

## **APNEP Scientific and Technical Advisory Committee**

Auditorium, Pitt County Office Complex  
403 Government Circle, Greenville, North Carolina  
**Summer Meeting Notes, August 5, 2010**

**STAC Members Present:** Dorsey Worthy, Silvia Terziotti, Tim Spruill, Tom Crawford, Mark Brinson, Enrique Reyes, David Kimmel, David Mallinson, Kirk Havens, Joe Rudek, Don Stanley, Peter Kalla, Dick Hamilton, Brian Boutin, Laura Taylor, Joel Fodrie, Heidi Wadman, Mike Piehler.

**Agency Science & Technology Liaisons:** Rob Breeding (NC-DENR-EEP), Dianne Farrer (NC-DACS), David Jones (NC-DENR-DFR), Anne Deaton, Christine Jensen (NC-DENR-DMF)

**Guests & Invited Speakers:** Lindsay Dubbs (UNC-IMS), Carl Hershner (CWM-VIMS)

**Staff Present:** Bill Crowell, Dean Carpenter, Jimmy Johnson, Chad Smith, Todd Herbert, Scott Gentry.

**Call to Order: Tim Spruill:** Tim welcomed everyone at 10:10AM. Tim asked if anyone had any changes or corrections to the minutes from the STAC spring meeting. Minutes were approved by consensus with no changes. There were no members of the public present to offer comments.

### **APNEP Update: Dean Carpenter**

- Dean thanked everyone for attending today's meeting. He reminded STAC members of former APNEP staff member Lori Brinn's resignation in June and noted that APNEP was currently seeking to fill that vacancy and over 100 applications were received. The interview process was set to begin soon.
- Dean announced STAC members whose new terms have begun effective July 1 (Field, Fodrie, Hamilton, Kenworthy, Kimmel, Piehler, Steelman, Wadman), plus those whose terms ended June 30 without renewal (Diaz, Pyne, Riggs, Smith, Stolte).
- Dean said he did not receive any news items from STAC members after making the request for science & technology news items.
- APNEP is set to launch a new website soon and the STAC webpage will feature meeting presentations but with no password requirement this time around.
- The fall and winter STAC meetings are tentatively set for November 2, 2010 and January 27, 2011.
- Dean mentioned that STAC Co-Chairs Spruill and Laney submitted a letter in early May to NC-DENR Secretary Freeman regarding APNEP's proposed relocation to a new DENR division formed from the proposed merging of two DENR Divisions: Soil & Water, and Resource Planning & Conservation. The letter's creation was an action item from the STAC spring meeting. Effective July 1, APNEP and the other sections of the DENR Division of Resource Planning & Conservation were transferred to a new Office of Conservation, Planning, and Community Affairs by NC legislative mandate.
- Dean mentioned that the APNEP Ecosystem-Based Management (EBM) Transition Team (including STAC members Havens and Laney) has been meeting monthly since the start of the year and that the team consists of staff and select partners.
- The STAC Executive Board held their quarterly teleconference on July 6. Later in July, STAC co-chairs, Spruill and Laney, were elected for a second consecutive term (2010-2012) along with five additional STAC Executive Board members (Boutin, Dennis, Field, Havens, Piehler).
- Dean briefed members on the 2010-2012 STAC Action Plan and the upcoming APNEP

assessment. Tim is set to talk about the Action Plan later in the meeting agenda.

- The Policy Board met shortly after the STAC spring meeting. The next Policy Board meeting is set for September 17 in Manteo, NC. Dean mentioned that the CCMP goals were discussed as well as the EBM transition for APNEP. In response to Dean's request, Kirk Havens (STAC representative for the Policy Board) provided highlights of the meeting.
- Dean mentioned that the APNEP Citizens Advisory Committee (CAC) will be discussing the drafting of a request for proposals for the 2011 APNEP field demonstration projects. Currently, there is no theme set for the projects.
- Dean mentioned there were six STAC technical papers and that STAC should proactively solicit the APNEP Policy Board and Management Advisory Committee (MAC) to see if they have any suggested topics for future papers.

### **Presentation and Discussion of the 2010-2012 STAC Action Plan: Tim Spruill**

- Tim summarized the STAC's proposed action plan covering the next two years, which is a product of the STAC Executive Board's planning meeting on July 30. The goal for this presentation is to discuss the proposed elements of the action plan.
- Tim directed members towards the draft copy that was sent prior to the meeting.
- Tim began by covering the committee bylaws followed by activities and assistance (see below).
- STAC activities include: (1) Coordinate an Albemarle-Pamlico Sounds Ambient Monitoring Program (APSAMP) and other science; (2) track key indicators of A-P health; (3) develop a comprehensive A-P GIS database; (4) research and collate best practices around key issues and maintain the database for practitioners.
- The STAC will assist in: (1) Developing near- and long-term action plans, reviewing draft documents, and making recommendations to the Policy Board on a document's technical merit; (2) designing and evaluating an effective information management system; (3) developing requests for proposals; and (4) reviewing and evaluating proposals received and making recommendations on projects to be funded. Additional duties may be assigned at the direction of the Policy Board.
- Tim continued his presentation by addressing the mandated activities and proposed tasks for July 1, 2010 through June 30, 2012. For a complete listing, please see the draft STAC Action Plan that was sent to all members prior to the meeting.
- Dean welcomed any comments to the STAC Action Plan. The final version will be available on the STAC webpage.
- A question was raised about the APNEP Comprehensive Conservation Management Plan (CCMP) update. Dean mentioned that it will be covered later in the agenda but it should be produced during the first half of 2011.

### **APNEP Transition to Ecosystem-Based Management: Conceptual Models and CCMP Objectives:**

**Carl Hershner** *\*note: presentations can be found in their entirety on the STAC website.*

- Carl briefed members on the development of conceptual models by APNEP's EBM Transition Team and how the models are being used to guide development of objectives for APNEP's new CCMP, which is currently under development. The resulting objectives will determine priorities for APNEP monitoring and assessment strategies.
- Carl mentioned COMPASS, which is a collaborative effort to advance marine conservation science and communicate scientific knowledge to policymakers, the public and the media. He also mentioned that EBM practice is constantly evolving.
- The EBM consensus statement is that it is place-based and that it focuses on sustaining valued ecosystem services by protecting ecosystem structure and function. It also recognizes internal

and external linkages of the whole system.

- It is essential that we set unambiguous goals and have well-informed stakeholders. The biggest challenge would be delegation of authority and financial resources to sustain implementation as well as capacity within implementing institutions.
- The hypothesized essential elements of EBM begin with a holistic vision or plan (comprehensive description) followed by community/process (effective engagement and management), and ending with foundation (legal framework and management institutions).
- Carl provided a list for implementing EBM into the developing CCMP: (1) Articulate program goals, (2) develop system level model for goal attainment, (3) assess current management efforts by identifying gaps, (4) develop management strategy, (5) develop monitoring program, (6) assess performance, and (7) manage adaptively.
- Success in implementing EBM requires a theory of change and acknowledging what must be done to produce the necessary and desired outcomes.
- Carl presented a spreadsheet that breaks goals into sub-goals, which is then categorized into: (1) Ecosystem model, (2) management framework, and (3) adaptive management. Further examination includes influencing factor(s), conditions necessary for goal(s), and the relevant management program(s).
- Several points were made by members concerning current management efforts. Don mentioned whether the economy will prevail over what scientific committee may decide is a priority. Carl responded that the spreadsheet is intended to address the priorities and that they could be inaccurate the first time around but the goal is to reduce uncertainty on the priority at hand. Mark mentioned that this spreadsheet was similar to the CHPP; therefore this was completed seven years ago. He felt that there was no need to reinvent what has already been done and that we should put our efforts towards getting things done (or implementation). Anne addressed that she liked the “drill-down” approach to the spreadsheet but advised that it focus more on key points because each requires a lot of time, money, and staff. She mentioned that being involved in the CHPP planning and implementation process has given good insight to this process but she also said a lot of things are difficult to accomplish due to unavailable assistance.
- Dean added that this plan would target a five-year period and not two years, which was assumed by a few STAC members. Bill added that this plan is not being done in isolation but in collaboration with other plans and will help identify gaps.
- Carl added that this spreadsheet was not a “pick your favorites” democracy but more of a consensus.
- A STAC member mentioned that the end results of the spreadsheet would be a good planning tool for the CHPP update.
- Carl continued on with his presentation and began focus on a monitoring program. He mentioned that this was a challenging undertaking. He listed four points: (1) monitoring reflects management priorities, (2) monitoring designed to reduce uncertainty in system model, (3) indicators link condition and management efforts, and (4) monitoring data is appropriate to decision thresholds for adaptive management.
- There was a discussion concerning the definition of high quality waters and how it relates to the goals. Bill added that the goals are by definition very broad and at some point we have to find them satisfactory and move forward with them.
- The last slide of Carl’s presentation dealt with STAC activities: (1) review and add to list of factors (making goal attainment), (2) provide input on ranking, and (3) develop indicator suite for goal monitoring.
- Don asked if the monitoring program is strictly citizen-based. Dean mentioned that it would likely be a combination of professional and citizen monitors. Don also talked about the goals and what they were 15 years ago and how they have held up. Dean mentioned that the CCMP was being updated and that we were working off the current CCMP (1994).

- Bill added that as of 2008 about 95-97% of the old CCMP objectives were met; the missing percentages were a result to how it was written and couldn't be accomplished feasibly.

### **Preparation for the APNEP 2010 Regional Ecosystem Assessment: Mike Piehler**

- Mike facilitated a STAC discussion and recommendations on topics involving the upcoming APNEP regional ecosystem technical assessment. Mike mentioned today's goal was to review the proposed table of contents and to recommend a subset of indicators to see where the STAC stands.
- Mike issued a timeline: August 2010, prioritize indicators based on natural/social scientific criteria; September 2010, select indicators for inclusion in assessment based on pragmatic criteria and assigning responsibilities; December 2010, complete writing; January 2011, draft assessments to the STAC; February 2011, draft to other committees; March 2011, make draft available to the public.
- Don asked when selecting important indicators, what should be one's frame of mind? A healthy ecosystem overall or a healthy ecosystem for the people? He added that these can result in different things.
- Discussion continued between STAC members concerning indicator prioritization. Mike mentioned that we are not removing anything, just prioritizing them. The broad categories consisted of: (1) Water, (2) river and streams, (3) wetlands, (4) estuaries, (5) sounds, and (6) associated wetlands.
- The idea of a water quality index that involves the violation of the Clean Water Act was discussed. This would include dissolved oxygen, pathogens, algal blooms, chlorophyll, etc.
- At this point in the discussion, some members were a little confused at our current point in the discussion. It was suggested that we go through the list and make suggestions on what should be included in the assessment. Members also suggested that a text document be displayed so they could have a visual of the discussion.
- The focus areas are on two chapters: Land and Water.
- For the "Land" chapter, the following indicators were considered important for the assessment: (1) land use/cover, (1a) CAFOs, (1b) pine silviculture, (1c) forest loss and characterization, (1d) riparian buffers, (1e) imperviousness, (2) highly erodible soils, (3) population, (4) agricultural production, and (5) forestry production.
- For the "Water" chapter, the following indicators were considered important for the assessment: (1) impairment, (2) hydrologic alterations, (3) hydro-geomorphic and condition modification in wetlands, (4) estuarine fish kills, (5) oysters, (6) submerged aquatic vegetation (SAV), (7) fish populations, (8) marine mammals, (9) number of tourists to coastal regions, (10) fish spawning areas, (11) nutrient and TSS/turbidity loading, (12) index of biotic integrity (IBI), (13) riparian condition, (14) freshwater mussels, and (15) water supply.
- The following indicators were listed under broad categories: (1) Storm emergency and severity, (2) natural heritage index, (3) landscape connectivity index, (4) sea level rise, and (5) air quality.
- Mike wanted to recommend a scientist author to each indicator but there was not enough time at today's meeting to accomplish this.
- Mike said that he plans to organize the list and send it to Dean along with details on the selection process. From there, it will be open for further discussion. Mike reminded members of the proposed timeline he mentioned at the beginning of the discussion.

### **Action Items: Tim Spruill**

- Due to time constraints, this agenda item was skipped. Instead, members were reminded to continue discussion concerning the APNEP Regional Assessment if needed and to follow the

proposed timeline that Mike presented earlier.

\* The next STAC meetings are tentatively set for November 2, 2010 and January 27, 2011.

**The meeting adjourned at 3:05 PM.**