

APNEP Education and Engagement Action Team
DRAFT Meeting Notes

10:00am – 1:30pm
November 8, 2016

North Carolina Department of Environmental Quality
Archdale Building, 512 N. Salisbury Street, Raleigh, NC
Webinar

<http://apnep.org/web/apnep/educationengagement>

Attendees: in person: Nicole Wilkinson (WRRRI), Danielle Pender (NC Museum of Natural Sciences), Lisa Tolley (NC Office of Environmental Education), Sean Higgins (NC State Parks), Gloria Putnam (NC Sea Grant), Sarah Yelton, UNC-Institute of the Environment, via phone: Terri Kirby-Hathaway (NC Sea Grant), Lori Davis (NC Coastal Reserve), Carol Price (NC Aquariums), Jessica Whitehead (North Carolina Sea Grant & Science and Technical Advisory Committee (STAC) representative), Kendall Smith (USFWS), Sara Hallas (NC Coastal Federation), Heather Deck (Sound Rivers & STAC representative), Renee Strnad (NCSU), Holly White (Town of Nags Head & Policy Board representative).

APNEP Staff Present: Stacey Feken, Coley Cordeiro, Bill Crowell, Jimmy Johnson, Marygrace Rowe

PURPOSE: To define the scope of the APNEP Education and Engagement Action Team and ensure the team is set up to achieve relevant Comprehensive Conservation and Management Plan (CCMP) goals and objectives.

- Welcome and Introductions
- Meeting Purpose and Objectives
- March, 2015 Meeting Notes

- APNEP Overview and CCMP Implementation Update
 - FY2015-16 Education & Engagement Action Team Grants
 - Other APNEP Sponsored Education & Engagement Initiatives

- Role and Scope of Education and Engagement Action Team
 - **Action D1.1:** Communicate the importance of stewardship and offer opportunities for volunteerism to further APNEP's mission.
 - **Action D2.2:** Provide environmental education training opportunities for educators in the region.
 - **Action D2.3:** Increase public understanding of the relationship between ecosystem health and human health advisories relating to water, fish, and game.

- Discuss inclusion of Access Action Team actions:
 - **Action D1.5:** Increase opportunities for public access to waterways, public lands, and trails.

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- **Action D2.1:** Provide and promote opportunities for outdoor experiences that connect individuals with the Albemarle-Pamlico ecosystem.

- Implementation Committee & Integration with Other APNEP Teams—SAV, Nutrients

- Establish Team Composition & Structure / Selection of Team Chair(s)

- Action Plan Development Discussion

- Management Metrics

- Roundtable Education and Engagement Updates

- Review of Action Items

- Schedule future meetings

- Adjourn

Welcome and Introductions

Stacey Feken, Policy and Engagement Manager for the Albemarle-Pamlico National Estuary Partnership (APNEP), welcomed the action team. The last time the group met was in March 2015. For this meeting, we did not convene the full group that met previously, but targeted a subset of previous participants for feedback on the team set up as we move forward. We may decide to include the full group, invite new participants, or split in to smaller groups as needed in order to adequately cover the assigned actions from the CCMP. Bill Crowell, Director, added that we wanted to be sure we were adequately covering all of the assigned actions and focused on CCMP implementation. Stacey opened the floor for comments or edits in regards to the notes from the March meeting, there were none but participants were invited to share feedback to her via email if they see anything.

Introduction to APNEP & Program Overview

Stacey gave an overview of APNEP. She explained that APNEP's watershed management strategy entails working from headwaters to the coast. She showed a river basin map of the APNEP region as a reminder of the scope of the region, and noted that projects can be located anywhere within these river basins, not just in the estuary. The APNEP region hosts six river basins containing 43 NC counties and 38 VA counties. APNEP is one of 28 National Estuary Programs (NEPs) established by the Clean Water Act. APNEP is funded through an Environmental Protection Agency grant to NCDEQ. The EPA requires a Comprehensive Conservation and Management Plan (CCMP) be established within each NEP. The CCMP has 58 actions that are separated into 5 components (Identify, Protect, Restore, Engage, Monitor). Currently 13 action teams have been set up to address CCMP implementation and multiple actions have been assigned to each.

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The Advisory Committee is made up of the Policy Board, Science and Technical Advisory Committee (STAC), and the Implementation Advisory Committee. These groups offer input and expertise on policy, technical, administrative, and funding issues. The Action Teams then decide how to best implement the CCMP.

Bill Crowell explained the CCMP had been adopted in 2012 and that technically we should be four years into implementation. However due to a number of reasons, including staff changes and that some staff (Bill and Jimmy) were half time as they were also responsible for the Clean Water Management Trust Fund, we are effectively only six months into implementing the CCMP.

Bill explained that the Implementation Advisory Committee (IAC) would be comprised of representatives / chairs from each of the Action Teams. The IAC will be responsible for funding decisions. If this team decides to put out another Request for Proposals or recommend funding individual projects, it would be routed through the IAC to ensure funding is balanced across the action teams. Major funding decisions (projects greater than \$4,000) are also routed through the Policy Board.

Stacey ran through the list of Action Teams that have already met and those that will be formed in the near future. She mentioned that the assignments listed could change, as there are current vacant positions that will also be responsible for leading Action Teams. Bill added that the Shorelines Action Team is active.

Stacey continued that the Education and Engagement Action Team could assist with other teams, as many have actions that may result in education and engagement outputs, such as workshops and educational materials. She is lead of the Education and Engagement Action Team and Jimmy Johnson is the secondary lead.

Stacey showed a graph on CCMP Implementation and noted that it was a preliminary look, more work was needed to evaluate CCMP implementation. She noted that most projects to date have addressed Engagement. Coley Cordeiro clarified that the data just included past contracts added that this was just referring to past contracts, not everything APNEP and partners have done. Stacey suggested that this could potentially be a topic for a future meeting once we're able to refine and crunch the numbers.

Sarah Yelton asked if there was a goal in mind for the percentages. Coley responded that APNEP is looking for a balance between all five components. Bill added that most projects try to incorporate multiple categories on the pie chart. He suggested that there should always be a larger engagement portion, as engagement is typically a part of most projects.

Stacey briefly reviewed the Education and Engagement Action Team grants that were awarded in 2015:

- Seeds of Inspiration: Mano al Hermano & NCCF
- Sea Wolves: CMAST
- Sound Choices in EE: EENC conference
- Secrets of the Swamp: Museum of Natural Sciences
- We Are Nature Heroes: NC Aquarium-Roanoke Island
- Cistern and Wildflower Meadow: NC Aquarium—Roanoke Island

She then briefly introduced the Shad in the Classroom and Roanoke River Days events that have been going on for 6-8 years through APNEP's partnership with the NC Museum of Natural Sciences and U.S. Fish

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and Wildlife Service. Danielle Pender, Shad in the Classroom Program Specialist, gave a brief overview of the program and noted they were reviewing applications and getting ready for 2017. She added that the Roanoke River Days is a traveling exhibit to schools within the Roanoke watershed that uses the geodome with hands on activities that takes place over a week.

Stacey then went over the Teacher Institutes and workshops that APNEP sponsors including the At Water's Edge partnership with the UNC-IE. Sara Yelton noted that this year they also had funding from the Duke Energy Foundation. She said these institutes and workshops allow teachers an opportunity to expand their knowledge of environmental topics and they also spark interest for attaining the Environmental Education Certification.

Sara Hallas discussed the Teacher Institute on Ocracoke that the NCCF hosts.

This year, APNEP also funded a Project WET facilitator workshop. Lisa Tolley noted that Holly Denham had moved to Georgia and her position of Project WET state coordinator position is vacant.

Stacey then went over the recent outreach events APNEP staff participated in including SciREN, Kids River Fest, Go Outside Willamston, and NC Coastal Envirothon.

After a short break, Stacey went over the three primary actions that were originally assigned to the team: D1.1, D2.2 and D2.3. She also went over some Public Access Subgroup goals: D1.5, D2.1 and asked the group if they would feel comfortable absorbing any of these actions.

Danielle Pender mentioned that the Museum offers trips to Lake Mattamuskeet.

Sean Higgins said when he thinks of access he thinks of it in terms of boat access or land acquisition and, easements, agreements, etc. and suggested it may not fit well with this group.

Nicole Wilkinson noted there was a difference in promoting the awareness of the region vs. promoting opportunities for access.

Lisa Tolley said it had been considered with the River Basin publications, Tracy Weidert has been working on documenting public access and there were challenges involved.

Terri Kirby-Hathaway noted that increasing awareness of the Albemarle-Pamlico system included outdoor experiences with teacher workshops.

Lisa said the EE certification often inspires people to volunteer in their region after having outdoor experiences.

Heather Deck said Sound Rivers is working on increasing public accesses on the Neuse and linkages to the Mountains to Sea Trail. These include ADA accessible ramps and launches. They are working at the county/local government level to put these in place.

Bill noted that things had changed since this action was written and included in the CCMP, there was not as much public access at the time so it had been identified as a need. He said there may not be a need to form a full team or subcommittee for public access, it may be a data gathering exercise with partners to compile what is currently available and see what needs exist.

The group agreed that D2.1 fit and should be incorporated into this group, but not D1.5.

Stacey asked if there was a need to break up into smaller groups to tackle the other actions. She mentioned action D2.3 as it could be geared towards adult education, and the group had not focused on this particular action to date.

Gloria Putnam agreed and noted there was a need for adult education related to this action.

Sarah Yelton mentioned a project they had partnered with the Superfund Research Program and others with funding from the Ward transformer. They are producing materials to educate subsistence fisherman about the impact of contaminants and help them understand water quality health advisories in Lake Crabtree. She asked if they let us know about that work, can the information be promoted? Link to [“Eat Fish, Choose Wisely”](#)

Stacey said yes and offered to promote any activities that partners are working on. She said that anyone can email her regarding these sort of activities. She also said she tries to share relevant information on social media (Twitter, Facebook, LinkedIn) but may not see everything, so it is helpful if people send along items they want shared.

Coley mentioned that the group can share documents on Google Drive.

Lisa Tolley mentioned the [Teachable Moments blog](#) on their website, that all were welcome to contribute. It also includes an Educator’s Spotlight, where recipients who have earned an EE certificate are highlighted.

Sean asked if the APNEP region included the entire Neuse watershed. Stacey replied yes and noted that the only two rivers that didn’t include the whole watershed were the Roanoke and White Oak. Bill clarified that the Roanoke included the portion below the dam, the entire watershed was not included for a number of reasons including issues with interbasin transfer. The White Oak just includes the portion in Carteret County. Gloria asked if their work in Swansboro would count and Bill said they could discuss further.

Stacey then spoke about the potential outputs listed in the CCMP for each action item to give the group an idea of materials and resources this team could produce.

Bill reminded the group to read the entire text associated with each action in the CCMP, not just the summary highlighted in bold. It’s important to understand the context of each action in its entirety.

Stacey opened the floor to any other examples of education materials in regards to D2.3 and summarized that it was something for the team to think about as they develop an action plan, what are the needs in this area and what type of education and outreach falls in this category.

Stacey then briefly reviewed the Secondary Actions and mentioned the opportunity to integrate with other teams.

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Stacey then showed examples of outputs or materials for Action D1.1 that APNEP had worked on with partners in the past, including the River Basin booklets, NC Catch placemats, and Virginia version of the Chowan River Basin booklet produced for the Albemarle-Chowan Watershed Roundtable.

Lisa said the EE Office appreciated the partnership and that this particular resource was very popular. She stated that teachers demand classroom sets of these materials often. Stacey had polled the teachers at the UNC summer Institute and they all said they used them.

Jimmy added that the NC Catch materials ran out as fast as they were printed and noted they had been distributed to restaurants. Stacey mentioned they were also used in the cafeteria at the legislative building and suggested that might be a good audience for other materials the team might produce.

Gloria suggested doing another version that talks about water quality and seafood or connecting people with where their food came from, noting it could be a series. You could also highlight different fisherman or a specific creek, habitat, or other geographic location.

Jimmy added that several restaurants are already making these placemats to promote locally caught seafood. He said there was one called getting to know your fisherman.

Stacey then showed more D1.1 output examples including Video Production for Hydrilla, Shad in the Classroom, and Mano al Hermano. Gloria was involved in the Hydrilla video. Stacey added that these videos showcased APNEP working with partners and can be found on the APNEP YouTube Channel. A new "About APNEP" video was showcased during Estuaries Week. Stacey mentioned there was not currently anyone on staff that had this expertise.

Other types of D1.1 outputs include engagement opportunities such as one former APNEP staff Marie English led called "A Peek at Pocosins" during the NC Science Festival.

Action D2.2 addresses environmental education and training for teachers; many of the outputs have included teacher workshops. Stacey asked the group if there was a need for more workshops.

Sarah asked how they can find out about workshops occurring in a watershed. Lisa said they have an online EE database that includes workshops and an online calendar. They could tag APNEP events by county.

Coley suggested ArcGIS online as an easy way to share info.

Nicole mentioned that we could also tie in information that WRRRI and Sea Grant share.

Stacey suggested that we create some kind of inventory of events going on.

Stacey went over other Action D2.2 outputs that had been produced including lesson plans. She mentioned the SciREN events as a great resource and opportunity to interact with teachers.

For Action D2.3, outputs included SAV signs placed at boat ramps.

Stacey then discussed opportunities for this group to integrate with other action teams on topics including nutrients, contaminants, submerged aquatic vegetation and policy & economics.

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Gloria mentioned that she was involved in education efforts related to Harmful Algal Blooms (HABs) that require cross-coordination between groups. There is freshwater phytoplankton monitoring on the Chowan, and EPA is funding a citizen science project that includes the Chowan Edenton Environmental Group. She believes there is a need for more of these types of activities due to the recent blooms in the Chowan and Pamlico.

Stacey then opened the floor for comments and questions about the action team set up. Do we need to break into subgroups?

Gloria mentioned that based on her past participation in the group, she felt the focus was more in K-12 vs. public and adult education. She had observed there were many K-12 educators present but not enough general public educators represented in the group.

Sean stated that at State Parks, their focus is on all of their 18 billion visitors, they cater to all people, not just K-12. They have visitor centers throughout the region and are building new ones at Eno River and Pettigrew State Parks.

Bill said there was an opportunity when building new facilities to include Low Impact Development (LID) techniques and stormwater improvement and use them as educational opportunities, including signage and public outreach materials.

Bill also suggested that the aquariums offer more general public education opportunities.

[There was a short break due to a computer update/reboot, after the meeting we received feedback that some of the participants were not able to log back in to the webinar.]

Bill suggested not breaking into subgroups.

Nicole said based on her experience with the Watershed Stewardship Network, having multiple people on multiple committees was too much and challenging to schedule and that it was easier to have larger group meetings.

Sean mentioned that a colleague trying to set up a youth based kayak camp and asked if the team would put out another RFP. Bill said there were currently no plans but that was up to the group, but if we decide to do an RFP we could.

Stacey stated that each action team has to set up an action plan to implement actions. She said that would be a topic for discussion at the next meeting. The team could discuss then if an RFP is needed.

Stacey asked the group again for any other ideas regarding team set up. There were none, so she reiterated that the group had approved including one Access action, and decided there was no need to break in to subcommittees.

Stacey said the last time the team met in 2015, they had discussed developing metrics and noted it would be a topic for the next meeting. APNEP will be looking for feedback on what others are currently using to measure the success of their programs. Coley has been working with partners on current APNEP contracts to ensure that surveys and other follow up materials are included for projects we fund.

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Gloria asked about integrating engagement and education actions from other teams. How will we go about doing that, is the plan to appoint someone? Who would be responsible for keeping track and communicating with those groups? Stacey said APNEP staff would perform that role since they are involved in multiple teams.

Bill also noted that the Policy Board and the STAC are engaged in each team and are also responsible for taking information back to those groups. Stacey mentioned that APNEP staff would also be sure to follow up with the STAC and Policy Board.

Terri asked if we were the only team working on action D2.3. Stacey responded that we are the primary team working on that action. Terri asked if this action was secondary to any to any other teams, and Bill said yes it is secondary to several other teams. Stacey will identify those and send out a list. [Follow up: the other [Action Teams](#) include but are not limited to [Contaminant Management](#), [Nutrient Workgroup](#), & Water Quality Improvements.]

Sarah Yelton said there was a need to see where the gaps are for this item as well as the earlier discussion on teacher workshops, we need to identify who is working where.

Holly asked if the scope of the team was limited to educators. Local governments are incorporating a water quality baselines into their policy. All coastal counties are required to disclose in their land use plans. She noted they had participated in one-day workshops with Sea Grant and these were a great way to reach out and to educate policy folks. They are developing template policy statements that address water quality improvement.

Stacey responded that the scope was not limited to educators, and what Holly described is a great example of other types of education and engagement as well as opportunities to integrate with other teams. She said she would like to hear more about this and discuss how we can incorporate into this team.

Stacey asked everyone to go around and share roundtable updates.

Holly White, Town of Nags Head and Policy Board representative, stated that she has been working on the Nags Head Comprehensive Panning Effort. She stated that APNEP's [Economic Valuation](#) study proved useful and offered helpful information about the value of ecosystems and the environment. She said they are half way through drafting the policy. She also mentioned that she is working with Jess Whitehead on sea level rise in Nags Head. The town is partnering with Sea Grant through a facilitated process to get a sense of public perception regarding sea level rise and what hazards we are vulnerable to.

Jess Whitehead, NC Sea Grant, messaged the group via the webinar to share more information on this planning tool, [Vulnerability and Consequences Adaptation Planning Scenarios](#) planning tool, known as VCAPS. Sea Grant is working with [local governments](#) to assess risks from climate change and identify ways to reduce vulnerabilities, involving the community and stakeholders in the process.

Carol Price stated that she recently started at the NC Aquariums as the Conservation Research Coordinator and is housed at CMAST. She is working with all of the aquariums and coming up with focus areas that make sense to pursue funding for research and education. She looks forward to meeting everyone and following up with various partners one on one including APNEP. Bill suggested she look at what the Charleston Aquarium is doing, she replied she is looking at them and others that are focused on research.

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Terri Kirby Hathaway, NC Sea Grant, is working with Lori Davis, NC Coastal Reserve, on a project called Seeds to Shoreline with local schools. They are collecting *Spartina* seeds, germinating them and replanting them for marsh restoration. She is also working to expand the Sea Grant education program over the next two years.

Sara Hallas, NCCF, stated she is currently conducting Dare County classroom lessons. She is helping build rain gardens on school grounds and is working on middle school water quality programs. She added that she is doing work that is not being sponsored by APNEP, but does fulfill action items and asked how she could report it. Stacey said that APNEP is interested in hearing more about this type of work, but has not figured out a process, so said she would get back to Sara and the group about reporting.

Sara said she is a part of a group called Coastal Environmental Educators Network (CEEN). Terri is also a member. There may be opportunities for this team to work with the network.

Heather Deck, Sound Rivers, stated they had been very busy after Hurricane Matthew and working on strategic planning for next year. She also mentioned the number of calls they received during the algal blooms in the Pamlico basin, which has sparked discussion regarding the best way to relay information to the public about harmful algal blooms, water quality, fish consumption and the need for standardized information and education about issues affecting public health. They are also working on finalizing proposals for stormwater projects with local colleges which includes an education component. She also noted that the role of her organization is to use education as a tool to spark action, which is not necessarily what is typically thought of with environmental education.

Renee Strnad, NCSU, said she was representing the Environmental Educators of NC (EENC) and mentioned they received a grant from APNEP for their last conference held at the coast. She added that the next meeting in 2018 would not be in the APNEP region.

Gloria Putnam, NC Sea Grant, stated she is continuing her work on the Hydrilla surveys and phytoplankton. She added that this is the third year of monitoring and the effort involves citizen science. This year, they did not find any Hydrilla, which is puzzling. They are also working on other issues related to submerged aquatic vegetation and invasives and natives.

Sean Higgins, NC State Parks, said they are building new visitor centers at Eno River and Pettigrew State Park, and are working on updates to Hammocks Beach and Jockey's Ridge. Their goal is to connect people to the environment when they come to play. For instance, getting people on the water, they are working with a non-profit organization to develop a canoe program. Bill suggested he look at the programs the Lower Columbia River has.

Sarah Yelton, UNC-IE, talked about the fish consumption advisories mentioned earlier and noted they had worked with the Upper Neuse Riverkeeper Matt Starr of Sound Rivers on that project. She mentioned they had a stakeholder meeting planned to discuss better ways to coordinate regarding environmental health, and had plans to expand pilot survey of well water users in regards to contaminant concerns. They are in the process of planning next year's At Water's Edge Teacher Institute. She also discussed the EGRET program for elementary teachers that is currently in the Tar-Pamlico River Basin, they partner with Sound Rivers, the Office of EE, and Goose Creek State Park on that effort. They would like to expand to other river basins and are looking for more match funding—they have funds from the Eddie and Jo Allen Foundation. The group joked that they may need a new acronym if they expand.

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Lisa Tolley, NC Office of Environmental Education, said they were hosting a Non-Formal Educators Meeting with the Department of Public Instruction and EENC December 6. She expressed that comments are needed on the importance of incorporating environmental education and literacy into the state's plan for the Every Student Succeeds Act (formerly No Child Left Behind), which is also tied to funding the state receives for environmental education programs. *[After meeting idea/follow up: perhaps this action team could sign a group letter from APNEP and signed by partners??]*

The EE Office has also planned their lunchtime speaker series for spring and have worked with the aquariums to line up OSEARCH (shark tracking) to speak at the Daily Planet in March.

Danielle Pender, NC Museum of Natural Sciences, said they were planning for Shad in the Classroom, Roanoke River Days, and Secrets of the Swamp. They are working on a Junior Curator's program and coastal ecology of the outer banks program for the public and educators.

Nicole Wilkinson, WRRRI, noted their efforts were geared towards environmental education for academic audiences and decision makers. Their focus is on working with and training watershed and water resources professionals representing a variety of stakeholders including government, university, and non-governmental organizations as opposed to the public and K-12. She is also involved with the Watershed Stewardship Network. They are planning more training events such as the watershed planning workshops held last year. She is also involved with planning the annual WRRRI conference, to be held March 15-16, 2017. The focus has been on freshwater resources but they have been trying to grow coastal representation the past few years.

Gloria Putnam mentioned the Watershed Stewardship Network is planning an outreach campaign, which may include a focus on the value of water, and suggested this team may be able to work with WSN on that effort.

Bill added that APNEP has been evaluating a host change at the direction of the Policy Board, and has been making progress towards a potential move to a university system, possibly UNC-IE at Chapel Hill.

Stacey then thanked everyone for being a part of the meeting and dismissed the team.

Summary & Action Items:

- **The group agreed that Action D2.1 fit and should be incorporated into this group, but not D1.5.**
- **The group agreed there was no need to break into subcommittees.**
- **Topics to include in the team's Action Plan will be discussed at the next meeting, preliminary items are identified below.**
- **Stacey will send out a list of which teams have Action D2.3 listed as a secondary item (included in notes above).**
- **APNEP will figure out a process/method for partners to report on projects that fulfill CCMP actions but are not implemented in partnership with APNEP and share with the group.**

Preliminary items identified for the Action Plan:

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- **Action D2.2:** The team will work together to create an inventory of existing teacher workshops and training in the APNEP region to determine if there are needs or gaps to be filled.
- The Office of EE can assist with flagging events in the APNEP region by county.
- Identify needs for Action D2.3, identify who is working where and what gaps need to be filled.

General:

- Team members to send any items they would like promoted via social media to Stacey.
- Team members are encouraged to submit articles to Lisa Tolley for inclusion in the Office of EE Teachable Moments blog.
- Team members are encouraged to comment on the importance of including environmental education in the state's plan for the Every Student Succeeds Act.