

# North Carolina Flood Resiliency Blueprint

**Hazard Identification TAG**

**Formal Meeting #2**

May 3, 2023

10:00am – 12:00pm





# Presentation Overview



# Meeting Agenda

1. Introductions (25 min)
2. Status of Deliverables (60 min)
3. Next Steps (20 min)
4. Open Discussion (15 min)



# Participant Introductions

Please share your name, agency/organization you represent, and your interest/experience in resilience in North Carolina



# Hazard Identification Participants



<b>Tom Langan- TAG CHAIR</b>	<b>NC Department of Public Safety/Floodplain Mapping Program</b>
<b>Adam Gold</b>	Environmental Defense Fund
<b>Danica Schaffer-Smith</b>	The Nature Conservancy
<b>Doug Marcy</b>	NOAA
<b>Gian Tavares</b>	American Flood Coalition
<b>John C Weaver</b>	USGS South Atlantic Water Science Center
<b>Kathryn Gaasch</b>	NC Inclusive Disaster Recovery Network/ MDC Rural Forward
<b>Klaus Albertin</b>	NC DEQ/ Division of Water Resources
<b>Kurt Golembesky</b>	NC Department of Transportation/ Hydraulics Unit
<b>Mackenzie Todd</b>	NC DEQ/ Division of Coastal Management
<b>Rick Luettich</b>	University of North Carolina-Chapel Hill Institute of Marine Science
<b>Wesley Brown</b>	USACE

# Hazard Identification

Technical Advisory Group

- Provide advisory input and feedback on data and modeling utilized to best calculate and display **present and future flood probability and extent**
- Include consideration of deterministic and probabilistic riverine, lacustrine, dam and levee induced, urban, stormwater, and coastal and/or riverine confluence flooding

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



# Project Status



# Phase I Tasks

**Task 1**- Stakeholder Outreach/Facilitation and Data Review

**Task 2** - Gap Analysis

**Task 3** - Recommendations/Decision Framework

**Task 4** - Develop Draft Blueprint and Draft Neuse Basin Flood Resiliency Action Strategy





# Subtask Flow Paths



# Subtask Status

ALL	Partnership/Funding
Governance	Resilience/Mitigation/Reduction
Hazard Identification	Tool Development/Acceptance
Neuse River Advisory Board	Vulnerability/Risk/Impact



Task	Description	Estimated delivery week of:
1.3	DEQ Public Participation Plan Stakeholder Engagement	Closed for TAG Review
1.10	Decision Making Process	Open for TAG Review
1.5	State Governance Scheme Review	May 15th
3.4	Other entity value incorporation recommendations	June 5th
3.13	Administering the decision-making tool recommendations	June 26th
2.4	H&H Modeling Report	Closed for TAG Review
2.5	Future Flood Hazard data identification	Closed for TAG Review
2.1	Inventory types and sources of flooding	May 10th
2.2	Resource documentation for risk data	May 10th
3.5	Open-source H&H modeling approach recommendations	May 29th
3.9	Standardizing statewide dataset and model implementation recommendations	June 12th
1.4	Watershed Planning Stakeholder Catalogue	Closed for TAG Review
2.3	Literature review and data collection inventory expansion	May 29th
2.14	Neuse Action Strategy - Analysis of under-served flood prone communities	May 29th
2.13	Neuse Action Strategy - Identification of flood attenuation natural structures	May 29th
4.4	Draft Neuse Basin Flood Resiliency Action Strategy	November 6th
2.6	Flood risk resiliency funding source identification	Closed for TAG Review
2.9	Identification of restrictions pertaining to flood resilience strategies	May 10th
3.15	Local stormwater program development and maintenance recommendations	June 19th
3.12	State-level staffing and regional communication recommendations	June 26th

# Subtask Status

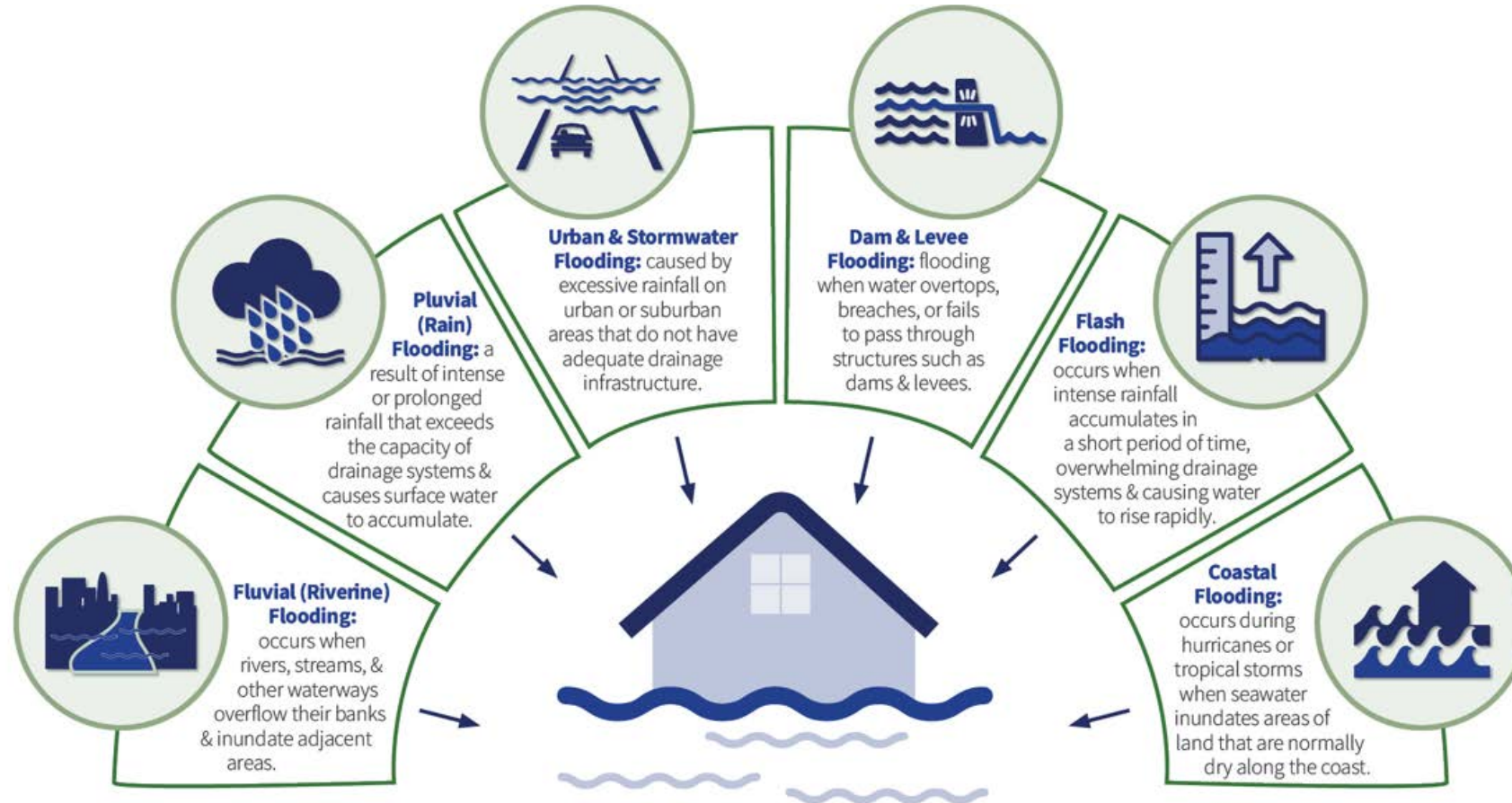
ALL	Partnership/Funding
Governance	Resilience/Mitigation/Reduction
Hazard Identification	Tool Development/Acceptance
Neuse River Advisory Board	Vulnerability/Risk/Impact



Task	Description	Estimated delivery week of:
1.7	Documentation of Recommendations from Existing Planning	Closed for TAG Review
1.1	Literature review and data collection inventory	Closed for TAG Review
2.7	Existing flood resiliency strategy inventory	May 15th
2.10	Identification of existing recommendations	May 22nd
3.3	Other flood resiliency effort integration recommendations	May 29th
3.10	Immediate statewide effort recommendations	June 19th
4.5	Draft North Carolina Flood Resiliency Blueprint	November 6th
2.11	Identification of existing flood mitigation decision tools	May 22nd
3.1	Risk decision-making tools recommendations	May 29th
3.2	Tool and flooding issue linkage recommendations	May 29th
4.2	Storyboards	June 5th
4.3	Wireframes and mockups	June 12th
4.1	Documentation of requirements	June 19th
3.14	Blueprint maintenance recommendations	June 26th
2.8	Natural infrastructure data assessment	Closed for TAG Review
2.12	Identification of AI/ML tools for Blueprint	May 15th
3.6	Decision tool storm frequency recommendations	May 29th
3.11	AI/ML utilization recommendations	May 29th
3.7	Climate forecast model recommendations	June 5th
3.8	Addressing challenges from Task 1 and 2 (technology, programs, strategies)	June 26th

# FLOOD HAZARD TYPES

There are many types and sources of flooding that create negative impacts to human safety, structures, infrastructure, and the environment. These sources of flooding may occur independently, but often occur concurrently with each other (compound flooding). Often, brick and mortar structures are a primary focus; however, impacts can include infrastructure, agricultural areas, natural resources, indirect economic impacts or anything else that could be negatively impacted by flooding. Different types of categorized flood hazards include:



# Coastal Inclusion in Blueprint

How is coastal being considered for data visualization and analysis?

- Coastal flood hazards will be included for consideration of data and modeling
- Using best available, existing data from local, state and federal sources

Example: DMS and DCM are working closely together to create a cohesive means for projects to move from planning, to formation, to action.

- DCM is currently working on coastal resiliency planning (Resilient Coastal Communities Program)
- Identifying projects and actions that have gone through a stakeholder engagement process and can be considered within the context of Blueprint project prioritization

We are looking at the best available data for the combined riverine and coastal areas.

- Asking for the TAGs to look at the existing datasets for the understanding of how combined flooding at the river ocean confluence could be considered.



# System Review



# System Reviews

## Microsoft Teams Site

- Microsoft Teams site created for TAG members
  - Separate channels for each TAG
- How to review comments
- Open conversation

## SharePoint Review

- Live Demonstration

<https://ncconnect.sharepoint.com/sites/FRBDM>

- Link to documents for review:

<https://ncconnect.sharepoint.com/sites/FRBDM/General%20Information/Forms/AllItems.aspx>

- SharePoint Document Management System
  - Show a document
  - Show how to comment

# Review Process





# Hazard ID Document Review

- Types of comments received from specific TAG
  - Outreach and Engagement Plan
  - H&H Modeling Gap Analysis
  - Examples of how they will be integrated
- Subtask 1.3- All TAGs
- Subtask 2.4- Hazard ID TAG



# Next Steps



# Community Outreach Meetings



## New Bern

### June 1st

- 10am to 12pm- **Local Leader meeting**
- 1pm to 3pm- **Neuse Regional workshop**
  - New Bern Convention Center
- 4pm to 7pm- **Community Outreach Meeting**
  - New Bern Convention Center

## Lumberton

### June 8th

- 10am to 12pm- **Local Leader meeting**
- 4pm to 7pm- **Community Outreach Meeting**
  - West Resource Center
  - *1702 West 5<sup>th</sup> Street, Lumberton, NC*

## Wilmington

### June 9th

- 1pm to 3pm- **Local Leader meeting**
- 4pm to 7pm- **Community Outreach Meeting**
  - *230 Government Center Drive in Wilmington, NC*

## Western NC

### TBD

- 1pm to 3pm- **Local Leader meeting**
- 4pm to 7pm- **Community Outreach**



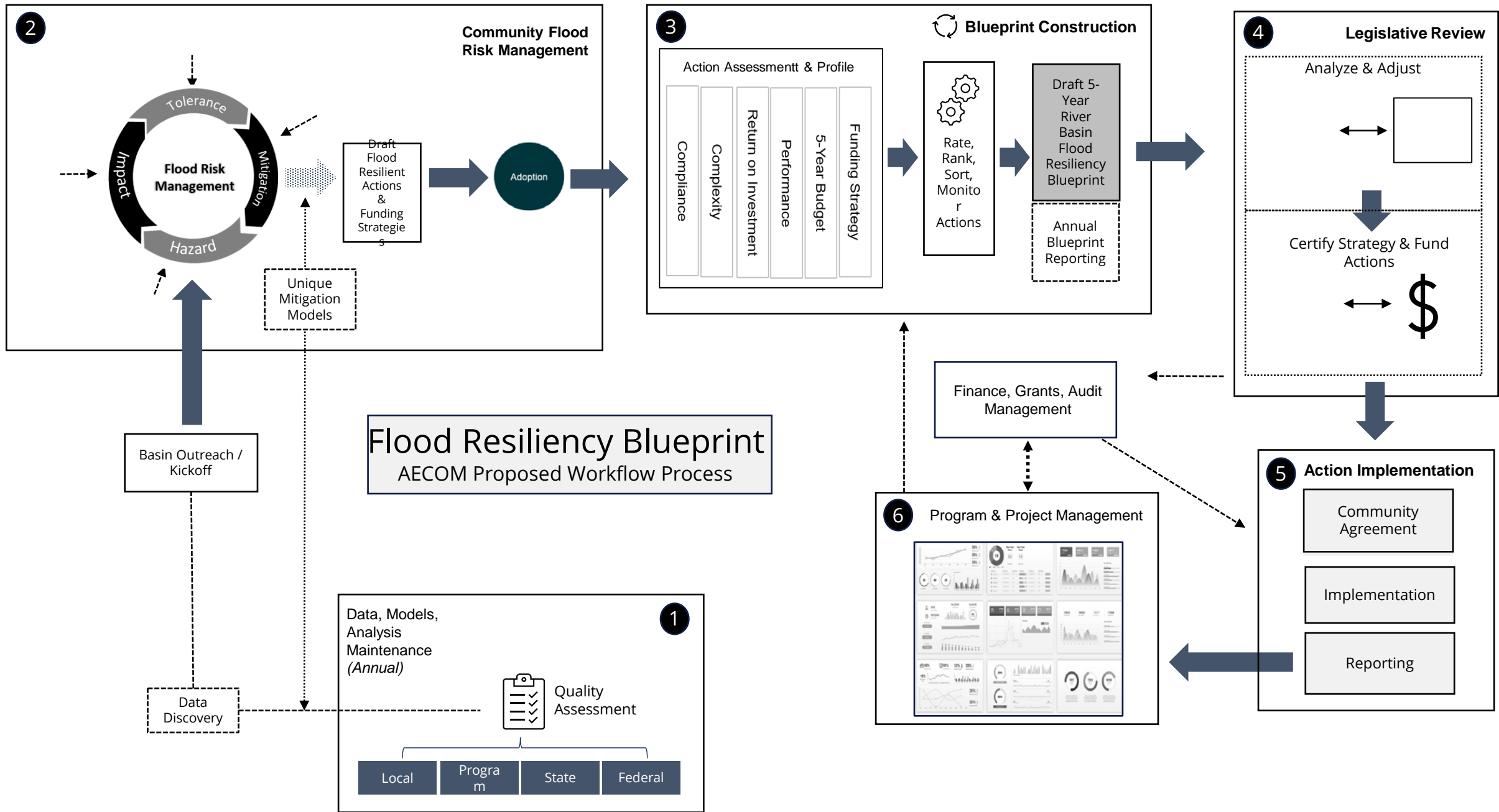
## SAVE THE DATE

Join us for information on Flooding, Resiliency, Mitigation and the NC Flood Resiliency Blueprint.

The State would like to get your input on how flooding impacts you and your community.

There will be a space for storytelling and learning about how floods impact an area.





# Decision Support Tool

- TAG ideas for Blueprint and Decision Support Tool
  - Who is it for?
  - How will they use it?
  - What information do they need?
- Next meeting (June 30<sup>th</sup>)
  - Storyboards, Wireframes and Mockups
    - Phase 1, Subtasks 4.2 and 4.3
    - Expected to be complete by end of June
    - Focus on user personas and functionality



# TAG Chair Pause

Any questions that you have so far?



# Open Discussion

What can we learn from Task 1 and Task 2 deliverables already reviewed that could be used to develop:

- a risk management process?
- an online decision support tool?
- a statewide method for prioritizing and selecting mitigation strategies?







# Open Discussion

What other programs in North Carolina have focused on identifying flood risk and supporting flood resilience?

# Open Discussion

Other questions to consider:

- What additional support could be provided to promote flood resiliency across North Carolina?
- What are some examples of how that additional support could be provided?
- What can we do to enhance the TAG experience?

# Next Meeting

June 30<sup>th</sup>- DEQ Green Square  
Formal TAG Meeting #3  
10:00am – 12:00pm



# North Carolina Flood Resiliency Blueprint

**Technical Advisory Group (TAG) Meeting #2**

May 3, 2023



Questions? Comments?