

Engagement and Stewardship Action Team
Albemarle-Pamlico National Estuary Partnership (APNEP)
10:00am-3:00pm
May 16, 2017

ECU Greenville Center
2200 Charles Blvd., Greenville NC, Room 1200

AGENDA

Welcome and Introductions

Stacey thanked everyone for coming and the group introduced themselves: Gloria Putnam (NC Sea Grant), Melissa Dowland (NC Science Museum), Paul Mazzei (Roanoke Aquarium), Dave Sybert (CSI), Liz Brown-Pickren (ECU), George Mathis (River Guardian), Terri Kirby-Hathaway (NC Sea Grant), Sarah Yelton (UNC-IE), Heather Deck (Sound Rivers/ STAC rep), Maria McDaniel (A Time for Science), Jess Whitehead (NC Sea Grant / STAC rep), Charles Yelton (NC Science Museum).

On phone: Constance Alexander (EPA Region 4 NEP Liaison), Bridget Munger (NCDEQ), Holly White (Town of Nags Head / Policy Board Rep), Ami Flowers-Staples (NCDMF).

APNEP Staff present: Marygrace Rowe, Jimmy Johnson, Kelsey Ellis, Coley Cordeiro, Tim Ellis, Stacey Feken.

First things – last meeting was in November; goal was to regroup. Team originally met in 2015. Regrouping with new staff and new participants. Ultimate goal is to implement the APNEP CCMP. Today we aren't going to go through it, but we are happy to give anyone a briefing if they'd like. Sometimes we do go through things in more detail, but today we're going to jump right in.

Review of November 2016 Meeting Notes

For those at the 11/16 meeting, the notes from that have been posted on the web. Anyone have any comments or edits they'd like to see made? No edits.

Meeting Purpose and Objectives

Team in 2015 issued a request for proposals and funded about 6 projects. Since we've met several times, we're hoping to dive in and develop an action plan for this team. CCMP is from 2012-2022 – keep that in the back of your mind. Hoping to ID some things we can do in the short term, but also come up with some collaborative initiatives we can work on throughout the region in the long-term.

Review of the APNEP mission – powerpoint presentation. Stacey is lead on this team, Jimmy is secondary, Kelsey may be taking more responsibilities on in the future.

APNEP's mission – ID, restore, protect significant resources of the AP ecosystem. AP is a big system – 6 watersheds and coast. Keep scope in mind as we go forward. Goal is to implement EBM throughout the region – can partner on projects throughout the watershed. APNEP region facts – big, 28000 square miles, watershed approach, 6 river basins, etc.

APNEP Programmatic Updates

Coley – issue of funding. APNEP was funded through October 2018. As far as any updates for moving, we have no movement on that front as of right now. Any questions or concerns? Question about yearly funding – we're funded through a grant through 2020, but are given a level of funding each year.

Stacey – funds are primarily there for implementation purposes. Currently roughly 13 teams, so funds are split and are dependent on the needs of the teams and what they want to do moving forward. Think through what the needs are and what are the actions we can accomplish together. Coming up with a topic we can all implement throughout the region, there are a number of ways we can tackle these actions moving forward. In the past the team developed an RFP, APNEP solicited proposals and ended up funding 6 projects. Mano al Hermano – family summer literacy project, Roanoke Island Aquarium Summer Programs and stormwater project, Env. Educators of NC – Sound Decisions conference, CMAST Sea Wolves Program.

This team does not necessarily have to do an RFP or solicit proposals. Not limited to that approach in how we move forward. The sky is the limit! Want us to brainstorm and think through things together. In order to make resources go further, we want to partner with people in the region – leverage resources.

Review of CCMP Actions: Role and Scope of 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.

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

Jimmy – quick reminder of actions that have been assigned. The actions that have been tasked to this action team fall under the engagement portion of the CCMP. If you look at it, that would be component D. Jimmy reads through CCMP Actions (D1.1, D2.1, D2.2, D2.3).

Stewardship was added to Action Team name because education in schools seemed to become the sole focus of the team – added to emphasize that stewardship is also a component of the team. We aren't limited to these four actions but these are the primary 4 actions assigned to this group.

[Action Plan Development Discussion](#) [click link for handout]

Stacey – we had discussion at the last meeting about projects that APNEP has sponsored in the past – we’re trying to capture some of those in one place. Quick cut from the last two years. We’ve walked through the actions associated with the team, at the end there’s also a discussion of the secondary actions associated with the team. Want to avoid mission creep, but there are other Action Teams with Actions where we have programs that cover those topics – food for thought.

What we tried to do here is a straw man for discussion. Don’t want to imply that we’re limited to the projects listed here. APNEP handles projects on a case by case basis, so some of these are projects that have come up and we have entered into a contract. Some are ones that partners have approached APNEP about or are projects we have heard about in different team discussions. **We do not want to limit it to what is listed here, if any of you have projects you know of or are working on then we should discuss those.**

First one – stewardship action. Very broad, number of projects that can fit under this category. Number of things you’re already all working on. This is taken straight from the CCMP – some acronyms may have changed, but we haven’t edited those. These do align with outcomes in the CCMP in terms of goals. We can walk through that with you individually if you all want, but we didn’t want to spend the whole day doing that.

Jimmy – keep in mind that the projects we fund need to be keyed into CCMP outcomes. Need to be sure that what we’re doing supports the outcomes found in the CCMP.

Stacey – outcomes for this one are workshops and engagement materials, volunteer opportunities. Recent sponsored projects – many are from 2015 RFP. Is there anyone who wants to speak to potential projects?

Terry - Seeds to Shoreline started in SC. Students collect seeds, take to classroom, germinate, in spring do wetland restoration day where they do and plant the spartina. Laurie Davis and I worked with 10 teachers in NC – most in Carteret, one in Hyde, one in New Hanover. Purchased greenhouses, teacher training. One year of doing it, with varying success. Hurricane blew over greenhouses, seeds died, etc. Carrying on the project for another year with a shoestring budget, **wanted to talk to APNEP about doing this project at a better level of funding.**

Stacey – Sean Higgins from NC State Parks couldn’t make it today, but he brought this up at the last meeting – initiatives at state parks, new visitors center at Eno River State Park. Partnering to share water resources messages, creating new displays at visit qor center. Creating message for these displays. Kayak and coastal ecology camps – falls under another action item as well. Blending in conservation education and recreation opportunities. American Canoe Association hosting a film festival. Does anyone have any thoughts/comments?

Jimmy – Stormwater education is really important/significant, especially as you go inland.
Stacey – I actually put that in there, past projects have dealt with retrofitting facilities and I

knew we had a number of projects in our toolbelt. Issue of how big the watershed is, making that connection of the Triangle to the Sounds.

Melissa – Swamps activities – taking a group of project-based learning fellows on Roanoke River, one from the Explorers school, the kids went down to Kinston after hurricane Matthew, kid working on developing an algorithm on releasing water from Falls Lake Dam.

That group of fellows came to the museum in March for a follow-up. Another tie-in to something that kind of already happened.

Heather – was this idea something from state parks? Stormwater. Stacey – could be broader, also ties into action D2.3, it could tie in to a number of different resources. Heather – who is the best audience? On Neuse/Tar-Pamlico, new development is required to do stormwater control. Preexisting development is a bigger issue. Is target audience general public, city/public officials? Big challenge. Idea of rain gardens, I always question the outcomes – are they actually maintained over time? Just curious about thoughts in terms of the best uses of these funds? It's very important, stormwater is going to continue to become one of the main factors affecting water quality/quantity.

Stacey – good point about the audience. Some CCMP actions have a target audience, but this one could apply to any audience. Discussion we had with AT back in the fall – who is our audience? Members are working with many different groups. Perhaps could pick a topic and create materials aimed towards different audiences. Internal discussions as well, who is our audience? I'd be curious on more thoughts on that related to this action – this action could apply to anyone.

Melissa – in terms of audience, is there a part of that that targets on the local/county/municipal levels for stormwater management? Stacey – we do have actions targeting local governments, assisting with coastal resilience and planning for sea level rise. An action related to educating policy/decision makers regarding the economic value of the region. If stormwater education is a route we want to head down, we could carve that out and pull the relevant actions.

Jimmy – Action D3.3 – providing support to local governments to prepare for sea level rise, etc.

Stacey – anywhere that we can marry two actions together, if we can get more bang for our buck and leverage limited resources to try to accomplish multiple goals with one project that's a good thing.

Coley – STAC has mentioned elevating several issues to the Policy Board to recommend increasing awareness to legislature....riparian buffers, algal blooms, etc.

Stacey – STAC meeting in February, there was discussion in the afternoon about the issue of who the APNEP audience is, discussion of being more targeted with efforts and we're starting to go back through the CCMP with that in mind.

Sarah Yelton – Familiar with Durham’s stormwater education program, **opportunity to leverage resources – already developed resources from larger municipalities, we could help spread that message out without having to do the creation of a lot of new things?**

Heather – Stormwater fits with a lot of the things this group has been talking about. Figuring out a process to do that. Staff is the glue between a lot of these different action teams. How do you all do that? How do you communicate what’s going on between the different action teams?

Stacey – part of why there are a lot of us here today. Idea of keeping other staff in the loop, making sure that people attend the meeting and can communicate to each other. Right now everything is happening organically

Coley – positioning the staff to lead related action teams. Making sure the right hand is talking to the left.

Stacey – internal matrix to share team assignments. Want to share with you to see what’s been assigned to each team, want you to go through and look to see if there are connections we’ve missed.

Idea of leveraging existing programs in more populated areas, can anyone think of towns/municipalities/etc that have successful programs we could contact?

Paul – Coastal Fed rep Sarah Hallas is partially funding a position Dare Co. Soil and Water district. Met recently with them about something small but I know that she’s working on a proposal for a watershed plan at Jockey’s Ridge. Education component to that. I also went to a room full of engineers a couple of months ago – watershed planning meeting. They referenced work that had been done in the Wilmington area as a success story. I utilized their printed materials when I worked at Fort Fisher, could be a good place to start in terms of handouts/materials. **Two things: Coastal Fed/Dare Co. and City of Wilmington’s program.**

Dave: It comes down to audience as well. Our area, demonstration sites on the beach, don’t know how many people seek them out. We’ve done research on stormwater on the Outer Banks for a long time, **have videos that you could use and also have K-12 materials.** But who are you interested in?

Stacey – We want to go where you want to take us. Trying to balance things, trying to spread the love equally amongst the different actions. Maybe we could come up with a topic with multiple audiences, develop a program and tailor products to reach multiple audiences across the region that could be implemented by your respective organizations. Or maybe one project lends itself more to one audience/topic. We’ve partnered with people on rain gardens/stormwater demos for a while...do you find those to be effective methods of education?

Holly – When you are talking about stormwater education, is this quality or quantity education?

Sarah – flooding issues

Jessica – flooding doesn't get as much attention as it should

Holly – Nags Head is the only community in area of outer banks with a stormwater engineer. Ties into groundwater issue here. Use of septic systems out here, it's kind of all tied together.

Stacey – excellent point. My mind gravitates towards quality, but dealing with flooding/volume issues are also important and the two are related.

Holly – quantity issue becomes a quality issue with heavy rainfall in a short amount of time over septic systems. Because of the way our communities are developed. Gets back to a point earlier about making sure people understand – increased public understanding between ecosystem health and human health. What impacts do we have? What do we need to be aware of? In the city it's easier to educate, you have formalized stormwater systems, rural areas have so many informal drainage systems it's hard to educate people about how stormwater relates to water quality, there's a disconnect

Stacey – Holly, idea of using this program, but idea of taking existing programming...thoughts from a local gov't perspective?

Holly – **create a template from existing programs.** What's an issue in Durham isn't going to be an issue in coastal NC. Repackage to make specific to AP area. **If you push out to PIOs, planners, people who deal with it on a local level – something to put out on social media, we on planning staff don't have time/resources to create that. It's an issue of time for staff.**

Jimmy – Gloria and I were in a meeting last week in Edenton about algal blooms. Are sending out **info in utility bills** about water quality and to alert folks about blooms in progress. Not sure how successful something like this would be, but idea to come up with an insert to put in utility bills.

Charles/natural sciences museum – common strategy that a lot of utilities pursue. Opportunity for APNEP to **work with local governments to nudge them to look at BMPs when it comes to households.** Communities moving to stormwater fees to help people manage their own properties. Still lots of communities behind the curve when it comes to teaching people how to manage stormwater on their own property. **Professional development opportunities for stormwater managers** – bang for their buck

Heather – Greenville, financial incentives for doing a BMP on a private property/business are small. Other than knowing it's good, they don't recoup that funding. Opportunity through COGs to set up utility fee that would incentivize this.

Charles – Exactly, these opportunities are lacking. Selling household systems, etc.

Stacey – topic that might also be suited to policy/economics Action Team.

It sounds like there's some interest in this topic, also relates to Action D2.3. Interest in working together around the idea of stormwater education? No one disagrees.

We'll table that for now and bring it up later.

Focusing back on Action D1.1 – stewardship. I know a lot of you are considered informal educators, meeting back in December, we were hearing needs from different nonformal educators around the state. How hard it is to get the word out about different programming. Wanted to address this on a broad scale – way to get the word out? Brochures? Resources, making people aware of that these things exist. EENC website.

Melissa – ongoing challenge. Office of EE does have a good database of those kinds of resources, more about making connection between teachers and the resources are already there. Tough egg to crack

Charles – Agreed. Marketing directly to teachers is a big hurdle. **Figuring out what teachers real needs are and their ability to take advantage of these resources. What are the real needs and what are the accessibility hurdles?**

Melissa – agreed to some extent. Need = curriculum in a lot of ways intersecting with museum's mission. Accessibility – time is a huge one and something we can't address, being able to pay for something – need to be able to communicate our ability to help pay for things. Having local contacts is helpful in that regard – word of mouth is a good way, talking to principals often doesn't help much.

Sarah – teacher institute is free, I send out an email to superintendents, etc. Work study students directly email teachers, we use listservs. This is specifically for the APNEP region. Really depends on which way it funnels down. Would be great to have some sort of face to face meeting for people at the district level, let them know what's available. Also some of those barriers, we have teachers who want to come down for a week but can't because of childcare, transportation issues. Haven't figured out how to fix all those yet.

Charles – messages were exposing them to, how to sell them on the importance – both teachers, districts, administrators – how to get buy in from those audiences. Need to better know what their needs are so we can better tailor what we're offering to meet those needs. For example, maybe can't spare time for something longer but can do something else instead. Or APNEP could start certification program – stormwater friendly schools – to get that carrot for administrators. There's a lot of unused capacity out there, and we know that teachers can benefit from this. How can we activate that?

Jessica – nsta.org – [article](#) just published – outlining the panel held by the NC Office of Environmental Education on this exact issue, includes how some of the lessons from this issue are being incorporated into Piedmont stormwater education. Feedback – tailor to in-classroom activities so that teachers who can't travel have access. Budget is pretty ugly right now, teachers get that there's value but when you're told that you have to take sick leave to do it...we need to tailor our expectations to their realities.

Dave – would it be of value for APNEP to know what kind of stormwater education is taking place among partners? Then just put out something specific for the APNEP region, stormwater, etc. People who visit CSI aren't the same as those who would visit the museum.

Stacey – this topic came up last time, and she is working with Lisa and Marty to pull information regarding teacher education programs already taking place in the region, we could expand that discussion. They maintain lists and databases of all education programs that aren't just limited to teachers – multiple audiences. Idea of extracting out what's happening in the APNEP region – we're talking to Lisa and Marty about doing that. Identifying what's occurring amongst all partners – reconvening to discuss what is going on and what is going to happen.

George – Elephant in the room, question of whether office of EE will even exist. Should APNEP find a way to pick up the pieces if the EE certification program no longer exists? He was at an EE program last week, most people don't know that the program is in jeopardy.

Stacey – APNEP is hosted by DEQ where the Office of EE is also housed. For those of you who can speak on behalf of your organizations or as private citizens, I know they'd be appreciative of that. Share info with friends/family. We hope we don't have to have the conversation and will see how it plays out.

Refocus on action items. Bertie Co. has purchased 137 acres on Albemarle Sound, have vision of creating a regional EE / recreation center similar to the Trinity Center in Salter Path, opportunity for "inner banks" to provide resources to the area. We've talked to them directly, it's an area that can use some support. They're working with staff at ECU – potential for partnering for displays, programs, etc. They're seeking out grants, leveraging opportunities. They may appreciate support from other partners in the region. As we move forward we'll keep that in the mix.

Sarah – Residential facility? Stacey – not sure if at that scale, she mentioned that vision is one that county commissioner, Tammy Lee has. County representatives made the point that there are families that have never put a toe in Albemarle Sound or the tributaries, and would like it to be a resource for the region.

Albemarle Chowan Watershed Roundtable – VA based group. Previously worked with Office of EE to reprint river basin booklets. Complementary effort in Chowan basin, with educators in VA. At last roundtable meeting that was discussed. Wanted to make you aware of that, could opportunities for collaboration that meet regional needs.

Citizen science – number of citizen science efforts going on in the region. Fall under D1.1 category. Opportunity for this team to assist with citizen science, or start new citizen science? APNEP led a citizen science group in the past but we aren't doing that now.

Stacey asked George to share their project, it will be included on the list.

George – involved in getting containers out to fishermen to put monofilament fishing line in. Good idea that works anywhere. Primarily a marine activity but works inland as well. Instead of fishermen cutting line off and leaving it, we encourage them to grab it, put it in a small container, take it to a recycling facility. PVC pipes at fishing piers. Tennis ball containers repurposed with Velcro strips. Pretty good success, a lot around Wake Co. area. Greenville outdoor recreation orgs. Rocky Mount in the future. Other thing – Wake Forest wants to put up self-serve dispenser for tennis ball cans with poster on the front, grab a can to use it and dispose of the line. Nonpolitical. Looking for funding, not expensive.

Paul – good match with the aquarium, we have a lot of fishing programs.

Gloria – where do you get the containers? George – I'm talking to folks at NCSU. Bulk come from tennis clubs around the triangle.

Charles – citizen science – advertise citizen science organization involving both education and research side, conference is this week. Will be back to Raleigh in May 2019. A lot going on in NC in relation to citizen science.

Stacey – we're talking about supporting existing citizen science initiatives, Coley mentioned a researcher who needs a place to house their data. Heather is working on initiatives with zombie crabs, stations along goose creek, mostly going to happen this summer, had a pretty good response from our membership. Astrid Schnetzer -- we're going to work with her to put out six sites of the Pamlico, easy part. Monthly change out resin bags. For her, challenge is to find funding to do analysis on the back end. Don't currently have opportunities on the Neuse but are looking for them.

George – Watershed Stewardship Network – one effort for this year is to look at citizen science and figure out who's doing what

Charles – museum is doing a lot, 42 active citizen science projects at field site, staff on board of big associations. One of our jobs is to go out and help people interested in citsci. EPA regional office in RTP does a lot with citizen science. They're looking for how to make that public connection with their work. Bill Ross, previous secretary of DENR, sits on EPA Advisory Commission and has helped steer things. A lot of resources available.

George – good to know, need to make sure that info gets disseminated.

Charles – we have homegrown citsci projects and also more national projects

Sarah – Another citizen sci project in NC, starting a lake level monitoring network for natural lakes, mostly Carolina bays, in prototype stage of grant from NASA and will hopefully be able to expand it nationally. Very easy. **If anyone has contacts in Croatan National Forest/Camp Bynum – would be great to get a contact there to get gauges out there.** Basically like a stream gauge, want people to check weekly. Can text lake level. We're working with a researcher in geology at UNC – pairing those with satellite imagery to track water storage over time. All related to a satellite mission going up in 2021.

Charles – museum projects in APNEP region – dragonfly detectives rounding out third year and hopefully will get more funding to continue. Funding from state parks, resource managers, local afterschool groups – kids go out to capture dragonfly behavior. Another – Emammal, involves camera traps, working with NCWC to install camera traps at schools to monitor.

Stacey – any other citsci initiatives throughout the region to put out there?

Paul – WQ related citsci initiatives? Melissa – Wisconsin project with fantastic resources.

Charles – Chris Goforth has looked into this quite a bit, could work with you. NC has been standoffish about using public data, so this could be a good time to revisit that.

Heather – program Volunteer monitoring information network – no more funding but that was a really good program, you sent them frozen samples and they came back with a host of water quality parameters. Was in 2009-2010.

Charles – project with coastal fisheries to record catch info. Charter captains used to have to do a lot, it was a hassle, but they've changed the methods so people can just send a text about their catch so their able to monitor populations that way. WrackText?

Gloria – citizen science monitoring network – fairly new grant. Chowan-Edenton Environmental Group – first freshwater phytoplankton monitoring group. Terry – schools along the coast are doing monitoring for harmful algal blooms, some have been doing it for ten years. Dead seabird study, people walk the beaches and look for dead birds.

Stacey – anyone on the phone have any additional ones to add? Holly – are these citizen projects? Planners in the outer banks are working on some education on risk, it would kind of tie into the stormwater piece, it would benefit the public but is kind of separate.

Stacey – Break 20 minutes for working lunch. Come back at 12:20 and we'll get the conversation started up then.

Action D2.1 – outdoor experiences. Jimmy reopens discussion. Shad in the Classroom completed a couple of weeks ago, he and Marygrace participated and it was really neat to see

how excited the kids are, they were even writing haikus about their shad. Melissa – it started in NC in 2009, partnership has lasted about 6 years.

Riverfest. Heather – Riverfest was underwater. Rescheduled for mid-October. Free day for kids to explore river park north. 1500 kids the past two years. Lots of diversity, lots of people who normally wouldn't go. Saturday 10a-2p, October 14th.

Jimmy – kayak camps through state parks under consideration. Canoemobile, Wilderness Inquiry trips. Stacey – Sean's project, was hoping he would be here to elaborate on that. Was looking for ways to get people out on the water, providing educational opportunities around that.

Heather – we've done a similar program the past two years. Third year we partnered with cities of Kinston and Washington. Going to try to come back to that next year. Incorporating environmental education.

Jimmy – Secrets of the Swamp project Melissa – overnight for educators on the Roanoke. Plan to do that next year. Last year incorporated PBL, next year it'll be stand-alone. River Days affiliated with Shad in the Classroom. Educators from NE NC, viewing video and doing activities related to water quality and the river system.

Jimmy – I know there's others, what are we missing that needs to be added to the list?

Maria – Time for Science Expo earlier this year in Greenville. Lots of different kinds of science. About 45 exhibitors. Doing it again next year.

Jimmy – talked to Bertie Co. commissioners last week about EE center. Excited but are concerned about funding, other issues, etc. Still moving forward.

Sarah – would you all have the opportunity to set up a meeting with folks in the area that are doing EE, talk to Bertie Co. and give advice? Charles – NCAEEC NC Association of EE Centers offers that service free of charge. Jimmy – that's a great idea Stacey – is that something you all would be interested in participating in? Sarah – would be helpful to **find out their questions**, send out an email to this group and EE centers association to see if there are people who have that kind of expertise. Charles – centers might be able to shape that conversation a little bit. Jimmy – they're basically starting from ground zero.

Jimmy – any other ideas? Being in Eastern NC, were blessed with aquariums, FWS facilities, opportunities to partner with so many different people. Think a little bit outside the box?

Paul – one program in the aquarium – Seed to Sound – she had previous funding that just ended this year. Interest from schools, 5th-6th graders. Variety of outdoor experiences, collecting data.

Melissa – Girls in Science Summer Program – in the past did programs at the coast at the Trinity Center – might be resources and staff available to make that happen with some extra funding.

Camping platforms along the Roanoke/Tar are great but underutilized. Boundary Waters of Minnesota attract tons of people, Eastern NC has similar resources but how can we attract people? Roanoke P...Sound Rivers are managing bodies. Connecting people to that resource would be a great way to accomplish this goal. Helping groups that are already going there, or starting your own programs. Heather – on Tar-Pam right now, we're rebuilding after hurricane Matthew. Also will be doing some on the Neuse, around Greenville. People should use them for educational purposes...if it becomes an economic burden just let us know. We want them used, so use them. You can reserve them online.

Melissa – platforms along Roanoke can sleep 8-10 people. Heather – most of ours are up on land. Melissa – one double platform on the Roanoke is great for groups, having a few additional sites that are good for groups would be a good way to make them more accessible

Melissa – paddling in general is a fantastic resource. Last year explored some of the tributaries of the scuppernong. So many waterways in the inner banks/coastal plains are underutilized. Need more access points, need more trips to take people out there. Don't know what is the answer on who does this, resource is amazing.

Paul – CSI, aquarium, are all running summer camps – paddle summer camps or day trips could be a thing. Possible funding for people that can't afford to send their kids to summer camps – there are a lot of kids in the community not attending those summer camps because it's cost-prohibitive.

Melissa – Mt. Rogers Naturalist Rally – 20+ years – over 300 people this year, managed by the Blue Ridge Discovery Center – connect people on a shorter scale to the natural world. Could do it in NC at the right kind of year. Kind of like a conference but outdoor experiences instead of powerpoints. Bring people interested in those things to give them a little more depth. Partners could come together.

Charles – analogous to that – wings over water – going on a long time in this region – great festival. We have a lot of resources, umbrella organizations like APNEP, Partners for the Sound, etc., working towards very similar goals, but I still struggle with how do we join forces – how to have a cohesive message that we can all get behind. NC LOW – NE NC economic development through natural/cultural resources.

Coley – it seems like this is really where APNEP can fulfill a role, bringing people together to collaborate on a project. Baby steps before big steps, maybe. Asking Marygrace about the Envirothon.

Marygrace – Academic competition about environmental topics. Starts out local and then goes regional.

Coley – one piece that tied it all together for me is that they had experts there speaking to the children

Charles – nationwide effort, we've had it in NC for a long time. Online resources, etc.

Marygrace – next year or the following year, national competition will be hosted in NC. Jimmy – I think it was in NC 10-11 years ago. Coley – one last plug, I want to make everyone aware, we don't just provide funding, we can also provide resources. We can bring partners together, we can provide technical assistance, put you in contact with the right person, etc.

Maria – We're trying to make our place more accessible for handicapped people – ramps/walkways around our pond. Want them to be able to go right to the water's edge – if you know of any grant funding, that would be great. Coley – Access action team has yet to meet, but that's

Heather – Group from Beaufort Co. builds accessible ramps, Pitt Co. might have something similar.

Coley – action item for us – excel file we went over yesterday in funders meeting, we could send it out to the group when completed

Maria – is there someplace, say someone wants to go online and find something to do outdoors, is there a place where all of this is listed? If not, maybe that would be a good place to start?

Coley – all encompassing answer, it depends. North Carolina Coastal Atlas – good resource. Brad Beggs, with ECU outdoor program and had a website with a comprehensive list of all the things you could do. Maria – what about Joe Public? Coley – I know Maria – is there money for an advertisement? Coley – access action team, that is something that's supposed to come out of that. As far as publicizing to the general public, I'm still wrapping my mind around it Maria – we lack funds for advertising Stacey – another good source is the office of EE, they promote outdoor activities on their website. At one point I think APNEP tried to maintain a similar calendar but it was too much. On the teacher education side, it sounded like there wasn't a need, but for this is there a need?

Maria – for NC Atlas, could anybody go there and ask them to put something up? Stacey – not sure. Coley – division of coastal management manages it now. Maria – is it free? Coley – yes. visitNC.com Melissa – I see commercials and billboards for that. Charles – I feel like that's underutilized. DOC has a lot of money, they spend a lot of money advertising, it's the responsibility of individual orgs to contact Visit NC to tell them about their events. It's low-hanging fruit.

Maria – Meetup? Knowing where to go, idea of an advertisement in local newspapers. Sarah – I like the visit NC idea. Chamber of Commerce for a city will also have some things.

Coley – **I've made a note to contact the folks from visit NC.** Even has Albemarle-Pamlico sound as a filter.

Melissa – **Convince Coastal Lakes National Wildlife Refuge to put in a bathroom at the Pungo unit. Stacey – Kendall Jackson, we could contact him about that.**

Action D2.2 – provide environmental education training opportunities for educators in the region. Stacey – longstanding partnership is the teacher institute. Past few years at water's edge, now has a new scope. Sarah – we're leveraging funds, had an opportunity to leverage teacher's institute funds with private funds to create a year-long professional development for teachers. Similar to EGRET in the Tar-Pam. 4th and 5th grade teachers. Summer institute supported by APNEP, private funding supporting weekend trips. We are actively seeking funding to expand this program. We have been advertising, recruiting, half or over half of the applicants are from the APNEP region.

Melissa – would be neat to involve teachers from AP and another NEP in the country in an exchange program. Introduce teachers to our estuary and give them the opportunity...would bring in partnerships with other NEPs. Allows for a rich experience. Educators of Excellence experiences – hugely impactful. Stacey – I'm from LA/TX, had friends/teachers asking about opportunities. Interesting idea.

Paul – Fort Fisher has a sea turtle curriculum based around a series of activities and aligned with common core, currently it's something offered in the Wilmington area but they would be excited about expanding. Teacher workshop they do down there and which could be brought up into our neck of the woods.

Stacey – Seeds to Shorelines idea again. SciREN Greenville – not as many participants. Don't know if there's a need there, we have APNEP-produced lesson plans, etc. Offers opportunities for educators to interact directly with resources/scientists. Right now there are a lot of graduate students leading that effort, are you aware of any needs? **Melissa – I'll mention it to the leadership team from SciREN Triangle, they formed a nonprofit.** Every year they pull scraps together from different universities and departments. Typically fairly small costs, but providing handouts, giveaways. Lesson plan workshops, supporting the materials there. Mainly kind of small ticket items but there are opportunities to do more with additional funding.

Stacey – Greenville event, they were having trouble getting the word out and it was right after the election. Maria – I think we're hosting SciREN Greenville this year. Leadership was changing, it was a big mess. Melissa – October 21st for SciREN Triangle this year. Terry – this year, more contact between the teachers. One of my biggest concerns is a lot of the lesson plans are developed by grad students, developed and never tried in a classroom. I go to classroom and offer CEUs to practice SciREN lesson plans. Timing is something that the grad students are not

so good at planning in terms of the lessons. Over 300 teachers sign up to do pilot testing, 5 have followed through. Looking for funding to do a small pilot test where grad students partner with teachers to develop lesson plans/practice beforehand before presenting. VIMS has a program – developed VA SEA – Science Educator Alliance – put grad students in the classroom with the teacher, panel discussion about lesson plans/curriculum, teachers mentored grad students in planning a lesson. Grad students presented lesson plans to teachers after mentorship/practice. I'd like to see SciREN go more that way.

Melissa – not a whole lot of long-term feedback. I may just not know. I think that would be helpful. One of the other benefits of that – connections are the richer benefit of SciREN. Trying to address lesson planning issues in planning workshop, but it's not an easy thing to do.

Stacey – Project WET facilitator workshops. Holly Denham. Open to formal and nonformal educators. River basin booklets. Any other projects or initiative or thoughts?

Break because of technical difficulties.

Melissa – problems with Shad in the Classroom – logistical difficulties. Lots of coordination involved. 27 classrooms involved, reaching a point where we are at capacity. **Way to grow that program – find a satellite location to mirror the program at another site. NC Science Museum could facilitate, provide support. Way to bring Shad in the Classroom to more schools? Any partners willing to take this on?**

Sarah – geographical limits? Melissa – Neuse Basin, Roanoke at Weldon. Eastern NC site is a good candidate. Don't anticipate that changing because of the way the commission is tracing the parentage of the shad. There's been talk of other fish species – different requirements of raising different fish. Also it's a real restoration effort that we get to be a part of.

Sarah – ties more into D2.1. River basin booklets – hiking and paddling sections in them – **use those basin booklets and make them mappable/searchable – so you don't have to go look at pdf versions.** Stacey – Tracey Weidert was working on Discover your Ecological Address – there may be a way to tie that in with the Visit NC, NC Coastal Atlas, etc.

Melissa – educator treks, we bring educators on weekend workshops to other parts of the region. **If there was funding to offset those costs, we'd be happy to make those more available to teachers with fewer resources.** [Audio died at this point]

Stacey – Holly has to leave soon, is there anything you wanted to bring up? Holly – as far as the planning part? Stacey – we talked about providing resources, educational materials Holly – **create templates that could be used by local governments or could be geared towards citizens as well. Creating a shortlist of policies/actions from CCMP. Planners could use these instead of getting consultants to do this kind of work. Some kind of shortlist that included language that would be helpful for consultant/planner, would ultimately be implementing actions of your plan through their plans. Put template out and connect with planners. Section**

5 – NE regional planners, meeting next week. Could partner with planner organizations to educate planners – conduit into the local communities. Even if they can't implement it on their own, could carry that info into their local communities.

Stacey – you specifically mentioned water quality, we talked earlier about stormwater education, this could be a good way for all of us to do some information sharing.

Holly – **policy template could be here's a menu of options for policy that would address water quality. Some communities are small enough that they don't have planners, if you have easy, ready-made policy in template form that they could tweak, it puts good policy in their plan and it helps your organization accomplish what you want to accomplish.** Stacey – you're pulling out policies about riparian buffers, LIDs, stormwater, etc. Have to go through whole CCMP right now. Instead, brochure, 1-page doc, information on website, etc.

Action D2.3 – increase public understanding of relationship between ecosystem health and human advisories.

Stacey – we're hearing there's a need to address topics in this area. Fish consumption and risks associated with fish and risks of algal blooms are two topics that keep coming to the surface. Is there opportunity here to collaborate on some of those topics? Also were talking about stormwater education earlier today. Liz, could you give a brief overview of your project on the fish consumption side?

Liz – Tyrell Co., compact. Not wealthy. Long history of people fishing from the same spots. People coming into the convenience store, I asked them how much money they made and they do depend very heavily on eating fish and almost no one knew about seafood consumption advisories. Available on dept. of health and human services website, freshwater is available when you get your fishing license, saltwater isn't – **wanted to push for saltwater to be included. No signs up** – difficult because advisories change, don't want to put up something that will change. Also most people didn't know about subsistence waiver. Talked to division of marine fisheries in Washington – Doug Bunfort(?) in Washington. Chris Wilson took his place, said its up to the WRC to put up signage – Christian Waters is the person to contact. **Any way APNEP could figure out how to warn people. Fewer than half the people she talked to used the internet, so you can't expect them to check online.**

Melissa – did you ask them, if they knew about the consumption advisories would they change their behavior? Liz – no, I didn't ask them that. If its edible at all, you eat what you can get. Gloria – did you find out where they get info? Liz – friends, the bait shop, wildlife officers, parents and grandparents. **The bait shop would be a great place to put some posters and flyers.**

Charles – it would be interesting to look at empowering people to look to fish for other species, lower-risk species. **Tackle-assistance programs to shift fisheries away from high-risk species.** Specific methods used to fish for catfish as opposed to other fish. Liz – **educational program**

that would bring kids/families out, show them how to fish, show them how to fish for lower-risk species.

Charlies – I think that would be fantastic. Commission already spends money on free tackle for families. Wish someone from the commission was here to speak to this. **Sarah – Christian Waters is very approachable and interested in this issue. He would be the person to talk to.**

Sarah – very interested Liz to talk more to you. We've been doing work with the superfund program – PCB contamination around Lake Crabtree. We want to tell people where to fish, there's no safe place to fish because of mercury advisories across the state. Focus groups with fishermen, etc., around the state – how do we communicate about fish consumption advisories. Folks from NC State would be good to contact. Signage issue – putting up signs, what do they need to say, it's a complicated issue – how can you boil it down? We've worked with George, Sound Rivers, Lake Crabtree County Park. We've been talking about continuing this work, trying to move it out of the Triangle area. Duke folks working in Cape Fear River around Castle Hayne(?) on similar research. Finding out who's fishing, what they're catching, how they're preparing it. Trying to help further conversation between DHHS and Wildlife Resources. No one fishing is going to the DHHS website. Liz – good model from Georgia where consumption advisories are put out by wildlife resources and health dept. together – so there are no mixed messages.

Stacey – I had reached out to the Dept. of Health – Lauren They – working with Kennedy Holt

Heather – in southeast waterkeeper network, fish consumption advisories came out as something to focus on. Nothing is standardized, no standard size. Longer scale – no regional coordination. SC or GA has rolled out a hotline – you call and it gives you info about fish consumption advisories. Big media campaign to get the word out.

Sarah – issue of not scaring people Working with WRC, they don't want scary messages when they're trying to get people to learn how to fish. Part of the messaging is figuring out how to make safer choices Charles – shifting the message to “fish for these fish”

Stacey – a lot of overlap between algal bloom and fish topic. There's a task force working on this issue at a state level. Algal bloom response team in the Chowan

Gloria – Cathy Davis – algal bloom response team in the Chowan. Lag time between getting a sample and issuing a warning. Communication issues between agencies at the state level. Coming up with some better testing methods, quicker. Need for outreach – posting signs where people are actually fishing. Group hasn't decided where/what to post. Some local health depts. Are ready to get out and educate the public, don't know about DHHS. Opportunity here to get engaged, as well as going down to the Pamlico and do the same thing.

Heather – opportunity to do something with other info – seagrasses, safe swimming, etc. Is that the statewide task force?

Stacey – not sure, I was hoping Bridget could speak to that – DEQ and DHHS are working together to try and solve this. I didn't know if the Chowan group was a pilot effort or something different. **We'll reach out and find out more details. Regardless, it sounds like there is a need, partners in the room are working on these issues.**

Any more thoughts? Is this something you see the team taking on?

Paul – Terry might know this, we talk about sustainable seafood and there are a lot of tourists eating seafood. Any need for more information out there at restaurants? Terry – NC Catch would be more in tune with that Jimmy – I would reach out to local CATCH organizations

Charles – zoo is looking at plastics reduction. Marine plastics is a huge issue but it's big for terrestrial orgs too. I don't know if that's been talked about

Paul – it's been filtered down, I don't know much more than that about next steps

Charles – pushing back against consumable plastics – educational efforts needed?

Paul – getting word out there to visitors and things, sustainable seafood is an important issue for people who are more well-off

Connie – working with aquarium on trash free program – Atlanta aquarium. They have gotten funding from some of their partners – they could provide more information to Paul. **Put Paul and Connie in contact about GA aquarium trash free program. Connie will share info about children's health program as well.**

Stacey – Connie, would you mind mentioning the well monitoring program? Connie – citizen science project relating to children's health. Curriculum called recipe for children's health, up to the 8th grade. Can be used in any classroom setting. K-2, Charlie Goes to Town – health and how it relates to children.

Stacey – you mentioned there was funding available, monitoring wells in rural areas. Connie – this is what we were talking about earlier George – not about well monitoring Connie – train the trainer program within the health dept/extension – citizen monitoring for wells Stacey – testing for water quality related impacts? Connie – yes, you may not have that many wells, but the office of R&D was thinking about this Stacey – do you have some more information you could share with the group? George – timeframe? Connie – you guess is as good as ours, it depends on our budget. **Once we have information we'll be sure to get the information out.**

Stacey – interested in hearing from the group, is this a topic you'd like to pursue – fish consumption/algal blooms?

Sarah – in terms of fish consumption, there are some things happening that are going to happen regardless and it would be good to plug APNEP into this. If it's a matter of getting information out there it would be good to keep everyone informed.

Stacey – is the team supportive of signage/educational materials related to Chowan algal blooms?

Heather – our team would use that too

Stacey – getting back to your respective offices, programs, let us know if there are things we could help with. Does anyone have anything else on this topic they would like to talk through/bring up?

Heather – just curious if other NEPs are dealing with the same thing, how they are dealing with it, if there's anything we could use? Stacey - Connie, you said that Indian River Lagoon has some brochures we could utilize? Definitely a good idea to look into. One of the challenges, some of them have much smaller watersheds, much more targeted audience. Tampa Bay is one example – they have a lot of different things going on. Centered public outreach/education around fertilizer. Save the crabs and eat them campaign from the Chesapeake Bay. Sounds like we're ready to leave this topic. Anyone on the phone have anything additional to add?

Stacey – looking at the time, will run through things quickly. Everyone was curious about secondary actions – looking for opportunities to integrate these topics. Some of these teams may not have met yet. Runs through secondary actions and associated potential programming.

Each individual team comes up with ideas to implement their actions and can get expertise from this team, but they are responsible for actually carrying out those activities.

Includes placemats for legislative building, educational materials for regional planners Jess – there are outcomes and projects on which Holly and I will be working in the next year. VCAPS from Nags Head, including options for sea level rise. Several of those items are education-related. Currituck is also including sea level rise. Request from Swansboro, etc. Other projects – getting clearance to say we've decided to fund oral history of sea level rise, photos of coastal change, traveling exhibit. Huge potential for additional leverage as it begins to take root within the art community. Charleston – integration of art and science festival all day, etc. Idea that's really beginning to take root within the region. A lot of opportunities, if not under D3.3, could look at how you mainstream sea level rise, changing precipitation, stormwater, etc. Next national climate assessment is still on track to come out next year.

Stacey – I have quite a list here, we've heard a lot in relation to needs in this area. Curious to hear if any of you are working on things in this area. Gloria – going to a meeting in Currituck Co. next week for a meeting, working with TNC for green infrastructure planning in relation to resilience Jess – code for sea level rise Gloria – they're gathering info about where water is pooling in different areas of the county. If things go well there, this is something that could be

taken to other areas. Stacey – trying to see where we can integrate with stuff you all are already working on

Maria – PLT has a book of climate change activities to do with students. Upper middle/high school.

Stacey – SAV team has definitely expressed an interest in communicating benefit of SAV. Don't know if that team is ready for outreach component but they want to do that eventually.

Team started talking about management metrics – if we choose a project, we need to be moving towards CCMP implementation. Coley – performance measures are our goal.

Collaboration for 2017 Estuaries Week and AP Estuary Day

We're very interested in partnering for estuaries week, held in September. Very interested in doing something for estuaries week – haven't in the past and it's a missed opportunity. There is typically a Governor's Proclamation for Estuaries Week done for the whole coast, APNEP has pursued this in the past and last year the NCCF had it done. This year APNEP would also like to have an AP Estuary Day for the APNEP region. Would be done during estuaries week.

Terry – interested in specific date, thinking about seafood festivals and thinking either stay away from that or leverage something to be included in one of the festivals. Outer Banks, Morehead City, New Bern, etc.

Stacey – it doesn't have to coincide – there's also a targeted national campaign during February, I Heart Estuaries.

Terry – or national wetlands month, which is held in May.

Selection of Action Team Chair(s)

Stacey – call for chair of action team, role is helping to inform and guide discussion of some of the subjects on the agenda. Right now we're using members of the STAC and Policy Board but if anyone is interested, wants to volunteer themselves or nominate someone else.

Melissa – time commitment? Coley – someone for the staff to interact with and bounce ideas off of

Coley – Melissa is interested Melissa – I'll talk to you all about it later Stacey – we want the direction to come from the partners moving forward, we're still the ones facilitating/running the meetings, role is more about providing guidance

Melissa – wants more info about being action team chair

Quick Partner Updates and Activities

Review of Action Items

Discuss frequency/general schedule for future meetings

Stacey – I've heard summer is a bad time. Maybe a meeting in the fall, unless you thought you wanted to meet sooner? Any thoughts? No response from the group.

George – Doodle poll?

Stacey – Okay, I can do that. Does the fall generally work? I would like to think about phasing – things we can accomplish in the short term, things we can accomplish in the long term. 2022 is ultimate CCMP goal but also thinking through things we can accomplish in the next year.

Gloria – would be good to come up with priorities for the next meeting. I didn't hear anyone chomping at the bit about group projects. I think some big discussion is needed about what the group can do.

Jess – we're a very broad, diverse group – might be helpful to get a draft priority or logic model and have the team respond to that.

Stacey – I can tell you that in terms of developing priorities, it needs to come from team members. If there's a way for the team to help us identify what the priorities would be, that would be really helpful for us. The priorities need to come from the partners. That's a challenge that we're faced with.

Jimmy – maybe we can find a way to distribute a general list/ranking for people to choose beforehand, so we can come up with something.

Jess – some feedback or guidance on how we should be actually weighting how we're making those priority decisions – timeframe, feasibility, existing resources, etc – needs to be given. STAC and the Policy Board have the long/high view and can look at the overall picture.

Coley – send out a google doc survey where team members can prioritize on the things discussed during the meeting – something so that we can move forward between now and the next meeting

Jimmy – Jimmy said that priority issues for the Coastal Habitat Protection Plan include SAV, living shorelines, and WQ/sedimentation issues. Between the CHPP and our CCMP, maybe we can use that to help inform our decisions.

Stacey – we can put a straw man together and send to the group. Anyone left on the phone?
Meeting adjourned.

Adjourn

Action Items:

- 1) APNEP (Stacey) to send Action Team Matrix to the group when completed.**
- 2) APNEP (Coley) to send the matrix from the grant funder's meeting when completed.**
- 3) EPA (Constance) will send more information on the children's health/well monitoring project when available.**
- 4) Coley will contact the folks at Visit NC.**
- 5) APNEP will pursue working with Chowan algal response team on signage or other needs since there will likely be short term needs before the team meets again.**
- 6) APNEP will find out whether there is also a statewide algal bloom task force.**
- 7) Stacey & Coley will follow up with Melissa regarding team chair responsibilities.**
- 8) Action team to send any ideas for Estuaries Week collaboration to Stacey.**
- 9) Action team to send any additional ideas for projects for team consideration to Stacey.**
- 10) Stacey will add project ideas discussed during meeting, add any team sends in the interim, and put into a survey to get feedback from the team on priorities and scheduling.**
- 11) APNEP will then develop a straw man logic model based on this feedback.**