



**Purpose of Report:** Summary document that synthesizes the conversations had with North Carolina localities and stakeholders about the presented draft tools, the tools they currently use to identify/fund resilience projects, and other relevant capacity building/needs assessment priorities.

### **Summary of Stakeholder Meetings**

Wetlands Watch staff met with several North Carolina stakeholders to discuss the usability and feasibility of the draft resources we made, and discussed what resources they currently use that are the most helpful in their work. The draft resources we presented on were the North Carolina Resiliency Compendium on Airtable and the [AdaptVA NNBF map viewer](#).

The majority of the meetings were conducted in the Summer and Fall of 2021. The exact stakeholder/stakeholder groups and their corresponding meeting dates were as follows:

- NC Community Rating System (CRS) Users Group - July 1st, 2021
- Jessica Hendricks, Scientist, Center for Coastal Resources Management, Virginia Institute of Marine Science (VIMS) - July 27th, 2021
- Helena Mitasova, Associate Director of Earth and Environmental Sciences Applications, Center for Geospatial Analytics, NC State University - August 11th, 2021
- Cat Bowler, Coastal Resilience Program Manager, Audubon North Carolina - August 19th, 2021
- Brian Byfield, NC Resilient Communities Program Manager, North Carolina Office of Recovery and Resiliency (NCORR) - September 28th, 2021
- Rick Savage, Executive Director, Carolina Wetlands Association - September 29th, 2021
- NC Climate Resilience Tool Developer and Users Group - October 11th, 2021
- Resiliency Planning, Environment, and Infrastructure Focus Group, NCORR - October 14th, 2021
- Lydia Olander and Katie Warnell, Nicholas Institute for Energy, Environment, & Sustainability, Duke University - October 20th, 2021
- Laurie LoCicero, Planning Director, Currituck County - October 27th, 2021
- NC Watershed Restoration Improvement Team (WRIT) Meeting - November 19th, 2021
- NC Resilience Clearinghouse Steering Committee Meeting - August 9th, 2022
- Wow Stormwater Webinar: Prioritizing Natural & Nature Based features to increase resilience of Coastal Communities - September 21st, 2022

Additionally, we collected feedback on the draft tools through a Google Form that collected responses from August 2021 - September 2022. We received 8 responses on the form from the following stakeholders, some of who met with us one-on-one after completing the survey:

- Joe Heard, Director of Community Development, Town of Duck
- Ted Brown, Water Resources Engineer, Biohabitats, Inc.
- Cat Bowler, Coastal Resilience Program Manager, Audubon North Carolina
- Jessica Whitehead, Executive Director, Institute for Coastal Adaptation and Resilience, Old Dominion University (ODU); former North Carolina Chief Resilience Officer
- Risk Savage, Executive Director, Carolina Wetlands Association
- Lorra Eddy, Community Resilience Specialist, The Nature Conservancy
- Laurie LoCicero, Planning Director, Currituck County
- Trish D'Arconte, Environmental Program Consultant, Nonpoint Source Planning, NC Department of Environmental Quality
- Lauren Daniel, Water Education Coordinator/NC Stream Watch Coordinator, Division of Water Resources, NC Department of Environmental Quality
- Allie Dinwiddie, Nonpoint Source Planning Coordinator, NC Division of Soil and Water Conservation

### **General Feedback**

The overarching feedback we received from North Carolina stakeholders is that there is an overabundance of tools and resources for environmental organizations and local governments to use, but very few are helpful in day-to-day work tasks. The majority of stakeholders noted that it would be useful to have a database of resources located in one document that is continuously updated at least twice a year. Lack of staff capacity, time constraints, and trouble finding potential funding sources were the leading barriers for organizations obtaining funding listed in the survey. These barriers align with the conversations we had one-on-one with stakeholders as well, as several stated the reason they are unaware of funding and resources is due to staff capacity and time constraints.

### **North Carolina Resiliency Compendium Feedback**

The draft North Carolina Resiliency Compendium consists of 5 tabs of resources: Tools, Funding Opportunities, Plans and Studies, Reports, and Stakeholders. The compendium is meant to connect viewers with funding opportunities for potential projects, while easily connecting them to tools, studies, and reports that could assist them in leveraging their project in the application, as well as identify potential partners in the Stakeholders tab. The Compendium is currently in draft form, and is meant to be built off of at the conclusion of Wetlands Watch's grant period with APNEP.

Stakeholder feedback on the Compendium was generally positive. Responses to the survey indicated that the Funding tab of the resource would be more useful than the Plans & Studies tab. It is worth noting here that survey respondents were given the link to the Virginia Coastal Resilience Database for the questions regarding the usefulness of tabs, as the North Carolina Resiliency Compendium had not yet been made available to the public. Conversations with stakeholders and survey respondents also indicated that the NC Compendium would need to be updated at least once every year for it to maintain its usefulness. The majority of stakeholders noted that the Compendium should be maintained and updated within a division or office of North Carolina's Department of Environmental Quality, such as the Office of Recovery and Resiliency or Division of Coastal Management.

## **AdaptVA & NNBF Map Viewer Feedback**

Wetlands Watch staff also discussed the [AdaptVA](#) website and the [NNBF map layer](#) with NC stakeholders. The AdaptVA serves as an information gateway on climate change adaptation for individuals, local programs, and agencies. The interactive map on AdaptVA includes water levels, social vulnerability, and various infrastructure layers, including the Natural and Nature Based Features (NNBF) layer.

We asked stakeholders how useful it would be to their work if similar resources to these were created for North Carolina. During almost all of the consultations with stakeholders about the map viewer, concerns arose regarding who would create, maintain, and update the map. Stakeholders noted that several map resources had been made in the past for similar conservation efforts; however, the maps would become obsolete once funding ran out to maintain them. This concern is particularly important for coastal North Carolina communities, as the Outer Banks region of the state transforms frequently. Through stakeholder conversations and the feedback survey, we summarized that if a similar NNBF map viewer were made for North Carolina, it would need to be updated at least every 6 months. Additionally, survey respondents indicated that a similar AdaptVA website made for North Carolina would be useful, with the Adaptations, Tools, and Resilience Resources sections being the most useful to them in their daily work tasks.

One survey respondent noted that North Carolina should “seek to collaborate with other efforts underway [already] in NC [to] avoid the tool proliferation and paralysis problem.” This sentiment is repeated throughout our conversations with stakeholders. Another respondent noted: “This would be very helpful for general education purposes, K-12 classrooms, and professional development. Keeping it as customizable as possible will also make it user-friendly.”

As for feedback on who should maintain the map viewer, most stakeholders noted that some sort of partnership between academic institutions located in the state might be the best option. Wetlands Watch staff had conversations with geospatial mapping experts at both NC State University and Duke University about the possibility of their departments creating and maintaining a NNBF map viewer, and both were interested. The NC State University Center for Geospatial Analytics faculty member stated that the center has been working on a grant to create a map viewer for the entire east coast of the United States that would be updated automatically with LiDAR data, and that this map viewer could potentially be integrated into that project. However, NC State did note that they would need to secure or receive funding for this initiative first, but they would be willing to store the data needed in existing NC State infrastructure. Additionally, they stated that GIS students could potentially work on different levels of analysis with the viewer as a part of their master’s capstone projects. The Duke University faculty noted that they are currently working on a similar effort - a dashboard that tracks the status and trends on working lands in North Carolina, such as changes in land cover type, carbon changes, conservation changes, and benefit calculations in relation to those factors. Their plan is to update it annually with student support and send an annual report to state agencies that outline how the portions of the map viewer can relate to their work. They believe there would be interest in a separate NNBF map viewer since their work is focused on state agencies and their efforts to

implement the Natural Working Lands plan, but they would be happy to link their tool out within the larger NC NNBF viewer tool if it were to be created.

### **NC Statewide Resilience Clearinghouse**

During Wetlands Watch assessment outreach, a similar effort to develop a North Carolina Resilience Clearinghouse was being coordinated by NC Department of Environmental Quality (DEQ) staff. Although the two efforts were not developed together, it is worth noting how this project could inform the overall Resilience Clearinghouse initiative.

Wetlands Watch staff participated in a NC Resilience Clearinghouse Steering Committee meeting on August 9th, 2022 to learn more about the Clearinghouse initiative and share general feedback received from stakeholders. Discussion focused on how the Clearinghouse resource should be organized online to maximize effectiveness for end users. NC state staff favored organizing the online resource to be solution-based, which include highlighting tools and resources by project type. However, there was still some uncertainty on whether or not the Clearinghouse should be more data-driven or solution-based. Additionally, it was noted that the ultimate form of the online Clearinghouse may be constrained to the maintenance capacity of state staff. Wetlands Watch staff shared that similar barriers were discussed for the Virginia equivalent resource, and that it was ultimately beneficial to host online resources through non-profit organization or academic institution websites due to their greater maintenance flexibility.

The second topic of discussion focused on environmental justice issues, and how it should be addressed in the development of the Clearinghouse resource. Individuals pointed out that the resource should incorporate an equity lens throughout, as opposed to creating a separate section for the issue. Additionally, it was highlighted that the resource being state-wide focused could pose problems, as many areas in North Carolina have unique environmental factors and risks that cannot be generalized. We suggest that North Carolina state staff consider organizing the Clearinghouse resource by region to address this issue. Although statewide planning is crucial to meeting environmental goals, actions taken to meet them must incorporate how different areas of the state - coastal, piedmont, mountain, urban, suburban, rural - should best tackle this issue. Especially for rural, underserved communities, it would be beneficial to create a streamlined process in how to best utilize the finalized Clearinghouse resource, as staff from these localities will have minimal capacity to learn how to utilize new tools. State staff could also consider separating the resources and plans created on the Council of Government level.