



## **Policy Board Meeting**

### **Albemarle-Pamlico National Estuary Partnership**

10:00 am – 3:00 pm  
September 26, 2014

Room 242  
Coastal Studies Institute  
Manteo, NC

#### Draft Meeting Notes

**Policy Board Members Present:** Dr. Tom Allen, Dr. Wilson Laney, Todd Miller, Joanne Benante, Dr. Burrell Montz (sub for Dr. Kirk Havens), Natalie Birdwell (for Brad Ives)

**APNEP Staff Present:** Dean Carpenter, Bill Crowell, Marie English, Jim Hawhee, Jimmy Johnson, Dana Gonzalez

**Guests present:** Rhonda Evans (US EPA)

**10:00 a.m. Call to Order**

**Todd Miller, Chair**

Todd called the meeting to order and asked for everyone to do introductions. Everyone did so.

**10:05 a.m. Welcome & Coastal Studies Institute Overview**

**Dr. Robert McClendon**

Robert noted that UNC-CSI is a multiple university coastal and marine research institute. They have a little over 200 acres, part of which is in marsh, and about 35 acres of which is in a TNC easement. The building is 55,000 square feet and was built in 2012. It is a LEED-certified Gold facility. They provide research and academic operations support for multiple universities. ECU is the administrative overseer and they have a strong relationship with ECU. There are multiple academic programs driven by the universities. There are six academic foci: Estuarine Ecology and Human Health; Coastal Processes; Public Policy and Coastal sustainability; Maritime Heritage; Coastal Engineering and Renewable Ocean Energy; and Public Engagement and Outreach. Estuarine Ecology and Human Health is headed by Dr. Michael Piehler; Coastal Processes is headed by Drs. Reide Corbett and J.P. Walsh; Public Policy is headed by Andy Keeler; Maritime Heritage is headed by Dr. Nathan Richards (this one is important for cultural tourism); Coastal Engineering is headed by Drs. Billy Edge and Mo Gabr; Education and Outreach is focused a lot on K-12 programming. John McCord is their videographer, and they have lots of video in HD and also 3-D. It is experiential and place-based and that is why the facility is located here. The research is put to work in the service of the public. Dean Carpenter noted that three of the faculty mentioned as leaders of CSI programs are also on our STAC (Corbett, Keeler and Piehler).

Robert noted that they have sensor lighting, special glass, capture rainwater, and have a water-to-water heat pump system. They borrow water from a Dare County well, extract the heat from it, and pass it back to the county. They maintain a lot of open space, and all of the water which falls on the site is treated. They have five created wetlands, and four infiltration systems, as well as onsite water

treatment. They tried to use as much local material as possible. They were able to recycle about 85 percent of the materials from the construction.

Robert noted his thanks to APNEP for some of the projects they have funded in the local area. One of them includes a boardwalk and kayak launch at Manteo High School.

Todd asked if there were any changes to the agenda. There were none.

**10:30 a.m. Adoption of Minutes**

**Todd Miller**

Bill Crowell noted that the meeting minutes didn't go out with the agenda, but they are much shorter. Tom/Wilson moved/seconded adoption of the minutes. The minutes were approved as written.

**10:35 a.m. Director's Report**

**Dr. Bill Crowell**

Bill noted that our last Board meeting was a conference call, back in May. The budget has been approved by DENR and he hoped that it would come soon.

Bill noted that the existing grant was extended through December 2016. When the new grant comes in, staff will be moved to the new grant, and the old funds will be used for projects. Bill noted that there are some funds remaining. He noted that the signs for the Albemarle-Pamlico watershed are coming. There are six of them which measure 7x14 feet. These are for NC, but one of them will be at the VA/NC border. Bill noted that about \$272,000 remains for projects, with some portion not yet designated.

Bill noted that we will discuss the Implementation Committee later, but in the interim the Policy Board leadership fills that role. One action was the approval for an economic assessment of the sounds. Hopefully that will be posted in the next couple of weeks and we will have an applicant to work on that one. Bill noted that he and the staff have been meeting with other stakeholders and are working to set up the Implementation Groups.

Bill noted that the summer has been rather busy with the STAC meeting and calls with STAC leadership. Bill noted that the Policy Board meeting was supposed to be in the summer but was moved to September. He welcomed Burrell to the meeting and noted that she was subbing for Dr. Kirk Havens.

Bill indicated that he would like for us to have a frank discussion this afternoon regarding APNEP's direction in the new year. Bill noted that he has drafted a new Governor's Executive Order, which has prompted discussions about the role of the host entity and its influence on APNEP. Bill noted that precipitated a question regarding whether an Executive Order is needed at all.

Rhonda noted that no other NEP functions under an Executive Order and that also normally the direction is provided by the Policy Board. There is a lot of ability and opportunity to be flexible in that regard. She encouraged everyone to think it through. The process is supposed to be collaborative and fair. The EPA has delegated their authority to the local NEP leadership groups. Bill noted that a new Executive Order would be less prescriptive than the old one. A lot of the "whereas" statements would be kept, but the implementation details would be minimal.

Bill noted that Marie English will be giving us her Americorps report. The Department has decided not to host the AmeriCorps program next year. Marie may be able to continue working with us. Todd asked if the funds for AmeriCorps for 2015 were moved into the budget.

Bill noted that Willy Phillips had hoped to be here today because he had requested a focus on video production by APNEP. Bill indicated that Willy Phillips has asked to move off the Board at year's end, so we will have to replace him. There are some possible candidates. This also relates to whether we get a new Executive Order or not.

Bill indicated that they would be moving the teacher institute back to the coast this year. It may be time to change the methodology up a bit.

Recently, he and Jim concluded their reporting to EPA regarding the funds leveraged for conservation projects. They have also entered into a partnership to help define nutrient criteria for North Carolina's sounds.

Lindsey Smart has left APNEP and is pursuing a PhD at NCSU. She will be continuing to assist APNEP on a contract basis.

Bill noted that he was glad Dana was here as our new Virginia representative. He asked Dana to give us some background. Dana is from California and just finished her PhD at University of Virginia. Her husband has worked with several UNC staff so they are familiar with the area.

We will have a discussion about CCMP implementation later today. Tomorrow is National Estuaries Day. Bill and Marie noted that APNEP will have a table in Raleigh at an event there.

**11:00 a.m. STAC Report**

**Dr. Wilson Laney**

Wilson gave the report on behalf of himself and Burrell for the STAC. Bill noted that Burrell stepped in to take Reid's place.

Rhonda asked if the APNEP's next symposium would follow the same format as the previous ones. Bill indicated that this one may be smaller in scope than previous ones, and may focus more on implementation and future actions.

Dean noted that every STAC member has been assigned to one of the 14 Implementation Work Groups. Todd asked if the bylaws deal with attendance. Yes, they do. Dean tracks attendance. The STAC now has reduced the number of annual meetings, thinking that they will be participating more through the work groups. Bill noted that some of the members have realized that they will be spending quite a bit of time in the work groups. Dean noted this new approach allows members to make more of a contribution of their expertise, since they will be working in their area of expertise.

Wilson elaborated on how the STAC members are very involved, at many different levels, in other partnerships at different scales in the landscape. He noted that keeping STAC members excited and engaged is a continual challenge, and he believes that the new approach focused on implementation will be a good approach.

**11:20 a.m. SAV Mapping Update**

**Dr. Dean Carpenter**

Dean defined Submerged Aquatic Vegetation (SAV) for the group and noted that seagrasses were a subset of SAV. Dean noted where the SAV monitoring effort fits into the APNEP goals. Dean noted the four questions posed by the CCMP. He noted that the function of the assessment is to try to answer the questions, and you look to the monitoring plan which is the fuel that drives the “engine” of assessment. Dean reviewed the APNEP EBM approach.

Dean noted that we had produced an interim assessment and one of the indicators we assessed was SAV. Dean noted that the Policy Board dedicated substantial resources in 2006 for SAV monitoring. The total extent of “visible” SAV was 137,951 acres. Dean noted that it takes a long time to get the work done, due to weather conditions, and photointerpretation. The extent of “visible” SAV in East Albemarle, Croatan Sound reporting region, is 24,490 acres. Dean has worked with many volunteers in other areas to have daily reports of the water quality and visibility on a given day. Dean receives reports from USFWS, NCDMF and NPS, and reports their direct observation on water quality to the pilots. We make the call, the night before, regarding whether to fly or not. Sometimes clouds will appear, between the time the plane takes off and gets aloft. Dean noted that “visible” SAV refers to the amount we can detect from the air. Historic amounts were approximately 200,000 acres based on available information.

Dean reviewed the second cycle of aerial monitoring of SAV between 2012-2014. Dean noted that we are trying to monitor every five years from the air. This second cycle is about six years, since the first survey. This imagery is from a Digital Mapping Camera and is being flown by NCDOT. It is flown from 10,000 feet above the mean terrain, and has four color bands: blue, green, red and near IR. Dean noted that having the imagery flown by NCDOT makes it far more affordable. The NCDOT crew acquired a digital mapping camera (cost is over a million dollars). In order to justify the acquisition, NCDOT needs to keep the camera in use. Dean noted that they are also doing the interpretation as well. We began in the north and then worked south. Central area and Bogue Sound were done in May, 2013. The southern area was done in July, 2014. Dean noted that one of the two state planes is dedicated to the governor’s use, and when one of them was unavailable, the plane with the camera hole was used instead so we missed one window of opportunity. Dean noted that we did extend the window and what we got was better than nothing. The NCDOT is now doing the interpretation and we will be doing the change analysis soon.

Todd asked how we adjust for the change in technology, regarding the change analysis. The basic question is, can we pick up more with the new camera? Dean indicated it depends on the interpreters. Bill indicated that in some cases, we can go back to the earlier imagery, and see if it shows there as well. Tom Allen noted that the error also could go both ways. You can have a committed error versus an omitted error. It will be interesting to see how much is actual loss, versus how much is error. Tom noted that we also should keep tabs on satellite imagery. He noted that the same sort of concerns exist for the shoreline monitoring. He suggested that someone from the STAC (he indicated he was not volunteering) should keep abreast of what is going on with the satellite imagery. The Landsat 8 is hugely improved, and is collecting twice as much imagery. Every couple of days, you may have Landsat imagery which is cloud-free. He indicated that we probably have a bargain from NCDOT.

Bill stated that APNEP is keeping an eye on this. Don Field does some satellite work in the Florida Keys, but the water clarity down there is much higher. Tom noted that folks working on algal blooms and chlorophyll are having the same issues. Things that work well in the ocean may not work as well in the sounds. Tom stated that there are hyper-spectral aeriels that can be used in some case. NASA has one,

using the SR-71 Blackbird, which costs \$20,000 an hour. Sometimes they may be able to piggyback missions. Dean stated that when we get to the third cycle, we definitely will evaluate other available technologies. Dean noted that wetlands may be more mappable via satellite.

Tom noted that they have put the SAV data layer online. Permit reviewers can put the estuarine shoreline, and wetlands, and SAV together in one map, to assess the impact on estuarine resources. This is becoming a daily use.

Dean noted that we can take samples of SAV as well to verify the species on the ground. Dean noted that he has also been very actively promoting our sampling of the “invisible” component of SAV, which is hard to see due to turbidity. The first baseline map was distributed in 2011, and when Dean and Jim were drafting a press release they looked at ecosystem services values in the billions of dollars. So, the ecosystem services provided are substantial.

Dean noted that the SAV “brain trust” of Maurice Crawford, Jud Kenworthy, and Joe Lucskovich have been developing a method to get a better handle on dynamic change. The interest is getting stations in the estuarine system which would be visited on a more regular basis. They started with Albemarle Sound. After the first flight, we had a better idea of where the more turbid areas are. The second cycle flew the clearer areas near the Outer Banks. Dean indicated that Joe is the team lead for the northern area and Jud is our overall coordinator. APNEP received a CRFL grant and has developed some protocols for SAV work. Dean noted that the project is applying SAV boat-based protocols developed under the 2012 CRFL grant. The field season is July-October. The monitoring technology uses a Lowrance HDS-7 echosounder sonar and SARtek video drop-camera. Joe developed a protocol for covering a lot of the shoreline. Dean noted that this effort is much more labor-intensive than the flights. The first work was done near Edenton, where two half-day efforts were conducted to visit 17 stations on the north shore of Albemarle Sound, near the proposed Sandy Point development. The applicants had previously surveyed the site, so there was a data baseline. The protocol was to drive the boat to a point, use GPS to locate the precise spot, then do 9 transects in a 50-foot radius around the marker buoy. Dean noted that Jim Hawhee has developed an effective sample frame tossing technique. He noted the importance of positive interactions with stakeholders, which occurred during their field work.

He noted that ECU has a very rigorous safety team and they worked to bring the APNEP boat up to ECU safety standards. ECU did a number of upgrades to the vessel.

The work was shifted in the following weeks, to actually doing the survey. Hilde Zenil, who is working on her PhD assisted, along with Director Crowell. Dean showed how the equipment is attached to the boats and reviewed the sampling protocol using the video camera to verify sonar readings. Dean hoped to illustrate the logistics involved in documenting SAV in order to help us do a better job in assessing this resource.

Rhonda asked if invasives were replacing our native species. In some places, that is the case. Wilson noted that in some cases, there are some ecosystem services which do result from species like Eurasian Watermilfoil and Hydrilla because our native species have disappeared. The preference is to have the native species. Studies have shown that the microfauna prefer the native species.

Rhonda asked Dean to share his thoughts about future use of the boat-mounted technology. Dean indicated that the first objective is to identify the beds. The idea in the future would be to conduct the boat-based survey on some periodic basis, not only to monitor SAV, but also possibly to

monitor/measure woody debris. Dean noted that APNEP is trying to fill a gap in sampling with very limited resources. The hope is that the partners will be able to step up. Dean noted that he looks forward to speaking with the new NERRS coordinator and possibly establishing some sentinel sites there. They are trying to make things more efficient using the camera rather than spending a lot of time in the water.

Rhonda noted Tampa Bay is much smaller, but their NEP is conducting training sessions (including QA/QC) with volunteers who then go out and do monitoring and she suggested Dean check with them. Dean noted that APNEP is very interested in using volunteers. Dean noted that Jud has found that the Puget Sound NEP is closer to APNEP in scale. He is looking at their approach to get an idea of how to improve our methods.

Dana noted that the Virginia Coastal Reserve LTER site could be used as a model for APNEP. She asked if some of the staff members might be interested in looking at what is being done there. Dean asked her to send him the information. Dean noted that a lot of the NEPs use snorkeling transects as a monitoring method. Dana indicated that they do snorkel in VA. They also do a lot of restoration, via spreading seeds. There are a lot of university staff involved in the program and monitoring follow up.

Todd noted that we will have an SAV work group and asked if it would be possible to put together a plan to map out the future sampling. Dean stated that the work group will be tracking the two objectives in the plan. The Monitoring and Assessment Team would be more likely to develop the future plan.

Bill appreciates the flexibility he has with regard to funding, since that enabled the Policy Board to move some funds into that project, and that resulted in the first mapping. The USFWS and NCDENR also contributed funding. That resulted in the imagery, and USFWS, NCWRC, NMFS and others were the immediate users of the information generated. Bill noted that there is some very nice shoreline imagery as well, and Bill's hope is that there would be some other uses for the imagery but that hasn't happened yet.

Tom Allen asked where the imagery is available. Bill indicated it was on the web site. CGIA has a copy, and APNEP also has it on flash drives. Also, NCDMF provided some funding to expand the scope of the project to cover all of NC, and also Back Bay in Virginia. Since NCDOT was able to get the new camera, not only have we been able to use their aerial imagery, but we have been able to help them refine their mapping capability and interpretation, which they need for highway planning. Bill stated that he is now working on an agreement between NCDOT and NCDENR, which will avoid the long, drawn-out, contracting process. They have been working on this for a while and it needs refinement, but it will be a major benefit once it is included.

Todd suggested that we break for lunch (11:52).

**12:17 a.m. Working Lunch: Americorps Project Overview**

**Marie English**

Marie introduced herself. She indicated that she has been working for APNEP for the past ten months, working on outreach materials and with NC Sea Grant to produce a video. She provided a summary of her educational background and the Americorps program. Their focus was on reaching under-served populations. They have reached a lot of people, over 33,000, during the program. The program was supposed to last three years, but due to funding cuts, is only lasting one year. Marie reviewed the

activities in which she was involved, one of which is Roanoke River Days, which employs a three hundred-sixty degree screen. They engaged teachers from the area, as well as students in outdoor educational activities. Another project was "A Peek at Pocosins." Wilson noted that he had to do vegetation line intercept transects through them. Marie indicated she thought that was impossible. Marie noted that she also participated in Earth Month at the NC Museum of Natural Sciences. They set up the geo-dome again at a Tar-Pam River event. She also got to participate in a take-a-kid-fishing program in Morehead City. Finally, they worked to develop capacity for APNEP to produce, short, educational videos targeting Northeastern North Carolina. Marie described the inexpensive process they have developed using minimal equipment. NC Sea Grant was contacted about Hydrilla, as a major threat to the sounds. Gloria and Marie traveled to Edenton, NC, and interviewed residents who have been impacted by Hydrilla. She also filmed a blue crab workshop and produced a video as a result. There have been other opportunities for them to obtain film footage as well during the SAV survey. They have also been trying out some social media and Citizen Science projects. APNEP has its own project to which people can upload observations. Jimmy Johnson has been very involved in this project. They are also working to create an Instagram, for APNEP, and are still trying to figure that one out.

Marie showed us the video: Hydrilla: an emerging concern for the Albemarle Sound. She asked for questions about APNEP's outreach program. The video was jointly sponsored by UNC-Sea Grant, and APNEP. Brett Hartis, Aquatic Weed Scientist, NCSU, is featured in the video. Hydrilla, according to the video, is taking over portions of the Chowan River. Hydrilla originated from overseas, as part of the aquarium trade. Hydrilla was first discovered in NC in Umstead State Park in 1980 and spread from there to other parts of the state. The Hydrilla has been shown to survive up to 18 ppt salinity. Natural habitat supports biodiversity; whereas invasives tend to simplify ecosystems. Hydrilla effects both ecotourism, and coastal fisheries. Terry Pratt was interviewed in the video, and explained how flounder fishermen in particular are impacted by Hydrilla, having to spend far more time cleaning their nets, and experiencing reduced catch. Anne-Marie Knighton, Edenton Town Manager, was also interviewed for the video and indicated that the town takes the impact of Hydrilla very seriously. The town has allocated funds to address the Hydrilla threat. Their efforts are having an impact. The video explained how Hydrilla reproduces, through seeds, fragments and tubers. Rob Emens, NC Division of Water Resources, was interviewed about use of herbicides to control Hydrilla. Grass carp are not an option in the coastal water bodies.

Marie noted that Gloria has begun a Hydrilla citizen monitoring program, with volunteers working out of Edenton, NC.

Todd asked how much time and cost went into production of the Hydrilla video. Marie indicated that one took the entire summer, in part because they had a lot of footage. Interviews lasted an hour but only 30 seconds of video was included onscreen. Marie indicated that there is a lot of software available these days, to enable editing and so forth.

Bill stated that the camera they acquired can shoot still and video. The Go-Pro cameras cost around \$300.

Todd noted that many folks are now using drones to get aerial footage as well. Bill indicated that they have looked into that but haven't found one they can afford yet. Dana asked about putting a Go-Pro on a balloon and using that for aerial footage. Bill noted that they had discussed using a kite as well. Dana reviewed some of the methods which had been used to rig a Go-Pro for such use. The complicated part was to rig the camera so it would stay flat. Tom Allen noted that JP Walsh has a hexacopter drone here

at CSI. Tom noted that the universities are to some extent shielded from FAA regulations, but anyone else has to go through a lot of red tape. Natalie agreed that use of drones by state agencies is problematic, and that usually some sort of partnership is acquired.

Jim Hawhee noted that Marie has shown incredible adaptability during her tenure at APNEP. She did an outstanding job in learning all she did. Jim noted that the video production capability was outside the APNEP staff responsibility. Jim noted that the AmeriCorps Program has been cut, impacting APNEP's engagement capacity.

Bill indicated that he would like at some future meeting to have us see the Roanoke River video in the geo-dome.

**12:52 p.m. Nutrient Criteria Development Progress Report**

**Jim Hawhee**

Jim noted that there is a lot to cover, and he would try to keep us on schedule. He noted that they have been working on this issue with EPA and lots of APNEP partners. Plants and animals need nutrients, but too much is a problem. Jim noted the problems caused by eutrophication; potential impacts like toxins, hypoxia, fish kills, real estate and tourism impacts, and drinking water treatment considerations. Jim noted a recent water supply crisis caused by a water pollution situation in Lake Erie for Toledo, OH. He noted that thus far, we have only isolated blooms and fish kills. That is the reason to get ahead of the problem now and develop criteria.

Jim reviewed the history of nutrient criteria development in North Carolina's estuaries. NC and EPA developed a Nutrient Criteria Management Plan, in 2004. In 2011, NCDP update was proposed to EPA, but there was no concurrence. In 2013, the new draft NCDP was proposed and public comment was sought. APNEP has a significant role in the new plan, which was agreed upon in 2014. Estuarine standards are now a focus of the plan. Albemarle Sound was chosen as an estuarine pilot site for development of criteria. APNEP has been working with EPA and NCDWR very closely to flesh out the details.

APNEP has put together the Contaminants Work Group, which has four CCMP actions assigned to it. Among the participants are: NC League of Municipalities, USEPA, NCDWR, USGS, NC Farm Bureau, UNC-IMS, ECU, NCSU, NCDA, NOAA, NASA and Waterkeepers Carolina.

Jim shared the estuarine nutrient criteria at which they are looking. They may regulate either causal variables, such as N or P, or response variables like Chlorophyll-a. Jim reviewed the generally recognized approaches for developing nutrient criteria. Use of a reference condition, stressor response, or water simulation models can be used. The final criteria may have narrative and quantitative aspects.

They are taking a two-phase approach. Phase I is due the end of March, 2016. Jim noted that everything is moving along quite well. Jim noted that APNEP's work on Albemarle Sound, will establish the precedent for all of the other sounds. NC is looking at a state-wide approach. NCDWR is depending on APNEP to come up with an approach that works.

The first meeting of the work group was held August 5, in Kinston. Tasks 1, 2 and 3 for Albemarle Sound in the NCDP were completed ahead of schedule. Task 4 is on schedule for completion at the October meeting. Workgroup members from USGS, UNC and ECU are applying for multiple-year NOAA HAB research grant to inform NNC development. If awarded, the grant would greatly help to move things

along. NASA Develop program is working with EPA, USGS and APNEP to improve remote monitoring approaches and examine historical remote sensing data in 2015. They are currently vetting options for data exploration and literature review tasks in the plan. The product deadline for phase I is March 2016. Rhonda stated that the last item, the data exploration and literature review tasks, are critical and often the most difficult for which to find funding.

Rhonda noted that she was glad that they had pursued the NOAA grant funds. Jim stated that looked promising. Jim noted that the EcoHab grant would be a good opportunity.

Joanne noted that nutrients often express themselves downstream of the source, so developing criteria for nutrients is especially important in estuaries. Jim: 52 percent of NC's land area feeds into an NC estuary. Todd noted that we have air deposition issues as well.

Tom Allen noted that Rick Miller at ECU is working on some of this as well. Jim noted that Daryl Keith, at the EPA Narragansett lab, is also doing some work which is relevant. Bill noted that Jim had mentioned that we are able to acquire some help presently from USGS staff which will help to address the capacity issue. Rhonda indicated that she and Joanne have been exploring as well what resources they may be able to tap, which could help. Joanne stated that their HQ liaison has been very helpful in trying to find funding opportunities as well.

Tom Allen indicated that there are projections that show an additional 2 million people in NC and asked if people are considering this. He is not aware of anyone projecting future nutrient inputs. Wilson mentioned the Terando et al. paper, and noted that it projects what the southeast will look like in 2050. He will provide the paper or the link to Policy Board members. Natalie noted that the paper is getting a lot of attention, especially from the military, based on a meeting she recently attended.

**1:17 p.m.            Implementation Workgroups Update            Dr. Dean Carpenter**

Dean provided an update on the Implementation Workgroups. Dean noted that both the Policy Board and the STAC have been intimately involved in the development of the work groups. Dean returned to the APNEP Adaptive Management Cycle. We had the 2012 plan, and now we are in 2014. There are 58 CCMP tasks, and to address them, they came up with the work group strategy. Right now, there are 13 workgroups.

Dean provided an example, graphically, of how the Contaminants Work Group relates to the CCMP tasks. Dean noted that doing these actions, based on our conceptual modeling, will affect 12 outcomes. The graphic he provided showed how multiple work groups all will work together to achieve that particular outcome.

The last slide showed the work group kickoff schedule, along with staff leads, and staff support. They have had trouble keeping on the schedule, after Lindsey's departure. Jim shared insights on launching the Contaminants workgroup. Jim showed us APNEP staff support actions since April of 2014 in support of the Contaminants workgroup as an example of the effort it will take to sustain APNEP's workgroups. Jim stated conservatively this represents many hours of work. Todd asked him to translate the time to a percentage of his time. Jim thought maybe it was 20 percent. Todd asked to go back to Dean's chart of all the work groups.

Rhonda noted that there are obligations under the grant for staffing requirements. She asked Bill what the plan is for replacement of Lindsey, and also noted that we are losing the Americorps program as well.

Wilson asked, before Bill answers, whether it would be useful to have a more formal approach, such as a signed annual work plan, or a formal MOU, and/or a cooperative agreement. Bill thought for the moment, things are working well informally. He stated that once it comes to developing nutrient criteria, that part of the process may require a more formal approach. It will vary group to group. Jim liked informality, but concurred with Bill that its case-by-case.

Wilson was concerned about the reduced capacity of APNEP given that Bill is now effectively half-time (due to his CWMTF responsibilities) and the loss of staff. He asked that at such point as when staff believe that a more formal document would be useful, he would like staff to let us know that is the case.

Todd returned to Wilson's first question, which was what sort of response he received to those invited to participate in the work group. Jim indicated that it was pretty good, overall.

**1:30 p.m. Discussion of CCMP Implementation Efforts**

**Dr. Bill Crowell**

We moved into the discussion of the implementation efforts. Bill noted that the Contaminants Work Group has already morphed itself into two subgroups (nutrients and risk analysis). He noted that we had combined some of them for simplicity's sake, but he anticipates that some of the others are also going to wind up splitting. Some folks want to work on more than one task at a time. Bill stated that Jim could have easily spent 50 percent of his time, working with one work group. Todd asked to see the graph with the staff assignments on it. Bill noted that they had re-evaluated, once Lindsey left, and they realized that they couldn't meet the schedule. Todd asked if 13 work groups was too ambitious, and whether we should revisit the priorities. Bill stated that he was very reluctant to say that any one CCMP action was more of a priority, since the CCMP is comprised of priority items. But, he said that perhaps we could say which workgroup are going to launch first. He would like to have all the work groups up and functioning, but he would rather have fewer, doing better work, than having all of them running at the same time.

Rhonda stated that perhaps we could identify some, as joint tasks, such as the nutrient criteria being a NCDENR and APNEP task, and not just APNEP.

Bill hopes to be able to fill positions and assign some of the groups to new staff. How fast they can do that depends on what skills are there when the new staff are brought on board. Bill stated that he has commitments from DENR to hire the positions, but some of the delay has been due to him. Bill indicated that all of the APNEP positions except for Jimmy's are federally-funded. Bill noted that it is a benefit to the state to fill the positions in a timely manner, so as not to lose the benefit of the federal funds. Bill noted that the money comes to the state, and federal funds get caught up in cash flow funding. There are also questions about whether federal funding or positions are needed. Those questions cause delay. Bill stated he didn't know what to do, other than designating which groups can move forward based on staff assessment. The commitment to the Policy Board was to have every group up and running by the end of the year. That is not likely to happen. Bill noted that in some cases APNEP will seek to support established groups like the SAV partnership.

Dean noted that it was also originally envisioned that we would have one meeting, and then be able to work largely via e-mail, thereafter. But, the experience with the Contaminants Work Group has shown that additional time is required to get everyone up to speed, establish a cohesive group dynamic, and begin working on initiatives. Todd noted that there was a lot of effort required just to get the group together for the first meeting.

The Oyster workgroup, for which there were some existing groups, was willing to work on APNEP issues, but there are already some other issues on which they want to work. Bill noted in that case, they were already working together. Having additional funding was exciting to them, but how they all fit in to the picture wasn't all that clear. There was less effort involved in that work group than in the Contaminants work group.

Jim noted the next one he will do is Education and Outreach. He has worked with them for a long time, and knows that they will want to meet multiple times a year. The next one he has is the Water Quality Work Group, which is very different from the Education and Outreach one.

Natalie asked if staff had done that sort of analysis, for each of the work groups. They have not, but Jim noted that some of the work done for the first one, lays the framework for the next ones. Natalie asked if the five slated for November need to be re-evaluated. Bill indicated that it does need to be re-evaluated.

Todd noted that the worst thing to happen is that you get people together to meet, then you can't adequately follow up.

Bill noted that our partners are also struggling. Jim stated one issue is to consider the scale of our mission with respect to the resources we have and decide how we need to get there in the next ten years.

Wilson asked if staff had looked at whether or not it might be possible to have some partner effectively take over some of the work groups, especially if they are responsible for many of the identified tasks for that group anyway. And if need be, develop a MOU for that one. Bill agreed that was an option. Bill noted that it took several years to get the SAV Partnership up and running.

Wilson noted that a lot of the fishery management agencies are moving in the direction of EBM now, so it may be productive to consider having one of them lead the freshwater habitats and fish passage work group, for example. He stressed that he wasn't yet advocating that be done, but rather just that staff conduct an assessment.

Bill addressed the likelihood of being able to undertake that approach. He addressed the potential for APNEP to secure additional staff positions and the budget situation. Bill noted that he has tried to keep half, or less, of the funding for staff salaries, and the rest for projects on the ground. The down side of that approach has been limited capacity to leverage resources and build partnerships. Bill noted that the program has to change, and secure more staff resources, now that we have moved into the implementation phase. If we have more staff, we can leverage more resources. More staff capacity would mean being able to pursue additional grant opportunities.

Bill asked about the opportunity to bring another person on the staff. Todd noted that increasing staff capacity was certainly an option. Reducing the number of work groups is another option. A third-party

taking the lead is another option. Bill agreed that the latter option is one we can explore more. He noted that he was supposed to go a visit the Puget Sound NEP, and he didn't get to go. He noted that they have lots of funds to implement their CCMP. In that case, they have taken the work groups and put out RFPs for individuals to manage work groups. The actions track back to CCMP actions.

Todd noted that there are some groups that you don't want to farm out. Bill stated that oysters may be one group that could be farmed out. He noted that he would like to farm out the invasives work group. Wilson asked if the state's ANS Plan was done yet. No, Bill advised it wasn't, because of staff departures, but it is getting back on track.

Jimmy noted that the letters for the Freshwater Habitats and Fish Passage workgroup had already gone out.

Rhonda noted that the Policy Board had approved the work plan, so if we need to revise it, we can do so. Bill noted that with regard to funding, small-level projects (\$8,000 or less) don't need to come to the Board but larger amounts need PB approval. Bill asked if the grant agreement needs to be modified.

Bill indicated that moving one position would mean \$50,000 out of the budget.

Tom Allen asked if Bill needed a motion to reallocate \$50,000 out of the work plan. Tom indicated also that we could discuss outsourcing some of the work groups. Tom noted that he was on a work group for a while, with Lindsey, and they were both involved with the Coastal Atlas, because there was some overlap with the CCMP.

Bill noted that the possibility of moving funds to some of DENR's facilitators had also been discussed. Bill stated that if we contract with someone or some organization to steer a work group, then it will take a while to get them up to speed. Bill stated that we still need a champion for each of the work groups, to keep them moving, and if we are spending funds on that, it would be funds well spent.

Bill stated that what is needed is the flexibility for him to be able to reallocate funds from the work plan toward additional positions. Tom made that in the form of a motion. Bill would need to consult with the Executive Committee on this. Wilson seconded the motion. The motion passed.

Todd noted that he has a sense that there is support for reducing the number of work groups, if needed. It was indicated that it was too soon to make that decision. Staff needs to have time to investigate. They will get back to the Executive Committee meeting on that point.

Rhonda noted that another thing is that there is an approved plan, which is part of the 320 Grant. This clarifies the agreement for the conference with EPA, and is different from the logistics of all the work. Rhonda stated that Bill would have to come back to the Board for final approval, once Bill had explored.

Tom moved that the Board give the Director and staff flexibility in rearranging the work groups, and delegating non-staff to take leadership of those groups, possibly including contracts and grant work. Todd asked if we had a second.

Bill stated that he wasn't sure they could reduce the number of groups any further. Todd noted that if we can't handle the present number, we need to be careful. Bill stated that they would look at which ones could possibly be farmed out, and/or which ones may be delayed. What they need is a little more

detail, looking at what actions the groups have, and which ones may be moved forward, and/or which ones might be addressed by some other group. The Oyster or SAV group may take the lead on one of those. Burrell seconded the motion. The motion passed.

Bill noted that the plan was viewed as ambitious but realistic. He noted that he isn't where he wants to be with regard to implementation, but he isn't ready to give up yet.

Bill referred us to the CCMP Actions Cheat Sheet, and noted that it has a January, 2014 date on it. He noted that they will be contracting with Lindsay for some of her time, to address some of their database issues.

**2:30 p.m. Discussion of Key Program Objectives for 2015 Todd Miller**

Todd asked about key program objectives. Todd noted that the number one impairment, which was reported to EPA was copper. He doesn't understand that one. He has asked around and hasn't yet gotten a good answer. Bill stated that he has done some investigation, and some people believe that it might be a methodology issue. Todd noted if that is the case, that would be relatively easy to fix. Todd noted that there is a lack of understanding regarding the copper. Bill stated that one possibility is that stormwater treatments may be putting copper in the water. Bill suggested that we refer that one to the contaminants work group.

**2:35 p.m. Public Comments Todd Miller**

There were no members of the public present to comment.

**2:36 p.m. Old & New Business Todd Miller**

Todd asked if we were going to have any more meetings this year. Bill indicated that we would not have another meeting this calendar year.

Bill asked for any volunteers for vice-chair and noted that Burrell could volunteer Kirk. Todd noted that it didn't seem appropriate to him to have a Virginia representative as vice-chair, since they would ultimately become chair, despite the fact that we have great Virginia people on the PB.

Bill noted that Willy has moved off the Board, and Mac Gibbs from Hyde County has been suggested as a replacement. The planner position is also vacant. Bill was hoping that we would have a new Virginia representative by this meeting.

Jim noted that the Implementation Committee isn't going to be fully staffed, until we have all the work groups fully formed. That needs to be kept in mind.

Bill stated that the EO says there will be a PB, STAC and Implementation Committee. He explained how the process worked in the past. The vision now is that there will be a recommendation from the work groups to the PB, and thence to the Secretary. Bill stated that it is problematic to be going through one partner, to make all of the appointments, is problematic. Bill stated that we will have two more members of the PB, and the Executive Committee will have one more member. Bill explained how the funding decisions would be made. The work groups organized and running first, will have more chance at funding.

Dean stated that the Implementation Committee would make the funding decisions, but also would be the body responsible for doing integration. Todd asked if they anticipated that group would have different membership than the STAC. Dean and Bill felt it would. There is only one STAC member assigned to each of the work groups.

Todd suggested now might be a good time to consider streamlining. Todd stated it would be interesting to see who would agree to take a leadership role. It would be interested to see how STAC members participate. Bill said that there are a lot of folks who want to work on the Oyster work Group, but there was a reluctance to take a leadership role. Jim noted that he had wanted to get a lot of STAC members for the Contaminant Work Group, but had scaled back a bit.

Bill stated that he fears that with the EO the way it is right now, we wind up with an Implementation Committee that isn't engaged with APNEP.

Todd asked if there was any other new or old business. There was none.

**2:55 p.m. Notice of Future Meetings**

**Todd Miller**

With regard to elections, Bill suggested that we have an electronic election prior to the next PB meeting. He anticipated having the next full Board meeting sometime in February. Nominations should come to Todd, or Bill. Bill reminded the Policy Board that they could choose to expand the Board membership. He didn't really want to see it expanded back to 21 members again. He noted that it was good to have Sea Grant on the Board.

Dean indicated that the STAC's next meeting is scheduled for February 11. They were going to have a focus on implementation, presuming that all of the work groups would be constituted by then. That might be a good time to have a less formal PB meeting. Bill wondered about having a PB meeting, following the STAC meeting. If we met in the evening, perhaps dinner could be provided. Tom Allen will be the new Chair.

Todd noted that work is underway with the Oyster Work Group, to have a meeting in Raleigh at the Museum of Natural Sciences. The dates are March 10-11. They are considering some type of legislative reception. He indicated that there would be more official word coming out later.

Bill indicated that Dana is our Virginia field person. Virginia has agreed to continue working cooperatively. Funding will pay for some of Dana's 'time this year. They are pleased that Virginia made that commitment. Bill indicated that at 4:00 PM today, there is a fish fry in Manteo. Willy Phillips is there cooking fish, which is why he isn't here.

Bill thanked Marie again for her time, and apologized for her being shifted around so much. Rhonda noted that Marie had done phenomenal work. Joanne asked for her future plans. Marie indicated that she would be beginning graduate school in the fall.

Todd asked for a motion from the Policy Board to acknowledge Marie's outstanding contributions to the program. Tom Allen indicated he supported that as well. The motion passed unanimously.

Policy Board members were asked to convene on the porch, for an official photograph.

**3:00 p.m.      Adjourn**