



Bay Area Ecosystems Climate Change Consortium

Wednesday, September 28, 2011, 10:00 am - 2:00 pm
Conference room, 11th Floor, California State Coastal Conservancy
1330 Broadway, Oakland, California 94612

Meeting Summary

Attendees:

Ellie Cohen, *PRBO Conservation Science*
Andrew Gunther, *BAECCC Executive Coordinator*
Kelley Higgason, *Gulf of the Farallones National Marine Sanctuary* (via Teleconference)
Benét Duncan, *Gulf of the Farallones National Marine Sanctuary*
Sara Moore, *UC Santa Cruz*
Tom Suchanek, *US Geological Survey*
Wendy Goodfriend, *Bay Conservation and Development Commission*
Christina Sloop, *SF Bay Joint Venture*
Lisa Micheli, *Pepperwood Foundation*
Erin Chappell, *Department of Water Resources* (via teleconference)
David Loeb, *Bay Nature Institute*
Louis Blumberg, *The Nature Conservancy*
Matt Gerhard, *CA State Coastal Conservancy*
Nadine Peterson, *CA State Coastal Conservancy*
Mendel Stewart, *US Fish and Wildlife Service*
Jaime Kooser, *SF Bay National Estuarine Research Reserve*
Jenn Fox, *Climate Works*
Ryan Meyer, *California Ocean Science Trust*
Rebecca Chaplin-Kramer, *UC Berkeley (PIER Bay Area Climate Change Study)*
Sarah Allen, *National Park Service* (via teleconference)
Rebecca Fris, *USFWS CA LCC* (via teleconference)
Marina Psoros, *SF Bay National Estuarine Research Reserve* (via teleconference)

1. Introduction of participants and agenda review

Participants introduced themselves and the interests of their organization in BAECCC. Matt Gerhart provided the information for the “Go-to-meeting” for those on the teleconference. No items were added to the agenda, but Andy noted that Amber Pairis of DFG indicated she’d join the call at 12:45 PM to give an update.

2. Policy Updates

a. New BAECCC-affiliated projects

Andy noted that the Steering Committee had approved an initial list of BAECCC-affiliated projects pursuant to the policy distributed at the BAECCC meeting in June. He will be contacting the principal investigators of the projects to seek their participation as BAECCC affiliates.

b. PIER Bay Area Impacts Study (Rebecca Chaplin-Kramer)

Rebecca presented a brief overview of the PIER (Public Interest Energy Research) Bay Area impacts study. The California Energy Commission started funding for PIER in the late 90s. PIER's climate impacts work has been using downscaled GCM projections to provide information on a statewide level, and the Bay Area study is the first regional project. Among other objectives, PIER was hoping to reach a new audience, local and regional agencies, which have a particular interest in specific information related to adaptation.

Rebecca touched on some of the key findings from the different parts of the project, which addressed water, energy, transportation, public health, agriculture, ecosystems, and social/institutional barriers to adaptation. The next steps include review by interested parties, and an internal programmatic peer review, during October-December 2011, with final reports released in February 2012.

Lisa Micheli suggested that it would be valuable for BAECCC to think about how to deliver content of PIER work to interested stakeholders. In that regard, Andy noted that he talked to Scott Loarie (one of co-authors of the ecosystems section of the Bay Area report) about providing a detailed presentation of their findings at the January 2012 BAECCC meeting.

Louis indicated that the recent decision by the Legislature not to renew the public goods charge has grave implications for the future of PIER funding.

3. Recap State of the Estuary Conference (A. Gunther/ E. Cohen)

Andy briefly reported on the sessions sponsored by BAECCC on September 20th at the biennial State of the Estuary Conference. The conference was very well attended and very well reviewed. The two BAECCC sessions (*Management Implications of Climate-driven Ecological Change*) were attended by about 100 people, and were unique for the Conference by integrating presentations regarding the Gulf of the Farallones. Andy passed around a copy of the State of the Bay 2011, the centerpiece report from the conference, which is available from the San Francisco Estuary Partnership (www.sfestuary.org).

4. Program updates

a. Dept. of Fish and Game Climate Change program (A. Paris)

No update was provided

b. Funding for PACE Fellow (K. Higgason)

Kelley noted that originally USGS/NOAA joint funding from USGS and NOAA was promised for the PACE fellow, and then with Federal budget problems these commitments were called into question. Kelley worked with senior NOAA officials and Tom worked with USGS to identify funds that could be used to support the fellowship, and complex contracting steps were then required to get the funds to University Cooperative for Atmospheric Research. Due to Kelley and Tom's hard work Dr. Benét Duncan has started work on her two-year fellowship. Benét will be working mainly from the office of

the Gulf of the Farallones National Marine Sanctuary, with some time spent at the USGS offices at Sacramento State.

c. Our Coast Our Future (K. Higgason)

Kelley reported that the Our Coast Our Future (OCOF) project conducted two scoping workshops with coastal managers and planners in August, one at PRBO and one in San Francisco. In total, 55 people participated. Seventy percent of participants indicated they are not presently using on-line tools to support their decision-making. Reasons for this included: (1) concern about whether available tools meet needs, (2) need for both technical support and staff commitment to set up and use existing tools, and (3) spatial resolution of available tools. Key issues identified by participants included: threats to existing infrastructure, recreational opportunities, habitats (especially wetlands), where/when/how much coastal erosion is likely in the future, prioritization of restoration sites, and multi-hazard impacts. Input from the workshop participants will be helpful in designing and targeting the tool to be developed by OCOF. Key next steps include completion of peer review of the new Digital Elevation Model at USGS, with applications beginning in early 2012. The project will have a beta-test group for the online tool, and will conduct training workshops in the project area.

d. Baylands Habitat Goals Update Coordinator (M. Gerhart)

The Coastal Conservancy has issued a Request for Services for a two-year project to develop a climate change technical update for the Baylands Habitat Ecosystem Goals Report. The project will focus on the likely impacts and what new tools or research is needed to further elucidate the impact of climate change on plans for future wetlands restoration. Nadine noted that it is likely will be some controversy about this process, and the candidate will need to manage the process to keep participants focused the goal of a technical update.

e. Federal subcommittee workplan (K. Higgason)

Kelly noted that the federal agencies participating in BAECCC (National Park Service, US Geological Survey, Gulf of the Farallones National Marine Sanctuary, San Francisco Bay National Estuarine Research Reserve, the US Fish and Wildlife Service, and the Central and Northern California Ocean Observing System (CeNCOOS) signed a letter of intent to guide their collaboration. They recently completed a progress report on the work plan for the letter of intent, and concluded their progress is adequate. Jaime noted that Federal agencies have a national goal for collaboration to improve efficiency in the pursuit of interdisciplinary, multi-agencies objectives, and the Bay Area letter of intent shows excellent implementation of national policy.

f. LCC Program (T. Suchanek)

Tom noted that Landscape Conservation Cooperative (LCC) programs may be getting increased funding nationwide in FY'12, supported by cuts in other programs at the Department of the Interior. Last year 70 proposals were submitted to the LCC, and 15 projects were approved for about \$1.5M total. Potential Conflict of Interest was treated very carefully, as some LCC Steering Committee members are from organizations that received funding. The Interim LCC Steering Committee has now been replaced a regular Steering Committee representing Federal and State agencies and NGOs. Positions remain to be filled representing tribes, fisheries, and portion of the LCC that is in Mexico (all of Baja, based on

existing Bird Conservation Regions). The key next step for the LCC is developing a strategic plan, and Tom referred people to website for more information (<http://www.californialcc.org/>).

Tom also noted that a workshop on Structured Decision Making (SDM) is happening in October, sponsored by the LCC. SDM is a systematic process that can be used to find optimal alternatives to achieve management objectives given specific constraints. At the workshop five case studies are being considered; a USFWS case for working on agency conservation priorities; a USGS case for prioritizing tidal marsh restoration in the face of sea level rise; a USFWS case regarding monitoring and management of American River; a NOAA case related to southern sea otter management; and a USFWS case for vegetation inventory and mapping in Alaska.

5. BAECCC-originating proposal
 - a. SFBNERR Sea Level Rise and other pending proposals (K. Higgason)

Patrick Barnard of USGS has secured funding to expand the agency's new high-resolution digital elevation model (DEM) of the Gulf of the Farallones coastal region into San Francisco Bay. USGS hopes to secure funding to also apply their Coastal Storm Modeling System (CoSMoS) to the Bay DEM as part of the grant proposal to expand the current scope of the Our Coast–Our Future project into San Francisco Bay. (Wendy noted that Patrick’s work is being coordinated with other researchers in the region). This proposal is pending with the National Estuarine Research Reserve System Science Collaborative, and decisions regarding funding will be announced on October 18th. Kelley also reported that the Our Coast–Our Future team will submit a proposal by October 3rd to the NOAA Climate Program Office to further supplement expansion of the Our Coast–Our Future project.

Presentations

6. Benét Duncan, PACE Fellow
*Developing a Set of Linked Environmental and Biological
Climate Change Indicators for the North-Central California Coast*

Dr. Benét Duncan (Benet.duncan@noaa.gov; 415-970-5253) is a Postdocs Applying Climate Expertise (PACE) fellow who will be working for the next two years with the NOAA Ocean Climate Center at the Gulf of the Farallones National Marine Sanctuary. Administered by the University Corporation for Atmospheric Research (UCAR), the purpose of the PACE program is to train recent Ph.Ds. to apply knowledge about climate dynamics to policy issues.

The goal of Dr. Duncan’s project will be to develop a set of environmental and biological climate change indicators and integrate them into a collaborative monitoring plan to help track and address the effects of climate variability and change on the Gulf of the Farallones National Marine Sanctuary region from Bodega Head to Año Nuevo. In Phase 1, a literature review and discussions with experts will be used to define selection criteria and identify candidate physical indicators. In Phase 2, these will be screened using workshops and modeling exercises. Phase 3 will repeat the process for biological indicators, and in Phase 4, a working group will assist with incorporating the indicators into a comprehensive monitoring plan. Dr. Duncan recently completed her Ph.D. in atmospheric and oceanic sciences at the University of Colorado, Boulder.

7. Wendy Goodfriend, Bay Conservation and Development Commission
*Innovative Wetland Adaptation Techniques in Lower
Corte Madera Creek Watershed*

This BCDC-led project is studying the wetlands ecosystem that includes Corte Madera tidal marsh and mudflat to evaluate (1) the benefits of tidal wetlands for flood protection and wave attenuation, (2) the sensitivity of these ecosystem services to sea level rise, and (3) the types of management measures that could be employed to enhance or protect these services in the future. The project is operating with a \$590,000 grant from the Estuary 2100 program managed by SFEP, with extensive in-kind match from participating agencies (particularly Marin County Flood Control, UNESCO-IHE and the USGS).

The project is using a variety of sophisticated physical measurements to calibrate wave, flood and sediment models. These include field measurements of waves, flume-based sediment erosion potential of cores taken from the mudflat, and a detailed digital elevation model (combining bathymetry and topography). The modeling efforts includes using the DELFT 3D and WHAFIS 1D models to evaluate the impacts of sea level rise on wave attenuation across the marsh and mudflat, and the sensitivity of this attenuation to the vegetation, profile geometry and morphology of the system. Initial results from the modeling teams will be discussed at a project meeting scheduled for November.

Based on the sensitivity of the system to sea level rise, the project will consider conceptual adaptation strategies (comprised of 2-3 alternative management measures) for three typical marsh profiles. The alternative management measures will be summarized in a framework that will be applicable to other tidal wetland systems around the Bay. Making sure the results of the project are transferable to other locations is important as the data collection and modeling analyses being conducted are resource intensive. Communication materials and a final report summarizing the project will clearly describe how the project results could be applied to other Bay Area wetlands.

The project was originally scheduled to be completed in December 2011, however a one-year extension of time has been requested, and it is expected that technical work will be completed in June 2012 and the communication materials and final report by December 2012.

8. Review of action items, other business

Lisa Micheli noted that her group (the “Ackerly Group”) would be producing a document for the upland environments that will be very similar to what BAECCC is calling a “research strategic plan.” She suggested that it might be worthwhile to produce this document as a BAECCC working paper or white paper. Andy agreed to work on this concept with Lisa.

9. Adjourn

The meeting was adjourned at 1:50 PM.