



bay restoration commission

STEWARDS OF SANTA MONICA BAY

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MEETING OF THE SANTA MONICA BAY RESTORATION COMMISSION TECHNICAL ADVISORY COMMITTEE

Contact: Lia Protopapadakis (310-216-9826)

Friday, December 17, 2010
9:30 am to 3:30 pm
Loyola Marymount University, North Hall 200

Online Password: IggyLion1

Note: Public comments are *italicized*. Items for staff follow-up are underlined.

1. Welcome and Introductions

Rich convened the meeting at 9:45am. Round-robin introductions followed.

2. Approval of Agenda and Meeting Minutes (*Attachment 1*)

The TAC approved the minutes from the last meeting with several substantive corrections made by Mas, and a few typographical corrections from Rich, Steve, and Lia.

Joe Gully asked if he could follow up on some items mentioned in the minutes. Specifically, SCCWRP met with the Monitoring Enterprise to discuss possible synergies between Marine Protected Area (MPA) monitoring and the POTW (Publically Owned Treatment Works) monitoring for NPDES permits. It turned out there are not many synergies and the funding for MPA monitoring cannot just be handed over to SCCWRP to add on or replicate the Bight Program. Joe recommended that SMBRC consider working with Dirk Rosen to assist with data collection about deep-water rocky reef ecosystem at Short Bank and in the canyons in particular.

3. Chair and Staff Reports

No one present had attended the Governing Board meeting the previous day. Guanyu noted a few items that were on the agenda, including SMBRC's annual report, and the Ballona Symposium. The TAC requested staff to send them the Symposium summary. *Sean Anderson discussed some of the context for SMBRC's handling of the Ballona Restoration Project, including the rationale for the Governing Board resolution supporting the scientific-based planning process and the symposium.*

Tom passed out copies of the latest edition of the Urban Coast. Dan asked staff to tell the editor (Sean Bergquist) to switch to anonymous review of articles.

Dan gave a summary of the last MRAC meeting. There was good turnout from the public, but few MRAC members. Rich interjected that the Malibu Lagoon Restoration Project was

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before the Coastal Commission that day. Dan reminded the group that AB25 – Rigs to Reefs passed the State Legislature, but needs some cleanup. He announced that the Fish and Game Commission voted 3-2 on Wednesday to approve the proposed network of MPAs in the Southern California Bight. UCLA recently joined SCMI. SCMI is requesting funding from the Annenberg Foundation to build a marine station at the new City Dock One. They anticipate the project taking 10 years to complete and costing \$0.5 billion. The Port is encouraging the move, because they want the space that SCMI currently occupies and want to revitalize City Dock One and the surrounding area. Linda wondered whether the State Lands Commission had weighed in or not yet.

Lia noted that she will make the material for this meeting available online before the New Year. She has been attending several meetings lately, but most of those are more related to the MRAC and were discussed in the afternoon (see #7 below). Funding from Prop 84 will be available soon and the TAC should expect to see another round of project review at the March 2011 meeting.

4. Discussion: Index development and improved analysis of habitat conditions (Attachment 2)

Guangyu gave a presentation on a draft white paper on index development. The paper builds on the presentations on index development given at the last TAC meeting. This has been a goal for SMBRC for 20 years. The 2010 State of the Bay Report (SoBR) marked SMBRC's first attempt at it. SMBRC is furthering this effort now, in part because the update to the Bay Restoration Plan (BRP) now includes goals for all habitat types. Indicators are different from Indices, even though many people use the word interchangeably. An indicator is a single metric, whereas an index is a combination of many. Since the last TAC meeting, Guangyu has surveyed State of the Estuary Reports produced by the other NEPs looking for indicators and indices used in these. Many of these reports use indicators, while very few use indices. The reason appears to be a lack of data. The most common index used was for assessing water quality, which has long-term monitoring data and established standards. The Benthic Response Index (BRI) is also widely used for soft-bottom habitats. The most common indicator relates to sea grass, but none of the reports had a sea grass health index. Another common indicator relates to the fishing industry and economic value. Guangyu will send around the key for the table in the handout.

Guangyu distributed handouts showing examples from different NEP reports on how they “grade” the status and trend of different indicators/indices. Most are based on best professional judgment not rigorous science, because the data does not exist. Another challenge is identifying the “healthy” condition. Buzzards Bay was unique in comparing 8 indicators to the “healthiest on record” from 1602 and combining the numerical score into one. This raises the question, is this an index for the health of Buzzards Bay? It only uses a few indicators for each habitat type.





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Dave wondered if anyone has used standard economic indicators or tourism statistics. Guangyu said none of the NEPs did. Linda thought that the National Marine Sanctuaries do a better job at tabulating information on tourism. Rainer added that the State Parks collects data on visitation. *Sean Anderson noted that the National Park Service only collects this information roughly every 6 years, which is not frequently enough to do standard annual or semi-annual analyses.*

Guangyu showed a table that outlines the current state of index development for different habitat types and asked for general feedback. *Eric noted that he has begun applying the fish guild index developed by Jim Allen and Dan Pondella to soft bottom trawls in his database. He suggested it may be possible to compare soft and hard bottom habitats.* Rich commented that even these indices do not include all aspects of the habitat being assessed; for example, MARINE protocols ignore fish all together. Joe noted that the BRI was designed for pollution and that it doesn't say anything about fishing impacts on a system. The BRI can serve as one component of a broader index on soft bottom health. *Sean Anderson stressed that it is important to start with something rather than waiting until a perfect index is developed, with all important aspects included. For example, when you go to a hospital, the nurse takes all your vital signs. While it is possible that you have cancer and these vitals will all be normal, they are still useful indications of many problems and shouldn't be abandoned.* Rainer wondered how we intend to use a "healthy habitat" index. Is it an outreach tool? Policy development? Project design and tweaking? Mas suggested that while the indices are developed for the SoBR, they are primarily a way to identify what needs to be fixed and also measure improvement. He adds that he really likes the concept of nested indicators put forth in the White Paper. Joe stressed that management decisions are made based on the results of the SoBR more than from peer review articles and data based indices would ensure that the info in the report is as accurate as possible. Rich suggested that indicators are useful to managers, while indices are useful to the public. He stressed that indices with the cause built in is proving to be problematic in many areas and recommended that any index developed by SMBRC should address condition only, the cause needs to be separated.

Joe noted that one benefit of having a huge database is that they can go back and re-run the data against different criteria. The only thing you need is a good gradient to measure against. Steve added that it is important to see how different components contribute over time. Mas repeated that the "healthy habitat" index can be used as a red flag as the first step in addressing a problem: 1) Is it a problem? 2) What is the cause? and 3) What should be done to fix it? Each step is important to the end result. Take 3 different examples relating to beach bacteria. First, in Santa Monica Bay, we conducted an epidemiological study connecting indicator bacteria to illness, found a problem, identified a cause, and determined a solution. Second, in Mission Bay, monitoring showed high bacteria levels (red flag), conducted an epidemiological study, found no problem, so they did not proceed with a solution. Third, in Cabrillo Beach, monitoring showed high bacteria levels, but did not

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conduct an epidemiological study, so they do not know if there is a problem, what the cause may be. However, they are moving forward with a solution. Steve agreed with this thought and added that a “Healthy Habitat” index could be used as a tool for identifying problems. Tom suggested that Ballona may present an opportunity to test a healthy wetlands index because we’ll be able to control some factors. Rich commented that spatial scale was critical in the rudimentary habitat assessment in our SoBR with different places receiving different scores, but this is not discussed in the white paper. Heal the Bay deals with this by grading each beach, but then you are faced with the question of how you roll it all up. Steve recommended that staff develop a framework for a “healthy habitat” index to ensure consistency between habitat types. Points to include are:

- How to address spatial scale
- How to identify indicators
- How to define “unhealthy”
- What are the expectations for the index

Guangyu presented a proposed timeline for working toward “healthy habitat” indices for habitat in the Santa Monica Bay and asked for direction from the TAC. What should SMBRC’s approach be? (For example, develop a framework first). What sort of work needs to be done? (For example, SMBRC is discussing the possibility of funding a beach inventory with Karen as a first step toward identifying indicators and developing an index.)

Rainer suggested identifying how fine grain the habitat classification should be. For example, sandy beach could be broken down further into “pristine,” “high use,” and “nourished.” Also need to identify a target or benchmark. Steve seconded the importance of knowing what the desired state is. Rainer illustrated this with an example from the Bay Delta, where over the last 20 years managers have been monitoring the decline in the health of the Delta, without having a trigger point to do something. Steve emphasized that the process we use to develop the indices will lead to acceptance (or not). He encouraged SMBRC to make full use of peer review process, beyond the TAC members because it will help with buy-in. Mas suggested using a triad approach. Potential components for sediment quality could be fish, sediment, and algae. Steve recommended defining “healthy habitat index”. What do the pieces of the index represent? Include spatial scale and stressors. Mas reiterated his liking of the nested idea, because it corresponds with organizational structure. The overall Habitat Health Indices will help with funding agencies, the Response Indices are useful to managers with a broader view, the indicator level is good for staff monitoring a particular item. Steve suggested the TAC help with developing the framework and asked if the goal is to be able to revise the assessments in the 2015 SoBR. Rich concurred that it is important to start with the structure. Even if there are no new data streams, the framework will help improve the assessments. Tom recommended keeping an eye on what the decision points may be and what information managers already use to make decisions. Burt added that it seems valuable to be able to convey a broader message by rolling all the healthy habitat indices up into an overall GPA type assessment, and noted that this will

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require coordination between indices. Rich wondered how one would weigh the different pieces, but thought it was a worthy goal to work towards. Linda was reminded of the shifting baselines concept and suggested accounting for changing conditions and tolerances. Burt noted that once you have a good index, it will be easier to identify the thresholds. Dave cautioned that setting thresholds would move discussion away from science and into realm of policy, unless the thresholds are statistical in nature. Sean Anderson suggested including in the framework recommendations for handling spatial extent, ecological structure, process and function, and physical factors. Rich added ecosystem support services to the list. Dave mentioned getting into economic indicators, but cautioned that drawing conclusions would get into stakeholder driven processes and isn't science.

Guangyu reiterated that SMBRC has some money to put into this and asked for recommendations on where it should be spent. Rich stated that the MARINE group had some funding from Sea Grant but that is gone now and they still have not developed their index. Burt commented that he is working on a project for Bight '08 to provide tools to start thinking about a nearshore pelagic index. Rich agreed that the nearshore pelagic system is a good opportunity because the data exists. Burt noted that ocean chemistry data, such as Nitrates, Phosphates, and dissolved Oxygen are obvious things to include. They may be able to tease out direct urban impacts and global influences soon, and could add fisheries, especially if we can bring CALCOFI closer to shore. Steve reiterated the need to develop a conceptual framework first. He suggested discussing a draft framework and potentially finalizing goals at the next meeting. Rich suggested assigning staff and TAC to build the draft framework. At successive TAC meetings, these internal experts can report on pieces they are assigned to.

Mas requested that staff produce the minutes sooner rather than later, as there were many interesting ideas discussed today. Dan added that he has been collecting fish data from beach trawls which would be useful information for the sandy beach assessment.

LUNCH

5. Introductions; approve meeting minutes and agenda

Dan explained that one reason for the joint meeting is that there has been a lot of back and forth between the MRAC and the TAC on MPA monitoring and this discussion is also highly related to developing indices for habitat health in the Bay. Burt has temporarily joined the MRAC to provide additional expertise.

Joe gave one correction for the MRAC minutes and the group approved them.

6. Discussion: SMBRC's draft South Coast MPA Baseline Monitoring Proposal
(Not discussed, the RFP has not been released yet.)

7. Discussion: Comments on the MPA Monitoring Enterprise' draft MPA Monitoring Plan

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(Attachment 3)

Dan briefly described the process the State is going through to develop a MPA Monitoring Plan, through the Monitoring Enterprise (ME). He added that the process has been frustrating as a scientist. They are taking a few different approaches including modeling (which the MLPA also used) and Best Professional Judgment (BPJ). The Monitoring Enterprise is an independent arm of the Ocean Science Trust housed with the Ocean Protection Council. *Sean Anderson added that Southern California is the first real role-out of their framework. The North Central Coast was a sneak preview, but they didn't have the time to fully develop it.* Rich added that they have a good perspective on what the goals of monitoring should be, but they are leaving a lot of the implementation for the proposers. Joe noted that the ME foresees limited funding and is trying to build a framework that can rely on citizen science, but he feels they have no overall strategy and should set better priorities. Rich added that at the ME workshop, they specifically wanted to focus only on the issues around how to measure ecosystem health rather than how to answer management questions, such as the effectiveness of the MPAs, although many of the scientists were interested in tailoring the discussion of indicators around the management question, which they felt had to be specified first.

Lia used that comment as a segue to the exercise she planned for the TAC, in which they will discuss indicators that would be needed to address specific management questions, and which will ultimately guide SMBRC's comments on the MPA Monitoring Plan, and possibly an SMBRC baseline monitoring proposal. She added going through this exercise will help SMBRC include in their baseline proposal, data streams that would not be captured if one was simply looking to monitor ecosystem health.

Dan asked what management question the group should address first. Lia suggested that the group keep using connectivity as an example, so perhaps we should start there. Lia brought a power point presentation up on the screen containing a flow chart that maps the connection between monitoring and management. The group began discussing and Lia filled in the flowchart.

Goal 6.3: Ensure ecological connectivity within regional components of statewide network

Data Needs

- Commercial and sport fishing industries
- Fish populations
- Recruitment monitoring

Decision Threshold

- Not as much larvae coming in and going out
- Fish populations not recovering as fast
- Spillover not happening as fast





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- Genetic linkages
- ROMS model (hypothesis)
- Otolith microchemistry (water chemistry needed as background)
- Genetic diversity showing up in different MPAs (planktotrophic, benthotrophic) and between MPAs
- Increasing genetic diversity overall

8. Staff Report (continued from agenda item 3)

Lia gave the MRAC staff report. She attended the OPC meeting where they approved funding for Sea Grant and the PSMFC’s Cooperative Fisheries Research Organization. She attended the West Coast Governor’s Agreement workshop to develop their Regional Ocean Partnership Development of a Coastal and Marine Spatial Plan proposal to NOAA. SMBRC submitted a proposal for this that consists of coordinating with the other NEPs, NERRs, and NMSs on the west coast to assist the spatial planning effort. She described the MPAs in the final MPA network approved by the FGC. Responding to a question about the politics behind the 3-2 vote, she outlined the last minute changes in the membership of the FGC and the tensions that resulted. *Sarah Sikich added that the FGC has never voted unanimously on MPAs.*

9. Communications (Members may discuss correspondence or other Committee responsibilities)

There were none.

10. Public Comment (This need not be related to any item on the agenda. Remarks are limited to three (3) minutes)

There were none.

11. Adjourn

Rich and Dan adjourned the meeting at 3:15pm

TAC/MRAC Members	Staff Members	Public Members
X Rich Ambrose (TAC Chair/MRAC)	Lia Protopapadakis	Sarah Sikich (HtB)
X Dan Pondella (MRAC Chair/TAC)	Guangyu Wang	Eric Miller (MBC)
X Steve Bay (TAC)	Tom Ford	
X Dave Caron (TAC)		
X Mas Dojiri (TAC)		
X Linda Fernandez (TAC)		
X Rainer Hoenicke (TAC)		
Jenny Jay (TAC)		
X Burt Jones (TAC/MRAC)		
X Karen Martin (TAC)		

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- X Jim Allen (MRAC)
- X Joe Gully (MRAC Alt)
- X Ana Pitchon (MRAC)

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