Board of Directors Meeting
Aquatic Science Center and San Francisco Estuary Institute

Friday, June 23, 2017 Time: 10:00 am – 2:00 pm

San Francisco Estuary Institute
4911 Central Ave, Richmond, CA 94804

Number: 1.415.655.0381 - Access Code: 664-310-209#

AGENDA

Joint Business

1.	**Call to Order** **SFEI Roll Call and Determination of Quorum** **ASC Roll Call and Determination of Quorum** **Review and Approval of Agenda – ASC Board** **Review and Approval of Agenda – SFEI Board**	10:00 am Jim Kelly
2.	**Public Comment**	10:10 am Jim Kelly
3.	**Action: Consent Items** *Attachment 1 – March 24, 2017 Meeting Minutes and Action Items – page 3* **Desired Outcome:** Approval of Consent Items - Vote by ASC Board - Vote by SFEI Board	10:15 am Jim Kelly
4.	**Executive Director Report** *Attachment 2 – Executive Director's Report – page 7*	10:35 am Warner Chabot
5.	**SFEI Development Strategy – Consultant Preliminary Findings & Recommendations** *Attachment 3 – Development Program Report – page 12*	10:50 am Warner Chabot & Bob Woods
6.	**Report on Governance Committee of June 13, 2017** *Attachment 4 – Draft Minutes of Meeting – page 33* **Desired Outcome:** Confirm Governance Committee Actions	12:05 pm David Williams
	LUNCH	12:35 pm
7.	**Report on Executive Committee of June 16, 2017** *Attachment 5 – Draft Minutes of Meeting – page 35* **Desired Outcome:** Confirm Executive Committee Actions	1:00 pm Jim Kelly
8.	**Report on Building Lease** *Oral presentation*	1:10 pm Warner Chabot
9.	**Board Member Reports**	1:20 pm Board Members

10.	**Adjourn Joint Business Meeting and Call SFEI Meeting to Order**	1:30 pm

San Francisco Estuary Institute Business Meeting

SFEI 1.	**Action: FY17 Financials and FY18 Budget & Program Plan** *Attachment 6 – Financial Performance of FY17 thru 4/30/17 & Restricted Reserve Policy – page 36* *Attachment 7 – FY18 SFEI-ASC Budget – page 41* *Attachment 8 – FY18 SFEI Program Plan – page 45* *Attachment 9 – E.D. Authorities: Resolution 18-01 – page 59* *Attachment 10 – E.D. Authorities: Resolution 18-02 – page 62* **Desired Outcome:** Accept Financials, and approve Restricted Reserve Policy, FY18 SFEI-ASC Budget, SFEI Program Plan, and E.D. Authorities	1:30 pm Warner Chabot & Lawrence Leung (by phone)
SFEI 2.	**Adjourn SFEI Meeting**	1:50 pm

Aquatic Science Center Business Meeting

ASC 1.	**Action: FY17 Financials and FY18 Budget & Program Plan** *Attachment 6 – Financial Performance of FY17 thru 4/30/17 (see above, same as SFEI) – page 36* *Attachment 11 – FY18 ASC Program Plan – page 63* *Attachment 12 – E.D. Authorities: Resolution 18-01 – page 75* **Desired Outcome:** Accept Financials, and approve FY18 SFEI-ASC Budget, ASC Program Plan, and E.D. Authority	1:50 pm Warner Chabot & Lawrence Leung (by phone)
ASC 2.	**Adjourn ASC Meeting**	2:00 pm

SFEI - ASC Future Agenda Items:

TBD

Upcoming Board Meetings (Proposed)

Friday, September 29, 2017
Friday, January 12, 2018
Friday, March 30, 2018
Time: 10am-2pm

SFEI AQUATIC SCIENCE CENTER
4911 Central Ave, Richmond, CA 94804, p: (510) 746-7334, f: (510) 746-7300 www.sfei.org

Attachment 1

Action Items & Board Meeting Minutes

ASC and SFEI

March 24, 2017 10am-2pm

4911 Central Ave. Richmond, CA 94804

Action Items:

1. Lawrence Leung - research Wells Fargo Line of credit
2. Warner –
   - **June Board Meeting -** Doodle Poll to set June Board meeting date,
   - **Building Lease –** Coordinate with Kelly, Olivieri (& others) on Lease negotiations
   - **Gov. Committee** - Schedule Next Gov comm. Start process to nominate Board candidates
   - **SFEI Budget** – Lay out process to develop a budget
   - **DEVELOPMENT –** Set process to create a development strategy and create a Development committee

Board Members:

Present:
Adam Olivieri, Janet Hashimoto, Karen Larsen, Alan Ramo, Mitch Avalon,
John Callaway, Jim Ervin, Jim Kelly, Jim Fiedler, Prabhakar Somavarapu
Skyli McAfee
***By Phone*:** Pamela Creedon & Bruce Wolfe
Absent: Ann Hayden, Barbara Salzman, Dave Williams and Dave Tucker
Others Present:
Staff: Warner Chabot, Lawrence Leung, Tony Hale and Joanne Cabling
Other: Unispace Representatives (Kayla & Andrew)
Quorum present? Yes

Proceedings

Item 1 – Call to Order and Approval of the Agenda

Meeting called to order at 10:11 am. by Chair, Jim Kelly

- Agenda reviewed by SFEI-ASC Board. Warner Chabot asked to move up ASC and SFEI Program Plans.

Item 2 – Public Comment

No Public Comment

2

Item 3 – September 23, 2016 Meeting Minutes and Action Items

- Action items and Meeting minutes of the September 23, 2016 Board meeting were presented, amended. MOTION made by Prabhakar Somavarapu to accept amending meeting minutes and action items, seconded by Jim Fiedler and passed.
- Warner Chabot recommended that the Agenda be modified to review, discuss and approve the SFEI and ASC Program Plans, while we had a full quorum of Board members.
- Joint meeting suspended
- ASC Meeting called to order.

Item 4 - ASC 1: Aquatic Science Business – Resolution 2017-1, Program Plan Update and Financial and Audit reports.

Warner Chabot called attention to the Program Plan Update to specifically review a project partnership between ASC and Delta Stewardship Council. He presented **Resolution 2017-1** to authorize a Three-year MOU and contract between the Aquatic Science Center and Delta Stewardship Council (DSC), to provide scientific services to the DSC. MOTION to approve made by Prabhakar Somavarapu, seconded by Jim Fiedler. Board approved. John Callaway abstained from vote.

- Each of the remaining projects were approved separately and as stated:
    - Project 8118 (Nutrient Modeling) - MOTION made by Pamela Creedon, seconded by Jim Fiedler. Prabhakar Somavarapu abstained from vote.
    - Project 81xx (Workshop for CEC's) - MOTION made by Jim Fiedler, seconded by Prabhakar Somavarapu. Board approved. John Callaway abstained from vote.
    - 8715 (Tech Support for SFPUC Watershed Management) - MOTION made by Pamela Creedon, seconded by Mitch Avalon, Board approved.
    - 87xx (Delta Landscapes Workshop) - MOTION made by Prabhakar Somavarapu, seconded by Jim Fiedler, Board approved.
- **Financial Performance and Audited Financial Statements and Single Audit** were presented to the Board by Lawrence Leung. Further discussion was made about Reserve funds. Lawrence Leung made recommendation for SFEI to retain Ricciardi, Inc. as auditors for FY 2017 audit. In the future, Mitch Avalon requested improved, open communication with Auditors and a presentation to the Board of Directions. Jim Kelly requested that the completed auditor's letter be provided to the full board upon its completion (rather than waiting until in the following board packet).
- Warner Chabot asked to postpone actions on the Restricted Reserve Policy. Considering the potential for reduced federal contract funds, he requested that the Executive Committee and the full board to discuss (at their next meetings), the option to allocate available surplus funds into strategies to diversify SFEI funding stream.
- Jim Kelly tabled the Restricted Reserve Policy to allow further discussion with the Executive Committee, who will then make recommendations on the budget at the next board meeting.

- Jim Kelly noted that Financial Performance and Audits were for both SFEI and ASC.
- MOTION to accept the Financial Performance and Audit Reports was made by Prabhakar Somavarapu, seconded by JF, Board approved.
- MOTION for Ricciardi, Inc. to remain as Auditors made by Adam Olivieri, seconded by Prabhakar Somavarapu, Board

Item 5 - SFEI 1: Program Plan Update

- Warner Chabot presented the SFEI Program Plan update. MOTION to accept the SFEO Program Plan made by Adam Olivieri, seconded by Prabhakar Somavarapu, Board approved.
- Joint business meeting reconvened.

Item 6 – Executive Director Report

- Warner Chabot presented his Executive Director's report explaining staff growth, foundation outreach, business model review and development consulting. He then gave summaries on each of the program areas.
- Tony Hale gave an update on funding of Environmental Informatics tools. He proposed that the ASC "legacy" site be retired and that traffic be re-directed to the SFEI site. Jim Kelly suggested that this would be acceptable if the SFEI site retained a section devoted specifically to ASC actions (including minutes from Board meetings).

Item 7 – Report on Building lease and Future SFEI Expansion

- Warner Chabot explained that building lease is expires in two years. He noted that SFEI has explored alternative office locations and recommended that he be authorized to begin lease renewal negotiations in collaboration with the Board Chair. He noted that if SFEI remained at this site, there was a need for additional office and conference room capacity and other facility improvements. Funding to support these improvements (tenant improvement allowance), would be part of the negotiations process. Two representatives from the Unispace architectural firm presented their ideas on how to renovate SFEI-ASC workspace. A few of the Board members gave comments on their own experience with workspace renovation. Jim Kelly informed that he might call on directors to help with the process. MOTION for Warner Chabot and Jim Kelly to start discussions with landlord and brokers to negotiate lease was made by Prabhakar Somavarapu, seconded by Pamela Creedon, board approved.

Item 8 – Board Term limits

- Warner Chabot presented the board with memo on Board Member Service and Term limits. Many agreed that the document was a great starting off point. Warner Chabot stated that the Governance Committee would examine the Service and Term limits more closely.

Meeting adjourned 1:10pm.

Attachment 2

Date: June 14, 2017

From: Warner Chabot

To: SFEI-ASC Board

Re: Executive Director's Report

SFEI has had a highly productive Spring and early Summer. A few highlights follow:

Staff Growth – Demands for SFEI services continue to grow. Since March we have added additional staff to our Clean Water program. ***Zhenlin Zhang*** is a modeler who will focus on physical-biogeochemical models to investigate three-dimensional water quality processes in San Francisco Bay. We've also added ***Nichelle Miller*** is our new office Administrative Assistant. Nichelle previously served in a similar role at the Friendship Missionary Baptist Church in Vallejo.

Financials – For the 2016-17 fiscal year, SFEI staff expect to exceed our financial target of a $331k surplus. Our actual surplus is projected to be around $587k. This will allow us to continue to add to our restricted reserve fund (see Financial Report, Attachment #6).

HR Consulting – SFEI now has 60 employees. This size requires a heightened attention to various state and federal employment laws and procedures. After a false start with one consulting firm, we made a shift and have retained a new Human Resources consulting firm (Options 4 Growth), with whom we are very satisfied. They have and continue to provide us with expert counsel on a wide range of important and complex personnel and management issues.

Foundation Outreach – Our outreach to the Foundation world continues. Last March, I noted successful grant efforts including:

- A $30k seed grant from the Silicon Valley Community Foundation to help launch a new SFEI initiative entitled the "Center for Resilient Landscapes."
- A $882k grant from the Betty and Gordon Moore Foundation for our landmark microplastics research project in SF Bay.

We have now partnered with a coalition of 10 Environmental Justice organizations to secure a $100k grant from the San Francisco Foundation to enable SFEI to provide science and technical support to serve projects in disadvantaged Bay Area Communities.

Development Consulting - In light of expected EPA funding cuts, we have accelerated our efforts on a development strategy. Our Resilient Landscape team is working with **Guidelight Strategies** to create a strategic communications and development plan for the Center for Resilient Landscapes.

In addition, SFEI has also retained Bob Woods, a strategic development consultant to work with the Board and staff on an overall foundation, corporate and major donor development strategy for the entire organization. He has interviewed a variety of board and staff members and will engage the board at the June meeting with his preliminary findings (see memo in Attachment #5)

Environmental Justice (E.J.) Outreach and Collaboration

In addition to our efforts to secure S.F. Foundation funding for a partnership with the Resilient Communities Initiative, we are also discussing possible SFEI technical support to a major regional water assessment project led by the Environmental Justice Coalition for Water (EJCW). This group has recently received a major, multi-million dollar grant from the Department of Water Resources. The DWR grant is for their Integrated Water Resources Management (IWRM) program. This grant will support an outreach and assessment program in the SF Bay Area, specifically to identify, quantify and prioritize

water related issues in disadvantaged communities. It is SFEI's goal to subcontract with EJCW to develop a database and mapping strategy to support their regional assessment efforts.

Program Updates:

- **Delta MOU -** Over the past few months, the Aquatic Science Center (ASC) has finalized the terms of a three-year MOU with the Delta Stewardship Council. This MOU will formalize a major new science advisor role between ASC and the Council and the Delta Science Program, allowing ASC to provide up to $500k per year in scientific studies and reports to support Delta restoration and management. This effort will require collaboration and contributions from all three of our program areas.

Environmental Informatics

- **BCDC Analytics and GIS Support** - The Environmental Informatics team has secured a grant with the Bay Conservation and Development Commission (BCDC) to support their climate adaptation and shoreline planning efforts by providing the Commission staff with GIS data management, user interface design, and web mapping. The two-year project will have SFEI provide up to $100k in services each year with renewal options for a third and fourth year. We intend to pursue a similar strategic proposal to other state agencies for similar work.
- **Harmful Algal Blooms Detection** - This month, we will also complete work on a detection tool for freshwater harmful algal blooms. The project represents a successful collaboration between NOAA, US EPA, the State Board, and SFEI. The product, an interactive map featuring processed satellite-based imagery, will be incorporated into the state's portal for Harmful Algal Blooms, which is managed by the State Water Resources Control Board.
- **S.F. Estuary Partnership Website Redesign** - We are also completing work on a revised website for the SF Estuary Partnership. It will be focused on tracking and reporting the current activities associated with the SF Estuary Blueprint, also known as the Comprehensive Conservation & Management Plan (CCMP).
- **Business Plan for EcoAtlas** - On behalf of the California Water Quality Monitoring Council, EI has drafted a business model for EcoAtlas. To identify options for ongoing funding of the various on-line tools in the EcoAtlas toolbox.

Resilient Landscapes

- **Flood Control 2.0** – SFEI has recently completed a multi-year, EPA funded partnership with multiple local and state agencies to rethink flood control design at the Bay interface. Our common goal has been to improve flood control protection while also achieving ecological diversity and complexity and delivering sediment to Bay wetlands.

  This month, SFEI and our partners released an on-line "toolbox." This toolbox contains many new resources to help land managers develop new channel management approaches. It contains data on the amount of sediment currently trapped in flood control channels, the regulatory considerations for flood control channel management, and the economic benefits associated with managing flood control channels to better support tidal wetlands. A toolbox report titled Changing Channels provides management recommendations for the major flood control channels at the Bay edge. These tools will be vital as the region moves into a new era of managing land along the Bay to support both people and wildlife as sea level continues to rise.
- **Resilient by Design, SFEI support –** The long awaited Resilient by Design Challenge finally launched this month. This 12-month project will invite 10 international design teams to develop visionary community plans to address climate change at 10 locations along the S.F. Bay shoreline. SFEI will serve as the science consultant to this effort and its 10 teams. We will present a science

briefing when all of the teams have been selected. SFEI will then provide a limited amount of independent science support to each of the design teams.

- **Sycamore Woodlands** - In California, sycamore-alluvial woodland (SAW) habitat is rare due to extensive habitat loss. Yet it provides regionally unique habitat values for wildlife and climate adaptation. A goal of the Santa Clara Valley Habitat Plan is to acquire and restore a portion of this habitat. To support this goal, SFEI and H.T. Harvey partnered on a landmark "Sycamore Alluvial Woodland" study to evaluate and map the regional habitat and to recommend options to restore and manage it at several sites. See: **http://www.sfei.org/projects/saw**

- **Calabazas-San Tomas Aquio- Pond A8 Vision Workshop** - This month, SFEI partnered with the Santa Clara Valley Water District and the South Bay Salt Ponds Restoration Project, to co-host a southbay "***landscape vision***" workshop. The workshop goal was to connect Calabazas and San Tomas Aquino Creeks to a South Bay salt pond (Pond A8), now slated for future restoration. The workshop explored short and long-term habitat and management priorities, ecological targets for the area, and elements of a multi-benefit vision. The developed vision will be finalized in the coming months and ultimately used to help guide management actions to support habitat creation and flood management. This project is one of a series of southbay projects, funded by a $1M EPA grant, awarded to an SFEI-authored proposal that partnered with 16 other agencies and

- **Wetlands Mitigation Tools** - Over the past year and continuing through 2018 Wetland science staff are working the state board, selected regional boards, and the Corps of Engineers to develop new online tools to plan and evaluate compensatory mitigation projects on the landscape context.

Clean Water

- **Monitoring PCB's in the Bay Margin** - In April, SFEI finished a report prepared for the RMP titled "*Conceptual Model to Support PCB Management and Monitoring in the Emeryville Crescent Priority Margin Unit*". The goal of **RMP PCB special studies** over the next few years is to inform the review and possible revision of the PCB TMDL and the reissuance of the Municipal Regional Permit for Stormwater. Both are tentatively scheduled to occur in 2020. Conceptual model development for a set of four representative priority margin units will provide a foundation to establish an effective and efficient monitoring plan to track responses to load reductions, and to help guide planning of management actions. The Emeryville Crescent was the first PMU to be studied in 2015-2016, and is the subject of this report. The San Leandro Bay PMU is second (2016-2017), Steinberger Slough in San Carlos is third (2017), and Richmond Harbor will be fourth (2018).

- **New Tool for SF Bay Contaminants** - A report on the development of **bioanalytical tools for screening contaminants of emerging concern** in Bay water was another major RMP product completed in April. Bioanalytical tools will allow for the screening of classes of contaminants, as an alternative to the more costly analysis of individual chemicals. The report, titled "*Linkage of In Vitro Assay Results With In Vivo Endpoints*", documents a multi-year effort to examine the relationship between responses to contaminant exposure that can be quantified by laboratory assays using cell lines to responses measured in a fish species that lives in the Bay (Mississippi silverside). This project focused on estrogens and estrogenic responses.

- **Ocean Acidification Workshop** - A summary of a workshop on **ocean acidification** was also published this quarter. Ocean acidification (OA) is one stressor expected to have widespread impacts on the Pacific coastal ecosystems. Recently, the West Coast Ocean Acidification & Hypoxia Science Panel recommended improved monitoring to assess biological impacts in the coastal ocean and estuaries. However, the current status and impacts of ocean acidification on West Coast estuaries are largely unknown. A workshop in October 2016 brought together scientists from throughout the West Coast of the United States, leading researchers on San Francisco Bay, the

region's largest estuary, and representatives from a variety of management agencies. The main objectives of the Workshop were to assess whether acidification is of concern in the Bay and to identify its potential impacts to beneficial uses, cost-effective monitoring strategies, and potential management actions. Although the Bay was the case study, the aim was to develop general guidance that could be applied to West Coast estuaries.

Attachment 3

Date: June 14, 2017

To: SFEI-ASC Board

From: Warner Chabot

Re: SFEI Development Strategy – Consultant's Preliminary Findings and Recommendations

As part of an overall SFEI business planning and fund raising (development), strategy, SFEI hired Bob Woods (Stewart Woods & Associates). The objectives of this 12 month effort will include:

1. Conduct an assessment of SFEI's development capacity through interviews with staff, Board and outside philanthropic professionals,
2. Prepare a Development Strategy,
3. Work with consultant (B. Woods), and a Development Committee to implement that strategy,
4. Create an SFEI Development Committee comprised of both Board and outside experts,
5. Recruit new SFEI-ASC Board members with an emphasis on business development and philanthropic outreach expertise,
6. Recruit and retain a senior staff Director (or V.P.) for Development,
7. Allocate additional an additional percent of senior staff time specifically towards this development effort.

The proposed FY 18 budget includes a major financial commitment ($409k), to develop, staff and implement this development strategy.

The following memo from Bob Woods presents his preliminary findings and recommendations from his initial round of interviews with staff, board and donors.

Bob will attend the June 23rd Board meeting to discuss his preliminary assessment.

Recommendation: The Board is encouraged to discuss these findings and the future funding opportunities and challenges for SFEI & ASC. These findings provide a foundation for staff recommendations on: a) a development investment in the FY 18 budget and b) criteria for new board members and members of a development advisory committee.

Stewart Woods & Associates

Preliminary Findings and Recommendations

San Francisco Estuary and Aquatic Science Center

June 15, 2017

Table of Contents

Stewart Woods & Associates (SWA) is a consulting firm specializing in fundraising and development engaged by the San Francisco Estuary Institute and Aquatic Science Center (SFEI) to explore whether SFEI can install a successful development program. SWA will issue a report by the end of June 2017. This document offers preliminary Findings and Recommendations for SFEI's consideration as it considers its budget for 2018.

Findings

The findings are based on conversations and interviews with seven board members, six senior staff, a representative of donors and a consultant who previously worked with SFEI on governance issues. Many of the observations below came from those associated with SFEI.

SWA offers these findings and recommendations with the hope that SFEI will understand that it has an opportunity to build from its strengths. SWA does not promote a gap analysis that tends to focus on deficiencies. Instead, we invite our clients to consider the options and ideas presented and determine whether such actions are consistent with the organization's culture and aspirations for its future.

Organization-wide

1. All interviewees view SFEI as generally having strong leadership and a compelling mission.

2. The fact that SFEI's science is of high quality and is independent and un-biased is key to its success as a convener and trusted advisor to organizations and agencies.

3. The Board of SFEI is enlisted because of its expertise, and in some cases, affiliation. It is not a "development board", nor does it have experience with business development or philanthropy other than the involvement of individual board members with a few other institutions or organizations.

4. SFEI has high aspirations to diversify its revenue and, to build a development structure.

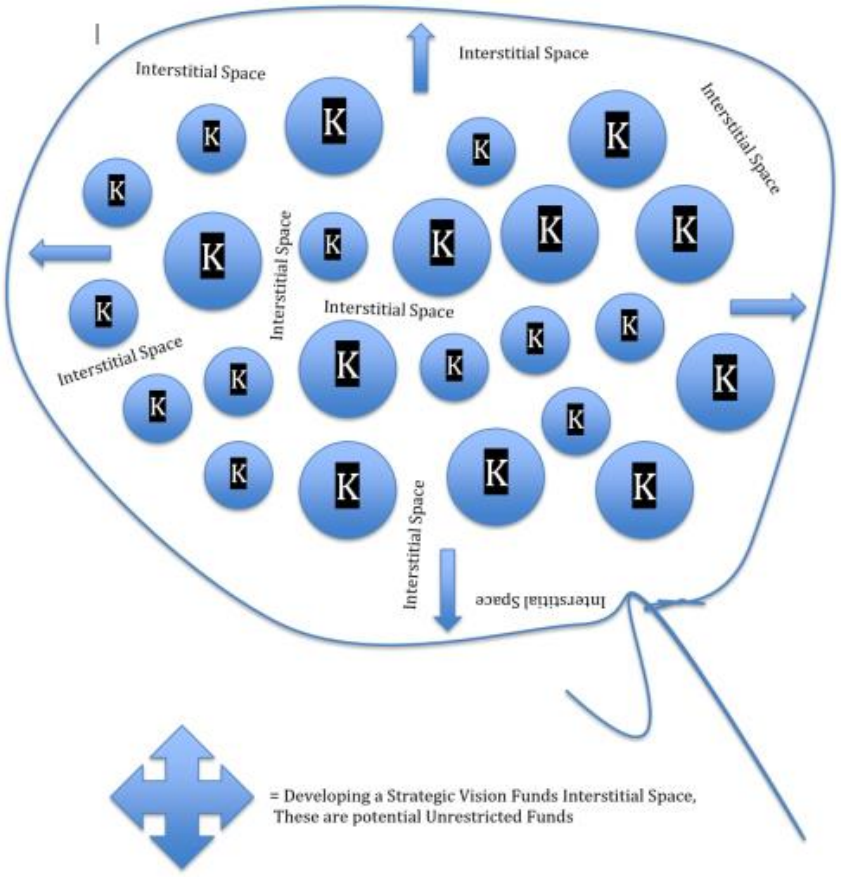
5. SFEI is interested in a dual goal:

    a. Developing a strategic vision that excites and unifies the organization while providing solutions to the needs of water quality, resilience and sustainability throughout the San Francisco Bay, Delta and beyond.

    b. Raising more money – particularly unrestricted funds – in support of its mission and its strategic vision.

6. SFEI derives the bulk of its revenue from contracts with local, regional, state and federal agencies, those regulated, or those needing scientific information to be used as the basis of policy. Agencies, non-profit organizations and some private companies contract with SFEI for its science, research and informatics capability.

7. Because SFEI is focused narrowly on each of its many contracts, it has not built a holistic vision using information gleaned from its contracts and information made available by examining the "interstitial space" between those contracts. In short, SFEI is not paid to explore meaning of the interstitial space and its implications for building a broader vision, combining that information and contract knowledge. No government agency, organization or company is paying for the interstitial information that may be both readily apparent to SFEI scientists and highly relevant for the improvement of the region's environment. Exploring a vision that is inclusive of the interstitial space may offer key new insights and solutions. The diagram below attempts to visualize this concept.



8. SFEI has the potential to lose about 25% of its revenue ($2.0 -$2.5 million) in funds derived from the Environmental Protection Agency (EPA) due to proposed federal budget cuts. SFEI seeks to replace that revenue eventually, with contributed revenue from foundations, individuals and the private sector.

9. It is possible that SFEI's revenue base will grow from new and expanded contracts and federal infrastructure funds to build and sustain infrastructure. It is not assured that the lost EPA funds could be replaced by infrastructure grants.

10. SFEI will likely need new development revenue to replace lost EPA funding for overhead and programs. SFEI also needs an expanded business model that offers

more unrestricted or budget-relieving funds in its revenue stream. This can come from development revenue.

11. Organizations do not build development programs solely to attract revenue. They seek to involve others to help organizations solve key challenges. Therefore, if SFEI commits to a development program it should include donors among the constituents or entities that are convened to address the environmental issues of the Bay, its estuary and likely the Delta.

12. It is highly likely that SFEI could attract individual, foundation and corporate donors from across Northern California because of its integrity and its extraordinary track record in convening groups to pursue scientific analysis and explanation. It is very likely that foundations will be attracted to help SFEI explore the significance of interstitial space while building a more significant vision for SFEI or a successor entity.

13. Although SFEI has accepted a few grants, it has never attempted to accept gifts and, therefore, will have to build a Culture of Philanthropy. If done right this will lead to increased contributed revenue and encourage the inclusion of new prospects, donors, and volunteers in SFEI's ranks.

Culture of Philanthropy

14. SFEI could improve its Culture of Philanthropy. It could raise its expectation that all board members, volunteers, and senior staff take a more active role in giving and raising money to support SFEI's mission and that the systems, processes, and procedures are in place to support that culture.

15. There are several missing elements which, if implemented, will support a stronger Culture of Philanthropy at SFEI:

    a. A Vision to engage a broad array of constituents and solutions
    b. Succinct Mission Statement and Message
    c. Case for Support
    d. Creation of a Sense of Urgency to raise money to address mission
    e. Increase follow through to realize appropriate pace of/for communications and solicitations
    f. Being Donor Centric
    g. Being Volunteer Driven
    h. Gift Acceptance Policy
    i. Stewardship Policy and/or Plan
    j. Recognition Policy and/or Plan
    k. Regular Board review of donor lists
    l. Board reviewed metrics to evaluate development program
    m. Increased Board interest and knowledge of philanthropy, in general, and SFEI's development program, specifically.

16. There is a danger in not improving a Culture of Philanthropy: if donor stewardship is not heightened, such inactivity might cause current donors, including foundations, to curtail future gifts or grants. Without increasing philanthropic gifts, program activity at SFEI may dwindle.

Board Engagement

17. The Board of Directors is engaged in assuring that the organization is well run and that SFEI is focused on attaining its mission.

18. Board members give their time, wisdom, experience, expertise, and good counsel as they oversee SFEI.

19. The Board is not active in the Raising of Money at SFEI.

20. No board member is actively supporting SFEI with their own gifts.

21. The Board considers the executive director as the leader of the external relations and will expect the executive director to lead in the implementation of a development program.

22. The Board would like to be more engaged in decision making at SFEI.

Donors

23. Donors believe that SFEI offers excellence in scientific discovery and that it collaborates with and supports other constituent groups extremely well.

24. Donors want more engagement with SFEI.

25. Donors support establishing a Center for Resilient Landscapes. With an expanded SFEI vision, donors could also offer unrestricted support for the organization. Informatics could be a tougher "stand alone" sell due to its technical complexity and its role in supporting other programs. However, it has an opportunity to generate increased earned revenue on a fee for service basis. Contracts are predicted to grow for the Water Program. Therefore, water projects may not need to be offered as a gift opportunity seeking support outside of contracts. Rather, they are an essential element of a interdisciplinary vision at SFEI.

26. SFEI offers donors incredible leverage for their gifts as SFEI already receives significant government support on issues to address critical environmental policy and nature based solutions to climate change and other major natural and urban issues. Such leverage can be marketed to excite donors about the impact of their philanthropy.

27. SFEI could do a more efficient job of soliciting individual giving prospects for gifts. Donors would prefer to be asked for gifts and in the process better understand how their gifts make a difference at SFEI.

28. SFEI could build a stronger stewardship program to ensure that donors are informed and feel great about the impact of their gifts.

29. SFEI should develop donors and volunteers as peer solicitors.

Governance

30. SFEI could seek alternate forms of Governance to manage the development program instead of managing it from SFEI.

31. It is possible to create a separate foundation to raise money for SFEI.

32. It is possible to create a separate organization to pursue a strategic vision and to raise money for SFEI simply to conduct science, thereby maintaining SFEI's integrity as an un-biased organization leader and convener.

Development Program

33. Currently, there is no designated development program at SFEI.

34. SFEI staff and board members would have to learn development and build development expertise.

35. SFEI can build a comprehensive development program and ultimately raise millions, annually.

36. SFEI has been more comfortable, and successful, in soliciting funds from foundations, rather than individuals.

37. Currently, there is no prospect pool for major gifts. SFEI has received gifts from the environmental donor circle at the Silicon Valley Community Foundation that should be cultivated further.

38. Inclination of prospects to make gifts in support of SFEI is largely unknown.

39. There is not a prospect allocation or a prospect management system at SFEI. There is no collaboration on developing engagement or solicitation strategies with the Board and staff, or at the staff level, because there is no development activity. Staff and volunteers could collaborate more in the effort to identify, engage, solicit, and steward prospects and donors.

40. SFEI does not have a development database that could be used to record and coordinate development activity.

Development Coordination with Marketing/ Communications

41. SFEI does not have Development or Marketing/ Communications (MarCom) functions. The current staff fulfill both roles as best they can.

42. SFEI could simplify its messaging to prospects and its various audiences.

Recommendations

Culture of Philanthropy

1. SFEI to work to improve its Culture of Philanthropy by:
    a. Being Donor Centric
    b. Being Volunteer Driven
    c. Creating a sense of urgency for the need to raise money and realizing an appropriate pace for communications and solicitations of prospects and donors
    d. Creating a succinct vision for SFEI using information gleaned from contract and from the "interstitial space" between them.
    e. Creating succinct descriptions of SFEI:
        i. Mission Statement and
        ii. "Ways to Talk about SFEI" document
        iii. Case for Giving
        iv. Case Statement
    f. Installing policies and procedures that support a Culture of Philanthropy
        i. Gift Acceptance Policy
        ii. Stewardship Policy and Plan
        iii. Recognition Policy and Plan
        iv. Coordinate a Development Plan with Marketing and Communications Plan
    g. Encouraging and supporting the Board as it becomes more active in Development by:
        i. Creating a Development Office.
        ii. Creating metrics that are presented in a Development Dashboard by the Board at each meeting
        iii. Holding volunteers and staff accountable for meeting or exceeding metrics
        iv. Having the Board approve all gifts of $5,000 or more
        v. Having each Board Member meet with Development Staff, at least annually, to determine how they can be of service to SFEI Development
        vi. Help the Board understand how they can be more helpful with Development;
            1. Making their own gifts
            2. Identifying prospects
            3. Helping to cultivate prospects
            4. Helping to solicit prospects
            5. Helping to close on gifts or grants
            6. Helping to steward relationships with donors

Board Engagement

2. The Board should give serious consideration to the challenges it will face in establishing a Culture of Philanthropy and enter into such a proposition clear eyed and committed to its purpose.

3. The Board should establish a board committee that will review and promote additional revenue options for SFEI, including helping to guide in the creation of a development program.

4. The Board can become more active in Development. It must learn how to nurture a development program while extending its oversight of it.

5. Board members can help identify, cultivate, solicit, and steward prospects and donors, with the guidance and collaboration of staff, pursuant to 1.f., above.

6. SFEI may want to consider participation in Boardsource -- a non-profit organization that gives great advice on governance issues and is designed to help boards and board members provide incredible service to their organizations. Working with Boardsource could help SFEI continue the previous effort it undertook regarding Board engagement.

7. The Board and staff should continue the work of Board Engagement that it initiated several years ago. This work will also assist in strengthening a Culture of Philanthropy at SFEI.

Donors

8. SFEI should build even stronger relationships with donors, who through relationship building, learn to increase their trust in staff, so staff may gain access to prospects who are freely identified and recommended by donors.

9. SFEI should ask the donors for additional financial support. It should create a menu of gift opportunities that will be broadly supported by donors and tied to the vision of the organization. SFEI should be unapologetic about its desire to include donors in its work and in the solutions it devises to address environmental concerns.

10. SFEI should provide more transparency in its progress and in its reporting to donors. Offer clear evaluations on progress towards your goals be proactive in your communications. Donors want to learn from successes and failures.

Development Programs

11. SFEI should create a development program and strengthen its development infrastructure
    a. SFEI should implement the Seven Steps to a Major Gift (Appendix 1) as its Development Methodology. All actions to create a development program should be consistent with this methodology.
    b. SFEI should consider implementing a proposed development budget to build out its development program and drive more revenue to SFEI.
    c. SFEI must hire experienced development staff
        i. Hire a highly experienced Development Director to focus on corporate and foundation support, major gifts, annual gifts, prospect identification and discovery, all while supporting the cultivation of existing prospects and donors. Although the prospect pool is

relatively small, it is expected to grow. SFEI has access to many prospects and donors who are among the most elite in the San Francisco Bay Area. They have an expectation of excellence in staffing and SFEI should considering hiring an experienced development officer who is able to seek gifts of $50,000 or more from individuals and who has experience in doing so in San Francisco and Silicon Valley.

ii. The Informatics Director should be in charge of selecting and administering the development database.

iii. An administrative assistant should be involved with database data entry, gifts processing and acknowledgement, events support, and general administrative support.

iv. Eventually, SFEI should consider hiring specialists in corporate and foundation relations as well as major gifts, if a growing prospect pool necessitates such expertise.

d. SFEI could build a strong prospect pool through donor acquisition strategies through the use of volunteer engagement, cultivation events, mail strategies, and social networking strategies.

e. SFEI could call upon its existing staff and new communications consultants to design and implement communication strategies to donors and prospects for purposes of stewardship and cultivation.

f. SFEI must conduct prospect research on its prospects by using screening tools like Donor Search or WealthEngine. It is a best practice to screen your individuals as prospects to determine their financial capacity and inclination to make a gift to SFEI. Donor Search or WealthEngine also provide information on a donor or prospect's sphere of influence with others. This screening is a means of prioritizing prospects for action and is a best practice. While corporate and foundation prospects are not screened in this manner, SFEI should consider a subscription to a foundation database to help it identify new corporate and foundation prospects. Again, this is a best practice.

12. SFEI is an extraordinary entity that could make an even larger on-the-ground impact and could offer donors value through its programs. Having said this, SFEI needs to build a sophisticated development program that includes an emphasis on major gifts. Such a program would pursue gifts of five-to-six-figures or more and be competitive in its elegance and style with more established major gift programs in the region. The recommendations below stem from the findings made by SWA and attempt to provide solutions so that the organization can build an efficient and effective major gift program that is well incorporated into its vision:

a. SFEI must determine if it wants a transformational major gift program, or if it wants large annual gifts, or both.

b. If SFEI determines it wants to create a major gift program, then that program should be volunteer driven and donor centric. Funds raised should not be based on budgetary needs but be based on transformational gift

opportunities that allow the donor to make a significant impact on SFEI's mission.

c. While SFEI can pursue corporate and foundation grants with relative ease, building a major gift program may be more difficult as such a program relies on peer solicitors – people who would make a major gift to SFEI and agree to ask others to do the same. It is not likely that members of SFEI's Board will become major donors. Therefore, the Board will have to recruit a host of donors to create a major gift committee or the Board will have to approve a supporting foundation, or an additional organization, that is organized by peer solicitors to seek these gifts.

d. The skill of the development staff will be in supporting peer solicitors and other volunteers while helping them develop key strategies that will be successful in raising major gifts. Staff should be trained to be able to undertake a major gift solicitation but SFEI should understand that a peer is more likely to raise larger gifts than staff.

e. The most successful major gift programs are built from peer solicitations. SFEI should determine if it wants to enlist and support major gift volunteers in the solicitation of transformational gifts. The attributes of a major gift volunteer are further described in Appendix 2. This volunteer structure should be used to identify, cultivate and solicit major gifts from the friends, colleagues and acquaintances of the major gift volunteers.

f. The volunteer structure could then better align with donor capacity; meaning that the several development programs could enlist volunteers who give at the targeted program capacity and therefore can better act as exemplars to others.

g. More than any other development program, the major gift program should be grounded in a development methodology, like the Seven Steps to a Major Gift. Such a methodology can be used to train staff and volunteers, to organize divisions within the development office to support each step (prospect identification, prospect research, stewardship, etc.), to organize a Prospect Tracking System within a development database so each step is available to be selected as a solicitation stage code and as a step-by-step guide on how to manage each individual solicitation.

h. If SFEI wants to encourage increased unrestricted gifts, then it should take steps to build development programs that traditionally build such gifts. It must invest more in mail programs and high-level annual gift programs. It may want to separate, further, the major gifts program from the need for unrestricted giving. The Major Gifts Program should be delivering gifts of five to six-figures or more from individuals to help transform the organization. Major gifts are often highly restricted gifts but high-end annual gifts of $25,000 or less are often found in giving circles and high-end membership programs that generate unrestricted giving.

i. SWA recommends that SFEI invest mail solicitation programs to assure unrestricted revenue and that these programs include special appeals and donor categories for gifts in the $10,000 to $24,999 range.

j. SFEI may want to hire a contract prospect researcher to provide additional prospect information that could lead to more sophisticated and more effective solicitation strategies.

k. Development staff will have to ensure aggressive visits activity. The current moderate pace of meeting with prospective donors must gain more momentum. This can be accomplished by qualifying new prospects through visits to those prospects who are WealthEngine-rated $500,000 or more, engaging a volunteer corps to help identify, cultivate and solicit new prospects.

l. A targeted campaign should be devised to raise money to support the development office so it can hire staff to support the enhanced development programs. Enough money should be raised to support the staff for a three-year period to give programs the time to create traction in their ability to raise more money to support the whole organization.

m. SFEI should review its Strategic Plan to make sure that it conforms to the installation of a Culture of Philanthropy. If it does not, SFEI should revise the Strategic Plan

n. While creating a Development Plan, to support the Strategic Plan, SFEI should also consider elevating Stewardship as a concern and as a way to continue the cultivation of existing donors. Once donors are gained by SFEI, it should do everything feasible to ensure that the donor relationship is strong and thriving. It may be that too much emphasis has been placed on program implementation and not enough on stewardship. While donors can see the impact that SFEI makes, they are not receiving enough information to appreciate that they, as donors, are helping to make that impact occur. More should be made of a stewardships program that places donors' interests first and foremost.

13. SFEI may wish to create unique events, consistent with the culture of SFEI. These events should engage prospects and donors more fully while presenting information in clear terms. Use your current brace of constituents to help design the events that would cater to the interests of your various prospects.

    a. SFEI may wish to improve its best practices on events by providing brief (three sentence) background summaries on attending guests, with pictures if possible, and maintaining the summaries in the development database.

    b. SFEI may want to follow the best practice of briefing volunteers before the event on who may be present and suggesting conversations the volunteers should have with prospects. After the event, SFEI should collect information about those conversations from volunteers.

Development Coordination with Marketing and Communications

14. SFEI may want to write a new development plan should it decide to augment its Strategic Plan. Once the development plan is written, SFEI may also create a marketing plan that is well coordinated with the development plan which will be used to sell the strategic plan to SFEI's various constituencies and help pay for the actions to be taken in the strategic plan. Develop a list of prioritized gift opportunities that, if funded, would pay for the new SFEI initiatives..

15. Ensure that SFEI can establish and adhere to priorities based on the strategic and development plans.. Communicate these priorities to volunteers, donors and staff so that they can align their support and work with SFEI's priorities. Help the various constituents of SFEI internalize the priorities – make the priorities relevant to their daily work or engagement – so there is clarity about your goals and the process on how you intend to move forward.

Conclusion

SFEI has an opportunity to build upon its 25-year reputation for excellence and build a strong development program. It will benefit initially from foundation and corporate grants supporting the Center for Resilient Landscapes and an expanded vision for the organization. Such support will lead to unrestricted and budget-relieving gifts and grants. Eventually, major gift and annual fund programs will also be built.

The Board will have to ensure that the organization adopts a strong Culture of Philanthropy. It will also have to consider the form of governance that philanthropy will be expressed whether it is internal to SFEI, a supporting foundation or a separate advocacy organization that funds SFEI's need for unrestricted support while protecting its scientific integrity.

Appendix 1
Seven Steps to a Major Gift

Step 1: Identify the Prospect

Purpose: To discover a new or newly qualified prospect.

Questions: Does the prospect have the financial capacity to make a major gift?
What form of assets might the prospect use to make a gift?

Step 2: Research and Qualify the Prospect

Purpose: To gather and analyze relevant information about a prospect.

Questions: What are the prospect's potential interest and priorities?
Does the prospect currently have a relationship with your organization?
What information is still needed to build a gift strategy?
Who is the best potential volunteer?

Step 3: Strategize with Staff

Purpose: To develop a plan for contact, cultivation and solicitation.

Questions: What is a realistic gift target?
Which of the prospect's interests best match the priority goals of the campaign?
What does the prospect need to know, feel, and experience to bring about a major commitment?

Step 4: Involve the Prospect - Make the First Call

Purpose: To build a bridge between the prospect and your organization.

Questions: What are the prospect's attitudes and concerns about your organization?
Which of the prospect's interests and needs can be satisfied by meaningful participation in the campaign?
How much future involvement/cultivation will be required before the ask?

Step 5: Make the Ask

Purpose: To invite the prospect to consider an investment in your organization.

Questions: What is the prospect's reaction to the ask?
What are the crucial objections or concerns?
What needs to be done to facilitate an actual gift or pledge commitment?

Step 6: Make the Close

Purpose: To lead the prospect to a commitment.

Questions: What further attitudes and concerns must be addressed?
What alterations may be necessary to the original request?
What professional help is needed -- legal counsel, investment advice, etc.?

Step 7: Follow Up

Purpose: To express appreciation and thanks.

Questions: What kinds of personal attention can be shown to the donor?
Where should ties to your organization be strengthened?
What further interests and needs of the donor may be served by another gift?

Five Prospect Attitudes and Reactions

	Attitude	**Reaction**
1.	Agreement:	Proceed to the next step.
2.	Misunderstanding:	Clarify the misunderstanding; gently correct with facts.
3.	Indifference:	Use "open-ended" questions to discover the needs and interests.
4.	Skepticism:	Overcome with an "expert witness".

5. Real Objections (Use the four-step process):

   A. Clarify the objection to make sure you understand it.

   B. Meet the objection as a question; use further questions to narrow the objection to one specific, manageable issue.

   C. Minimize the impact of the objection; try to emphasize the greater good or bigger picture.

   D. Try to gain a neutral position. Ask if the objection will keep the prospect from joining in the campaign. Summarize graciously and move on.

The Seven Steps to a Major Gift was developed by Bill Dailey and Paul Edwards while at Stanford University.

Appendix 2 – SFEI Major Gift Committee Volunteer Attributes

Members of the Major Gift Committee (MGC) are participating in an effort to be ambassadors for and donors to the San Francisco Estuary Institute (SFEI). They are engaged in and excited by the programs of and impact of SFEI while seeking to involve others in SFEI's activities. Members of the MGC are, themselves, major donors to SFEI and act as peer solicitors on behalf of the organization. The ultimate objective of the MGC is for its members to raise major gifts on behalf of SFEI. The specific task of the MGC member is to introduce SFEI to their friends and acquaintances who have major gift capacity and who believe in the vision and mission of SFEI, help cultivate them, and ask them for an investment in the SFEI. Prospects should be selected carefully so it will be difficult for those prospects to decline the MGC members' solicitations. Corollary to this process is the ability to spread qualified information about SFEI and create goodwill in the community.

Members of the MGC should take the time to learn SFEI well enough so they can discuss their interests in it with some specificity with friends and acquaintances. MGC members should make themselves available for a training process that will include:

- Getting to know SFEI though site visits, cultivation events, volunteer meetings, publications and other materials and by encouraging relationships with the SFEI Board, staff and volunteers.
- Becoming familiar with various methods of securing a gift for SFEI including an understanding of SFEI's gift opportunities and how they assist the institution.
- Learning how to recognize and cultivate likely prospects for SFEI while working with staff and volunteers of SFEI to bring prospects closer to the organization.
- Balancing the work of a leadership volunteer with gaining insight and sometimes direction from staff.
- Gaining experience with asking friends and acquaintances for financial support of SFEI.
- Ensuring that appropriate follow up is undertaken by SFEI, including its volunteers and staff.
- Using the Volunteer Solicitation Checklist as a guide for volunteering with SFEI.

<u>Expectations</u>

The most effective volunteers are those who have already made their own financial commitment to the organization. These volunteers have credibility in the eyes of prospects because it becomes clear that these volunteer are passionate about SFEI and SFEI and have made their own significant investment.

Each MGC member will be asked to involve at least 3-5 prospects, annually.

The MGC will meet two times a year to learn more about SFEI. It is likely that volunteers based in similar geographic areas will meet as a group, or individually with staff, to review prospect lists. Volunteers will also be asked to attend a training session on how to solicit gifts. SFEI's volunteers will be encouraged to attend events designed to impart knowledge about SFEI so they can be more effective in their service. Every attempt will be made to respect the volunteer's effective use of time that is afforded to SFEI.

Appendix 3 – Glossary of Development Terminology

1. **Fundraising:** Asking for money to support a public benefit corporation. Often involves a donation.

2. **Development:** Long term process to maximize giving from donors by building a relationship with the donor. Usually involves an investment in the organization.

3. **Donor Centric** – the needs of a donor are thoughtfully considered by the organization.

4. **Volunteer Driven** – Building trust with volunteers and donors so they play an essential, vital, central role in your mission's success.

5. **Development Programs:** Specific processes for developing prospects and raising money
   a. Annual Fund – Either an annual mail campaign or the funds raised to support operations in a given fiscal year. Can include a membership program.
   b. Personal Solicitation – meeting between volunteer solicitor or staff member and individual prospect
   c. Major Gifts – Investments made in non-profits by individual donors, usually made out of assets, not income.
   d. Planned Gifts – highly structured gifts, often involving estate planning or multi-year gifts.
   e. Corporate Relations – working with corporations, corporate foundations and corporate sponsorship or marketing offices to attain financial support for an organization.
   f. Foundation Relations – working to attain grants from professional foundations
   g. Government Grants – working to secure funding from government agencies
   h. Events – fundraising opportunities that are date specific that create revenue and increase public relations opportunities and public awareness of an organization.
   i. Social Networking – the use of social media websites to promote your organization.
   j. On-line Giving – the use of your website to raise money for your organization.
   k. Prospect Research – Determination of public information about a prospect that is useful in a solicitation.
   l. Gifts Processing – Office where the receipt and acknowledgement of gifts occur
   m. Stewardship – Office where recognition and continuing engagement of donors is planned and executed.

6. **Gift Opportunity:** Description of the project, program or initiative a donor is asked to support

7. **Recognition Plan:** Description of the honors offered a donor for his or her gift, relative to the scope of gifts made by other donors. Tied to gift opportunities and stewardship.

8. **Volunteer:** Board member or donor who helps to raise money for the non-profit.

9. **Donor:** Individual, corporation or foundation who makes a gift to an organization, free of any quid pro quo.

10. **Prospect:** Individual, corporation or foundation who is likely to make a gift to the organization but who first needs cultivation.

11. **Suspect:** Individual, corporation or foundation where it is possible that they may make a gift to the organization; however, significant qualification (research and cultivation) needs to occur.

12. **Prospect List:** Qualified list of names of people who have the inclination and capacity to make a gift of a specific level.

13. **Prospect Allocation**: The process of dividing and sharing prospects among interested parties.

14. **Prospect Rating:** The $ amount a prospect may be able to contribute to all charities over a 5 year period. Typically, this can be 2% to 3% of net worth. In sophisticated rating systems, gift history and inclination to give are balanced in the equation. Ratings are usually provided by third party rating agencies; however, any organization can create a rating system using staff and volunteers. Ratings are not ironclad, they merely offer an indication of what is possible and are helpful in prioritizing prospects.

15. **Field Fundraiser:** Development Officer located in a specific geographical region.

16. **Supervising Fundraiser:** Manager of another fundraiser; usually has significant administrative work but is a very strong strategic fundraiser.

17. **Development Revenue:** Contributions used to fund the current fiscal year's budget.

18. **Development Receipts:** Contributions raised in a current fiscal year; common measure of development program's effectiveness.

19. **Unrestricted Fund:** donations that are available for the nonprofit to use for any purpose.

20. **Restricted Fund:** the use of the fund is tied to a particular purpose, time, or geography.

21. **Endowment:** gift lasting in perpetuity where a portion of the interest, but not the principal, is used to support an organization.

22. **Expendable Fund:** the funds can be drawn down at any time.

23. **Reserve Fund:** An account set aside to meet any unexpected costs that may arise in the future as well as the future costs of upkeep.

24. **Working Capital:** the difference between current assets and current liabilities.

25. **Visits:** in-person meetings between a representative of an organization and a prospect in which the organization is discussed.

26. **Development Assessment or Audit:** an analysis of an organization's development programs and its supporting systems within the organization.

27. **Development Feasibility Study:** an analysis of the development program, including campaign readiness and donor interest. Often includes interviews with potential donors and tests messaging, gift structure and top-of-mind knowledge of the donor/prospect base concerning the organization.

28. **Development Plan:** a step by step description of how to raise money for an organization.

29. **Volunteer Engagement Plan:** a description of the organization's volunteer structure, including job descriptions, term of assignments, matrix of needs, potential volunteers and engagement strategies for those volunteers. Can also include suggestions for staff/volunteer etiquette.

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Attachment 4
Minutes
Resulting from the
Governance Committee Conference Call
Tuesday, June 13, 2017

In Attendance:
Jim Fiedler, ASC/SFEI Chair
Dave Williams, ASC/SFEI Vice Chair
Barbara Salzman, SFEI Vice Chair
Alan Ramo

Absent:
Pamela Creedon, Treasurer

Staff:
Warner Chabot, Nichelle Miller

The meeting was conducted via conference call. Notice of meeting was given via e-mail.

The meeting was called to order at 10:32 A.M.

Objective: To discuss SFEI Board departures (term limits), and to begin to discuss qualifications and process to nominate candidates for the SFEI Board.

1) **Executive Director's report**

Warner Chabot gave a review from his memo regarding:

- SFEI's challenges to diversify our funding base,
- Our goal to secure funding from philanthropic and private sources
- Our success to date in securing foundation finds,
- Our proposed process to work with development consultants to create a "development strategy",
- The need for criteria for a new board members to emphasize business development and philanthropic outreach.

2) **Committee Discussion**

Warner Chabot – stated that Pamela Creedon, Prabhakar Somavarapu and David Williams plan to continue with their terms. Pam plans to retire spring of next year. She will expect her replacement as executive officer will replace her as the Central Valley Regional Board representative. Prabhakar states that he plans to continue with another term. David Williams' board will meet this month to determine if he will continue or someone else will represent BACWA on the SFEI board. Warner spoke with Jim Fielder to request that he remain engaged with SFEI as a non-member capacity to assist with development committee so we can continue use him for his expertise. Alan Ramo confirmed his intent to retire also at the end of this term.

The SFEI Bylaws requires a membership of 11 members and allow up to 21 members. With current departures, the SFEI Board will have 15 members and ASC Board will have 14 members. The bylaws require that the directors reflect a balance of user groups, environmental protection advocates, scientists and regulator of the public trust. Warner suggested we now have nine agency/regulatory

group board members, three representing environmental groups, two representing the science category and one representing business category.

Warner reaffirmed previous board discussions on efforts to diversify SFEIs funding base. He noted SFEI's heavy dependency (about 95% of our projects) government agency funding. This provides a very small profit (surplus). It also requires aggressive marketing to ensure future projects are in place immediately after one project ends. This greatly limits our ability to create a financial reserve.

We've been working on strategies to increase the state-allowed overheard costs in coordination with other NGOs. But this is a major challenge with no assurance of success. We're also exploring funding options with foundations and the private sector. We've been successful with two recent foundation grants totaling $910k, due in part to our many partnerships. We've also submitted a third proposal to the S.F. Foundation for collaborative work the Environmental Justice leaders.

To expand our development strategies, we've retained two consultants. One consultant is working with our Resilient Landscape Group to develop the strategic plan to fund the ***Center for Resilient Landscapes***. This effort will produce a communications strategy and a full proposal to submit to other possible funders of the Center.

We've also hired development consultant Bob Woods (of Stewart Woods & Assoc), who brings 30 year experience to SFEI including roles with Stanford and as the V.P. for Development at the Trust for Public Land. Bob is conducting an initial assessment based on interviews with SFEI Board, senior staff and outside donors. He will present a preliminary assessment report at the June 23rd meeting.

Barbara Salzman – Noted that she was very impressed and it appeared that SFEI has a good inroad to foundations & individual donors. Need to look at that as an ongoing effort. Foundations will not give permanent funding. Individual donors (and some foundations will give funds for endowments).

Warner Chabot: Noted that there's more potential funding from individuals than foundations. SFEI must do a better job in the explaining our overall mission and goals and our unique role in the science and public policy arena. We should develop the programs that major donors would want to fund.

Alan Ramo – Noted that he memo and presentation makes a strong case for our strategy. Staff has long expressed concern about lack of funding for outreach and innovation. Regarding future board member selection we should also ensure that the board reflects a balance of represented interests. He would be concerned about industrial dischargers or anyone trying to thwart environmental regulation, including politicians. Our platinum reputation must be maintained.

Jim Fielder - Agrees with Alan, that the balance on the board is critical. We might want to create a foundation. We did have WSPA representative. In regards to future candidates. Santa Clara Valley Water District wants to continue to be represented in aquatic science. Kirsten Struve is interested.

Alan Ramo – We are at the center of the new economy in the U.S. We have Google, Facebook and other industries who are enlightened. We don't need to go to Chevron for funding. We shouldn't exclude anyone from any sector. The economy and investment world is really changing. We are lucky that they're all global.

David Williams & Barbara Salzman- Both concluded that staff has conceptual support from the Governance Committee for the proposed direction to the Board.

Warner Chabot- Concluded that he will draft a memo and send it out the board.

The meeting was adjourned at 11:32 A.M.

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Attachment 5

Minutes of the
SFEI-ASC Executive Committee Conference Call
Friday, June 16, 2017
11:30 – Noon

Directors participating by telephone: Bruce Wolfe**,** Skyli McAfee, Ann Hayden, Jim Fielder, Jim Kelly
Staff: Warner Chabot, Lawrence Leung & Nichelle Miller

The Committee conference call convened at 11:30 am.

Lease Update – At Chairman Kelly's request, Warner provided an update on the current negotiations for a 5-year renewal of the lease in our current building. He noted that the negotiations will not likely be completed by the June 23rd Board meeting, where he will provide a further update to the entire Board.

Governance Committee – At the chair's request, Warner also summarized the results of the recent Governance Committee meeting, which included discussions of the budget, development strategy and criteria and process for future board members to support business and foundation funding support.

Board Agenda – Staff reviewed the proposed June 23rd Board Agenda. After discussion, the Committee approved the Agenda.

Restricted Reserve Policy – Staff summarized issues around the Restricted Reserve Policy including a staff decision to propose adding an additional $250k to the restricted reserve fund. Jim Kelly expressed support for this proposed action.

Proposed FY 18 SFEI-ASC Budget – Warner and Lawrence presented the proposed SFEI budget for FY 18. The budget projects a total 7% increase in overall spending and a 9% increase in expenses.

The most significant changes from FY 17 to FY 18 are:

- **Staff** – Greater labor costs (and corresponding revenue) due from staff growth (now at 63)
- **Development** - a major invested (approx. $409k for a major development initiative). This includes costs for:
    - Consultants (development & executive recruiting)
    - New Sr. Position of Development Director or V.P. for Development
    - Development Expenses
    - Additional (unbillable staff time) of Sr. staff devoted to development
- **Construction Expenses** – We are not projecting major construction expenses in the FY 18, for several reasons (e.g. Lease status and uncertainty on federal contract funding),
- **Salary/Bonus Pool** – We are budgeting for an upper range of 6% for combined salaries and bonuses.
- **Smaller (end of year) Surplus** – This will leave us with a smaller (end-of-year, projected surplus of $143k (compared to $322 for FY 17. Staff believes this is an acceptable margin due to:
    - Our history of exceeding past projected surpluses by 20-40%.

- A conservative estimate on returns in FY 18 from our development investment.
- A commitment to revisit the budget on a quarterly basis to ensure that we remain on track with our budget projections.

This will leave us with a smaller projected surplus. But we've exceed our projected surplus in past years by 30-100% or more.

Vote: Anne Hayden moved approval of the Board Agenda, and receipt of the Restricted Reserve Policy and Draft FY 18 Budget, Bruce Wolfe seconded and the full committee approved.

Approval of SFEI contract with BCDC for GIS support: Staff summarized a recent contract Secured by the SFEI with the Bay Conservation and Development Commission (BCDC) to support their climate adaptation and shoreline planning efforts. Our Environmental Informatics team will provide BCDC with GIS data management, user interface design, and web mapping. The two-year project will have SFEI provide up to $100k in services each year with renewal options for a third and fourth year.

Vote: Jim Fiedler move approval of the contract, Skyli McAfee seconded and the full committee approved the project.

Additional Discussion –
Jim Kelly inquired about projected budget growth in the coming year when we also expect EPA funding to be reduced. Lawrence noted that possible reductions in EPA funded projects are not expected to impact SFEI budget for FY 18, but rather will affect future budgets. He expects that existing contracts and proposals submitted to the EPA will allow SFEI to meet the proposed budget projections for the next 12 months.

Item #	Item Description	Page	Duration (in min)
1	**Call Meeting to Order, Introductions and Review Agenda**		1
2	**Board Agenda, Restricted Reserve Policy, and FY18 Budget** • *Attachment 1* - June 23, 2017 Board Agenda • *Attachment 2 - Restricted Reserve Policy* • *Attachment 3 - FY18 SFEI-ASC Budget* **Desired Outcome**: Approve agenda and receive Restricted Reserve Policy and FY18 budget		25
3	**GIS Support for BCDC** • *Attachment 3* - GIS Support for BCDC **Desired Outcome**: Approve project		4
4	**Review Action Items and Adjourn**		

The Committee adjourned at 12:15 pm

Attachment 6

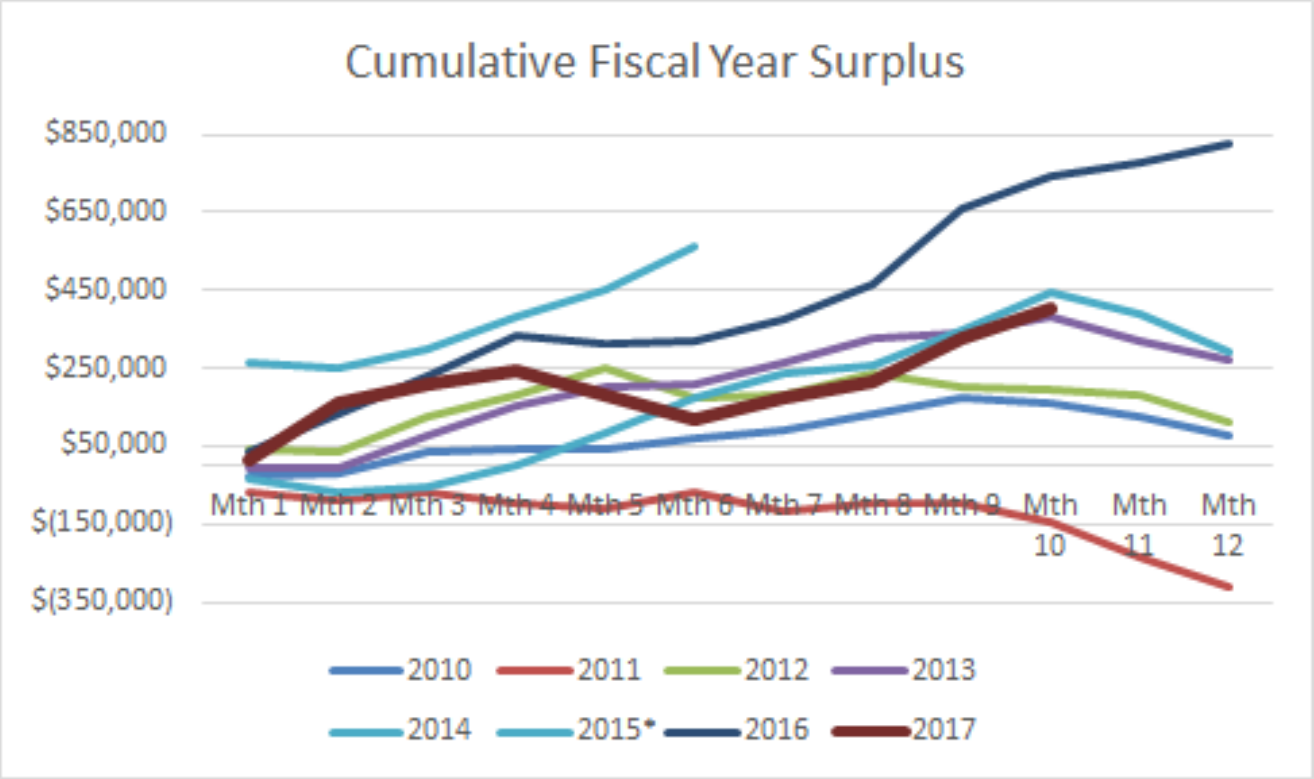
Item: Financial Performance Summary & Restricted Reserve Policy
From: Lawrence Leung, Finance Director

FY17 Financial Performance Summary thru April 30, 2017
The Board approved budget yields a $331K surplus for FY17. Thru 10 months, we've achieved a $401K surplus; we're well ahead of schedule as prorating the $331K surplus 10 months yields $269K. The same time last year (i.e., April 2016), we achieved a $746K surplus; note that FY16 was a bit of an anomaly as staff were exceptionally billable. We are projected to end the FY with another $186K in surplus for a total of $587K. See Figure 1 for cumulative FY surplus dating back to FY2010.

Our current unrestricted cash is $1.12M, with an additional $250K in the Board Restricted Reserve. As discussed in prior meetings, our desire is to maintain 4 months of operating expenses, which currently equates to ~$2.5M. Due to the anticipated $587K in FY17 surplus and relatively healthy unrestricted cash of $1.12M, we recommend a $250K deposit into the Board Restricted Reserve. The funds will be applied in June 2017, dropping the unrestricted cash $250K and increasing the Board Restricted Reserve $250K for a total of $500K.

See Tables 1 & 2 for summaries of the FYTD budget and actuals. April financial statements can be accessed here: https://goo.gl/OUO9fS

Figure 1



*2015 is a carryover year and added to 2014 for an 18 month fiscal year due to the switch in fiscal year time period from CY to July-June

Restricted Reserve Policy

In the last Board meeting, Warner asked to postpone actions on the Restricted Reserve Policy due to the potential for reduced federal contract funds. Warner requested that the Executive Committee and the full board discuss the option to allocate available surplus funds into strategies to diversify SFEI funding stream.

Staff determines that surplus funds need not be used in its development strategy. Instead, as described later in the FY18 budget, development strategy costs are already incorporated in the budget and will not likely need additional funds from unrestricted cash or the Board Restricted Reserve. We recommend the Board to approve the Restricted Reserve Policy.

Recommended Action: Accept financials, approve $250K deposit to the Board Restricted Reserve, and approve Restricted Reserve Policy

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RESTRICTED RESERVE POLICY – Draft 4.0

I. PURPOSE

The purpose of this Restricted Reserve is to build and maintain an adequate level of reserve to support the organization's day-to-day operations in the event of unforeseen shortfalls (see risk factors below in Section V). This policy is intended to provide the criteria and guidelines for the management of this fund. The reserve may also be used for one-time, nonrecurring expenses that will build long-term capacity, such as staff development, research and development, or investment in infrastructure. Restricted Reserves are not intended to replace a permanent loss of funds or eliminate an ongoing budget gap. The organization intends for the reserves to be used and replenished within a reasonable period of time. This Restricted Reserve Policy will be implemented in conjunction with the other financial policies of the organization and is intended to support the goals and strategies contained in those related policies and in strategic and operational plans.

II. DEFINITIONS AND GOALS

The Restricted Reserve is defined as the designated fund set aside by action of the Board of Directors. The minimum amount to be designated as Restricted Reserve will be established in an amount sufficient to maintain ongoing operations and programs for a set period of time, measured in months.

The goal is to build a Restricted Reserve of four (4) months of average recurring operating costs, and will be funded with surplus from unrestricted operating funds.

III. ACCOUNTING FOR RESERVES

The Restricted Reserve will be recorded in the accounting system and financial statements as SFEI Reserve. The Restricted Reserve will be funded and available in cash or cash equivalents. Restricted Reserves will be commingled with investment accounts of the organization (currently LAIF - Local Agency Investment Fund).

IV. AUTHORITY TO USE RESTRICTED RESERVES

Authority for the use of Restricted Reserves is delegated to Executive Committee for amounts up to $250K and with approval of the full Board for amounts over $250K. The use of Restricted Reserves will be reported to the Board of Directors at their next scheduled meeting, accompanied by a description of the analysis and determination of the need to use the funds, and plans for replenishment to restore the Restricted Reserve to the original amount prior to use.

The Executive Director will identify the need for access to reserve funds and confirm that the use is consistent with the purpose of the reserves as described in this Restricted Reserve Policy. Determination of need requires analysis of the sufficiency of the current level of reserve funds,

the availability of any other sources of funds before using reserves, and evaluation of the time period for which the funds will be required and replenished.

V. REPORTING AND MONITORING

The Executive Director is responsible for ensuring that the Restricted Reserve is maintained and used only as described in this Policy. Upon approval of the use of Restricted Reserve, the Executive Director will maintain records of the use of funds and plan for replenishment. It shall be the goal to replace any withdrawal from this fund within six months. The Executive Director will provide reports to the Executive Committee or Board of Directors meeting of progress to restore the fund to the original amount prior to use until the fund is restored.

The Executive Director will annually discuss what additional risk factors might be considered for the organization, the impact of budgeting on Restricted Reserve levels, and any requirements with funders or chartering organizations. Such risk factors include Federal/State budget freezes, macroeconomic factors such as recessions, inflation/ deflation, etc., and loss of funding from major programs/projects.

In addition to calculating the actual Restricted Reserve at the fiscal year-end, the Restricted Reserve goal will be calculated each year after approval of the annual budget. These reserves will be reported to the Executive Committee and Board of Directors, and included in the regular financial reports.

VI. REVIEW OF POLICY

This Policy will be reviewed by the Executive Committee every two (2) years at minimum, or sooner if warranted by internal or external events or changes. Changes to the Policy will be recommended by the Executive Committee to the Board of Directors. This policy, upon every revision hereof, shall be distributed by the Executive Director to the following individuals/entities: Executive Committee, Board of Directors, and SFEI's external auditor. The Restricted Reserve serves a dynamic role and will be reviewed and adjusted in response to internal and external changes.

Attachment 7

Item: FY18 SFEI-ASC Budget
From: Lawrence Leung, Finance Director

Revenue is projected to exceed $11M with 58.5 FTEs (60 salaried & 3 part time). Surplus ($143k) is less robust than in prior years due to a strategic investment in development ($139k in labor and $146k in overhead expenses, see the table below). Projected average labor multiplier for the year is 2.60 in FY18, which averages our current portfolio of projects ranging from 1.61 to 2.95. Breakeven multiplier is projected to be 2.55. With cash reserve at $1.12M, and $250k of that figure depositing into the Board Restricted Reserve at the close of FY17, we recommend to continue budgeting the labor multiplier on new proposals at 2.95 when allowed by the client. Also, because of the slim margins due to development, we recommend not to budget for a deposit to the Board Restricted Reserve, but can certainly revisit this item if we manage to exceed the surplus target.

Development Investment:
The following table is a summary of costs and decreased revenue associated with the development investment. Note that these costs are not additive and are already incorporated in the budget.

	A	B	C
	Item	**Amount**	**Decription**
1	Consultant (Bob Woods)	$ 17,500	Strategy
2	Consultant (Bob Woods)	$ 63,000	Implementation
3	Recruiter (Leyna Bernstein)	$ 25,000	Recruiting Development Director
4	Misc. Overhead Expenses	$ 40,000	Client cultivation, mailing program, CRM program, etc.
5	VP of Dev or Development Director	$ 139,363	New hire 10/1/17 anticipated. 9 mths salary & benefits
6	Reduced Labor Revenue	$ 123,896	Senior staff development time
7	**Total**	**$ 408,759**	**#1-4 included in Admin OH Expense table. #5 included in Budget Summary under Labor Expenses. #6 included in Budget Summary under Billed Labor Revenue.**

Recommended Action: Approve budget and 2.95 labor multiplier for FY18

Budget Summary

	A	B	C	D	E	F	G
		FY18				FY17	Increase
		Total	SFEI	ASC	RMP	Total	
	Revenue						
1	Billed Labor	$ 7,949,218	$ 3,205,158	$ 2,493,043	$ 2,251,017	$ 7,526,880	6%
2	Subcontracts	$ 2,850,000	$ 878,717	$ 401,504	$ 1,569,779	$ 2,525,972	13%
3	Other Reimb Revenue	$ 270,000	$ 51,666	$ 23,608	$ 194,726	$ 299,737	-10%
4	*Other Revenue	$ 36,000	$ 24,710	$ 11,290	$ -	$ 35,000	3%
5	**Total**	**$ 11,105,218**	**$ 4,160,251**	**$ 2,929,445**	**$ 4,015,522**	**$ 10,387,589**	**7%**
	Expenses						
6	Admin Overhead	$ 1,184,000	$ 477,393	$ 371,327	$ 335,279	$ 1,166,250	2%
7	IT Overhead	$ 97,754	$ 39,415	$ 30,658	$ 27,681	$ 89,662	9%
8	Labor	$ 6,560,000	$ 2,645,019	$ 2,057,355	$ 1,857,626	$ 5,983,545	10%
9	Subcontracts	$ 2,850,000	$ 878,717	$ 401,504	$ 1,569,779	$ 2,525,972	13%
10	Reimb Expenses	$ 270,000	$ 51,666	$ 23,608	$ 194,726	$ 299,737	-10%
11	**Total**	**$ 10,961,754**	**$ 4,092,210**	**$ 2,884,452**	**$ 3,985,091**	**$ 10,065,166**	**9%**
12	**Surplus**	**$ 143,464**				**$ 322,423**	-56%
13	**Deposit to Restricted Reserve**	**$ -**				**$ 300,000**	-100%
14	**Restricted Reserve Balance**	**$ 550,000**				**$ 550,000**	0%

	A	B	C	D
	Administrative Overhead Expenses	**FY18**	**FY17**	**Increase**
1	Legal	$ 20,000	$ 20,000	0%
2	Audit	$ 29,000	$ 24,000	21%
3	Consultants	$ 120,500	$ 115,000	5%
4	Human Resources	$ 61,000	$ 50,000	22%
5	Building Exp - Trash	$ 6,000	$ 5,000	20%
6	Building Exp - Property Taxes	$ 5,000	$ 6,000	-17%
7	Building Exp - PG&E	$ 28,000	$ 20,000	40%
8	Building Exp - Repair & Maint.	$ 4,000	$ 6,000	-33%
9	Building Exp - Office Buildout	$ 10,000	$ 60,000	-83%
10	Office & Field Supplies	$ 21,000	$ 27,500	-24%
11	Publications/Dues	$ 9,000	$ 6,000	50%
12	Printing	$ 11,000	$ 15,000	-27%
13	Postage & Courier	$ 2,000	$ 2,500	-20%
14	Small Equipment (Office & Field)	$ 29,000	$ 50,000	-42%
15	Rent	$ 370,000	$ 365,000	1%
16	Equipment Lease & Rental	$ 28,000	$ 30,000	-7%
17	Telephones	$ 24,000	$ 22,000	9%
18	Insurance	$ 56,000	$ 62,500	-10%
19	Repairs & Maint	$ 11,000	$ 16,000	-31%
20	Janitorial service	$ 23,000	$ 26,000	-12%
21	Travel	$ 27,000	$ 27,000	0%
22	Professional Development, Training & Conference Registration OPS	$ 6,000	$ 6,000	0%
23	Professional Development, Training & Conference Registration CW	$ 23,000	$ 23,000	0%
24	Professional Development, Training & Conference Registration RL	$ 19,000	$ 20,000	-5%
25	Professional Development, Training & Conference Registration EI	$ 13,000	$ 14,000	-7%
26	Meetings & Events	$ 11,000	$ 15,000	-27%
27	Professional Membership Dues	$ 4,000	$ 4,500	-11%
28	Recruiting Costs	$ 40,000	$ 15,000	167%
29	License & Taxes	$ 2,000	$ 2,000	0%
30	Depreciation	$ 16,000	$ 15,000	7%
31	Misc Payroll Expenses	$ 6,000	$ 1,000	500%
32	Temporary Staff	$ 20,000	$ 20,000	0%
33	Bank Fee	$ 3,500	$ 4,250	-18%
34	Unallowable Expenses - Bad debt & Write-offs	$ 1,000	$ 1,000	0%
35	Unallowable Expenses - Employee Appreciation	$ 35,000	$ 30,000	17%
36	Unallowable Expenses - Communications	$ 50,000	$ 40,000	25%
37	Unallowable Expenses - Development	$ 40,000	$ -	
38	**Total Admin Expenses**	**$ 1,184,000**	**$ 1,166,250**	**2%**
39	**IT Overhead**	**FY18**	**FY17**	**Increase**
40	Workstation software	$ 7,750	$ 7,563	2%
41	Workstation hardware	$ 18,500	$ 15,000	23%
42	Internet	$ 18,596	$ 17,480	6%
43	Data Storage (Backup)	$ 7,560	$ 5,560	36%
44	Server software	$ 11,249	$ 10,800	4%
45	Server hardware	$ 16,100	$ 14,560	11%
46	Small Equip. & Book	$ 1,500	$ 1,500	0%
47	Cloud Services	$ 16,499	$ 17,199	-4%
48	**Total IT Expenses**	**$ 97,754**	**$ 89,662**	**9%**

Program & Focus Area Labor Revenue

	A	B	C	D
	Program	**Focus Area**	**Labor Revenue**	**%**
1	*Multidisciplinary		$ 356,209	4.5%
2	Clean Water	Bay RMP	$ 2,251,017	28.3%
3		Bioaccumulation	$ 148,964	1.9%
4		Delta RMP	$ 460,933	5.8%
5		Geomorphology	$ 10,689	0.1%
6		Green Chemistry	$ 37,566	0.5%
7		Green Infrastructure	$ 120,235	1.5%
8		Nutrients	$ 1,126,553	14.2%
9		Watershed Loadings	$ 92,817	1.2%
10		Green Chemistry	$ 116,358	1.5%
11		Green Infrastructure	$ 255,646	3.2%
12		Subtotal	$ 4,620,778	58.1%
13	Environmental Informatics	Applications Dev	$ 313,045	3.9%
14		Data Technical Services	$ 176,710	2.2%
15		Systems & IT	$ 29,037	0.4%
16		**Subtotal	$ 518,792	6.5%
17	Resilient Landscapes	Historical Ecology	$ 1,592,740	20.0%
18		Landscape Ecology	$ 63,155	0.8%
19		Wetland Science	$ 797,544	10.0%
20		Subtotal	$ 2,453,439	30.9%
21	**Total**		**$ 7,949,218**	**100.0%**

22 *Center for resilient landscapes, DSC MOU, etc.

23 **Environmental Informatics staff heavily involved in other focus

24 areas (e.g., data management tasks within Nutrients)

Attachment 8

Item: FY18 SFEI Program Plan
From: Lawrence Leung, Finance Director

The following tables summarize the SFEI contracts we currently have signed, in negotiations, and in proposal phase with high likelihoods of funding. Most of the projects have already been approved in prior years' yearly program plans and quarterly program plan updates. New projects not previously approved are highlighted in yellow.

Recommended Action: Approve SFEI Program Plan

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
1092	SF Bay Nutrient Strategy	CW	Nutrients	2.95	8/18/2014	Ongoing	$2,902,500	$1,676,076		BACWA	Various local agencies	David Senn	Jen Hunt	UGSG, UCSC
1105	North Coast CEC Study	CW	Bioaccum-ulation	2.40	8/1/2015	12/31/2017	$121,000	$85,427	$14,400	SCCWRP	EPA/SWRCB	Rebecca Sutton	Phil Trowbridge	RB1, SCCWRP
1107	Grassland Bypass Project	CW		2.40	1/1/2016	12/31/2020	$180,136	$180,136	$23,842	USBR	USBR	Nicole David	Nicole David	
1111	Moore Microplastic Monitoring	CW	Bioaccum-ulation	1.61	10/25/2016	11/30/2019	$880,250	$338,327	$161,740	Moore Foundation	Moore Foundation	Rebecca Sutton	Meg Sedlak	5 Gyres, University of Toronto, University of Michigan
1113	Support for KTAP Development and Implementation	CW	Klamath Basin Monitoring Program	2.95	1/17/2017	9/30/2017	$14,901	$14,901	$8,224	Willamette Partnership	PacifiCorp	Randy Turner/Jay Davis	Jen Hunt	
1114	KBMP Program Coordination and Member Support	CW	Klamath Basin Monitoring Program	2.40	3/1/2017	9/30/2017	$66,877	$64,385	$49,400	National Fish and Wildlife Foundation	USFWS	Jay Davis/Randy Turner	Jen Hunt	
3014	RMP 2014 Special Studies - Nutrients	CW	Bay RMP	2.95	1/1/2014	6/30/2018			$20,000	RMP	RMP	Jay Davis	Phil Trowbridge	USGS
3015	RMP 2015 - Special Studies - Selenium	CW	Bay RMP	2.95	9/1/2014	6/30/2018	$35,000	$25,650	$15,000	RMP	RMP	Jay Davis	Phil Trowbridge	CDFW, WSPA
3015	RMP 2015 Special Studies - Nutrients	CW	Bay RMP	2.95	9/1/2014	12/31/2016	$470,000	$315,000	$60,000	RMP	RMP	Jay Davis	Phil Trowbridge	USGS, Deltares, RMA
3016	RMP 2016 - Special Studies - Chemicals of Emerging Concern	CW	Bay RMP	2.95	10/1/2015	12/31/2017	$155,000	$115,000	$10,000	RMP	RMP	Jay Davis	Phil Trowbridge	POTWs, SUNY, AXYS, CDFW
3016	RMP 2016 - Special Studies - Selenium	CW	Bay RMP	2.95	10/1/2015	12/31/2017	$47,000	$31,775	$4,000	RMP	RMP	Jay Davis	Phil Trowbridge	CDFW, WSPA
3016	RMP 2016 Special Studies - Nutrients	CW	Bay RMP	2.95	10/1/2015	6/30/2018	$300,000	$225,000	$60,000	RMP	RMP	Jay Davis	Phil Trowbridge	USGS, Deltares, RMA, UCSC, BACWA
3016	RMP 2016 Special Studies - Stormwater	CW	Bay RMP	2.95	10/1/2015	12/31/2017	$353,696	$337,360	$12,000	RMP	RMP	Jay Davis	Phil Trowbridge	BASMAA
3017	RMP 2017 Main Program (S&T and PM)	CW	Bay RMP	2.95	10/1/2016	12/31/2018	$2,349,290	$1,266,290	$542,036	RMP	RMP	Jay Davis	Phil Trowbridge	Multiple: BACWA, BASMAA, WSPA, BPC, USACE, USGS, AMS, AXYS, and others
3017	RMP 2017 Special Studies	CW	Bay RMP	2.95	10/1/2016	12/31/2018	$1,475,835	$980,766	$425,580	RMP	RMP	Jay Davis	Phil Trowbridge	Multiple: BACWA, BASMAA, WSPA, BPC, USACE, USGS, AMS, AXYS, and others

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
3018	RMP 2018 Main Program (S&T and PM)	CW	Bay RMP	2.95	*10/1/2017*	*12/31/2019*	$2,509,554	$1,352,674	$542,036	RMP	RMP	Jay Davis	Phil Trowbridge	Multiple: BACWA, BASMAA, WSPA, BPC, USACE, USGS, AMS, AXYS, and others
3018	RMP 2018 Special Studies	CW	Bay RMP	2.95	*10/1/2017*	*12/31/2019*	$1,365,000	$907,111	$425,580	RMP	RMP	Jay Davis	Phil Trowbridge	Multiple: BACWA, BASMAA, WSPA, BPC, USACE, USGS, AMS, AXYS, and others
3300	Supplemental Environmental Projects Fund	CW	Bay RMP	2.95	2/9/2016	Ongoing	$741,850	$362,917	$135,530	RMP	Various dischargers	Jay Davis	Phil Trowbridge	Multiple: Water Board, MLML, WPCL, AXYS, USGS, Tetra Tech.
4044.3	Montezuma Wetlands Project Technical Review Team	RL	Wetland Science	2.95	4/1/2016	3/31/2018	$120,207	$102,887	$63,500	Montezuma Wetlands LLC	Montezuma Wetlands LLC	Josh Collins	Sarah Lowe	Multiple: Save the Bay (Donna Ball), Peter Beye, Point Blue (Dan Robinette), Teejay O'Rear, Eric Polsen
4073.18	*CRAM Trainings	RL	Wetland Science	2.95	7/1/2017	6/30/2018	$55,000	$50,000	$50,000	Various trainees	Various trainees	Josh Collins/Sarah Pearce	Sarah Lowe	Statewide Level-2 Committee for the California Rapid Assessment Method (CRAM)
4094.01	*Llagas Flood Control Project Mitigation Monitoring Plan Development	RL	Wetland Science	2.95	10/1/2016	12/31/2017	$25,000	$25,000	$5,000	SCVWD	SCVWD	Josh Collins	Sarah Lowe	
4096	Receiving Water Monitoring Data Upload (SEP funding)	RL	Wetland Science	2.95	7/12/2016	7/12/2017	$29,950	$29,950	$7,140	Sonoma County PRMD Stormwater Program	SWRCB (SEP)	Josh Collins	Sarah Lowe	
5083	IRWMP Green Infrastructure	CW	Green Infrast-ructure	2.95	9/1/2012	12/30/2017	$330,000	$268,355	$108,600	ABAG	DWR	Lester McKee	Jen Hunt	NA
5084.02	Zone 7 for the Sediment Monitoring Program	CW	Watershed Loadings	2.95	11/1/2016	9/30/2019	$24,915	$24,915	$10,723	Zone 7 Water Agency	Alameda County	Lester McKee	Alicia Gilbreath	
5088	Bay Area Green Infrastructure Technical Transfer	CW/ EI	Green Infrast-ructure	2.40	6/1/2015	6/30/2018	$592,000	$569,580	$181,840	ABAG	EPA	Lester McKee	Jennifer Hunt	BASMAA

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
5089	*POC Monitoring for Source Identification and Management Action Effectiveness	CW	Watershed Loadings	2.95	2/2/2017	*12/31/2019*	$32,363	$31,563	$15,000	EOA, Inc.	BASMAA	Lester McKee		Office of Water Programs, Kinnetic Laboratories, Inc.
6526	SFEP Website Support	EI	Systems & IT	2.40	3/1/2011	9/30/2017	$47,000	$46,280	$2,470	ABAG	EPA	Tony Hale	Tony Hale	-
6533	IRWMP Flood Infrastructure Mapping	RL	GIS	2.95	8/16/2011	9/30/2017	$655,000	$641,044	$42,900	ABAG	DWR/BACWA	Robin Grossinger	Jen Hunt	BAFPAA
6545	Tools to Track Wetland Habitat Net Landscape Change in the Central Valley and San Francisco Bay	EI	Applications Develop-ment	2.40	8/26/2015	12/31/2019	$119,998	$119,998	$40,000	USFWS	SFBJV	Cristina Grosso	Cristina Grosso	Central Valley Joint Venture, San Francisco Bay Joint Venture, Sacramento-San Joaquin Delta Conservancy
6550	*Trash Monitoring Methods Testing	EI	GIS	2.95	*1/1/2017*	*6/30/2019*	$400,000	$400,000	$203,700	Prop 1	SCCWRP	Tony Hale	Pete Kauhanen	SCCWRP, Ocean Protection Coucil, SWRCB, California Ocean Science Trust
7111	RL Seed Funds	RL	Historical Ecology	2.95	3/17/2016	12/31/2017	$25,000	$24,801	$11,924	The Seed Fund	The Seed Fund	Robin Grossinger	Robin Grossinger	SPUR
7115	Central California Coastal Watersheds Channel Incision and Floodplain Disconnection Assessment Project	RL	Historical Ecology	2.40	9/8/2014	3/31/2019	$24,000	$23,929	$5,000	USFWS	USFWS	Robin Grossinger	Scott Dusterhoff	NOAA-NMFS
7116.1	Google Phase 2: Resilience Framework and Local Vision	RL	Historical Ecology	2.95	7/1/2015	9/30/2017	$335,000	$284,000	$45,000	Google Inc.	Google Inc. Charitable Giving Fund	Robin Grossinger	Erica Spotswood	TAC Members
7227	Demonstrating the use of Historical Hydrology to Prioritize Multi-benefit Wetland Restoration in the Petaluma River Watershed	RL	Historical Ecology	2.40	10/1/2015	11/30/2017	$258,423	$256,795	$106,200	Sonoma Resource Conservation District	EPA	Robin Grossinger	Sean Baumgarten	Petaluma Partnership
7230	Development of a Coyote Valley Greenprint	RL		2.95	10/28/2015	12/31/2017	$20,000	$20,000	$10,000	Santa Clara Valley OSA	Santa Clara Valley OSA	Robin Grossinger	Amy Richey	
7235	Sycamore Alluvial Woodland Restoration Phase II—Feasibility Studies	RL	Historical Ecology	2.95	9/15/2016	12/31/2019	$13,024	$13,024	$10,000	Loma Prieta Resource Conservation District	SCVWD	Robin Grossinger	Amy Richey	Loma Prieta RCD/H.T. Harvey/Acterra

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
7236	Healthy Watersheds, Resilient Baylands	All	Center for Resilient Landscapes	2.4	10/1/2016	7/31/2020	$988,335	$952,335	$446,085	ABAG/SFEP	EPA	Robin Grossinger	Jen Hunt	Acterra/City of Sunnyvale/Canopy/SBSPRP/ SCVWD/BAECCC/BPC/ SFBJV/East Palo Alto/BAFPAA/Google
7237	Develop Regional Transition Zone Mapping Methodology	RL	Historical Ecology	2.40	10/1/2016	7/31/2017	$30,000	$30,000	$3,000	ABAG	EPA	Jeremy Lowe	Jen Hunt	None
7238	Urban Ecological Potential	RL	Historical Ecology	2.95	11/15/2016	12/31/2017	$25,000	$25,000	$12,600	Peninsula Open Space Trust	Peninsula Open Space Trust	Robin Grossinger	Erica Spotswood	
7239	Reverse Osmosis Concentrate Management Plans	CW		2.95	11/21/2016	5/15/2018	$126,000	$126,000	$55,250	GHD Inc.	SCVWD & SWRCB	Jeremy Lowe & Rebecca Sutton	Phil Trowbridge	UC Berkeley & Stanford
7240	RSV Documentation and Communication	RL	Historical Ecology	2.95	11/30/2016	9/30/2017	$10,000	$10,000	$3,730	Google	Google	Robin Grossinger	Robin Grossinger	
7241	Development of CRL (SVCF)	RL	Historical Ecology	2.95	12/9/2016	12/31/2017	$30,000	$30,000	$20,000	Silicon Valley Community Foundation	Silicon Valley Community Foundation	Robin Grossinger	Robin Grossinger	
7243	Science Support for SCV Restoration & Conservation Plans	RL	Center for Resilient Landscapes	2.95	1/1/2017	12/31/2017	$5,000	$5,000	$3,609	Peninsula Open Space Trust	Peninsula Open Space Trust	Robin Grossinger	Robin Grossinger	
7244	Delta Channel Incision/Floodplain Discon	RL	Landscape Ecology	2.4	12/7/2016	3/31/2021	$150,000	$148,000	$86,393	USFWS	USFWS	Scott Dusterhoff	Julie Beagle	USFWS, UC Davis
7245	Ecological Advising on Campus Projects	RL	Historical Ecology	2.95	4/20/2017	12/31/2017	$20,000	$20,000	$17,143	Google	Google	Robin Grossinger		
7246	2017 RSV Sponsorship Re-Oaking Outreach	RL	Historical Ecology	2.95	5/30/2017	12/31/2017	$15,000	$15,000	$15,000	Google	Google	Robin Grossinger	Erica Spotswood	
40xx	*West Valley Watershed Assessment 2017	RL	Wetland Science	2.95	*6/16/2017*	*8/10/2018*	$220,000	$213,500	$183,000	SCVWD	SCVWD	Josh Collins	Sarah Lowe	
65xx	*Biological Opinion Project Tracking	EI	Data Technical Services	2.40	*7/1/2017*	*12/31/2018*	$10,000	$10,000	$10,000	USFWS	USFWS	Tony Hale	Tony Hale	USFWS
6552	*GIS Support for BCDC	EI	GIS	2.40	7/1/2017	6/30/2019	$200,000	$200,000	$100,000	BCDC	BCDC	Tony Hale	Pete Kauhanen	
72xx	*New Life for Eroding Shorelines in Marin County and Beyond	RL	Geomorphology	1.62	*7/1/2017*	*6/30/19*	$52,000	$52,000	$26,000	SF State	Coastal Conservancy/Marin Community Foundation	Robin Grossinger	Julie Beagle	Marin County, Peter Baye
72xx	*A Framework for Prioritizing Adaptation Strategies	RL	Geomorph-ology	1.62	*7/1/2017*	*6/30/2019*	$84,000	$84,000	$42,000	State Coastal Conservancy	Marin Community Foundation	Jeremy Lowe	Julie Beagle	Point Blue, Marin County Planning

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
72xx	*Laguna-Mark West Creek Watershed Master Restoration Planning Project	RL		1.70	*7/1/2017*	*4/30/2020*	$326,973	$308,973	$109,049	Sonoma County Water Agency	CDFW (Prop 1)	Scott Dusterhoff		
72xx	*Laguna-Mark West Creek Watershed Master Restoration Planning Project (Match)	RL		2.95	*7/1/2017*	*4/30/2020*	$250,058	$250,058	$88,256	SCVWD	SCVWD	Scott Dusterhoff		
72xx	*Resilience in San Francisco Bay Study	All		1.61	*7/1/2017*	*3/31/2019*	$100,000	$100,000	$57,143	The Natural Capital Project (NatCap)	Moore Foundation			
72xx	**Preparing for the Storm: Riparian Restoration, Sediment Reuse, and Urban Greening to Enhance Stream and Watershed Resilience	RL	Center for Resilient Landscapes	2.40	*10/1/2017*	*9/30/2021*	$945,000	$945,000	$177,188	Zone 7 Water Agency	EPA	Robin Grossinger	Julie Beagle	

Proj #	Project Title	Project Description
1092	SF Bay Nutrient Strategy	Funds from BACWA to support the Nutrient Management Strategy including modeling, monitoring,stakeholder support and communication, scientific peer review, and toxins analysis.
1105	North Coast CEC Study	The primary objective of this study is to investigate the occurrence of high priority CECs in receiving water, sediments, and fish tissue within the Russian River Watershed to address the management question: Are contaminants of emerging concern in WWTP effluent and stormwater runoff impacting beneficial uses in the Russian River watershed? Additionally, this watershed may be impacted by agricultural pesticides not considered in the statewide prioritization framework. Therefore, another objective is to determine which pesticides applied in the Russian River Watershed are of highest priority for monitoring. The study includes 3 main components: Task 1 – Monitor prioritized CECs in WWTP effluent and stormwater entering the RRW; Task 2 – Monitor prioritized CECs in fish tissues; Task 3 – Prioritize and monitor regionally-specific pesticides. SFEI is completing Tasks 2 and 3. SCCWRP is responsible for Task 1.
1107	Grassland Bypass Project	The purpose of this grant agreement is to provide a continuation of summarizing findings for the annual report and maintaining and updating the Grassland Bypass Project website.
1111	Moore Microplastic Monitoring	This project will support multiple scientific components supporting new knowledge and characterization of microplastics in San Francisco Bay. Research will be conducted to better understand microplastics in Bay fish, sediment and surface water; to provide the first ever characterization of microplastics outside of the Golden Gate and adjacent National Marine Sanctuaries; to characterize pathways through which plastic enters the water, including wastewater treatment plants and stormwater discharges; and to develop an estuarine-marine transport model linking Bay microplastics to the sanctuaries beyond. Based on the findings, the researchers will suggest potential avenues to control microplastic release into the Bay and ocean, which may inform innovations and policy discussions. Lastly, this work can help advance methods and tools to standardize how samples are collected and to ensure all sources of microplastics are captured in system-wide assessments.
1113	Support for KTAP Development and Implementation	Supporting the operations and improvement of the Klamath Tracking and Accounting Program (KTAP) through stronger quality assurance and quality control measures and stronger participation in reporting.
1114	KBMP Program Coordination and Member Support	KBMP proposes this funding be used to continue critical assistance to members through existing and new programs under guidance by the KBMP Steering Committee. KBMP will work with the National Fish and Wildlife Foundation (NFWF) and the US Fish and Wildlife Service (USFWS) to expand the Flow Restoration Accounting Framework (FRAF) into the Shasta, Scott, and other identified watersheds. Lastly, KBMP will provide support for the Integrated Fish and Restoration Monitoring Plan (IFRMP) team as needed by providing KBMP data, program resources, and general assistance.
3014	RMP 2014 Special Studies - Nutrients	Nutrients remain a high priority for the RMP. One task from the 2014 budget will remain open in FY18: Nutrient Monitoring Program Development. These funds will support coordination with other nutrient monitoring programs in the Estuary.
3015	RMP 2015 - Special Studies - Selenium	Selenium TMDL is being developed for the North Bay. In support of the TMDL, the RMP will analyze sturgeon tissue for selenium (plugs from fish caught in the Bay, plugs and eggs from fish caught in the Delta Fishing Derby). Recent data on selenium will be sythesized in a report. The RMP will also convene the Selenium Strategy Team for oversight.
3015	RMP 2015 Special Studies - Nutrients	Nutrients remain a high priority for the RMP. We will continue to develop modeling capabilities, conduct high-priority research, and maintain a network of real time sensors that were installed in the Bay in 2014. Both modeling and high-frequency monitoring are important tools to help us understand how nutrients might affect the health of the Bay. RMP resources are being combined with resources from local dischargers, the State Water Board, USGS, the Interagency Ecological Program, and other organizations to complete these studies and help answer the highest priority issues laid out in the Nutrient Conceptual Model.
3016	RMP 2016 - Special Studies - Chemicals of Emerging Concern	The goal of this program is to understand the potential impacts of contaminants of emerging concern (CECs) on the Bay. In the 2016 RMP budget, there is funding to conduct a "non-targeted analysis" monitoring study, complete a study of fipronil and other current use pesticides in wastewater, and hold a workshop to develop a microplastics strategy for the Bay. The program will also update the overarching CEC Strategy for the program and revisit the classifications of CECs to determine if any management actions are needed and if there are new chemicals that should be studied.
3016	RMP 2016 - Special Studies - Selenium	In support of the selenium TMDL for the North Bay, there is funding in the 2016 RMP budget for a study of selenium in the tissues of sturgeon at the 2016 Sturgeon Derby. The RMP will also convene the Selenium Strategy Team for oversight.
3016	RMP 2016 Special Studies - Nutrients	Nutrients are a high priority management issue in the Bay. In support of a regional permit for POTWs, the Nutrient Management Strategy conducts scientific studies to understand the effects of nutrients on water quality in the Bay. The 2016 RMP budget contains funding for monitoring in Lower South Bay with moored sensors, monitoring of dissoved oxygen in the margin areas, and monitoring program development.

Proj #	Project Title	Project Description
3016	RMP 2016 Special Studies - Stormwater	In support of the revised municipal regional permit (MRP), the RMP's Sources, Pathways, and Loading Workgroup (SPLWG) and Small Tributary Loading Strategy (STLS) Team have developed a workplan for RMP funding to collect critical information on stormwater loads from Bay Area watersheds. In the 2016 RMP budget, there is funding for (1) facilitating the STLS and SPLWG discussions; (2) Wet weather monitoring of watersheds for PCB and mercury using innovative methods; (3) Continued development of a regional spreadsheet model to estimate contaminant loads; and (4) Development of a strategy for measuring trends in stormwater pollution.
3017	RMP 2017 Main Program (S&T and PM)	The Regional Monitoring Program (RMP) enters it's 25th year of providing data to inform management and policy decisions regarding the Bay. The RMP will hold quarterly meetings of governance committees (Steering Committee, Technical Review Committee, Workgroups) to review and provide oversight to the program. Additional review will be undertaken in our workgroup meetings. For Status and Trends monitoring in 2017, RMP will collect and analyze water samples for a suite of contaminants and support long-term monitoring for nutrients and suspended sediments by USGS. These results will be quality assured and uploaded to CEDEN and visualized through the CD3 web portal. Data and interpretation of RMP results will be communicated to partners through a Pulse of the Bay report and at the State of the Estuary Conference in October.
3017	RMP 2017 Special Studies	RMP special studies are targeted studies to answer specific management questions. Studies are completed in the following focus areas: Stormwater, Nutrients, Emerging Contaminants, PCBs, Selenium, Dioxin, and Exposure & Effects.
3018	RMP 2018 Main Program (S&T and PM)	The Regional Monitoring Program (RMP) enters it's 26th year of providing data to inform management and policy decisions regarding the Bay. The RMP will hold quarterly meetings of governance committees (Steering Committee, Technical Review Committee, Workgroups) to review and provide oversight to the program. Additional review will be undertaken in our workgroup meetings. For Status and Trends monitoring in 2017, RMP will collect and analyze water samples for a suite of contaminants and support long-term monitoring for nutrients and suspended sediments by USGS. These results will be quality assured and uploaded to CEDEN and visualized through the CD3 web portal. Data and interpretation of RMP results will be communicated to partners through a Pulse of the Bay report and at the State of the Estuary Conference in October.
3018	RMP 2018 Special Studies	RMP special studies are targeted studies to answer specific management questions. Studies are completed in the following focus areas: Stormwater, Nutrients, Emerging Contaminants, PCBs, Selenium, Dioxin, and Exposure & Effects.
3300	Supplemental Environmental Projects Fund	The Water Board and SFEI entered into an agreement that made the RMP an authorized Supplemental Environmental Project (SEP) funds administrator in October 2015. Therefore, for enforcement actions, parties have the option to direct up to half of the penalty to the RMP as a SEP. The State Water Resources Control Board SEP Policy requires a nexus between the violation and the SEP. There is nexus between the RMP and violations in general because the RMP studies water bodies that are potentially affected by violations in the San Francisco Bay region. For smaller violations with Mandatory Minimum Penalties (MMP), this general nexus is sufficient and the funds may be assigned to any study. For larger settlements, specific studies with nexus to the violation will need to be identified through the RMP planning process.
4044.3	Montezuma Wetlands Project Technical Review Team	This project is ongoing. Since 2002 SFEI has administered the Technical Review Team (TRT) for the Montezuma Wetlands Project (LLC), pursuant to the TRT Charter Agreement, as called for in the US Army Corps of Engineers permit 19405N (USCAE Permit) that authorizes the Project. Funding and tasks are renegotiated on a periodic basis. Since its inception, the TRT has worked with the MWLLC to support an adaptive management approach toward project design and implementation. New habitats and management methods have been introduced with advisory input from the TRT. The project is continuing Pre-breach monitoring and updating its QAPP and Monitoring Plan based on the CA Regional Water Quality Control Board – San Francisco Bay Region's Updated Waste Discharge Requirements and Water Quality Certification: WDR Order No.R2-2012-0087. The TRT advises the Montezuma project team on monitoring plans and provides review of ongoing monitoring efforts.
4073.18	CRAM Trainings	This project consists of ongoing CRAM Practitioner trainings led by SFEI's lead CRAM Practitioner, Sarah Pearce. SFEI-ASC is regularly asked by local, regional, and/or state agencies to conduct2-day agency staff trainings and five-day practitioner trainings for the California Rapid wetland condition assessments using CRAM. SFEI is scheduled to do four trainings this year (2016) with up to 30 trainees in each course. As new requests for CRAM trainings are scheduled and contracted, they are added to and tracked under this parent project code.
4094.01	Llagas Flood Control Project Mitigation Monitoring Plan Development	The purpose of this project is for SFEI to provide support to the District for the Llagas Creek Flood Control Project (Project) in the use and implementation of California Rapid Assessment Method (CRAM) in mitigation planning and future monitoring and assessment. SFEI staff will work with District Project staff to estimate mitigation ratios based on CRAM and guidance provided in the ACOE's Mitigation Guidance (January, 2015). SFEI staff with also participate in Project related meetings with San Francisco ACOE to discuss the mitigation monitoring plan (MMP) and use of CRAM in the MMP and offer guidance as warranted.

Proj #	Project Title	Project Description
4096	Receiving Water Monitoring Data Upload (SEP funding)	County of Sonoma's Supplemental Environmental Project (SEP) will make receiving water quality monitoring data, from the Russian River watershed, available online through the Contaminant Data Display and Download (CD3) tool.
5083	IRWMP Green Infrastructure	The Regional Green Infrastructure Capacity Building Program will be undertaken by a team of partners under the leadership of SFEP. The program will implement three demonstration projects in the northern, southern and eastern sub-regions of the San Francisco Bay Area IRWM region. The projects included are completion of the San Pablo Spine along seven East Bay cities from Emeryville to San Pablo, "Green Street" Improvements to Hacienda Avenue in Campbell, and Napa Valley Rainwater Harvesting. The program will analyze the performance of these projects to determine actual benefits of water conservation and/or stormwater quality benefits. Results of the pilot evaluations will then be used to inform and expand development of green infrastructure projects to all parts of the region. The future goal of the project is to convert non-permeable areas to permeable or landscaped areas; Decrease maintenance, material and energy costs; Treat surface runoff and allow for percolation into the ground aquifer. SFEI will be responsible for project performance analysis for each project. SFEI will use appropriate, standardized monitoring and assessment, results analysis, and geospatial tools to inform future green infrastructure management decisions.
5084.02	Zone 7 for the Sediment Monitoring Program	In water year (WY) 2011, Zone 7 Water Agency (Zone 7) began a study to directly support improved modeling for design and compliance purposes and decisions about future operations and maintenance of its facilities. This study focused on the mainstem of Arroyo Mocho upstream from Alamo Canal and downstream from the Arroyo Mocho at Hagemann gauge (the study area). The major objectives of this effort were to determine the flow of water and sediment into and out of mainstem Arroyo Mocho and potential locations for on or off site mitigation. Towards providing data to support these objectives, SFEI (the CONSULTANT) was contracted to gauge sediments (including bedload) through the study reaches, to develop a GIS-based terrain map of the study watershed which apportions the estimated sediment load from each of the subwatersheds, to create an annotated bibliography of the available information pertinent to understanding the transmission of water and sediment through the mainstem channel facilities, to complete a focused historical ecology study of the area, and finally to complete a sediment budget for the study area. The sedimen~ budget period well-defined sediment transport during dry-a period, but a notable weakness was the lack of sediment transport and deposition in the study area during a period with large storm events. In WY 2017 and beyond, Zone 7 will continue sediment monitoring in the area in partnership with USGS, and the CONSULTANT will be contracted to provide ongoing support to Zone 7 during this time.
5088	Bay Area Green Infrastructure Technical Transfer	Further development of the GreenPlan-IT toolkit to add features. Work with 3-4 municpalities to implment the toolkit in select watersheds. Design and develop a LID tracker tool to indentify where LID features are implemented in the Bay Area.
5089	POC Monitoring for Source Identification and Management Action Effectiveness	Investigation of PCBs in road and stormwater infrastructure caulk and well as performance monitoring of various BMPs types.
6526	SFEP Website Support	SFEP upgraded their website in 2013 and contracted with SFEI for ongoing support and hosting services for their Content Management System. SFEI will continue to serve as webmaster and will provide ongoing routine maintenance to the site. SFEI developed and implemented an interactive map for SFEP's Watershed program. Minor modifications to this portion may also be performed under this contract. Funding is on an as-needed basis through amendments.
6533	IRWMP Flood Infrastructure Mapping	The San Francisco Estuary Institute in partnership with BAFPAA will gather, compile and standardize existing flood infrastructure data into a Geographic Information System (GIS) database. The database will build upon the existing Statewide Levee Database and the existing Army Corps of Engineers Levee Database, but will map a broader range of flood protection and stormwater facilities and information. The result will be a regional and standardized dataset of flood infrastructure for the SF Bay region and the information will provide a foundation for the Statewide Flood Needs Assessment. This critical information will be provided to flood managers and planners through an on-line interactive map. Specific flood risk information will be collected for a disadvantaged community (DAC) in Richmond by EJCW under a separate Prop 84 grant. Data from that effort will be integrated into the regional website as a pilot of targeted flood risk analysis for Bay communities.

Proj #	Project Title	Project Description
6545	Tools to Track Wetland Habitat Net Landscape Change in the Central Valley and San Francisco Bay	This project will assist the Central Valley Joint Venture (CVJV) and San Francisco Bay Joint Venture (SFBJV) track projects and wetland habitat net landscape changes, and provide GIS mapping support for the production of the Joint Ventures' Implementation Plans and other program activities. In 2013-2015, a USEPA funded grant was used to migrate the Joint Ventures' project database and tracking to EcoAtlas (www.ecoatlas.org). This transition allowed the Joint Ventures to use EcoAtlas to visualize their projects on an interactive map and leverage other investments made to enhance EcoAtlas.
6550	Trash Monitoring Methods Testing	The Ocean Protection Council and the State Water Resources Control Board are seeking to develop a library of standardized monitoring methods for trash in receiving waters to support emerging monitoring programs. This project will require SCCWRP and SFEI to test the efficacy of various monitoring methods in the field to determine their ability to address specific management questions. The team will work with stakeholders -- municipalities, stormwater programs, state and federal agencies -- to align the methods with pre-existing standards or develop new ones. The management questions find their origins in the Trash Amendments issued by the SWRCB. However, each regional board will find specific permutations of each management question to pursue. Therefore, the library of monitoring methods must be versatile enough to address a range of salient questions. SFEI will furnish science and technology support in service of this project.
7111	RL Seed Funds	The project will initiate a new framework for guiding and evaluating climate adaptation strategies appropriate to San Francisco Bay's diverse shoreline settings, enabling the development of innovative design concepts that integrate natural and built infrastructure. These concepts include structural and nonstructural measures that address ecosystem health and resilience, flood risk management, water quality, land-use planning, and social equity goals. The result will be an essential framework for understanding what kind of adaptations could work for real places in the Bay Area, and a vision for how individual projects and design concepts can add up to resilient landscapes.
7115	Central California Coastal Watersheds Channel Incision and Floodplain Disconnection Assessment Project	The main goal of the project is to assess the magnitude ofincision and floodplain disconnection in coastal California watersheds from southern Sonoma County to southern San Mateo County over the past 150 years as a means of developing restoration priority areas. Phase 1 of the project will focus on identifying the existing data required to conduct a channel change analysis for focus area watersheds, identifying priority watersheds in the focus area that are known to have experienced channel incision and floodplain disconnection over the past 150 years and for which the appropriate data for conducting a channel change analysis is available, and providing a cursory channel change analysis for at least one priority watershed. Subsequent phases will focus on compiling and analyzing the catalogued data, assessing the magnitude of channel incision and floodplain disconnection for targeted watersheds, prioritizing channels for restoration, and implementing appropriate actions aimed at restoring frequent floodplain inundation.
7116.1	Google Phase 2: Resilience Framework and Local Vision	This second phase of Resilient Silicon Valley will build on the first phase to further refine the Resilience Science Framework and apply it to landscape-scale restoration in Silicon Valley and the South Bay. This work will integrate resilience science into local planning and help the Google Ecology Program and other local organizations use a science-driven approach to optimizing investments in regional ecological health.
7227	Demonstrating the use of Historical Hydrology to Prioritize Multi-benefit Wetland Restoration in the Petaluma River Watershed	This project will engage watershed partners to demonstrate the efficacy of historical hydrology in identifying and prioritizing multi-benefit wetland restoration opportunities. This demonstration will focus on the Petaluma River watershed. In San Francisco Bay as a whole, only 15% of historic tidal marshlands remain. In San Pablo Bay (the northern extension of the San Francisco Bay), 27% remain. The Petaluma Marsh, which covers 5,000 acres, is the largest remaining salt marsh in San Pablo Bay, and represents the single largest and least disturbed example of Ancient Tidal Marshlands in California (Collins, 2006). In addition there are 7,000 acres of reclaimed wetlands in the watershed creating an excellent opportunity for Petaluma to act as a stronghold of marshland protection and restoration within San Pablo Bay and the greater San Francisco Bay. The proposed project will work with a variety of stakeholders to synthesize diverse historical data, such as maps, landscape and aerial photographs, textual accounts, and early surveys, to enhance our understanding of the hydrologic conditions of the Petaluma River watershed prior to major Euro-American modification. Findings will be compiled into an illustrated technical report and GIS describing historical hydrologic conditions and discussing implications for management, restoration, flood control, and groundwater recharge. These products will fill a critical data gap in the integrated picture of historical conditions in the North Bay. Products will also include prioritization of wetland restoration opportunities and feasibility analysis, and information regarding costs, methods, and feasibility for transfer of the historical hydrology method to other watersheds.
7230	Development of a Coyote Valley Greenprint	SFEI and the Santa Clara Valley Open Space Authority (OSA) are partnering to apply ecosystem science and the Landscape Resilience Framework (Beller et al. 2015) for the development of a Coyote Valley Greenprint.

Proj #	Project Title	Project Description
7235	Sycamore Alluvial Woodland Restoration Phase II—Feasibility Studies	California sycamore (Platanus racemosa) is an iconic native tree species whose health and regeneration have been substantially affected by a wide range of factors. Sycamore alluvial woodland (SAW) is an uncommon habitat type considered to be a very rare and threatened land cover type in Santa Clara County. The San Francisco Estuary Institute and H. T. Harvey & Associates have been involved in a Natural Community Conservation Planning grant–funded study designed to develop a better understanding of the biotic and abiotic factors that influence California sycamore health and regeneration. The significant progress made on the study to date has helped build a foundation on which to better understand the ecology of these habitats and what is required to restore and enhance SAW. SFEI will analyze two sites to identify potentially suitable areas for sycamore planting treatments and develop a set of guidelines for the use of field crews who eould implenent SAW restoration efforts.
7236	Healthy Watersheds, Resilient Baylands	Watersheds, Resilient Baylands is a timely effort to catalyze and demonstrate how resilience to climate change can be enhanced through implementation of multi-benefit environmental projects. The project will develop essential science-based tools that allow planners to integrate wetland restoration and water quality improvements, demonstrate the effectiveness of the tools in major implementation projects in the Silicon Valley and South Bay, and transfer information to local practitioners for incorporation into an array of implementation plans and programs. Within 4 years, outcomes will include 10 multi-benefit urban greening projects in Sunnyvale, Mountain View, and East Palo Alto, reducing stormwater runoff and creating 13 acres of wetland, riparian, and native plant habitat; 2 creeks realigned to deliver an estimated ~50,000 cubic yards/year of sediment to restored tidal marsh, reducing maintenance costs and increasing permitting efficiency; 10 acres of tidal transition zone and seasonal wetlands; reduced risk of flooding and associated contamination to the community of Alviso; reduced PCB and mercury delivery to the Bay; reduced methylmercury production in the baylands; and reduced risk of landfill contamination to the Bay. In 5 to 10 years these actions will restore 1,400 acres of shallow subtidal, tidal flat, and tidal marsh habitat at Pond A8 as well as a range of other outcomes.
7237	Develop Regional Transition Zone Mapping Methodology	Technical lead on the coordination team for the Upland Transition Zone Mapping Methodology Task Force. Develop ideas for a technical approach to identify a regional mapping methodology of existing and projected transition zones, as defined in the 2015 Baylands Habitat Goals Science Update. Create materials such as presentations and handouts for meetings to support and guide overall technical approach. Co-author final report, focusing on detailed synthesis and analysis of transition zone sub-zones based on input and review from Task Force members and coordination team.
7238	Urban Ecological Potential	Investments in urban greening and urban open space are increasing rapidly, with greater recognition of the benefits to public health and other ecosystem services, and catalyzed by rapid trends towards drought:tolerant landscaping and multi:benefit “green” projects. Such efforts are often described as having benefits to local and regional ecosystems; however, the specific benefits are usually not specified. In addition,there are potential negative impacts to be considered. For example, wildlife populations attracted to cities in response to urban greening may suffer increased predation and disease transmission. Therefore, whether urban greening efforts will ultimately benefit wildlife populations, including those in open space areas that surround cities, is a key question to address as we move towards transforming our cities to make them greener places to live. At the same time, ecosystem managers are increasingly confronted by challenges of maintaining and improving ecological connectivity and adaptating to climate change, which instigate thinking beyond traditional reserve boundaries to other ways to support regional ecosystems. For example, urban, suburban, and developed landscapes occupy large parts of the landscape, constituting barriers between critical habitat areas. They are also often the only settings where many regionally:rare habitat types can be obtained. These parallel trends raise the question of whether urban landscapes (including suburban and commercial) can support a greater level of desirable ecological functions. If so, then given the major investments in urban greening, conservation interests may want to provide more specific guidance as to the actions and associated benefits that would be improve ecological outcomes. An urban ecological vision, implemented through diverse coordinated actions, has the potential to leverage extensive resources to gain ecological “lift” from previously undervalued areas. In this project we propose to synthesize existing literature and local expertise to determine what is realistically achievable from urban ecological restoration in such settings and then apply these concepts and principles to the Santa Clara Valley to identify the opportunities and constraints for specific ecological improvements. This work will establish an important new direction for 21st:century conservation efforts in Santa Clara County and the Bay Area, providing a starting point for future work identifying specific approaches, policies, and projects to leverage these benefits in the coming years.

Proj #	Project Title	Project Description
7239	Reverse Osmosis Concentrate Management Plans	The University of California at Berkeley (Berkeley) and Stanford University (Stanford), in partnership with the San Francisco Estuary Institute (SFEI), the Bay Area Coalition Wastewater Agencies (BACWA), and the City of San Jose (CSJ) will help the District in evaluating the technical and economic feasibility of two of the following RO concentrate management options: (1) Engineered wetland treatment of RO concentrate. Wetland-based treatment has the potential to remove organic contaminants, nutrients, metals and pathogens, while increasing the TDS (through evaporation) and providing brackish water habitat. To assess the efficacy of engineered wetland treatment of RO concentrate, experiments will be conducted under conditions likely to be encountered in a full-scale treatment system. (2) AOP treatment of RO concentrate. AOPs can degrade dissolved organics and inactivate pathogens. When used as a pretreatment for engineered wetland treatment, AOPs may increase the efficiency of engineered wetland treatment by partially breaking down recalcitrant organic compounds, rendering them more susceptible to further biological degradation, and by increasing the UV/visible light transmittance, aiding photodegradation. They also may aid the removal of metals within the wetland by liberating metals from strong complexes (e.g., EDTA). The project team will study the efficacy of ozone and UV/hydrogen peroxide treatment (and other potential oxidants) of RO concentrates alone and in combination with engineered wetland treatment.
7240	RSV Documentation and Communication	SFEI has developed the Resilient Silicon Valley Vision over the past two years, with support from Google. With many partners and experts, we are continuing to develop the scientific guidance for landscape resilience. However, as interest in RSV grows and we have more actionable information and tools, it is important to document and communicate the overall RSV story from science to implementation. With the support of the RSV Sponsorship Program, we initiated this documentation and communication work in 2016. These efforts in 2017 will continue by focusing on documenting local landscapes, with input from the artist Susan Schwartzenberg. This will involve several Silicon Valley site visits, with photo-documentation of landscape trajectories and transformation that illustrate RSV. We expect this work will result in an initial products and, potentially, a proposed approach for fuller RSV documentation in collaboration with Susan Schwartzenberg.
7241	Development of CRL (SVCF)	To develop a multi-year, strategic plan for a new Center for Resilient Landscapes within SFEI. The Center's goal is to accelerate and incorporate state-of-the-art science into Bay Area climate adaptation policy decisions. The Center will provide a forum and a process for SFEI's unique science and technology leaders to partner with our established network of top policy leaders. This partnership will develop options and long-range solutions that synthesize and translate actionable science into holistic visions for resilient communities and ecosystems.
7243	Science Support for SCV Restoration & Conservation Plans	Providing consulting, strategic research, and graphic services related to historical ecology, water systems, green infrastructure, and resilience science for the development of our restoration and conservation plans in Santa Clara Valley, on an as needed basis.
7244	Delta Channel Incision/Floodplain Discon	Historically, native salmonids and other fish reared in the freshwater marshes that filled the Sacramento-San Joaquin Delta and the floodplains of the channels entering the Delta. Over the past 200 years, diking for the sake of land reclamation and flood control has resulted in considerable channel-floodplain disconnection and a dramatic decrease in rearing habitat, in addition to other impacts to native wildlife that historically used the Delta floodplains. This project will leverage previous SFEI work to build an understanding of key channel-floodplain disconnection hotspots in the Delta core and surrounding areas, and develop high level restoration approaches aimed at restoring lost floodplain habitat.
7245	Ecological Advising on Campus Projects	This updated contract will be for services to Google around advising on development projects - Charleston East, Bay View, district scale planning and management of the Resilient Silicon Valley site.
7246	2017 RSV Sponsorship Re-Oaking Outreach	This project will specifically implement the Native Landscaping and Re-Oaking recommendations of the Vision for a Resilient Silicon Valley Landscape. It directly implements the Landscape Resilience Framework in a number of ways. Re-oaking is a direct response to the Silicon Valley Setting, recovering a significant biological legacy with long-term resilience potential. Re-oaking is about establishing the Processes of pollination and dispersal that will allow urban oaks to persist, providing Connectivity to oak-associated wildlife across the landscape. Re-oaking emphasizes multiple species of oaks to increase Diversity and Complexity and will establish new populations of oak species that respond differently to climate signals, providing Redundancy to the coast live oak-dominated communities of the upland preserves. The Re-oaking guidelines specifically address the Scale needed to achieve ecological resilience and, finally, are specifically designed to bring People actively into the enhancement of landscape resilience within their neighborhoods and communities.

Proj #	Project Title	Project Description
40xx	West Valley Watershed Assessment 2017	The Santa Clara Valley Water District's Safe, Clean Water and Natural Flood Protection Program (SCW) D5 Project is continuing to assess the amount, diversity and condition of aquatic resources in the District's five watersheds. This contract for the West Valley watershed completes the first round of watershed assessments (Coyote Creek in 2010, Guadalupe in 2012, Pajaro River in 2015, and Lower Peninsula creeks in 2016). SFEI will support the District with a statistical survey design, sample draw, data analyses, reporting, and general guidance regarding consistent application of the EcoAtlas toolset for the District, State Water Board's new section 401 guidance, U.S. Army Corps of Engineers' (USACE) mitigation planning procedures, and watershed-based environmental strategies.
65xx	Biological Opinion Project Tracking	USFWS requires a Biological Opinion Tracking System (BOTS) with a basic geospatial component (KML) associated with each of its Section 7 projects consultations. SFEI will create a Drupal-based set of forms and a database, not unlike our main website, to record basic information about each project, its anticipated impact on habitat and specifies, and facilitate notifications to selected individuals when certain time-bound threshold conditions are met. The USFWS will use the system as an intraorganizational tracking mechanism to facilitate their monitoring of project consultations and the fulfillment of promised outcomes related to habitat and species.
6552	GIS Support for BCDC	SFEI will support BCDC with data and metadata development, best management practices, data analysis and mapping, technical assistance, web mapping, and development of internal, external GIS tools and data acquisition; (2) have extensive experience in digital mapping, website design and graphic support; (3) keep BCDC's existing materials up to date by amending with new graphic style, maps, figures, layouts and content assisting with the development of new plans and reports; (4) provide BCDC staff with support on communication materials and exhibits for use at meetings, in presentations, in print material (such as posters, one-pagers, five slide briefs, etc.) and on websites; and (5) work collaboratively with BCDC staff to provide technical, mapping, GIS, graphic support for projects, programs and day to day questions that arise.
72xx	New Life for Eroding Shorelines in Marin County and Beyond	This project will pilot a new green shoreline treatment for eroding marshes which will elevate parts of the marsh surface using a wooden arbor and climbing rare plants. SFEI's role will be in assessing the shorelines before and after the treatment and monitoring erosion and sediment deposition.
72xx	A Framework for Prioritizing Adaptation Strategies	The County of Marin has recently undertaken a vulnerability study along its Bay shoreline funded by the Coastal Conservancy, called BayWAVE, which identifies the assets at risk to a number of hazards including flooding and erosion due to rising sea levels. As BayWAVE moves into its adaptation phase, the next logical step is to identify strategies, particularly those including "living shorelines" or "nature-based adaptation," to reduce the county's exposure to these hazards and to increase the resilience of the shoreline. Point Blue Conservation Science (Point Blue) requests $202,896 over 2 years to develop a framework to identify, evaluate and prioritize climate change adaptation strategies, specifically including nature-based solutions, ensuring decision-makers can maximize benefits to the public and ecosystem using the best available science. Point Blue, San Francisco Estuary Institute (SFEI) and the County of Marin's Community Development Agency (the County) will co-develop the framework using the adaptation phase of the County's BayWAVE project as a test case with the intent that it will also be applicable around the entire bay and beyond. We will identify and evaluate landscape-scale adaptation strategies to address climate vulnerabilities identified in the recently completed BayWAVE vulnerability study, and define criteria to prioritize strategies for maximum benefit to both the natural and man-made environment. We will include extensive public outreach to the County's Executive Steering Committee, other city and county stakeholders, and regional collaboratives to ensure the framework is actionable and accommodates a diversity of constituencies. Our framework will, by design, ensure nature-based adaptation solutions receive full consideration as an option to protect and enhance the Marin County Bay shoreline and its associated natural resources. As a result, the County will be able to identify, evaluate and prioritize a range of flexible, cost-effective strategies to increase coastal resiliency to climate change. The resulting tools will be readily adaptable for use by other decision-makers around San Francisco Bay and beyond.
72xx	Laguna-Mark West Creek Watershed Master Restoration Planning Project	The Restoration Plan will identify, coordinate, and prioritize on-the-ground multi-benefit projects to be implemented by public, non-profit, and tribal agencies throughout the watershed. The Restoration Plan development process will provide a baseline understanding of the historical and contemporary geomorphic and ecological conditions and account for the likely impact of predicted changes in precipitation and flood intensity. The Restoration Plan development process will include gathering information from several existing data sources and historical studies. The Restoration Plan will lead to improved ecosystem functioning through a coordinated suite of stream and wetland restoration projects. This suite of projects seeks to improve streamflow, water quality, critical habitat for species migration, and rearing for fish and wildlife, especially California Central Coast coho salmon (Oncorhynchus kisutch) and Central California Coast steelhead (O. mykiss). The projects also seek to address Total Maximum Daily Load (TMDL) constituents in the Laguna and to advance the productive use of adjacent lands, including lands owned and managed by the California Department of Fish and Wildlife (CDFW).

Proj #	Project Title	Project Description
72xx	Laguna-Mark West Creek Watershed Master Restoration Planning Project (Match)	Same as the above
72xx	Resilience in San Francisco Bay Study	Science support for NatCap's 2-Pronged Engagement: 1. Regional effort through collaborating with BARC and BCDC on their regional vulnerability assessment (CalTrans grant). 2. County effort focused on San Mateo (including inclusion of natural capital in climate adaptation planning on both the coastal and bay sides of the county). SFEI's support will include: •Add information to vulnerability assessments about where coastal habitats have the potential to mitigate damages (NatCap and SFEI, in conjunction with BARC/BCDC and selected consultants, also Mark Stacey @ Berkeley) •Explore the possibility of conducting local analyses in specific places to quantify the role played by coastal habitats in reducing vulnerability to people and infrastructure (e.g. East Palo Alto for which marsh restoration may have considerable protective benefit) (NatCap, SFEI, Mark Stacey) •Map OLUs in San Mateo county (this would build on work being undertaken in other areas of the bay, like Marin) and delineate the 'service-sheds' (i.e. beneficiaries) for each OLU (may be multiple 'service-sheds' within each OLU) (SFEI (lead OLU mapping), NatCap (lead service-shed delineation), County) •Engage stakeholders to develop a suite of scenarios for each OLU. For example: a 'do nothing' scenario, a 'tide denying' scenario (borrowing here from the Netherlands) prioritizing immediate protection through hardened shorelines, 'tide embracing' (converting diked land back to marshland, etc.)) (SFEI (lead landscape modeling), County and NatCap (stakeholder engagement) •Refining the current metrics used to map and measure DAC (NatCap lead, with SFEI and County)
72xx	Preparing for the Storm: Riparian Restoration, Sediment Reuse, and Urban Greening to Enhance Stream and Watershed Resilience	Catalyzed by the extensive damages caused by the Winter 2016-2017 floods and the opportunity to align flood response with major habitat improvement, Preparing for the Storm is an innovative public-private partnership to improve watershed health and resilience in the Alameda Creek watershed. The project leverages a diverse portfolio of flood-related funding to implement high-priority, multi-benefit projects. Preparing for the Storm will re-establish floodplain and riparian habitat along over 2 miles of steelhead streams, restore 10 acres of rare Sycamore Alluvial Woodland habitat, reduce flood peaks and increase recharge through a floodable park and vineyard, advance stormwater plans for a 50-square-mile urbanized valley, establish a regime of regular reuse of an estimated 50,000 cubic yards/year of coarse sediment, and resolve an array of previously-identified water quality and sediment erosion hotspots. To achieve these ambitious outcomes, a team of expert scientists, engineers, implementing agencies, and large streamside private landowners will apply an integrated strategy to reduce excessive stream flows, erosion, sedimentation, and water quality impacts. Demonstrating a proactive, process-based approach to the large storm events anticipated to be more frequent in coming years, Preparing for the Storm provides a regional model for enhancing hydrological and ecosystem resilience.

Attachments 9 & 10

Item: Executive Director Authorities
From: Lawrence Leung, Finance Director

The following SFEI resolutions are executed each year in the yearly board meetings. Attachment 9 grants the Executive Director authority on maintaining bank accounts and spending, signing contracts, and maintaining qualified staff levels. Attachment 10 further grants the Executive Director signing authorities on contracts. This item is separate since State agencies providing funding often request such a resolution before contract execution.

Recommended Action: Approve E.D. Authorities

RESOLUTION No. 18-01

The Board of Directors of the San Francisco Estuary Institute

Resolution for the FY2018 Program Plan

IT IS HEREBY RESOLVED THAT:

The Executive Director shall be specifically authorized to take the following actions on behalf of the Board of Directors of the Institute:

1. Maintain bank accounts in a local bank and deposit receipts of payments or contributions into the Institute's bank account; provided that the Institute's accounts will not be moved without prior written notification to the Board.

2. Acquire goods and services on behalf of the Institute as necessary for the maintenance of an efficiently operating office and staff, provided that such expenditures are consistent with the budget presented to the Board at the beginning of each fiscal year; sign checks on behalf of the Institute for all Institute expenditures relating thereto, provided that any non-routine, unbudgeted expenditure which exceeds $15,000 shall be subject to explicit Board approval.

3. Make payments up to $5,000 per contract per month to consultants/vendors smaller than the Institute within 30 days of receipt of invoice for reimbursable projects. All other consultants/vendors for reimbursable projects will continue to be paid within 15 business days upon receipt of payment from client.

4. Make emergency expenditures which exceed $15,000 if required between Board meetings only upon approval of the Executive Committee; or, if it is not possible to contact the Committee, and harm to the Institute would result if the expenditure is not made, the Executive Director shall be empowered to make such expenditures, but will immediately notify the Board of the purpose and amount of the expenditure and the cause for emergency action, and shall submit the matter to the Board for their approval at the next regular meeting.

5. Consistent with the Institute's Strategic Plan and with the Board approved Program Plan: represent the Institute in negotiations or solicitations related to the procurement of funding for the Institute's programs; sign as the Institute's authorized representative on applications or proposals for grants or contracts, permit Principal Investigators to explore potential projects and funding, and through the Executive Director, report to the Board; and with prior notification to the Board, accept awards of such grants, contracts or other funding arrangements.

6. Sign as the Institute's authorized representative on all State and Federal tax and other such official forms as necessary to the ordinary conduct of the corporation.

7. Maintain a qualified staff of scientific, technical and office professionals in accord with the personnel policies of the Institute.

8. This Resolution is approved and effective only for the period of the FY2018 Program Plan.

APPROVED AND ADOPTED the 23rd day of June, 2017.

I, the undersigned, hereby certify that the foregoing Resolution No. 18-01 was duly adopted by the Board of Directors of the San Francisco Estuary Institute.

Approved: **Date:**

Jim Kelly, Chairman, SFEI Board of Directors

RESOLUTION No. 18-02

The Board of Directors of the San Francisco Estuary Institute

Resolution Authorizing and Designating a Representative to Negotiate Contracts or Agreements on Behalf of the San Francisco Estuary Institute

WHEREAS, the Board authorizes all contracts or agreements on behalf of the Institute; and

WHEREAS, the Board designates the Executive Director, or the Executive Director's delegate, to sign all contracts, agreements and any amendments thereto; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the San Francisco Estuary Institute hereby authorizes the Executive Director, or the Executive Director's delegate, to negotiate and execute all contracts or agreements consistent with the Institute's Strategic Plan and Board approved Program Plan and its quarterly updates.

BE IT FURTHER RESOLVED, that any contracts or agreements not exceeding $50,000 may be signed by the Executive Director, or the Executive Director's delegate, prior to Board approval of the Program Plan and its quarterly updates. The Executive Director, or the Executive Director's delegate, shall notify the Board of such action at the next regular Board meeting.

APPROVED AND ADOPTED the 23rd day of June, 2017.

I, the undersigned, hereby certify that the foregoing Resolution No. 18-02 was duly adopted by the Board of Directors of the San Francisco Estuary Institute.

Approved: **Date:**

Jim Kelly, Chairman, SFEI Board of Directors

Attachment 11

Item: FY18 ASC Program Plan
From: Lawrence Leung, Finance Director

The following tables summarize the ASC contracts we currently have signed, in negotiations, and in proposal phase with high likelihoods of funding. Most of the projects have already been approved in prior years' yearly program plans and quarterly program plan updates.

Recommended Action: Approve ASC Program Plan

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
8111.18	Delta Regional Monitoring Program	CW	Delta RMP	2.95	7/1/2017	6/30/2018	$1,043,030	$485,483	$485,483	Various dischargers	Various dischargers	Thomas Jabusch	Matthew Heberger	Delta RMP; Regional Water Quality Control Board
8112	Delta Mercury Exposure Reduction Program	CW	Bay RMP	2.95	4/23/2014	*6/30/2019*	$163,775	$46,534	$8,000	SWRCB	SWRCB	Jay Davis	Jennifer Hunt	
8115	Reference Beach Sampling Project Phase II	CW	Bay RMP	2.40	7/1/2015	12/31/2017	$250,000	$82,129	$13,520	SWRCB	SWRCB	Thomas Jabusch	Amy Franz	
8116	Nutrient Modelling	CW	Nutrients	2.95	12/14/2016	3/31/2019	$299,987	$299,896	$101,200	SWRCB	SWRCB	Rusty Holleman	Jen Hunt	
8117	SF Bay Nutrient Strategy FY2017 (Modeling Suisun Bay Sloughs/Creeks/Ponds)	CW	Nutrients	2.56	3/3/2017	6/30/2019	$97,600	$50,000	$52,300	Delta Science Program	Delta Science Program	David Senn	Jen Hunt	
8118	Nutrient Modelling	CW	Nutrients	2.95	4/12/2017	6/30/2018	$110,000	$100,000	$84,670	RegionalSan	RegionalSan	David Senn	Jen Hunt	
8119	CEC Monitoring in the Delta	CW	Green Chemistry	2.95	4/12/2017	6/30/2017	$20,500	$20,300	$0	Delta Stewardship Council	Delta Stewardship Council	Rebecca Sutton	Phil Trowbridge	DSP, Central Valley Regional Board, Regional San.
8120	*An Ecosystem-Scale Nutrient 'Experiment': Conceptual Framework for Studying the Effects of Reducing Point-Source Nitrogen Inputs to the Delta	CW	Nutrients	2.95	*7/1/2017*	2/28/2018	$55,500	$34,000	$34,000	Delta Stewardship Council	Delta Stewardship Council	David Senn	Jennifer Hunt	
8410	Support for L2 Committee Priority Tool Development: Validation of Three CRAM Modules	RL	Wetland Science	2.40	1/1/2014	9/30/2017	$122,888	$115,638	$20,472	SJSURF	EPA	Josh Collins/Sarah Pearce	Sarah Lowe	Central Coast Monitoring Goup (CCMG)
8413	North Bay Mercury Biosentinel Monitoring	RL	Wetland Science	2.95	7/1/2015	3/31/2018	$199,824	$101,824	$32,850	SCC	SCC	Josh Collins, Jay Davis	April Robinson/ Amy Richey	UC Davis
8414	SoCal Wetlands Recovery Project	RL	Wetland Science	2.40	12/11/2015	12/31/2017	$300,000	$292,691	$42,750	SWRCB	EPA	Josh Collins	Sarah Lowe	SWRCB (401 Program staff)
8415	Russian River R3MP Development Support	RL/ CW	Wetlands/ Data Manage-ment	2.95	12/1/2016	3/31/2019	$200,000	$197,477	$88,219	SWRCB	RB1 Discretionary Funds	Josh Collins	Sarah Lowe	North Coast Regional Water Board
8416	CRAM Training Caltrans May 8-12, 2017	RL/ CW	Wetland Science	2.95	12/1/2016	3/31/2019	$41,806	$31,541	$0	Caltrans	Caltrans	Sarah Pearce	Sarah Lowe	

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
8609	DEDUCE: Delta Environmental Data for the Understanding of a California Estuary (NEIN Grant)	EI	Data Technical Services	2.40	11/10/2014	9/30/2017	$260,000	$259,408	$15,500	Sacramento-San Joaquin Delta Conservancy	EPA	Cristina Grosso	Cristina Grosso	SWRCB
8610	Visualizing and Sharing Intensive Data Assessments	EI	Applications Develop-ment	2.40	10/1/2014	9/1/2017	$210,000	$209,914	$35,900	Sacramento-San Joaquin Delta Conservancy	EPA	Cristina Grosso	Cristina Grosso	SFBJV, CVJV, SWRCB
8611	Statewide Wetland Planning and Tracking in theWatershed Context	RL/ EI	Wetland Science	2.40	9/1/2015	12/31/2017	$498,329	$462,929	$270,836	EPA	EPA	Josh Collins	Cristina Grosso	MLML
8612	Implementing the Vision for Managing California's Environmental Information	EI	Systems & IT	2.95	9/25/2015	12/31/2016	$48,426	$48,200	$23,376	Delta Stewardship Council	Delta Stewardship Council	Tony Hale	Tony Hale	Delta Stewardship Council
8614	Advancing Performance Measure Reporting for New and Continuing Landscape Restoration Projects	EI	Applications Develop-ment	2.40	3/16/2016	10/31/2018	$210,211	$206,380	$51,088	EPA	EPA	Tony Hale/ Cristina Grosso	Cristina Grosso	Sacramento-San Joaquin Delta Conservancy
8615	South Bay Salt Ponds GIS & Web	EI	Systems & IT	2.95	8/3/2016	3/1/2020	$84,500	$83,500	$41,190	Coastal Conservancy	Coastal Conservancy	Tony Hale	Tony Hale	-
8707	Water Resources and Aquatic Ecosystem Protection MOU (Years 1 & 2)	RL	Historical Ecology	2.95	1/1/2015	12/24/2019	$553,145	$513,976	$99,430	SCVWD	SCVWD	Robin Grossinger	Scott Dusterhoff	SCVWD, Science Advisory Hub (members TBD)
8710	Southern California Wetlands Recovery Project Technical Assistance	RL	Historical Ecology	2.79	7/1/2015	9/1/2017	$345,000	$335,000	$34,166	SCC	EPA	Jeremy Lowe	Jeremy Lowe	SCCWRP
8715	Technical Support for Watershed Management and Interpretation	RL	Historical Ecology	2.95	3/31/2017	3/31/19	$773,679	$403,079	$152,500	SFPUC	SFPUC	Robin Grossinger	Sean Baumgarten	The Acorn Group, Nomad Ecology
8716	Sea Level Rise Guidance thru OLUs	RL	Geomor-phology	2.95	1/25/17	11/30/18	$300,000	$174,494	$125,000	SWRCB	SWRCB	Letitia Grenier/Robin Grossinger	Julie Beagle	SPUR
8717	Ecological Effects of Sea Level Rise	RL	Climate-Indexed Landscapes	2.4	5/5/2017	1/25/2020	$52,946	$52,946	$13,237	SCC	NOAA	Jeremy Lowe	Erica Spotswood	Coastal Conservancy, UC Davis, USGS, SCCWRP, Point Blue, Tijuana River NERR, USC Sea Grant

Proj #	Project Title	Pro-gram	Focus Area	Multi-plier	Start Date (*Anticipated*)	Completion (*Anticipated*)	Total Funding	Total Funding for Labor	Projected FY18 Labor Spending	Direct Client	Funding Source	Principal Investigator(s)	Project Manager	Collaborator(s)
8718	Delta Landscapes Half-day Workshop	RL	Historical Ecology	2.95	5/1/2017	12/1/2017	$24,761	$24,761	$18,571	Delta Conservancy	Delta Conservancy	Robin Grossinger	Julie Beagle	Water Education Foundation (WEF)
8719	*Delta Landscapes Executive Summary and User's Guide Proposal	RL	Historical Ecology	2.95	*7/1/2017*	6/30/2018	$24,896	$22,140	$22,140	Delta Science Program	Delta Science Program	Robin Grossinger	Julie Beagle	
81xx	*Surface Water Ambient Monitoring Program (SWAMP)	CW	Bioaccum-ulation	2.40	*1/1/2018*	*12/31/2018*	$805,400	$805,400	$402,700	SWRCB	EPA	Jay Davis	Jennifer Hunt	
86xx	**QED Quality Environmental Data	EI		2.40	*10/1/2017*	*3/30/2019*	$230,000	$230,000	$115,000	Delta Conservancy	EPA	Cristina Grosso	Cristina Grosso	
86xx	**Delta Aquatic Resource Inventory (DARI) Development for the Sacramento-San Joaquin Delta	EI	Data Technical Services	2.40	*10/1/2017*	*9/30/2020*	$320,000	$320,000	$80,000	Delta Conservancy	EPA	Cristina Grosso	Cristina Grosso	
87xx	*McCormack-Williamson Tract/Northeast Delta Restoration Planning	RL	Historical Ecology	2.40	*7/1/2017*	*6/30/2020*	$275,789	$242,589	$67,386	TNC/Reclamation District 2110	CDFW	Robin Grossinger/ Tony Hale	Julie Beagle/ Cristina Grosso	Sacramento-San Joaquin Delta Conservancy, The Nature Conservancy, Delta Science Program, FlowWest
87xx	*California Bay-Delta Collaborative Science Initiatives	All		2.95	*7/1/2017*	6/30/2020	$957,000	$950,000	$316,667	Delta Stewardship Council	Delta Stewardship Council	Robin Grossinger/ Josh Collins		
87xx	*Develop Landscape Scenario Planning Tools & Supporting Science	RL/ EI	Multiple	1.79	*4/1/2017*	*1/31/2019*	$350,000	$280,000	$58,333	Delta Science Program	Delta Science Program	Robin Grossinger/Tony Hale	TBD	Delta Conservancy, Flow West, others

Proj #	Project Title	Project Description
8111.18	Delta Regional Monitoring Program	The Delta RMP provides coordinated Deltawide monitoring, reporting, and assessment of water quality.
8112	Delta Mercury Exposure Reduction Program	This project involves providing all financial administrative services needed to support the Delta Mercury Exposure Reduction Program (MERP). Duties include receiving funds, paying expenses as directed by the Central Valley Water Board and Delta Conservancy, and providing financial information for quarterly and final reports. ASC will provide fiduciary support to community organizations that receive funding under the project.
8115	Reference Beach Sampling Project Phase II	Field study of Northern and Central California coastal beaches and their associated catchments to establish a reference beach system similar to those in use in Southern California to estimate “natural” (i.e., non-anthropogenic) source concentrations of fecal indicator bacteria. The study willl result in a report, associated data files (e.g., analytical results) and other information, as appropriate, to be used to develop a beach reference system.
8116	Nutrient Modelling	Biogeochemical and estuarine modeling to support NMS.
8117	SF Bay Nutrient Strategy FY2017 (Modeling Suisun Bay Sloughs/Creeks/Ponds)	This funding will be directed towards modeling efforts in Suisun Bay.
8118	Nutrient Modelling	This contract funds the development and application of a biogeochemical computer model to be used to address water quality and plankton management questions related to the Delta and Suisun Bay.
8119	CEC Monitoring in the Delta	The purpose of this effort is to conduct a workshop to present the most recent information regarding CECs in the Delta and Central Valley and develop plans for future monitoring programs in this region. A monitoring design will be developed that will build off of monitoring strategies and locations from previously conducted studies and plans.
8120	An Ecosystem-Scale Nutrient ‘Experiment’: Conceptual Framework for Studying the Effects of Reducing Point-Source Nitrogen Inputs to the Delta	This project will convene an expert team to develop a conceptual model(s) describing ecosystem response under the current nutrient loading regime; and apply the conceptual model to identify hypothesized changes in response that will occur as a result of planned changes to nutrient loads.
8410	Support for L2 Committee Priority Tool Development: Validation of Three CRAM Modules	Through the validation of three additional CRAM modules this project will enhance the ability of state agencies to implement the State’s Wetland and Riparian Area Monitoring Plan (WRAMP), allowing them to better manage and assess the ecological condition of wetland and riparian resources utilizing scientifically validated tools. Validation provides the scientific evidence that CRAM modules adequately evaluates the potential of a wetland area to provide a range of ecosystem services based on wetland type and setting. Without being validated, the efficacy of a module is essentially unknown because they lack the complimentary scientific data and analysis to demonstrate that the rapid assessment methods accurately assesses wetland condition.
8413	North Bay Mercury Biosentinel Monitoring	The State Coastal Conservancy (SCC) has provided SFEI support to continue the mercury (Hg) biosentinel monitoring for mercury in the North Bay. This project supports the monitoirng of biosentinel fish and song bird species carried out in the North San Francisco Bay by UC-Davis (Darell Slotten) and SFEI (April Robinson) respectively. In recent years these researchers have targeted several tidal marsh areas around San Pablo Bay (2010 - 2014). Continued monitoring of biosentinel species in sub-tidal and high-marsh habitats will occur at 6-8 tidal marsh sites in 2016 and 2017. Similar to the previous studies, this project includes sampling advice and review by a science advisory group, field sampling of fish and birds, mercury analyses, data management, data analyses, and reporting. The final project report will be published online at SFEI's website. The project will be completed in 2018.
8414	SoCal Wetlands Recovery Project	ASC-SFEI will provide science and technical support to the State Water Board in finalizing a feasibility study for a draft Wetland Water Quality Control Plan (Wetland Plan) as Phase 2 of the California Wetland and Riparian Area Protection Policy (Policy). The draft Wetland Plan will include new proposed beneficial uses and water quality objectives for wetlands and an implementation plan. Between SFEI and the State Water Board project partners, training materials will be developed to help State Board staff implement the Wetland Plan. A demonstration project will be conducted in colaboration with the North Coast Regional Water Quality Control Board (RB1) to evaluate wetland standards application of indirect effects of upstream impacts. The Wetland and Riparian Area Monitoring Plan (WRAMP), developed under Phase 1 of the Policy, will be incorporated to best support the Wetland Plan. A business plan will be developed to sustain key elements of WRAMP, especially the EcoAtlas information delivery system. The California Rapid Assessment Method for wetlands will be reviewed to improve its performance in a regulatory context.

Proj #	Project Title	Project Description
8415	Russian River R3MP Development Support	Current monitoring of water and habitat in the Russian River Watershed is focused on individual management and regulatory actions that cannot always be compared to each other or over time due to inadequate standardization of monitoring methods and inadequate access to monitoring data. The net cumulative effect of the actions on overall watershed health is therefore unknown, and the return on public investment in watershed health is uncertain. The purpose of the Russian River Regional Monitoring Program (R3MP) is to assure that all environmental monitoring that is conducted in the watershed with public and private resources or that intends to implement public policy is adequately standardized, coordinated, and accessible to cost-effectively answer watershed management questions. Under this proposal ASC-SFEI will conduct outreach and coordinate with potential R3MP members, work with the Regional Water Board and the Russian River Watershed Association (RRWA) to develop the governance structure and charter for the R3MP, develop key management questions to address regional priorities and data needs, and facilitate steering committee discussions around the development of short and long-term models to sustain the R3MP.
8416	CRAM Training Caltrans May 8-12, 2017	CRAM training preparation, 5-day session (May 8-12), and follow-up correspondence for Caltrans employees.
8609	DEDUCE: Delta Environmental Data for the Understanding of a California Estuary (NEIN Grant)	The project goals are to work with data providers collecting data in the Delta, harmonize data for improved interoperability, and increase access to, and exchange of, high-quality environmental data from public and private sector sources for scientists, environmental program staff, managers, the public and other stakeholders. The anticipated outcome of this project is an estuary-wide data repository.
8610	Visualizing and Sharing Intensive Data Assessments	The goal of this project is to visualize and share quantitative Level 3 data relevant to scientific inquiry and decision-makers through EcoAtlas (www.ecoatlas.org), thus making these data available to a broad user community. Furthermore, landscape-scale habitat metrics will produce optimized designs and guide planning for restoration projects. Working collaboratively, project partners will ensure that the issues driving the Delta's urgent crises can, at their foundation, come to a consensus about the integrity, stability, and legitimacy of the collected scientific information. However, the increased capacity and enhanced functionality to EcoAtlas will be global and benefit users throughout the state.
8611	Statewide Wetland Planning and Tracking in theWatershed Context	The three main objectives of this proposal are to (1) design and develop the state watershed approach to compensatory mitigation planning consistent with the USACE approach; (2) develop capacity in Project Tracker to visually link and quantify on-the-ground mitigation sites and their related impact sites; and (3) establish capacity of the Regional Data Centers of the CA Environmental Data Exchange Network to support their regional Project Tracker user communities. This project builds on the recent WRAMP pilot funded by USEPA that recommended further demonstration and technology transfer of EcoAtlas for prioritization, planning, and tracking of wetland projects and monitoring efforts. This also serves to build capacity in other regions to track projects in the watershed context using the WRAMP toolset.
8612	Implementing the Vision for Managing California's Environmental Information	Since February 2014, SFEI-ASC has assisted the Delta Stewardship Council's Science Program in the convening of the successful Environmental Data Summit, the composition of the white paper "Enhancing the Vision for Managing California's Environmental Information," and advising on steps for adoption of the paper's recommendations. The next phase will entail creative problem-solving, shuttle diplomacy, technical acumen, and a passion for the advancement of California's environmental information. The implementation of the recommendations must take into account the ongoing data-sharing efforts. Accordingly, the plan must reconcile or compare the initiatives to the terms in the white paper and bridge the differences between what is and what should be. Example efforts include Data Basin, Bay-Delta Live, Sacramento River Coordinated Monitoring Program, the Federal Open Water Data Initiative, and others. The Aquatic Science Center will address the work in two stages. 1. The implementation of the recommendations must take into account the ongoing data-sharing efforts. Accordingly, the plan must reconcile or compare the initiatives to the terms in the white paper and bridge the differences between what is and what should be. Example efforts include Data Basin, Bay-Delta Live, Sacramento River Coordinated Monitoring Program, the Federal Open Water Data Initiative, and others. 2. The emerging Implementation Plan will record the resources necessary to implement the recommendations, how to foster ongoing efforts, and how to integrate technology to reduce duplicative work.

Proj #	Project Title	Project Description
8614	Advancing Performance Measure Reporting for New and Continuing Landscape Restoration Projects	The Delta Stewardship Council (Council) is required to track and report on all Delta projects, programs, and plans that support the implementation of the Delta Plan. The efforts in this project align with the Plan's goals, strategies, policies, recommendations, and performance measures. At present, the Council stores and maintains all of its records for project tracking within the Council's Delta View system. Delta View is an internal system used by the Council staff and is used in a variety of ways, including supporting research activities, developing various funding and limited performance reports in response to oversight agencies and stakeholder requests for information, and supporting the Council's strategic decision making process. Delta View currently lacks features available in EcoAtlas such as habitat classifications, a broader complement of wetland project tracking information, and accessibility by other agencies and the public. The Council feels that the proposed work offers an excellent opportunity to partner with the Sacramento-San Joaquin Delta Conservancy (SSJDC) by enhancing EcoAtlas to serve as the shared and primary point of collection for project data, then actively transferring project data between EcoAtlas and Delta View, such that Delta View might leverage the enhanced capabilities of EcoAtlas in support of more robust, timely, and accurate reporting on Delta habitat restoration projects in support of Proposition 1 and other programs. By unifying information in this way, project tracking and reporting will become less duplicative and more capable in offering features that can effectively target the needs of Council and other Delta-based organizations.
8615	South Bay Salt Ponds GIS & Web	SFEI administers the SBSP website and Shoreline Study website for the Coastal Conservancy and Army Corps. For 2016 and 2017, the sites will be converted to a Content Management System, with minimal, if any, redesign. This will make the site more resilient and versatile moving forward. As always, the sites will be maintained, with design, document processing, and site organization work as needed and requested. The SBSP electronic bulk mailing lists, and the SBSP online photo archive will continue to be operated, maintained and improved. The final element of SFEI's services is to maintain the Project's spatial data holdings, which are catalogued in ESRI Geoportal software.
8707	Water Resources and Aquatic Ecosystem Protection MOU (Years 1 & 2)	This Memorandum of Understanding marks a new, collaborative partnership between the District and ASC aimed at sharing experience, knowledge and resources, and working toward a shared vision of watershed management. Through this partnership, the District and ASC will: • work together and with our partners and stakeholders; • develop and utilize new science and technology; • set quantitative goals for watershed services; • evaluate actions to achieve the developed goals in the present and future; and • consider the dynamic management environment that will result from continued social and climatic change. Within this partnership, landscape scenario planning will be used to explore "alternative landscape futures" throughout the watersheds within the District's boundary. Landscape scenario planning will be a collaborative process that involves five key elements, which are described in the table below. The overall goal is to build capacity over time within each element through this partnership.
8710	Southern California Wetlands Recovery Project Technical Assistance	Provide technical assistance to the State Coastal Conservancy and Southern California Wetlands Recovery Project Science Advisory Panel to support the WRP Regional Strategy Update.

Proj #	Project Title	Project Description
8715	Technical Support for Watershed Management and Interpretation	There are four (4) task orders in this MOU. <u>Peninsula Watershed Historical Ecology Study ($427.6k)</u> The Peninsula Watershed Historical Ecology Study will synthesize diverse historical data to enhance understanding of the ecological, hydrological, and geomorphic conditions of the San Mateo Creek and upper Pilarcitos Creek watersheds prior to major Euro-American modification. Drawing on sources such as historical maps, landscape and aerial photographs, textual accounts, and field observations, the study will reconstruct landscape-scale patterns and local environmental variability within the watersheds. Findings from the study will be compiled into an illustrated technical report describing historical conditions and processes, analyzing landscape trajectories, and discussing implications for management and restoration. Baseline information about historical landscape patterns and processes will support the San Francisco Public Utilities Commission (SFPUC) and other land management agencies in identifying appropriate restoration targets and effectively managing the watersheds for water quality, vegetation, fire, sediment, wildlife, and public access. Findings from the study will address a variety of technical questions related to historical habitat distribution, land use history, changes in vegetation community structure and composition, and the effects of landscape change on ecological functions. The historical ecological information developed through the study is also intended to help unite multiple land management agencies and stakeholders around a shared understanding of local landscape history and provide a context for envisioning future landscape potential. The Aquatic Science Center (ASC) will draw on an extensive body of prior research in reconstructing historical ecological conditions for watersheds and landscapes around the Bay Area, including Santa Clara Valley (e.g., Beller et al. 2010), Alameda Creek watershed (Stanford et al. 2013), Eastern Contra Costa County (Stanford et al. 2011), and Napa Valley (Grossinger 2012). To the extent possible, the study will also incorporate concepts from recent research into landscape resilience (Beller et al. 2015, Robinson et al. 2015) to explore changes in the ability of the watersheds to support desired ecological functions. <u>Peninsula Watershed Trail Interpretive Master Plan ($82.5k)</u> The Acorn Group will produce an Interpretive Master Plan to provide a framework that will inform and guide the development of interpretive media that will be installed along the entire Fifield-Cahill Trail including the new Skyline Trail extension
8716	Sea Level Rise Guidance thru OLUs	This project will provide tools needed to incorporate sea level rise adaptation into permitting decisions for the San Francisco Bay shoreline. SF Bay has great potential for multi-benefit, natural infrastructure solutions to accelerated sea level rise and numerous large projects are currently being proposed which will shape the future shoreline. Yet few tools exist for either project proponents or regulatory staff to determine which strategies make sense where, how to maximize the benefits to aquatic resources, and how to evaluate a project's contribution to cumulative positive or negative impacts. This project will develop a typology for the Bayshore based on physical, ecological, and socioeconomic characteristics and analyze the opportunities and constraints for integrated adaptation strategies in each shoreline unit. The result will be a web-based interface that provides an updatable, geographically-specific, science-based framework that will increase regulatory efficiency and certainty, while maximizing the incorporation of ecosystem resilience and adaptation into shoreline projects. The project includes three phases over a 24-month timeline. The first phase will develop the regional shoreline typology by synthesizing data on physical setting and drivers (e.g., watershed boundaries, local sediment supply, shoreline morphology, groundwater basins, wave energy and tidal processes), with socioeconomic information (e.g., historical and contemporary land use patterns, infrastructure, fill, real estate value, existing flood protection, etc.). The second phase will evaluate the potential for adaptation strategies in different shoreline units, considering approaches such as sediment augmentation, treated wastewater reuse, horizontal levees, tidal marshes, and other living shoreline types. The third phase will incorporate this information as a regional shoreline typology map and documents available through the SF Bay Resilience Atlas, which is funded separately (by DWR through the Shoreline Infrastructure Mapping project).

Proj #	Project Title	Project Description
8717	Ecological Effects of Sea Level Rise	The project will investigate how the dynamic estuarine systems of Southern California will be affected (physically and biologically) by sea level rise and will determine how and where nature-based solutions can be used to provide resilience to those effects. 1. the project will integrate existing sea level rise and habitat evolution models to understand how the physical and habitat-level changes will occur with rising tides and associated storm events. The project will then develop various conceptual models of changing estuarine inlet dynamics to refine model outputs. 2. the project will identify nature-based, sea level rise adaptation strategies for Southern California. Upland-estuarine transition zones (T-zones) will be identified and mapped for potential conservation and restoration. Additionally, the project will involved stakeholders and case-study sites to prioritize T-zone areas and develop guidance on T-zone restoration and/or nature-based T-zone creation (e.g. horizontal levees).
8718	Delta Landscapes Half-day Workshop	Develop a workshop to introduce and familiarize participants with the Delta Landscapes project and recent report “A Delta Renewed”. Provide guidelines on how participants can use this report to help individual projects have increased cumulative impacts. Get feedback on how to further develop and focus “straw-man” framework of user’s guide through a participatory design process.
8719	Delta Landscapes Executive Summary and User’s Guide Proposal	The Delta Landscapes Project offers new insights into the Sacramento-San Joaquin Delta, examining how changes to the landscape over time have reduced support for native wildlife, and offering guidance that can be used by stewardship agencies in developing programs and policies to achieve better ecological outcomes in the Delta. This guidance can inform restoration and management in the Delta at both the project and landscape scales. Key to realizing these benefits is making sure the insights and recommendations from this project reach the larger Delta community. We are prepared to implement a key recommendation that emerged during the initial vetting process SFEI used to help inform the content of the document to be finalized prior to the 2016 Bay-Delta Science Conference. This recommendation entailed the production of a user-focused executive summary. This document would be easily accessible to and useable by implementers of restoration projects to ensure that the Adaptive Management Program currently under development by EcoRestore can incorporate landscape-scale considerations and guidance to individual restoration projects that are aligned with the ecological functions and processes specific to each of the Delta’s habitat types and regions. This user-friendly guide will also benefit grant writers and project managers of similar restoration projects resulting in improved regional-scale planning across Delta habitats. The current grant by CDFW contained insufficient funding for a “co-production” process of landscape-scale restoration concepts, and we are exploring funding options for adding this important task.
81xx	Surface Water Ambient Monitoring Program (SWAMP)	ASC shall provide the following for the State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP): technical expertise to support SWAMP’s Statewide Bioaccumulation Monitoring Program. The Contract shall also provide services to assist data providers in uploading datasets to the California Environmental Data Exchange Network (CEDEN). The service areas covered under this Agreement are generally the Central Coast and Northern Coast, including San Francisco (see Exhibit A, Attachment III, Regional Data Center Service Locations.”).
86xx	QED Quality Environmental Data	The purpose of this project is to expand the existing San Francisco Bay-Delta Regional Data Center (RDC) to include continuous data measurements (e.g., dissolved oxygen, temperature, turbidity, flow) and establish tools (written and technological) to promote QA/QC for continuous data. This project will leverage the successes of a current project: expanding the San Francisco Bay RDC to include priority water quality datasets from the Delta. By integrating into the RDC the new data type of continuous data, the anticipated outcome of this project is a Bay-Delta data repository with a much fuller and timely picture of available data. Given the inundation of continuous data, this RDC would not duplicate efforts. Rather, it would fill existing gaps. While numerous data providers collect continuous data, currently there is no regional “clearinghouse” that can direct anyone to the various data sources available. Moreover, continuous data are often underutilized due to concerns about variable and under-documented data quality. This project would develop standard guidance and tools for managing and reviewing these data for quality assurance. The project goals are to work with data providers collecting data in the Delta, develop and review guidelines for improved interoperability, apply standard data storage, and increase access to, and exchange of, high-quality environmental continuous data from public and private sector sources. Developing guidance and data review tools with input from statewide partners, such as the California Environmental Data Exchange Network (CEDEN) and EPA’s Water Quality Exchange (WQX), will ensure broad dissemination of the data to scientists, environmental program staff, the public, and others for their empowerment to make science-informed, state-mandated reforms to the Delta’s water resources and ecological management.

Proj #	Project Title	Project Description
86xx	Delta Aquatic Resource Inventory (DARI) Development for the Sacramento-San Joaquin Delta	This project will develop a common basemap of aquatic resources for the Delta, establish a standard regional typology for the Delta Aquatic Resource Inventory (DARI), train local GIS staff to develop the Geographical Information System (GIS) dataset, build mapping expertise, and create a dataset that will be integrated into EcoAtlas and used for regional watershed restoration planning, tracking, and reporting. A subset of the California Aquatic Resource Inventory (CARI), DARI is the Delta version of the California-wide dataset. This regionalization will be facilitated by the California Aquatic Resource Inventory (CARI) SOP, approved by California Wetland Monitoring Workgroup, which accommodates regional SOPs to address region-specific variations in classification and nomenclature (http://www.sfei.org/cari). The DARI SOP was developed through collaborative project by San Francisco Estuary Institute-Aquatic Science Center and Department of Water Resources. This project will complete DARI mapping for the whole Sacramento-San Joaquin Delta and make it available through the online EcoAtlas toolset that supports the California Wetland and Riparian Area Monitoring Plan (WRAMP). The project will significantly increase the ability to assess and track the amount and quality of wetlands in the Delta to support compliance monitoring and assessment of wetland projects being implemented through Proposition 1 Grant Programs, EcoRestore, and the Delta Conservation Framework. The success of the proposed work will undoubtedly encourage broader use of the EcoAtlas tools. The ultimate outcome will be the capacity for comparable assessments of regional and statewide net change in the abundance, diversity, and condition of wetlands as affected by land use.
87xx	McCormack-Williamson Tract/Northeast Delta Restoration Planning	We will (1) develop a spatially and ecosystem-function explicit Landscape Vision for restoration and land-use on and around MWT within the context of the northeast Delta as a functionally connected landscape unit, building on SFEI/ASC's Delta Landscapes project, (2) develop a detailed, cross-disciplinary research, monitoring, and adaptive management plan (Research Plan) for the proposed restoration of MWT. The Research Plan will incorporate ecological elements of the Landscape Vision to provide hypotheses, and a conceptual and methodological basis for pre- and post-implementation research and monitoring at and around MWT, and (3) assemble, synthesize, and analyze existing data on historical and current conditions for relevant ecological and hydrodynamic variables in the northeast Delta in and around MWT, based on identified science needs from Tasks 2 and 3.
87xx	California Bay-Delta Collaborative Science Initiatives	ASC will contract with DSC for projects that meet the following categories and criteria: **Support Development of Best Available Science** • Design Advice and Review Team • Collaborate with DSC to recruit, support, and manage an expert team to advise early restoration project design and review proposed designs. • Monitoring and Assessment • Delta RMP – ongoing • Bay-Delta Wetland RMP – concept/proposal for new initiative • Informatics/Tool Development • Data Management – ongoing • Implementation of Data Summit whitepaper • AB 1755 advising • Integrated Modeling • DPIIC workgroup participation, including advising on concept/proposal for new initiative • Suisun Bay Biogeochemical Model Development • Development of Landscape Restoration Scenario Planning tools to advance incorporation of science in decision-making (with potential application in – Northeast Delta, /Cache Slough, Public Corridor) **Communicate and Promote Science-based Adaptive Management** • Development of publications, graphics, maps, presentations, for the purpose of communicating scientific information to general audiences (task orders) • Task Order FY 16/17: Delta Renewed Executive Summary – not contracted • Collaboration on Bay-Delta outreach and education to stakeholders, elected officials, and community, and non-governmental organizations (billable hours per FY, not task order) **Build the Capacity of the California Bay-Delta Science Enterprise** • Participation in and presentations to Delta-Area technical workgroups, steering committees or other forums (e.g. Delta Agency Science Workgroup, Collaborative Program Managers Meetings, etc.) (billable hours per FY, not task order) • Involvement in joint funding strategy for priorities science actions, competitive grant processes, and other science-funding diversification efforts (billable hours per FY, not task order)

Proj #	Project Title	Project Description
87xx	Develop Landscape Scenario Planning Tools & Supporting Science	This pilot project will complement ongoing planning efforts in the Cache Slough and McCormack-Williamson regions by building tools and capacity to support the development of regional landscape-scale restoration strategies in the Delta. The project will pilot the Delta-wide landscape restoration strategies developed in A Delta Renewed and apply them to regional scales, using a suite of tools and local analyses to advance the development of data-driven, community-engaged, multi-benefit restoration scenarios. As part of our work, we will incubate new tools, techniques, and processes, evaluating experimental successes and failures, to adapt and improve planning practices in preparation for larger scale restoration. In Phase 1, we will evaluate and customize available data capture, analytical, and visualization platforms; engage with local and regional stakeholders and experts; and conduct selected landscape analyses with priority datasets to demonstrate the ability to visualize and synthesize multiple data sets in the development of alternative scenarios.

Attachment 12

Item: Executive Director Authorities
From: Lawrence Leung, Finance Director

The following ASC resolutions are executed each year in the yearly board meetings. Attachment 12 grants the Executive Director signing authorities on contracts.

Recommended Action: Approve E.D. Authority

RESOLUTION No. 18-01

The Board of Directors of the Aquatic Science Center

Resolution Authorizing and Designating a Representative to Negotiate Contracts or Agreements on Behalf of the Aquatic Science Center

WHEREAS, in accordance with Section 8.6(c) of the Bylaws, the Executive Director, or the Executive Director's delegate, has such other powers and duties as may be prescribed by the Board or the Bylaws; and

WHEREAS, the Board, pursuant to Section 6.2 of the Bylaws, has the authority to authorize and enter into contracts or agreements on behalf of the Aquatic Science Center; and

WHEREAS, the Board designates the Executive Director, or the Executive Director's delegate, to sign all contracts, agreements and any amendments hereto.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Aquatic Science Center hereby authorizes the Executive Director, or the Executive Director's delegate, to negotiate and execute all grants or contract agreements consistent with the Aquatic Science Center's Board approved Program Plan and its quarterly updates.

BE IT FURTHER RESOLVED, that any contracts or agreements not exceeding $50,000 may be signed by the Executive Director, or the Executive Director's delegate, prior to Board approval of the Program Plan and its quarterly updates. The Executive Director, or the Executive Director's delegate, shall notify the Board of such action at the next regular Board meeting.

APPROVED AND ADOPTED the 23rd day of June, 2017.

I, the undersigned, hereby certify that the foregoing Resolution No. 18-01 was duly adopted by the Board of Directors of the Aquatic Science Center.

Approved: **Date:**

Jim Kelly, Chairman, ASC Board of Directors