

Booker Creek Working Group

April 4, 2022 Agenda, 6-8 pm

Desired Outcomes

What would we like to see accomplished because of this meeting?

Group exploration of recommendations to address Mayor Hemminger's framing questions:

- Where is it flooding in our community and by how much? (in layman's terms - 6 inches, etc) how many homes, streets & businesses?
- What ideas can help reduce flooding during big storm events - and by how much?
- How to get the community engaged on their own properties with stormwater reduction
- How long do you think it will take to come back with short term & long-term ideas?
- What role do our existing bottomland forests play in mitigating large stormwater events?

What guiding questions would we like to address?

- What ideas are promising and worth further consideration for our recommendations?
- What additional information do we need to help us develop our recommendations?
- How can we improve and evolve the organization of our meetings to help us be successful?

Agenda

Roll Call & Announcements: Pamela Schultz (10 minutes)

Recommendation for a program on cost effective flood damage reduction: John Morris (40 minutes)

David Kroening from Mecklenburg County will be available to answer questions.

Review of the Booker Creek watershed map and of the Mayor's charge: Pamela Schultz (10 minutes)

Break (5 minutes)

List of potential Working Group recommendations & Looking ahead: John Morris (30 minutes)

Additional Working Group discussion of the previous agenda items as needed (15 minutes)

Public Comment (10 minutes)

Adjourn

Attachment for the April 4 WG Agenda

Recommendation to the Working Group

1. Cost Effective Flood Damage Reduction Program

A program to reduce flood damages to structures by identifying specific structures with flood risk, assigning a quantitative risk factor to each, evaluating a wide range of mitigation measures to determine which is most cost effective in each particular case, and setting a priority list for capital budgeting based on selecting the most cost effective projects to implement with available funds.

2. Program Operation and Benefits

This program will directly address reducing flood damages to homes and businesses by a systematic, quantitative method so that program expenditures can be evaluated for cost effectiveness. Specific structures at risk of flood damage will be identified and given a quantitative risk rating. For each structure, a wide range of damage mitigation measures will be evaluated. These measures, successfully used and proven in practice around the country, include property acquisition and demolition, property acquisition and relocation, elevation of structures, abandonment of basements, dry and wet floodproofing, small floodwalls to protect one or more structures, elevating HVAC equipment, and others. The next step is to determine the most cost-effective mitigation measure for each structure, then to set priorities considering both cost effectiveness and community factors such as public safety. The mitigation measures are then selected in priority order for the government unit's capital budget. Town staff can then report to the Town Council how much quantitative reduction in potential flood damages has been achieved by public expenditures each year.

3. Differences from Current Chapel Hill Approach

The recommended new approach will shift the Town's goal from preventing flooding to preventing flood damages. Chapel Hill now relies mainly on controlling flood waters, partly through regulation of new development and increasingly on flood water detention in the proposed flood storage projects. The Town Council has disapproved the six unbuilt flood storage projects because of their high cost, negative environmental impacts, and adverse climate effects. A better approach to protecting structures from flood damage is to focus on structures at risk and to consider a wide range of mitigation measures to choose the most cost effective one for each structure. The result will be more targeted reduction in flood damages with less cost and less environmental damage. Unlike the proposed flood storage projects, the benefits of public expenditures will be clearly quantified.

4. Supporting Documentation

The most fully developed and proven program in North Carolina for reducing flood damages is in Mecklenburg County. Here is David Kroening's presentation to the working group on the Mecklenburg program:

[David Kroening: Charlotte-Mecklenburg Storm Water Services](#)

Here is a consultant report for Mecklenburg on flood damage reduction:

https://charlottenc.gov/StormWater/Flooding/Documents/Flood_RARR_Plan-Final.pdf

Attachment to April 4 Agenda: List of Tentative Working Group Recommendations

Tentative Working Group Recommendations and Schedule as Foreseen April 4, 2022

A green infrastructure grant program to help individuals install small dispersed projects to provide streambank stability, reduce erosion, provide stream access to the floodplain, and other purposes. This program will place special priority on low income neighborhoods and involve teachers and students in learning about water management and in taking part in installing projects. Durham and Mecklenburg County have successful model programs of this type. (The Working Group gave this recommendation tentative approval at our previous meeting.)

A cost effective flood damage reduction program that focus on specific structures at risk of flood damage and evaluates a wide range of damage mitigation measures to determine the most cost effective solution for each building. A quantitative priority setting system is then used to select projects to be funded by the capital budget. This program will target flood damage reduction expenditures to get maximum benefits from Town expenditures with minimum environmental impacts. (On the agenda for the April 4 meeting.)

Improved floodplain management and entry into the FEMA Community Rating System to keep new construction out of flood risk areas and to give Chapel Hill residents lower rates on FEMA flood insurance. The Town of Cary has made significant progress here and will report to us at the April 25 meeting on the steps they took to make their significant achievements.

Policies and programs to document the environmental and climate value of mature bottomland forests and to protect them through targeted regulation. (Under development.). Anticipated to be on the WG agenda for tentative approval April 25.

Improved land use planning and revisions to the LUMO (Land Use Management Ordinance) to minimize development of new impervious surfaces in locations in watersheds that will significantly increase downstream flood damages. This recommendation is under active study to develop a specific proposal.

Recommendations on changes to the LUMO and on items coming out of the Town of Cary presentation are anticipated to be on the agenda for the May 16 meeting.

There is an opportunity for the Working Group to make an interim progress report to the Town Council on May 11.