

**APNEP Scientific and Technical Advisory Committee**

Pitt County Office Complex, Greenville, North Carolina

Winter Meeting Notes, February 3, 2010

**STAC Members Present:** Kirk Havens, Tim Spruill, Joe Rudek, Robin Dennis, Jud Kenworthy, Don Field, Dick Hamilton, Bill Swartley, Joe Fridgen, Mike Piehler, Enrique Reyes, Stan Riggs, Peter Kalla, Mark Brinson, Reide Corbett.

**Agency Science & Technical Liaisons Present:** Bill Swartley (NC-DFR)

**Guests and Invited Speakers:** B.J. Copeland (NC-Marine Fisheries Commission), Dave Jazinski (CWM-VIMS)

**APNEP Staff Present:** Dean Carpenter, Todd Herbert, Jimmy Johnson, Chad Smith.

**Call to Order:** Tim Spruill, STAC Co-Chair, called the meeting to order at 10:15 AM and welcomed all the committee members, staff, and guests. Tim noted that today's meeting will be more "discussion-based" unlike previous meetings where more focus was on presentations. Tim also noted that we will continue the theme of Ecosystem-Based Management for today's meeting.

**APNEP Update: Dean Carpenter**

- Dean welcomed everyone as well. He indicated that the STAC's spring meeting will be held at the UNC Institute of Marine Science in Morehead City on May 5th.
- Dean introduced new STAC member, Joe Rudek. Joe Luczkovich, Rick Miller, and Rick Linthurst have resigned their position with the STAC.
- The APNEP Policy Board Meeting was held on December 16, 2009. The meetings will now be more frequent (quarterly) and be focused on assisting APNEP staff on transitioning to a program focused on Ecosystem-Based Management.

**Role of Assessment during the Albemarle-Pamlico Estuarine Study Period (1988-1994): B.J. Copeland, North Carolina Marine Fisheries Commission. \* No accompanying PowerPoint.**

- B.J. shared his past experiences and recommendations on the role of assessment during APNEP's pre-Comprehensive Conservation Management Plan (CCMP) period.
- The estuarine study began in the 1970s when Chesapeake Bay needed to be studied. This jump-started other estuary programs to be created.
- B.J. discussed the creation of the different APNEP advisory committees at the time.
- In 1989-90 a management plan was needed or EPA would not continue funding the estuarine study. This led to the creation of the Comprehensive Conservation Management Plan (CCMP), which was guided by information in the 1991 APNEP status and trends assessment (B.J. served as lead author).
- B.J. provided recommendations for the new CCMP. He mentioned that a lot of the main interests in the older CCMP may have changed since the late 1980s. He advised that we include a section that discusses what management practices have worked and those that did not.
- B.J. also recommended that one person be in charge of the final draft as opposed to ruling by committee.
- Dean inquired as to the time between the 1991 status and trends assessment and completion of the

- first draft of the CCMP. B.J. responded with “1.5 years.”
- A question was asked regarding who should drive the assessments. Legislature? Stakeholders? B.J. responded with “scientific-based.”
  - Another concern is whether or not there was overlap between the Coastal Habitat Protection Plan (CHPP) and the CCMP. It was mentioned that the CHPP was a planning document and that the CHPP has been relying on APNEP for providing indicators.
  - A question was asked whether or not the current CCMP was relevant. Dean mentioned that the current CCMP is less relevant because it is dated (published 1994). This explains why climate change and sea level rise were not addressed in the current CCMP. Times have changed. What was not as relevant then is relevant now.
  - It was also discussed if the North Carolina Legislative Commission on Climate Change be a part of CCMP planning.
  - B.J. recommended that the new CCMP be linked to local jurisdictions.
  - Jimmy Johnson mentioned that human dimensions needs to be covered better in the new CCMP. He also mentioned that water quality was defined well in the CHPP but there was not much information regarding human dimensions.
  - Reide Corbett mentioned that the final CCMP be filtered and presented to the public as a booklet, brochure, etc.; he mentioned that not many people will be interested in reading a 100+ page document.

**APNEP Assessment Planning to Support Ecosystem-Based Management: Dean Carpenter, APNEP.**

*\*note: presentations can be found in their entirety on the STAC website in the “members only” section. “Rough outlines” are provided in the notes.*

- Dean presented an outline of APNEP’s current plans for a 2010 assessment report, including comparisons with APNEP’s previous assessment report from 1991.
- Good decisions depend on the ability to create environmental intelligence that can be accessed by decision makers.
- Dean presented a model that summarizes adaptive management. It begins with assessing the problem, followed by design and implementation. From there, monitoring is important for future evaluation where eventually adjustments can be made.
- Dean discussed the APNEP targets for 2008-09. The new CCMP (or CCMP 2.0), Indicator Specification 1.1, Integrated Monitoring Strategy, Ecosystem Assessment 1.0, and the Ecosystem-Based Management Plan 1.0.
- The Integrated Monitoring Strategy is composed of STAC members and state agencies and the degrees of connectedness among monitoring networks are (from least to greatest): 1) Independence, 2) Cooperation, 3) Collaboration, 4) Integration.
- The steering committee for the CCMP 2.0 includes individuals from the APNEP Management Advisory Committee (MAC), Citizens Advisory Committee (CAC), Policy Board, and STAC.
- Dean mentioned the kickoff meeting and the objectives were by theme. First a brainstorm session followed by a classification from APNEP staff. The NEPs are requesting that the CCMP 2.0 be completed in December 2010.
- Dean talked about the Ecosystem-Based Management Plan 1.0 and that it stems from the interests of APNEP staff and NEP Headquarters. It has been a recurring theme at the recent STAC meetings and has been proposed to the APNEP Policy Board.
- Dean discussed the proposed APNEP assessment. The contributors would be APNEP, federal, state, and local partners. The content would be technical information within a decision support system to help answer seven policy-based questions involving ecosystem services. They are: magnitude, extent, trend, cause, source, risk, and solutions.
- Target periods: 2010 to display measures of condition; 2011 to provide measures of diagnosis;

2012 to commence forecasts.

- Dean referenced a book that APNEP purchased for STAC Executive Board members and regrets that APNEP couldn't afford copies for every STAC member. The book is entitled, *"The State of the Nation's Ecosystem 2008"* from the H. John Heinz III Center for Science, Economics, and the Environment. Dean was interested in the condition assessment approach that the book offers. The text includes many indicator reports, each addressing the same policy questions: 1) Why is the indicator important? 2) What does this indicator report? 3) What does the data show? 4) Understanding the data. 5) Why can't the entire indicator be reported at the time?

**Potential Role of Index Tools in the 2010 Assessment: David Jazinski, Virginia Institute of Marine Science.** *\*note: presentations can be found in their entirety on the STAC website in the "members only" section. "Rough outlines" are provided in the notes.*

- David presented preliminary results of an APNEP-supported watershed assessment that applies index tools to convey ecological status and trends in a stakeholder-friendly manner.
- Dave mentioned his work covered water quality and that it included the Pasquotank and Chowan Basins.
- His approach began with data collection, followed by data transformation, and then assessment.
- Collecting the data sources was time consuming. He provided a list of sources: National Atmospheric Deposition Program, North Carolina Division of Water Quality, Climate Office, U.S. Geological Survey, Marine Fisheries, Shellfish Sanitation, and a few others.
- The first step was to plot the data sources on a map showing the designated basins.
- Data were transformed because of different data formats for each source. Data from all sources were put into a consistent, horizontal format; station coordinates were obtained and the access database was created.
- Dave provided an overview on data assessment and gave a few examples from some of the data sources. He mentioned that NC Division of Marine Fisheries had 166 stations of information but only seven of them had suitable water quality data. USGS had five stations that charted daily flow back to the 1930s.
- Dave discussed the Water Quality Index, which is based on and used by the NEPs.
- Dave mentioned that the overall grade (basin report card) is subjective. There were some concerns by STAC members regarding the report card grade. Would individuals be satisfied with a "C" grade? Would they see themselves as average and not find the motivation to improve?
- A STAC member recommended that trend analysis be involved to see if there have been any significant changes over the years.
- Dave presented a list of questions of "issues to resolve." They are: 1) Are we on the right track? 2) Are the thresholds correct? 3) Different variables/thresholds for fresh/non-tidal? 4) Other variables in addition to or instead of? 5) Assess rivers by segment? 6) Gap analysis? 7) Report on management efforts? 8) Inclusion of additional ecosystem variables?

**Committee Discussion: Human and Financial Resources for 2010 Assessment: Leadoff Speaker, Tim Spruill.**

- The STAC was reminded that the CCMP is a planning document and that NEP Headquarters wants a complete draft by the end of the year.
- The Ecosystem-Based Management Transition Plan. It was advised that the time interval of the APNEP assessment begin during the APES era and look at the end of that period, then end with a data catalog detailing what we now know about the Albemarle-Pamlico Estuarine System.
- There was concern about the challenges to get folks involved with the Ecosystem-Based Management Transition Plan who are busy or become too involved with projects that do not fit

their job descriptions. B.J. Copeland mentioned that most folks that contributed to the 1991 assessment received honorariums.

- Dean went over the Regional Ecosystem Model and the STAC members that may fit in each area (Assessment Teams). 1) Land Cover , 2) Material Balances, 3) Water Resources, 4) Atmospheric Resources, 5) Living Aquatic Resources, 6) Wetland Resources, 7) Terrestrial Resources, 8) Species Introduction and Removal.
- B.J. suggested that the assessment be less complex. It should state what the problem is and how it can be resolved.
- A majority of STAC members agreed that we should develop an outline with titles and to have a clear format with given pieces so they can be filled out and include indicators where needed. It was mentioned that APNEP follow the “Heinz” template from the book Dean mentioned earlier.
- Dean suggested that the STAC Executive Board get together to determine the table the contents and open it up for comment. Bigger picture first, and then fill in the gaps.
- It was suggested that we focus on four geographic slices of the Albemarle-Pamlico region.
- A majority of STAC members felt it would be good to draft an outline while everyone was present. Mike Piehler led the brainstorming.
- Below is a rough outline of what was drafted by STAC members:

#### System Overview

- Rationale for subdivisions
- Indicator Selection Rationale
- Human Dimensions

#### 1) Watershed/Riverine

- Extent and coverage
- Hydrology
- Biogeochemistry
- Habitat
- Ecosystem Services

#### 2) Estuarine

- Extent and coverage
- Hydrology
- Biogeochemistry
- Habitat
- Ecosystem Services

#### 3) Sounds

- Extent and coverage
- Hydrology
- Biogeochemistry
- Habitat
- Ecosystem Services

#### 4) Atmospheric

- Extent and coverage
- Hydrology
- Biogeochemistry
- Habitat

-Ecosystem Services

- 5) Vulnerability to climate change
  - Rate of Sea Level Rise
  - Storminess
  - T
  - FW discharge

**Meeting adjourned at 2:45 PM.**