

APNEP Scientific and Technical Advisory Committee

Summer Meeting Notes

July 25, 2012

Headquarters Conference Room, Great Dismal Swamp National Wildlife Refuge
3100 Desert Road, Suffolk, Virginia

STAC Members Present: Robin Dennis (USEPA), David Kimmel (ECU), Tim Spruill (USGS retired), Michelle Moorman (USGS), Reide Corbett (ECU), Brian Boutin (TNC), Peter Kalla (EPA), Tom Crawford (ECU), Burrell Montz (ECU), Wilson Laney (USFWS), Maurice Crawford (ECSU), Erin Fleckenstein (NCCF), Kirk Havens (CWM-VIMS), John Hefner (Atkins)

State Agency Liaisons Present: Noah Hill (VA-DCR), Jack McCambridge (VA-DOT), Russ Baxter (VA-DEQ), Tom Gerow (NC-FS).

Guests/Public Present: Katherine Weaver (USGS), Rich Whittacre (ODU), Rhonda Evans (USEPA), Veronica Fasselt (USEPA)

APNEP Staff Present: Dean Carpenter, Bill Crowell, Todd Herbert, Jimmy Johnson, Leigh Habegger, Erin Thompson

Call to Order

Brian Boutin, STAC Co-Chair, convened the meeting at 10:15.

Minutes from the spring meeting were approved.

Fred Wurster, Refuge Hydrologist, welcomed us to the Refuge and provided an orientation presentation. The Refuge is a peatland, formerly dominated by Atlantic white cedar and other wetland species. Over 350 miles of ditches were dug into the swamp over the last century or so, and changed the hydrologic regime of the swamp, making it more fire-prone. Much work on the Refuge has been directed at restoring the natural regime. Wilson suggested that Fred might want to mention the bear population and bear management issues. The bear population is very healthy at present, with a fairly high density of bears. In response to Jimmy's question about the size of the Refuge, Fred noted that the total of Great Dismal Swamp NWR, and Dismal Swamp State Park, the latter located in North Carolina, is about 130,000 acres.

Brian asked our two newest members to introduce themselves. Burrell Montz and Michelle Moorman both did so. Brian then asked the remaining members to introduce themselves. Everyone did so.

Brian noted that there is a need to delay somewhat, because two vehicles with meeting participants are currently stuck in ditches nearby. Wilson noted that Dean had called and indicated they are on their way and should arrive soon.

Brian suggested that the Committee review what the STAC Executive Board had accomplished during their June 26 meeting. The members of the Executive Board are Brian Boutin, Reide Corbett, Tom Crawford, Andy Keeler, Dave Kimmel, Wilson Laney, and Mike Piehler. Many Board issues will be discussed later in the meeting, in several sessions. One major recommendation will be to have only two meetings annually, but this means that STAC members must work on APNEP deliverables outside of meetings. The intent is to have the STAC be more proactive and less acting in an advisory role. The committee will address four different aspects of climate change: coastal development, sea-level rise, water quality & quantity, and ecological responses. They are the issues the Executive Board felt will be most pertinent during the next two years. The Executive Board wants feedback from the entire STAC, and then there will be breakout sessions in the afternoon to discuss the respective issues further.

Reide noted that the entire draft action plan is up for discussion. There is a need to have some discussion regarding what actions may be important, regarding these themes and possibly others. Given the controversy over sea-level rise in North Carolina, it would be good to at least produce a white paper, even a one-pager, to address that issue. Executive Board members are seeking guidance from the greater STAC.

Brian noted that they want to solicit more engagement and input from STAC members, beyond the actual meetings. The Executive Board will be pulling from committee expertise to put some value in documents, or other projects. It could be as simple as establishing research priorities.

Tim clarified that four themes are proposed under the climate change theme. Brian confirmed that was the case and noted that there could be changes in agricultural production, or changes in runoff into the estuary, and the four themes arose when considering these changes collectively.

Tim asked how these position papers interface with the other STAC responsibilities. Specifically, how does that fit with the monitoring plan for example.

Brian indicated that the monitoring/indicator piece is certainly part of the puzzle. The actual monitoring must be done by the partners. The STAC will continue to serve in an advisory capacity. Wilson noted that the six indicator/monitoring teams, will continue their roles and complete their responsibilities. Once the indicator/monitoring plan is completed, the STAC will have an opportunity to review it and provide input.

Tim indicated that was good.

Brian noted that the indicator/monitoring work would continue, it just wouldn't be a focus.

Kirk noted if the committee shifts to semi-annual meetings, the Executive Committee is likely going to have to meet more often, perhaps via telephone. Brian concurred that was likely.

Reide noted that he thought members were actually discussing three meetings a year. Wilson confirmed that the third meeting would be the fall all-hands meeting, aka "State of the Sounds."

10:37 AM: Dean, Rhonda, John Hefner and Robin arrived.

APNEP Briefing, Dean Carpenter: Dean thanked everyone for coming to attend, as well as Fred for the presentation on the Refuge. He also thanked van pool driver Tom Gerow, whose North Carolina Forest Service vehicle is currently stuck in a ditch, for driving participants to the meeting site. With changes in EPA guidance there is now more flexibility in supporting the STAC. APNEP will now be able to reimburse members on travel for whom organizational support is dicey. He noted, however, that given a limited committee budget the more members who are reimbursed, the less resources for other committee support. APNEP plans to continue to offer the vanpool option from Raleigh as well, despite this morning's difficulties. Kirk noted that the budget is being impacted today by towing needs.

Dean noted that APNEP project coordinator, Scott Gentry, left APNEP on June 1 and is now working for AMEC in Research Triangle Park. His family will be having their first child in the fall.

Dean welcomed the STAC's two new members, Burrell Montz and Michelle Moorman.

Dean noted that a date or location has not been set for the fall meeting, pending deliberations at today's meeting.

With regard to activities, APNEP staff is now permanently located in the new Nature Research Center in Raleigh (location of the STAC spring meeting). In early May, APNEP staff surveyed the STAC: eight members provided feedback, and the feedback was reviewed at the Executive Board meeting (details are in the notes from this meeting). The Policy Board met in DENR's Green Square in mid-May, and the 2012-2013 APNEP work plan was approved for implementation on October 1. Several STAC members attended a SLR Workshop in Kill Devil Hills. Reide briefed the STAC on that meeting, noting that the NOAA-funded project for which he is one of the principal investigators, involved multiple stakeholders. The project will look at sea-level rise along the entire east coast, and the purpose of the meeting was to poll the stakeholders about what sort of data and products they want to see. This is something NOAA wanted them to do. There were actually three such meetings along the east coast, with the other two being held in Florida and Massachusetts (Woods Hole). Rhonda asked who the audience represented in the North Carolina meeting. Reide indicated that there were 35 people, some associated with the project, others academics, and many from other venues, like county managers and agency representatives. Reide noted that many local managers were invited, but due to the distance and the nature of the issue, some were unable to attend. Wilson noted that there were multiple STAC members there, as well as multiple agency folks. Robin asked if anyone from NC 20 was there. Yes, Reide indicated, Willa Kelly was there, and asked some good questions. He noted that NC20 will be meeting next week, and Reide plans to attend to listen.

Pete Calla asked if Reide was aware of the meeting EPA held two years ago, to discuss the same topic. Reide was unaware, and therefore Rhonda or Pete will send him materials from that meeting.

Dean noted that APNEP has two summer interns, and both of them are part of the crew currently stuck in the ditch. Once they arrive, he will ask them to discuss their experience.

Dean noted that he had been participating in the Department of Interior's Eastern North Carolina, Southeastern Virginia (ENC-SEVA) ecological planning workshops, as a strategic planning exercise. There are six habitat targets (Wetlands, Riverine, Estuarine, Uplands, Barrier Islands, Marine), and each team is applying the Open Standards protocol as a planning tool. Dean has participated in two workshops thus far and plans to participate in all six workshops. APNEP is hoping to work in parallel with them. Dean participated in the Wetlands exercise, Dean and Wilson participated in the Riverine one, and next week Dean plans to participate in the estuarine one. Wilson and Brian plan to participate in the second session of the Estuarine one, because both have conflicts next week, with Brian in Charleston, and Wilson in Philadelphia.

Brian asked the new arrivals to introduce themselves. They all did so.

Potential Application of EPA Water Quality Performance Measure, Veronica Fasselt: Veronica noted that she was one of eight watershed coordinators for EPA's Southeast Region. She is the North Carolina Coordinator and will give a presentation on how the Performance Measure, SP-12, can be applied to document watershed-scale restoration, in the National Estuary Program. Veronica addressed the benefits of using this approach: documents environmental outcome; justified watershed approach, requires minimal reporting, uses an existing measure, can be applied flexibility and is understandable.

This performance measure is part of the EPA Strategic Plan, Goal 2: clean and safe water. She explained several of the measures, SP-10, full attainment of standards for all impairments; SP-11, partial attainment of standards for impairments; and SP-12, watershed-scale water quality improvement. The latter can be claimed only once.

Robin asked if standards have to be in place to claim credit. Veronica indicated that was the case for SP-10, but not for SP-12.

The standards to which Veronica she will refer are water quality standards, impaired waters are those on the 303(d) list, the baseline for improvements is the 2002 listing cycle, and for this program, the watershed area is HUC-12, or a coastal equivalent.

The elements of a watershed approach must have: hydrologically defined area, involve key stakeholders, interactive planning or adaptive management to address priority water resources goals; integrated restoration tools and programs (voluntary or regulatory), environmental outcome objectives, monitor and assessment to identify improvements.

The options for claiming credit: 1) remove one or more of the causes of impairment for at least 40 percent of the impaired water bodies; and 2) demonstrate significant watershed-wide improvement. She noted Option 1 is pretty straightforward, Option 2 less so.

Reide asked, to what is the advantage for an agency in doing something like this. Veronica noted that agencies are always competing for resources, and so for the purposes of the NEP, where the focus has been ecological and resource-oriented, this program will enable documentation of water quality

improvements. Rhonda noted that water quality improvements have to be documented to Congress, so she felt that this will help the NEP overall. EPA future funding will likely be directed to the NEPs which can document that they have made improvements.

Rhonda noted that as resources become more limiting, programs such as SP-12 will become more important. Demonstrations of local governments operating together will be beneficial. Maurice asked if their performance measures are linked to NEP performance. Veronica indicated that they are not directly linked, but certainly are considered.

Veronica continued with explanation of the program. Options 2a and 2b were discussed and explained. [See handout.] Veronica noted that for watersheds where credit is sought the data must show improving and not deteriorating trends. Brian asked about a case where the overall trend line is upward. Veronica noted that you need to make the case that it is improving.

Tim asked about the time horizon for improvement. Veronica noted that the baseline is 2002, but you can go earlier if desired. Tim asked if you could use a five-, ten-, or two-year data set. Veronica indicated that if you have only two years, it would be harder to make the case.

Dean noted that there have been discussions in the past that NEPs which are just holding the line may be challenged on their success, or lack thereof. Veronica noted that point is raised often by the states to EPA.

Veronica reviewed the reporting process. Guidance is on the web. Upon review, EPA will either accept or comment on the application. Once accepted, it will be posted electronically on the web site, and on occasion will be featured in EPA publications. All monitoring data will go into STORET.

Michelle asked who is responsible for reporting the information. The State of North Carolina is responsible for reporting because EPA provides the funding. It isn't specifically limited to NC Division of Water Quality. APNEP could also report independently and get additional credit. However, the NCDWQ is the agency which actually puts the application together and submits them annually.

Veronica reviewed the template reporting format, which she noted is discussed in detail in the handouts she provided, and also on the EPA web site.

11:15 AM: Veronica indicated that she was prepared to show us more detail regarding how APNEP could apply this within their region. Rhonda and Veronica displayed a map which had all of the impaired segments in the APNEP geography highlighted in red. The ones so designated are the ones which were listed in 2002. Veronica suggested that APNEP might want to see what sort of monitoring is ongoing, with a view toward determining which segments have shown improvement. The map was prepared from a national data set. Rhonda indicated that she could provide the data layers to Michelle Moorman.

Rhonda indicated that the mapping in Virginia is more detailed, so there is a lot more red on that part of the map. Rhonda noted if anyone present works with impaired waters, it would be good to let them know so that any monitoring can be captured. The NEP is trying to put meat on the bones of what can

be achieved, so if APNEP is selecting sites for focus it would be good to focus efforts and funding in areas with potential for improvement. Rhonda also handles wetland grants for North Carolina, and those grant applicants who are not working with other partners to achieve water quality improvements will not be as competitive. What Rhonda would like to see is for additional funding be provided to meet these criteria. She could help APNEP be more competitive within EPA's own grant programs. Some of the NEPs which have been successful at this in the past have received multiple grants. These include Tampa Bay and Charlotte Harbor. It is not necessarily the NEP applying for the grants, but rather local governments or regional planning authorities. She stated that APNEP is in the formative stages of looking for these opportunities.

Veronica noted that when the federal Clean Water Act was first written its authors anticipated that all the nation's waters would be clean by now, but that hasn't happened due to changes in growth pressure and so forth.

Kirk asked about the two red areas, both within conservation areas. Rhonda thought it might be an artifact of the GIS process; but it was noted on the map that Virginia has classified them both as impaired lakes (the southern one is Lake Drummond).

Pete asked Veronica to explain the classification process. She did so and noted that Virginia has some disconnects from North Carolina waters because each state approaches classification differently. Rhonda indicated that many North Carolina impairments are based on biological integrity, whereas Virginia bases most of theirs on physical or chemical factors. All North Carolina waters are impaired by mercury so they aren't displayed, otherwise all segments would be colored red on the map. There are some in North Carolina impairments which are based on sediments and nutrients.

Michelle asked if there are groundwater data available for use in the SP-12. Veronica noted that in the applications received thus far they have not received groundwater data, only surface water data.

Rhonda noted that groundwater issues are hard for EPA to address, although clearly they are connected. You may have well data trends which show improvement. Robin noted that they could show declines due to the lag effect.

Rhonda explained the rest of the color-coding on the map. Veronica noted that the orange-yellow colors indicate streams with TMDLs, or where TMDLs are not needed.

Veronica noted there is a lot of focus on watershed restoration in North Carolina now. Some of the focus has shifted from TMDLs to watershed restoration.

Reide requested confirmation that North Carolina was already participating in the SP-12 Program. Yes, they are.

Reide asked Dean to share APNEP's potential role. Dean noted that the premise for much of this is monitoring. He sees the STAC weighing in on the technical aspects of the monitoring, and bringing this

in place. This is not solely a science discussion, and the Policy Board is likely to approach the STAC at some point and seek their input. Dean asked about Virginia's participation in the process.

Rhonda noted that Virginia is located in another EPA Region. Dean noted that we know that NCDWQ is already participating in the program and suggested that there would be advantages to a dual application.

Kirk asked Veronica if she knew the EPA coordinator for Virginia. She did not.

The question was asked if the sounds are impaired. Rhonda noted that the mapped impairments are associated with the shoreline. Erin explained that there are two points listed on the shoreline of Pamlico Sound which are impaired, but there is the color green in between them.

It was noted that water quality goals are needed for the watershed, if APNEP wants to measure improvement. The question was asked as to what might the sound's water quality goals be. Dean noted that we have to set down some strategies, and then document improvements. We will be deriving metrics. Currently we don't know whether or not APNEP's process would fulfill the SP-12 requirements.

Rhonda stated that reporting and being involved in this process will support APNEP's larger goals and measures. She sees the process as complementary, because APNEP is a watershed group and a large one at that.

Michelle noted that because some of APNEP waters may be listed as acidic (low pH), a natural condition in some North Carolina coastal waters, what happens if you can't attain the standards? Veronica stated that would be something reflected in the 303(d) listing process, but not something captured for SP-12.

Tim noted that there are some cases where natural conditions are less than the standards, so how is that addressed? Rhonda noted that such situations have been addressed often in Florida. She wasn't sure how EPA staff had addressed that concern, and noted that the Sarasota Bay NEP has had to address that issue.

Pete noted that after study some waters do get delisted. In some cases biota criteria were used and waters were delisted, despite low dissolved oxygen. Rhonda noted that the conditions can vary from state-to-state.

Tim noted that it seems there are lots of apple and orange issues from state-to-state.

Bill Crowell and the APNEP interns arrived. Bill noted that there are some nice people in this county, and he has never seen such big tow trucks.

Dean asked the interns to introduce themselves. Leigh Habegger has been assisting with drafting the APNEP blue crab assessment, and writing up some SAV materials for legislators. She is also working with Jim Hawhee on a grant application.

Erin Thompson is an undergrad at NCSU in Resource Policy and is working on educational materials, as well as the APNEP web site, so people can see what APNEP is doing in their area.

11:40 AM: Brian noted that the remainder of the meeting will involve reaching some consensus on the STAC Action Plan. We had addressed some of this earlier before members of the ditch crew arrived. Brian noted that the Executive Board met in June and developed some priorities for the term of the new co-chairs. There are some mandated activities and assistance required for the Policy Board. Because only 15 minutes until lunch break, he reviewed it verbally. Pete asked if there were any extra hard copies. There are none, but Dean indicated he has a digital copy and will project it after lunch.

Brian reviewed the proposed activities and noted that the Executive Board had a much discussion about using member expertise to guide the APNEP effort. The Board recommends focusing the next meetings around themes, including afternoon workshops where the STAC will decide on its course for the meeting theme: for example, whether to prepare white papers and whether there are activities on which the committee should focus. All topics discussed fell under the climate change umbrella, and how to adapt to potential impacts. Under that umbrella, the Board identified four major areas/topics. Obviously that is not a complete list, but those were the four which the Board felt were most pressing. The Board discussed the meeting schedule and decided that meeting frequency should be reduced to semiannual, to enable STAC to tackle products outside the meeting framework. If STAC members for example agreed that writing a white paper is in order, they could prepare an outline during one of the meetings then assign work to particular members. Basically, the Board wants to have more of an action-based STAC. That was the primary result of their discussions. What came out as well is the desire to continue the success of the State of the Sounds Conference in November 2011. That was a great effort by APNEP staff to bring together stakeholders in the APNEP region and discuss progress. The Executive Board desires to see this happen at least every other year. That way we can ensure that all stakeholders are talking to each other. Other activities in the plan include a continuation of supporting the work of APNEP's six monitoring and assessment teams, and help to evaluate that framework. The initial monitoring design will be reviewed once completed. The last item is the APNEP ecosystem assessment, of which some STAC members were authors. That document should be published in a couple of months. Members will have the opportunity to author additional assessments, and also work on the diagnostic phase of those assessments. That is sort of how the Board sees the STAC's primary activities.

Brian asked Reide if he had any additional comments.

Kirk asked whether the STAC is going to be advisory, are there protocols in place for responding to requests, and/or responding to comments from agencies. Dean stated that no formal criteria are in place. One criterion is whether or not an issue was regional. That is one criterion which past Executive Boards have voiced, and staff agrees with that one. Kirk noted that if the STAC is successful, there may be a lot of requests from agencies. While the STAC doesn't want to be overwhelmed, they want to be responsive.

Brian felt that was where the Executive Board weighs in. The Board can make an initial decision and then put it out to the entire STAC.

Kirk noted that another role the STAC can serve is to network with colleagues. The Chesapeake Bay STAC has a protocol in place which requests entities who solicit STAC advice to get back to them within 60 days and let STAC know what the solicitors did with STAC advice. Brian asked Kirk if he could provide those protocols. Kirk will provide those to Dean for distribution.

Rhonda noted that each NEP technical group is set up differently, in different areas, but all of them respond often to issues raised by their Citizen Advisory Committees. CACs often raise the best issues because they live in the area and pose good questions. Some of the issues regarding mercury were raised in such a manner.

Reide asked about the activity level of APNEP's CAC, because he has never heard about anything coming from CAC to the STAC. Bill noted that the CAC is very active, but they have yet to ask the STAC for input. Bill noted that APNEP is expecting a new Executive Order from the Governor, and if promulgated the structure of APNEP is going to change, in that there will be an Implementation Committee rather than a CAC and Management Advisory Committee. Kirk noted that the CAC was very active in review and comment on the CCMP. Dean noted that he has actively encouraged the CAC members to attend the STAC meetings.

Bill noted that the Mayor of Plymouth, Brian Roth, has been very active on the CAC and will likely be involved on the Implementation Committee.

Brian completed his review of the draft STAC Action Plan. The Executive Board will be assisting the Policy Board on various issues, especially those regarding major policies. Part of that entails going through and finalizing this Action Plan. He noted that the Executive Board also will provide support to APNEP staff for the next State of the Sounds event. That is how the STAC co-chairs envision their two-year leadership appointment.

Bill mentioned another item, which is that the STAC needs to keep pursuing EBM, and EBM-related projects. Rhonda noted that EPA supports that approach. Kirk noted that we need to make sure that is being implemented. Dean noted that the STAC will continue to work through the monitoring & assessment teams, as we have discussed.

Brian noted that the draft Action Plan will be discussed in detail after lunch, and hopefully by the end of the discussion, there will be a prioritization of the themes. Reide noted that the four proposed are not necessarily we have to do. Outcomes should also be identified. Robin asked for the four themes to be named again. Brian named them. Reide noted these are fairly broad.

Before breaking for lunch, Dean requested meeting attendees' attention. He presented Wilson with a plaque in appreciation for his four years of service, with Tim, as STAC co-chair.

The STAC broke for lunch at 12:45 PM.

Reide reconvened the STAC at 1:00 PM.

Dean asked for a show of interest in a shuttle trip out to Lake Drummond after the meeting. There was sufficient interest to warrant a trip.

Reide noted that the agenda called for dividing into smaller discussion groups, but he and Brian had decided to keep the committee together. He reviewed the four focus areas again, and noted that they do arise from the CCMP. The plan is that the four themes will drive the Action Plan for the next four years and possibly beyond. Reide asked what the STAC thinks about these four, and what may be additional areas should be considered.

The question was asked about the meaning of the term “shoreline development”. Reide explained that there is little policy in place regarding shoreline development in the estuary system. There are policies for using “living” shorelines, but those are more difficult to implement. The intent here would be to examine shoreline development, and what policies should apply. Brian noted that we also want to consider the need for a natural buffer. Rhonda asked if the riparian area would be considered. Brian noted that would be certainly one area of discussion.

Rhonda noted that another arena in which she is working with NCDENR is wetlands. She wants to make sure that any efforts there are compatible with APNEP. This other program could result in an additional \$500,000 possibly coming to North Carolina agencies. She wanted to make sure that the two programs are talking to each other.

Pete felt that the themes were good overarching ones, and certainly in an emerging arena. He asked what had been discussed about water quality within the context of climate change. Brian explained that the Board’s discussions focused on land use, and agriculture, and changing weather patterns and how those may affect nonpoint source pollution. It could entail forecasting as well. We aren’t saying that the STAC would be doing the research, but we could help APNEP in guiding their focus. Pete noted that the scientific community has been at this for a long time, and have struggled to focus. Nutrients, wetlands, and overfishing all come to mind, especially if you go back a long time. As long as the overarching theme includes addressing nutrient issues, he is comfortable with it. Reide noted it would be difficult to address water quality without considering nutrient issues.

Tim noted that by taking climate change as an overarching theme, it is still limiting given all the issues in the watershed. The CCMP addresses other things. His question is, does the STAC really wish to be limited solely to climate change?

Brian stated as we move forward, the impacts of climate change will be felt throughout the entire system, and unless the STAC works with that in mind, their efforts will not be whole. If the STAC focuses on historic nutrient patterns, they won’t take the future into account. Climate change is a piece of the puzzle. Tim noted that in his mind we are still at the level of trying to understand how the natural system works.

Reide agreed, but noted that this is just trying to provide guidance for what the STAC can do, over the next 18 months or so, as an advisory body.

Rhonda stated that climate change has such a negative connotation now, especially in the Coastal Plain. She would try to use the term “trends.” Reide questioned an alternative term given the STAC is an advisory body. Rhonda felt that using “climate change” would cause STAC to lose credibility with the local managers, so she felt that we could use more appropriate terms.

Reide stated that as a scientist he was not going to use that approach. Brian agreed, and noted that the APNEP staff could communicate to the public. Brian stated that they would use the term climate change.

Michelle noted that she agreed that climate change is an issue. She thinks the four themes are great, but noted that more general terms could be used, and address land use change, for example.

Reide noted that rather than hearing about the terminology, he would rather hear about what we want to do about the threats.

Brian noted that land use change can be encompassed under several of the themes, including shoreline change, sea-level rise, and water quality. It is another piece of the puzzle, but not drawn out directly. STAC can't propose to halt building, as the STAC's role in land use. Land use can't be tackled in the same way as other issues.

Tim noted that there is a relationship between land use and water quality. He felt that the climate change theme is too restrictive.

Robin said that he views the draft Action Plan as more of a downstream issue. The CCMP seems to be more of an upstream document. He asked how Reide and Brian see this connecting to the CCMP.

Brian indicated that we had gone through the CCMP, by goal and objective, and pulled out the “identify” and “monitor” action items, and honed them down to what we saw as the issues which need to be tackled. Brian asked Robin if he was considering the headwaters. Yes, he was. Brian noted that “shoreline development” was not just a coastal issue. Sea-level rise is more of a coastal issue, but the themes were not intended to be just ones with a coastal focus. Brian noted that the four themes selected, are those being discussed, or with the potential for being discussed, in our region.

Burrell noted that climate change is imbedded throughout the CCMP, so she didn't see why it is a big issue. David Kimmel noted that the Executive Board felt that the public needs to understand that climate change is here to stay.

Kirk noted that in Virginia, state representatives must call climate change recurrent flooding. He suggested that we might want to target areas which may be underwater within the next 50 years. One issue is at what point local governments cease maintaining roads, or providing local services. We could begin to tee up the social and legal issues which arise from sea-level rise.

Reide noted that he wants to focus on what we as a STAC want to do, relative to sea-level rise.

Kirk stated he felt that we should tee this up for the social scientists, or lawyers.

Kirk noted that Virginians confront this often, as to what counties are allowed to do with regard to property ownership.

Tim noted that the NEP is directed at estuarine preservation, and he felt that it goes beyond climate change. It includes human population growth and land use. You have to be broad enough to attack whatever issues you can.

Brian indicated that he is fine with someone approaching the STAC for an opinion on either of those issues, but the Board in this action plan wanted to define what the STAC can address. He felt that the STAC wasn't going to say anything about population change.

Tom Crawford asked, what are we going to do about sea-level rise? Reide noted the government has already done that in NC [laughter].

Brian noted that STAC can help to provide the science behind where things are going. Tom noted that there is a science of land use and land cover change. He knows that STAC can't enact policy, but the STAC can investigate in terms of land use and land use science that would be of interest to the City of Greenville, or other jurisdictions. To him, that is part of the climate change stuff.

Maurice noted that he has spent a lot of time working with NOAA, and NOAA has five big themes at present. These are pretty broad, and Maurice felt that anything of interest could fit under these themes.

Brian indicated that was what the Board was hoping.

David Kimmel noted that we are talking about a proactive approach, which is where these themes were derived. Brian agreed and indicated that the themes were developed with a proactive mindset.

Robin noted that we can augment the work plan, with reaction as needed.

Reide noted that we want to focus these meetings on a product which we produce at the end of each one. We want to create action items which produce something useful for APNEP and beyond. To do so, the STAC must focus, whether it is in the headwaters or elsewhere.

Tim suggested that to put it in a long-term perspective, we could have some two-year themes, in the context of the CCMP. Tim felt that sort of vision, or long-term plan, would be useful. What he has a hard time with, given a focus of climate change, is that other issues like nutrient standards don't appear to fit very well.

Brian felt that would be a part of the water quality discussion. We would compile all the pertinent research from the past and see what it reveals. Just because climate change is the theme, doesn't mean

that you don't consider nutrient standards. Brian stated again, the umbrella of climate change covers all of these issues.

David Kimmel noted that STAC needs to consider what a state agency should do when the current standards don't work, given forthcoming climate change. In other words, once TMDLs or other regulations are established, will they work under a changed regime as a consequence of climate change?

Tom Crawford stated that this is a different proposal, because it has a theme which will serve as an umbrella. Is the STAC okay with the approach of having an umbrella and if so, is the STAC okay with climate change as that umbrella?

Brian noted that even if the "umbrella" is to change to something else, we still need to consider these four issues.

Michelle stated that would still turn off people, especially in the current legislative climate.

Burrell noted that she is working in the Cape Fear Region, and they like the work we are doing. She thought that we are politicizing it too much. She felt that if we capitulate, then we aren't focused on science. Many managers along the coast are very interested in climate change for planning purposes, despite the fact that there are those who have their heads in the sand. She noted that she is a social scientist.

David Kimmel noted that the great thing about science is, whether you believe it or not, it is still true.

Kirk felt that is fine if they don't want to use the term "climate change" in their statement.

Bill noted that the programs in NEPs are supposed to be based on science and the respective community's desire to move forward. It doesn't matter to him if we want to discuss climate change. The issue is whether or not STAC wants to have it as an umbrella theme.

Pete proposed to move on and make progress.

Brian asked whether any other themes should be included in addition to these four themes proposed.

Tim asked about hydrological fracturing (fracking), a major issue in environmental policy circles. STAC members noted that the target extraction area was mostly in the Cape Fear basin, but Bill noted that it does overlap in the upper part of the watershed.

Bill noted that some Policy Board members have already come to staff and asked about fracking.

Wilson felt that all of the issues associated with fracking fit under the water quantity/quality area.

Rhonda noted that she prefers documentation of the current situation, and where APNEP plans to be in five or ten years.

Brian noted that STAC can make suggestions for management, but whether or not they are followed is up to the regulatory authorities.

Rhonda noted that she wants to be able to tell NEP staff whether or not we have made progress.

Kirk noted that the way the CCMP is built, the STAC will be looking to see whether the adaptive provisions need to be invoked. David noted that a lot of the measures in the CCMP will be assessed in the future.

Reide asked what STAC has produced to date.

Dean said there are seven issue papers, each of which advocate change from the status quo. They are designed for the non-technical reader.

Bill noted that the ecosystem assessment was another STAC-contributed product, along with the CCMP itself, the nutrient letter to NCDWQ, along with the metals letter in preparation.

Dean noted that he has looked at the action plan from the perspective of assessment. He didn't really see the climate change as an umbrella. He noted that of the four focus areas, two are threat-based, and the other two outcome-based. If STAC pursues a meeting or activity on shoreline development, there are two aspects. We can discuss which activities under shoreline development we can target, and we can also discuss what outcomes are of most concern to us. In doing this, we would have to consider what aspects of climate change we must consider. Sea-level rise is of course a component of that. For the ecological processes theme, given the myriad stressors in our system, STAC can identify which ecological components are most vulnerable and which stressors are most influential. STAC can do the same for water quality. As part of the process, STAC should help APNEP determine which water quality issues should be addressed in the vulnerability assessment. The STAC could also determine which part of water quality on which we should focus, say nutrients, and then have a meeting to focus on those.

Reide noted that he would like to determine what does APNEP need, and how can the STAC provide what is needed.

Brian agreed that STAC needs to undertake a vulnerability assessment then tackle the identified priorities, or, we can focus on the one of the four themes which is deemed highest priority.

Dean noted that APNEP does have preliminary work by the EBM transition team, who had identified the major threats, and the outcome was the threats identified in the CCMP. So, the actions have already been identified for the next ten years in the CCMP. The identified actions are quite broad. APNEP will have an implementation team to drive identification of priorities. The actions are directly targeted to achieve CCMP outcomes. That is a little bit of background, on the process. Dean requested that STAC select one of the themes, say ecological responses, and describe what is envisioned at the meeting. Should there be a focus on invasive species? There can be some discussion of how to address that issue.

Kirk reminded the staff that Brian and Reide are asking, what STAC products does APNEP need?

Robin envisioned that STAC would take a section of the CCMP, monitoring for example, and ask is APNEP set up properly to monitor this. If not, how would APNEP change things to improve their position. He asked if that is what Brian and Reide were thinking.

Brian said that could certainly be the case. Also, developing nutrient standards would be another piece. STAC could eventually be in a position to support development of a nutrient standard.

Reide asked about the end product for this exercise: does STAC want a white paper? STAC needs some guidance from the staff. What would be best for STAC to inform the process. Reide wanted to see something coming out of our meetings, so that he feels engaged and make good use of members' time.

Dean noted that it is interesting to him that staff advice is now being sought. It seemed to him that there was some motivation to change the process. Brian said they want to have a meeting to discuss the science first then after the lunch break members can decide either to produce a white paper, educational materials, or something else. Does STAC want to decide now, or wait until we have the information, then decide.

Bill felt that it could be a combination of both. He noted that there are some things he would like to see the STAC take a position. STAC could make a recommendation, for example, on the projected rate of rise in water-level within the estuarine portion of the APNEP region. That would be useful. Whether we are in Carteret County or one of the Sounds, APNEP would have something to which stakeholders can relate.

Dean felt that there was some difference in protocol between the stressor-based and outcome-based topics. He would like to know if the activities that STAC has specified are the right ones, and on which stressors APNEP should focus in the near term. On the ecological response side, there are multiple ways APNEP could proceed. What are the most vulnerable components for APNEP focus?

Todd noted that there are considerations, such as what elevation model should be applied. STAC should identify where there are gaps, and so forth.

Tom Crawford noted that words can mean different things to different people. It can mean both the stressor, as well as the human response. He immediately thinks about the human response. You have to write it at a more general level, but get specific later.

Bill stated that you would use the CCMP as guidance. There is information in there regarding nutrient management. Also, we have to develop a full monitoring strategy, and there will be lots of needed decisions there. There are plenty of things to discuss.

Reide indicated it sounds like we will go with the four general themes, and decide how we want to drill down in each of them. Brian noted that when we discuss water quality, Tim's concerns can be addressed.

Reide noted that we need to develop the first meeting theme and specify a date. Reide noted that he has his personal preference. Wilson asked if that was by any chance, sea-level rise.

Rhonda noted that we do need to consider which measures would fit into a monitoring strategy, for each of the four themes. If we take that approach, we can specify existing information, and what will be monitored.

Brian stated that was certainly part of the process. Also, STAC must take a position.

Rhonda didn't see that as a role of an advisory body.

Brian disagreed. He felt that coming up with a position on the science was a necessary precursor to providing advice, on monitoring or policy.

Rhonda wanted to see what things are APNEP plans to monitor, to document sea-level rise. Brian felt that STAC will do that task. Reide stated some of that has been done.

Dean noted that it falls outside the scope of the four themes. The products which come out of the meetings could inform that process.

Reide noted that APNEP already did that exercise, and Dean noted that it will be revisited again.

Rhonda noted that there is a huge funding need there, which needs to be addressed.

Reide suggested that we begin with sea-level rise, because that is a hot topic in North Carolina right now. He noted that in another month, state officials may be unable to discuss it.

Robin was comfortable with that recommendation.

Reide indicated that with no objection, STAC would move forward with that topic. The Executive Board will put together a recommended agenda.

Brian indicated that the Executive Board will send out ideas for that meeting to the entire STAC.

Robin indicated that it is important to send that information out well in advance of the meeting.

Dean noted that if STAC has fewer meetings, attendance will be more critical. Working with the Board, he will definitely try to get things out well in advance of the meeting.

Bill asked that the Board clearly state what the desired outcome of each meeting will be.

Brian noted that's it will take outside effort, and we will be drawing upon members to take some ownership of the STAC. In order for STAC to move forward and become the committee envisioned, members all need to take equal ownership.

Tim asked how many STAC meetings are planned. Discussion clarified that STAC will have one more this fall on sea-level rise; then we will have three in 2013 (two STAC meetings and the State of the Sounds in fall).

Michelle suggested that we invite stakeholders from the other groups to submit any topics they would like for STAC to address. Bill noted that the Policy Board won't meet until September. Reide thought that was a good idea to promote communication.

Dean asked if by year's end whether STAC would have an additional meeting. Reide stated that he didn't envision it happening in the next two months.

Pete asked about the big meeting in fall. Dean will distribute a poll for the last two weeks in October and first week in November.

Members discussed the possibility of having it at the new Coastal Studies Institute. Reide suggested that STAC might want to push the dates further into November if we want to use CSI. Brian suggested that we consider using the new USFWS Gateway Refuges Center, in Manteo. Dean will shoot for doing something in Manteo, the last week in October or first two weeks in November.

2:15 PM: The meeting adjourned.