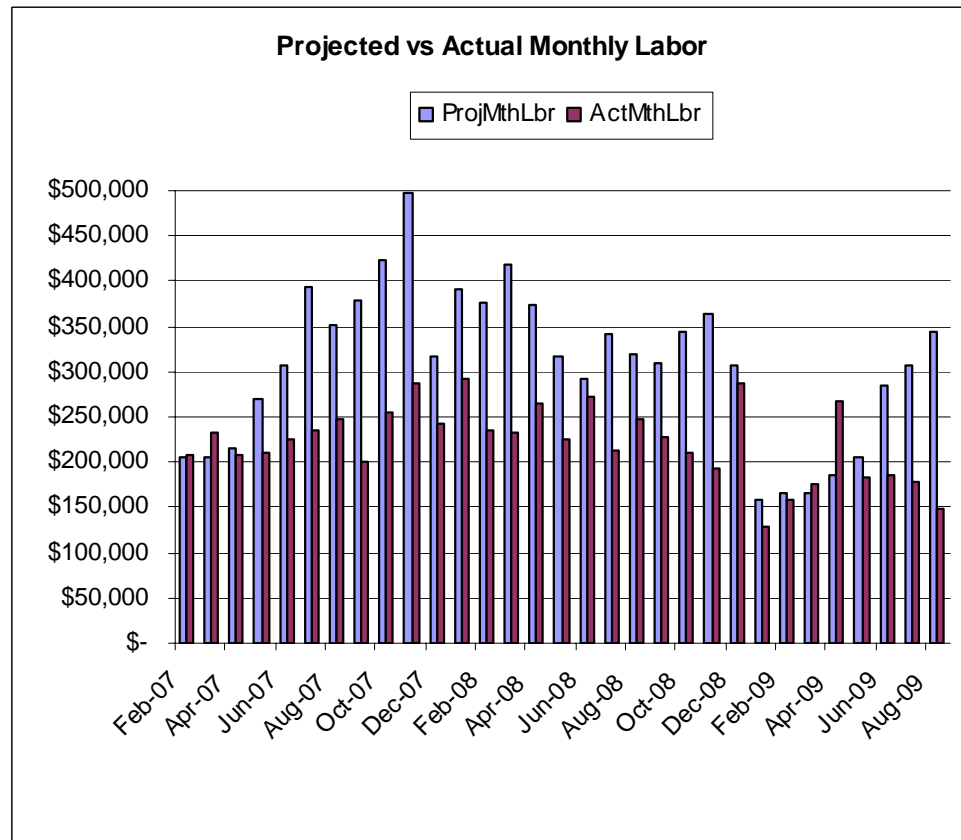
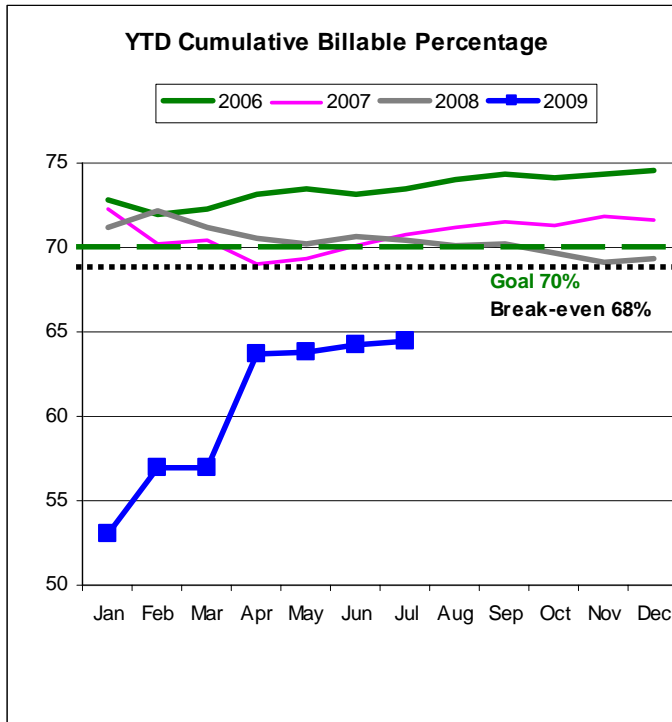
Quality - 1 (\$345K)

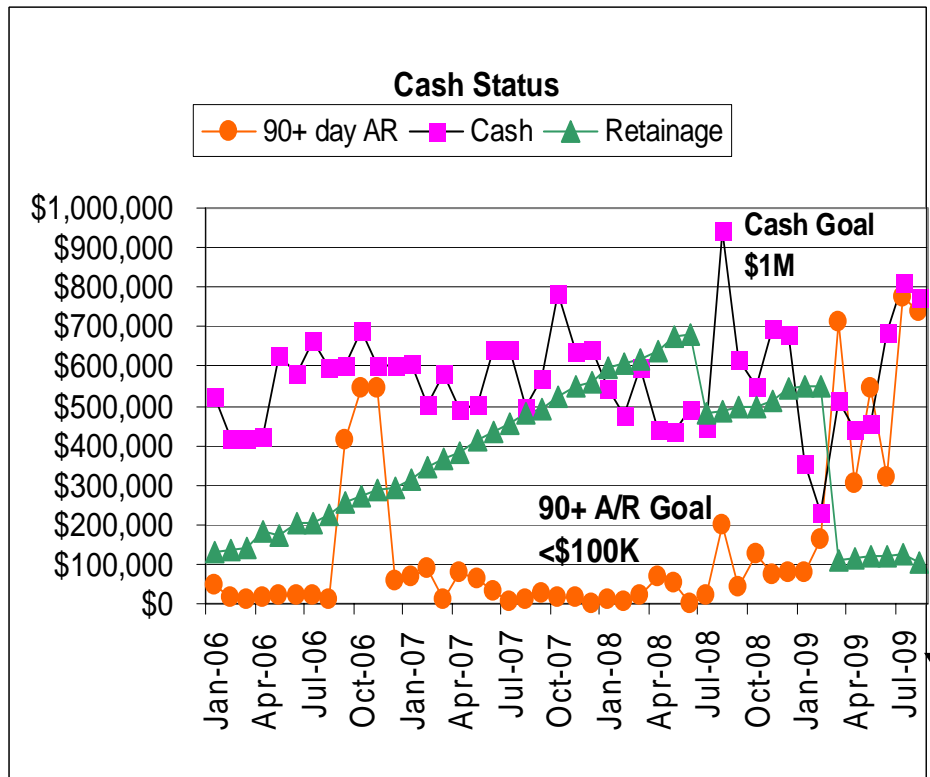
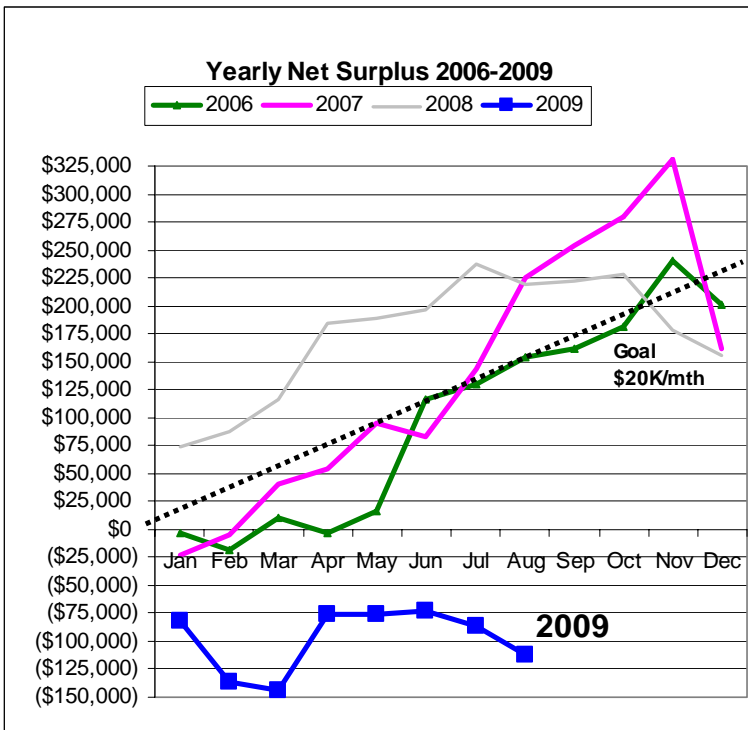
Client not awarded (SFEI was sub) - 2 (\$113K)

Underbid - 2 (\$200K)

Financial indicators

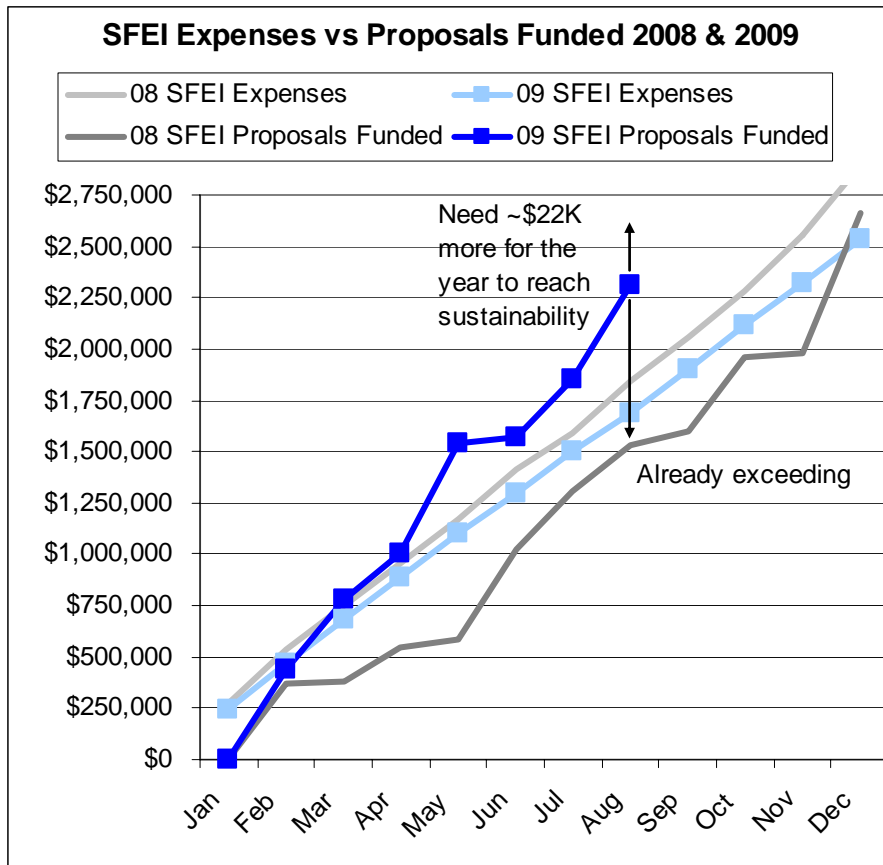
Cash flow has improved greatly since May.





Continued

Financial indicators



SFEI Website:

Three milestones remain before launch of the new SFEI website: 1) security, 2) performance, and 3) project rankings. IT staff are working to address security and performance issues. Program managers are working on the project ranking issue. In brief, the new site offers the ability to promote content based on various metrics (e.g., popularity, date, relation to given search parameters). Program managers are discussing which of these metrics would be most useful for highlighting projects. A list of projects worthy of highlighting is currently being developed. Once the list is finalized, those project pages will be cleaned up and entered into the ranking system. A user tracking system will track the number of unique visits each project page gets. Over time the system will provide feedback regarding the most popular project pages. SFEI staff can use this information to refine and optimize the presentation of material on the new site.

TECHNICAL ACTIVITIES

CONTAMINANTS AND REGIONAL MONITORING PROGRAM FOR WATER QUALITY

1. RMP

- a. The RMP TRC held a joint meeting with SCCWRP's Technical Advisory Group in May. The groups agreed to hold annual joint meetings. The meeting is leading to closer coordination and collaboration between the RMP/SFEI and SCCWRP. RMP and SCCWRP staff are working on a number of collaborative projects including sponsoring a benthic workshop on August 3rd.
- b. The RMP has successfully completed the 2009 water cruise. The sediment cruise commenced in mid-September.

2. Contaminants of Emerging Concern

- a. NOAA Mussel Watch is redesigning its program. For 2010, the program will use California as a pilot study to evaluate chemicals of emerging concern. A planning meeting will be held at SFEI in October to provide input on the 2010 program.
- b. SFEI, SCCWRP, NWRI and a number of other organizations have prepared a short summary document of the May 2009 workshop to assist the State of California in developing strategies for CECs. This document will be available late September in time for the State's recycled water blue ribbon panel to review.

3. SWAMP Bioaccumulation Monitoring

- a. The California Water Quality Monitoring Council's Safe-to-Eat Fish and Shellfish portal is going live next week.
- b. SFEI leads SWAMP's Bioaccumulation Oversight Group (BOG), which has just taken on a larger role as a formal Workgroup for the Council. The BOG will provide oversight for the Safe-to-Eat portal and coordination of the underlying monitoring and assessment efforts across the state.
- c. The State Water Board is using one of SFEI's maps as one of their performance indicators in their annual report.
http://www.waterboards.ca.gov/about_us/performance_report/ecosystems/eo_lakes_fishable.shtml

4. San Diego Bay Sediment Assessment

The San Diego Regional Water Quality Control Board accepted the final report.

5. Sediment Quality Objectives Development

- a. On August 25, USEPA approved the SQO Program for evaluating effects of contaminated sediments to aquatic life. This has resulted in formal state adoption of the program, the first of its kind in the U.S.
- b. The Science Coordination Committee met in July and provided useful recommendations for the indirect effects module (risks to human health from bioaccumulative substances in fish tissue) currently under development.

6. Sources, Pathways, and Loadings

- a. The Small Tributaries Loading Strategy (STLS) is presently being reviewed by Mike Strenstrom (UCLA) and Eric Stein (SCCWRP). This strategy was written to

guide the RMP loading studies over the next 5 years and to ensure consistency between RMP activities and monitoring completed by BASMAA as a consequence of the pending municipal Regional Permit (MRP).

- b. Staff completed two technical reports over the past 12 months both of which are awaiting TRC approval before publishing to the web. The Z4LA y1 report presents concentration and loads data and preliminary interpretations from a small tributary in Hayward. The second report on Regional Suspended Sediment Loads presents new and compelling evidence that fine sediment supply to the Bay is dominated by loads from small tributaries in the nine-county Bay Area. Evidence suggests that the Sacramento River is no longer the larger supply of sediment to the Bay despite it dominating the freshwater budget by a ratio of 25:1. As well as providing further evidence for the importance of local tributaries in the contaminant supply to the Bay, this RMP-generated information could have large impacts on sediment management initiatives largely overseen by BCDC.

Pending RMP approval, SFEI will be monitoring pollutant loads in Zone 4 Line A in Hayward and on the Sacramento River at Mallard Island again this winter.

7. Delta RMP

- a. Currently engaging in discussions with IEP to identify mechanisms for closer coordination and program integration.
- b. Reports slated for public distribution within the next month: 1) comprehensive report on existing water quality monitoring in the Delta & strawman proposals for funding the Delta RMP and data integration in the Delta.

8. San Joaquin Monitoring Coordination Strategy

The project team (SFEI, EPA, RB5, Bernstein) is finalizing a draft strategy document for sharing with potential partners and is planning to engage potential partners (e.g. San Joaquin Restoration Program) during fall.

9. Technical Support for Humboldt Bay Water Quality Attainment Strategies

Staff was approached by the North Coast Regional Water Board to assist the Humboldt Bay Dioxin Workgroup in developing an outline for a sampling and analysis plan. The primary focus of the plan would be to provide a framework (or resource) to assist the North Coast Regional Water Board and other regional stakeholders in developing environmental monitoring studies to assess and address potential dioxin risks in Humboldt Bay. It is not clear at this stage if the Water Board intends to engage us in next steps.

WETLANDS

1. Science Support for Development of the Stream and Wetland Protection Policy

SFEI continued to lead the Science Support for Development of the Stream and Wetland Protection Policy. A series of technical memoranda are being published for use by the Policy Development Team.

Technical Memorandum No. 1 – Role of the TAT – Completed and accepted.

Technical Memorandum No. 2 – Definition of wetlands – Completed and accepted.

Technical Memorandum No. 3 – Landscape Context – Second revision under review.

Technical Memorandum No. 4 – Wetland Identification and Delineation – in progress.

Technical Memorandum No. 5 – Wetland classification – in progress.

2. South Baylands Mercury Project (2006-2009)

Final Report delivered to South Bay Salt Pond Restoration Project. Initial reviewer comments were favorable and more mercury biosentinel work is planned for South Bay with several collaborators.

3. Wetlands Regional Monitoring Program Development (Prop 50)

Development of the riparian model progressed. A presentation on the model's structure and function was given to Shin-Roei Lee, Andree Greenberg, and Ben Livsey.

4. Estuary 2100

We worked with Save the Bay through the Estuary 2100 program to develop a new protocol for monitoring vegetation in transitional wetlands ecotones. Josh Collins drafted the initial protocol and since then has partnered with Save the Bay staff to refine it. SFEI and Save the Bay continue to work closely together.

WATERSHEDS

1. Proposition 13 Stormwater BMPs

This project is about to ramp up again. The final projects of the project will be finalized over the next six months and placed on a dedicated web project web page.

2. Science Support to the Alameda County Flood Control District

SFEI put together an external team and successfully won a bid to work with ACFC&WCD to assist them with sediment-related scientific and engineering studies in the Alameda Creek watershed and other Alameda County watersheds. Potential projects include exploring the possibility of modifying the Fremont Flood Control Channel to include a bankfull channel and riparian trees.

3. Alternative Agricultural Land and Water Management Approaches in the Napa River Watershed

This 3- year collaborative project with the RCD and other stakeholders in the Napa River watershed is near completion with the final report undergoing internal review presently.

4. Green Infill, Clean Stormwater

Staff is monitoring the efficacy of alternative stormwater management at Gellert Park parking lot (Wembley Dr) in Daly City as a component of the Green Infill Clean Stormwater project (SFEP collaboration). The data generated as part of a parking lot retrofit will not only serve to quantify pollutant load reductions but also explore the potential water quality improvements at broader scales of application.


5. Development of Nutrient Endpoints

SFEI is collaborating with SCCWRP on a project to review nutrient-related data and information in San Francisco Bay and recommend numeric nutrient endpoints. The literature review is progressing but the project is slowing down due to Lester needing to prioritize completion of the Prop 13 Stormwater BMPs project that was recently defrosted.

6. Guadalupe River Mercury Loads Monitoring

Staff will be taking samples at two locations this year and have asked the RMP to consider funding a PCB component in addition to the Hg components funded by the SCVWD.

7. PCBs in Building Materials

This project is a collaboration with SFEP and is ramping up again with  RA funding. Susan (the SFEI lead) will be meeting with BASMAA soon to develop a monitoring plan that might include screening (using XRF) and measuring PCBs in caulk in various building applications that predate about 1975 including concrete roads, side walks, bridges, parking garages, tilt slab construction public buildings (e.g. schools, hospitals, administration buildings).

ENVIRONMENTAL INFORMATICS AND INFORMATION TECHNOLOGY

1. Bay Area Regional Data Center

Cristina Grosso and John Oram are leading SFEI's involvement in the California Environmental Data Exchange Network (CEDEN). All CEDEN participants (SFEI, SCCWRP, UC Davis, MLML, State Waterboard) have been holding weekly phone conferences in preparation for an October demo to the State Waterboard. CEDEN funding is currently being provided by the Surface Water Ambient Monitoring Program (SWAMP).

2. Central Valley Interactive Monitoring Directory

Staff met with RB5 staff to discuss scope of work for focused funding (\$50K); the funding is intended to move the directory "over the hump" from beta version to public release as a planning & coordination tool to interested entities in R5. The SWAMP Data Management Team has indicated interest in using the concept statewide in connection with CEDEN/web portals.

3. National Hydrography Dataset Stewardship

The NHD stewardship project is in the early negotiation stages to develop another contract where SFEI will assist USGS NHD in regional stewardship efforts. This round of funding will focus on assisting State stewardship efforts and furthering NHD's National 2010 agenda, including methodology development and procedure refinement, enhancing the Geographic Names Information System (GNIS), and uploading additional regional data to the National dataset. Items delivered in the last contract, ending July 31, 2009, included results from tool testing, procedure documentation, evaluation of NHD editing technical approaches and QA/QC process, and uploading stream and storm drain data to the National dataset.

4. Web Portal Development

John Oram, Jay Davis, Jen Hunt, Shira Bezalel, and Cristina Grosso are wrapping up development of the SWRCB Safe-To-Eat Fish Portal. The site is in its final days of review by the Water Quality Monitoring Council. So far, review comments have been positive. The Portal is scheduled to be launched by the Water Board later this month.

5. Wetland Tracker Updated

John Oram, Mike May, Meredith Williams, Cristina Grosso, Patty Frontiera, and Todd Featherston are working with the SWRCB and SCCWRP to develop the Wetlands Data Portal. This portal will extend some of the basic functionality of Wetland Tracker to meet the specific needs of the Water Board and the Monitoring Council. Funding for this development is being provided by the SWRCB in the amount of \$30k. The Wetlands Data Portal is scheduled for public release in late-October.

Attachment 2b

Staff Summary

To: Board of Directors
From: Rainer Hoenicke, Interim Executive Director
Date: September 23, 2009
Re: Project Status

Recommendation

None. The purpose is to summarize the Aquatic Science projects completed since last Board Meeting, underway, or in negotiation.

Project Title	Amount	Funder	Leads	Start	End
Application of SQO approach in San Diego Bay	\$31,000	SWRCB	Davis, Melwani	April 09	March 10
Delta RMP	\$200,000	RB 5	Jabusch, Davis	April 08	March 10
Petaluma, Tomales TMDL	\$214,000	RB 2	McKee, Ridolfi	Sept 08	March 10
Wetland Monitoring Toolkit	\$650,000	MMS via Resources Agency	Collins, Williams	January 10	Jul 11
401 Certification and Wetland Tracker	\$299,947	EPA via SWRCB	May	Oct 08	Sept 10
Science Support for Wetland Protection Policy	\$270,200	EPA via SWRCB	Collins, Williams	Nov 08	Oct 10
Delta Historical Ecology	\$350,000	DFG	Grossinger, Whipple	suspended	
Development of Bay Area Regional Data Center	\$750,000 <i>(estimate only)</i>	SWRCB	Lowe, Oram	suspended	
Wetlands Data Portal Development	\$1,000,000 <i>(estimate only)</i>	SWRCB	Oram, Grosso	cancelled	
North-Bay Mercury Biosentinels	\$192,000	SCC	Grenier, Slotton	cancelled	
San Leandro Bay Clean-up Strategy	\$1,000,000 <i>(estimate only)</i>	SWRCB	Davis, Greenfield	Idea stage	

Science Support for Statewide Wetland and Riparian Protection Policy, Phase II	\$350,000	USEPA	Collins and Williams	In negotiation	
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Projects Summaries and Updates
Agreements Signed and Underway:

San Diego Bay Sediment Assessment

The San Diego Regional Water Quality Control Board (SDRWQCB) received a technical report from us in July and is using it as part of a mediation process with parties required to implement sediment remediation efforts.

Delta RMP Technical Support

In partnership with Brock Bernstein, staff are assisting the Regional Board in developing a Regional Monitoring Program for the Delta and its tributaries. Draft reports on financing options and data integration, as well as a comprehensive report on existing monitoring efforts are slated for distribution in October.

Petaluma River, Tomales Bay TMDL

Staff are assisting the Regional Board with developing the scientific basis of Total Maximum Daily Load (TMDL) projects to resolve water quality impairments for the Petaluma River and Tomales Bay. This summer, we collected samples of biota (small prey fish), water, and sediment in Tomales Bay to better characterize the spatial distribution of mercury concentrations. These data will be analyzed, and in the case of biota, compared to numeric targets proposed for the protection of birds and other wildlife in a report submitted to the Regional Water Board. An impairment assessment, which includes interpretation of the data for mercury, will follow. A draft sediment impairment assessment was submitted in early September. In the Petaluma River watershed, the Regional Board would like us to focus on nutrients and pathogens. Based on the findings from our preliminary impairment assessment, we will be developing a detailed monitoring plan and QAPP for nutrients and pathogens. The field work will not take place under this contract due to limits on timing and funding, however when it is completed, it will include using the new SWAMP algae sampling protocol to characterize nutrients.

Science Support for Development of Wetland and Riparian Protection Policy

The main objective of this project is to extend key policy elements developed in the North Coast and San Francisco Bay Regional Water Boards' *Stream and Wetlands System Protection Policy* by further developing these concepts into a State Water Board *Policy to Protect Wetlands and Riparian Areas*. The Water Board will develop a wetland regulatory mechanism based on Clean Water Act 404 (b)(1) guidelines; and extend statewide beneficial use definitions and water quality objectives developed by the North Coast and SF Bay Regional Water Boards. A series of technical memoranda are being published for use by the Policy Development Team.

Technical Memorandum No. 1 – Role of the TAT – Completed and accepted.

Technical Memorandum No. 2 – Definition of wetlands – Completed and accepted.

Technical Memorandum No. 3 – Landscape Context – Second revision under review.

Technical Memorandum No. 4 – Wetland Identification and Delineation – in progress.

Technical Memorandum No. 5 – Wetland classification – in progress.

401 Certification in Wetland Tracker

This project, conducted in collaboration with the Southern California Coastal Water Research Project, Moss Landing Marine Laboratories, California Coastal Commission, Humboldt Bay Harbor, Recreation and Conservation District, is intended to enable the Wetland Tracker to be the common data management system for the State's primary wetland protection policies and programs, including the 401 Certification and WDR Programs, the proposed Wetland and Riparian Area Protection Policy, and the State's No-Net-Loss Policy. The main product will be a new version of Wetland Tracker that streamlines 401 Certification, provides access to historical 401 cases, and enables standardized reports on the status and trends of 401 projects and ambient conditions for watersheds, regions, and Statewide.

Work is continuing on development of the software specifications to insure all initial requirements are met. The specifications will be vetted with Water Board staff and other stakeholders by October 2009.

Projects with Approved Funding – Agreements not yet signed

Wetland Monitoring Toolkit

Level 1-2-3 framework has now expanded across the state. This project will continue to develop CRAM, eCRAM and Wetland Tracker infrastructure to cover four regions of the state (South Coast, Central Coast, SF Bay Area, and North Coast) in collaboration with the Southern California Coastal Water Research Project, Moss Landing Marine Laboratories, California Coastal Commission, Humboldt Bay Harbor, Recreation and Conservation District. This project will continue coordination with regional teams to ensure their output builds statewide capacity to monitor and assess wetlands and riparian areas. This includes the statewide Steering Committee and coordination of IT engineering with the user community. We will expand CRAM habitats to include depressional wetlands and seasonal estuarine/coast lagoon systems. This funding will also be used to continue development of the "train-the-trainers" program.

Projects with Approved Funding – Agreements Suspended or Cancelled

Delta Historical Ecology (suspended)

SFEI will conduct a historical ecology study of the Sacramento-San Joaquin Delta, documenting the hydrogeomorphic and ecological characteristics of the Delta prior to significant Euro-American modification. This effort will use well-

developed methods for the synthesis of historical data through GIS development and analysis. This historical reconstruction will document, to the extent possible, patterns of variation and extent of habitats throughout the Delta to better understand species support functions and controlling physical processes within the native landscape. Such information will provide a basis for identifying target locations and physical conditions necessary to restore functional habitat mosaics within the projected future Delta landscape.

The project will synthesize hundreds of independent historical data sources to build a reliable picture of early conditions that is sufficiently detailed to inform the ERP Conservation Strategy. SFEI will assist and train DFG staff to participate in the project, including assisting with data collection, GIS, and report production and presentation. Project deliverables will include a GIS of historical conditions documenting target habitat types (e.g. tidal channels, riparian forest, ponds and lakes, tidal marsh-upland ecotone, etc.) and a final report describing the methodology and results.

While the project is suspended, the Bay Delta Conservation Plan and Ecosystem Restoration Plan have kept going. Agency staff have continued to express the need for the historical ecology study findings. So SFEI has continued a small amount of work to keep the project moving forward, particularly through directing DFG staff (Water Branch), who have been assigned to the project. Compilation of textual data and GIS development have continued ahead, albeit slowly. We expect this project to start soon and have received a signed contract with a notice not to proceed until further notice.

Small Fish Biosentinels Monitoring in North-Bay Wetlands (with UCD) – cancelled in its current form

This Small fish mercury (Hg) biosentinel monitoring has been requested by the Coastal Conservancy and CDFG for the North Bay region (including the Napa-Sonoma Marshes, Hamilton Restoration, Petaluma Marsh, and appropriate control locations). The most appropriate design will depend on the information needs of the project and land managers. The final design will be determined vary according to tradeoffs among number of sites (spatial coverage), sampling frequency and whether samples are analyzed individually or as multiple composites. Study design and site selection will occur during a project planning meeting with DFG and will be approved by SCC. Field and laboratory work will include collection of small fish and analysis for whole body Hg and ancillary parameters. Results will be analyzed and presented to interested stakeholders in an annual planning meeting and in a brief annual report. In addition, twice per year, all newly collected data will be QA verified, formatted, and compiled in a relational database. These data will be provided to project stakeholders, and provided to the general public via the SFEI website. The Conservancy indicated that they have resources available to start this project, albeit with only about half the funds originally allocated.

Development of Regional Data Centers (cancelled)

SFEI was designated as one of four Regional Data Centers at this time. The State Board will consider an item on December 2 that would provide funding for the purposes of collecting and integrating project data into the California Environmental Data Exchange Network (CEDEN) in order to more

comprehensively track water quality project effectiveness and make it accessible to the public. The funds will provide for the operation of the four centers for up to a three-year period. The data centers will integrate monitoring data across departments and agencies, and will be made available to the public through a user-friendly Internet portal. SFEI will likely be focusing on wetland data and identify options, in close collaboration with the other Regional Data Centers, for how to make them self-sustaining and independent of General Fund contributions. The project became a victim of the budget crisis and was suspended before an agreement could be completed.

Wetland Data Portal (morphed into new, more phased project with SWAMP funding)

We submitted a proposal to the State Water Board, which was approved for funding on December 2 to implement the Wetland Tracker (www.wetlandtracker.org) as a model Data Center portal, as recommended by the California Water Quality Monitoring Council. The Wetland Tracker has many of the desired portal attributes and functions. It is based on the 3-level monitoring framework outlined in the USEPA guidance for comprehensive wetlands monitoring and assessment (USEPA 2006); it is consistent with the State's growing interest in open source engineering (CPRC 2004); its development is led by Data Center staff and water quality experts with oversight by regional and statewide advisory groups; and it permits public data exchanges, although these functions are rather limited at this time. The Wetland Tracker must have functions added to deliver the data to the broad community of wetland interests throughout the State. The project became a victim of the budget crisis and was suspended before an agreement could be completed. It now is back on track with SWAMP funding to SFEI under subcontract with the San Jose State University Foundation (MLML), rather than the ASC, at an initial level of approximately \$32,000.

Projects in Discussion

San Leandro Bay Cleanup and Abatement Plan

In collaboration with the San Francisco Bay Water Board, ASC would conduct studies needed to provide a scientific foundation for a cleanup and abatement plan for San Leandro Bay. A proposal is being developed for submittal to the State Water Board's Cleanup and Abatement Fund. This would be a multi-year effort that would include stakeholder participation. ASC's role would be to coordinate the project and implement scientific studies in support of cleanup plan development. San Leandro Bay was included on the 2006 303(d) list for multiple pollutants, including mercury, PCBs, chlordane, dieldrin, dioxins, furans, exotic species, lead, PAHs, pesticides, and zinc. This project would develop a blueprint for cleaning up this valuable ecosystem, and lessons learned from study of this microcosm of San Francisco Bay would also be broadly applicable to other contaminated sites on the Bay margin and the Bay as a whole.

Elements of this project to be performed by ASC would include some or all of the following:

- preparation of a conceptual model/impairment assessment report,

- studies of sediment quality in support of assessments relating to the new sediment quality objectives (for both direct effects and indirect effects),
- monitoring and modeling of contaminant loading from local watersheds,
- sediment core studies to evaluate load attenuation and the spatial distribution of contamination,
- fate modeling in support of recovery forecasting,
- food web monitoring and modeling,
- exposure and effects studies to fill critical information gaps,
- emerging contaminant screening, and
- studies to support human risk reduction.

This project would test many of the approaches being implemented on a broader scale in the RMP, and would be closely coordinated with the RMP.

SFEI Projects of Interest

Development of “Is It Safe to Eat Fish and Shellfish” Portal

The Water Board asked SFEI to assist with providing content for the forthcoming “portal” through an existing SWAMP sub-agreement with San Jose State University. This project is in support of the work the California Water Quality Monitoring Council is conducting under SB 1070. The funding level is \$35,000, and the website launch is scheduled for this summer.

Development of the Wetlands Data Portal

Based on the successful work on the Safe to Eat Portal, the Water Board allocated funding for the first phase of a Wetland Portal. The funding level is approximately \$32,000.