



Update on Stormwater Master Plan

**Town Council Work Session
January 29, 2025**

Agenda

- Stormwater Basics
- Program Mission & Master Plan
- Booker Creek Subwatershed Studies
- Moving Forward & Next Steps

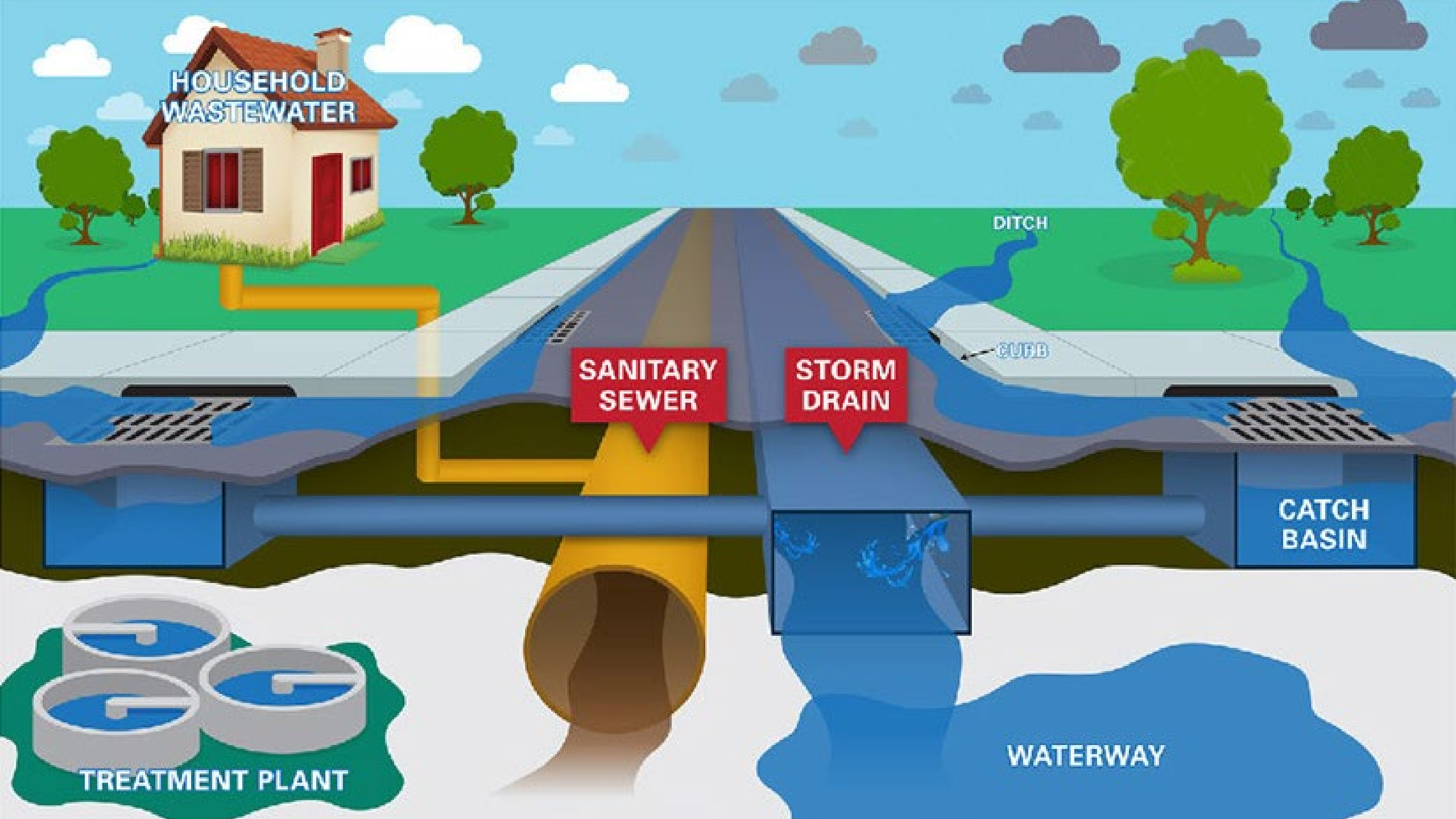


Stormwater Basics

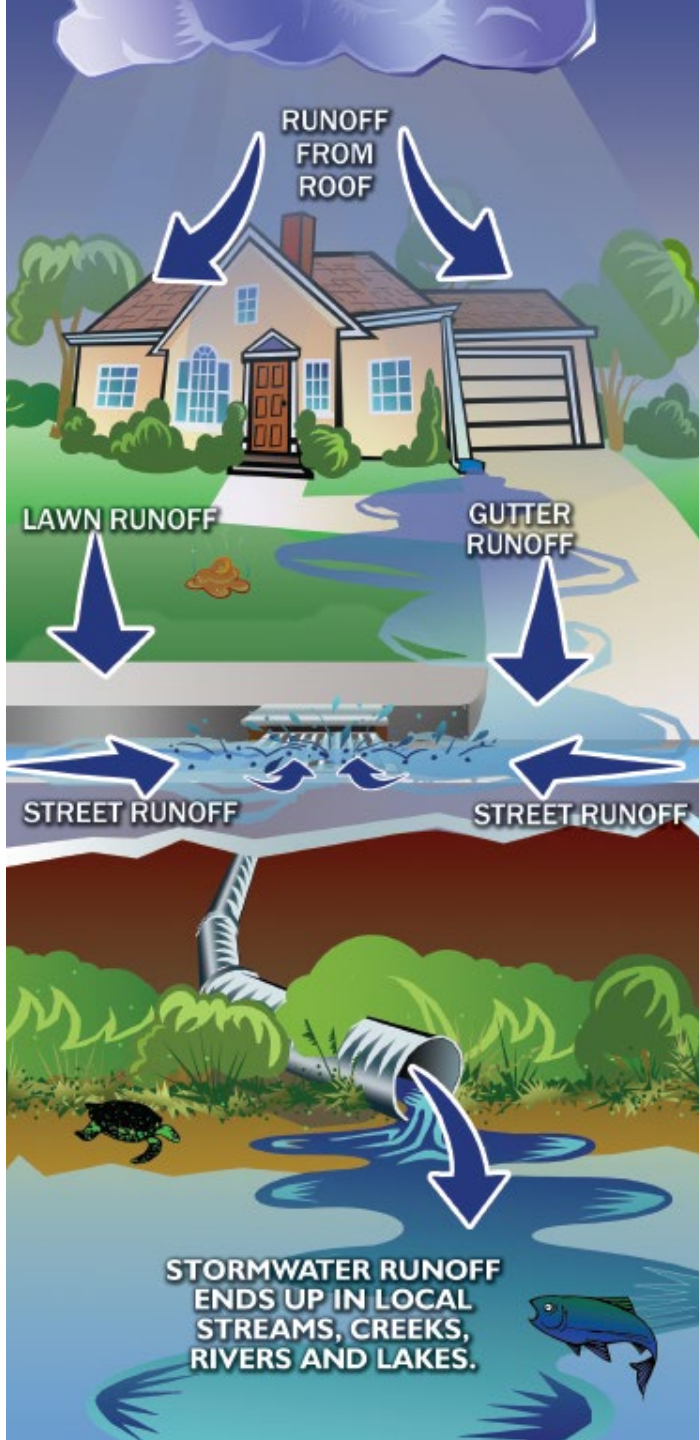


What is stormwater?

- Any kind of precipitation that does not soak into the ground.



What's the impact of stormwater?



- Significant negative impacts on water quality
- Stormwater runoff is the greatest source of surface water pollution
- Runoff flows from roofs, driveways, parking lots into storm drains and makes its way to the environment untreated

What are stormwater control measures?

- SCMs are physically engineered structures
- Temporarily store and treat excess runoff
- Regulated by local and state requirements



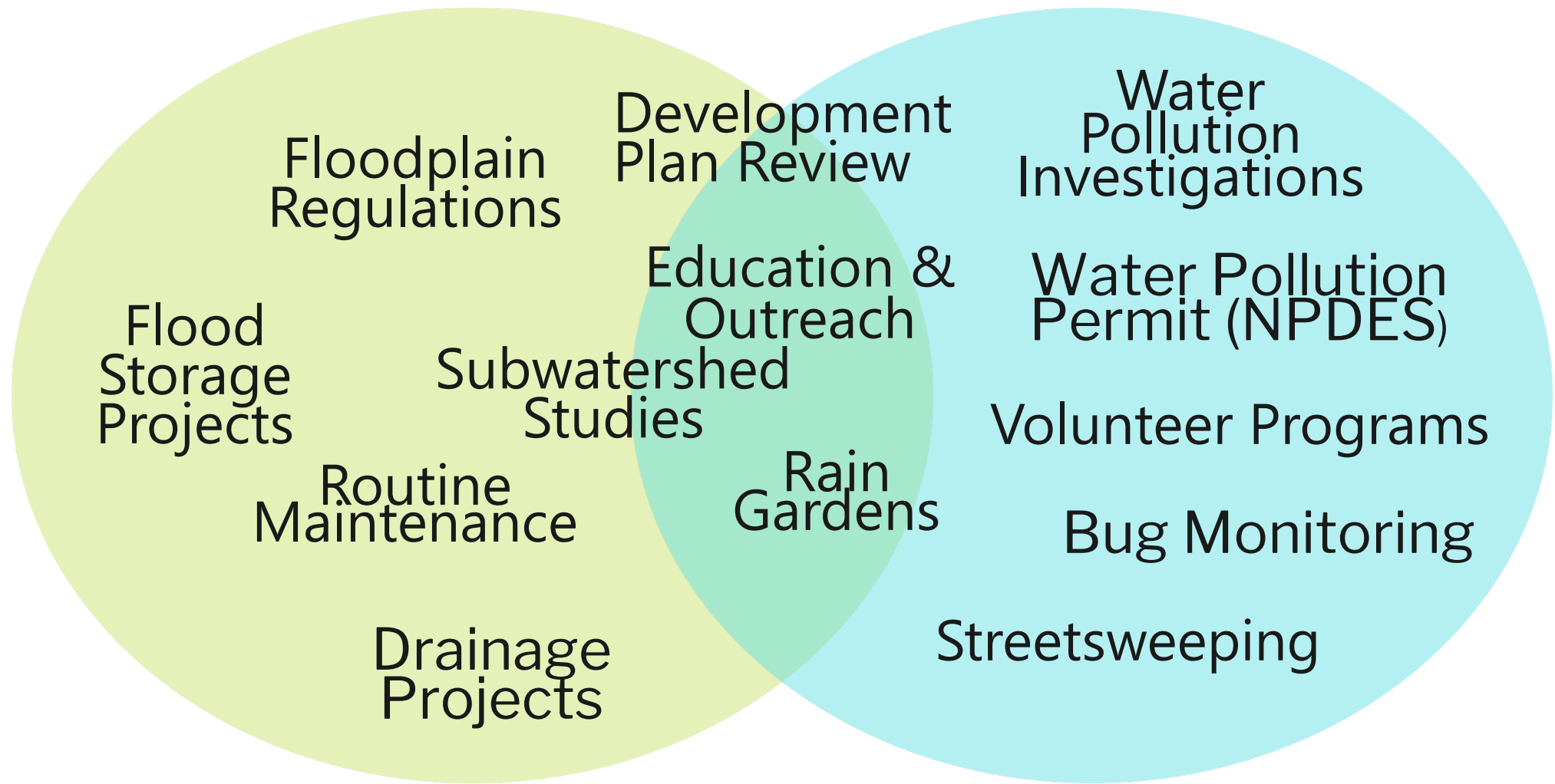
Bioretention Basin at St. Thomas More



Rain Garden at Hargraves Community Center



Build Your Own Rain Barrel Workshop



**Stormwater programs should address
water quantity AND water quality.**



Stormwater Program Mission & Master Plan

Mission

- Protect the health and safety of our residents and our ecosystem
- Address water quality and quantity concerns
- Meet or exceed federal and state requirements

Master Plan

- Adopted by Council in 2014
- Collaborative, inclusive process
- Links strategic goals to action steps
- Includes both implementation and funding plans
- Includes studying subwatersheds for water quantity and quality improvements

Master Plan

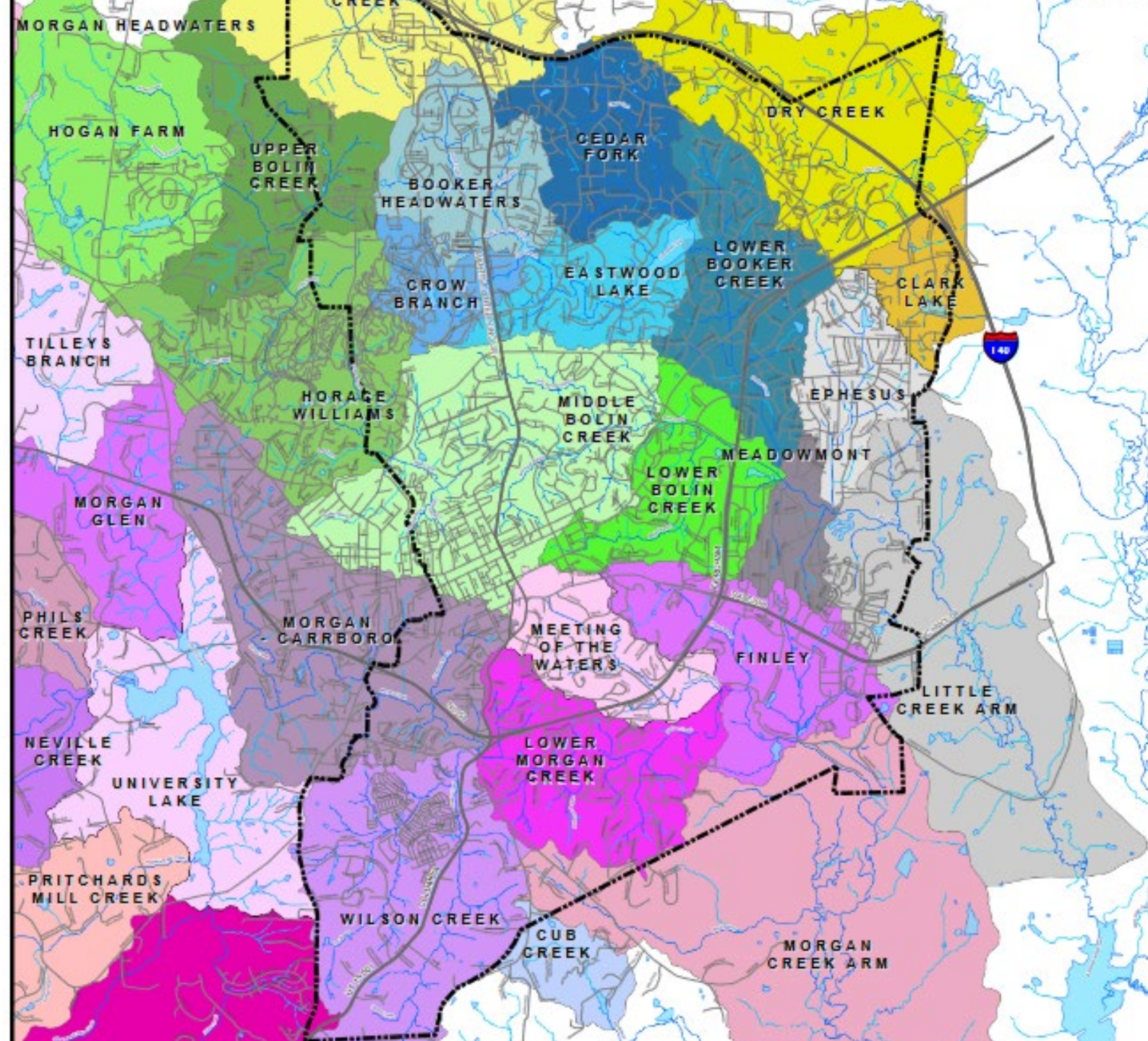
1. Develop and **implement** a comprehensive Master Plan
2. **Address flooding**
3. **Address water quality**
4. **Protect and restore natural stream corridors**
5. Develop formal public education program
6. Define performance standards
7. **Ensure compliance with federal and state mandates**
8. Establish clear program leadership recognized by public
9. **Utilize resources efficiently**
10. Establish understanding of stormwater system as a utility

Our Master Plan reflects the shared interest of staff, Council, and community to address both water quantity and water quality, now and in the future.



Booker Creek Subwatershed Studies





Booker Creek Subwatershed Study Highlights

- Approved by Council in 2017
- Additional, robust, community engagement
- Residents identified flooding as major concern

Booker Creek Subwatershed Study Highlights

- Recommends retrofits for **green infrastructure in residential areas** to help with water quality
- Recommends **improving “level of service” for existing grey infrastructure** to help with water quantity
- Recommends **network of flood storage projects** to help with quantity



Example of residential green infrastructure



Example of grey infrastructure improvements



Current creek conditions



New floodplain added to the creek

Example of flood storage project

Booker Creek Flood Storage

- Priority project because it would have biggest impact on flood prone area
- Designed to mitigate 25-year storms
- Added park amenity in this area of town

Flood Storage in Action: August 2024



Flood Storage in Action: August 2024



Flood Storage in Action: August 2024



This flood storage project is working as expected.

- Feedback from downstream residents
- Site inspections during rain events
- Letter of Map Revision (LOMR)

Community Concerns & Working Group

- Included clear-cutting forest, lack of alternative, and poor communication and outreach
- Council paused projects until Booker Creek Working Group shared recommendations
- Council received recommendations, staff committed to incorporating those as appropriate

Lessons Learned

- If time between planning and construction is lengthy, we need to intentionally reengage and communicate.
- In design process, we need to double down on neighborhood engagement.
- Future flood storage projects will not require as many trees to be removed

A photograph of four people engaged in a stream restoration project. On the left, a man in a green jacket and waders holds a large blue net. Next to him, a man in an orange safety vest and glasses pours water from a white bucket into the stream. To the right, two women observe the work; one is wearing a grey t-shirt and camouflage pants, and the other is in a blue and white plaid shirt. The stream is shallow with visible rocks and some vegetation. A semi-transparent grey rectangle is overlaid in the center of the image, containing the text "Moving Forward & Next Steps" in white. A white bucket and a yellow hose are on the ground in the lower right.

Moving Forward & Next Steps

**As we continue to implement the
Master Plan and Subwatershed
Studies, we want to include
residential green infrastructure AND
improve grey infrastructure AND
construct flood storage projects.**

Moving Forward

- We will continue to educate and encourage residents to retrofit their properties.
- We will require new and re-developments to meet stormwater standards.
- We will continue routine stormwater maintenance and new stormwater construction on Town property.

Moving Forward

- We are confident these projects will advance our mission and yield the greatest public benefit.
- We will continue to balance flood storage needs and environmental protection goals.
- We will continue to leverage Town-wide communications platforms and engagement framework.

Next Steps

- Identify new funding through the annual budget process.
- Address staff capacity issues, balancing NPDES permit requirements with desire for new programs.
- Advance top priority projects, including flood storage, upsizing culverts, and neighborhood retrofits.

A serene sunset scene over a body of water. In the foreground, a large, gnarled tree trunk stands partially submerged in the water, its silhouette dark against the lighter sky. The water is calm, reflecting the soft orange and yellow hues of the setting sun. In the background, a distant shoreline with trees is visible under a clear sky. A semi-transparent blue rectangle is overlaid on the center of the image, containing the word "Questions?" in white, bold, sans-serif font.

Questions?