

# **COMMUNICATION KEEPS STORMWATER PROGRAMS AFLOAT**

Annette Lucas, PE, Stormwater Program Practice Lead

Daniel Wiebke, PE, CFM, Green Stormwater Infrastructure Project Manager

The two words 'information' and 'communication' are often used interchangeably, but they signify quite different things. Information is giving out; communication is getting through.

- Sydney J. Harris



**Annette:**

1. Ordinances + Design Standards

**Daniel:**

2. Inter-disciplinary Team Communication
3. Visual Communication – Plan + GIS
4. Watershed Initiatives

**Annette:**

5. Communicating with Stakeholders
6. Communicating with SCM Owners
7. Communicating with Regulators



# 1. Ordinances + Design Standards

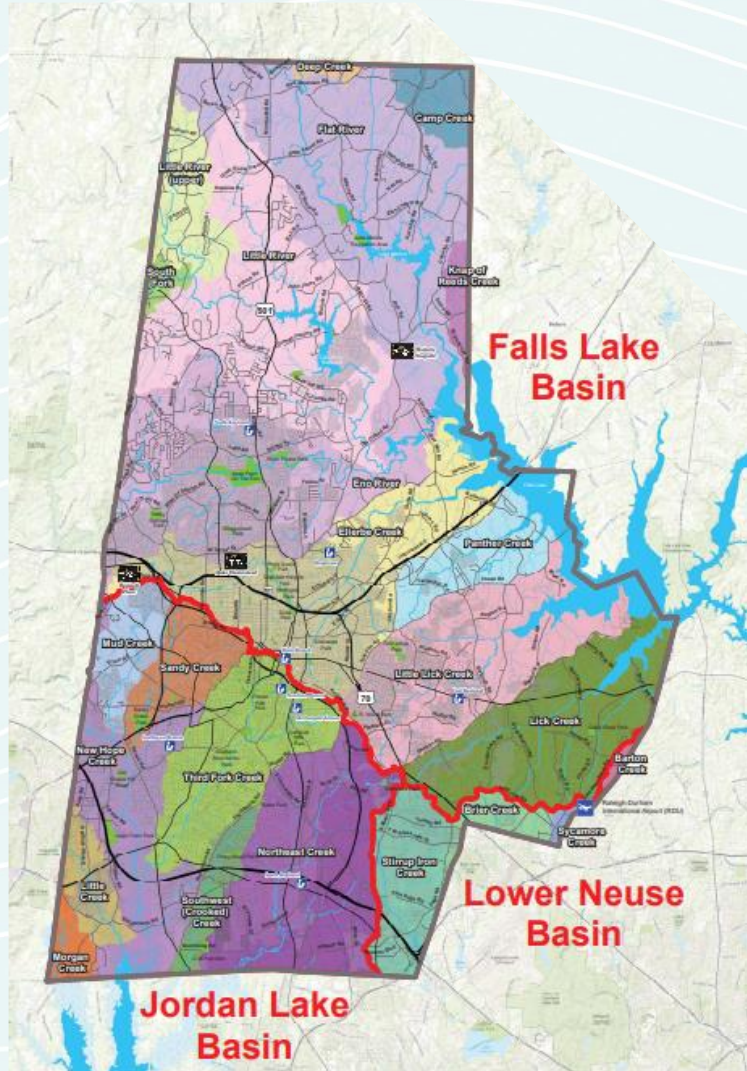


What is the purpose of a stormwater ordinance?

- a. To scare the development community
- b. To demonstrate the community's grasp of legal jargon
- c. To clearly communicate stormwater requirements
  - Fewer questions for your team
  - Fewer complaints / misunderstandings
  - Better submissions that are easier to approve



# Tips on Clear Ordinances



**Big Picture:** Outline + reorganize if needed

**Content:** Resolve different requirements when zoning + state rules overlap to create a “one-stop shop.”

**Details:** Clear titles for each item

**Plus:** Don’t forget the administrative manual

## Outline + Reorganize: Durham County Ordinance Update

<b>OLD:</b>	<b>NEW:</b>
Sec. 14-150: Definitions	Sec. 14-150: Definitions
Sec. 14-151: Purpose	Sec. 14-151: Purpose + Administration
Sec. 14-152: General Provisions	Sec. 14-152: Applicability + Exemptions
Sec. 14-153: Enforcement + Administration	Sec. 14-153: General SW Stormwater Management
Sec. 14-154: Exemptions	Sec. 14-154: Falls Lake Basin
Sec. 14-155: Design + Performance Standards	Sec. 14-155: Neuse Basin Outside of Falls Lake Watershed
Sec. 14-156: Plan Submission procedures	Sec. 14-156: Jordan Lake Basin
Sec. 14-157: Permit Requirements	Sec. 14-157: Requirements for Design of SCMs
Sec. 14-158: As-built Plans + Certification	Sec. 14-158: Approval of Stormwater Construction Drawings
	Sec. 14-159: Operational Stormwater Permit



## Clear Titles: Hope Mills

### Sec. 82-92. Establishment of application requirements, schedule, and fees.

- (a) ***Application contents and form***. The stormwater administrator shall establish requirements for the content and form of all applications and shall amend and update those requirements from time to time.
- (b) ***Submission schedule***. The stormwater administrator shall establish a submission schedule and submittal checklist for applications. The schedule shall establish deadlines by which complete applications must be submitted for the purpose of ensuring that there is adequate time to review applications and that the various stages in the review process are accommodated.
- (c) ***Permit review fees***. The Town board of commissioners shall establish permit review fees as well as policies regarding refund of any fees upon withdrawal of an application and may amend and update the fees and policies from time to time.

## You can even be creative!

*Density equation.* The following requirements shall apply to the calculation of project density:

- (a) Projects without existing BUA shall use the following equation to calculate project density; and

$$\text{Project Density} = \frac{\text{Total BUA}}{\text{Total Project Area}}$$

- (b) Projects with existing BUA shall have the option to use the following equation to calculate project density.

$$\text{Project Density} = \frac{(\text{Total BUA} - \text{Existing BUA})}{(\text{Total Project Area} - \text{Existing BUA})}$$



## Definitions that have been added + changed since 2017

Built-Upon Area

Development

Dispersed Flow

Existing Development

Geotextile Fabric

Infiltration Systems

Major / Minor Modification

Minimum Design Criteria

Off-site Stormwater System

Perennial Stream

Permeable Pavement

Permittee

Primary SCM

Project

Project Area

Public Linear Transportation Project

Required Storm Depth

Residential Development

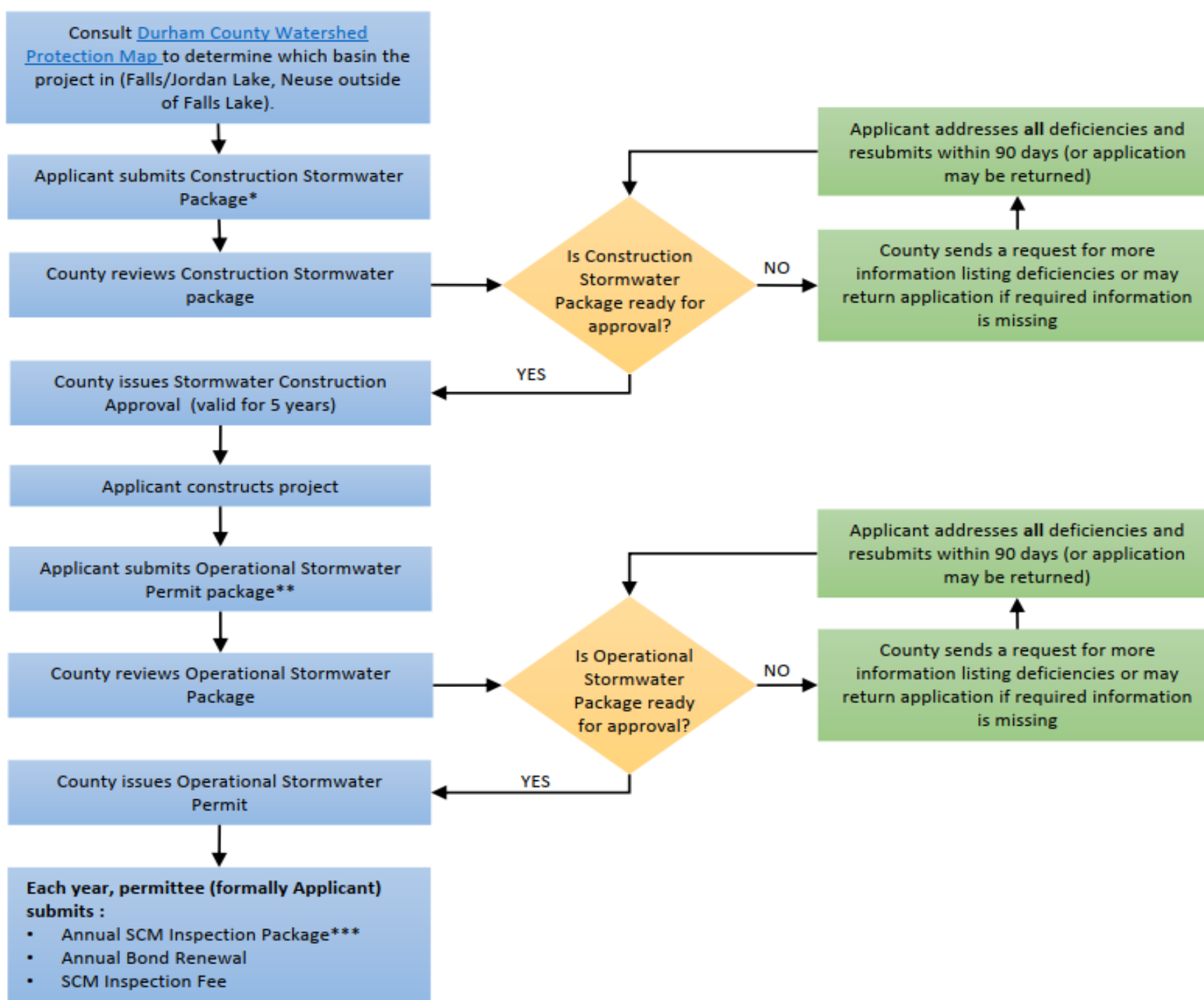
Runoff Treatment

Runoff Volume Match

Secondary SCM

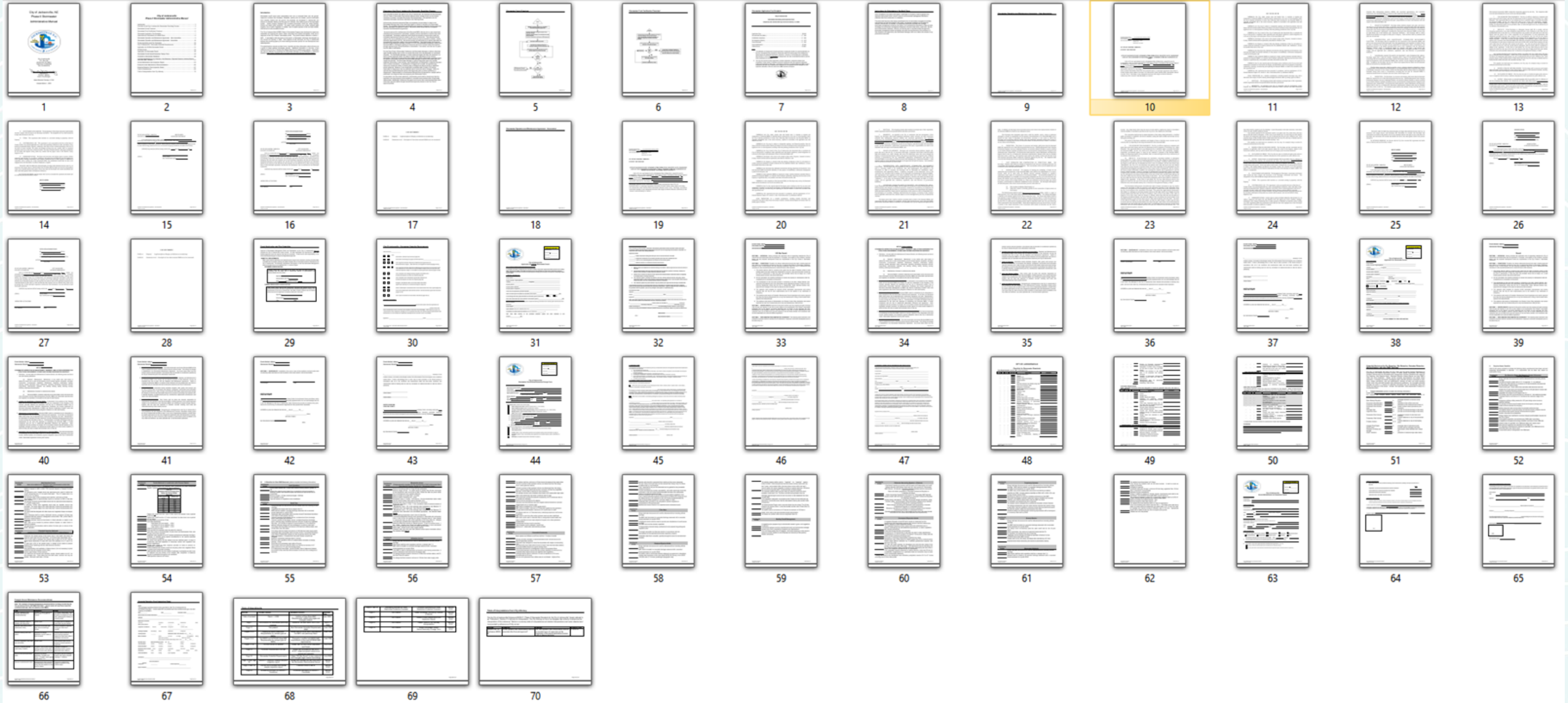
Stormwater Control Measure (SCM)

\* The state rules no longer say “85% TSS Removal.”





# Jacksonville Administrative Manual - Original



## 2. Inter-disciplinary Team Communication

Disciplines Stormwater Professionals Coordinate with:

1. Civil Engineers (Civil, Structural, Transportation, Water + Wastewater)
2. Landscape Architects
3. Planners
4. Architects
5. Wetland Scientists
6. Mechanical + Electrical Engineers
7. Construction Inspectors + Managers



# 2. Inter-disciplinary Team Communication

## Planners



**PRELIMINARY SKETCH "B"**

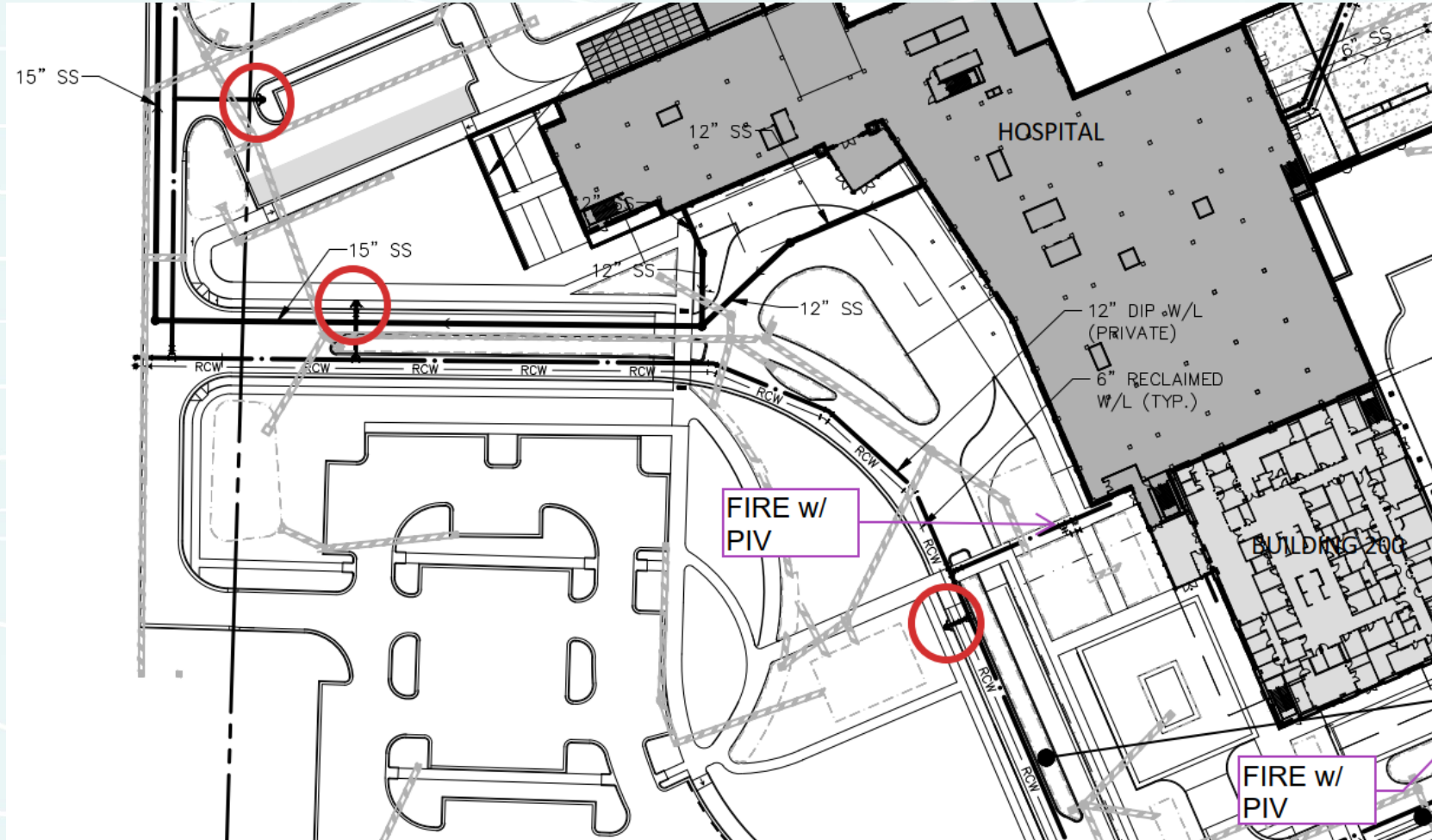
40' x 100' (20' x 100')	60
40' x 100' (20' x 100')	67
40' x 100' (20' x 100')	69
40' x 100' (20' x 100')	74
TOWNSHIPS 20' x 100' LOT	151
	481

McAdams 14, 2022



## 2. Inter-disciplinary Team Communication

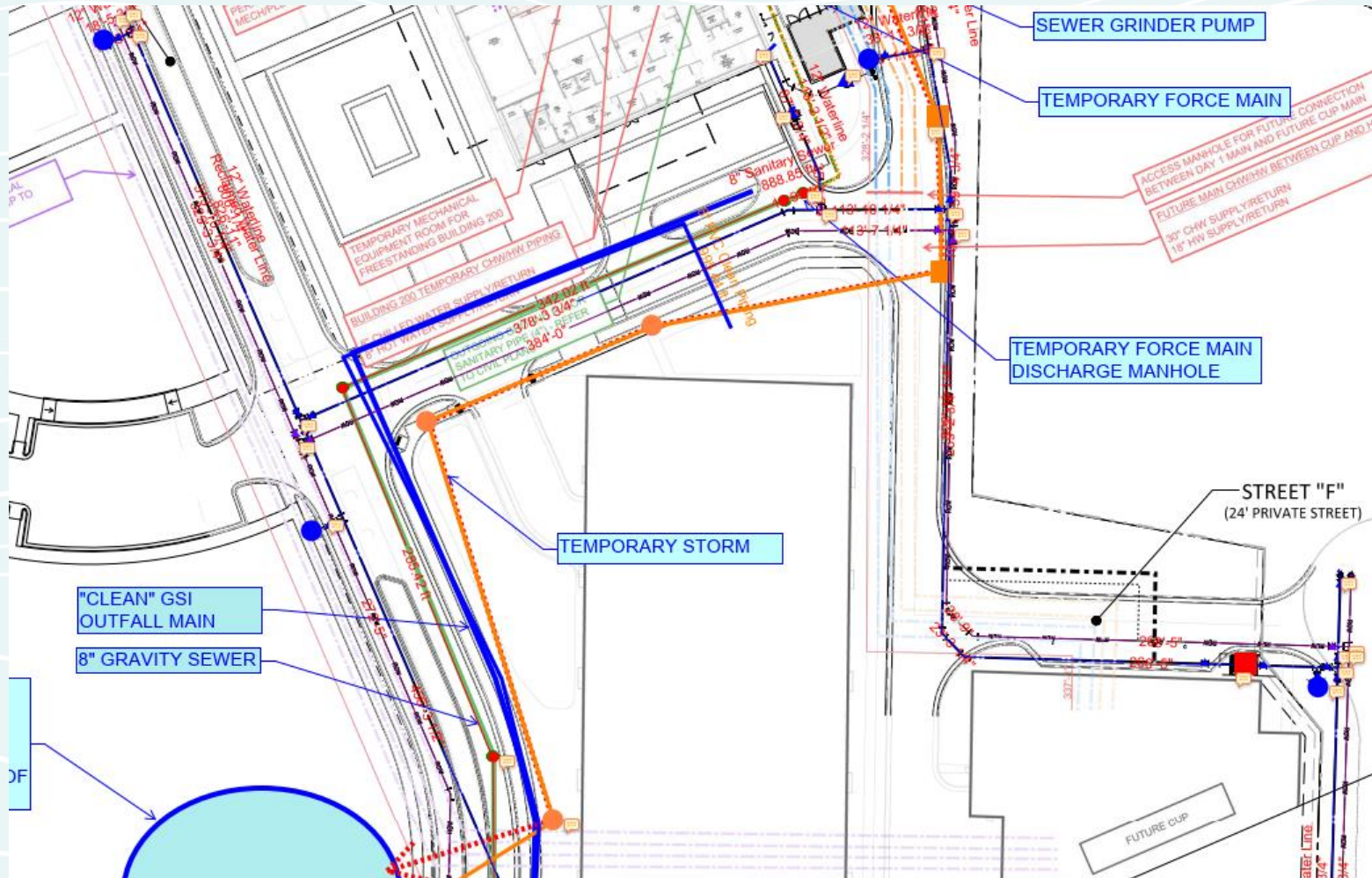
### Civil Engineers





## 2. Inter-disciplinary Team Communication

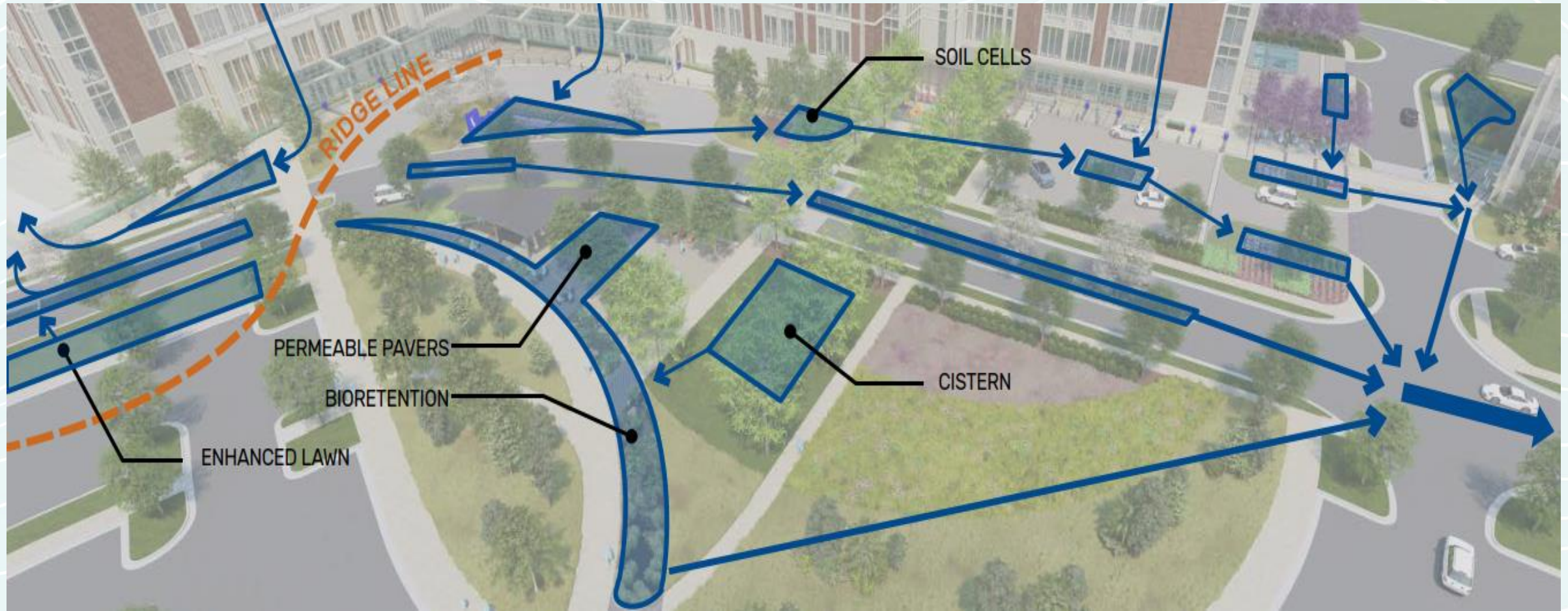
### Civil Engineers





## 2. Inter-disciplinary Team Communication

Planners + LA







## 2. Inter-disciplinary Team Communication

### Execution and Follow up

- > Have an agenda and send it out prior to the meeting
- > Discuss overall goal of project
- > What are the scope items and fees (time allotments)
- > Establishing task + discipline Leads
  - > Taking feedback from disciplines on coordination points and schedule
- > Conduct Check-in Meetings
  - > Provide access to charge accumulation + living schedule
- > Follow-up with Summary Minutes from Meetings
  - > To-Do Items





QUARTERS  
FOR LEASE

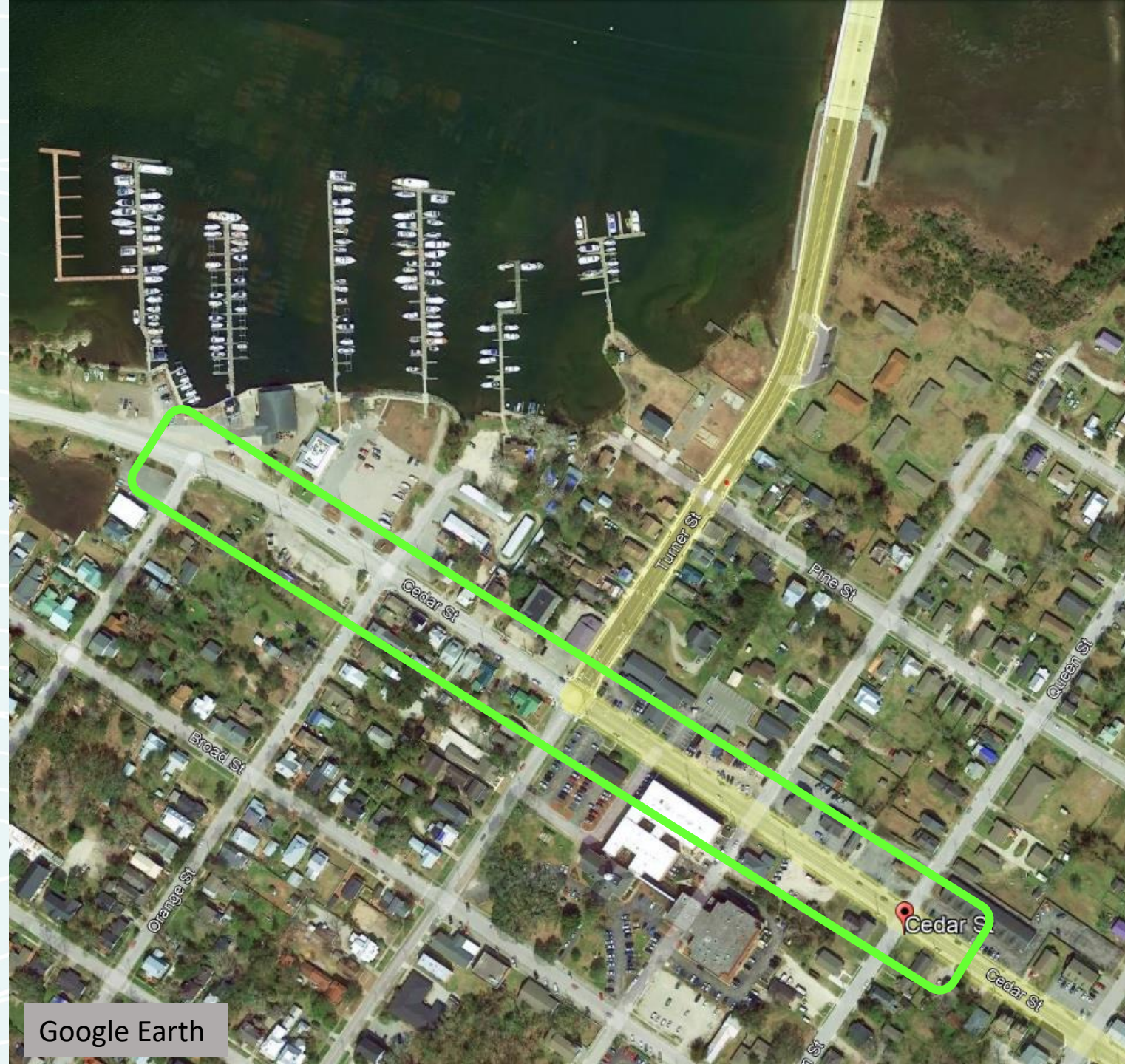
Queen St





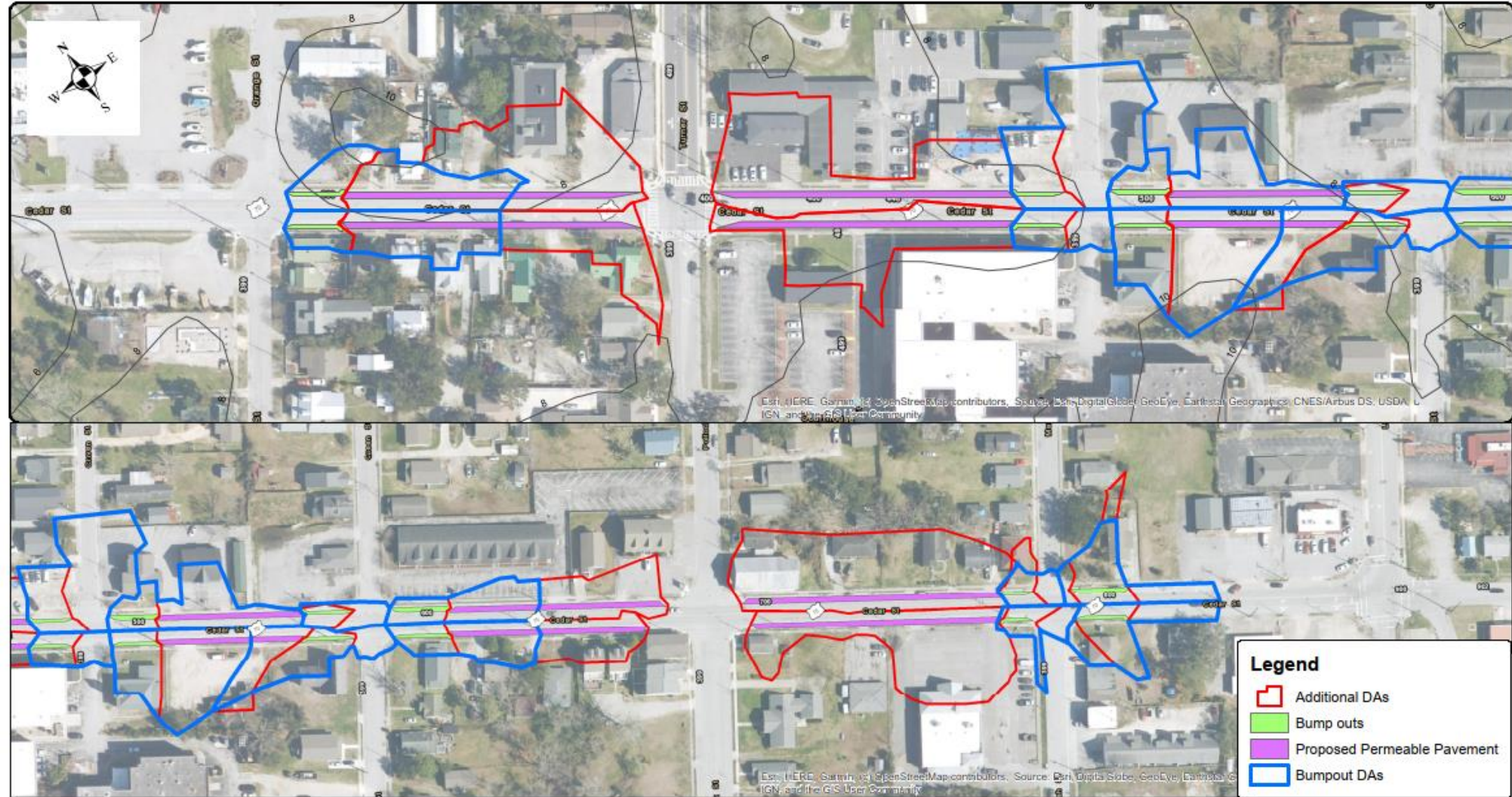
## Town of Beaufort + NCDOT – Cedar Street Retrofit

Fourteen bioretention boxes will be installed adjacent to the roadway to collect + treat stormwater and improve the streetscape funded by the NCDOT's Highway Stormwater Program.





### 3. Visual Communication













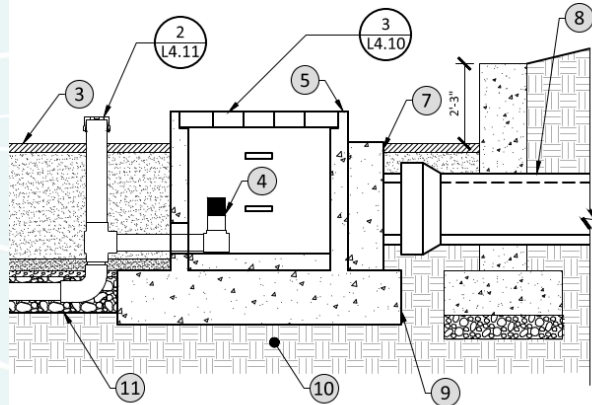
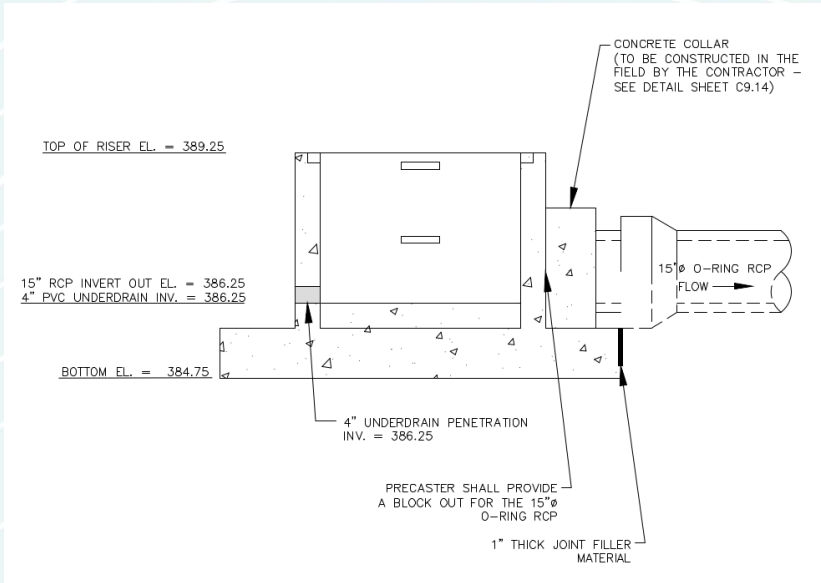




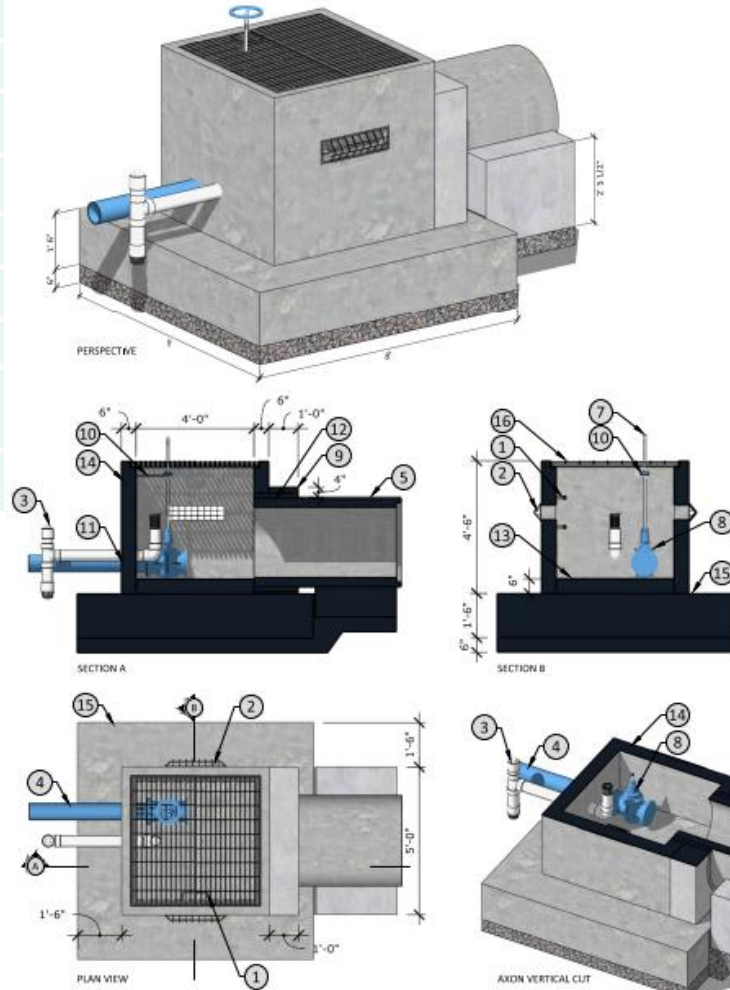




### 3. Visual Communication – Plan Details



- 1 CLEANOUT/OBSERVATION WELL (SEE DETAIL 2/L4.11)
- 2 PERFORATED UNDERDRAIN PIPE (DETAIL 1/L4.11)
- 3 TOP OF BIORETENTION MEDIA (SEE DETAIL 1/L4.11)
- 4 INVERTED STRUCTURE (SEE DETAIL 3/L4.10)
- 5 PERMANENT OUTLET STRUCTURE (SEE DETAIL 3/L4.10)
- 6 FINAL GRADE (SEE GRADING PLAN FOR ELEVATIONS/SLOPE AND SEE SPECIFICATION FOR EMBANKMENT COMPACTION DETAILS)
- 7 CONCRETE COLLAR (SEE OUTLET STRUCTURE DETAILS)
- 8 CONCRETE OUTLET PIPE (SEE PERMANENT OUTLET STRUCTURE DETAIL 3/L4.10)
- 9 CONCRETE ANTI-FLOATATION BLOCK (SEE DETAIL 3/L4.03)
- 10 COMPACTED SUBGRADE BENEATH OUTLET STRUCTURE (SEE SPECIFICATION FOR REQUIRED COMPACTION)
- 11 BIORETENTION CELL SUBGRADE TO REMAIN UNCOMPACTED DURING CONSTRUCTION. SUBGRADE SURFACE TO BE SCARIFIED PRIOR TO ADDING BIORETENTION MATERIAL)

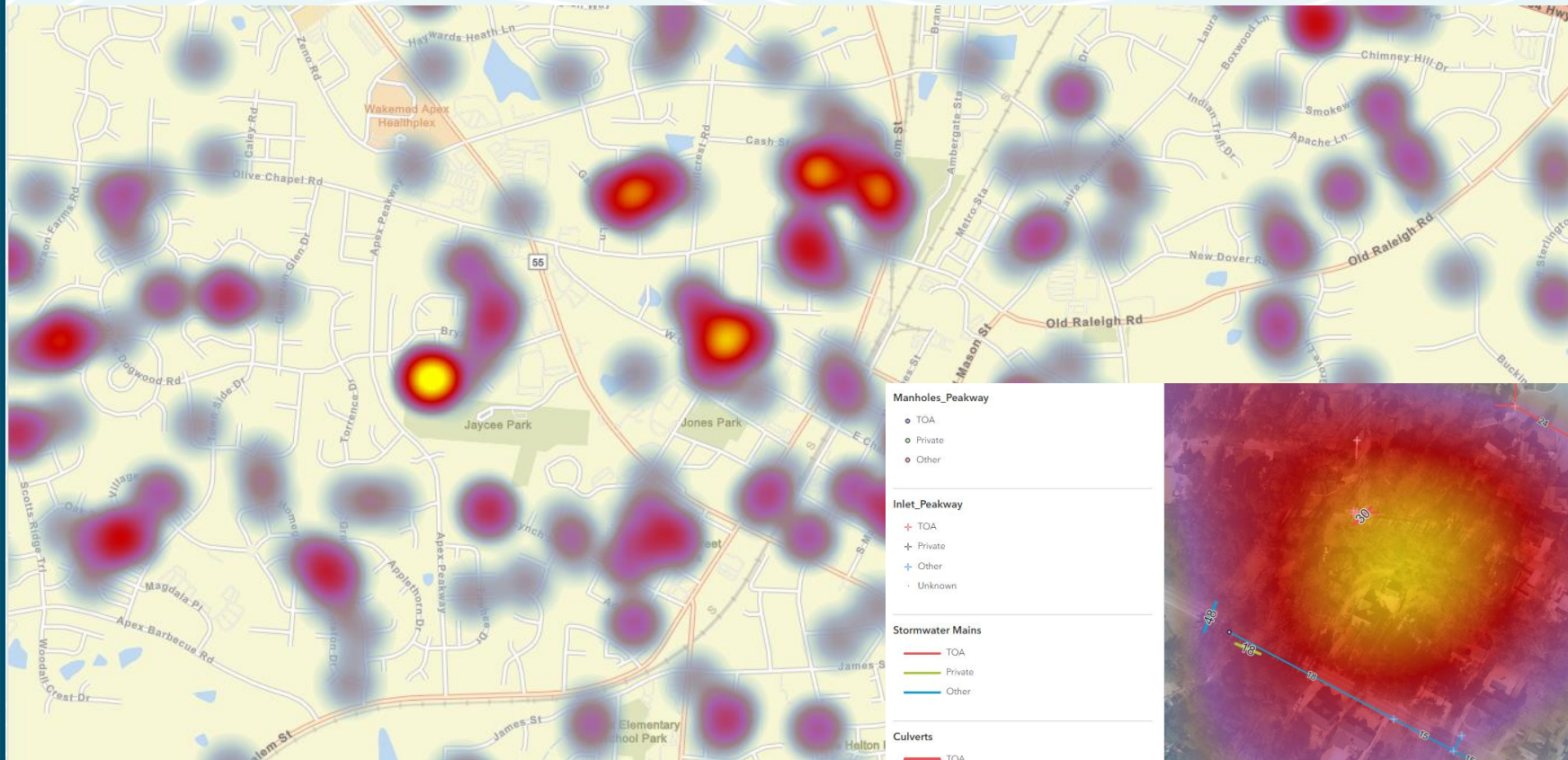


- 1 STEPS TO MEET NCDOT 840.66 REQUIREMENTS
- 2 6" X 24" WE81 WITH TRASH RACK AS SHOWN OR APPROVED EQUAL. SEE PLANS FOR WEIR HEIGHT
- 3 4" DIA. PVC INVERTED INTAKE (SEE PLANS FOR INVERT ELEVATION)
- 4 6" DIA. DIP DRAIN
- 5 24" DIA. CLASS III O-RING RCP. SEE PLANS FOR INVERT ELEVATION
- 6 WATER TIGHT NON-SHRINK GROUT AT JOINT
- 7 HANDWHEEL TOP OF HANDWHEEL TO EXTEND 1' ABOVE TRASH RACK
- 8 6" PLUG VALVE IN ACCORDANCE WITH AWWA C-517 AND OPERABLE FROM TOP OF STRUCTURE. VALVE SHOULD BE M&H STYLE 3810 ECCENTRIC VALVE OR APPROVED EQUAL
- 9 CONCRETE COLLAR WITH REINFORCEMENT
- 10 STEM GUIDE FOR VALVE HANDWHEEL PER MFR. RECOMMENDATIONS
- 11 SEAL GAP BETWEEN OPENING AND PIPE WITH RUBBER BOOT AND S.S. HARDWARE
- 12 WRAP OUTSIDE OF PIPE WITH FLEXIBLE WATERSTOP SEAL (SEE NOTE 2)
- 13 6" CONCRETE FILL SLOPED TO DRAIN
- 14 PRECAST STRUCTURE WALL
- 15 CONCRETE ANTI-FLOATATION BLOCK
- 16 DUAL TRASH RACK GRATE (SEE NOTE 5)

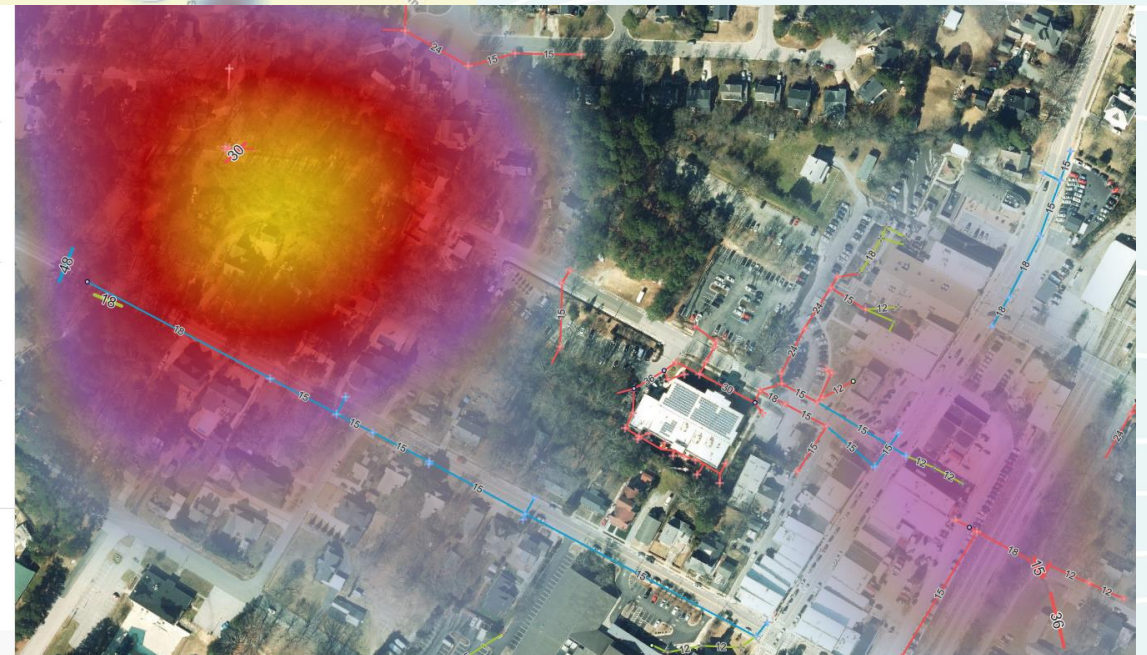
- NOTES:
1. ALL CONCRETE TO HAVE A MIN. 3,000 PSI
  2. RCP PIPE TO BE WRAPPED WITH VOLCLAY WATERSTOP-RX 101 OR APPROVED EQUAL AT THE FACE OF THE PRECAST STRUCTURE WALL. PROVIDE 6" OVERLAP ON THE BOTTOM OF THE PIPE
  3. CONCRETE COLLAR TO HAVE #4 REBAR AND BE CONNECTED TO PRECAST. IF CONTRACTOR CHOOSES TO DRILL HOLES FOR ANCHORS INTO THE PRECAST THEY MUST FILL THE JOINT WITH EPOXY GROUT.
  4. PRECAST STRUCTURE WALL TO HAVE REINFORCEMENT. SEE PLANS FOR WEIR AND PIPE INVERT HEIGHTS TO AVOID CONFLICTS. CONTRACTOR TO BRING UP ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PRECAST CONSTRUCTION.
  5. CONTRACTOR TO SUBMIT CUT SHEET FOR TOP TRASH RACK GRATE. DESIGN SHOULD HAVE A CAST IN PLACE IRON FRAME WITH L ANCHORS WELDED AT 24" MAX. SPACING. TOP GRATE TO BE MADE FROM 6063 ALUMINUM ALLOY: 3/8" X 3" FLAT BARS SPACED A MAX. 2" O.C. AND 1/4" PERPENDICULAR SUPPORTS A MAX. 5.75" O.C. OR APPROVED EQUAL. ATTACH GRATE TO FRAME WITH GALVANIZED OR S.S. FASTENERS.
  6. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF ALL ASSOCIATED STRUCTURES AND PRODUCTS FOR ENGINEER APPROVAL PRIOR TO PURCHASE AND INSTALL.
  7. INSTALL ALL PRODUCTS PER MFR. RECOMMENDATIONS.



### 3. Visual Communication



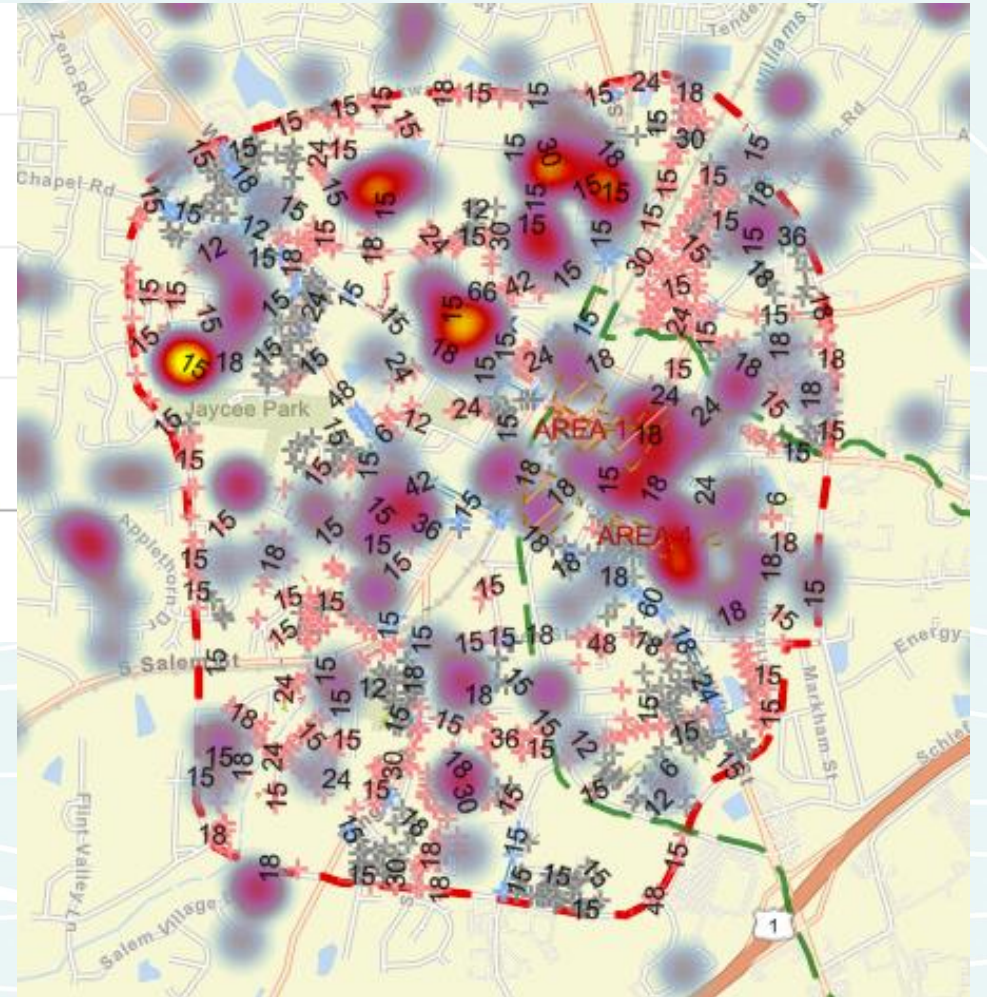
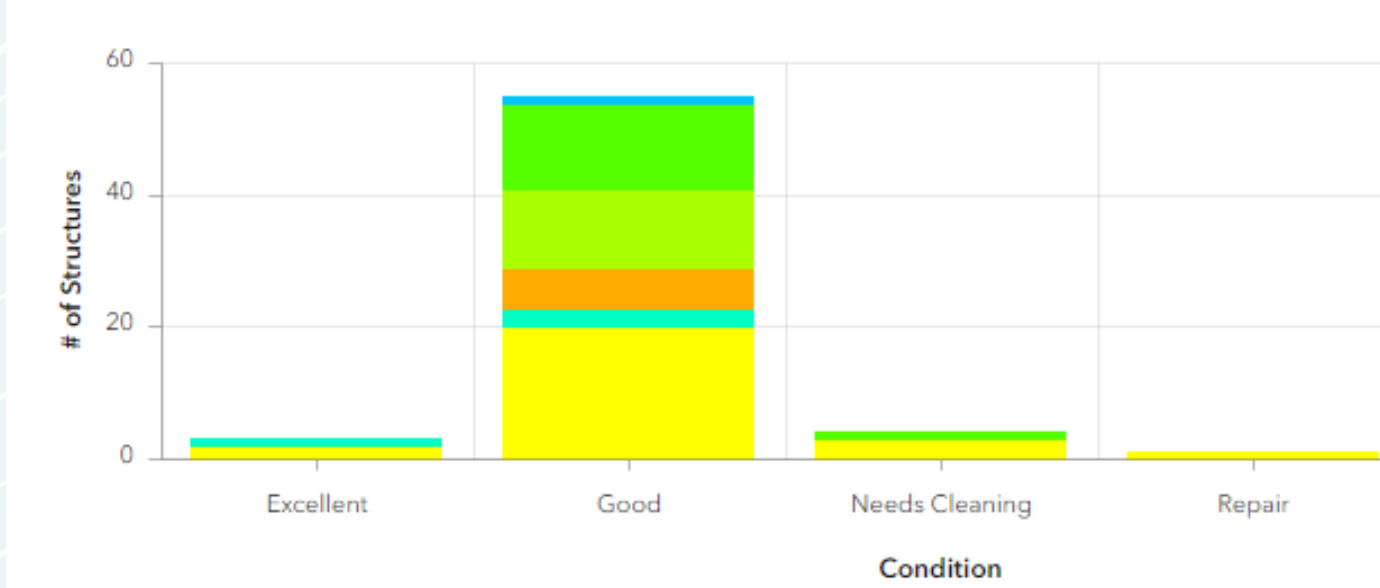
- Manholes\_Peakway**
  - TOA
  - Private
  - Other
- Inlet\_Peakway**
  - ✦ TOA
  - ✦ Private
  - ✦ Other
  - ✦ Unknown
- Stormwater Mains**
  - TOA
  - Private
  - Other
- Culverts**
  - TOA
  - Private
  - Other
- Drainage Complaints**
  - High
  - Low





### 3. Visual Communication

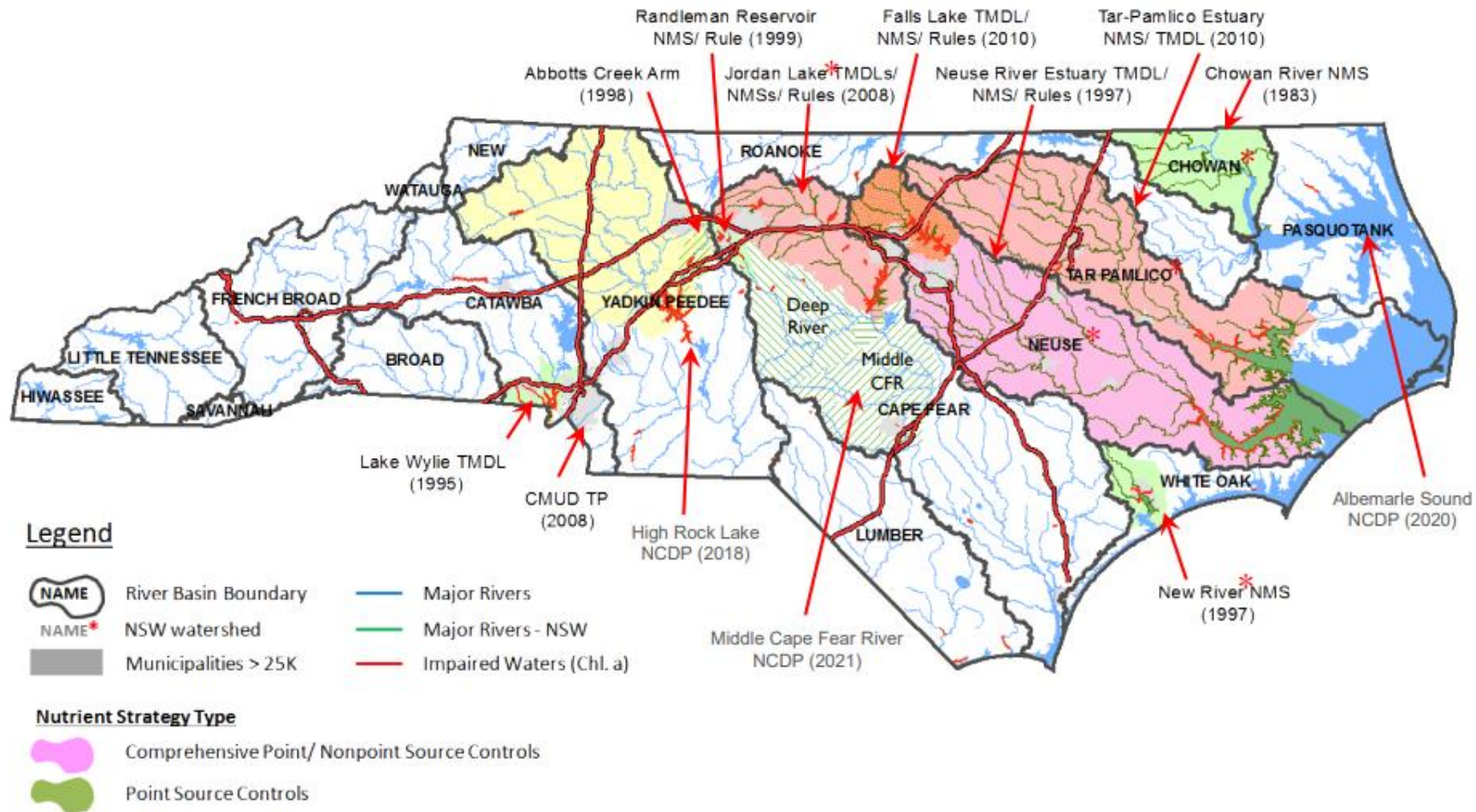
Manholes- Town Owned





## 4. Watershed Initiatives

# Watershed-Based Nutrient Controls





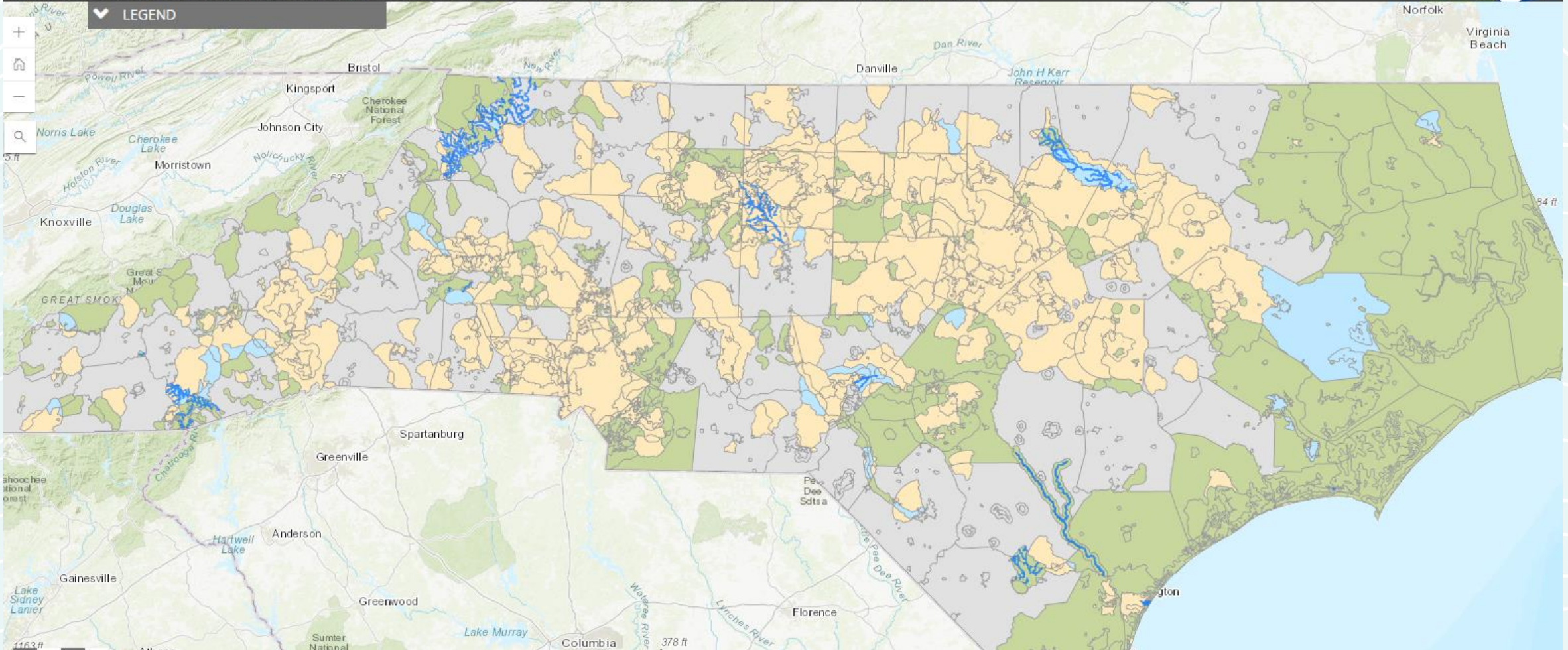
# 4. Watershed Initiatives

## Post-Construction Stormwater Permitting Map

NC DEQ Stormwater Program



Identifies stormwater permitting authorities for development projects in NC. Use the SEARCH button to find a location or address, and then click on the map for guidance. NOTE: Please contact DEQ staff to determine if a property is within a watershed or area that requires special considerations (SA, HQW, ORW, Special Management Strategies).





## 4. Watershed Initiatives

### Gathering focuses on algae problems with High Rock Lake

Published 12:10 am Friday, June 2, 2023

By Brad Dountz

1 of 3 < >



People during the meeting had a chance to break off and speak with several experts on ways to protect High Rock Lake. Brad Dountz/Salisbury Post.

SALISBURY— High Rock Lake has always had a special connection with people in the community. However, environmental pressures have started to affect the lake and steps are being taken to prevent further damage.



846 WEST 4TH STREET  
ADOPT A WATERSHED

DONATE

HOME

ABOUT

NEWS

EVENTS

EDUCATION

RESOURCES

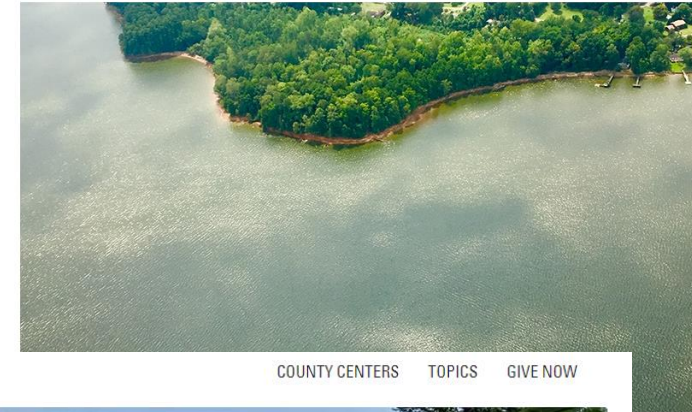
GET INVOLVED

CONTACT

WINSTON-SALEM, NC, 27101

336-722-4949

### HIGH ROCK LAKE



COUNTY CENTERS

TOPICS

GIVE NOW

NC STATE EXTENSION

### Water Resources

Meet Our Staff

Welcome

Extension Water Resource Workgroups

Agricultural Drainage and Irrigation  
Urban Water Management Residential  
and Agricultural Water Quality ...

NC State Climate Office

Agent Resources (Login  
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Publications & Factsheets

Search



### Rulemaking in the High Rock Lake Watershed

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# 4. Watershed Initiatives

North Carolina Department of Agriculture & Consumer Services

ENHANCED BY Google

JOBS EMPLOYEE PORTAL

Home Programs Services Divisions Newsroom Contact

- NSW Watersheds
- Neuse
- Tar-Pamlico
- Jordan Lake
- Falls Lake

## Watershed Initiatives - Nutrient Sensitive Waters Strategies

Environmental conditions in North Carolina's rivers, estuaries and reservoirs are driven by complex interactions among rainfall, flows, temperatures, biological factors, and chemistry. Some of the waters of the state have a history of exceeding nutrient and chlorophyll a standards, and are deemed nutrient sensitive waters (NSW). Currently, the following watersheds have active nutrient sensitive waters strategies: Neuse River Basin, Tar-Pamlico River Basin and Jordan Lake Watershed. A draft strategy has been proposed for the Falls Lake Watershed, and a strategy will be developed for the High Rock Lake Watershed in the coming years.

The division and local soil and water conservation districts assist with the implementation of the agriculture rule. By working together, districts, oversight committees and local advisory committees can insure that the agricultural community affected is able to meet the reductions required by the rules.

- Browse Soils
- Soil & Water Conservation
- StRAP
- Watershed In
- Grant Projec
- Impaired Imp
- Streams Init
- PL-566 Wate
- Protection
- Nutrient Ser
- Waters Strat

Search Soil and

NORTH CAROLINA Environmental Quality

Divisions Permits & Rules

Home > About > Divisions > Water Resources > Water Planning > Nonpoint Source Planning > High Rock Lake Nutrient Strategy

## High Rock Lake Nutrient Management Strategy

The map displays the High Rock Lake Watershed boundary in red, covering parts of several counties in North Carolina. The legend includes County boundaries (dotted line), Water Bodies (blue), Municipalities (shaded grey), and High Rock Lake Watershed Boundary (red line). The map shows major water bodies like High Rock Lake and various creeks. Surrounding counties are labeled, including Wayne, Jones, Franklin, and others. An inset map shows the location of the watershed within the state of North Carolina.




## 4. Watershed Initiatives

### Our Creeks, Our Communities Festival



A full day of celebrating the Walnut Creek Watershed, the communities within it, & its admission into the **US EPA's Urban Waters Partnership!**

- Educational Activities for families
- Guided walks
- Birdwatching
- Local organizations
- Vendors
- Food trucks & more!

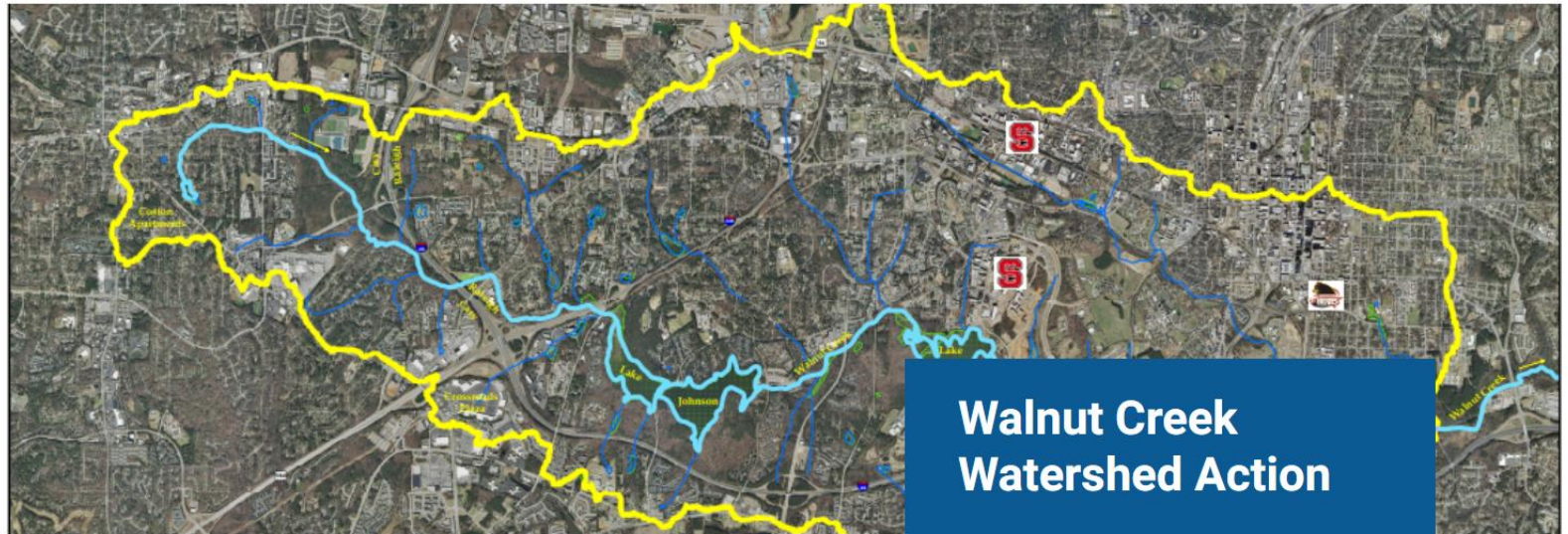
 **Southeast Raleigh YMCA**  
1436 Rock Quarry Rd  
Raleigh, NC 27610

**\*This event is outside!**

 **Earth Day**  
Saturday, April 22, 2023  
11:30 AM - 4:00 PM



Visit the Our Creeks, Our Communities website



### Walnut Creek Watershed Action

Collaboration on environmental justice and improvements in the Walnut Creek Watershed began in South East Raleigh, with Partners for Environmental Justice and later joined by the Walnut Creek Wetlands Community Partnership. The stories of care and attention from this downstream corner of the watershed has since inspired action across the entire watershed.



## 4. Watershed Initiatives

### Rocky Branch & Central Walnut Creek Watershed Study

Downtown/South Raleigh Area

UPDATED: JUN 13, 2023

We are doing a study of the Rocky Branch Watershed and the adjacent portion of the Walnut Creek Watershed located in southern downtown Raleigh. The goal is to identify ways to improve the watershed by:

- Reducing flooding impacts
- Renewing stormwater pipes and infrastructure that is in poor condition
- Improving water quality
- Repairing streambanks

Study Area: In and near downtown Raleigh.

Provide your feedback and observations on stormwater issues and concerns with our [Rocky Branch and Walnut Watersheds Study Survey](#) and view the [live results](#).

## STREAM FLOOD MONITORING

### Timeline of Project Installations

Neuse River Basin Projects

- 2021 Walnut Creek
- 2022 Swift Creek
- 2023 Crabtree Creek

Cape Fear River Basin Projects are projected to begin in 2024.

### Goals and Uses

#### Walnut Creek Watershed Action Plan

- 1 Watershed Action Plan (WAP) Overview
- 2 Water Quality Issues, Information and Data
- 3 Water Quality Issues -Hydrologic Alteration  

The hydrologic cycle has been heavily altered in the Walnut Creek Watershed. This is typical of most urban areas where the emphasis has been on moving stormwater to streams rapidly. Zoom in on the map pane and you will see City of Raleigh stormwater infrastructure. Because most of the WAP area is built out with impervious surfaces (roads and rooftops) hydrologic restoration will be challenging. Stormwater Control Measures (SCMs) will need to be implemented at both large and small scales depending on the opportunities. It is important that all new and redevelopment projects in the WAP area reduce impervious surface connections to the hydrologic network. Communities can also help to disconnect impervious surface by turning downspouts away from streets and keeping as much rainfall as possible from running into the stormwater infrastructure and then to local streams.
- 4 Roles and Responsibilities -Who is involved?
- 5 WAP Goals, Strategies and Objectives
- 6 Community Involvement NC Stream Watch
- 7 Community Involvement- Focus Area Plans (FAP)





## 4. Watershed Initiatives

### Walnut Creek Watershed

Proposal to join the Urban Waters Federal Partnership

#### WALNUT CREEK AMBASSADOR HOST ORGANIZATIONS

Carolina Wetlands Association; Rick Savage: [rick\\_savage@carolinawetlands.org](mailto:rick_savage@carolinawetlands.org)  
Partners for Environmental Justice; Amin Davis: [akdavis23@yahoo.com](mailto:akdavis23@yahoo.com)

#### LEAD FEDERAL AGENCY

U.S. Geological Survey; Charles Stillwell: [cstillwell@usgs.gov](mailto:cstillwell@usgs.gov)  
U.S. Geological Survey; Kristina Hopkins: [khopkins@usgs.gov](mailto:khopkins@usgs.gov)



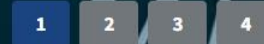
Submitted Month, Day, Year

## Urban Waters Federal Partnership



### 21st Urban Waters Federal Partnership

The Walnut Creek watershed in Raleigh, NC was designated as the 21st UWFP location. Federal agencies will work collaboratively with local partners to restore, improve water quality, mitigate flood risk, enhance recreational opportunities, strengthen local economies, and create jobs.



The Urban Waters Partnership reconnects urban communities, particularly those that are overburdened or economically distressed, with their waterways by improving coordination among federal agencies. The Partnership also collaborates with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental and social benefits. [Read more about the Partnership.](#)

### What's New

- [21st Urban Waters Federal Partnership \(UWFP\) Location Announced](#)

## 5 Communicating with Stakeholders

### In-Person:

- Open House
- Workshop
- Community Event
- Focus Group
- Stakeholder / Partner Meeting
- Public Hearing

### Virtual:

- Social Media
- Websites
- Video
- Email
- Surveys + Polling
- Mapping Platforms

**GOALS:** Have a **conversation**, not a one-sided “exchange of information.”  
Provide a combination of in-person and virtual opportunities to include everyone.  
Show citizens how their input improved the final product.



# QR Codes (Quick Response)



QR Codes:

They are not just for seeing the menu!

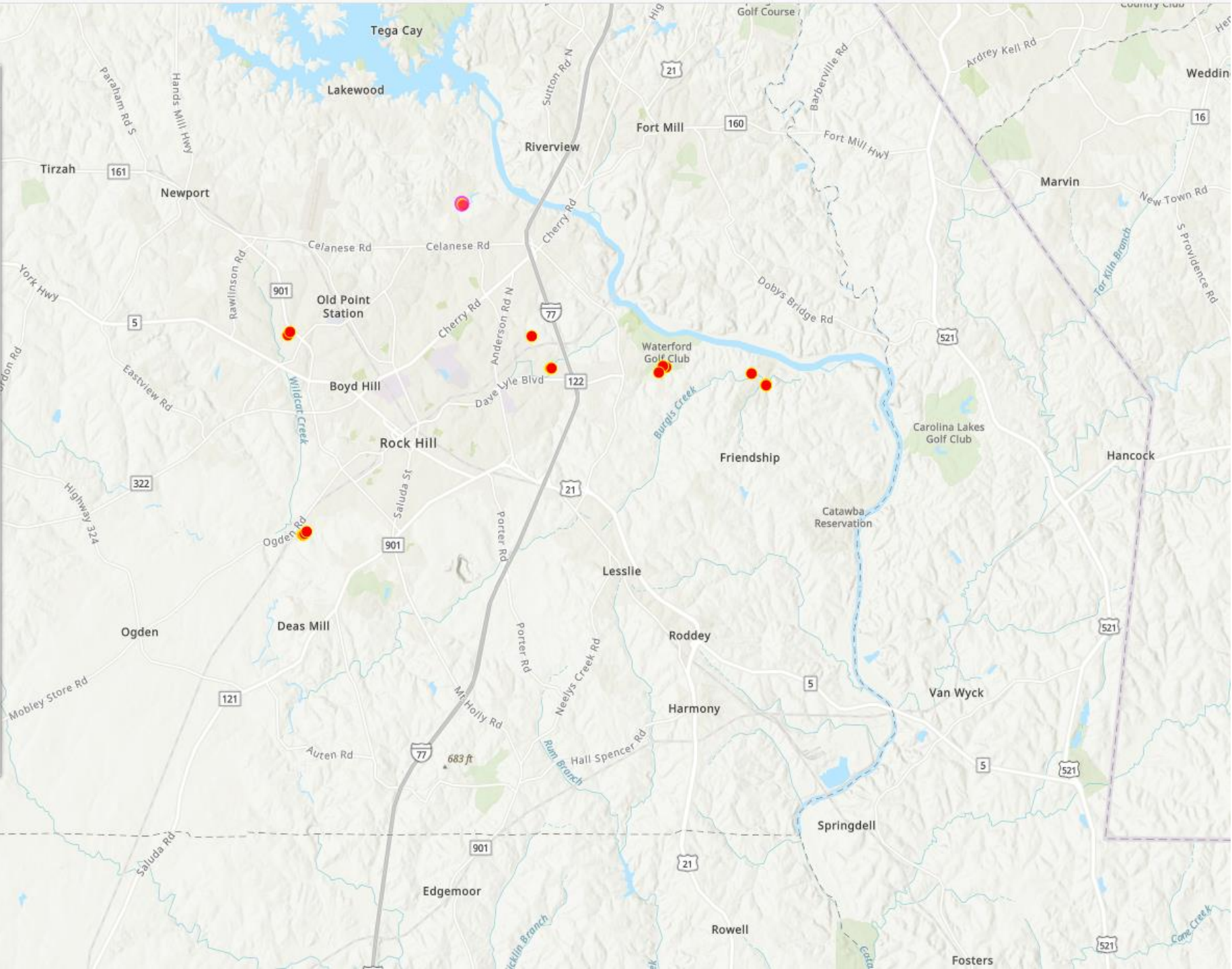
They can facilitate a meaningful and inclusive exchange of information.



Zoom to Pan 1 of 4

survey

Notes:





## 6. Communication with SCM owners



**SCM TREATMENT**  
Stormwater Control Measure

STORMWATER RUNOFF

STORMWATER DRAINS OFF THE DEVELOPMENT AND FLOWS INTO STORMWATER CONTROL MEASURES (SCM)

POLLUTANTS SUCH AS BACTERIA, FERTILIZER, OIL AND GREASE, AND SEDIMENT ARE REMOVED BY SETTLING, INFILTRATION AND PLANT UPTAKE.

CLEANER WATER FLOWS INTO OUR STREAMS, RIVER AND DRINKING WATER RESERVOIRS

**CLEAN WATER DOESN'T JUST HAPPEN.**

Learn more about how SCMs work and why it is important to inspect and maintain them.

SCAN ME







**Stormwater Collection System, Device + Perimeter** ▾

Swales are free from blockage and erosion.\*

<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
<input type="radio"/> Unknown		

Grates, gutters, curb openings, and pipes appear free from damage & clogs.\*

<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
<input type="radio"/> Unknown		

Bioretention cell is accessible for inspection.\*

<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
<input type="radio"/> Unknown		

Signage is present.\*

<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
<input type="radio"/> Unknown		




## Stormwater Collection System, Device + Perimeter

Swales are free from blockage and erosion.\*

Yes  No  N/A

Unknown


Describe problem and suggest follow up action(s):

1000 

How quickly should follow up occur?

No Rush  2-3 Months  2-3 Weeks  ASAP

Upload a picture of problem.

Drop image here or select image 

Grates, gutters, curb openings, and pipes appear free from damage & clogs.\*

Yes  No  N/A

Unknown



Unknown

Outlet structure is free from damage, clogs, and erosion.\*


 Yes No N/A Unknown

Notes:

1000

Upload Photo(s)

1Drop image here or select image (number of files allowed: 1 - 3)



Is maintenance required on this SCM prior to the next annual inspection?\*

 Yes No

Submit

## WET POND INSPECTION REPORT

### SCM INFORMATION

Project name:	Hillsborough SECU
Permit number:	NCS0123014
SCM ID number:	587462
Project address:	1867 King Street, Hillsborough, NC 27278

### INSPECTION INFORMATION

Inspector name:	Michael Meloy
Inspector PE number:	PE156872
Inspector phone number:	336-309-2255
Inspector email:	<a href="mailto:meloy@mcadamsco.com">meloy@mcadamsco.com</a>
Date of inspection:	01/04/2023
Recent weather conditions:	A few inches of rain in the past week. Very humid and foggy on day of inspection. Temperatures in the 40s.

### STORMWATER COLLECTION SYSTEM + ACCESSIBILITY

1. Are swales free from blockage and erosion?	YES
2. Do grates, gutters, curb openings, and pipes appear free from damage and clogs?	YES
3. Is wet pond accessible for inspection?	NO

### INLET(S) + FOREBAY

4. Estimated depth of the forebay:	1 foot
5. Are inlet(s) free from damage, clogs, and erosion?	Unknown, I cannot see the inlets
6. Is forebay berm stable and not eroding?	YES
7. Is forebay free from slime algae?	YES
8. Does algal growth cover <30% of the surface area?	NO, see below
9. Do cattails, phragmites, or other invasive plants cover <10% of the surface area?	YES
10. Is forebay free from trash and debris?	YES

### PERIMETER, EMBANKMENT + SIDE SLOPES

11. Is perimeter free from water quality impacts caused by geese and ducks?	YES
12. Is embankment free from woody shrubs and trees?	Unknown, I do not know what woody shrub is
13. Are side slopes stable, vegetated, and free from erosion/bare soil?	YES
14. Are side slopes free from trash and debris?	YES
15. Are side slopes free from muskrat and/or beaver activity?	NO, see below

### MAIN POOL

16. Is vegetated shelf covered with healthy vegetation and free from erosion?	YES
17. Is main pool free from slime algae?	YES
18. Does algal growth cover <20% of the surface area?	NO, see below
19. Do cattails, phragmites, or other invasive plants cover <10% of the surface area?	YES

20. Is main pool free from trash and debris?	YES
21. Is a fountain and/or aeration device present?	YES

### OUTLET DEVICES

22. Is emergency bypass and/or bypass swale clearly visible and in good condition?	N/A
23. Is outlet structure free from damage, clogs, and erosion?	YES
24. Does water level match the level of the lowest outlet?	YES

### PICTURES + GENERAL NOTES



#### Stormwater Collection System Inlet + Accessibility

Notes: Access to wet pond is limited.



#### Inlets + Forebay

Notes: None



#### Perimeter + Embankment + Side Slopes

Notes: None





**Main Pool**

Notes: None



**Outlet Devices**

Notes: None

**ISSUES AND CORRECTIVE ACTIONS**



**#3:** Wet pond is not accessible. Recommend clearing brush/re-establishing walking paths to wet pond.

**Follow up should occur:** Within one year



**#8:** Forebay surface is covered in algae. This is preventing sunlight from reaching pollutants in forebay. Recommend clearing the algae out with non-chemical means.

**Follow up should occur:** Within 2-3 months



**#15:** Extensive evidence of beaver activity on banks. Recommend using decoy wolves to discourage beaver habitation.

**Follow up should occur:** Within 2-3 months



**#18:** Main pool is almost completely covered in algae. Recommend removing algae with non-chemical means.

**Follow up should occur:** ASAP

**Certification**

I, Michael Meloy, certify that the information provided in this form is complete and correct.

## 7. Communication with the Regulator

Power Automate



1. Submitter Name:

Enter your answer

2. Date of Activity:

Please input date (M/d/yyyy)



3. Activity Category:

select all that apply

- Public Education and Outreach
- Public Participation
- Illicit Discharge Detection and Elimination (IDDE)
- Construction Site Runoff
- Post-Construction Site Runoff
- Good Housekeeping in Municipal Operations

4. Describe Activity:

Enter your answer

5. Upload Supporting Document(s) (Non-anonymous question)

Upload file

File number limit: 10 Single file size limit: 100MB Allowed file types: Word, Excel, PPT, PDF, Image, Video, Audio

Submit



# 7. Communication with the Regulator



My lists

Stormwater Activities ☆ ☑

Title ▾	Submitter Name ▾	Date of Activity ▾	Activity Category ▾	Activity Descrip... ▾
New Item	J. Smith	05/05/2023		Inspected Fire Station SCM
New Item	Aaron	05/05/2023	<b>Post-Construction Site Runoff</b> <b>Illicit Discharge Detection and Elimination (IDDE)</b> <b>Public Participation</b>	Handed out 53 stormwater public education flier at the County Fair.
New Item	Annette Lucas	05/05/2023	<b>Public Education and Outreach</b>	Included environmentally friendly tip inserts into customer's utility bills.

# Final Takeaway: Technology *Enhances* Communication

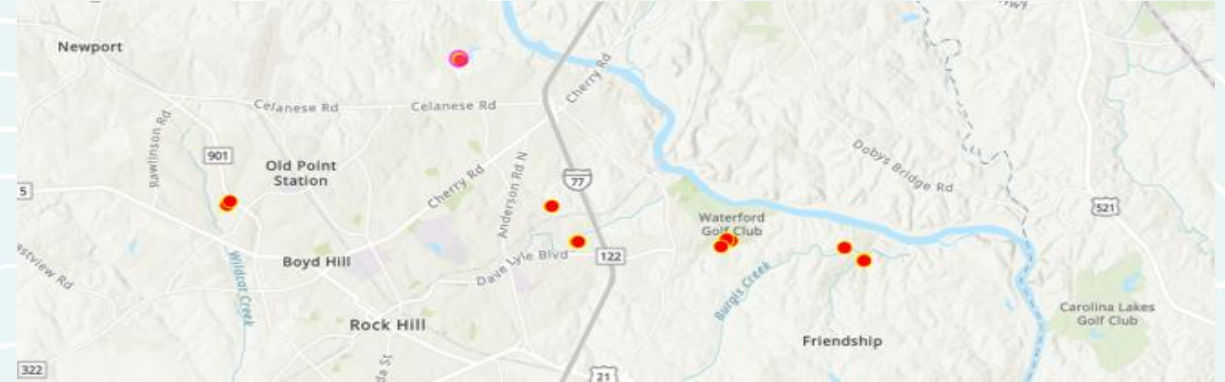
QR codes can allow citizens to provide input + report problems when it is convenient for them.



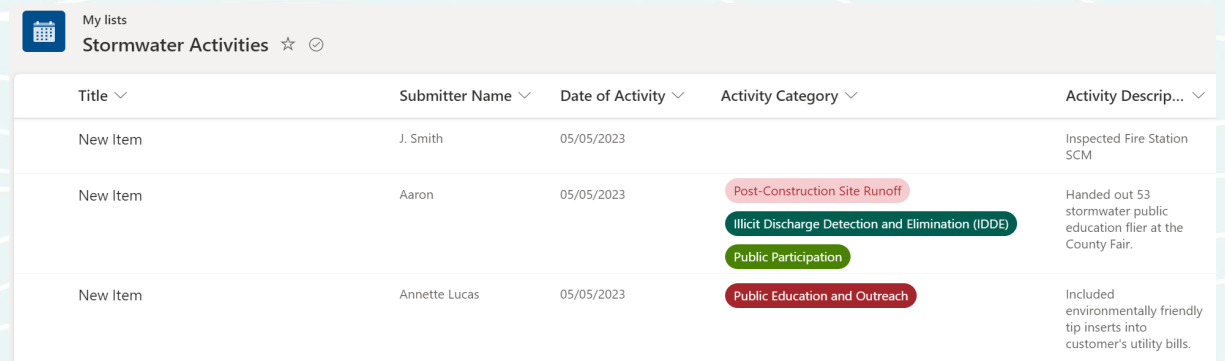
Signage + Survey123 can make SCM inspection + reporting much easier while providing better data to owners.



On-line maps can be interactive to show concerns reported across the community.



Power Automate can make logging MS4 activities easy and take the heat out of audits.



Title	Submitter Name	Date of Activity	Activity Category	Activity Descrip...
New Item	J. Smith	05/05/2023		Inspected Fire Station SCM
New Item	Aaron	05/05/2023	Post-Construction Site Runoff Illicit Discharge Detection and Elimination (IDDE) Public Participation	Handed out 53 stormwater public education flier at the County Fair.
New Item	Annette Lucas	05/05/2023	Public Education and Outreach	Included environmentally friendly tip inserts into customer's utility bills.



# Let's Make Time for the Important Communication!





**"Of all the life skills available to us, communication is perhaps the most empowering."**

- Brett Morrison



# THANK YOU!

## Questions?

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