

Coastal Resilience Community of Practice Meeting

Thursday, September 23, 2021 – 1:00pm - 3:00pm

Via Webex

Purpose of the COP: Bring together diverse coastal stakeholders to focus on how ecosystem resilience can build local community resilience. We don't necessarily have to have a "thing" to work on but will take on projects as appropriate and mutually agreed on. Website: <https://deq.nc.gov/coastal-resilience-cop>

Agenda

1:00pm Welcome & Introductions. Attendees:

- Cat Bowler, Audubon
- Jacob Boyd, Division of Marine Fisheries (DMF)
- Sam Burdick, Town of Beaufort
- Kacy Cook, Wildlife Resources Commission (WRC)
- Lora Eddy, The Nature Conservancy
- Stacey Feken, Albemarle Pamlico National Estuary Partnership
- Michael Flynn, North Carolina Coastal Federation
- Eryn Futral, NC Floodplain Management Program
- Joe Heard, Town of Duck
- Whitney Jenkins, Coastal Reserve & DCM
- Rachel Love-Adrick, DCM
- Brooke Massa, WRC
- Tancred Miller, DCM
- Amanda Ohlensehlen, City of New Bern
- Charlan Owens, DCM
- Gloria Putnam, NC Sea Grant
- Grace Roskar, Coastal Reserve & DCM
- Sarah Spiegler, NC Sea Grant
- Mackenzie Taggart, DCM
- Holly White, Town of Nags Head

Guests:

- Laura Moore, C-Coast
- Beth Roach, NC Commission of Indian Affairs, Tribal Coastal Resilience Program Director

1:15pm **Building the Collaboratory for Coastal Adaptation through Space and Time** ([C-CoAST](#)) **Laura Moore, Director**

- Great we're coming together in this way, building community
- C-Coast: working to fill a particular niche, so many groups working on resilience many represented today
- Challenges: Nags Head example: erosion, transportation, ponding during rain events, stormwater not draining, groundwater levels higher
- Niche: Provide coordinated community driven research in support of community resilience and adaptation
- Where they think they can provide information and guidance:
- Storms and chronic hazards—lead to short-term decisions, changes to natural processes, landscape and environmental change, cycle comes back to storms / eye towards coupled human-natural system dynamics

- Short term solutions may be in conflict with long term needs/influence future habitability of these landscapes
- Barrier islands examples: rather have barrier rarely over washed and wide in 50 years vs too narrow for roadway in 50 years, then ferry only option, but requires decision in the short term we're not likely to make, allow island elevation to increase (causeway), maintain dunes to protect roads, end up with barrier island too narrow to even support a roadway
- When conditions are more complex, more understanding is needed –research
- C-CoAST: Collaboratory for coastal adaptation over space and time
 - networks of coastal researchers, stakeholders, and practitioners with the goal to address:
 1. How do decisions made in the short term alter future risks and the resilience of coastal communities, ecosystems and landscapes?
 2. What action may enable or inadvertently inhibit, resilience of coastal communities, ecosystems, and landscapes?
- Funded in April 2020 by NSF coastlines and people (CoPe) program, awarded \$500K to build capacity and to co-produce a research agenda. Currently in year 2, will likely seek extension into a 3rd year, had to pivot to online just like everyone else due to Covid. Seeking additional funding, more on this in a bit.
- Steering committee, academics, advisory board, looking for new SC members from the coastal stakeholder community, Tancred on advisory board, Holly on steering committee
- Network building:

Website: <https://c-coast.org/>; intro video, Facebook, twitter, slack workspace
https://twitter.com/c_coast_nc
<https://www.facebook.com/CCoASTNC>
- More than 175 members, 150 listed in directory, researchers and stakeholders, many from NC, but also from across the US & other countries; **Growing network would love for COP members to join**
- C-CoAST RCN activities / network building through: disciplines 101, listening sessions, gallery walks, research agenda workshop, annotated collection of publicly available coastal resilience resources
- Disciplines 101: Fall 2020-present:
 - Fall 2020/spring 2021; 18 distinct presentations spanning 10 sessions bi-weekly
 - 517 attendees repress. 208 distinct individuals from 16 states and 8 countries
 - 3 types: run gamut from theoretical conceptual on non-linear dynamics to environmental justice
 - Have page on website: can view recordings on webinar: <https://c-coast.org/activities/discipline-101-seminars/>
- Listening sessions: spring 2021:
 - Built from DCM workshops, not start from scratch
 - 75 participants, from 11 coastal counties, analyzing data
 - Work through recordings and jamboards
 - Decision making themes: short term: development, water management, financial, shoreline management
 - Effects: economic, tourism housing issues, water quality, flooding, ecosystem/environmental degradation
 - Decision Makers: local government/state/federal government almost equally, individual residents, others
 - Matrix: short term decision & actors' matrix: when talk about ecosystem state/fed, de elopement talk about local government / individual perceptions of how things are correlated
- Gallery Walks: online for now due to delta had hoped to do in person this fall

- In design/development: ETA late fall, low touch and high touch, share what was learned during listening sessions, story maps, gain further insights from a broad range of coastal stakeholders (geographic, etc. etc. etc.)
- Interactive gallery wall: development, planning 7 zoning, redevelopment, management & planning
- Zoom in on zoning: state/fed override local control / impact short term decisions that have long term consequences
- Research agenda workshop: co-produce a research agenda that supports community resilience
 - Hopefully in person late spring, central location TBA, funding available for stakeholders to attend
 - Particular connections between short term decision long term consequences
- Build out collection of coastal resilience resources: publicly available
- large scale cope hub proposal submitted 2020, requested funds \$20M/5 years to conduct research ad further build network/ not funded, likely resubmit based on feedback, academic partners
- teams: 1) sandy coasts, 2) flooding & WQ, etc.
- Have newsletter every 6 months, on social media, etc.

Community research and planning needs: how might the COP assist us in identifying how community research and planning needs intersect with C-coast goals and expertise? How can we align in a good way? Articulate connections that are already established.

Q&A:

Lora: often see large planning documents and processes, land use comp plans, not always have participation from research side, Nags Head has done a good job, is it possible to scale to create fast facts, 2 pagers, etc. sometime presence of a researcher helps make those connections

Laura Moore would love to talk more: cull research and planning needs and research to those specific communities, look for themes in comp plans

- Lora suggested getting in touch with the UNC school of government. Stacey noted that we'd had a grad student speak at a prior meeting, Carol Abken, now with NCDEQ. Her professor is Maureen Berner, UNC School of Government
- Kacy suggested meeting with local government planning directors and municipal county managers
- Holly noted there is a disconnect between planning documents and what's actually being implemented and funded, cull CIP budgets from communities

1:45pm [Building Capacity for Climate Resilience in the Albemarle-Pamlico Region Tribal Communities Project](#) – Beth Roach, NC Commission of Indian Affairs

- Beth opened by sharing the Nottoway version of the **Haudenosaunee** Thanksgiving address and explained that language revitalization is a priority for her Tribe, the Nottoway Indian Tribe of Virginia, and many others. The top 3 lines reflect the following which is relevant to this group and the important work everyone is doing: One mind around the good work everyone is doing, all of us are on sacred lands no matter, we are so grateful for our lands, Mother Earth, and auwa (water). Roughly translates to:
"We are thankful for we are now of one mind. We are thankful for the people, Mother Earth, water, all of the fish, all of the birds, all of the plants [and] all of the trees"

- Here is a link to another version of the full Thanksgiving Address, which touches on every element of creation: https://americanindian.si.edu/environment/pdf/01_02_Thanksgiving_Address.pdf
- Beth shared that climate resilience is part of work that been a big part of her life, many things have happened over the past year, a lot of groundwork has been laid, many layers, but there is more to come and she is thrilled to be part of it.
- She shared a picture of the Mouth of Chowan/Albemarle Sound, she lives in Bertie county and noted that while paddling she can't help but think of shoreline and what it and the communities that lived alongside it looked like in the past, and in thinking about climate change impacts and change coming, how it may impact communities in the future.
- Beth shared that she wears many hats, she is a Tribal Councilwoman with the Nottoway Tribe of Virginia, Tribal Coastal Resilience Program Director with the NC Commission of Indian Affairs, works for the Sierra Club, is a Coastal Futures Conservatory fellow with the University of Virginia, and helps run the Alliance of Native Seedkeepers, but first and foremost she is a Nottoway woman.
- Tribal Coastal Resilience slide: inclusion of communities during EO80 resilience workshops, get more people involve, Coharie started paddles, how formalize work and get into our spheres, funding found, proposal drafted, project:
- APNEP partnered with the NCCIA, NCSU, VCPC; hired Beth as Director, Dr. Ryan Emanuel, Lumbee water scientist, kind soul, lead efforts daylight injustices for tribal communities, how do we become players, not when permit timeclocks already open they met ACP, Jocelyn Painter, grad student, member of the Winnebago Tribe of Nebraska analyzing how tribes have incorporated traditional ecological knowledge into tribal resilience plans
- Maps: snapshot: watershed imprint, map out tribal communities. Beth has a degree in public history; the history before colonization and contact and afterwards is not a seamless thread, Powhatan, Weapemeoc, present day vs. historical, if you overlay linguistic maps and groups tie up well with watershed, Algonquian: coastal north, Piedmont, Nottoway Iroquoian, Meherrin, Tuscarora, still there, there are actually 9 groups of Tuscarora communities in NC. Some of these groups are not federally or state recognized. Also mix in the history of a diaspora of natives moving from coastal area, some hit with disease, some moved with colonization, names of groups changed over time. So, how do you approach doing a land acknowledgement, not that it's not worth doing, but not an easy answer.
- Watersheds and nations: Nottoway: Sussex, Southampton, Surry counties in VA, western tidewater, she grew up on edge of the dividing line between the Albemarle—Pamlico watershed and Chesapeake Bay. Very cognizant of difference in watersheds, even going back to signatures of plantation, mega treaty time, Blackwater river : Indian River was Indian county/ signature of Nottoway chief, connection to land and water shown in signatures, how sign treaties. The A-P region/watershed includes two states (VA/NC), two EPA regions (3&4), 6 tribes (VA: 2 state 1 federal, NC includes non-recognized Tribal communities including the Chowanoke and Tuscarora in addition to state recognized tribes (Meherrin, Haliwa-Saponi, Sappony, Occaneechi Band of the Saponi Nation). So, how do you go about engaging with Tribal communities when there are so many present day groups? Need to know a bit about each one, are different.
- Slide pics: Waccamaw Siouan tribe canoe repatriation, Ryan; historically rivers were very important to many tribes, remains true this day
- Tuscarora/Meherrin/Nottoway are deeply connected. Migration from central and south America in the Yucatan then up to the Ozarks, stories say the tribe received a message to come to the land of the sunken pine (think means cypress trees), so did a hard right and headed to coastal VA/NC. The communities are deeply connected to this region.
- Switch gears to talk about climate science and impacts on tribes:
 - 1) Temperature: not have to tell this group! Project includes looking at climate plans from around Turtle Island, how they are different or similar to non-native plans, how to converge planning. Temperature—consider how will impact culture: Pow-wow examples, as temperatures increase, will get harder and harder to hold, typically in spring/summer/fall: hard to wear heavy regalia, hard to dance, hard on elders, just a few impacts highlighted.

- 2) Precipitation: recent storms hit Lumbee Tribe hard, flooding.
- 3) Sea level rise, which we know is an issue in this region, archaeological resources at risk, picture of ghost tree in middle of sound, Site X archaeology at Bertie beach, how much is already lost, what is left to understand with history, terrifying to think lose so much ground by the end of century
- So, we hear this, do people understand what's coming, mindset of what's happening and what to do about it
 - Lake Phelps: picture of Ryan/Jocelyn, Beth paddling at Phelps canoes from 4000 years ago have been found, incredible time stamp to wrap head around, wooded, virgin forest around it, not many places that look as how ancestors saw it, Phelps is one of those
 - Changes to natural environment: agricultural zones, shifts in plant hardiness, ghost forests, cypress trees, can name at least 5 tribes with logos with cypress tree, Nottoway one of them, not want to hit too hard with climate grief, work towards understanding and focus on what we can do
 - Seedkeeper: many indigenous seeds lost, some need to be planted every year, better chance of adapting to climate, sourcing and locating seeds back to communities, thousands of corn varieties, try to get back in community hands, seeds will need diff growing seasons over time and place, how help families, adapt TEK in real time
 - Human driven change: paddle: clean up over 10 years at place important to people, old trash, made connection, Enviva expand logging/wood pellet processing, release old trash, giant logging tires, now able to point to cause and threats, as a tribe figure out where is place, flex our muscle
 - Tribal coastal resilience connections: Share your #waterstory on social media (@TribalCoastalResilience on Facebook): ask folks to post a pic or video, share a favorite memory, express concerns about changes and environmental issues, etc. Facebook not substitute for true community engagement, not reach everyone, unrecognized tribes contributing, NCCIA, reach tribal leaders, good start, but not where end up
 - Wampum: water story idea, indigenous adaptation framework for SLR, created by a Shinnecock woman working with federally recognized tribes in the northeast, Dr. Kelsey Leonard. Provides a great approach when working with tribes, helpful to think through each one of these pieces, wampum, clam shell, framework for stories: witness change over time, acknowledge ancestors and culture, mending shorelines, unite with other communities, build capacity plan relocation, all in watershed together all have to work together, hard conversation to have: move to new places, but when you think about it and look at the history, we've always been moving throughout time,
 - Terrastories: use this platform to share water stories using the wampum framework, no licensing free, train to use, map layers, climate modeling, etc. / developer was at UNC-CH / Rudo Kemper, originally from Columbia, took 1612 John Smith map, imagine what that could look like for our area, overlay shown in VA/ re-imagine what space looks like, place markers, threats, what dealing with, what do we want to look at, example sand pit mining,
 - Reviewing resilience plans: still undergoing just a few exist in the southeast, want to fix and have more
 - Highlight good work being done: Nansemond, Nottoway doing paddles and river clean ups, Chickahominy, Monacan, Pamunkey, fish hatchery, relevant work being done; how formalize into adaptation planning,
 - Get all folks together and return to paddling done for centuries, Salish folks NW, get on water,
 - Lessons learned:
 - slow, more natural timeline, build trust and build relationships
 - Not rely on easy sources, mapping: Nativelands.ca problems
 - Everything is intertwined, but one tribe does not speak for all,
 - Be mindful of recognition status, impact laws and policies, capacity, resources
 - Not day job for most tribal members, any request for a meeting will be on their own time, consider compensation.
 - Future: Focus work on Chowan River watershed, Jocelyn work with Coharie Tribe and CAFOs, Ryan is writing a book; they are both moving from NCSU to Duke in spring 2022.

- Beth closed by sharing that she is deeply committed to this work moving forward

Questions:

- Whitney mentioned NERR Hollings scholar talk {Whitney I missed details can you add}
- Sarah Spiegler: asked about climate grief and impacts on communities: Beth said she has been thinking about framing paddles with mourning approach, work through trauma, grief is a process, so work through it, confront it, hopefully get people ready to act. When thinking about engaging with communities, cold emails, could take awhile to find the right person, Chief not the one to start with, slow building, go to public events, well before any grant idea, need to build relationships, goes a long way.
- Kacy: thank you: appreciate the work that you're doing, help in any way that's appropriate, Enviva, Sandhills, ask if anything we can do as a conservation partnership, they come to meetings, marketing is that they are sustainable, any way to talk to Enviva, help out, messaging sustainability, not same trees, not old growth cypress tupelo swamps, buffer zones, bay agreements more iron clad than A_P watershed, voluntary BMPS how push policy to get protection of wetlands, log up to the river.

Break

Round Robin Member Updates

Mackenzie: Sam no longer with us, went to Town of Beaufort. For the Resilient Coastal Communities Program, contracts finalized for phase 1&2, done by end of March, applications for phase 3 end of January, fund design work, action team meetings, excited/end of June expand program add to communities,

Jacob: link in chat to Draft Coastal Habitat Protection Plan, CHPP 2021 amendment up for public comment: also working with NWL Coastal Habitats committee
<https://deq.nc.gov/news/events/coastal-habitat-protection-plan-public-comment-period>

Amanda: back from maternity leave/ city of NB resilience plan being finalized adopt in Oct hopefully, prioritizing projects, exciting to be working on

Cat: wrapping up Currituck marsh conservation plan look forward to sharing with group once finalized

Eryn: workshops for floodplain administrators: work on a post-disaster toolkit, good examples from different states in next year or so

Grace: first partner stakeholder meeting for habitat resilience plan for Rachel Carson reserve and Town of Beaufort/ great input, SLR and extreme storms, sift through data / stay tuned/ Mackenzie used mural

Joe: 1) RCPP: begun prioritize things adopted in plan to identify projects,
 2) BRIC: large federal FEMA grant, allow construct living shoreline, sidewalk improvement, etc. hoping comes through time constraints to construct, do during off season
 3) CCAP: Dare county SWCD small grant for a rain garden, SW wetland, interesting add on boy scout looking to become an Eagle scout, public education, signage, I can do in my backyard

Holly: quick updates, RCPP kick off, work with same consultant, update decentralized WW management plan, last update in 2005, implementation action of comp plan in VCAPs report, interesting takeaway, valuable to all NENC communities, initial research Mike O'Driscoll Charlie Humphries, GW rising faster than SLR rate is higher, based on preliminary monitoring, 11mm/year, next project estuarine shoreline management plan, retain consultant, get underway, add lens of SLR and CC to see how implementation actions be affected by SLR and CC

Kacy: She & Brooke working on updates to the Green Growth Toolbox / beefed up Teams channel, subcommittee, have to write before meet again, section 1 ready for review next week, looking for more inland examples of benefits, economic / funding avail for local government, flexible partners for green growth, if resilience project intersect with that reminder it's a resource for communities:

<https://www.ncwildlife.org/Conserving/Programs/Green-Growth-Toolbox/Technical-Assistance>

Lora: news release FEMA BRIC fund link in chat, new guide TNC developed with AECOM how to navigate the FEMA system cost-benefits analyses, etc.:

<https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/nature-based-fema-hazard-mitigation-guidebook/>

Working with Dare county supervisor for Dare SWCD, help implement smaller projects like rain gardens, bigger ones with a cost-share, every county has one, reach out to SWCD, help put in NRCS funding that comes down during disaster, emergency watershed protection program, helps with stream restoration can also use with farm land flooded, put a conversation easement on it, tap into sources, need documentation flooded, may be in disaster declared areas, federal funds

Emergency Watershed Protection Program(EWPP):

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/nc/programs/financial/ewp/>

Sam: Town of Beaufort: still working on resilience just in Beaufort, a lot going on, update comp and land use CAMA plan, mid-October 11 happy to share, resilience identified as one of main goals within CAMA land use plans, RCPP as well transition leverage land use plan with RCPP work with folks to build community action team, stormwater improvement projects in town, install tide gauge, approach association of beach shoreline and preservation and Secoorra, subsidized tide gauge, work closely with reserve staff on their resilience plan

Stacey: APNEP continuing to work on a water management study with Washington and Tyrrell counties, USFWS, SWCD, and State Parks called the Scuppernong Study, enjoying continuing to work with Beth and partners on the Tribal Coastal Resilience Project, thanked Beth for taking time to speak to the COP today

Suggestions for presentations/discussions at the next meeting:

- Holly suggested a presentation from the CISA conference /Sara Watson Folly beach / tipping points for wastewater
- Stacey suggested inviting members of the interagency Watershed Restoration Improvement Team (WRIT), they work on water quality/watershed restoration and have been discussing integrating resilience into water resources planning, would like to connect to this group
- Laura recommended inviting Patrick Barnard from USGS / conducted a vulnerability analysis in SE / included SLR scenarios and such

Whitney will send out a doodle poll for the next meeting. Meeting adjourned.