

Coastal Resilience Community of Practice Meeting

Monday, September 12, 2022 – 1:00pm - 3:30pm

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>

In attendance:

- Adrianna Weber - Town of Leland
- Anna Cherry - Currituck County
- Cat Bowler - NC Audubon
- Cayla Cothron - NC Sea Grant
- Charlan Owens - Elizabeth City District Planner, NC Division of Coastal Management (DCM)
- Dawn York - Moffatt & Nichol
- Eryn Futral - NC Department of Public Safety
- Jeff West - Cape Lookout National Seashore
- Joe Heard - Town of Duck
- Kara Nunnally - NC Coastal Federation
- Krista Early - Resilient Coastal Communities Program (RCCP), DCM
- Lisa Williams - Mid-East Commission
- Lora Eddy - The Nature Conservancy
- Rachel Love-Adrick - Morehead City District Planner, DCM
- Mackenzie Todd - RCCP, DCM
- Nathan Dollar - DEEPP, UNC Chapel Hill
- Robin Hoffman - Basin Planning, NC Division of Water Resources
- Sam Burdick - Town of Beaufort
- Steve Bevington - North Carolina Land and Water Fund
- Terry DeMeo - Battleship NC
- Whitney Jenkins, NC Coastal Reserve, DCM

NC Sea Grant Climate Resilience Advisory Group Update – Cayla Cothron

- Schedule a special session with COP to get through Cayla's program framework (needs/issues), please complete meeting poll: <https://doodle.com/meeting/participate/id/aAn00Q1b>
- Cayla will send out a follow up email

Living with Water project update – Terry DeMeo, Development Director for the Battleship North Carolina & Dawn York, Moffatt & Nichol ([See Terry's Presentation](#))

- Battleship was commissioned in 1941, highest decorated ship, served in Pacific theater
- Transferred to NC in 1961, national historic landmark
- Noticed high tide, sunny day flooding, live oaks dying
- Battleship on 65 acres of waterfront property, with marsh land
- Don't receive state tax revenues for operations, all paid for through visitor receipts. If folks can't access due to flooding, can't pay for operations
- 2019 - MOU with NOAA NCCOS - water level patterns are same as at the base of Cape Fear bridge
- Salinity is consistent across site, meaning that tides are the source of flooding

- Solutions include a living shoreline, bioswales, etc. Model for coastal communities
- ArcGIS StoryMap - <https://storymaps.arcgis.com/stories/5a1169bc127f48e3b94eb52986c9186e>
- Construction should be next fall and take about 6 months
- Planning horizon for sea level rise projections? One road access in/out - not part of the project (owned by DOT) - coordinating with DOT on future opportunities to elevate the road. Designing an elevated parking lot to work with the existing road. Using 6' perimeter elevation, right now it's 5.2'. Trying to get a consistent grade across the parking lot, connect to bioswale, and outflow in constructed tidal creek. Hope that the wetland will have room to expand as sea level rises. Development pressure on Eagle's Island - that will affect the battleship site - increase the water flow to the site
 - The design elevation of 6 ft was based on FEMA design elevations for a 25 year flood elevation. This is based on FRIS.
- Funding for project? Several grants, NC land and water fund, NFWF, USFWS. some special appropriations from the state

Coastal Leadership Institute Discussion – Kara Nunnally, NC Coastal Federation ([See Kara's Presentation](#))

- Program contacts: Kara Nunnally, karan@nccoast.org & Ana Zivanovic-Nenadovic, Assistant Director of Policy, anaz@nccoast.org
- Coastal Federation focuses on water quality, oysters, effective coastal management, living shorelines and marine debris
- Purpose of the leadership institute is to shorten the bridge between science and practice. The primary target audience is elective officials and staff in local governments. May also include engineers, academia, agency reps, etc.
- Focus on local governments in the 20 coastal counties
- Institute - series of sessions at difference conferences, virtual meetings, in partnership with other organizations - also want to get people in the field
- Institute objectives:

Coastal Leadership Institute Objectives

Participants will learn	Participants will gain
<p>1. Strategies for:</p> <ol style="list-style-type: none"> 1. nature-based stormwater 2. watershed management and restoration planning 3. water quality management 4. shoreline management 5. flood damage reduction 6. habitat and ecosystem restoration <p>2. Methods for:</p> <ol style="list-style-type: none"> 1. financing environmental initiatives 2. spatial and temporal planning 3. grant applications 4. engaging partners 	<ol style="list-style-type: none"> 1. Confidence in navigating complex environmental issues in their community 2. Tools to secure funding for projects in their community 3. Resources for supporting constituents and community members



North Carolina Coastal Federation
Working Together for a Healthier Coast

- How many participants? How often?
 - Number of participants is unknown, see description of target audiences. Ongoing over times, continuous learning opportunity
- Have you reached out to the UNC School of Govt?
 - Have spoken to them in the past, and plan to do so again
- How will the institute be funded and staffed?
 - Program of NCCF - have private funding. Colleagues at NCCF will be staffing (Ana), will be looking for additional grant funds.
- What topics are the most pressing or relevant to local governments?
 - Nature-based stormwater, Watershed mgmt and restoration planning
 - Consider linking the economic impacts of not taking resilience actions. Local governments have a long planning horizon, legally required to involve the public, which complicates the process, election cycle can change priorities. But at the local govt level they understand the financial implications
 - Great point - economic impacts, more robust work done in an attempt to talk about tradeoffs. Tie in the story of growth and development with climate impacts. Big gap at local level
 - Will this be related to the goals and objectives outlined in your previous slide? Yes, NCCFs main goals
 - Audubon has been thinking about how to build trust with marginalized communities in the coastal plain - how will y'all try to reach these audiences? Biggest barrier is resources, trying to reduce this barrier through funding, and meeting these communities where they are at
 - Focus on economic impacts - that is persuasive language
 - Coastal communities are losing population, getting older. Variation across counties - focus on technical capacity. Some counties don't have resilience plans, which are needed to apply for FEMA BRIC funds. Networking with experts at universities. Providing data products, Nathan will be happy to talk more
- Where and how can the CLI support or elevate your work?
- Who are the key players that should be engaged? Who is likely and least likely to engage? What is the best way to engage?
 - Elected officials control the purse strings and what projects move forward - single most important group. Town planners and managers are also important. Elected officials - ways that the NCCF can engage - staff speak at public meetings, or at a elected official work session. Elected officials have a day job, hard for them to get away for a session in another area.
 - I echo Joe's points on the focus on elected officials, planners, and managers. It'll be a challenge to reach communities where there isn't current political will to address these issues.
 - Basinwide plans being developed for entire state - would be great to be in partnership (Robin Hoffman)
 - Eryn - engage state agencies, non profits that have a stake in these issues.
 - Elected officials can be engaged at a workshop environment before their scheduled meetings. We also have annual meetings that this type of training would work well at if it's limited to 1-2 hours in-person. Field trainings would be valuable if held with a more diverse group of officials.
 - Use the Council of Governments, reach many governments at one time

- On content, another thought is when you're engaging folks around these emerging best practices and positioning communities for external funding opportunities, it will be increasingly more important to think about how to operationalize these practices internally as well (i.e. local plans, processes, implementing measures). I think equity will also be a major consideration as communities look toward the long-term.

DEQ resilience activities, clearinghouse – Jacob Boyd, NC Division of Marine Fisheries
([See Jacob's Presentation](#))

- EO80 Resilience synergies - mitigation/adaptation practices. Incorporating the CHPP into these activities.
- Working with RCCP and RISE to incorporate CHPP recommendations into local govt activities. SAV and GHG inventory
- NC resilience clearinghouse
- Recommendations database - track progress, easier to show connections and overlap between plans
- Online clearinghouse/tool box - climate resilience and NWL info - steering committee. Looked at how different states have done it (i.e. CA, VA). StoryMap/mapping components, open searches, dropdown menus
- Target audience? Want to be the one-stop shop for climate resilience resources, local planners, local communities, state agencies, academia, etc.

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

- Steve Bevington: My program update is that the NCLWF award meetings are coming up. September 19 the Acquisition Committee will meet and the Restoration Committee will meet starting at 8AM on September 20. Contact Terri Murray at teresa.murray@ncdcr.gov or 919-707-9122 to request a meeting invitation/call-in for the meetings.
- Mackenzie - RCCP - Phase III engineering and design, 20 projects funded, \$1.14M awarded, working on contracts, and RFPs coming out soon. Communities will hire a firm to do the work. 2nd round of Phases I and II - applications later this fall
- Stacey - updating CCMP (mgmt plan) - will go out for public input later this year. Federal infrastructure funding, work plan for use of those funds, will include a resilience component. SeaGrant APNEP graduate research fellowship RFP just came out: <https://ncseagrant.ncsu.edu/funding-opps/fellowships/ncsg-apnep-fellowship/>
- Sam - Beaufort is working on LUP update, working on adoption process. Received Phase III RCCP funding - ordinance updates. Sam recently became a Certified Floodplain Manager, congrats Sam!
- Robin - Cape Fear river basin plan undergoing 4th update. Doing outreach with marginalized communities, specifically tribal communities. Survey for stakeholders has received great feedback. Recent approvals of pasquotank, chowan, white oak plans
- Lora - restoration efforts Engola Bay gameland, hydrologic restoration in partnership with Wildlife Resources Commission. NFWF funding scope out design for Holly Shelter gameland. Fish friendly floodplain restoration on Roanoke River
- Joe - living shoreline project, elevating part of HWY 12, stormwater management - the project is stalled, may end up deferring again, state and FEMA permitting hang ups. RCCP Phase II recipient, stormwater mgmt study to address flooding in neighborhoods in Duck
- Eryn - National conference association of state floodplain managers, call for abstracts, consider putting in something (email went out to COP on how to submit an abstract)

- Dawn - next Wednesday hosting a virtual meeting for Cape Fear partnership - coalition of organization working towards improving fish passage in the river, all are welcome to participate
- Cayla - NC Sea Grant coastal conference, Nov 7 & 8: <https://ncseagrant.ncsu.edu/2022-north-carolina-coastal-conference/>. Graduate fellowship: <https://ncseagrant.ncsu.edu/news/2022/09/nc-sea-grant-opens-student-team-competition-on-coastal-resilience/>
- Cat - audubon completed a mapping analysis of the Carolinas - best available data on bird habitat, distribution of human vulnerabilities - implement the plan with local community partnerships, underserved communities
- Anna - Currituck Co - currituck sound coalition, update to stormwater manual
- Adrianna - Leland - stream debris cleanout, Phase III of RCCP, working with consultant on survey. RFQ Leland resilient routes, transportation routes. NC forest service - urban tree study. APA conference in Winston Salem, talk about RCCP. Cape Fear region - RISE public meetings at Leland town hall

Next meeting:

- Next meeting in December or January. Whitney will send a meeting poll
- Next meeting topics –
 - NCCOR – update on RISE program, intersection w/ RCCP (fall or winter meeting) – Brian Bifield speaker? Stacey will reach out
 - Lesson learns from RCCP – Mackenzie
 - Dan Rizza - Climate Central - Cayla will get up with them
 - NC Flood Coalition (American Flood Coalition) (Eryn) -



Fast, Powerful, Dominant



A photograph of the USS North Carolina battleship, viewed from the front. The ship is white with a dark hull and is adorned with numerous signal flags and an American flag. The name "NORTH CAROLINA" is visible on the bow. The ship is set against a clear blue sky.

National Historic Landmark
State Historic Site
250,000 Annual Visitors
1 on Trip Advisor

On the Cape Fear River

Living with
WATER



Leadership Experience

Living with
WATER



9-22-2021
Tide peak 5.62'
Flood event = 5.5'

Tidal Impact: Access Road

Living with
WATER



9-22-2021
Tide peak 5.62'
Flood event = 5.5'

Tidal Impact: Parking Lot





9-22-2021
Tide peak 5.62'
Flood event = 5.5'

Tidal Impact: Visitor's Entrance





Prime Artifact & Grounds





Zero State Tax Revenues
\$3 million Annual Budget

State Enterprise





● Water Level
 ★ Water Level + Salinity

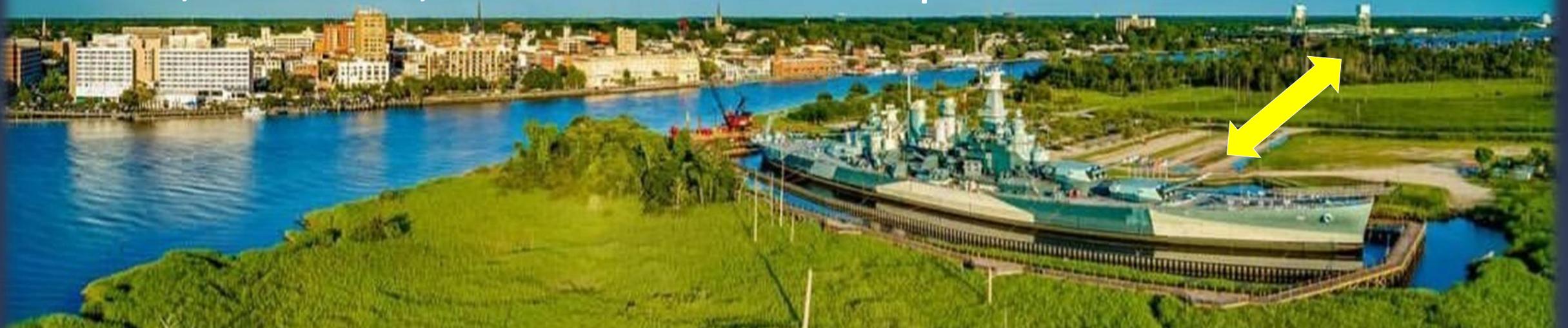


NOAA NCCOS' Studies



Identical Water Level Patterns

Tides, not Rain, Flood the Battleship Site



Take – Aways



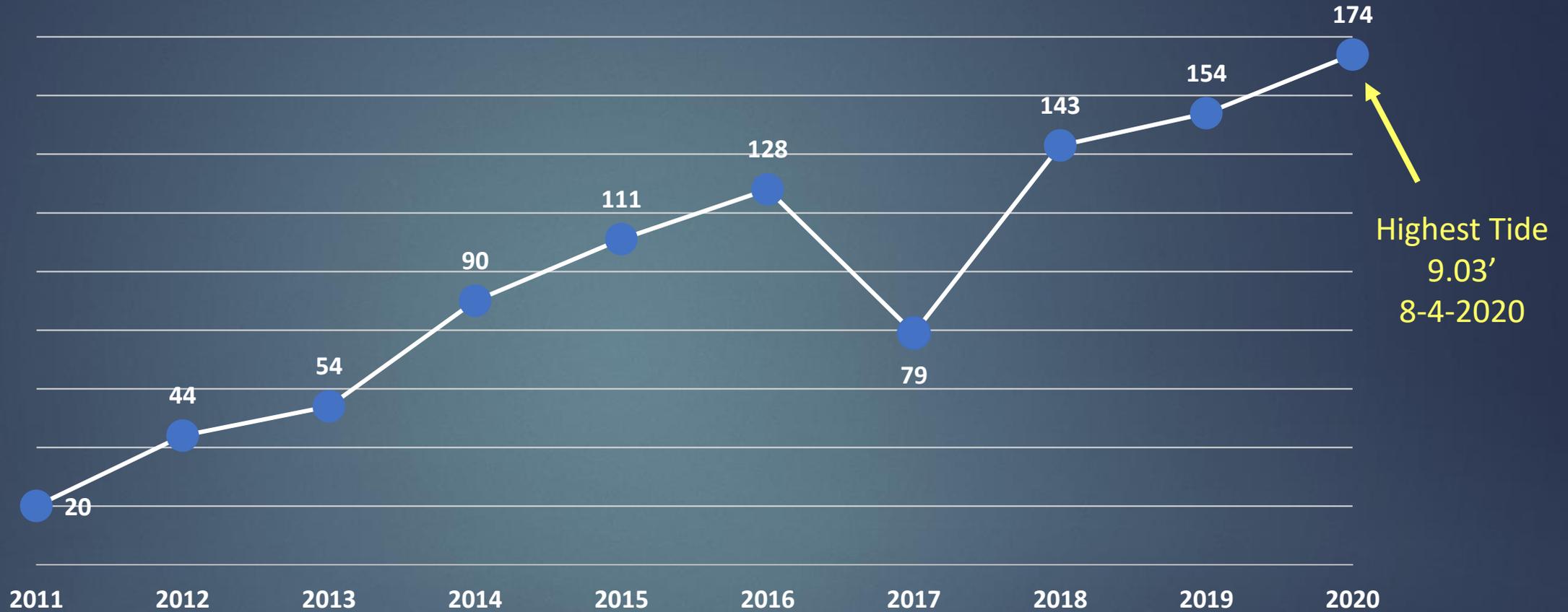
7,021% Increase Since 1961



Historic Tidal Flooding Trend



770% Increase Over Decade



Recent Tidal Flooding Trend





Living with Water Concept





Education & Outreach



North Carolina Land & Water Fund
National Fish & Wildlife Foundation
US Fish & Wildlife Service
Kerr-McGee Natural Resource Trustees
State of North Carolina
Battleship Commission

Project Supporters





North Carolina
Coastal Federation
Working Together for a Healthy Coast

New Program Feedback: Coastal Leadership Institute

Kara Nunnally

September 12, 2022

Coastal Resilience COP Meeting

Coastal Federation

- Member-supported 501(c)3
- Protection and restoration of water quality and natural habitats
- Located in Newport (Ocean), Wanchese, Wrightsville Beach



Background & Purpose

Purpose: To shorten the bridge between science and practice

- Primary audience
 - Elected officials and staff in local government
 - 20 CAMA counties and ~100 municipalities
- Focus on building capacity
- Series of sessions at conferences, during seminars, over virtual meetings, and in the field

Coastal Leadership Institute Objectives

Participants will **learn**

1. Strategies for:

1. nature-based stormwater
2. watershed management and restoration planning
3. water quality management
4. shoreline management
5. flood damage reduction
6. habitat and ecosystem restoration

2. Methods for:

1. financing environmental initiatives
2. spatial and temporal planning
3. grant applications
4. engaging partners

Participants will **gain**

1. Confidence in navigating complex environmental issues in their community
2. Tools to secure funding for projects in their community
3. Resources for supporting constituents and community members

Discussion Questions (content)

What topic areas are the most pressing or relevant to local government units based on your observations and interactions?

Where and how could CLI help support or elevate your work?

Discussion Questions (audience)

Who are the key players that should be engaged within and outside of local government units? Who is most likely to engage? Who is least likely to engage?

How are these stakeholders best engaged? How can we best reach the audience?



North Carolina
Coastal Federation
Working Together for a Healthy Coast

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252-393-8185



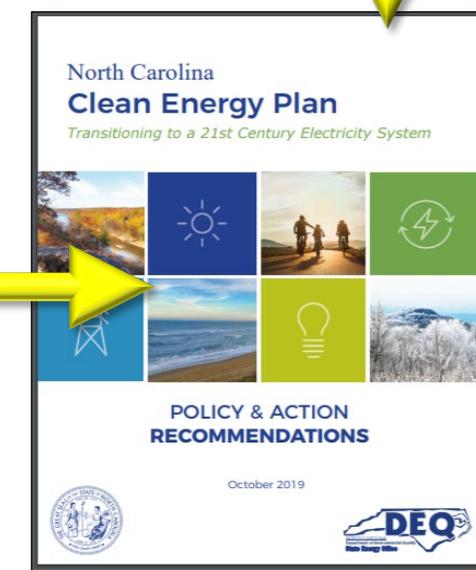
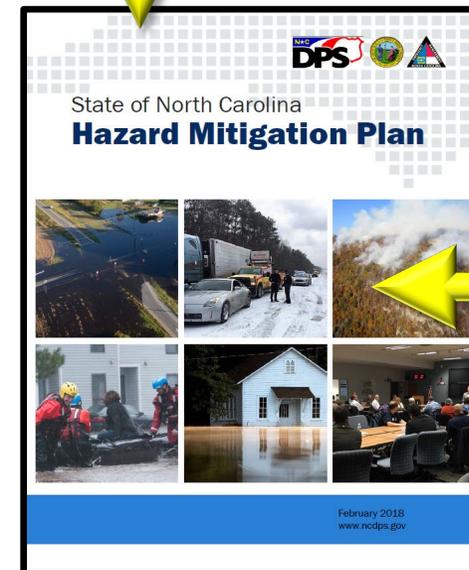
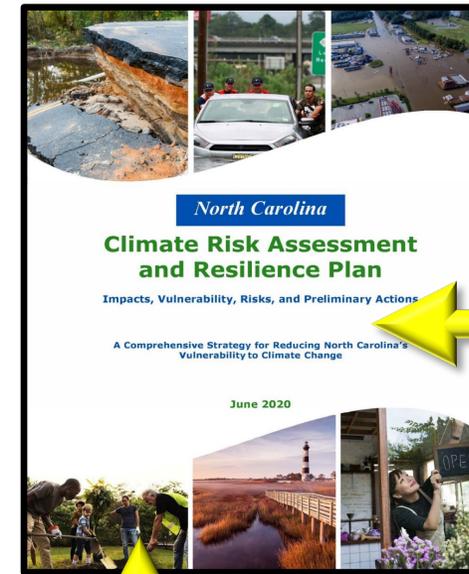
DEQ Resilience Synergies

Jacob Boyd



EO80 Resilience Synergies

- **EO80** - Committed NC to address climate change by incorporating **mitigation and adaptation** practices in their programs, policies, and operations
- **Protect** human life and health, property, natural and built infrastructure, cultural resources, and other valuable assets



CHPP & EO80 Resilience Synergies

- **EO80** - Committed NC to address climate change by incorporating **mitigation and adaptation** practices in their programs, policies, and operations
- **Protect** human life and health, property, natural and built infrastructure, cultural resources, and other valuable assets

• **CHPP** - Prioritize actions for coastal habitats that will increase **resilience, carbon sequestration, and environmental justice**



- Nature-Based Solutions

- Strengthen local capacity

Ecosystem Resilience

Community Resilience

CHPP & EO80 Synergies

Climate Change Adaptation

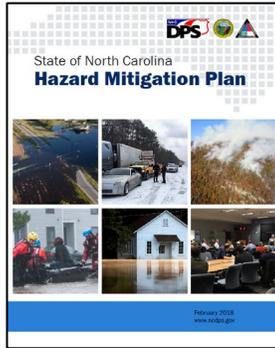
Carbon Sequestration

- Protect and restore **wetlands** and **oysters**
- Increase **SAV**
- Improve **water quality**
- Flood-proof **wastewater infrastructure**
- **Monitor** coastal habitats to prioritize actions

- Policy

- Natural & Working Lands

Incorporating CHPP & EO80 Recommendations Into Existing Efforts



- Collaborating with multiple agencies, NGOs, and other organizations
 - RCCP, RISE, SAV GHG inventory, **NC Resilience Clearinghouse**
- **Recommendations Database: NC Resilience Plan & NWL Action Plan**
- Southeast Regional Partnership for Planning and Sustainability (SERRPAS)
 - South Atlantic Salt Marsh Initiative (SASMI) - Conservation Plan

Recommendations Database: NC Resilience Plan & NWL Action Plan

Tracking/Progress

Recommendations

Strategies

Overlapping efforts

Efficiencies

Chapter	Recommendations / Strategies
5C-1	Create and fund a program to build local capacity for climate resilience. The program should incentivize and reward communities for meeting defined standards for long-term planning, preparedness, and community engagement, and help them to plan shovel-ready projects in order to capitalize on federal and state funding opportunities. DCM and NCOOR are currently researching other states that have created similar programs.
5F-1	Increase funding for land conservation. Land conservation can help reduce vulnerability by protecting the natural resiliency of North Carolina ecosystems and by sequestering and storing carbon to reduce greenhouse gases in the atmosphere.
5K-1	Land use guidance. One critical strategy is to guide land use in riparian zones and floodplains. Natural land adjacent to waterways attenuates pollution from overland runoff.

NC Resilience Clearinghouse

- DEQ and NCORR partnering
- All-encompassing climate resilience and NWL resources hub
- Collaborating with numerous agencies and organizations
- Local decision-makers, regional councils of government, state government agencies, other organizations, universities, and the public
- USCA funding for technical support



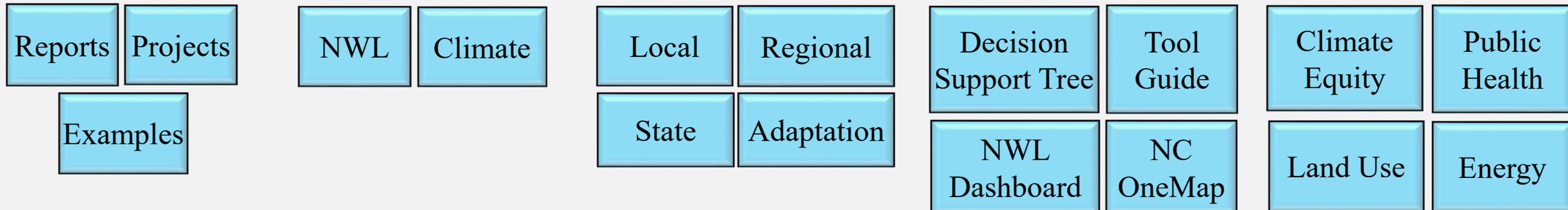
NC Resilience Clearinghouse

- All-encompassing climate resilience & NWL information/resources **Hub**
- Climate **D**iversity, **E**quity, and **I**nclusion throughout

Portals (Tier I): *high-level*



Portals (Tier II): *subportals*



Example Portals (Tier I)

California Adaptation Clearinghouse

- Portals Tier I (high-level):
 - Adaptation Planning Guide
 - Case Studies
 - Resources by Topic
 - Tools & Data
 - About

The screenshot displays the ResilientCA.org website. At the top, there is a navigation bar with the site logo, social media icons, and a 'GLOSSARY' link. Below this is a secondary navigation bar with links for 'Adaptation Planning Guide', 'Case Studies', 'Resources by Topic', 'Tools & Data', and 'About'. The main content area features a large banner for the 'Adaptation Clearinghouse' with a search bar and a description: 'The Adaptation Clearinghouse is the State of California's consolidated searchable database of resources for local, regional and statewide climate adaptation planning and decision-making. Search and explore resources for adaptation and resiliency efforts in California. Learn more.' Below the banner is a video player titled 'Tour the State Adaptation Clearinghouse' with a 'Tour the site' link and a 'Explore our complete Video Playlist' link. The 'Featured State Guidance Resources' section includes four tiles: 'Adaptation Planning Guide', 'General Plan Guidelines', 'Cal-Adapt', and 'Climate Change Research Assessments'. The 'Popular Adaptation Resources' section includes five tiles: 'Coastal Plan Alignment Compass', 'Find a Tool', 'Case Studies, Examples, and Projects', 'Explore by Topic', and 'The ResilientCA Adaptation Planning Map (RAP-Map)'.

Example Portals (Tier I)

Adapt VA

- Portals Tier I (high-level):
 - Forecasts
 - Adaptations
 - Tools
 - Resilience Resources
 - Planning & Policy

Thursday, October 14, 2021

FORECASTS ADAPTATIONS TOOLS RESILIENCE RESOURCES PLANNING & POLICY

ADAPTVA

Evidence-based planning for changing climate

- FORECASTS**
Forecasting water levels, temperature, and precipitation helps mitigate impacts and plan resilient communities. Access a tide forecast & sea level projections for Virginia
- ADAPTATIONS**
Case studies and story maps illustrate how adaptation works, and can be financed, through zoning, planning, engineering, and policy practices.
- TOOLS**
Tools assess risk and inform preparation and response to a changing environment. Access flood risk maps, shoreline recommendations, and an interactive comprehensive map of adaptation strategies.
- RESILIENCE RESOURCES**
Data, websites, and other resources important for community adaptation. Including: social and equity issues, climate outlooks and resilience projects.
- PLANNING & POLICY**
Management strategies from local and State code to the Community Rating System. Learn about FEMA National Flood Insurance Program, relevant local ordinances, state legislation, and access legal analyses.

Example Portals (Tier II)

California Adaptation Clearinghouse

- Portals Tier II (subportals):
 - Resources by Topics
 - Adaptation Planning Guide

The screenshot displays the ResilientCA.org website. At the top, there is a navigation bar with the site logo, social media icons, and a search bar. Below the navigation bar, the main content area features a large heading: "The Adaptation Planning Guide provides guidance to local governments on local adaptation and resiliency planning." To the right of this heading is a circular diagram illustrating the four phases of the Adaptation Planning Guide: Phase 1 (Explore, Define, and Initiate), Phase 2 (Assess Vulnerability), Phase 3 (Define Adaptation Framework & Strategies), and Phase 4 (Implement, Monitor, Evaluate, and Adjust). Below the diagram are two buttons: "Explore APG Online" and "Download APG".

Below the main heading, there is a list of questions with expandable content:

- What is adaptation and resilience? +
- What are the requirements for local general plans? +
- How is greenhouse gas mitigation integrated into adaptation planning? +
- How is equity integrated into climate change adaptation planning? +
- How should communities take action? +

Further down, there is a section titled "Explore Adaptation Planning Phases" with five colored buttons representing the phases:

- Introduction: Overview of local adaptation planning
- Phase 1: Explore, Define, and Initiate
- Phase 2: Assess Vulnerability
- Phase 3: Define Adaptation Framework and Strategies
- Phase 4: Implement, Monitor, Evaluate, and Adjust

At the bottom, there is a section titled "Explore Supporting Resources" with four purple buttons and corresponding text boxes:

- ADAPTATION PLANNING RESOURCES**: List of reports, guidance documents, and toolkits from federal, state and non-governmental organizations that support local adaptation planning.
- ADAPTATION PATHWAYS**: Build adaptation capacity, prioritize strategies, stagger investment, maintain flexibility, and communicate critical climate adaptation concepts while pursuing adaptation goals.
- EXPLORE BY TOPIC**: Explore climate impacts, example adaptation strategies, and Clearinghouse resources by topic.
- EQUITABLE PLANNING & COMMUNITY ENGAGEMENT**: Learn key equitable planning and community engagement concepts summarized from the four phases of the Adaptation Planning Guide.

Example Portals (Tier II)

- Portals Tier II (subportals):
 - Data portal (**Cal-Adapt**)
 - State and local adaptation plans (**Georgetown Climate Center**)

Climate Tools

New to climate data? Start with the [Local Climate Change Snapshot Tool](#)

All Temperature Precipitation Snowpack Sea Level Rise Wildfire

Local Climate Change Snapshot

A starting point to get climate impacts for your location.

[EXPLORE](#)

Annual Averages

Projected annual averages of maximum & minimum temperatures and precipitation.

[EXPLORE](#)

Extreme Weather

Extreme weather events for baseline and future climates.

[EXPLORE](#)

Maps of Projected Change

Maps depicting long-term (30 years) changes in annual average temperature and precipitation.

[EXPLORE](#)

Extreme Precipitation Events

Changes in intensity and frequency of extreme precipitation events.

[EXPLORE](#)

Extreme Heat Days & Warm Nights

Projected frequency and duration of extreme heat days and warm nights.

[EXPLORE](#)

Sea Level Rise - CalFloD-3D

Maps of inundation during 100 year storm events with projected Sea Level Rise scenarios.

[EXPLORE](#)

Snowpack

Timelapse animation and monthly averages of projected Snow Water Equivalent.

[EXPLORE](#)

GEORGETOWN LAW

GU Home | Law Home

GEORGETOWN CLIMATE CENTER

A Leading Resource for State and Federal Policy

Home About Adaptation Transportation Clean Energy Reports News & Updates Accessibility

Search this site [go](#)

State and Local Adaptation Plans

Select a State

Select State [Go](#)

States and communities around the country have begun to prepare for the climate changes that are already underway. This planning process typically results in a document called an adaptation plan.

Below is a map that highlights the status of state adaptation efforts. Click on a state to view a summary of its progress to date and to access its full profile page. State profile pages include a detailed breakdown of each state's adaptation work and links to local adaptation plans and resources. Please move the map to view Alaska and Hawaii.

Map Satellite

Map data ©2022 Google, INEGI | Terms of Use

Examples Functionality

- Checkbox and/or Dropdown Filtering

CLIMATE IMPACTS

PLANNING PHASES

RESOURCE TYPES

TOPICS

PUBLIC AGENCIES

REGIONS

Adaptation + Mitigation = Innovation + Resilience

Blue Lake Rancheria Tribe | 2018

The Blue Lake Rancheria Tribe is a federally recognized Tribal Government located in Humboldt County. The Tribe began developing its Adaptation + Mitigation policy and programs in 2008 to mitigate climate change and prepare for increased...[show more](#)

CLIMATE IMPACT TAGS

Drought Extreme storms Flooding

RESOURCE TYPE TAGS

ICARP Case Study

Adaptation Strategies for Agricultural Sustainability in Yolo County, California

CA Energy Commission (CEC) | 2012

This paper examines biophysical and socioeconomic issues related to mitigation of greenhouse gas (GHG) emissions and adaptation to climate change for agriculture in Yolo County, California. This paper provides a science-based exploration of...[show more](#)

CLIMATE IMPACT TAGS

Drought Extreme heat Flooding Temperature

RESOURCE TYPE TAGS

Assessment Planning and policy guidance Project or example

Area of Interest

Pick one or more interests:

Air Quality

Indoor Air

Outdoor Air

Ground Level Ozone

Particulate Matter

Water Management

Water Utility Facility Operations

Drought

Saltwater Intrusion

Sea-level Rise

Storms & Flooding

Waste Management & Emergency Response

Contaminated Site Management

Disaster Debris Management

Public Health

Air Quality

Water Quality

Extreme Heat

Adaptation Planning

Getting Started

Comprehensive

Sector-Based

INDIANA UNIVERSITY

Menu

region. For each search, only one area of interest may be selected within each dropdown box.

Select Area of Interests

Select Level of Governments

Select Region

Select Area of Interests

- Air Quality > Indoor Air
- Air Quality > Outdoor Air
- Critical Infrastructure > Buildings and Housing
- Critical Infrastructure > Communications
- Critical Infrastructure > Energy Generation, Procurement and Transmission
- Critical Infrastructure > Transportation Systems
- Critical Infrastructure > Waste and Wastewater
- Ecosystem Protection > Estuaries
- Ecosystem Protection > Invasive Species and Pests
- Ecosystem Protection > Lakes, Rivers and Streams
- Ecosystem Protection > Maintaining Biodiversity
- Ecosystem Protection > Parks, Trees and Forests
- Ecosystem Protection > Urban Ecosystems
- Ecosystem Protection > Wetlands

Site Reduces Climate Exposure

Water Treatment Plant for Climate

- Open Search

Adaptation Clearinghouse

POWERED BY THE GEORGETOWN CLIMATE CENTER AND USERS LIKE YOU

SITE SEARCH

Enter a keyword

RESOURCES SECTORS NETWORKS MY CLEARINGHOUSE ABOUT

Welcome to the Adaptation Clearinghouse

An online database and networking site that serves policymakers and others who are working to help communities adapt to climate change

Search the Clearinghouse

By Keyword By State

SEARCH FOR: RESOURCES ORGANIZATIONS USERS ALL

Enter a keyword

SEARCH

ADAPTATION PLANS & PROGRESS

FIND STATE AND LOCAL ADAPTATION PLANS

The Georgetown Climate Center tracks progress states are making in implementing their adaptation plans and provides quick access to local plans in every state on their main website.

VIEW MAP

OR

SELECT A STATE

ECOSYSTEMS

ENERGY

PUBLIC HEALTH

Featured Resource

Resource

2022 California Climate Adaptation Strategy

April 4, 2022

The 2022 California Climate Adaptation Strategy presents six state priorities and relevant actions to increase climate resilience at the state, regional, and local levels. The 2022 Strategy updates the conclusions and innovations put

Adaptation Clearinghouse

The Adaptation Clearinghouse is the State of California's consolidated searchable database of resources for local, regional and statewide climate adaptation planning and decision-making. Search and explore resources for adaptation and resiliency efforts in California. [Learn more.](#)

Search all resources

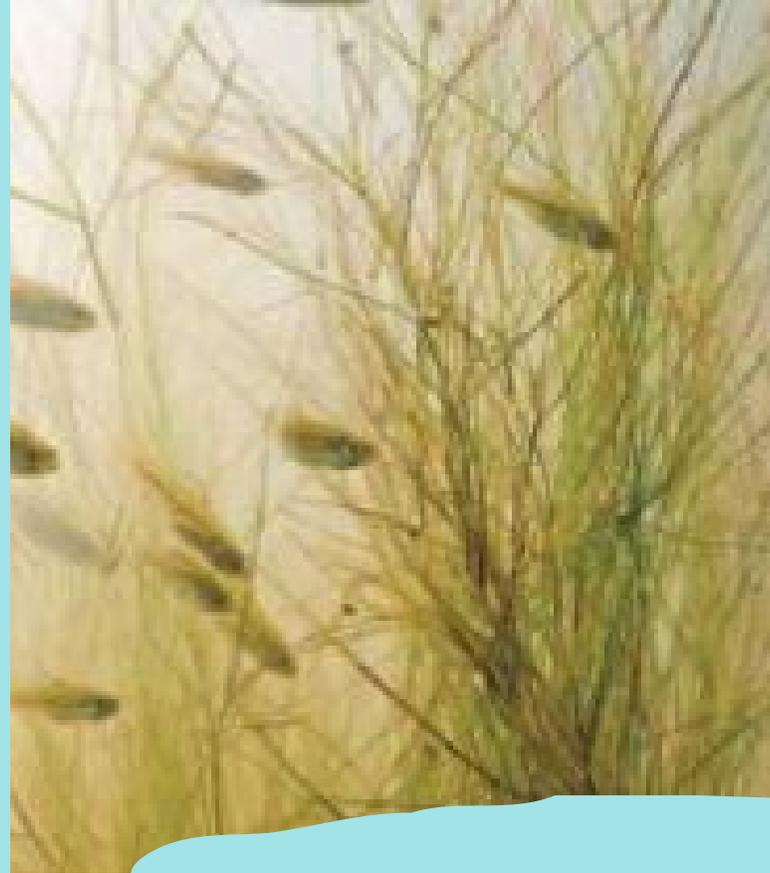
Benefits

- Efficiencies short- and long-term
- Justification of future resources (i.e., community)

Next Steps

- Continue integrating ecosystem and community resilience (i.e., CHPP recommendations)
- Feedback





Questions?