

North Carolina Flood Resiliency Blueprint

NORTH CAROLINA
Department of Environmental Quality

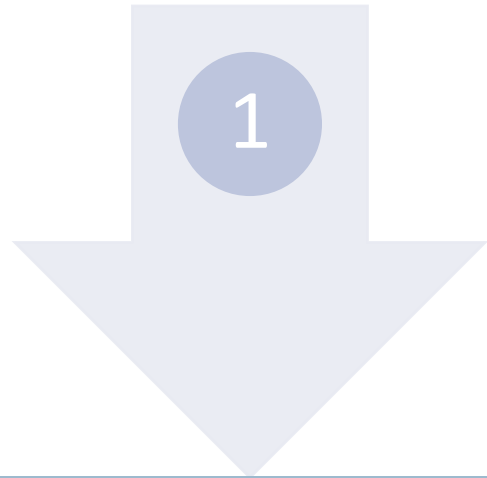
Secretary's Environmental Justice and Equity Advisory Board

February 9, 2023



NC DEQ
SECRETARY'S ENVIRONMENTAL
JUSTICE AND EQUITY
ADVISORY BOARD

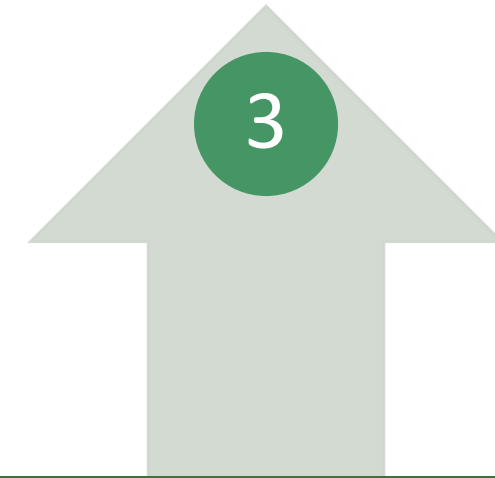
Purpose



Reduce likelihood and extent of flooding in NC



Reduce vulnerability and impact from flooding in NC



Increase community ability to maintain and quickly resume pre-storm activities following flooding in NC

Goals

Develop

Develop community and basin-specific risk management processes to identify and address flooding for NC communities

Decision

Develop an online decision support tool which seamlessly guides state, county, municipal, and other jurisdictions to identify and select flood mitigation strategies responsibly, systematically, equitably, and transparently

Establish

Establish a repeatable, statewide methodology for prioritizing and selecting flood mitigation strategies for future implementation

Flood Resiliency Blueprint Executive Timeline

PHASE 1 Results

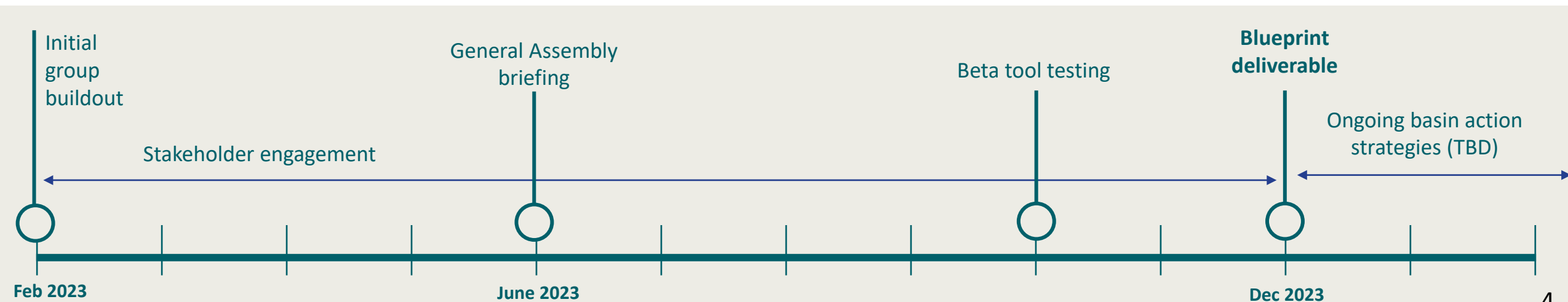
- **Blueprint Process Document:** planning at multiple scales, long-term administration of Blueprint, governance and decision-making recommendations
- **Online Decision Support Tool Requirements:** document, storyboard and wireframes
- **Draft Action Strategy** for Neuse River Basin (NRB)

PHASE 2 Results

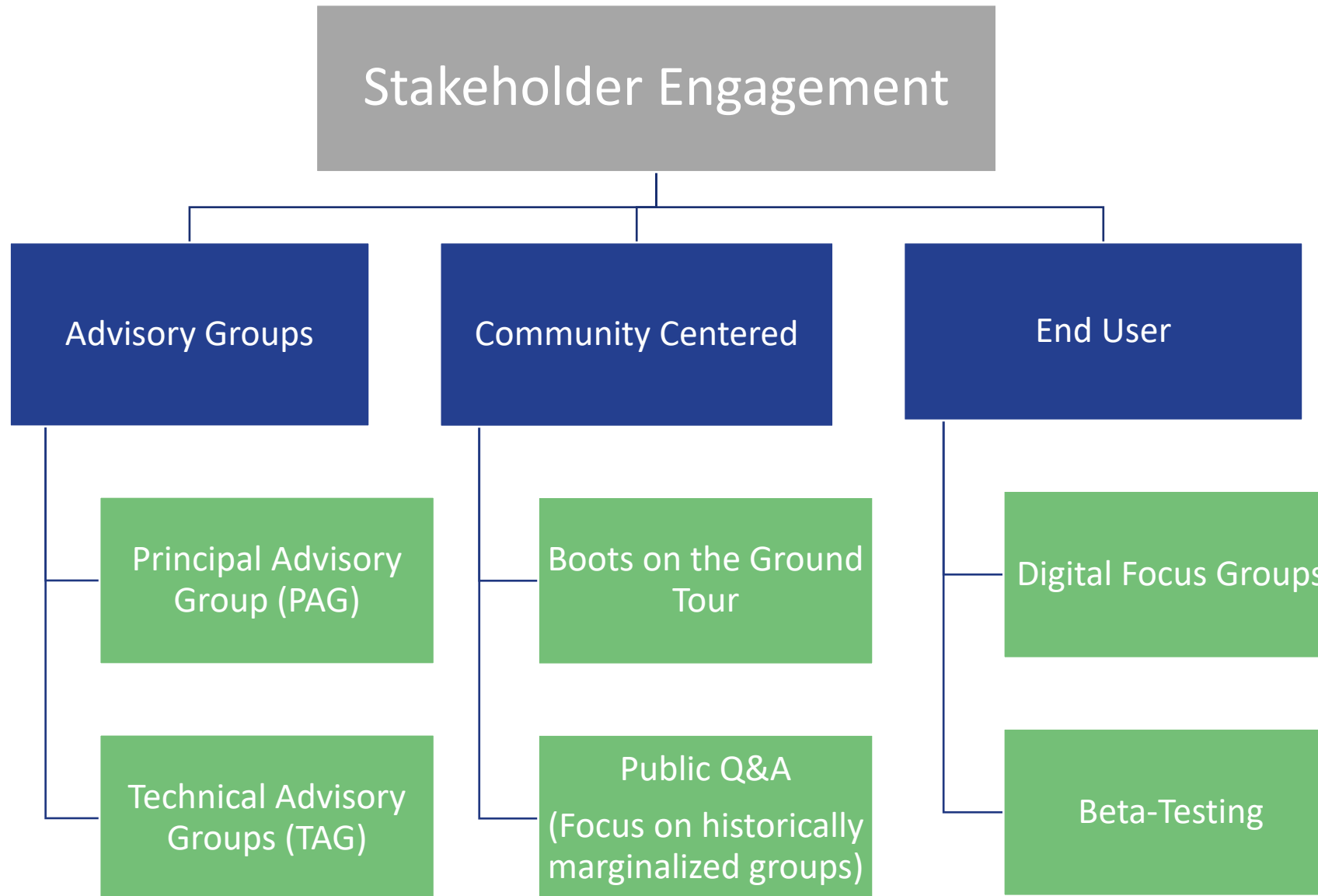
- **Online Decision Support Tool:** build-out and beta version

PHASE 3 Results

- Goal is to develop **River Basin-Specific Action Strategies** for all major river basins in NC
- **Statewide Online Decision Support Tool:** Statewide application and beta-testing of online decision support tool



Environmental Justice Involvement



Environmental Justice Involvement

Statewide Consideration

- Focused participation from historically marginalized groups and Tribal experts
- Review of data showing impacted communities
 - Federal Climate and Economic Justice Screening Tool (CEJST)
 - NCDEQ Community Mapping System
 - Historical impacts
- Focus on impacts to areas from an environmental justice (EJ) standpoint to understand implications of decisions

Basin-Level Consideration

- Need to add focused participation from communities
 - Look at historical impacts to local areas
 - Look at historic response from communities
 - Include volunteer response organizations
- Focus on impacts of specific projects from an EJ standpoint to understand implications of decisions

Stakeholder Engagement

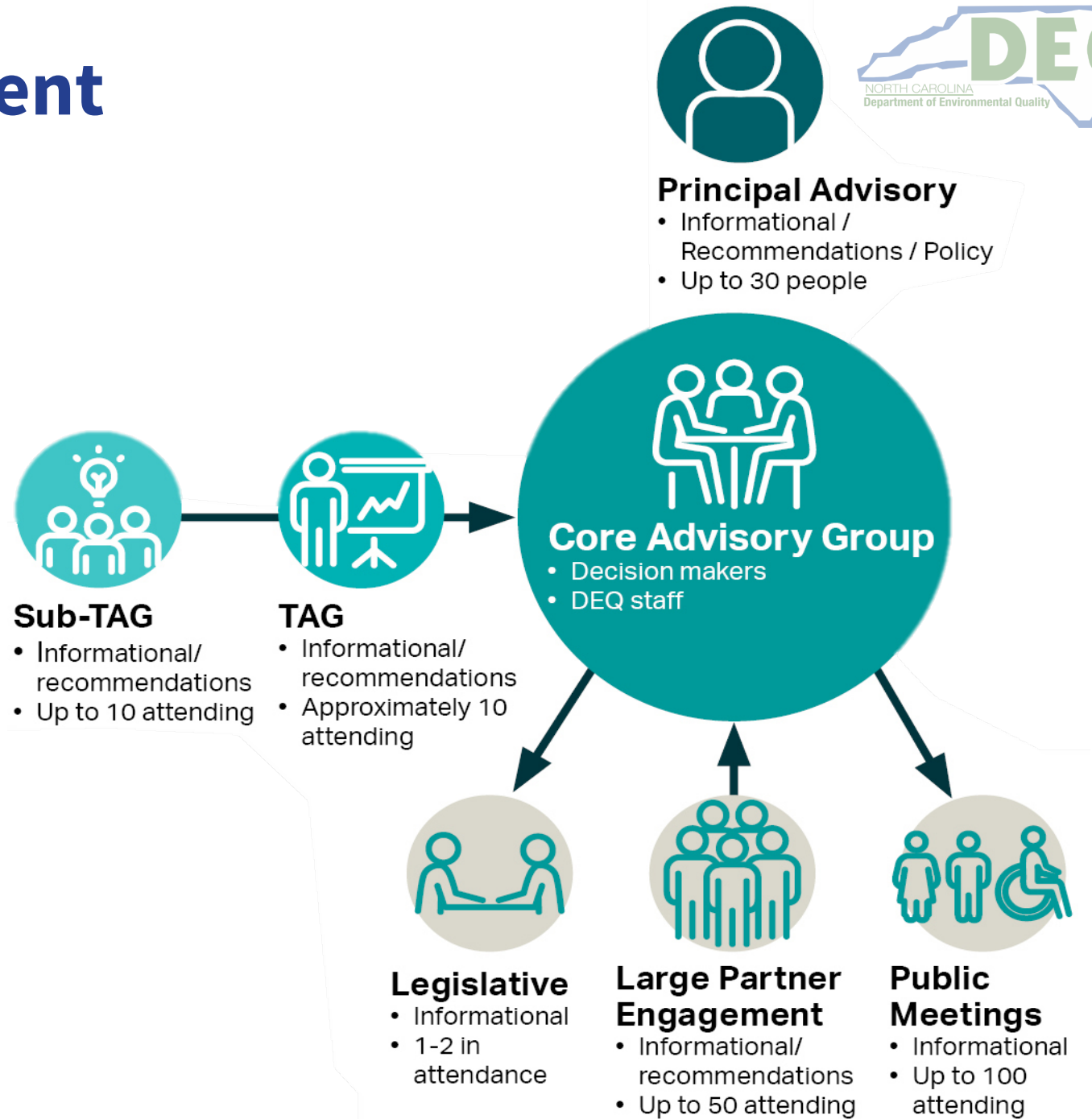


Creation of viable teams from extensive stakeholder list :
state, federal, local, and county experts, Tribal, non-governmental organizations, academic, and community experts

Stakeholder Engagement Plan (draft)/
Decision Making Process

Technical Advisory Group (TAG) can create sub-TAGs for more detailed requirements

- Coordinated meeting content and review



Group Structures

Leadership		
DEQ Executive Leadership	DEQ Core Advisory Group	Principal Advisory Group
Work with the Core Advisory Group to decide on recommendations	Determine whether to implement recommendations provided by the TAGs, including technical requirements, policies, economics, environmental and human health, and project funding	Provide advisory input and feedback on the policy, process, engagement, modeling, tools, and support utilized

Government		Environmental		Social		RAB
Governance	Partnership/ Funding	Hazard Identification	Vulnerability/ Risk/ Impact	Resilience/ Mitigation/ Reduction	Tool Development/ Acceptance	Neuse Regional Advisory Council

Provide advisory input and feedback

TAGs: Government

Governance

- Existing and proposed policies, processes, and programs at a federal, state, Tribal, historically marginalized community, and/or other local level that will impact the rollout and operations of Blueprint

Partnership/ Funding

- Provide advisory input and feedback on the inventory of funding and financial partnership opportunities present or anticipated to support implementation of Blueprint projects
- Provide input and feedback on criteria and modeling utilized to calculate benefit and prioritization

Government		Environmental		Social		RAB
Governance	Partnership/ Funding	Hazard Identification	Vulnerability/ Risk/ Impact	Resilience/ Mitigation/ Reduction	Tool Development/ Acceptance	Neuse Regional Advisory Group

TAGs: Environmental

Where/When: Hazard Identification

- Data and modeling utilized to best calculate and display present and future flood probability and extent
- Including consideration of deterministic and probabilistic riverine, lacustrine, dam and levee induced, urban, stormwater, and coastal and/or riverine confluence flooding

Who/What: Vulnerability/ Risk/ Impact

- Data and modeling to best calculate and display present and future vulnerabilities and impacts to people (including specifically to historically marginalized communities) and other receptors*
- Criteria and modeling utilized for risk and equity ranking and rating

*Receptors will include, but not be limited to population, historically marginalized communities, Tribes, environment, structures, infrastructure, and commerce.

Government		Environmental		Social		RAB
Governance	Partnership/ Funding	Hazard Identification	Vulnerability/ Risk/ Impact	Resilience/ Mitigation/ Reduction	Tool Development/ Acceptance	Neuse Regional Advisory Group

TAGs: Social

How: Resilience/ Mitigation/ Reduction

- Data and modeling to best calculate and display present and future loss avoidance to people (including specifically to historically marginalized communities) and other receptors*
- Criteria and modeling utilized for ranking and prioritizing mitigation strategies and projects

Tool Development/ Acceptance

- Business case and functional requirements of Blueprint tools, websites, and applications
- Efficient engagement and decision making

*Receptors will include, but not be limited to population, historically marginalized communities, Tribes, environment, structures, infrastructure, and commerce

Government		Environmental		Social		RAB
Governance	Partnership/ Funding	Hazard Identification	Vulnerability/ Risk/ Impact	Resilience/ Mitigation/ Reduction	Tool Development/ Acceptance	Neuse Regional Advisory Group

Neuse River Basin Regional Advisory Group

Pilot River Basin used to implement and work through potential ideas for Blueprint

- The Neuse Regional Advisory Group will provide input, feedback, and advice on **Neuse River Basin specific needs, including from historically marginalized communities, and how to engage and utilize the information from Blueprint at a River Basin level most effectively and efficiently.** This group should be representative of the Basin and is intended to serve as a pilot that will help define how future basins are incorporated into the Blueprint process.

Government		Environmental		Social		RAB
Governance	Partnership/ Funding	Hazard Identification	Vulnerability/ Risk/ Impact	Resilience/ Mitigation/ Reduction	Tool Development/ Acceptance	Neuse Regional Advisory Group

Approximate Level of Effort

- **Meeting Review and Attendance: 12 Hours total**
 - Four 2-hour meetings in 2023 with an hour of prep for each meeting
 - Discuss deliverables that have been developed and provide feedback
 - Discuss the status of ongoing work and next steps
- **Document Review and Meeting Preparation:**
 - 8 - 24 hours of document review and meeting preparation
 - When questions arise based on specific experience of subject matter experts (SMEs)
 - Amount of review based on level of participation and topic covered
 - Some topics such as modeling and scientific needs may warrant more detailed review based on content.

12 hours - Meeting review and attendance

8-24 hours - Document Review and meeting preparation

36 hours total



Questions:

- 1. Are there people you would recommend to serve as a principal advisor or on TAGs?**
- 2. Where would you recommend we prioritize visiting for a workshop or public meeting?**
- 3. What additional feedback do you have for us to ensure we understand how flooding and methods for prioritizing projects impact historically marginalized communities?**

An aerial photograph of a tropical storm or hurricane over the ocean. The storm's eye is visible as a bright, circular center, surrounded by dense, swirling clouds. The surrounding ocean is dark, with white foam from the storm's outer edges visible. The image is framed by a dark, textured border.

***Equitable* Community Engagement
for *Effective* Mitigation Planning**

Objectives

1. To communicate relevant takeaways and outcomes for developing a community engagement framework.
 2. To explore opportunities to partner with DEQ on their NC Flood Resilience Blueprint Planning process.
 3. To advocate for more equitable community engagement as a best practice across the whole of government.
-

NCIDR *Research Team*

Collectively, we represent multiple, dynamic roles throughout the life of this project.

... advocate, convener, content expert, documentarian, educator, facilitators, funder, faith leader, neighbor, organizer, partner, witness.



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NC **INCLUSIVE** DISASTER RECOVERY NETWORK (NCIDR)

...is a collaborative of public, private, non-profit, and faith organizations seeking avenues for **community voice and equitable access to resources** in our disaster recovery system.



Information Sharing

Sharing information across organizational boundaries



Program and Policy Development

Generating knowledge, ideas, and practices



Advocacy

Leveraging numbers, diversity, and community reach to influence decisionmakers



Capacity Building

Developing and amplifying individuals, organizations, and coalitions

The Needs We Want to Address

1. Disasters *do* discriminate. Flooding does not impact all people equally because of public policies that affect the lives of especially Black, Indigenous, and Latino communities. *What practices will ensure that the people and communities most impacted by flooding have the power and resources to adapt to increasing climate risk and uncertainty?*

2. Racial and economic disparities are as obvious in outcome as they are in engagement and planning processes. *What support do government officials and community advocates each need to collaborate on this shared vision of more resilient communities?*

Community Resilience, *defined*

...whether community members themselves and the extent to which they have the capacity to respond to change, engage in community-level decisions about resource use and thrive in a context of uncertainty (Magis 2010)

Our Process:

Modeling Participatory Values

Initial Process

Develop Research Team

Host 1st Research Team Meeting
– Organizing and Brainstorming

Host 2nd Research Team Meeting –
Resetting and Visioning

Host 3rd Research Team Meeting –
Activating and Moving Forward

Host 4th Research Team Meeting
Activating and Moving Forward,
cont.

Meetings #5 and #6

Desired Outcomes

Stronger relationships
between group members

Develop set of
recommendations or
scorecard for best
practices around
community engagement.

Next Steps:
What we do with
what we learn.

NCDEQ
Public Input
(deadline: 2/24)

*"If you don't write it,
how will they know?"*

– Rev. Roland Whitley

1. Communities need an explicit and candid discussion of systemic racial discrimination and disparities.
2. Communities and agencies cannot assume racial equity and justice is part of the Blueprint's framework because we know that racial equity has not been part of similar federal, state, and local planning projects.
3. If we don't talk about the disparities, we can't reduce them. If we don't reduce them, we aren't meeting our mission. Many will be excluded.

Selected Recommendations for State Government

1. Build upon any related planning or work being done to address issues of flooding [PARTNERSHIP]
 2. Engage stakeholders that reflect the diversity of the community [PARTNERSHIP]
 3. Exercise patience and find consensus on a shared vision for the project with planning participants [PEOPLE]
-

Short-Term *Priorities*

1. **Activity Name:** Identify and designate an appropriate vendor [PEOPLE].

2. **Activity Name:** Select and appropriately train agency representatives [POWER].

3. **Activity Name:** Build upon any related planning or work being done to address issues of flooding [PARTNERSHIP].

- **Activity Detail:** Agency representatives and vendors should:

- Research, build upon, and coordinate with prior or concurrent planning efforts that address upstream and downstream issues of flooding.
- Look for people that are not part of the 'usual suspects' (i.e. Cooperative Extension, Department of Natural Resources, Wildlife Commission).
- Identify and engage with stakeholders with lived experience. See Appendix 1 Stakeholder Involvement.

Mid-Term *Priorities* (1/2)

- 1. Activity Name: Engage stakeholders that reflect the diversity of the community [PARTNERSHIP].**
 - Activity Detail: Agency representatives and vendors should:
 - Look for people that are not part of the usual suspects (i.e., Cooperative Extension, Department of Natural Resources, Wildlife Commission).
 - Identify and engage with stakeholders with lived experience. See Appendix 1 Stakeholder Involvement.
 - Ensure stakeholders at the table reflect the communities they are representing.
- 2. Activity Name: Select neutral venues within the communities where planning efforts are underway [POWER]**
- 3. Activity Name: Emphasize full participation and actively commits human and financial resources to removing barriers to full participation [PEOPLE].**
- 4. Activity Name: Dedicate time to understand the issues that are most pressing to community [PEOPLE].**

Stakeholder Groups

- A. **Stakeholders with “lived experience”.** Stakeholders with “lived experience” such as those who have experienced death and loss from flooding events; those who have been “orphaned” from their community (unable to return to their communities); homeowners and renters who were unable to move back to their homes due to damage, farmers that have suffered severe losses due to flooding, etc.
- B. **Stakeholders reflecting diversity of community.** Stakeholders who represent the racial, ethnic, economic, and cultural diversity of the community, such as people of color, Native Americans, members of the LGBTQ community, and members of traditionally unrepresented or underrepresented groups.
- C. **Insurers and Contractors.** Stakeholders who work in the rebuilding process with an emphasis on local private sector businesses who see the devastation; people who do immediate clean up.
- D. **Food Systems Services.** Stakeholders who work in food systems, such as small farmers, small holder producers, especially farmers and growers of color.
- E. **Faith-Based Organizations.** Stakeholders who represent faith-based organizations, houses of worship, and other long-term historic buildings.
- F. **Community-Based Organizations.** Stakeholders who represent local community groups, coalitions, and non-profits.
- G. **Education and employment service providers.** Educators, such as representatives of K-12 schools, community colleges, and universities; and those providing vocational education, job skills training, or related employment services.
- H. **Death Services.** Stakeholders such as morticians and funeral arrangers who have witnessed the lives lost to flooding events.
- I. **Social service providers.** Providers of human services, social services, housing services, and community health services
- J. **Healthcare providers.** Hospitals and health systems, providers of behavioral health services, medical professionals, pharmacists, community health centers, medical safety net providers, and other healthcare providers.

Mid-Term *Priorities* (2/2)

5. **Activity Name: Use consensus-based decision-making [POWER].**

6. **Activity Name: Exercise patience and find consensus on a shared vision for the project with planning participants [PEOPLE].**

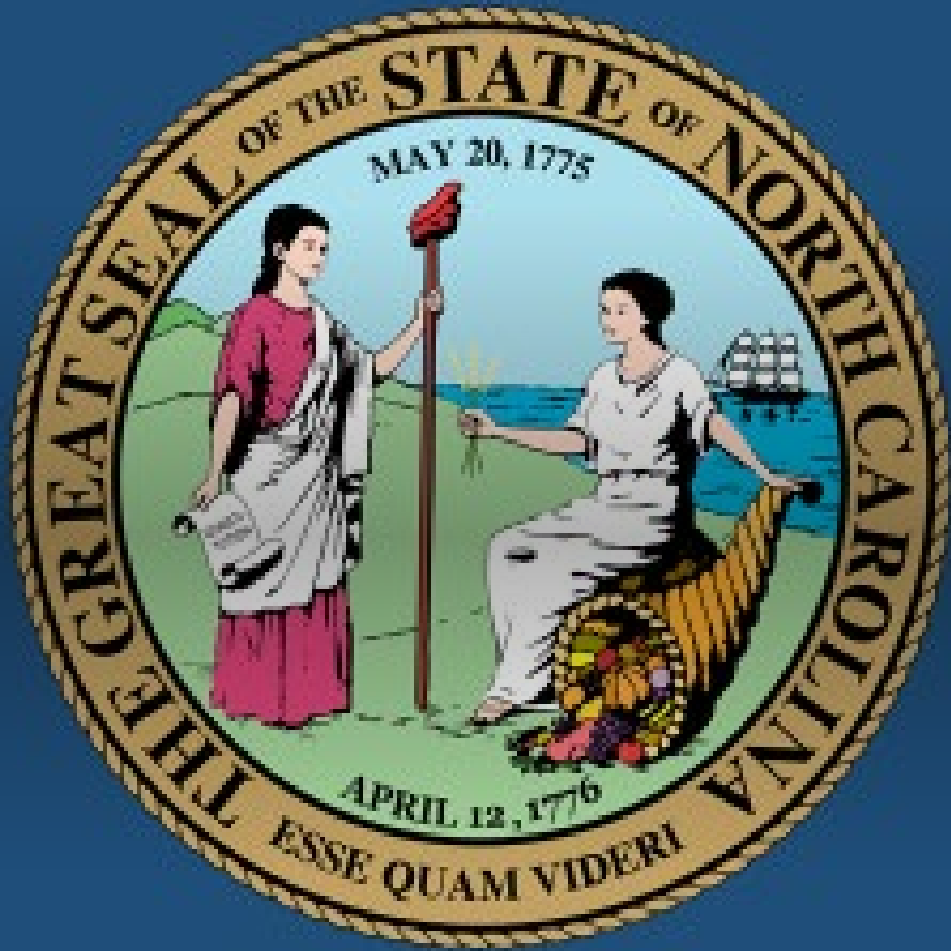
- Activity Detail: Agency representatives and vendors should:
 - Create time in the planning portion of the project to ensure that all participants have the relevant context needed to co-design the project.
 - Be able to address the question: “Does this project save lives? How?”
 - Be amenable to adjusting project timelines to accommodate the needs and pace of community.

7. **Activity Name: Prepare to manage conflict and assume accountability [PEOPLE].**

8. **Activity Name: Appropriately yield the power and privilege of leading mainstream agencies, particularly in under-resourced communities [POWER].**

Broader Outcomes

1. The Blueprint is an entry way to talking about these issues. As a coalition, we've been talking about community voice for years.
 2. The intent of EO 246 mirrors the intent of NCIDR.
Environmental justice is a whole of community effort: bringing together housing, agriculture, food systems, legal services, etc.
 3. Disasters exacerbate pre-existing disparities. There is a need for more equitable distribution of resources. And that requires greater community voice in decision making via sustained, funded relationship building and community engagement.
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Executive Order 271 “Growing North Carolina’s Zero-Emission Vehicle Market”

Environmental Justice and Equity Advisory
Board
February 9th, 2022

Office of Governor Roy Cooper



Presentation Overview

- ❖ Summary of Executive Actions
- ❖ Zero-Emission Truck Benefits
- ❖ E.O. 271 Overview
- ❖ Implementation Updates



Growing the Clean Energy Economy: NC Executive Actions

Oct. 2018

EO 80

- Reduce GHG emissions by 40% below 2005 levels by 2025
- Increase total number of registered LD ZEVs to at least 80,000 by 2025
- Reduce energy consumption in state-owned buildings by 40% below 2002-2003 levels

Jan. 2022

EO 246

- Reduce GHG emissions by 50% below 2005 levels by 2030 & net-zero by 2050
- Increase total number of registered LD ZEVs to at least 1.25 million by 2030
- Increase the sale of ZEV so that 50% of in-state sales are zero emission by 2030
- NC DOT to develop Clean Transportation Plan by April 2023

July 2020

MHD ZEV MOU

- Advance & accelerate MHD ZEV sales & reduce GHGs from this sector
- 30% of all new MHD vehicle sales be zero-emission vehicles by 2030
- 100% of all new MHD vehicle sales be zero-emission vehicles by 2050

Oct. 2022

EO 271

















- MHD vehicle manufacturers to sell increasing percent of ZEVs each year (Advanced Clean Trucks Program)
- NC DHHS to publish report on EJ impacts of transportation-related pollution
- NC DOT to develop NC ZEV Infrastructure Needs Assessment



Why Support the Transition to Zero-Emission Trucks?

- Reducing air pollution and greenhouse gases
- Advancing Environmental Justice
- Promoting Economic Development + Job Growth
- Enhancing Consumer Choice

FIGURE 1: MHD VEHICLE CLASSIFICATION
BY GROSS VEHICLE WEIGHT RATING (GVWR)

WT CLASS	CLASS 2B	CLASS 3	CLASS 4	CLASS 5	CLASS 6	CLASS 7	CLASS 8									
GVWR	8,500-10,000 LB 3,856-4,536 KG	10,001-14,000 LB 4,536-6,350 KG	14,001-16,000 LB 6,351-7,257 KG	16,001-19,500 LB 7,258-8,845 KG	19,501-26,000 LB 8,846-11,793 KG	26,001-33,000 LB 11,794-14,969 KG	>33,000 LB >14,969 KG									
EXAMPLE VEHICLES	 Crew Size Pickup	 City Delivery	 School Bus	 Coach Bus	 Work Truck	 Large Walk-in	 Single Axle	 Semi Tractor	 Utility Van	 Bucket Truck	 Rack Truck	 Dump Truck	 Walk-In Van	 Box Truck	 Refuse Truck	 Fire Truck



E.O. 271 Overview



State of North Carolina

ROY COOPER
GOVERNOR

October 25, 2022

EXECUTIVE ORDER NO. 271

GROWING NORTH CAROLINA'S ZERO-EMISSION VEHICLE MARKET

WHEREAS, N.C. Const. art. XIV, § 5 establishes that it is the policy of the state to conserve and protect its lands and waters for the benefit of all its people, and that it is a proper function of the state to control and limit the pollution of our air and water, and in every other appropriate way to preserve as a part of the common heritage of this state, its forests, wetlands, estuaries, beaches, historical sites, open lands, and places of beauty; and

WHEREAS, North Carolina's transition to a clean energy future will create good-paying jobs, reduce harmful emissions, and protect our environment; and

WHEREAS, medium- and heavy-duty ("MHD") vehicles, ranging from delivery trucks and school buses to public transit buses and semi-trucks, support the connectivity, safety, and livelihoods of North Carolinians and underpin the state's leading economy; and

WHEREAS, automakers are rapidly increasing investments in the production of zero-emission vehicles ("ZEVs"); and

WHEREAS, by 2025 or earlier, many MHD ZEVs are expected to be more affordable to

Section 1. Advanced Clean Trucks (ACT) Rule

Section 2. Distribution of State and Federal Funds

Section 3. Complementary Strategies

Section 4. Public health and Health Equity

Section 5. ZEV Infrastructure Needs Assessment

Section 6. State Motor Fleet Transition

Section 7. Environmental Stewardship Initiative



Implementation Updates

NCDEQ Stakeholder Engagement for ACT Rule Development

- [Advanced Clean Trucks | NC DEQ](#)

Investing Applicable State + Federal Funds

- Volkswagen Settlement Funding
- Inflation Reduction Act + Infrastructure Investment and Jobs Act

Complementary Analysis and Strategy Development

- Clean Transportation Plan
- NESCAUM Action Plan
- Pathways Analysis



Governor Roy Cooper
@NC_Governor

Clean transportation is critical in our fight against climate change, and we're glad to support our schools as we move toward a clean energy future.





Thank You!



Zach Pierce

Senior Advisor for Climate Change Policy

Office of Governor Roy Cooper

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February 9, 2023

Update on BIL Funding for Lead Service Line Replacements

*Department of Environmental Quality
Division of Water Infrastructure*



Recap: BIL Lead Service Line Replacement Funding

\$15 billion nationally evenly split over five years.

US EPA determines what each state is eligible for each year. States apply for the funds.

Max NC allotments:

FY2022 cap. grant: up to \$87,062,000

FY2023 cap. grant: possibly similar to FY2022

FY2024, 2025, 2026 cap. grants: TBD

Recap: What are “Lead Service Lines” (for this funding)?



Updates Since Last Meeting

- Fall 2022 funding applications
- Developing new process to identify projects starting end of February
- Drafting Priority Rating System and Intended Use Plan (with public review)
- Developing plan to assist small systems undertaking LSL inventories
- Webpage created

Fall 2022 Funding Applications

- Used existing application forms and process, not specific to lead service line replacements.
- Had added priority points for LSLR projects in the Priority Rating System for regular loan and grant funding.
- Received at least 7 construction applications and 9 planning applications that include inventorying and/or replacing lead service lines or connectors as part of a project.
- State Water Infrastructure Authority scheduled to meet and make funding decisions on February 21.

Identifying Projects Going Forward

- Will continue to accept regular applications, *and...*
- Will provide simpler project solicitation form and guidance on how to provide necessary information
- Will accept project solicitations at any time; may require additional information later
- Will score projects in a unique Priority Rating System (to be established)
- Will present applications to SWIA on a regular basis; will make awards more frequently than 2x/year
- Awards at first may be pending receipt of federal capitalization grants
- Will begin at the end of February

Priority Rating System and Intended Use Plan

- Will be completed (including public review) by July 2023. Part of DEQ's application for US EPA capitalization grant.
- PRS to be developed by the State Water Infrastructure Authority. First draft to be presented on February 21.
- Intended Use Plan specifies how funds will be prioritized and allocated, including the 49% portion that is principal forgiveness to disadvantaged communities.
- Draft will go to public review with the proposed PRS after SWIA's review.

Current Considerations in IUP and PRS

- Prioritization for:
 - 1) inventories or identification in areas with unknown service line materials
 - 2) finding and replacing lead service lines (higher)
 - 3) replacing known lead service lines (highest).
- Prioritization for disadvantaged communities and disadvantaged areas similar to DWSRF definitions
 - higher priority, and higher percentage eligibility for principal forgiveness.

Assistance to Small Systems

- Working with Public Water Supply Section to direct resources to small systems
- Develop materials for communication and outreach
- Application trainings (Feb 28 – March 9)

Webpage Created – will continue to update with more info



Lead Service Line Replacement Funding

The Division of Water Infrastructure will be offering funding specifically to identify, inventory, and replace lead service lines and lead connectors throughout water systems. Information specific to North Carolina's lead service line replacement funding will be shared here soon. The Division is developing a process by which local governments, non-profit water companies, and investor-owned water utilities can request low-interest loans and principal forgiveness. The process will be announced here and in a webinar in Spring 2023.

Press Release

[DEQ announces new lead service line replacement funding during summit on water infrastructure needs and funding in disadvantaged areas](#)

What are Lead Service Lines and Lead Connectors?

A service line is the water line that connects a home or business to the main water line on the street.

Water Infrastructure

[About Division of Water Infrastructure](#)

[Application Training](#)

[I Have Funding](#)

[I Need Funding](#)

[Latest Funding Round Updates](#)

[Lead Service Line Replacement Program](#)

[News, Events and Training Opportunities](#)

<https://deq.nc.gov/about/divisions/water-infrastructure/lead-service-line-replacement-funding>



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Thank you

