

**MBCORC Meeting**  
**June 30, 2006**

**MINUTES**

*Present:* Mary Batteen (NPS), Simon Chang (NRL), Mike Clancy (FNMOC), Kenneth Coale (MLML), Pat Coulston (CADFG), Churchill Grimes (NMFS), Sam Johnson (USGS), Rikk Kvitek (CSUMB), Lora Lee Martin (UCMBEST/UCSC), Marcia McNutt (MBARI), Tate Miller (MIIS), Rachel Saunders (MBNMS), Mike Shulters (USGS), Mark Silberstein (ESF), Eli Silver (UCSC), George Somero (Hopkins), Charles Wahle (MPA), Geoff Wheat (NURP), and Pat Duran (MBARI).

The meeting was called to order by Chairman, Marcia McNutt, at 12:15 p.m. at the Monterey Bay Aquarium Research Institute in Moss Landing, CA.

**Self Introductions**

Charles Wahle - Director of the MPA Science Institute which is part of the National Marine Protected Areas Center created in 2001. The Center explores more effective use of MPAs nationwide.

Rachel Saunders – Representing the Monterey Bay National Marine Sanctuary. The MBNMS is one of thirteen national marine sanctuaries. The MBNMS focuses on resource protection and education. It has approximately 30 staff and collaborates with local institutions.

George Somero – Director of Hopkins Marine Station of Stanford University. Hopkins employs 60 staff and is involved in education and research. It provides undergraduate and graduate classes that are integrated with classes at Stanford.

Rikk Kvitek – Representing CSU Monterey Bay as Acting Dean of Science, Media Arts and Technology program, faculty member, and director of the seafloor mapping lab. The ESSP (Environmental Science, Systems and Policy) program teaches technical and quantitative skills in science, economics and policy. The ESSP program was a founding partners in CI-COREP.

Mark Silberstein – Executive Director of the Elkhorn Slough Foundation. The ESF works with the national estuarine research reserve focusing on large scale land conservation. The ESF has purchased 4,000 conservation lands that are managed as habitat refuges and working farms and ranches involved in experimental work and land management. There is a staff of 30.

Tate Miller – Assistant Dean for Academic Programs at Monterey Institute of International Studies. There are 45 students in the Master of Science program in International Environmental Policy This is one of the first such masters MS programs.

Geoff Wheat – The West Coast and Polar Regions Undersea Research Center has an office in Moss Landing with the main center at the University of Alaska. Geoff is also a research

professor at the University of Alaska in undersea vehicles and assets. He collaborates with MBARI.

Pat Coulston – Manager of resource assessment program of the California Department of Fish & Game’s Marine Region. The emphasis is on documenting landings of sport and commercial fisheries, evaluating MPAs, and assessing the implementation of the abalone recovery program.

Simon Chang – Naval Research Laboratory, Marine Meteorology Division. There are 70 employees in the division with roughly 80 scientific staff conducting basic and applied research.

Mike Clancy – Fleet Numerical Meteorology and Oceanography Center (FNMOC) employs 200 people. They are operational 24/7 conducting meteorological models, processing satellite data, providing products, among other things. The focus is primarily global but occasionally local. They provide high resolution meteorologic ocean modeling.

Ken Coale – Director of Moss Landing Marine Laboratories, a consortium of seven California State Universities. They have approximately 100 graduate students, 20 undergraduate students, 100 staff. The Pt Sur is their 135’ research vessel. MLML is celebrating its 40<sup>th</sup> birthday in September.

Mary Batteen – Chair, Department of Oceanography at the Naval Postgraduate School. NPS has 100 faculty/staff and offers Masters and PhD programs. Mary teaches physical oceanography. Many of the faculty work with MBARI.

Churchill Grimes – Director of the NOAA/NMFS Southwest Fishery Science Center. The Center’s programmatic responsibilities are the west coast. It has two principle programs: research/management of commercial fishery resources and supporting restoration of endangered species including salmon. The Center employs 70, mostly biological scientists, and works closely with UC Santa Cruz and other organizations.

Eli Silver – Representing UC Santa Cruz Institute of Marine Sciences. UCSC has approximately 15,000 students. There are several departments and large research centers with an interest in the ocean. The work done includes remote sensing.

Marcia McNutt – President and CEO of MBARI. MBARI is primarily involved in ocean engineering, marine biology, chemistry, and geology. It is a sister institution to the Monterey Bay Aquarium. MBARI serves as a technology incubator for ocean sciences to develop new tools and technology.

Lora Lee Martin – Executive Director the UC MBEST Center in Marina. MBEST (Monterey Bay Education, Science& Technology) has nearly 500 acres of land and two operating facilities to house agencies and industry related to the interests of UCSC and our regional research and education institutions. The MBEST center hosts a small business incubator operated by the City of Marina. MBEST is working to create a research center that will attract complimentary businesses and agencies and to help move innovation to market.

Mike Shulters – Director of the California Water Science office of USGS. His department of USGS studies the land and ocean interface. Their local work includes looking at saltwater intrusion.

Sam Johnson – Chief Scientist of the US Geological Survey Pacific Science Center. The sphere of his office is the entire western United States. Marine geological problems being studied include hazards, erosion, benthic habitat mapping, coral reefs, and some resource related issues such as methane hydrates.

### **Brief History of MBCORC**

Dr. McNutt provided background to the formation and focus of MBCORC. It was initiated in late 1997/98 in response to then-President Clinton's national ocean conference being held in Monterey. Local ocean research groups saw the conference as an opportunity to showcase the work done in the area. After the event, the group continued to meet as a means to find ways to collectively use the expertise and facilities to provide a local force. A retreat, memorandum of understanding, and brochure were developed early on. MBCORC then took the lead in forming the Central and Northern California Coastal Ocean Observing System (CENCOOS). Due to the time and resources necessary to get that effort started, MBCORC became less active for a period of time. CENCOOS is now active and staffed as a separate organization. It is time for MBCORC members to meet again to welcome new leadership in the region, update each other on current areas of focus, and explore new initiatives that we might want to help catalyze.

The purpose of today's meeting is to explore whether there are items of joint interest among the group that warrant holding of a retreat later in the year and to select a new Chair.

### **Review of Regional Initiatives Underway**

Mike Shulters – The USGS has a groundwater quality program underway with a major focus this year on the Monterey Bay. The group could look at the ocean interface with collaboration opportunities of researching groundwater and the bay, including issues related to saltwater intrusion. The USGS will hold public meetings of findings. Marcia shared that the Aquarium would likely be interested in this area.

Eli Silver – UCSC is involved in remote sensing and it appears that most MBCORC members have minor to major programs involving remote sensing. It is a tool but could also be a means to pull groups together. Similar signals can be used for a variety of things. Eli would like to explore the potential synergy of what the groups are doing and see if a consortium can be developed to not only work together but to attract funding to develop further in the field.

Churchill Grimes – The NMFS coastal observing system consists of regional organizations. Part of this is to be national backbone of system. It will initially be comprised of assets, programs and information already being collected or in existence. John Finney in La Jolla is leading the effort and Churchill is overseeing the Northern California operation by organizing people and establishing the organization.

Mary Batteen – NPS is studying rip currents with a local monitoring site off the coast. They are working with MBARI to gather data. The monitoring includes underwater cameras, real time data, remote sensing, and shallow water acoustics. Mary sees opportunities to combine things; newest is Navy students understanding undersea vehicles. NPS has instituted an ocean policy course, with whales being the current issue.

Ken Coale – MLML has found MBCORC to be helpful spearheading actions and useful in solidifying and launching programs. The *R/V Pt. Sur* is coming up for renewal, its lifetime expectancy is to expire 2011. NSF is working on an initiative to replace UNOLS ships. Ken sees that MBCORC can, as a group, be competitive in convincing NSF to provide a replacement vessel to this area. Three UNOLS ships will be built: east coast, gulf coast, and west coast. We want to position ourselves to be competitive for the regional class west coast vessel. Scripps and Oregon State University will likely be doing the same thing. By submitting a proposal for the replacement ship and having the proposal endorsed by MBCORC we can provide a compelling and geographic case. By presenting enough interest by local institutions to use time on the ship, we can demonstrate ways to reduce the day rate and show the ship as being utilized to its maximum but without sole use of NSF funds. The vessel is to be state-of-the-art and much better for acoustic work.

Mike Clancey – From the point of view of FNMOC, there are several areas of potential overlap including remote sensing; the idea of a remote sensing consortium would be of interest. While some of the organizations have a global focus, the local area can be used to test things to be applied globally. Potential local program with MBARI to develop a planning tool for marine operations combining wind and wave information using Fleet Numeric's 24/7 operations. Their operations can be helpful to other organizations as well, particularly for certain experiments and proposals requiring someone always being on call.

Simon Chang –The Marine Meteorology Division is the research side of Fleet Numerical and is involved in modeling. Years ago there was a proposal to do pressure and forecasting; this Central California prediction initiative became the basis for the performance modeling program. The model has become more robust and sophisticated and could be used for forecasting, prediction and studies. Simon is also interested in the use of remote sensing to identify low and high light. A real time remote sensing product could run predictive models. This information would be very useful for the local community if the population increases.

Patrick Coulston - CDFG funded an automated fishing license system that will provide better user information. They have the infrastructure to annually evaluate kelp beds, and evaluate marine protected areas. They are part of a collaboration in Southern California using ROVs to look at fisheries in MPAs.

Geoff Wheat – A new direction of NOAA entities is coming together for the general purpose to do something new. Collaborations are happening in Alaska centered around observing systems in Alaska and public information. Having something like MBCORC in place can help position interested parties to take advantage of opportunities for submitting proposals to NOAA and other outside groups as they become known.

Tate Miller - MIIS is undergoing an aggressive expansion in all programs. Its mission has changed and there is a mandate to become more involved in local environmental issues. MIIS does not conduct research but is exploring ways to become involved, including in the policy area.

Mark Silberstein – ESF could contribute use of its sites to study land/sea interface and to address how to manage natural resources, particularly diverse resources with populations concentrated on the coast. The work done at ESF is a natural classroom. They have no funding for research but could provide locations to engage the next generation and test tools. Mark is very interested in working with the MBCORC organizations as they test in a way that can make a difference in the conservation of resources

Rikk Kvitek – There are programs at CSUMB that look at the land/sea interface. They are involved in a NASA cooperative focusing on aerial remote sensing and doing landscape modeling such as tracking climate, runoff, wildlife movement, forage, and other areas transportable to other venues. There is an ocean economics program looking at how coastal economies are driven and the value derived. An active coastal watershed program is involved in restoration and land use, working with growers and looking at land use practices. A seafloor mapping lab is moving marine ecology into the higher resolution landscape by conducting high resolution mapping of near shore and disseminating the information to the public and other researchers. Serial mapping looks at dynamics and change. Students become skilled in GIS and remote sensing.

Sam Johnson – The USGS Pacific Science Center is involved in mapping, forecast and landscape change. They are doing habitat mapping to the 3 mile limit and have been collaborating with Rikk Kvitek’s seafloor mapping group. USGS is getting more support and a push to derive a coastal zone management scale, land/ocean interface, for ecosystem and biological maps. There could be production of a more useful product to coastal zone managers and the general public. Understanding the coastal impacts of rising sea levels, and dam removal are other areas looked at. They are developing broader, cooperative relationships with entities to produce higher resolution maps, to evaluate process and change, and modeling landscape change.

George Somero – Stanford University has launched the Woods Institute of the Environment playing to the strengths of faculty and getting better interactions across disciplines. The Center for Ocean Solutions is being discussed with a planning grant from the Packard Foundation. Involved parties are identifying ways to bring together groups and institutions with a pool of talent to address important problems involving oceans, engineering, economics, law, etc. The Center would address key land/sea issues. The form of the organization should be identified by the end of this summer. The main concern is to do something unique, so the group is looking closely what others are doing, so as not to duplicate efforts.

Rachel Saunders – The MBNMS looks at managing resources and human activities. Water quality is a priority core issue for research and management. They have a large water quality protection program and are looking at results of monitoring programs MBNMS is engaged in. The data is being pulled together to see what management initiatives are being accomplished; are we making a difference in the protection and long term conservation of resources. There are

some bond issues coming up including one focusing on water quality in Monterey Bay. SIMON is integrating long term information and bringing those projects to the attention of the public. Bill Douros' office (Western Region) will take a larger scale view. MBNMS is collaborating with Fish & Game on decision making and planning tools in federal waters, this will be a big area of attention. The Sanctuary will be getting a new 65' aluminum catamaran built specifically for research use by sanctuaries on the west coast. It will be docked in Monterey but will service all sites. They look forward to collaborations with area research institutes.

Charles Wahle – The MPA Science Center covers three western state coastal resources and level of protections. It is looking at better use of MPAs. Charles thinks MBCORC should be looking at new, unique areas and issues that could then obtain funding that may not come up in other ways. For example, how do we know if MPAs are effective? They will disappear if their effectiveness can't be shown. By working as a group, MBCORC could explore the issue and attract more funding.

Lora Lee Martin – UCMBEST is trying to attract new agencies and companies that will compliment our regional education and research strengths and to build facilities that provide a resource for the institutions around this MBCORC table. In addition, on the UCSC campus/Institute of Marine Sciences there are discussions underway regarding a program in ocean policy. There are also regional discussions beginning regarding the new state Marine Life Protected Areas (MLPAs) and how this region might find a way to pilot efforts related to benchmarking and monitoring of these new designated areas. Finally, MBCORC might want to consider hosting forums on topical issues e.g. use of remote sensing.

Marcia McNutt – MBARI just completed its new strategic plan. The plan underscores Monterey Bay as the focus and proving ground for technology and understanding processes. If others are looking for a partner to study Monterey Bay, MBARI is a possible option. MBARI has a new emphasis on policy; do our activities impact communities beyond our peers? Is our technology being used beyond the oceanographic community? Are we impacting policies? We need to take advantage of local expertise to be able to add this new component. Two technologies that MBARI would like to work with others as to their usefulness are AUVs equipped with a variety of sensors and a bottom mapping system. Use of the MARS cabled observatory would be ideal if it could be placed on the edge of an MPA. This would provide an opportunity to place cameras and sensors in that area of those trawled and those protected. The Center for Ocean Solutions is looking at pilot projects to serve as initial workshops for the Center. The Center will take important questions and look at where roadblocks exist to achieve desirable outcome. What type of changes are necessary to get around a roadblock? Some possible issues are: resumption of whaling, eutrophication issues, ocean health, and ocean acidification.

### **Updating Brochure**

The Monterey Bay Crescent brochure has not been updated for many years. Lora Lee was contacted by someone working with the Monterey County Business Council's cluster effort. They are looking to promote education and research and would like to know if MBCORC would be interested in broadening the scope of the MBCORC brochure beyond a focus on oceans. If so, the bulk of the funding for the reprinting would be provided by the Business Council and

others. Do we see value in keeping an oceans-focused brochure or do we want to broaden the scope of our brochure to that of general education and research and not a focus on oceans. Lora Lee indicated the Monterey group wants to use our format, almost exactly, but changing some of the text and the categories on the grid. The consensus of the group was to keep our own separate brochure with a focus on oceans. Use of the MBCORC grid format would be allowable if the new brochure listed the MBCORC institutions in their brochure and if they include a strength in oceans as one of the regional strengths. They can use aspects of our brochure but it needs to be distinctly different from the MBCORC brochure to avoid any confusion. MBCORC members have requested that Lora Lee review the new Monterey County draft brochure and to make sure that MBCORC is reflected in their brochure along with an acknowledgement of our regional strength on oceans.

### **Potential ideas for further discussion/Retreat**

Marcia summarized the areas that are of interest to pursue further as a group:

- 1) *Pt. Sur* replacement - This is a key federally supported asset serving the area. We need to develop a proposal and make sure there is regional support.
- 2) Remote Sensing Consortium – Eli is planning a day long workshop on this topic on September 7 at the Seymour Center, Long Marine Lab, in Santa Cruz.
- 3) MPA monitoring and monitoring beyond MPAs, such as runoff and affordable monitoring. What do you need to measure, how often, and how do you make it affordable? Need to keep track of what others are already doing or are planning at levels larger than our area. Where are the gaps locally? What could be done better or what kind of leadership/expertise do we want to provide?
- 4) Center for Ocean Solutions – Later this year planning for the Center may have progressed to the point that it can be discussed with MBCORC.

Other items were mentioned but they cut across these four topics. Ocean policy could be leveraged around the Monterey Bay and is an end result of everything we're talking about.

What would we like this group to do? Because MBCORC doesn't exist legally it has some restrictions in what it can do and is seen more as a means to communicate with each other and to build multi-lateral programs on a cooperative basis. Do we see a need to be more than that? Mike suggested getting an update from CENCOOS and how MBCORC could collaborate with them. Find out how CENCOOS got to where it is and its current activities.

A two-day retreat will be scheduled for later this year, likely October or later.

**Selection of New Chair:**

Marcia nominated Lora Lee, current Vice-Chair, to replace her as the MBCORC Chair. Upon motion duly made and seconded, Lora Lee was elected Chair. Selection of the Vice-Chair will occur at the Retreat.

Mike mentioned a visit of high level individuals coming to the area in August for AOSN. Does MBCORC want to host an activity or cocktail party to have a chance to meet with them? Mike will provide information to MBCORC members as to who is attending and when.

Meeting adjourned at 2:30 p.m.