

APNEP Scientific and Technical Advisory Committee
Winter Meeting
February 11, 2009
Pitt County Office Complex, Greenville, North Carolina

STAC Members Present: Tim Spruill, Rafe Sagarin, Joe Fridgen, Jeff Hanson, Helena Mitasova, Robert Reed, Rick Linthurst, William Porter, Peter Kalla, Jerry McMahon, Don Field, Craig Landry, Reide Corbett, Steve Smutko, Wilson Laney, Robin Dennis, Michael Rikard, Ken Stolte

Staff Present: Dean Carpenter, Bill Crowell, Jimmy Johnson, Chad Smith

Liaisons: Bill Swartley (NC Division of Forested Resources), Gordon Cashin (NC Department of Transportation), Jean Lynch (NC Division of Parks and Recreation)

Observers: Kirsten Tighe (US Geological Survey)

Call to Order: Wilson Laney: Wilson convened the meeting at 10:20 AM. He asked if anyone had any changes or corrections to the minutes from the STAC fall meeting. Approval was moved and seconded.

APNEP Update: Dean Carpenter and Bill Crowell

- Dean Carpenter reviewed the changes to the agenda. The two scheduled morning presentations (Betsy Smith and Kirk Havens) will be re-scheduled for a later date. In their place, Jimmy Johnson will give two presentations, one on the NC Coastal Habitat Protection Plan (CHPP) and the other on the One NC Naturally Conservation Planning Tool. Rick Linthurst will give us a presentation on the initial results of EPA's ecosystem services modeling.
- Dean noted that we will be holding the spring and summer meetings in the Pitt County Office Complex. Past discussions led to the decision of holding the meeting in a central location.
- Dean noted that Bill Kirby-Smith had resigned from the STAC. We have two new members, Bob Diaz from VIMS and Ken Stolte from the US Forest Service. Ken is the team lead for the APNEP Terrestrial Resources

Monitoring & Assessment Team.

- Dean welcomed Rafe Sagarin and Helena Mitsova to their first STAC meeting. Also, Dean recognized the state agency liaisons, Bill Swartley, Gordon Cashin, and Jean Lynch.
- Dean noted that given the state budget situation, travel by STAC members from public universities and by liaisons from state agencies is becoming difficult, so APNEP will help out wherever possible with carpools. He also noted that Don Field and Jud Kenworthy (NOAA) is offering transportation from the Beaufort-Morehead City-New Bern area.
- The next two STAC meeting dates are scheduled for April 29 and July 22, both at the Pitt County Office Complex.
- Dean noted that we have five issue papers on the web site, and a sixth in preparation. Dean hopes to have that one out by the end of the month.
- Dean noted that the NC Legislature has just appointed a committee of scientists to look at the potential environmental impact of offshore energy development on NC. Doug Rader will be co-chairing that committee. Joe Fridgen noted that there is a public hearing on the energy issue today, in Washington, DC.
- Dean noted that a couple of APNEP monitoring & assessment teams will be starting soon. Robin Dennis is chairing the Air Resources team, and Ken Stolte will chair the Terrestrial Resources team.
- Dean noted that APNEP had applied last August for a grant through the NC Coastal Recreational Fishing License (CRFL) program, for developing a SAV monitoring in the field. The grant was funded. It will be a two-year effort, and Judd Kenworthy will be the project team's technical leader.
- Dean noted that he was contacted by EPA about using APNEP for ecosystem services pilot work. Dean will serve on a committee to consider how this can be done.
- Dean noted that along with a new Governor, North Carolina has a new Secretary of Natural Resources, Dee Freeman. He comes from a planning background, his previous position being in the Triangle J Council of Governments.
- Bill Crowell noted that there are lots of changes going on in the NC Department of Environment and Natural Resources in Raleigh, and in DC as well. The EPA National Estuary Program (NEP) managers have changed, both in Region 4 and in DC. The new EPA Administrator has been serving on a Policy Board for a New Jersey NEP. Bill will meet with new EPA leadership in DC later this month.

- Bill also mentioned that APNEP will undergo a program review this year.
- Bill mentioned that the application for the NEP Climate-Ready Estuary pilot program was submitted. APNEP will contract with Nicholas Institute at Duke University to administer those funds.
- Bill also briefed the committee about the CCMP. He mentioned that it was still in the process of being updated. It is currently being handled by APNEP staff member, Lucy Henry, who has been away on maternity leave.

Agenda Addendum: Coastal Habitat Protection Plan (CHPP): Jimmy Johnson*

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

- Jimmy Johnson noted there are three program areas and three staff representatives. Jimmy gave us a presentation on the NC CHPP. He noted that the hard copy is over 600 pages long.
- His presentation was designed for the general public, which reviewed coastal fish habitats that are important to NC.
- Jimmy mentioned that the Fishery Management Plans (FMPs) and CHPP are mandated for review at five-year intervals and that the CHPP is currently being re-written and will have to go through the three commissions (Coastal Resources, Environmental Management, Marine Fisheries).
- Jimmy commented that sea level rise and new tasks would be added to the updated CHPP; completed work will be removed.
- Dean Carpenter noted that the document contains a lot of literature review and that the updated CHPP would offer an update on science; Jimmy also mentioned that the CHPP is considered a good "source" document.
- Jimmy mentioned that some STAC members may be asked to review some of the new/revised chapters.

**Agenda Addendum: The One NC Naturally Conservation Planning Tool:
Jimmy Johnson***

- Jimmy Johnson noted that this planning tool is important as NC continues to develop. The program is non-regulatory and it attempts to put a plan on the table.
- Jimmy reviewed the six coordinated natural resource assessments: open space and conservation lands; biodiversity/wildlife habitat; marine/estuarine ecosystems; water services; farmland lands; and forestry lands. Jimmy noted that it is likely to be another six to nine months before this is done.

- Jimmy also noted that there is much work to be done, with VA and USGS. Jimmy reviewed the uses of the Conservation Planning tool.
- Additional information can be found at www.onencnaturally.org.

Agenda Addendum: HUC-12 Watersheds: Rick Linthurst

- The program works on ecosystem services.
- Rick Linthurst noted that he recently had a conversation about how to present ecosystem services. He noted that human health dimensions are more easily translated into economic consequences. He noted that it is harder to do for ecological information, and that causes difficulty with Congress members. He isn't sure how to do it, but ecosystem services may be a way.
- Rick noted that if we have a defined area, we need to determine how to go about looking at all the services provided, and how they change as a result of management decisions.
- EPA's Ecosystems Service Research Program are really trying to take a systems approach, because something done for one service may impair another. Rick noted that one thing that will be an issue will be modeling.
- Rick provided an example of a model on fish production and how it is affected by changes in nitrogen, mercury, pesticides, etc. He noted that he didn't like the application of these types of models to these types of questions.
- Rick noted that he would like to see some discussion with fishery managers about the model and whether it is correctly parameterized, and how it can be used. He would like to know if they have accounted for all the things they need to include.

Open Topic Discussion: Tim Spruill

- Robin Dennis commented on the EPA Coastal Carolinas meeting he attended on January 14 in Charleston, SC. He noticed that in moving from NC to SC a gradient in the importance of such as topics on fisheries and sea level rise.
- Don Field noted that the statewide imagery purchase of aerial imagery to support submerged aquatic vegetation (SAV) mapping has concluded through the help of Bill Crowell, Dean Carpenter, and NC-DMF. One of the best digital cameras available on the open market was used for the SAV aerial photography sessions. The resulting dataset is massive and it is being held

by Brian Conrad (NC-DMF). If there is interest in obtaining this information, please keep in mind that the file size is 1 terabyte.

US Fish and Wildlife Service Activities in the A-P Region: Wilson Laney

- Wilson Laney covered five broad organizational topics: ecological services, fisheries, law enforcements, National Wildlife Refuges (NWR), and migratory birds.
- FWS Ecological services dealt with strategic planning for red cockaded woodpecker, spiny mussels, anadromous fishes, Cape Fear shiner, etc. Wilson noted that Mike Wicker is the NC Coordinator for the Ecological Services Coastal Program. Further discussion was on education outreach, endangered species listing and recovery, environmental contaminants, and partners for FWS.
- Wilson mentioned himself as the coordinator for the South Atlantic Fisheries Coordination Office.
- Wilson also referenced law enforcement activities that target federal trust species (endangered/threatened species).
- Wilson mentioned John Stanton as the coordinator for the Migratory Bird Field Office in Columbia, NC. Responsibilities include conducting shorebird and waterfowl monitoring on National Wildlife Refuges and state management areas; annual winterfowl surveys; and implementation of the North America Waterfowl Management Plan.
- Wilson identified Mike Bryant as the complex manager for National Wildlife Refuges. Each refuge has a Comprehensive Conservation Plan and that each refuge was established for a specific purpose.
- NWR research often comes from academia; special use permits are required to conduct research.
- Wilson continued his presentation talking about various NWRs that are in the area. He provided a brief detail for each NWR.

Riparian Buffers and Hedonic Prices: A Quasi-Experimental Analysis of Residential Property Values in the Neuse River Basin: Craig Landry

- Craig Landry defined riparian buffers and addressed the Neuse River Riparian Area Rule. The required buffer width is 50 feet. Such buffers impose a restriction on the use of private property limiting harvest and

development. The buffers may also provide aesthetic and recreational values to property owners.

- This study offers quasi-experimental evidence of the effect of the Neuse River Riparian Buffer Rule on the value of property adjacent to the waterway. The project looked at pre- and post-riparian rule property values. Other non-riparian properties are used as a control group. Their approach was to use Hedonic price analysis. There is evidence that water does influence property values and that proximity to water is important. View and water quality appear as important. Most literature on riparian buffers has focused on agricultural land.
- Craig provided statistics for the Neuse River Basin. It constitutes 20% of the land in the A-P Basin. Historic fish kills precipitated the Riparian Buffer Area Rule. The rule was introduced as temporary in July 1997 and after minor changes became permanent in August 2000. The rule applies to all water bodies in the Neuse Basin.
- The study looked at 3,106 straightforward single-family residential property transactions. About half the properties were sold after the rule went into effect. Riparian property commands a substantial premium, but that was true both before and after the riparian rule.
- There were questions on whether or not the rule was being followed, which could make the study biased. Craig mentioned that DENR were enforcing actions that these rules be followed.

The meeting concluded at 2:25 PM.