

Coastal Resilience Community of Practice
Thursday, December 15 – 1:00pm - 3:00pm

Meeting Notes

Attendees: Brian Byfield, Adrianna Weber, Cat Bowler, Eryn Futral, Stacey Feken, Jeff West, Joe Heard, Kasen Wally, Kyle Breuer, Sarah Spiegler, Terry DeMeo, Mackenzie Todd, Anna Cherry, Michelle Lovejoy, Holly White, Lora Eddy, Andrea Webster, Laura Moore, Brooke Massa, Kacy Cook, Krista Early, Kathleen Riely, Jacob Boyd, Ana Dulskiy, Cayla Cothron, Whitney Jenkins

Welcome & Introductions

Lessons learned from the Resilient Coastal Communities Program (RCCP) – Mackenzie Todd, N.C. Division of Coastal Management ([see Mackenzie's slides](#))

- Group discussion and Q&A
 - Kacy Cook: The NC Wildlife Commission Green Growth Toolbox can be used to map a lot of nature-based infrastructure.
 - Stacey: In the beginning you talked about the beginning stages of mapping community assets and natural infrastructure. Was there a standardized process for that, or did contractors pick their own tool/methods? Wasn't sure if you used RENA as a platform, or let it be contractor/community-driven.
 - Mackenzie: All of the above! Some guidance in the Handbook, did leave it up to the communities and contractors. Looking to provide more guidance next time.
 - Stacey: Looks like you had Washington County shaded in phase 3 grant recipients, was I looking at that incorrectly?
 - Mackenzie: Map hard to see, City of Washington not Washington County.
 - Laura: Great summary! Could you say more about recommendation regarding training and specifically what information would be useful?
 - Mackenzie: For next round of Phases 1 and 2, thinking a mini-contractor training with the goal of a long-term training where contractors may need to go through that to be certified to participate. For next round, get contractors together to highlight resources, tools, expectations—didn't give that kind of training last time. For communities, we're bouncing around the idea of DCM offerings i.e. training modules or partnering with organizations like Coastal Fed and others on that. Community engagement would be a large focus, how to do that effectively, reach socially vulnerable populations, etc. Also natural infrastructure, what is it, what are nature-based solutions, how can you implement one in your community? Starting out, thinking community engagement, nature-based solutions, and some technical training on risk and vulnerability assessments and how to leverage data to evaluate future conditions.
 - Whitney: Project in Albemarle-Pamlico peninsula (Stacey will mention more later), working with Digital Coast partnership focused on equitable and inclusive community and stakeholder engagement. Will let you know if anything comes out of that that could be helpful!

- Cat: Can you describe challenges in community engagement and public participation that you wanted to see? Was it that it was difficult to get people to show up, consensus, etc.?
 - Mackenzie: All of the above! Attribute some of that to COVID, hopefully additional guidance/training will also help. Some contractors used surveys and some would only have 3 responses. Plan meetings and only 4 people would show up. Need to find creative ways to achieve the engagement we want to see.
 - Cat: Was that the onus of the contractors?
 - Mackenzie: Yes, but there were also staff capacity challenges at DCM. Would take any input on guidance that could be helpful, if you have ideas!
 - Laura: One suggestion is that when you're thinking about NOAA collaborative science strategies, consider a bridge person who plays a role in bringing people together. Could have people trained in bridging capacity to be a point person for each of the groups so it doesn't fall on anyone within the groups to assume that function. About co-creation, sounds like what you're working to do. Whitney can share resource!
- Sarah: Mackenzie has done a great job answering these questions!

Regions Innovating for Strong Economies & Environment (RISE) 2022 Winter Update – Brian Byfield, N.C. Office of Recovery & Resiliency ([see Brian's slides](#))

- Group discussion and Q&A
 - Lora: As far as nature-based projects, divided into two categories. Can you say more about that, or give an example of the grey options?
 - Brian: Everyone talking about stormwater, expanding pipes, etc. Some of the more interesting ones talk about a combination with green infrastructure/urban flooding and how to address that. Is it just stormwater or is it a combination with swales, etc.? Working through some of those details on trying to help people to think about not every solution needing to be concrete and steel.
 - Laura: Meetings/workshops during the day were better attended. Sound like most participants were staff or people's whose work is in this field rather than community members. Often in community engagement, thinking evening meetings so found that an interesting finding. Do you have a read on who tended to be at the daytime workshops?
 - Brian: Day time were mostly staff and elected officials. Normal part of their work to do that rather than carving out additional time in the evening. Certainly missing community input from the average community member, but also folks who may not be willing to give up that time for the subject matter. Opportunity to beef up resiliency 101 in the general public to encourage people to participate/get involved.

Round robin – members share what they are working on related to resilience

- Brian: Suspect that was my update. Anything to add from Holly or Andrea?
 - Holly: Look for the save the date for the funding forum in the next couple weeks (hopefully before the holidays)! Plan to pencil that in around the end of February.
- Stacey

- Project that Whitney mentioned, with a team including Stacey, Whitney, Cayla, and Lora, grant through the NOAA Digital Coast Partnership and NERRA to support projects/ongoing efforts with marginalized communities experiencing flooding. Some of you might have heard me mention the Scuppernong Study on the northern Albemarle-Pamlico peninsula looking at flooding issues and watershed management in the region. Includes some community engagement in that effort, and we were recently awarded funding to support that! Was just in Charleston, SC with the Digital Coast Partnership to present on the project and got some great feedback. Great resources/tools available, will be reviewing those to see which we may be able to leverage as part of that work. Moving contract over to the Albemarle Commission for that Study that could yield lessons learned for a future meeting. We're also looking for hire a graduate student assistant, if you know of anyone who may be interested, please spread the word! Lessons learned from RCCP and RISE will be helpful in that process moving forward.
- All National Estuary Partnerships are slated to receive money from the Bipartisan Infrastructure Bill. Developed work plan for that ([APNEP BIL work plan for the first two years](#)) talking about ideas and to determine best path forward. Hoping there will be opportunities for this group with whatever projects come out of that, wanted to make everyone aware. Covers a wide variety of potential projects including SAV, resilience, etc.
- Stacey will be stepping into new role with APNEP to manage and oversee those funds, [so her position is currently open and posted!](#)
- Anna: Currently shifting into planning role in Currituck. No big updates since the NC Coastal Conference.
- Brooke
 - A few years ago, came to this group and discussed how we could be better assisting local governments in climate resiliency planning and protecting their natural areas. Trying to encourage communities to integrate conservation data/science into land use planning through the Green Growth Toolbox. We'll be releasing an updated version of the Green Growth Toolbox Handbook in early 2023 which will include latest and greatest data, case studies, example plans, ordinances, etc. that we'll be able to share with everyone soon!
 - Heading up as of this past fall an effort within our agency to develop a climate resiliency plan and be able to report on our achievements, set goals, etc. Will be a very comprehensive look at how the Wildlife Resources Commission can support climate resiliency in the state.
- Cat
 - Audubon NC convened the first meeting in over a year of the Currituck Sound Coalition, a group working on nature-based solutions in the northeast region.
 - Audubon is still working on a marsh restoration project in Currituck Sound, and is currently in the final design/permitting process for restoration projects including thin layer sediment application. If anyone has experience with thin layer placement, please reach out!
- Eryn Futral
 - Will be having the National Association of Floodplain Managers conference in Raleigh this upcoming year in May, so working on that.

- Notified today that FEMA is doing direct technical assistance to all communities for the BRIC program. Will be great for communities who don't have the capacity to plan/prepare for that application process. Want to push that information out to communities!
- Jacob
 - Had first Coastal Habitat Protection Plan (CHPP) steering committee meeting a couple weeks ago, going well.
 - Resilience clearinghouse project: Finished wireframes and getting ready to develop scope of work. He and Andrea will be meeting with NC Office of Recovery and Resilience and Department of Environmental Quality senior management to get the greenlight on getting it built. Goal is to have that done end of 2023. Still deciding on who will host it (DIT, external contractor?) and long-term maintenance, but pretty exciting.
 - Had water quality summit a couple months ago (October) with about 115 stakeholder/shareholders attend. Looping that into CHPP and resilience efforts.
- Jeff West
 - Where we have assets on the barrier islands, looking at what we can do about them in making them more resilient/less vulnerable. Long point cabin was heavily damaged during Dorian, big problem as it was no longer a viable location. Went through EA process and we're going to move them to the widest point of the island with the least erosion. Design is far more resilient as the previous ones—using ocean-going containers for the building structures on elevated platforms. One central pavilion with restrooms which will also go into sewage treatment in containerized elevated structure. No more generators, this will be 100% off solar and wind power where we feel are the most protected/elevated locations. Design completed, hope to be going into construction once we receive our budget.
 - Challenges with historic structures in historic districts. Have a number of them damaged in the last couple hurricanes, locations not tenable. Ended up demolishing 6 historic structures. Great Island cabin is another large asset on the beach—utilized Western Carolina University to do a vulnerability assessment to relocate those cabins at some point in the future. Lost two of them, didn't rebuild them. We're going to look at another location (Cape Village?) for a possible use of overnight leasing (similar to what we've done at North Core/Long Point).
 - Part retreat part resilience!
- Joe Heard
 - The first more active project is part of the RCCP phase 3 and it's a neighborhood floodwater study. We've had meetings with five different neighborhoods and getting input to help identify what the issues are and the locations so our contractors have a good base of knowledge to work from. Next 5 months, we're going to continue that neighborhood engagement and also work on the technical side of it to do studies to figure out why the flooding is occurring and identifying potential solutions focusing primarily on nature-based.
 - The second project is one I've talked about before and unfortunately has been delayed on more time—have a large resiliency project on the northern end of Duck Village that will involve a living shoreline addition of bike lane and sidewalk, elevating part of NC Hwy 12 to make it more resilient through that low-lying stretch, and we're incorporating some stormwater management so we can treat some of the runoff before it goes into the

Currituck Sound that adjoins the area. Really neat project that we're excited about, \$2.8M project and cost to Town of Duck will be zero due to grant funding. Part of it is through BRIC funding, but they haven't finished review of the project and cut the money loose, causing it to drag outside the season. Can only do this project during the off-season. Likely it won't start until fall 2023, but exciting nonetheless!

- Kacy: Reviewed Brunswick County's land use plan update and they did everything we would have recommended almost at a landscape scale with minimizing wildlife habitat fragmentation. Looking forward to seeing if they need any assistance on their unified development ordinance update.
- Kathleen: Want to say that this group is doing great work, collaboration is key! I'm the executive director of NC Beach, Inlet, and Waterway Association. Planning spring meeting sometime in May, putting together ideas for topics and have so many from this group. Will keep in touch!
- Kyle
 - Now have 18 preliminary designs to address roadway flooding issues with a combination of bioswales, permeable pavers, infiltration basins, etc. Really robust toolbox that we'll be able to work with! Looking to our public works folks as being able to replicate projects as flooding hotspots continue to pop up throughout all three towns.
 - Received grant funding from Goldenleaf and NC Emergency Management to address stormwater issues on primary ingress/egress route that also affects Topsail Beach. Designing a catch basin, mostly gravity fed with some pumps, to utilize infiltration chamber—kind of a hybrid nature-based approach to those projects, excited to get that underway.
 - Working through some state funding for utility work to improve resiliency for water distribution to the island. Looking at providing some additional crossings for resilient service delivery under the Intracoastal Waterway.
- Laura Moore
 - Submitted a large-scale proposal for C-CoAST—received high ratings but didn't get funded. We're working to continue to explore additional pathways for further funding.
 - In November, held fourth of planned activities with the research agenda workshop. Total of about 65 participants over two days, held the meeting in partnership with SG. Exciting group of people representing many stakeholders including academia, state reps, local communities, NGOs, etc. Spent two days thinking through co-creation and how we can work together and consider what new knowledge/understanding is needed to support communities in becoming more resilient into the future. Learned a lot, seemed to be well received, and going forward we have some ideas for smaller more focused working groups that might be able to carry forward some of the ideas that were generated and bring in more voices. Working on next steps now, so please stay tuned!
- Lora
 - Plug for some upcoming funding—NC land and water fund applications are due February 1st. Connected to what Brooke/Kacy were saying, can be a resource for you to get a good level of information on how to grow and where areas can be protected!
 - Link to NC land and water funding, app deadline February 1, 2023:
<https://nclwf.nc.gov/grants>
 - NC Water and Boating Grant Opportunities—Quick facts:
<https://deq.nc.gov/media/18113/download>

- We've had projects where we've done wetland restoration mainly in peat soils on managed/protected lands—resilience benefit of those projects are for fire but also provide flood resilience. Working to restore these areas where we can to slow peak discharge to the downstream and mitigate dry conditions for flood risk among other benefits. We've also done work on the Roanoke River to put in bridges where there's been culverts on the floodplains (now natural areas). To follow up on what Brian said in his presentation, we do think about undersized culverts, but make sure we aren't just thinking about them in the context of draining, but also where we can set aside areas in the natural floodplain to maximize that function and provide co-benefits to fish, etc.
 - APA resources, Naturally Resilient Communities: <https://nrcsolutions.org/restoring-floodplains/>, <https://nrcsolutions.org/flood-friendly-culverts/>
- Michelle: First time joining this group!
 - Work with Environmental Defense Fund and focus more on inland communities and funding. Paying a lot of attention to the Blueprint and have heard good news that a vendor will be being announced soon. There will be stakeholder engagement opportunities all next year.
 - My work also focuses on equitable engagement, and work a lot with NC Inclusive Disaster Recovery Network and Rural Forward. That body of work continues to grow with local communities front and center to hear from that perspective and from voices that often aren't given a seat at the table.
 - Other part of my work is with the farmer and thinking at the farm-level i.e. opportunities with edge of field strategies, also called water farming or park the water. Bring that up to say we have a partnership with the Coharie tribe--awarded a grant of \$3.5M that will focus on water quality improvements at the farm level. Coharie is also one of the floodprint communities (a partnership with NCORR and NCSU Coastal Dynamics Design Lab) looking at what flood mitigation solutions. Also thinking about what farm bill programs can be used to fund natural infrastructure.
 - Contact info: Michelle Lovejoy, Environmental Defense Fund mlovejoy@edf.org

Next meeting

- Next meeting in March. Whitney will send a meeting poll in the new year.
- Next meeting topics
 - Dan Rizza - Climate Central – Cayla can follow up.
 - NC Flood Coalition (American Flood Coalition) – Eryn
 - Other agenda item ideas?
 - Laura: Could benefit from a couple people coming to talk with us, maybe Michelle has some work to share with us or has recommendations? Perhaps a small panel of people to talk about these community engagement challenges highlighted on the call today, and maybe folks who are playing those bridging functions?
 - Michelle could get someone from Rural Forward to speak to this group.
 - Stacey: Also developing an equity strategy as part of BIL funding, part of that will be to allow funding without a match. Probably need all the help we can get, and would love to get feedback from this group as we move

forward in that process. Some time on engagement and bridging could be really helpful for that!

- Michelle: Would also add if we could get details from flood resiliency blueprint vendor on stakeholder engagement calendar/process, they may have that information by the time of the next quarterly meeting.
- Lora Eddy: Town of Nags Head will be done with their estuarine shoreline management plan, not sure if they'll circle back with DCM on that. Might be an interesting topic for this group.
- Michelle: Might also be interested in hearing about what projects NC land and water is funding for their flood funding so this group knows what's happening on the ground.
 - Stacey: Can ask Steve Bevington!

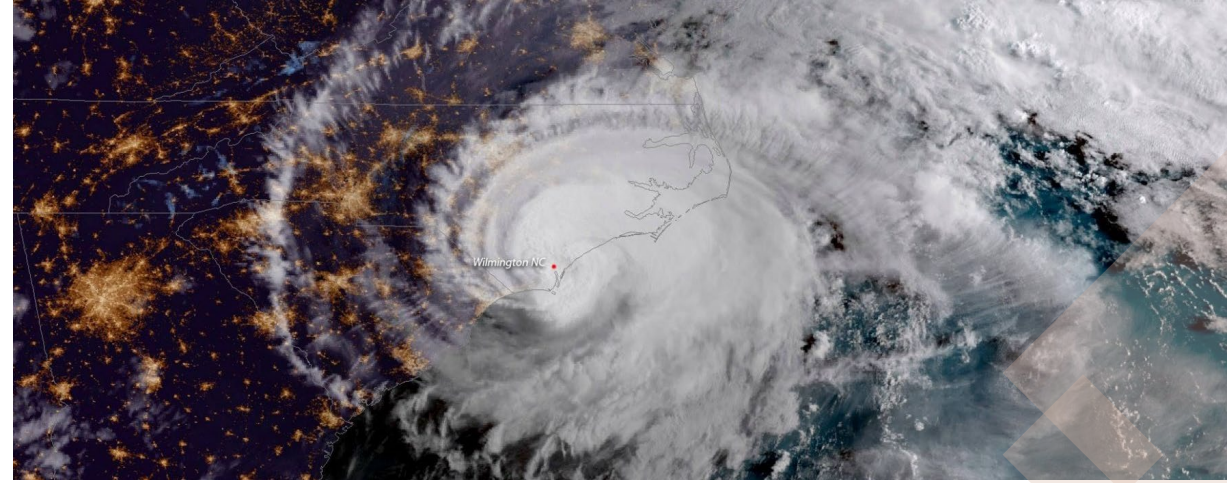


The North Carolina Resilient Coastal Communities Program

Mackenzie Todd, DCM
Coastal Resilience Specialist

INTRODUCTION

- RENA & Hurricane Matthew (2016)
- Hurricane Florence (2018)
- N.C. Coastal Community Resiliency Guide (2018)
- Regional Resilience Workshops (2019)
- N.C. General Assembly & NFWF \$ (2020)



PROGRAM SCOPE

20 Coastal CAMA Counties

All counties and municipalities within the CAMA jurisdiction and any federal and state-recognized tribes are eligible to apply for the RCCCP program.



PROGRAM OBJECTIVES



PROGRAM PHASES



Phase 1

Community
Engagement &
Risk/Vulnerability
Assessment



Phase 2

Planning, Project
Selection, and
Prioritization



Phase 3

Engineering & Design



Phase 4

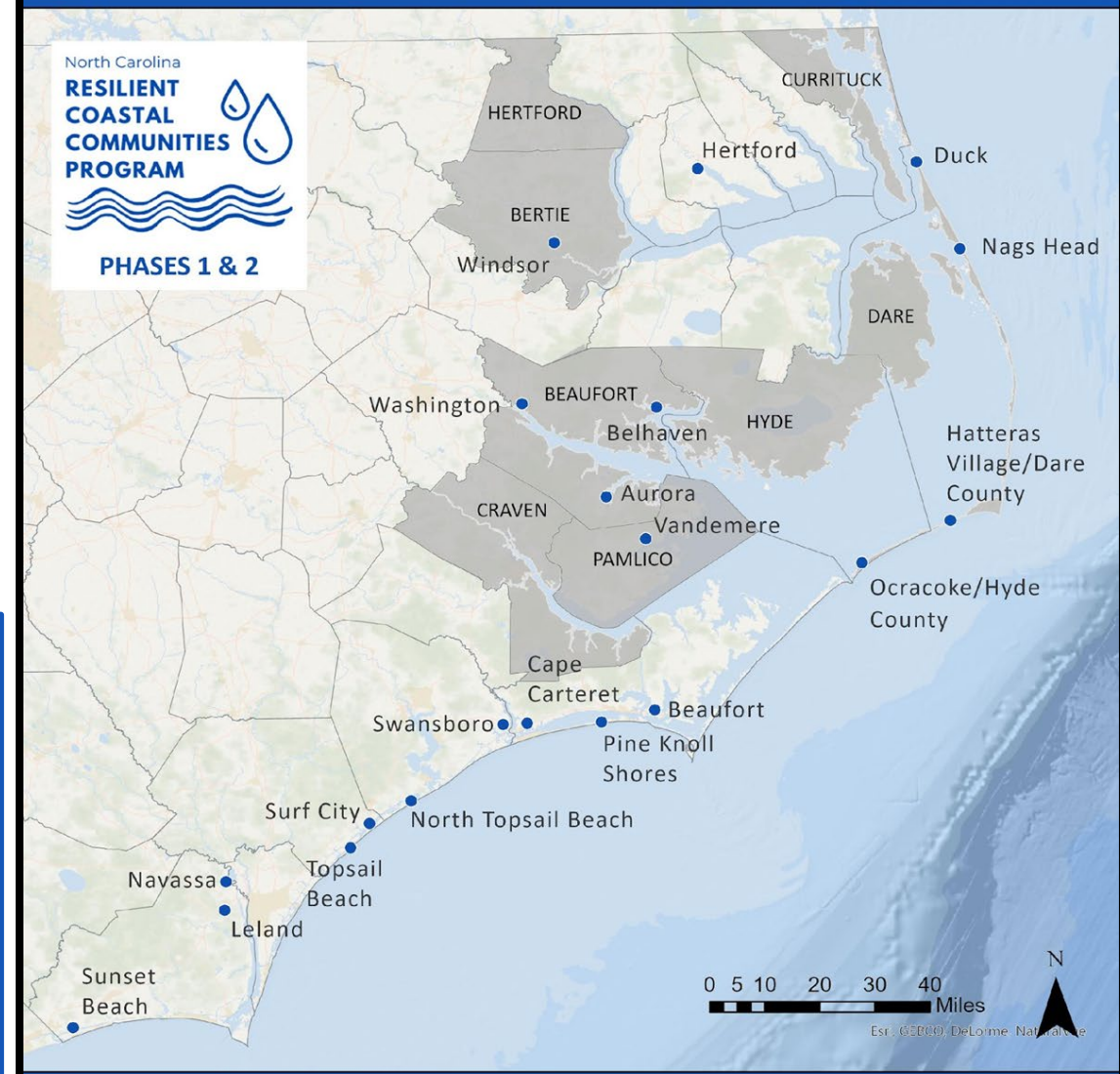
Implementation

COMMUNITY & CONTRACTOR SELECTION PROCESS PHASES 1 & 2 2021-2022

Community Scoring: Level of risk exposure, economic need, capacity, and momentum with related efforts

Contractor Scoring: Experience with resilience planning, community engagement, and NBS

- RK&K & Mid-East Commission: Aurora, Beaufort County, Belhaven, Washington
- SWCA: Hertford, Hertford County, Windsor, and Bertie County
- Withers Ravenel: Dare County (Hatteras Village) and Currituck County
- Kimley Horn: Vandemere, Pamlico County, and Hyde County (Ocracoke)
- Dewberry: Craven County, Pine Knoll Shores, Swansboro, and Cape Carteret
- Moffatt & Nichol: Navassa, Leland, and Sunset Beach
- Kleinfelder: Surf City, Topsail Beach, and N. Topsail Beach
- Stewart: Town of Beaufort
- VHB: Duck & Nags Head

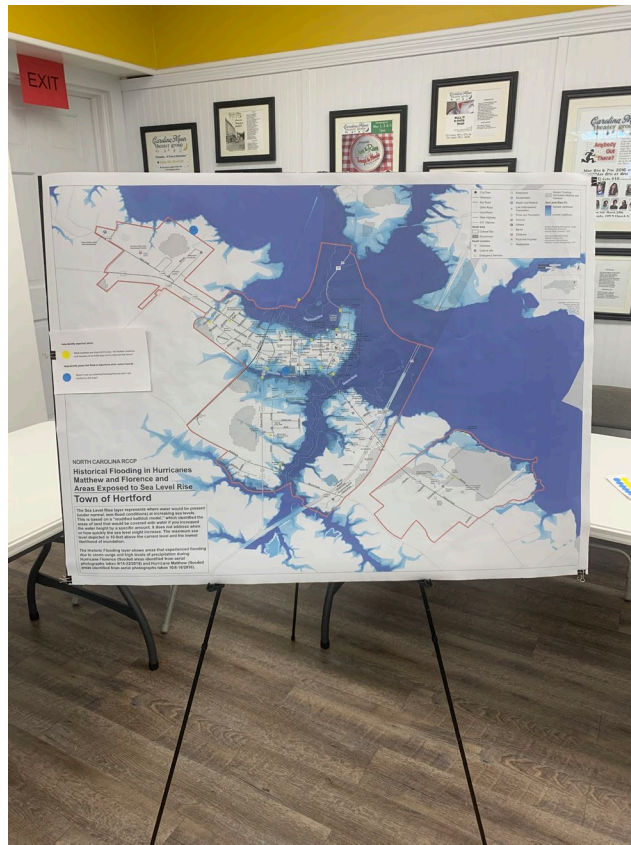


GRANT RECIPIENTS

- Communities
- Counties

CONTRACTORS

- RK&K & Mid-East Commission: Aurora, Beaufort County, Belhaven, and City of Washington
- SWCA: Hertford, Hertford County, Windsor, and Bertie County
- Withers Ravenel: Dare County (Hatteras Village) and Currituck County
- Kimley Horn: Vandemere, Pamlico County, and Hyde County (Ocracoke)
- Dewberry: Craven County, Pine Knoll Shores, Swansboro, and Cape Carteret
- Moffatt & Nichol: Navassa, Leland, and Sunset Beach
- Kleinfelder: Surf City, Topsail Beach, and N. Topsail Beach
- Stewart: Town of Beaufort
- VHB: Duck & Nags Head



Step 1: Develop a Community Action Team



Step 2: Set Vision and Goals



Step 3: Review Existing Local Plans & Efforts



Step 4: Develop a Community Engagement Strategy

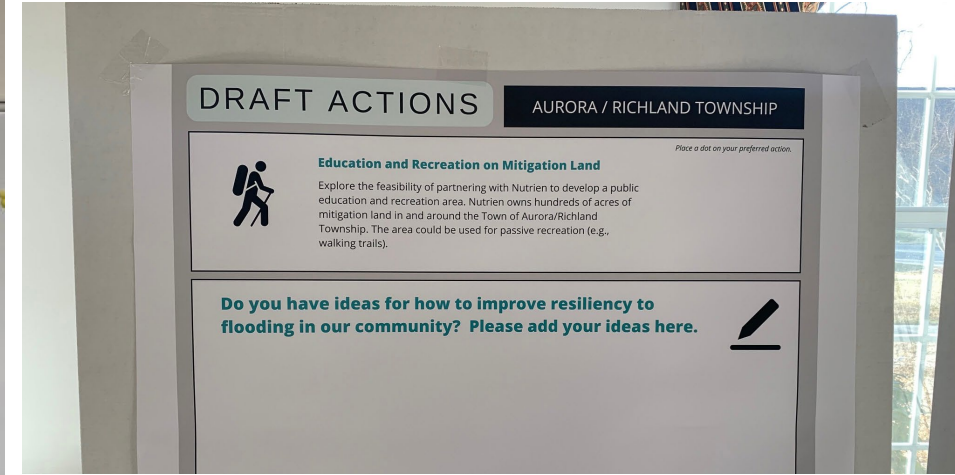
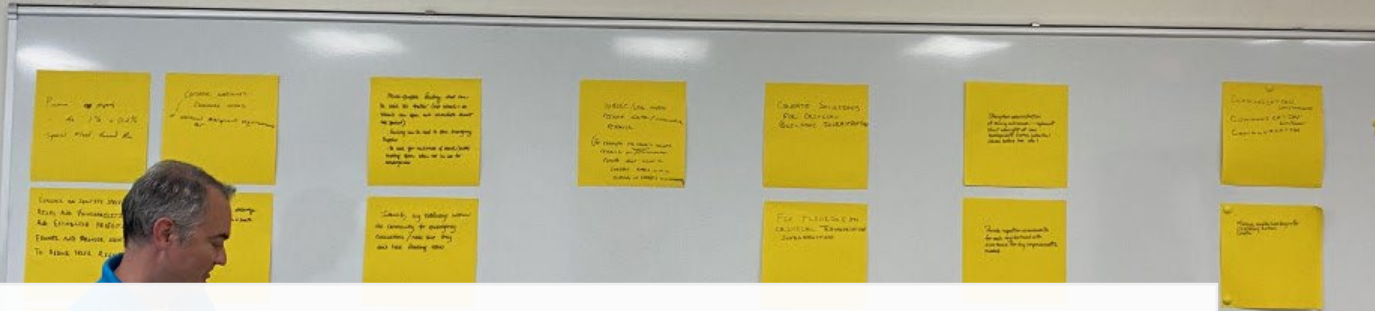


Step 5: Map Critical Assets and Natural Infrastructure



Step 6: Conduct a Risk and Vulnerability Assessment

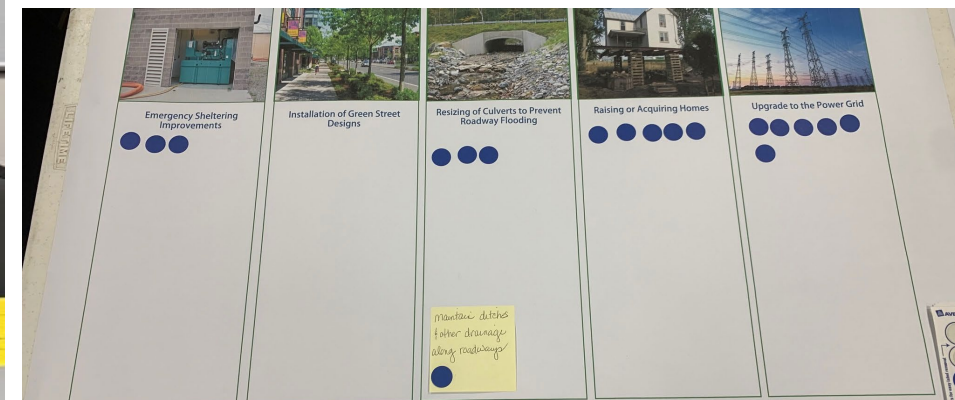
PHASE 1



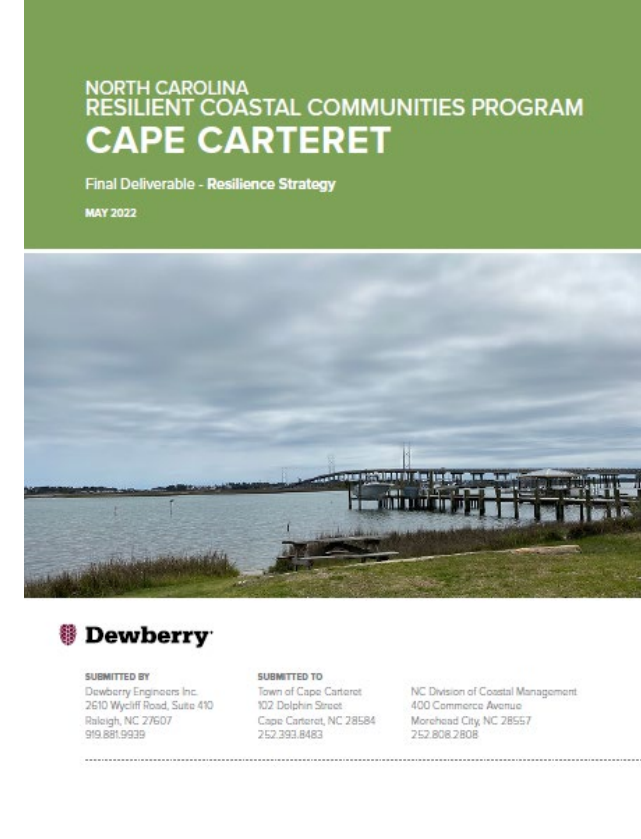
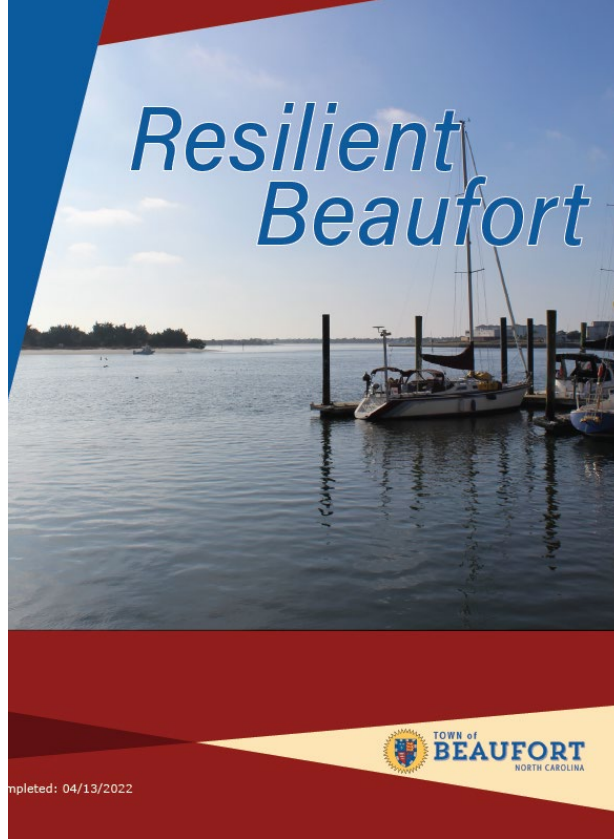
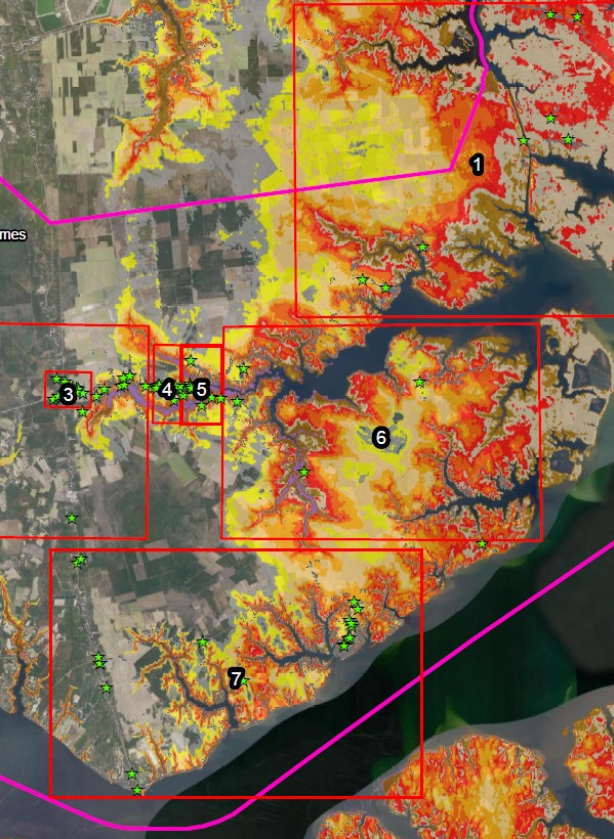
PHASE 2

Develop a Project Portfolio

- Step 1: Identify a suite of potential solutions
- Step 2: Consolidate and prioritize projects



Using the Blue Dots, vote for the top four strategies you would like to see utilized your community.



PHASE 1 & 2 FINAL DELIVERABLES

1. Resilience Strategy

Community Action Team Report
 Vision & Goals
 Community Engagement Strategy
 Risk & Vulnerability Assessment
 Maps & GIS Data

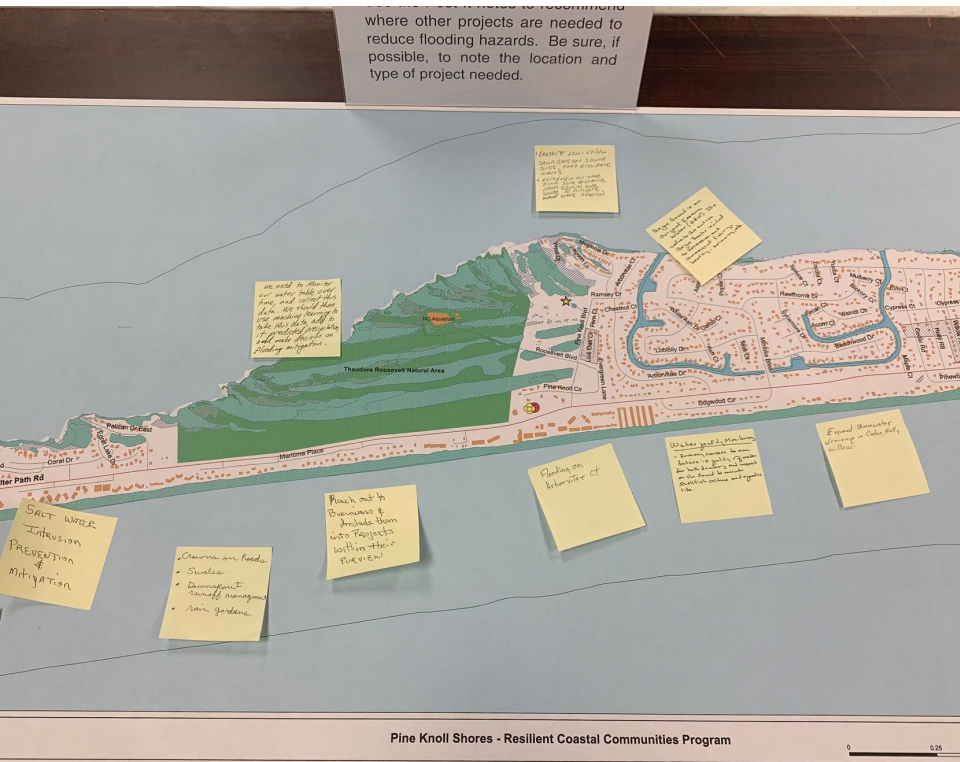
2. Project Portfolio

At least five projects




LESSONS LEARNED

Evaluation of the
First Round of
Phases 1 & 2 of the
RCCP (2020-2022)





Working Group Process

- Ex-officio members on Community Action Teams
 - Monthly to weekly small group meetings
 - Reviewed all deliverables: “Resilience Strategies”
 - Tracked themes of program, gaps & opportunities, collected contractor & community Feedback
 - 1-day workshop on recommendations & proposed training topics for 2nd Round of Phases 1 & 2
- 

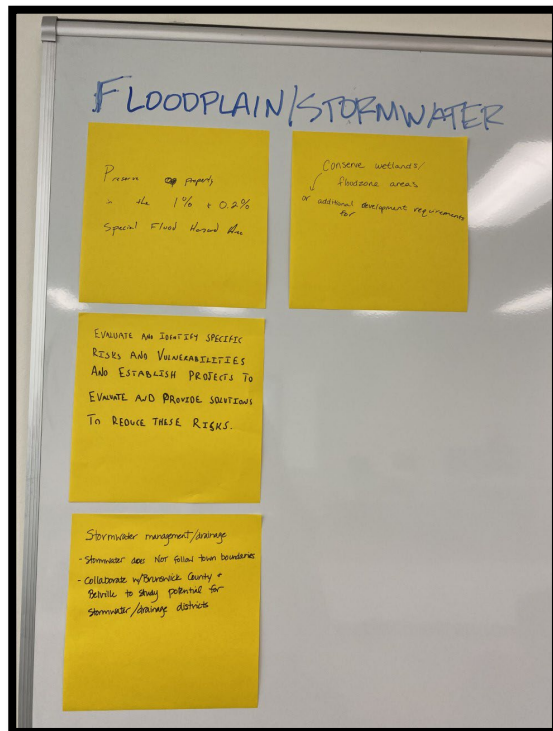


Successes

“Overall, we were very grateful for this process. We enjoyed and respected our time with our engineers, and we now have a team that can be called on to discuss issues in the future. We are going to use our final deliverables for leveraging future grants. We appreciate being selected for the process and wish the program great success and hope it will continue.”



“Getting communities talking and thinking about these challenges is important. The CAT team is a great tool to get multiple stakeholders engaged.”



“For our situation, the local Council of Government partnered with an engineering/planning firm to serve our four communities, and the partnership worked very well. COGs with the staff capacity to participate can be valuable to the process by providing a local contact for the project who is already familiar with staff at the local governments and with conducting public outreach in the communities.”



Areas for Improvement

- Facilitation & Engagement
- Consistency of Risk & Vulnerability Assessments
- Natural Infrastructure – What is it? & How do we ID NNBS?
- Minimum list of critical assets
- Connecting the dots b/t vision & goals, R&V assessment, and project identification
- Guidance on assessing future conditions
- Guidance on “Next Steps”

Kayak! ~~PARKING~~ Lot ideas

③ ✓ • CAT gaps./rep.

✓ * • Timeline (6 months vs. 1 year?)

② ✓ * • Bottom up vs. top down
→ guidance/facilitation, community driven process

• Handbook length: keep short
→ move resources to an appendix

① ✓ * • \$ /time

✓ • # communities/round funding

④ ✓ → quality vs. quantity

✓ • lack of successful examples

✓ • Showcase the successful examples

①

Working Group Recommendations



Planning Handbook
edits



Req. Contractor
Training



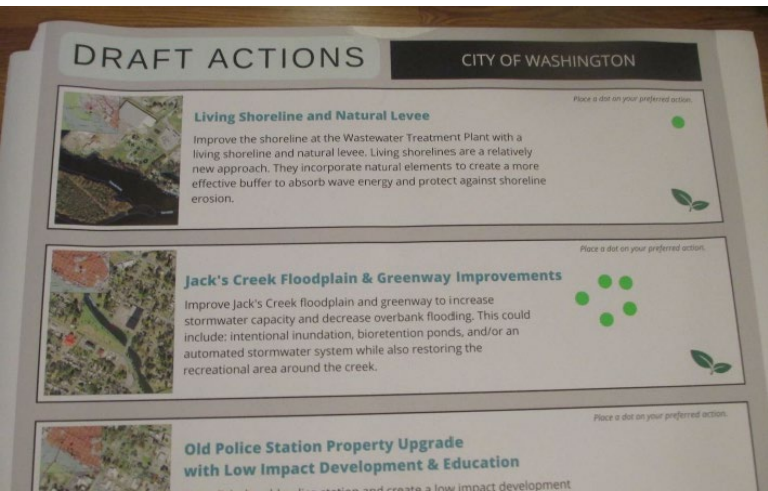
Provide Community
Training on
Resilience/CC



NC Specific Data,
NNBS



Case Studies, Next
Step Resources



CASE STUDY: RK&K AND THE MID-EAST COMMISSION PARTNERSHIP





CASE STUDY: TOPSAIL ISLAND PARTNERSHIP
TOPSAIL BEACH, NORTH TOPSAIL BEACH, AND SURF CITY

A FEW METRICS

Community applications:	30
Communities selected:	26
Community Action Team members engaged:	200 +
NC General Assembly Funding (SL 2019-224):	\$1,350,000
NFWF ECRF Funding:	\$1,060,000
NFWF Coastal Resilience Fund:	\$545,000
N.C. General Assembly Funding (SL 2021-180):	\$1,150,000 3FTEs
HUD (via NCORR) Funding:	\$500,000
NOAA/CZMA Funding:	\$60,000
● Phase 1 & 2 Funding per community:	\$30,000
● Total Phase 1 & 2 Funding:	\$775,000
● Total Phase 3 Funding:	\$1.1 million
● Total Phase 4 Funding (anticipated):	TBD (\$500k)

NEXT STEPS

- Currently in Phase 3 (Engineering & Design)
 - 20 projects awarded for a total of \$1.12 million
 - Anticipated to wrap up in May 2023
- Program Improvements
 - Planning Handbook
 - Scopes of Work
- Second round of Phase 1 & 2 Applications Open
 - Due to DCM by February 3, 2023
 - Informational webinar on January 12th
- Phase 4 (Implementation/Construction)
 - Applications anticipated to open next spring



RCCP Phase 3 Grant Recipients

- Communities
- Counties

The N.C. Resilient Coastal Communities Program facilitates a community-driven process to identify and prioritize projects that enhance community resilience to coastal hazards. The four phases of the program include: 1: Community Engagement and Risk & Vulnerability Assessment; 2: Planning, Project Selection and Prioritization; 3: Engineering and Design; and 4: Implementation.

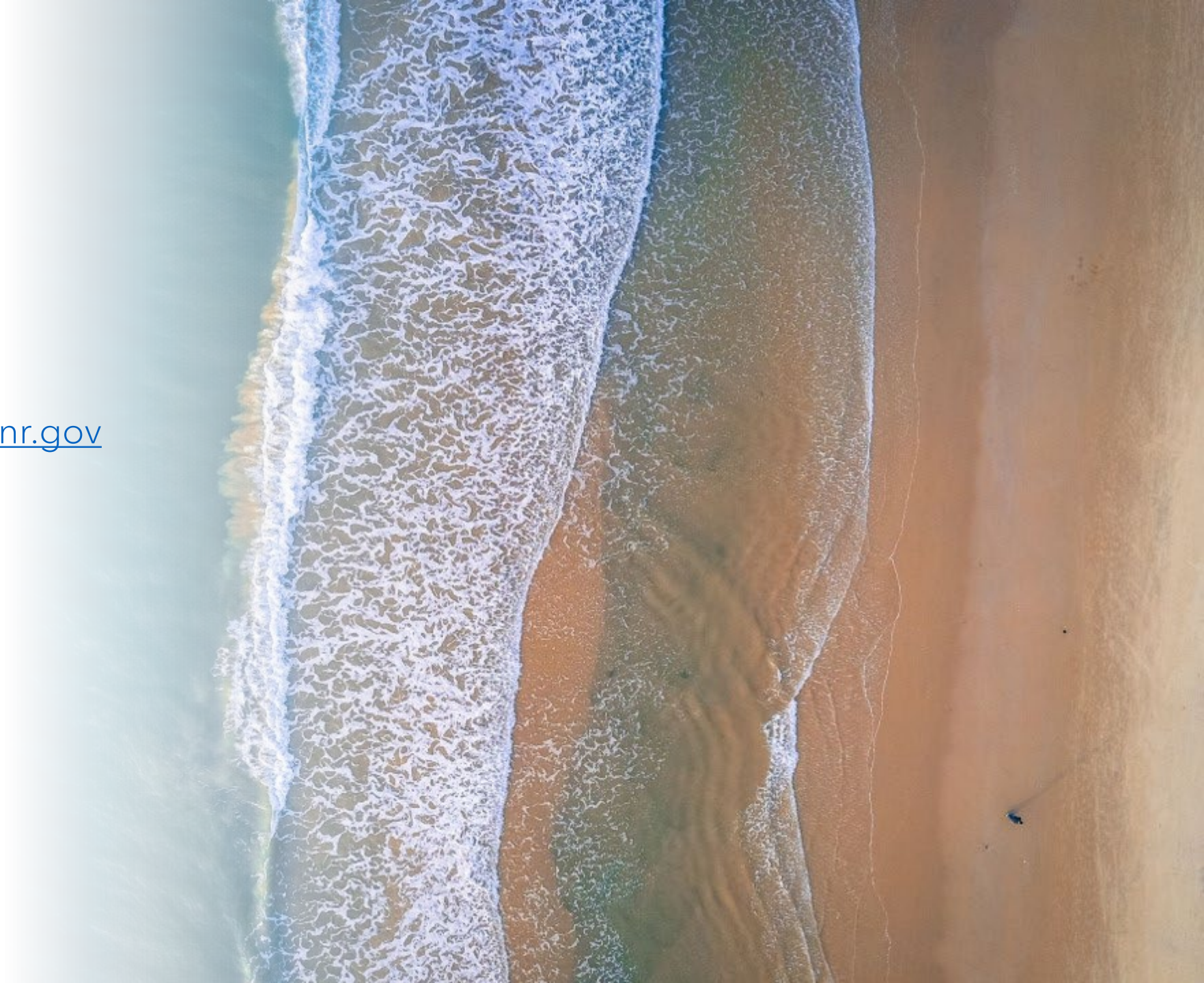
Phase 3 of the RCCP provides funding to assist communities in the engineering and design of a prioritized project identified in their RCCP Resilience Strategy, or other existing plan that meets the RCCP's Phases 1 and 2 planning criteria.

2022-2023 PHASE 3 AWARDS: ENGINEERING & DESIGN

Community	Project Name	Award(\$)
Aurora	Wetland Restoration at Wastewater Treatment Plant (WWTP)	\$74,885
Beaufort County	Low Impact Development Site-Beaufort County Community College	\$64,130
Belhaven	Wynne's Gut Tidal Gates and Flood Attenuation	\$84,800
Bertie County	Cashie River Drainage System	\$45,000
Cape Carteret	Cape Carteret Flood Mitigation Planning Project	\$85,000
Craven County	Craven County Living Shoreline Prioritization and Engineering Design	\$45,000
Dare County	Hatteras Village Stormwater Improvements	\$45,000
Town of Duck	Duck Neighborhood Floodwater Management Plan	\$45,000
Town of Hertford	Jennies Gut Drainage Improvement Feasibility Study	\$45,000
Hyde County	Ocracoke Stormwater Management Plan	\$45,000
Town of Leland	Mallory Creek Drive Drainage Improvements	\$20,000
Nags Head	Town of Nags Head Drainage Infrastructure Improvements	\$45,000
New Bern	Duffyfield Community Resilience Improvement-Basin Restoration and Enhancement	\$45,000
Pine Knoll Shores	Town-Wide Nature-Based Stormwater Solutions	\$45,000
Sunset Beach	Green Infrastructure-40th Street Erosion	\$49,865
Swansboro	Water Street Rehabilitation	\$45,000
Topsail Island (Surf City, N. Topsail Beach, and Topsail Beach)	Topsail Island Roadside Stormwater Project	\$135,000
Vandemere	Improving Stormwater Culverts and Drainage	\$45,000
City of Washington	Jack's Creek Floodplain and Greenway Improvements	\$61,480

THANK YOU

- Mackenzie Todd
- Mackenzie.todd@ncdenr.gov
- 252-515-5434





Resiliency



RISE - Regional Resilience Planning in N.C.

Brian Byfield
Resilient Communities
Program Manager



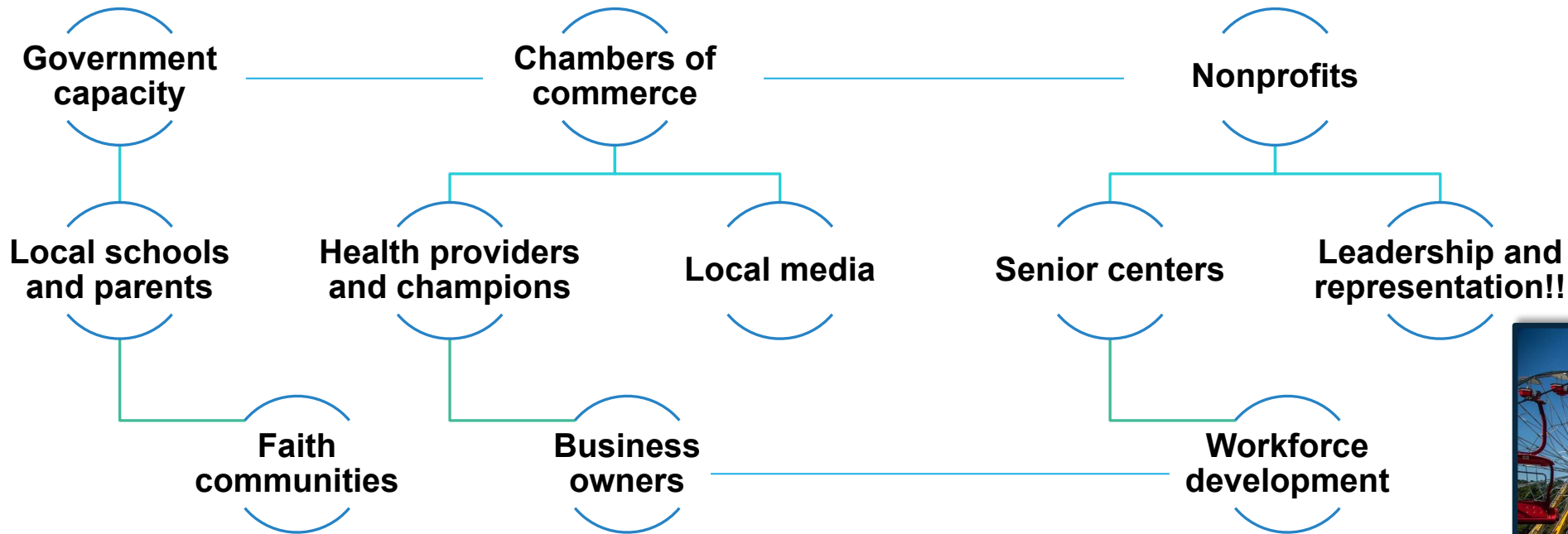
Resiliency

Why Resilience – Places & Life





Social and Economic Connectedness





Resiliency

Threats



Wildfire



**Saltwater
Intrusion**



**Flash &
Riverine
Flooding**



**Cumulative
Public
Health
Burden**



**Loss of
Housing
Stock;
Businesses
& Job Loss**

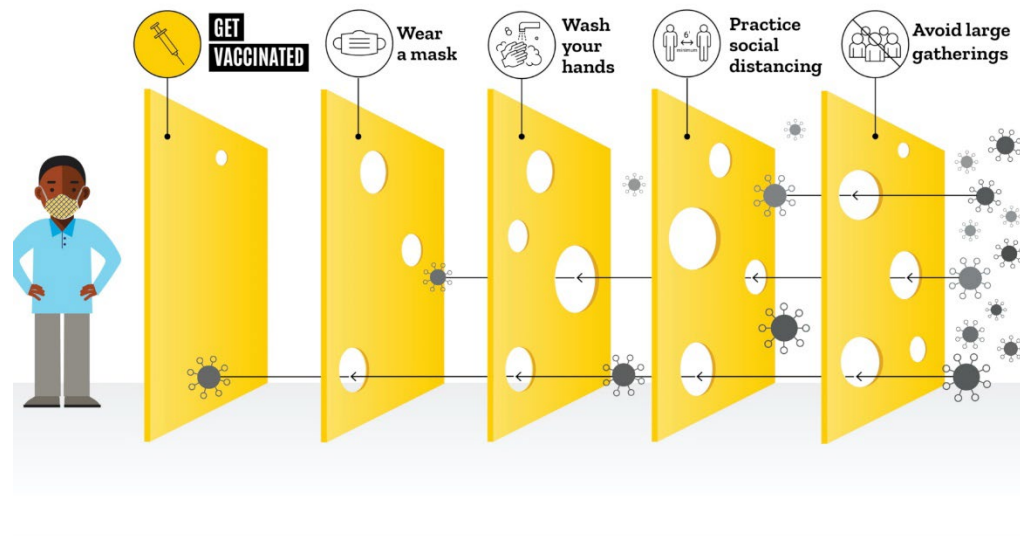


**Water
Quality and
Ecological
Impact**



Swiss Cheese Model Approach

“Borrowed from COVID-19”



- Multiple layers of defense/offense
- No single layer provides 100 percent protection against harm
- Residual possibility of harm

University of Iowa Hospital & Clinics website:
<https://uihc.org/health-topics/why-swiss-cheese-may-be-key-keeping-you-safe-covid-19>



What's Happening in North Carolina?

STATE RESILIENCE PLANNING

Flood Resilience Blueprint (DEQ).

Digital Resilience Clearinghouse (NCORR & DEQ).

NCDOT Resiliency Strategy

State Disaster Recovery Task Force (NCORR, NCEM)

Natural and Working Lands Action Plan (NC DNR).

NC Climate Risk Assessment and Resilience Plan (NCORR led / Many State Agencies)

Annual Resilience Strategy Reports (2022 – 12 Agencies)



What's Happening in North Carolina?

County & Municipality / NGOs / Private Sector

-  Community Health Assessments – Heat Mapping
-  Tree Canopy Evaluations
-  Energy Infrastructure Analyses
-  Nature Based Infrastructure Development
-  Public-Private-Plus Partnerships
-  Greener Agriculture
-  Smart data



Courtesy of Advanced Energy – 2021 data



Green Infrastructure courtesy of the NC Museum on Art & Surface 678



Resiliency



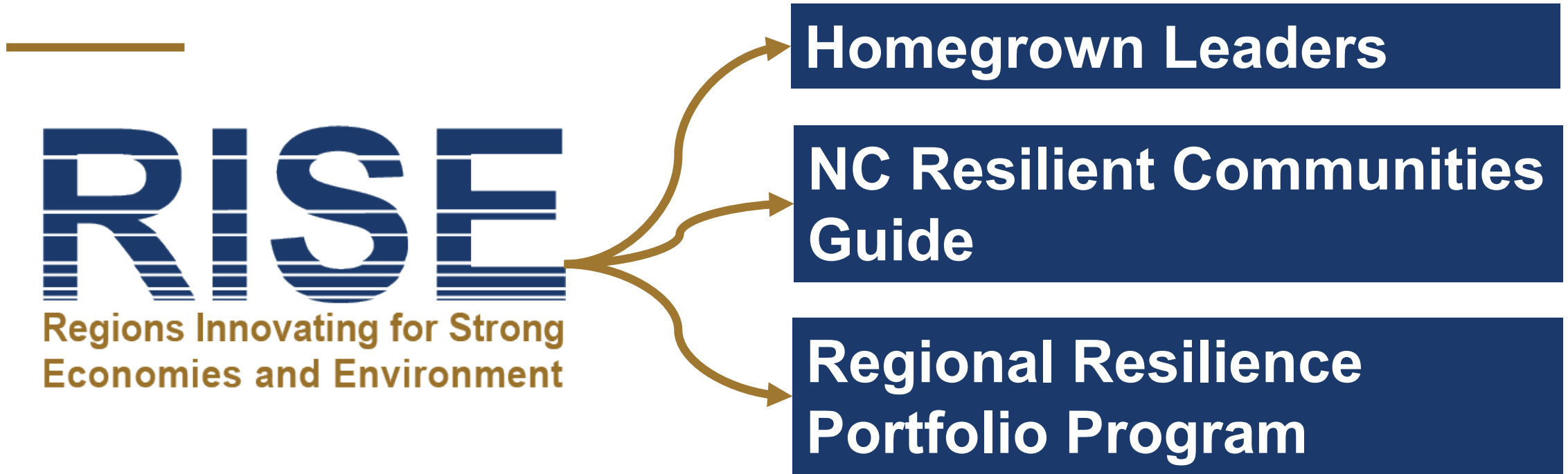
North Carolina
**RESILIENT
COMMUNITIES
PROGRAM**

North Carolina
**RESILIENT
COASTAL
COMMUNITIES
PROGRAM**



RISE

Regions Innovating for Strong
Economies and Environment

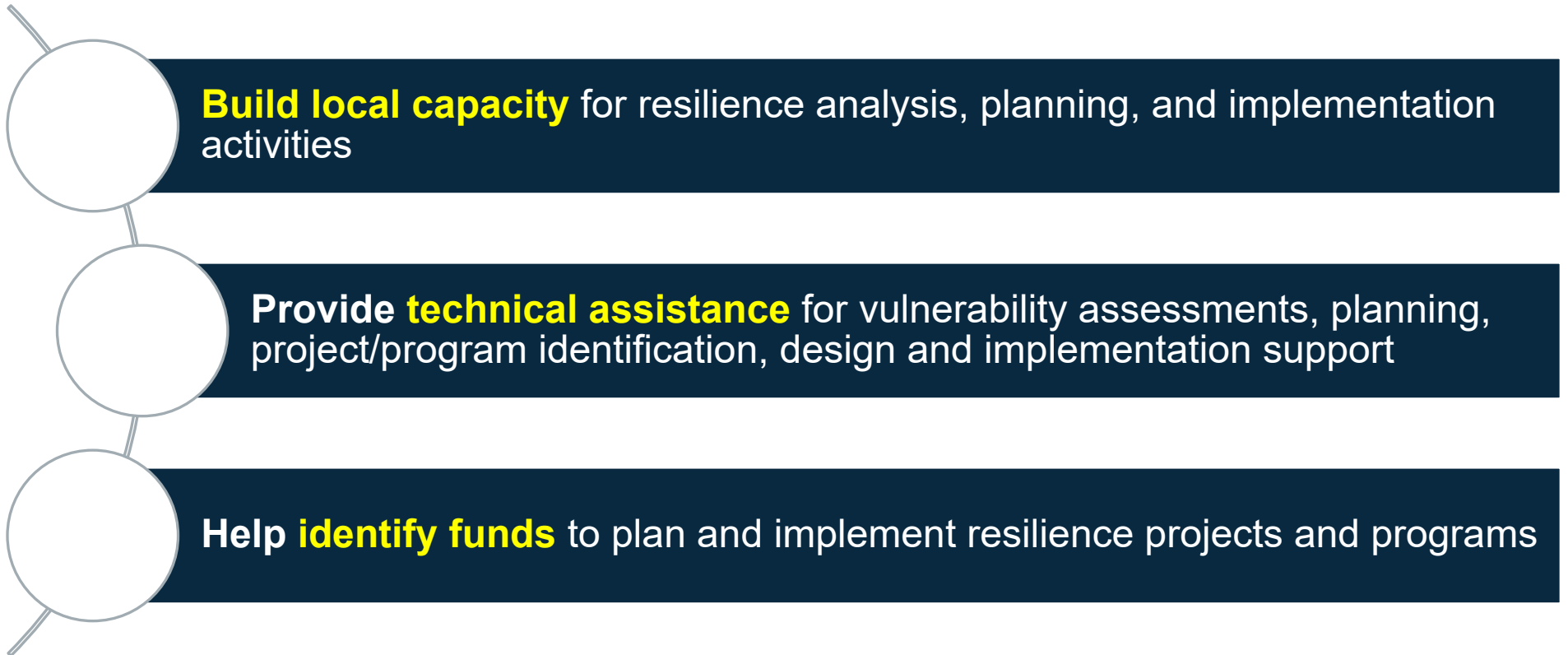


In partnership with the North Carolina Rural Center

Funded by U.S. EDA and NCORR through HUD CDBG-Mitigation Funds



Goals

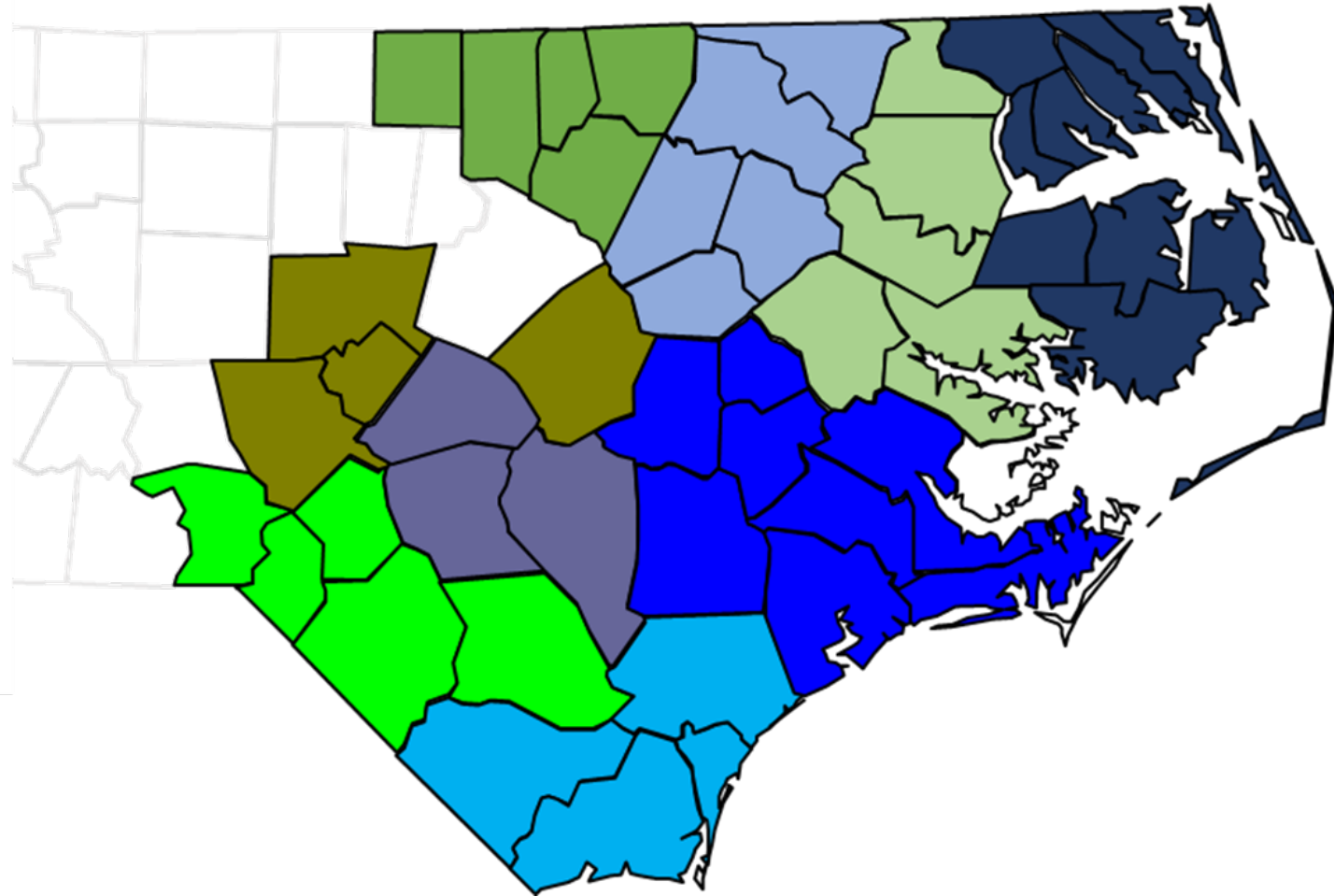




Resiliency

RISE Councils of Government

- Albemarle Commission
- Cape Fear
- Eastern Carolina
- Kerr-Tar
- Lumber River
- Mid-East
- Mid Carolina
- Triangle J
- Upper Coastal Plain

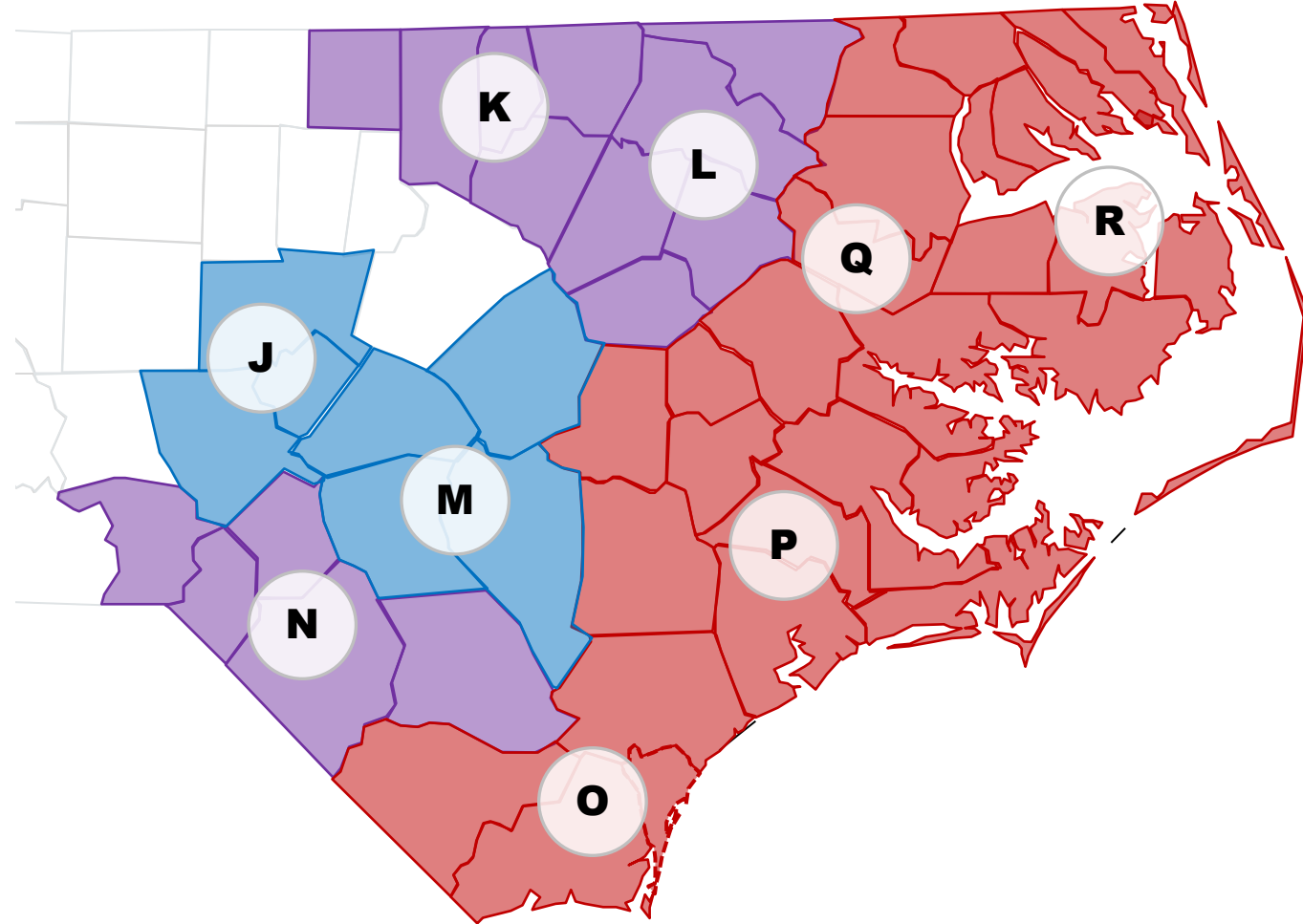




Resiliency



PROJECT ADMINISTRATION

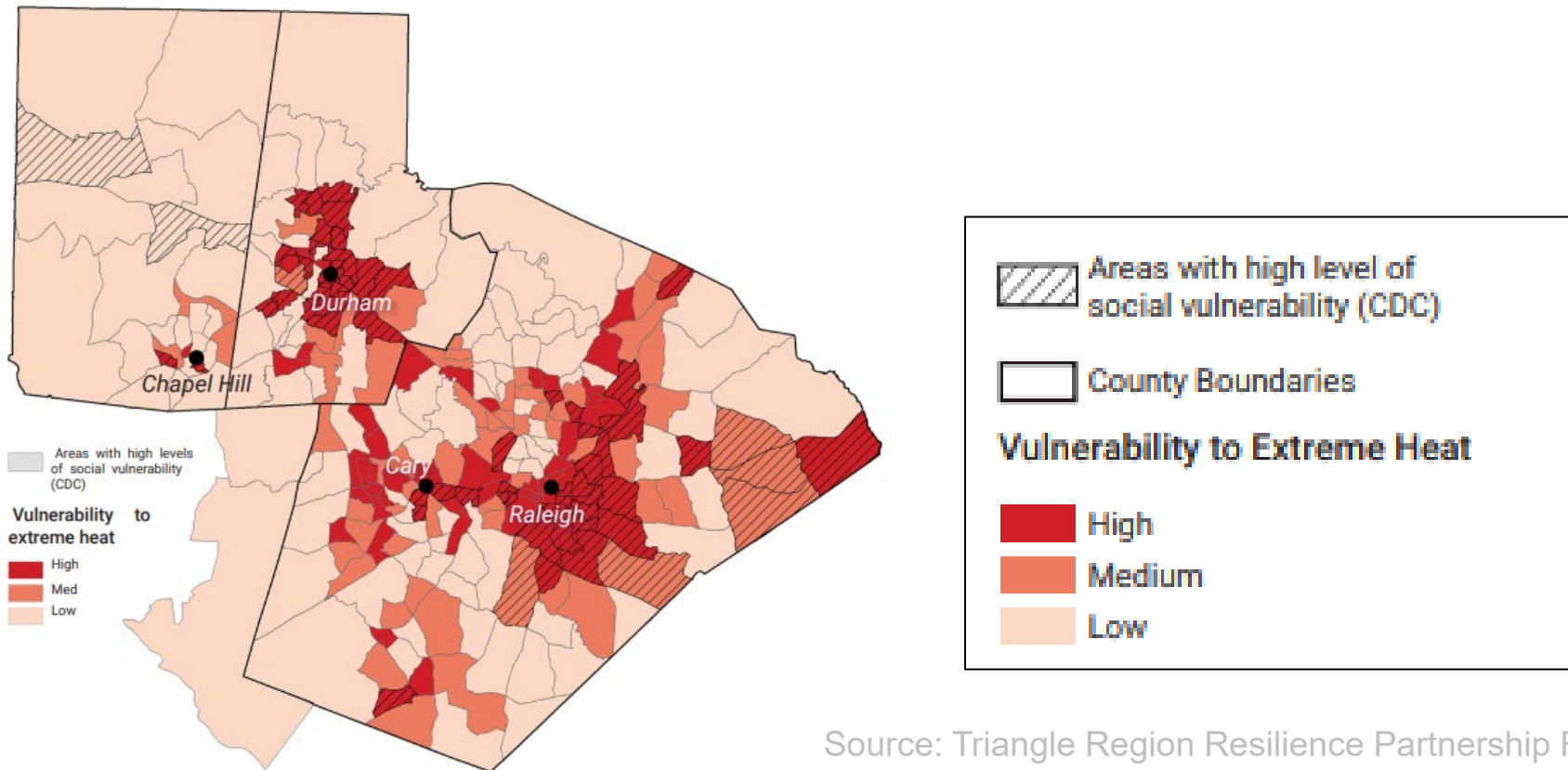


NCORR is a division of the North Carolina Department of Public Safety.





Conducting a Vulnerability Assessment



Source: Triangle Region Resilience Partnership Resilience Assessment (Fernleaf)



RISE Regional Resilience Portfolio

Vulnerability Assessment – Bring science and local knowledge together to understand the region’s greatest risks

Portfolio of Resilience Projects – A set of priority projects (capital or non-capital) with implementation pathways. Projects should have some kind of regional benefit.

Stakeholder Engagement – Stakeholders collectively work toward a commonly agreed upon project portfolio, strengthening working relationships and supporting regional conversation about resilience



Structure & Performance - RISE

➤ **49 Counties**

- Many Municipalities
- 3 Million + Population
 - Declining and Booming Counties
- Wealthy and Impoverished Individuals

➤ **Nine Regions (Councils of Government)**

- Stakeholder Partnerships
 - 245 Members, Avg 27 Each

➤ **Stakeholder Engagement**

- Stakeholder Partnership Meetings (74+)
- Public Workshops (20+)
- State Agency/Interest meetings
- Public Comment Periods

➤ **Regional focus**

- Beyond my town and county



Products - RISE

➤ **Portfolio Projects**

- 56 shortlisted
- 85+ potential ideas

➤ **Types**

- Flooding (27)
 - Gray Infrastructure (16) / NBS (7)
- Environmental Justice (22)
- Capacity Development & Education 18
- Assessment/Planning (34)
- Mitigation (24)

➤ **Vulnerability Assessments**

- 9 Regional
- Capital Impro
- GIS free



Next Steps

- **Funding Forum**
- **Project Close out**
- **Portfolio Project Development**

- **RISE 2.0/RISE West**
- **Funding for continued work**



LESSONS BEING LEARNT

➤ **Stakeholder Recruitment & Retention**

- Facilitators & the NC Rural Center

➤ **Overcoming Mindsets**

- Regionalism vs Parochialism
- Recovery vs Resiliency

➤ **Have a conversation**

- Personal Impacts of climate change often not clear
 - *Have the conversation in reverse*



As Heard from Local Leaders...

Ongoing capacity burden for small local governments

Competing community, economic, and housing development issues

Flooding caused by upstream communities or infrastructure

It takes work to be to “shovel ready”



Resiliency Funding Forum

- **February 28, 2023 (1 day event)**
- **Grenville Convention Center, NC**
- **Federal, State, Philanthropic & Nonprofit Actors**
- **RISE & RCCP projects**

- **Save the Date...more information to come**