



Bay Area Ecosystems Climate Change Consortium

Bay Area Ecosystems Climate Change Consortium
Thursday, January 31st, 2012, 10:00 AM – 2:00 PM
Conference room, 26th Floor, Bay Conservation and Development Commission
50 California St, San Francisco, California 94111
Meeting Summary

Attendees:

Whitney Albright, <i>DFW</i> *	Kelley Higgason, <i>GFNMS</i>
Sarah Allen, <i>National Park Service</i>	Marc Holmes, <i>The Bay Institute</i>
Mitch Avalon, <i>CCC Flood Control</i>	Judy Kelly, <i>SFEP</i>
Donna Ball, <i>Save the Bay</i>	Tom Kendall, <i>USACE*</i>
Adrien Baudrimont, <i>SFEP</i>	Gary Knoblock, <i>Moore Foundation</i>
Kate Bimrose, <i>GFNMS</i>	Danielle LaRock, <i>California LCC</i>
Patrick Barnard, <i>US Geological Survey*</i>	Roger Leventhal, <i>Marin County*</i>
Louis Blumberg, <i>The Nature Conservancy</i>	David Loeb, <i>Bay Nature</i>
John Bourgeois, <i>SCC/South Bay Salt Ponds</i>	Lisa Micheli, <i>Pepperwood Reserve</i>
Bill Brostoff, <i>US Army Corps of Engineers</i>	Anne Morkill, <i>USFWS</i>
Ellie Cohen, <i>PRBO Conservation Science</i>	Sara Moore, <i>Sonoma State University</i>
Mike Connor, <i>East Bay Dischargers Authority</i>	Heidi Nutters, <i>SF Bay NERR</i>
Deanne DiPietro, <i>PRBO/CA LCC</i>	Nadine Peterson, <i>CA SCC</i>
Liz Exell, <i>The Bay Institute</i>	Cynthia Powell, <i>Calflora</i>
Emma Freeman, <i>Bren School, UCSB</i>	Sarah Richmond, <i>BCDC</i>
Rebecca Fris, <i>CA LCC</i>	Bruce Riordan, <i>Joint Policy Committee</i>
Matt Gerhart, <i>CA SCC</i>	Katherine Smetak, <i>CEMAR</i>
Steve Goldbeck, <i>BCDC</i>	Tom Suchanek, <i>US Geological Survey</i>
Letitia Grenier, <i>BAECCC</i>	Rebecca Varity, <i>URS</i>
Robin Grossinger, <i>SFEI</i>	Bruce Wolfe, <i>SF Bay Water Board</i>
Andy Gunther, <i>BAECCC</i>	Erica Yelensky, <i>US EPA</i>

*via teleconference

1. Introduction of participants and their BAECCC-related projects

Participants introduced themselves and the interests of their organization in BAECCC.

2. Review agenda

No new items were added to the agenda.

3. Discussion of Resilient Shorelines

Andy opened the discussion by noting that at present many different individuals and institutions ("stakeholders") are working on or interested in the restoration of tidal and riparian wetlands for multiple purposes. These purposes include restoration of wildlife habitat, maintenance of biodiversity, improvement of water quality, management of flood risk, beneficial re-use of



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dredged material, increased recreational opportunities, and building our region's reputation for innovation, environmental sustainability, and physical beauty.

It has been suggested that BAECCC could assist the region by facilitating a discussion among stakeholders working in this area. Among other outcomes, a facilitated discussion that leads to a joint vision of future shorelines would be advantageous for funding and implementing of demonstration projects to identify scalable designs that are resilient to rising sea level while also providing multiple other public benefits. The purpose of today's discussion was to briefly introduce the multiple stakeholders and their projects/interests, and then determine if there is a role for BAECCC in facilitating this regional conversation.

Andy then invited participants to provide a brief description of their interests and projects, and these are summarized below.

Mitch Avalon, Contra Costa Flood Control District:

Mitch discussed the need to address sea level rise impacts on low lying communities and creek corridors from the flood control district perspective (as opposed to a shoreline perspective). Protecting shoreline communities with creeks that run through them will ultimately boil down to community re-design. Some of the key issues will be what this re-design will look like, where and how does a community get additional right of way for a wider creek corridor, and how to fund the right of way and community improvements.

Marc Holmes, The Bay Institute:

TBI conducted an analysis to evaluate the difference in cost and effectiveness between a traditional earthen levee and a levee with tidal marsh frontage ("horizontal levee"), such as the "ecotone slope" concept developed by ESA-PWA. Marc noted that TBI's analysis found an economic advantage to including tidal marshes in levee designs when possible, because the wave attenuation benefits delivered by the wetland allow for a smaller levee for a given level of flood protection. In general, the levee/wetland combination costs about half as much as the traditional levee. The analysis was conducted in part to support the San Francisco Bay Restoration Act, which has been introduced in Congress by Senator Feinstein and Representative Speier.

John Bourgeois, SCC/South Bay Salt Ponds:

The South Bay Salt Pond Restoration (SBSPR) Project spans three counties and will restore 15,100 acres of tidal wetlands with the goals of habitat restoration, reducing flood risk, and providing public access. Restoration will require removal of the berms that surround the salt ponds. Phase I of the project is nearing completion. Planning for Phase II projects has begun and is focusing on tidal marsh restoration, with particular attention paid to creating transition zones. The project area has a large capacity to utilize sediment to raise marshes and create transition zones.

In the Alviso complex, the SBSPR is working with the Army Corps to build a flood control levee. John noted that while levee/marsh combinations can provide lower overall cost and greater



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flood risk protection, there can be a window of marsh development (a decade or more) where these additional benefits are not yet realized. Therefore, levees must be built that take both sea level rise as well as marsh development rates into account.

Donna Ball, Save the Bay:

Save the Bay uses community-based restoration to restore transition zone habitat. They install over 30,000 plants each year using approximately 5,000 volunteers as part of their corporate, public, and education programs. For the past 12 years, Save The Bay has used volunteers and staff to restore transition zone habitat on degraded levee slopes and newly constructed levees in partnership with others including the South Bay Salt Ponds Restoration Project, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, East Bay Regional Parks District, Palo Alto Baylands, and Marin County Parks. This work provides ecological benefits to adjacent marshes and increases habitat for threatened and endangered species. Save The Bay also engages in wetlands protection and advocacy and is launching a public outreach initiative to help build awareness of the value of wetlands and the Bay.

Robin Grossinger, San Francisco Estuary Institute:

SFEI is involved in several projects related to resilient shorelines:

- 1) A three-year project to design resilient landscape units in the Delta. The scale and process to make functional systems adaptive are being evaluated; many local and national scientists are involved.
- 2) The Flood Control 2.0 project that focuses on the fluvial-tidal interface. The project involves rethinking how the flood control/tidal interface is structured such that it contributes to shoreline resilience. It includes a policy component and an economic analysis, as the developing science may run counter to some long-standing policies. The project team, which includes SFEP, BCDC, and SFBJV, is working with the regional water board and regulatory agencies on the policy component. The project involves working with three partner flood control agencies (San Francisquito Creek JPA, Marin County, and Contra Costa County) over four years, and the project team is evaluating how to build the project into an ongoing program to enhance its value.
- 3) The Shoreline Resilience project in San Pablo Bay focuses on how to assess shoreline dynamics on decadal scale. The shoreline is growing in some places while eroding in others—some areas appear to be very resilient, while others have been eroding for decades.
- 4) SFEI is working with BCDC on the Head of Tide project.



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- 5) SFEI is conducting an ecotone transition analysis. The project evaluates what types of transition zones historically existed in the bay to develop ideas for how to recreate them. These elements might be reestablished using natural topography as well as wastewater and semi-artificial structures to create resilience nodes.

Mike Connor, East Bay Dischargers Authority:

The wastewater treatment plant industry has historically focused on the treatment and dilution of wastewater to minimize toxicity. Over the past 30 years, the characteristics of wastewater have changed and the focus of the industry has shifted from treatment to recovery—how to recover carbon and nitrogen and how to reuse water in more effective ways. Wastewater agencies in the Bay Area currently recycle approximately 10% of water that comes through treatment facilities.

All treatment plants are vulnerable because of their location at the edge of the Bay, and moving them is not a trivial issue. Mike noted a key challenge is managing for multiple goals as part of creating resilient shorelines (endangered species, water quality, flood control), as these can sometimes be at least partially in conflict.

Demonstration projects being developed/ proposed around the Bay include:

- A project to use nutrients from wastewater effluent to grow peat to create a buffering marsh
- A demonstration plot at Hayward marsh using treated waste water to create fresh water bird habitat
- A proposal to build demonstration ecotone slopes in Oro Loma and Eden Landing

Bruce Wolfe, San Francisco Bay Regional Water Quality Control Board:

The Water Board's mission has historically involved protecting beneficial uses, with a focus on habitat, but the water bodies themselves are changing, creating a new perspective. There now exists the need to address potential pollutant discharge to the Bay in the face of sea level rise from sanitary and storm sewer lines, landfills, low lying oil and gas pipelines and other types of storage facilities that would have pollutant impacts. Future management of these facilities must be evaluated using a multi-objective approach. For example, a project to repair aging pipelines will need to be evaluated in the context of protecting infrastructure and augmenting habitat. The challenge from a regulatory standpoint is permitting; it will take collaboration among interested agencies and parties to issue permits that accomplish multi-objective management. Bruce noted that he is encouraging agencies to be open to evaluating new ideas, as they may be suited to the changing Bay and support multiple objectives.

Bruce Riordan, Joint Policy Committee:

For the last 3 months, the JPC has been interviewing stakeholders in the nine-county area as part of their grant from the Kresge Foundation. The purpose of the interviews is to determine how a cross-sector, nine-county collaboration for climate change adaptation planning would best help stakeholders with their work. While there is a lot of excitement surrounding improved



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collaboration, some stakeholders are concerned that this will not be enough. These individuals believe that moving the Bay Area forward at the scale required and making decisions in a timely manner will require investing in expanded authority for one or more agencies.

Bill Brostoff, US Army Corps of Engineers:

The U.S. Army Corps of Engineers (USACE), National Oceanic and Atmospheric Administration (NOAA), and the Federal Emergency Management Agency (FEMA) are in early stages of developing an initiative entitled, “SAGE,” which stands for Systems Approach to Geomorphic Engineering. The purpose is to pursue and advance methodologies for coastal transformation to slow, prevent and mitigate the consequences of climate change in coastal communities based on non-traditional approaches. The SAGE approach is that of hybrid engineering, using a mixture of “gray” (e.g., cement, rip rap) and “green” (nature-based, such as salt marsh establishment) (hence Sage). The impetus for this program was the Coastal Engineering Research Board (CERB).

The program is being coordinated by the Corps of Engineers Institute for Water Resources (IWR). They are requesting a document summarizing endeavors in the San Francisco Bay and Delta using green technologies for shoreline protection and a listing of the potential for other such activities throughout the region in anticipation of funding a demonstration project.

Roger Leventhal, Marin County:

Marin County is already experiencing the effects of sea level rise, including road closures at high tides. Roger mentioned two projects:

1) A beach design for Aramburu Island has just been completed. In most locations along the Eastern shoreline of Marin County there may not be enough unoccupied lands to lay back slopes and implement marsh-based wetland solutions to erosion and sea level rise. Therefore, we are also interested in the effectiveness of coarser-grained natural gravel and sand beaches for shoreline adaptation to combat wind wave erosion and sea level rise since these types of systems may require less room for implementation. As part of this effort, a demonstration beach project was constructed, under the management of the Richardson Bay Audubon Society, at Aramburu Island Richardson Bay over two years in 2011 and 2012 and is currently being evaluated for effectiveness. Initial monitoring results from the large December 2012 storms are very promising. There is a need for more pilot projects that demonstrate that these types of solutions can work to avoid a shoreline future of hardened engineered structures with minimal habitat values.

2) In the southern Marin watershed, on the ground adaptation strategies for flooding and the impacts of sea level rise are being evaluated holistically at the watershed scale considering multiple strategies for dealing with floodwater both now and into the future.



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Sara Allen, National Park Service:

The NPS coastal parks in the San Francisco Bay Area (which include Golden Gate NRA, Muir Woods NHS, Fort Point NHS, the Presidio, Rosie the Riveter NHS, Port Chicago NHS and Point Reyes National Seashore) have completed large restoration projects that built sea level rise into their design, including Big Lagoon in Muir Woods NM and Giacomini Wetland in Point Reyes NS. Nationally, the NPS held a workshop in May 2012 at Western Carolina University which focused on putting together a toolkit for coastal national parks to address the impacts of sea level rise. The list of tools is being developed by Dr. Robert Young and will cover a wide spectrum, from wetland restoration to protecting cultural resources and park infrastructure. A final report on the toolkit was to come out this fall but hurricane Sandy delayed completion. Sarah provided a mundane (but important) example of a type of a tool that might be included: if bathrooms structures are washed out, parks could replace them with movable bathrooms in response to sea level rise and storm surges.

Steve Goldbeck, BCDC:

BCDC, USGS, and PWA are collaborating on a sea level rise study in Corte Madera that evaluates the benefits of wetlands to attenuate wave energy (a BAECCC-affiliated project). The project is funded by EPA through SFEP. The project evaluates the resilience of wetlands and the provenance of sediment in Corte Madera, and will consider ways to help wetlands become more resilient moving forward.

All projects along the Bay shoreline (in BCDC's jurisdiction) must be built to accommodate mid-century sea level rise, must have adaptation plans for end-century levels, and must have wetland restoration aspects. A project-by-project approach will not work—a regional strategy is needed. The JPC will provide the umbrella to develop a regional strategy.

BCDC is working on regional sediment management project to evaluate the effects of the changing sediment processes in the Bay on the natural and built community. Current sediment dredging and disposal management practices will be evaluated, and solutions will be developed that focus on enhancing natural systems while maintaining a rich and beneficial economy. The project is in the early phases and will ultimately necessitate changed practices in the built environment and sediment, flood control and regulatory management.

Steve noted that one policy that is evolving is for dredged material to be viewed as a resource rather than a waste for disposal, and in this context logistics is as big cost consideration. Solutions must be developed for how to move dredged materials from deep to shallow at the right times of year to minimize impacts. A regional strategy has not been developed, and BCDC wants to work closely with others from the start.

Matt Gerhart, CA SCC:

Living shorelines have been used extensively in coastal areas outside of the San Francisco Bay. The Coastal Conservancy is leading a multi-year project to look at bringing living shorelines to the Bay (a BAECCC-affiliated project). Marilyn Latta is the project lead. Small-scale pilot



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projects using oyster and eelgrass have been installed in San Rafael and Hayward. The project is in the monitoring phase and will assess: 1) habitat benefits, and 2) the potential for shoreline protection via wave attenuation and oyster recruitment/ use by other aquatic life. A suite of water quality parameters is being measured.

Letitia Grenier, Baylands Ecosystem Habitat Goals Update:

This project updates the Baylands Ecosystem Habitat Goals report to include climate change. Coordinated regional sediment management will likely be one of the recommended management actions coming out of the report. Also, recommended management actions for sediment will likely include ideas on how to use natural processes (like the tide and streams) to move sediment to desired locations. The management recommendations that come out of the report will have strategies for each part of Bay.

A discussion followed the individual presentations. Andy Gunther started it off by asking for all the participants to provide any additional thoughts or ideas they had on the idea of resilient shorelines in the Bay Area, and to consider the proposition that BAECCC can play a valuable role by facilitating a discussion among interested parties regarding coordinating a joint vision for demonstration projects and other actions. He suggested that having such a vision with implementation ideas will be important, as the political opportunity to take action might appear suddenly in response to an extreme weather event.

Bruce Riordan noted that JPC has been getting calls from Sacramento that there is a real interest post-Superstorm Sandy to write legislation that clarifies authority for developing plans and actions to prepare the Bay Area for extreme storms. He noted that creating a story about the benefits of resilient shorelines that can be told to the public and elected officials will be important. Judy Kelly also noted the importance of communicating a message to the public, and Sarah Allen suggested the sea level rise tool being developed by the Our Coast Our Future project will generate valuable images for engaging the public. Andy announced that BAECCC would be initiating a communications and outreach working group, with a key objective being the coordination of messages about climate change and resilience among interested organizations.

Marc Holmes stated that there is an immediate need to write a policy paper for climate change adaptation strategy now to present at the state level and to Congress that outlines likely problems (e.g., flooding and subsurface gas lines), solutions (noting that adaptive management will be required given our imperfect knowledge), and specific policy changes that our current knowledge suggest are necessary. This could be combined with requests for Federal funding to design and build projects to increase shoreline resilience. Marc suggested that BAECCC could be the organization and develops and vets this policy paper.

Ellie Cohen noted that as a partnership between scientists and managers, BAECCC includes people involved in policy development and might be well suited to prepare such a document. She agreed with Marc that we don't need to wait for more studies, that we have enough information



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to make recommendation now. It is just a matter of pulling resources together. She asked if Marc would be willing to lead the effort on the policy paper if BAECCC can help with resources. Nadine noted that a policy paper could get a lot of visibility if linked with the roll out of the management recommendations that will be generated by the Baylands Ecosystem Habitat Goals Update.

The following meeting participants volunteered to be part of a committee to help develop a policy paper: Sarah Moore, Sarah Allen, Sarah Richmond, Mitch Avalon, Matt Gerhart, Rebecca Varity, and Ellie Cohen. It was also noted that Louis Blumberg had previously expressed an interest in this idea.

Mitch Avalon suggested that BAECCC could play a role in coordinating the application of science to the question of building resilient shorelines. Demonstration projects are valuable for learning and documenting science-based solutions, which can generate a political push for federal funding. Rebecca Varity also suggested that BAECCC could engage the engineering and industrial communities regarding “climate smart” concepts for shoreline projects, as many such projects are in design without considering climate change. She noted that discussions with engineers at URS have resulted in “climate smart” changes to project designs.

Judy Kelly noted that the Restoration Authority has been working since 2008 on developing funding for wetlands restoration projects, but to date there has not been a huge increment of local funding. There is a property tax measure to support the Restoration Authority that is expected to go on the ballot in 2014. The Restoration Authority has to have a hands-off attitude to the ballot measure itself and is looking to non-governmental partners to pass it (two-thirds majority of all people who vote in all of the 9-county area). Donna Ball noted that Save San Francisco Bay Association plans to be very active in the campaign. Nadine indicated that polling for the measure is currently favorable but very close.

David Loeb encouraged efforts to educate the public regarding the multiple benefits of wetlands restoration. Bay Nature is working on a special issue about wetlands restoration, framing it around the importance of wetlands restoration for resilience to sea level rise. They are trying to build on the heightened attention being paid to the Bay because of the American cup, and suggested that now is an opportune time to introduce the Restoration Authority to the public.

Marc Holmes noted that all the issues discussed today are integral components of a larger singular strategy to adapt to sea level rise, and that they need to be integrated in a narrative fashion that (1) speaks up about the problem, (2) stresses its urgency, and (3) points to the solution. A narrative about sea level rise and damage to the shoreline will get the attention of politicians, and while government agencies may not be able to promote policy recommendations or support the San Francisco Bay Restoration Act, they can support the science on which these initiatives are founded. He noted that if BAECCC could organize scientific and management voices to support the Act it would be very helpful.



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Andy thanked everybody for the thoughtful and interesting discussion. Given the enthusiasm for the topic and the possibilities of working together on joint interests, he said he was quite sure BAECCC would organize a follow up session to further refine joint interests. Among the topics he noted for inclusion were (1) possible changes to policy, (2) testing engineering designs, (3) organizing demonstration projects and considering permitting strategies, (4) communications and messaging around climate change and resilient shorelines, and (5) targeted funding strategies. He encouraged participants to contact him with other ideas.

4. Policy Updates

a. Gulf of the Farallones National Marine Sanctuary Expansion

Kate Bimrose provided a brief update on the proposal to revise the boundaries of Cordell Bank and Gulf of the Farallones National Marine Sanctuaries. The proposed expansions would extend the boundaries of the sanctuaries to the north and west by approximately 2000 square miles to the Point Arena in Mendocino County.

A notice of intent for the proposed expansions was published in the [Federal Register](#) on December 21, 2012. The project is currently in the public comment phase. The first of three public scoping meeting was held on January 24th. Additional scoping meetings will be held on: February 12, 2012, 6 PM, Point Arena High School, Point Arena, CA; and February 13, 2012, 6 PM, Gualala Community Center, Gualala, CA.

Public comments on the proposed expansions are being accepted through March 1, 2013. Kate noted that a lot of discussion surrounds living shorelines. Comments may be submitted electronically via the [Federal eRulemaking Portal](#) with Docket Number NOAA-NOS-2012-0228 or mailed to: Maria Brown, Sanctuary Superintendent, Gulf of the Farallones National Marine Sanctuary, 991 Marine Drive, The Presidio San Francisco, CA 94129.

Detailed project information is available [online](#).

b. National Climate Assessment Report

Ellie Cohen and others provided an update on the [National Climate Assessment](#) report. Congress has required a National Climate Assessment every four years. This assessment will be the third produced since 1990. A [draft report](#) has been released for public review, and comments will be accepted through April 12, 2013. Ellie suggested that BAECCC participants review the report to: 1) provide comments for subjects that fall under the realm of BAECCC, such as coastal ecosystems; and 2) find information that could be included in the policy document that Marc Holmes suggested developing. She noted that the federal government is interested in hearing from the scientific community in light of recent events like Hurricane Sandy, and suggested delving into the report, including the background documents that go into greater detail, to develop comments that would help bring funding to BAECCC. Kelly Higgason noted that Benet Duncan has been invited to serve an expert to develop a prototype indicator system for the national assessment.



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c. California Climate Adaptation Plan

Whitney Albright provided a brief update on the California Climate Adaptation Plan. She noted that the report is now being referred to as the “California Climate Readiness Strategy” in response to recent events like Hurricane Sandy. All materials have been submitted and introductory materials are being reworked in light of the shifted focus. The public scoping phase will begin after updates have been made.

5. Group discussion: Next steps for the Climate Commons

Deanne DiPietro provided an overview of the California Climate Commons as it stands now and led a discussion about future services that the Commons can provide that would be of interest to the BAECCC group.

The Commons is the official digital library of the CA LCC. Services developed in its first year and a half are:

- a constantly-updated searchable library of documents, datasets, web resources, tools, and LCC projects;
- access to and support for how to use key climate change model datasets (including the California Basin Model);
- featured articles that clarify concepts and guide the user through important materials;
- discussion forums intended to connect the conservationist with peers and with the research community.

The Climate Commons provides conservation practitioners with a starting point for finding information, in particular the latest science and examples to help them make their projects “climate smart”. The Commons is very focused on climate change science for those in California conservation, containing hundreds (as opposed to thousands) of searchable items making it highly navigable. The Commons lets you follow links to find all the other materials associated with an item of interest: for example, a dataset record might link to the documents that explain how a dataset was created, and the forum where you can ask questions about it.

The system has been built to provide easy access to data. If a particular dataset is housed on the Commons, the user is given direct access; otherwise, the user is directed to the source data. Also provided are metadata and a forum for data providers to answer questions. Like any library, the site provides the raw materials that the user can read, download, assemble, and analyze to get the answers for their project; it is not an analysis environment.

The Commons team and the CA LCC is seeking input from the conservation community at this stage in the development of the Climate Commons, so they can direct their attention to the most-needed services. Meeting attendees were asked to provide suggestions on how to further develop the site and which datasets and types of climate change information tools were high-priority. The discussion focused predominantly on how to make the Commons more accessible and useful for



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novice users, how to organize the Commons into sections specialized for different kinds of users, and the need for examples of workflows specific to the different kinds of projects that they do.

Deanne welcomed feedback on the handouts she gave out for the purpose, and invited further participation in guiding the Commons through individual conversations and focused testing. Contact [Deanne](#) if you would be willing to test the site or if you have ideas for how to improve it.

6. Project updates

a. Third Biennial Ocean Climate Summit

Kelly Higgason announced that registration was open for the [Third Biennial Ocean Climate Summit](#). The summit will be held on February 20, 2013 and the registration deadline is February 13th. Space at the event is limited to 150 people and Kelly suggested that those interested in attending register as soon as possible.

The Ocean Climate Summit was first convened in 2008 to provide a forum for coastal planners, scientists and educators to come together in one place. This year's summit highlights collaboration. The goal of the summit is to connect information, resources, and people across disciplines to collaboratively sustain North-central coast and ocean ecosystem health. The Gulf of the Farallones NMS is the lead convener for summit along with a host of sponsors and partners, including NOAA, CA-LCC, PRBO, Cordell Bank NMS, and BAECCC.

Kelly noted that this year's summit will include:

- The announcement of the launch of OCOF's outer coast tool
- The announcement of the final climate change indicators for the Gulf of the Farallones
- A discussion about creating an education panel for educating the community on climate change and ocean acidification
- A presentation about climate smart conservation by Ellie Cohen
- A 15 minute opportunity for open discussion
- A lunchtime poster session

Kelly noted that all attendees are encouraged to bring a poster. The deadline for submitting a poster is Feb 7th. Details about how to register for the event and submit a poster are available on the summit website.

b. Baylands Ecosystem Habitat Goals Update

Letitia Grenier reported on the progress of the Baylands Ecosystem Habitat Goals technical update, which synthesizes existing scientific knowledge on sea level rise and other regional climate change effects on the Baylands and Baylands wildlife to develop recommendations to increase their resiliency.



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The update is halfway complete, and a draft report will be submitted to the steering committee in summer of 2013. A final report will come out next winter at which point outreach to the public and local entities will be conducted. The final report is expected in February 2014.

Letitia noted that the effort to produce the report has been largely volunteer based, and has included contributions from over 125 scientists, regulators and managers. Those with management recommendations or other contributions can [email](#) Letitia.

7. Other items

A number of BAECCC participants will be presenting at the [National Adaptation Forum](#) in Denver in April. Rebecca Fris noted that the LCC will likely have an information table at the forum that could include information about BAECCC, and Andy agreed to mail copies of BAECCC's fact sheet to Rebecca.

Lisa Micheli noted that the research she reported on at a previous BAECCC meeting regarding downscaled projections of future climate in North Bay counties has finally been published in *San Francisco Estuary and Watershed Science* (Micheli, E., L. Flint, et al. (2012). "Downscaling future climate projections to the watershed scale: a North San Francisco Bay Estuary case study." *San Francisco Estuary and Watershed Science* 10(4): 1-31.)

8. Adjourn

The meeting was adjourned at 2 PM. The next quarterly meeting will be held on Thursday, April 25, 2013.