Forsyth County

Stormwater Management Program

Prepared for

Forsyth County Engineering Department

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Table of Contents

Appendices

Attachments

Attachment 1. Municipal facility inventory
Attachment 2. Inspection forms
Attachment 3. Forsyth County Addendum to the GSMM
Attachment 4. Stormwater Management/BMP Facilities Covenant
Attachment 5. Forsyth County Comprehensive Plan (2017-2037)
Attachment 6. Litter Control Ordinances
Attachment 7. Flood Management Prevention Ordinance
Attachment 8. IDDE Ordinance
Attachment 9. Forsyth County Soil Erosion and Sedimentation Control Ordinance
Attachment 10. Forsyth County Development Guide Documents
Attachment 11. Soil Erosion and Sedimentation Control Bond
Attachment 12. Stormwater Ordinance
Attachment 13. GI/LID Program
Attachment 14. Conservation Subdivision Ordinance
Attachment 15. Impaired Waterbody Maps
Attachment 16. Environmental Sampling Plan
Attachment 17. Stream Buffer Ordinance

Acronyms

BMP	Best Management Practices
CFR	Code of Federal Regulations
CID	Comprehensive Inventory Database
CMOM	Capacity Management, Operations, and Maintenance
ERP	Enforcement Response Plan
GADNR	Georgia Department of Natural Resources
GAEPD	Georgia Environmental Protection Division
GIS	Geographical Information System
GSWCC	Georgia Soil & Water Conservation Commission
GSMM	Georgia Stormwater Management Manual
HUC	Hydrologic Unit Code
HVPS	Highly Visible Pollutant Source
IDDE	Illicit Discharge Detection and Elimination
LDA	Land disturbing activity
District	Metropolitan North Georgia Water Planning District
MS4	Municipal Separate Storm Sewer Systems
NA	Not Applicable
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
OCGA	Official Code of Georgia Annotated
ROW	Right-of-Way
SIC	Standard Industrial Classification
SOP	Standard Operating Procedure
SPLOST	Special Purpose Local Option Sales Tax
SWMP	Stormwater Management Program
SWP3	Stormwater Pollution Prevention Plans
TMDL	Total maximum daily load
USEPA	US Environmental Protection Agency
WIP	Watershed Improvement Plan

Executive Summary

Forsyth County has a long history of successful implementation of our GAEPD-approved Stormwater Management Program (SWMP). These efforts, in support of the Phase I Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) permit, have been refined and updated as part of a recent permit renewal, and current regulatory guidance from Georgia Environmental Protection Division (GAEPD).

The purpose of the SWMP is to provide a framework for the current and planned strategies, responsibilities, and procedures related to stormwater management. The stormwater management program is designed to prevent harmful pollutants from being washed by stormwater runoff into the MS4 (or from being dumped directly into the MS4), then discharged from the MS4 into local waterbodies.

The legal authority by which Forsyth County enforces its SWMP varies by element but is largely supported by five unique ordinances, which are available on the County website at www.forsythco.com. These ordinances include:

- Flood Management Prevention Ordinance
- Illicit Discharge Detection Elimination (IDDE) Ordinance
- Soil Erosion and Sedimentation Control Ordinance
- Stormwater Ordinance
- Stream Buffer Ordinance

The Georgia Stormwater Management Manual (GSMM) and the current Forsyth County Addendum also provide details regarding design standards and maintenance requirements. The Forsyth County Development Guidelines references review processes and checklists.

Forsyth County's MS4 service area covers all unincorporated lands within the County (**Figure E-1**). The only incorporated area in the County is the City of Cumming, which is a Phase II community and manages its MS4 independently from Forsyth County. The County's service area is located approximately 40 miles north of downtown Atlanta and is within the Metropolitan North Georgia Water Planning District (District). Approximately two-thirds of the service area is located in the Chattahoochee River basin, draining to Lake Lanier and a section of the River downstream of the Lake. The remaining one-third of the service area, located in the northwest portion of the County, drains to the Coosa River basin.

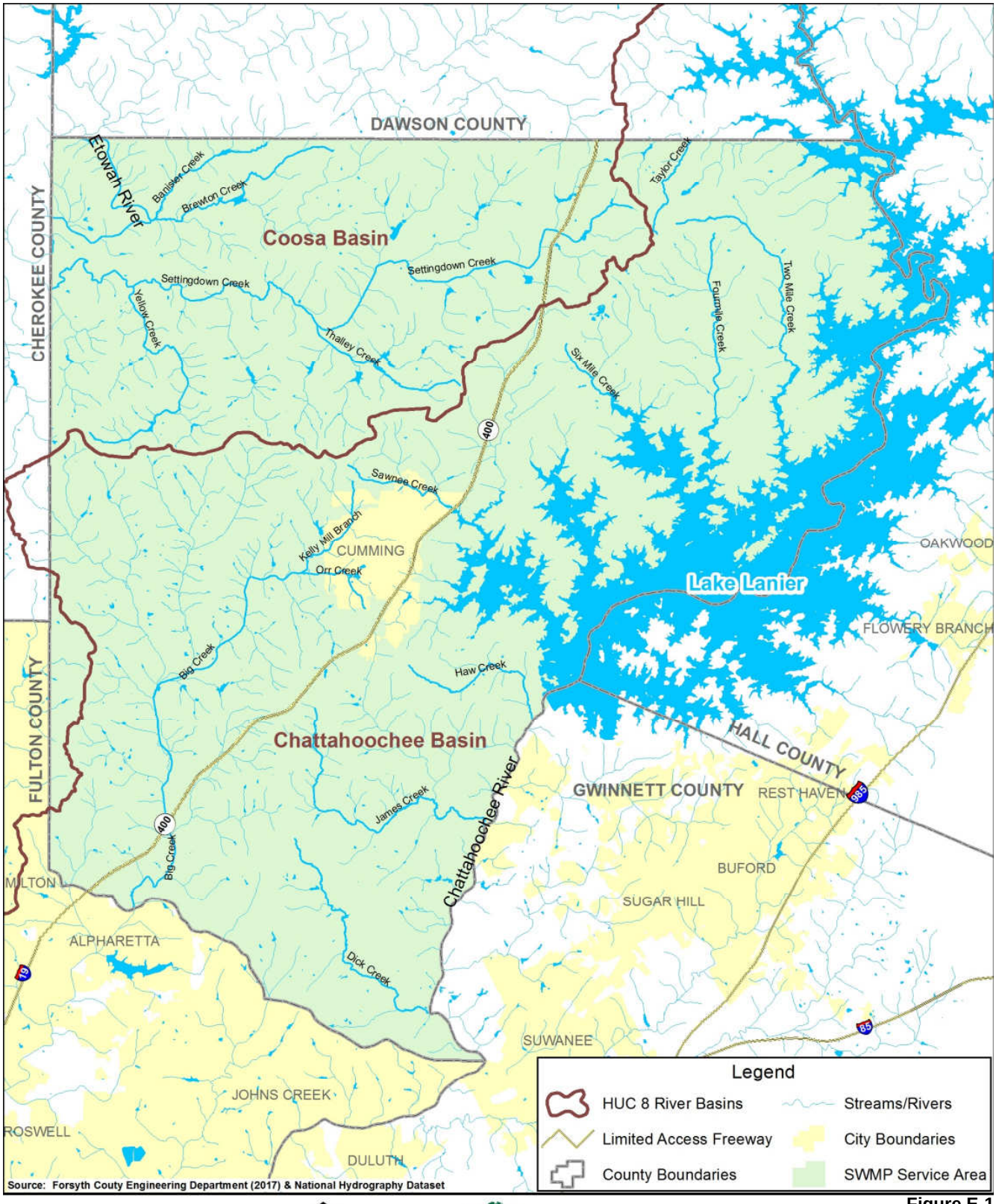

Figure E-1

Forsyth County Stormwater Management Service Area

1. Sharing Responsibility

Forsyth County has long held a collaborative approach to implementation of its regulatory requirements. The SWMP is led currently by the Engineering Department, which works in partnership with multiple other departments, as well as several community partners, as described below.

1.1 Within Forsyth County

- Board of Commissioners
- Engineering Department
    - Stormwater Division
    - Erosion, Sedimentation, and Pollution Control Unit
    - Roads and Bridges Division
    - Traffic and Transportation
- Planning and Community Development Department
- Keep Forsyth County Beautiful (KFCB)
- Emergency Management Agency
- Forsyth County Health Department
- Forsyth Co. UGA Extension Office

1.2 Partnerships

- Natural Resource Conservation Service (NRCS)
- Upper Chattahoochee River Soil and Water Conservation District

2. Structural and Source Control Measures

As part of its Phase I MS4 NPDES permit, Forsyth County is responsible for efforts related to structural and source control measures that reduce stormwater peak flows and pollutants. Specifically, procedures for the following measures are addressed in this section: (1) MS4 control structure inventory (2) MS4 inspection and maintenance program, (3) planning procedures, (4) street maintenance, (5) flood management projects, (6) municipal waste facilities, (7) municipal facilities with the potential to cause pollution, (8) pesticide, fertilizer, and herbicide (PFH application), and (9) municipal employee training.

2.1 MS4 Control Structure Inventory and Map

Forsyth County
Current Structural Inventory:

- 16,765 catch basins
- 1,090 ditches
- 145 detention ponds
- 390 miles of storm drain lines
- 4,124 outfalls

The Forsyth County Stormwater Division of the Engineering Department and the GIS Department work together to frequently update the Comprehensive Inventory Database (CID) of all stormwater structural controls and conveyance features in unincorporated Forsyth County. The compilation of the digital inventory started in May 2004. In accordance with this Permit, the County maintains an inventory of stormwater control and conveyance structures including pipes, catch basins, ditches, and municipally owned detention ponds located in unincorporated Forsyth County. It includes attributes for structures that allow inspection and maintenance teams to locate individual structures, record inspection results, prioritize maintenance needs, issue maintenance work orders, as well as to track records, drawings, and reviews. Forsyth County also maintains a database of junction boxes, inlets and other conveyances. A map detailing the County's MS4 structural inventory is depicted on **Figure 2-1**. Excel databases with the structural inventories, with the exception of ditches, are included in **Attachment 1**. The County is currently working on an inter-Departmental process to create a digital inventory of ditches to satisfy various needs. Up until this point, the County has been reporting ditches based on an estimate refined each year from work orders completed by the Roads and Bridges Department. The County does have a digital database of "open drain lines", which depict flow paths (generally ditches) from the ends of pipes to the nearest receiving water. The County is planning to begin creating an initial digital inventory of ditches by the end of 2018 and targeting completion of a draft list by May 15, 2019. This would be considered a "living" list that would be further refined and updated during field inspections. An updated list would be provided as part the Annual Report.

Private ponds, which are not required to be inventoried or maintained as part of this permit, are inspected in accordance with the requirements set forth in the Metro North Georgia Water Planning District's Water Resources Management Plan (updated June 2017). As of May 2018, there are 1,851 ponds in the inventory that are not owned by Forsyth County. Although the County inspects private ponds, maintenance is the responsibility of the landowner and/or entity responsible for that facility. As defined in Section 34-184 of the Forsyth County Ordinance No. 75, the County's MS4 includes "conveyance or system of conveyances which is located within County owned rights-of-way and designed and used only for collecting or conveying stormwater runoff or other approved surface water discharges."

The County uses survey grade GPS equipment to determine the geographic location and elevation of stormwater control and conveyance structures. In 2015, the County implemented a Data Management System (DMS) to update the inventory efficiently using GIS data and GPS coordinates. The inventory

will continue to be updated to reflect the changes in the system and is intended to provide an interactive platform to evaluate system growth and improvement projects.

As part of each year's Annual Report, the County will submit the following information:

- Updated MS4 structural control inventory.
- Summary of the number of structures added to or removed from each inventory.

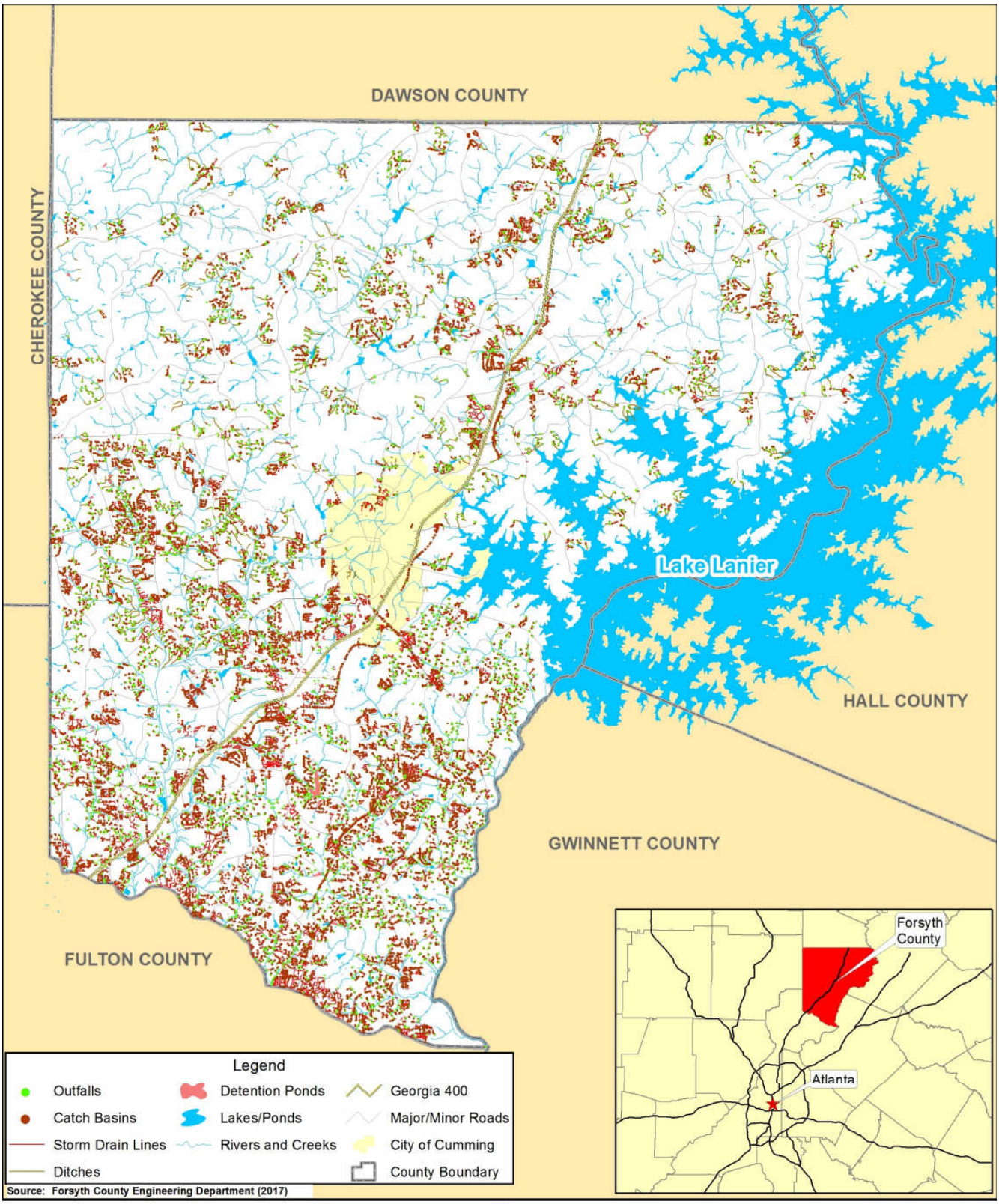

Figure 2-1
MS4 Stormwater Control Structures

2.2 MS4 Inspection and Maintenance Program

For the purposes of the Forsyth County MS4 permitting efforts and for this SWMP, only those stormwater structures that are located on public property are included in the regulatory inventory, with both inspection and maintenance being done. The Forsyth County Engineering Department is responsible for the majority of the inspections, and the Parks and Recreation Department or the Board of Education performs quarterly inspections for detention ponds on their property. The Engineering Department currently has 4 dedicated Stormwater Technicians who are responsible for inspecting stormwater structures and completing field reports. In addition, the County retains a Consultant that assists with dry weather screenings of outfalls.

Privately owned stormwater infrastructure in Forsyth County, including any stormwater management facility which services a single lot, subdivisions, or commercial and industrial development, should be maintained by the private owner and/or entity responsible for maintenance. Maintenance for privately owned infrastructure is carried out by the private landowner. Forsyth County staff, however, does inspect private facilities to ensure that proper maintenance has been completed by the property owner and structures are functioning as designed.

Structures are routinely added to the inventory; and the County has increased the number of annual structure inspections accordingly. As directed by GAEPD, the County inspects 100 percent of stormwater structures over a 5-year period with a percentage of these inspections conducted each year to evaluate maintenance needs. As reported to GAEPD, the County's structure inspections have been at or above the approximately 20 percent annual inspection rate suggested by GAEPD for each structure type (i.e. catch basins, detention ponds, storm drain lines, ditches, etc.). As noted in **Section 2.1**, the County has migrated to a DMS for inspections and has provided examples of the information collected through that system in **Attachment 2**.

When catch basins and outfalls are inspected, the County also inspects other adjacent stormwater infrastructure, such as culverts, conveyance channels, drop inlets, pipe discharges, weir walls, stand pipes, and junction boxes. Forsyth County prioritizes stormwater control structure inspections based on those that discharge to 303(d)-listed waters and complaint investigations. Additionally, the County conducts inspections of storm drain lines on an as-needed basis, or when a problem is encountered during structure inspections. This approach allows staff to respond efficiently to both local and watershed-wide problems, while documenting the condition of other structures in adjacent areas.

Each complaint is tracked as a work order by the Engineering Department. Emergency situations are addressed immediately; others generally are addressed chronologically. During each inspection, conditions are documented on an inspection form (**Attachment 2**), and maintenance work orders are prepared if necessary. Maintenance activities follow the same pattern as the inspections. Once maintenance is conducted, information is documented in the GIS inventory regarding the efforts, final condition, and follow-up needs of the structure.

Maintenance and repair of stormwater structures may include such actions as cleaning or replacing drains, replacing catch basin lids, unclogging pipes, maintaining rights-of-way, and removing litter where needed. Because a portion of stormwater infrastructure in Forsyth County was built in the last 30 years, most infrastructure is still within the predicted engineering lifespan. Therefore, the County is able to address all maintenance issues on public infrastructure, as they arise with priority for areas draining to 303(d) listed stream segments and citizen/staff complaints. Routine maintenance requirements and further details regarding private structure inspections and maintenance are discussed below.

As part of each year's Annual Report, the County will submit the following information:

- List of stormwater structures inspected each year.
- Number and percent of total inspections performed each year.
- Any maintenance actions.

2.2.1 Routine Maintenance Requirements

Chapter 5 and Appendix E of the 2016 Georgia Stormwater Management Manual (GSMM) provides guidance on routine maintenance activities for each of the stormwater management facilities recommended for use in Forsyth County. The following general maintenance standards are recommended as potential components of a local operations and maintenance program:

- Catch basins, culverts, and structural stormwater control facilities should be inspected on a routine basis.
- Damage or deterioration threatening the structural integrity of any component, conveyance, or facility should be repaired as soon as possible.
- Catch basins should be cleaned if accumulated sediment, debris or other deposits are equal to or greater than 25% depth from the basin to the invert of the lowest pipe into or out of the basin. If catch basins are found during annual inspections to exceed this standard significantly, they should be cleaned every 6 months.
- Storm drain (sewer) pipes should be cleaned if accumulated sediment, debris, or other deposits are blocking more than 20 percent of the pipe diameter.
- Drainage ditches should be cleaned if accumulated sediment, debris, or other deposits exceed 25 percent of the design depth.
- Woody debris and other blockages should be removed from culverts and other critical conveyance components.

Table 2-1 summarizes guidelines for basic activities and recommended frequency of these activities for maintaining stormwater ponds, one of the most common elements of the County's stormwater system. Additionally, **Table 2-2** provides an overview of the maintenance expectations associated with oil/grit separators. The Forsyth County Addendum to the GSMM (**Attachment 3**) requires that all proposed service stations, convenience stores, and other developments with commercial fueling facilities shall provide an oil/grit separator for water quality. It should be noted that the Forsyth County Addendum is scheduled to be updated in June 2018. Other maintenance procedures are summarized below for stormwater structures and oil/grit separators.

Table 2-1. Typical Inspection and Maintenance Activities for Stormwater Ponds

Activity	Recommended Frequency of Maintenance Activity
• Clean and remove debris from inlet and outlet structures. • Clear exterior and interior slopes of dam and easements to pond. Trees are not allowed on the dam or in drainage easements. Note that healthy ground cover is necessary to prevent erosion. [a]	Monthly/Routine
• Remove debris from basin surface to minimize outlet clogging and improve aesthetics.	Following significant storm events

Activity	Recommended Frequency of Maintenance Activity
• If wetland components are included, inspect for invasive vegetation.	
For all ponds: • Inspect for damage, paying particular attention to the control structure. • Inspect for invasive vegetation. • Monitor for sediment accumulation in the facility and forebay (flow area into pond). • Examine to ensure that inlet and outlet devices are free of debris and are operational. For wet detention ponds: • Inspect for signs of eutrophic[b] conditions. • Perform wetland plant management and harvesting.	During inspections
• Repair undercut or eroded areas. • Seed or sod to restore dead or damaged ground cover. • Remove litter/debris. • Perform structural repairs to inlets and outlet.	As needed based on inspection
• Remove accumulated sediment from the forebay.	5 to 7 years or after 50% of the total forebay capacity has been lost
• Monitor sediment accumulations and remove sediment when the pool volume has become reduced significantly, or the pond becomes eutrophic.	10 to 20 years or after 25% of the permanent pool volume has been lost

Source: GSMM, Appendix E
Notes:
[a] Periodic mowing of the pond area is only required along access and outfall easements and the embankments, including the outside of the dam. The remaining areas can be managed as a meadow (mowing every other year).
[b] Having waters rich in mineral and organic nutrients that promote a proliferation of plant life, especially algae, which reduces the dissolved oxygen content and often causes the extinction of other organisms. Control with nutrient management.

2.2.1.1 Stormwater Structures

Routine maintenance for stormwater structures includes:

- A sediment marker should be located in the forebay to determine when sediment removal is required.
- Sediment excavated from stormwater ponds that do not receive runoff from designated hotspots is not considered toxic or hazardous material and can be safely disposed by either land application or landfilling. Sediment testing may be required prior to sediment disposal when a hotspot land use is present.
- Periodic mowing of the maintenance easement surrounding the pond and the embankment is required. The remaining areas can be managed as a meadow (mowing every other year) or forest.

- Care should be exercised during pond drawdowns to prevent downstream discharge of sediments or high flows with erosive velocities. The approving jurisdiction should be notified before a stormwater pond is drained.

2.2.1.2 Oil/Grit (Gravity) Separators

Routine maintenance for oil/grit (gravity) separators includes:

- Additional maintenance requirements for a proprietary system should be obtained from the manufacturer.
- Failure to provide adequate inspection and maintenance can result in the re-suspension of accumulated solids. Frequency of inspection and maintenance is dependent on land use, climatological conditions, and the design of gravity separator.
- Proper disposal of oil, solids, and floatables removed from the gravity separator must be ensured.

Table 2-2. Minimum Routine Maintenance Requirements for Oil/Grit (Gravity) Separators

Activity	Recommended Frequency of Maintenance Activity
• Inspect the gravity separator unit.	Regularly (Quarterly)
• Clean out sediment, oil and grease, and floatables, using catch basin cleaning equipment (vacuum pumps). Manual removal of pollutants may be necessary.	As Needed

Source: GSMM, Appendix E.
Note: The Forsyth County Addendum to the GSMM (**Attachment 3**) requires that all proposed service stations, convenience stores, and other developments with commercial fueling facilities provide an oil/grit separator for water quality.

2.2.2 MS4 Inspection and Maintenance Program for Privately-owned Facilities

Privately owned detention ponds and other BMPs are maintained by the individual property owners in Forsyth County. New developments, residential as well as commercial, are required to sign a Stormwater Management/BMP Facilities Covenant (**Attachment 4**) before obtaining their final plat. The Covenant facilitates the identification of a responsible party if any maintenance issue occurs. A copy of the Covenant will accompany any transfer of property and Forsyth County may be notified in writing of the change in responsible party.

Inspection and maintenance reports for new privately-owned ponds should be submitted annually by the responsible party to the Engineering Department and must meet the minimum recommended inspection and maintenance requirements found in Chapter 5 and Appendix E of the GSMM. Failure to meet the requirements of the inspection and maintenance agreement constitutes a violation of Chapter 34 Article V. of the Forsyth County Code of Ordinances and may be punishable under Section 34-195 of said code. Tracking and inspecting privately-owned facilities with covenants is required to be included in ordinances adopted as a requirement of the Metro District's Water Resource Management Plan.

For existing privately-owned ponds, the Engineering Department inspects these facilities along with other structure inspections or in response to requests to ensure that owners are instituting proper maintenance. All pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater are

assessed at the same time. Inspections of privately owned ponds by Forsyth County staff are documented on the MS4 Structure inspection form (**Attachment 2**) and, at a minimum, attempt to identify the following information:

- Adequate access to structures via drainage easements and berms.
- Detention ponds that require sediment removal, grassing, outlet control structure repair, and erosion control.
- Accumulation of dirt or debris at the discharge of outfall structures.
- Stormwater collection and transfer structures that are not properly maintained.

Private owners and/or entities responsible for maintenance will be required to initiate the necessary repair process to deficient stormwater structures within 30 days of receiving the inspection report, unless the County deems the deficiency to be an emergency or waters of the State are being adversely affected. For these situations, the County will issue a time limit for repairs. A re-inspection will be conducted to verify the maintenance activities were performed.

2.3 Planning Procedures

2.3.1 Comprehensive Land Use Planning and Protective Ordinances

The County has recently completed a multi-year effort to update its Comprehensive Development Plan. The 2017-2037 update of the Forsyth County Draft Comprehensive Plan was completed during 2016, a time of rapid growth and change. The outcome of this community-focused planning process is a plan that emphasizes balanced and responsible growth. The update placed emphasis on land use, transportation, housing, and economic development.

As part of implementation of the Comprehensive Plan, the County continues to update the Short-Term Work Program (STWP) annually. The STWP is a five-year action plan created to incrementally attain long term goals. Each item listed in the updated STWP includes information on the responsible party, funding sources, and estimated cost of attaining the Comprehensive Plan's goals.

Information related to the Comprehensive Plan can be found at the following website: http://www.forsythco.com/Departments-Offices/Planning-Community-Development/2016-Comp-Plan-Update. The Comprehensive Plan is attached in **Attachment 5**.

Figure 2-2 and Table 2-3 shows the allocation of land uses in Forsyth County in 2016. Approximately 35 percent of the County remains either undeveloped, in agricultural use, or set aside as park lands. Forty percent of the County is in residential use, while almost 8 percent is used for commercial or industrial purposes. The County also conducted a Future Land Use Needs Analysis which looked at population, housing, and employment forecasts to determine the amount of land necessary to accommodate both residential and non-residential future land use needs. Forecasting the land use needs for non-residential growth is an important factor in the relationship between land use and economic development planning.

Table 2-3. Forsyth County Comprehensive Existing Land Use Plan (2016)

Land Use	Acres
Agriculture	**28,720**
Residential	58,368
Commercial	2,929
Office	214
Industrial	5,360
Institutional / Public	3,022
Private Open Space	4,116
Public Parks / Recreation	2,566
Conservation	5,722
Right of Way	11,058
Trans / Comms / Utilities	145
Undeveloped	19,204
City of Cumming	3,491
TOTAL	144,914

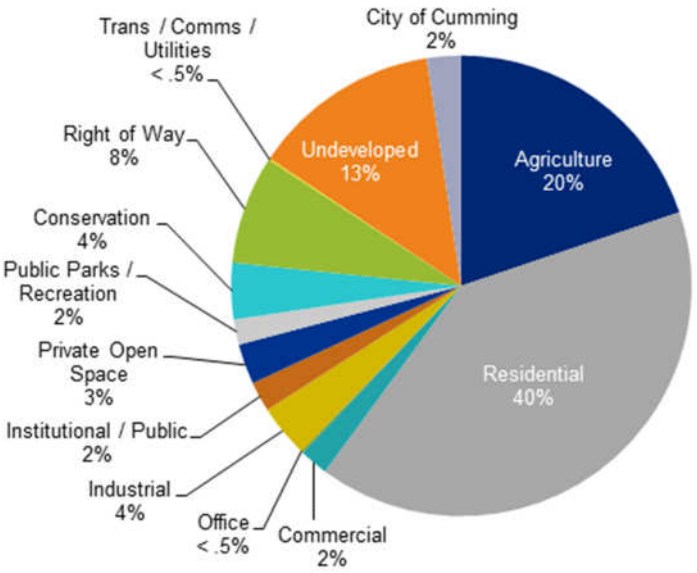

Figure 2-2. Forsyth County 2016 Existing Land Use

2.4 Street Maintenance

Stormwater pollutants from roadways such as litter and sediment can be washed into the MS4 and receiving waters, which can negatively affect water quality and the functioning of the MS4. Drainage-related maintenance activities are the shared responsibility of the Stormwater and Roads and Bridges Divisions of the Engineering Department. As complaints about roadway debris are received they are addressed and tracked by the Roads and Bridges Division.

2.4.1 Forsyth County Street Sweeping Program

Forsyth County does not have a formal street sweeping program in place; however, the Roads and Bridges Division addresses and tracks street maintenance and roadway debris removal activities on an as-needed basis. The County currently has a street sweeper budgeted for 2019. That budget is still being reviewed and approved by the Board.

2.4.2 Catch Basin/Inlet Cleaning

Forsyth County is responsible for the maintenance and operation of stormwater facilities in the public ROWs. This includes catch basin and inlet cleaning, as well as other maintenance and repair of the stormwater conveyance system. Visual inspection of these facilities is an ongoing responsibility of both Stormwater and Roads and Bridges Division staff as they perform their daily tasks. If cleaning or maintenance needs are noted or reported by staff or a citizen, the Roads and Bridges staff receives notice to perform the necessary maintenance. In addition, during other street maintenance activities, the area of disturbance is minimized, work is conducted during dry weather, and debris is removed following major activities.

2.4.3 Litter Removal Activities

Forsyth County prohibits littering through the enforcement of two existing ordinances: Ordinance No. 15, Chapter 6 “Material to be Kept Out of Drainage System” and Ordinance No. 84, Article III “Litter Control.” These two ordinances are included in **Attachment 6**. Forsyth County responds to work order requests for trash and litter removal along street ROWs using State prisoners, and County staff are tasked with removing larger items continually throughout the year.

Forsyth County has multiple litter and road cleanup programs facilitated by Keep Forsyth County Beautiful (KFCB) including the ongoing Adopt-A-Road program and the annual Great America Cleanup Event. The Adopt-A-Road Program is a way for County civic and non-profit organizations, businesses, subdivisions, and families to become involved with litter prevention along County roadways. For anyone who chooses to join this County program, an Adopt-A-Road sign representing the participant’s name is placed near the road cleanup. Groups can choose to adopt a County road that may be located near their home, organization, or business. All groups must sign a litter cleanup contract before they begin the program. The litter pick-up efforts are conducted quarterly and status reports on the cleanups must be submitted to KFCB. KFCB follows the rules and regulations of the state Adopt-A-Highway Program and keeps track of the participating groups in a database. To encourage participation in the program, KFCB holds an annual volunteer appreciation picnic and the Board of Commissioners created the “Adopt-A-Road Resolution” to recognize those volunteers who have adopted roads and worked hard to keep them clean**.**

2.4.4 Tracking

Through the shared responsibility of the Stormwater and the Roads and Bridges Divisions of the Engineering Department, the County tracks activities regarding maintenance of catch basins, inlets, or

other stormwater structures. KFCB will continue tracking information and keep an updated database of litter cleanup activities and the amount of litter removed each year and provides this information to the County.

As part of each year's Annual Report, the County will submit the following information:

- Litter cleanup Activities conducted by KFCB.
- Amount of litter removed each year.
- Maintenance activities conducted on stormwater structures.
- Work orders for litter removal by County employees or State prisoners.

2.5 Flood Management Projects

The Flood Damage Prevention Ordinance No. 55 (**Attachment 7**) minimizes public and private losses due to flood conditions in specific areas by restricting or prohibiting uses that are potentially hazardous to health, safety, and property. Such losses could result from water or erosion hazards caused by increases in erosion rates, flood heights, or flood velocities. The revised ordinance specifically prohibits new development in the floodplain and requires that uses vulnerable to floods be protected against flood damage at the time of initial construction. For special flood hazard areas and flood-prone areas, the regulatory flood elevations will be determined by a registered engineer in the State of Georgia using a method approved by the Director of the Engineering Department, or designee. The same criteria apply to determination of the future conditions floodplain, which is based on the future land use.

Over the last decade, Forsyth County has taken a step-wise approach to meeting its floodplain mapping requirements, originally contained as part of the District's plans. Those efforts are now largely complete, as both the existing and future floodplains have been mapped across the County. In 2015, Forsyth County entered into an agreement with GAEPD to incorporate the updated mapping data into the basin-wide revision of the Etowah River floodplain. During the most recent reporting year, the preliminary FIRM panels for the Etowah River were issued on February 14, 2017. The completion of this task will allow Forsyth County to update the Flood Insurance Rate Map (FIRM) without the additional time required to complete a Letter of Map Revision (LOMR) to FEMA. It is generally expected that some Forsyth County residents will obtain relief from flood insurance premiums once the SFHA boundaries are revised when the FEMA FIRM becomes effective in 2018.

Forsyth County's commitment to accurate floodplain mapping has provided a basis for stronger development reviews/inspections and more detailed hydrologic studies in support of flood management projects.

2.5.1 Inspection of Flood Management Projects

In conjunction with preserving the vital functions of the floodplain, Forsyth County is responsible for ensuring that future development does not cause water quality impacts as part of design plan reviews (**Section 5.2**). Through the use of the GSMM and the County's Addendum, Forsyth County also ensures that the design of flood management projects include water quality treatment volumes necessary to remove the required percentage of stormwater pollutants. As a result, water quality protection is a key factor to expand the benefit of any given flood management project.

The Department of Engineering reviews new flood management projects during the plan review process, and it works with local developers to verify that the County's requirements for compliance with the GSMM and the Forsyth County Addendum, including the Stormwater Quality Site Development Review Tool. The tool can be reviewed at:

https://atlantaregional.org/natural-resources/water/georgia-stormwater-management-manual/.

Additionally, Forsyth County's development guide documents (**Attachment 10**), provide a detailed description of the site plan review process and applicable checklists in the County. This information is available on the County website. **Section 5.2.1** provides further details about BMP requirements and review procedures that are completed by the Engineering Department during site plan reviews. It should be noted that the County provides two methods for submitting site plan reviews, electronically or more traditionally. The County has adopted ePlan as the system for electronical submittals.

As part of each year's Annual Report, the County will submit the following information:

- Updated inventory of flood management projects, included as part of larger Forsyth County inventory.
- A list of plans submitted to County that include water quality structures.
- Information on projects and structures inspected, including number inspected, overall percentage, dates, conditions, and other information.
- Results of inspections, including current status, maintenance needed or recommended, and any corrective or compliance actions take.

2.5.2 Assessing Potential Retrofits for County Owned Facilities

While Forsyth County's current level of service allows for inspection of projects across the County, maintenance and/or development of potential retrofits is allowed only on the County ROW and County-owned property. Historically, the County has assessed the potential for retrofit of flood reduction projects, through its Watershed Improvement Planning (WIP) efforts. The WIPs included preliminary project costs, feasibility, and projected environmental benefits, including criteria of water quality, flood/channel protection, habitat/biological integrity, implementation constraints, and accessibility. The WIPs contained prioritized locations and opportunities to improve watershed conditions in impaired watersheds; and, the County's overwhelming focus has been finding areas of County-owned property to implement them. Potential projects were categorized as either:

- Stormwater BMP retrofits: projects aimed at improving structures to retain and treat stormwater; or,
- Stream channel restoration: projects that stabilize stream banks, restore aquatic habitat, and re-establish riparian corridors to improve water quality, promote ecological integrity, and reduce erosion and sedimentation.

In addition to the WIPs, the County evaluates existing, municipally owned structural flood control devices during each reporting period to determine if retrofitting the devices for additional pollutant removal is feasible. This process begins with the inspections at each of the County's **145** detention ponds (as of May 2018) annually, which is above and beyond the Permit requirement. These inspections identify maintenance needs to ensure the pond is functioning properly as well as assess erosion issues immediately downstream.

The current MS4 Permit requires the County to assess existing County owned facilities for the potential for retrofit. In addition to the routine maintenance that is conducted at these facilities, the County will begin more formal analysis to determine potential retrofits. The process to prioritize potential retrofits at the County-owned ponds includes the following elements:

- Prioritize potential projects in watersheds with 303(d)-listed streams; ponds from one of these watersheds will be selected each year for evaluation. Approximately 70% of the County's detention ponds are located in a watershed with a 303(d)-listed stream.
- Focus on ponds constructed prior to 2001, which was before the current water quality requirements (~20% of the County-owned ponfds).
- Ponds within the selected watershed will be further screened based on landuse and potential pollution sources (ponds with most impervious surface and potential pollution sources given higher priority).
- Other factors such as constructability (access, slopes, impacts to surroundings), visibility (education potential), online vs. offline ponds (i.e. live stream), qualitative observations from the stormwater techicians/inspectors, and cost/benefit will be considered.
- At least one pond from the selected watershed will be modeled each year using HydroCAD or similar technology.
- Based on model results and other screening criteria, retrofits will be considered to meet water quality and/or water quantity goals. Retrofits could include, but would not be limited to: disconnecting impervious surfaces for pre-treatment, increasing the area and/or depth of the pond, modifying the outlet control structure, replacing the outlet control structure, creating treatment cells within the pond.
- Retrofits would be implemented as funding becomes available.

As part of each year's Annual Report, the County will submit details of areas and specific ponds evaluated during each reporting period.

2.6 Municipal Facilities with Potential to Cause Pollution

Forsyth County is responsible for inspecting municipal facilities that may have potential to cause pollution, but that are not subject to the Industrial Permit. The County maintains an inventory of these facilities as listed in **Attachment 1.** They include:

- 6 fleet maintenance and fueling facilities
- 16 fire stations

Some of the fire stations currently contain at least one fueling tank or other materials with potential to cause pollution on-site which resulted in the inclusion of these facilities. The facility inventory may be further updated as future facilities become operational or are decommissioned.

As has been discussed earlier in this document, Forsyth County's current level of service has them responsible for inspecting stormwater structures that are located on both public and private property, while the County completes maintenance on public structures only. Municipal facilities are inspected such that 100 percent of facilities are inspected within 5 years to comply with the permit requirements, with a minimum of 5 percent of facilities inspected annually. However, the County inspects 100% of the municipally owned facilities every year. The facility inventory is updated as necessary on an annual basis. These reports are submitted as part of the Annual Report. Each inspection is tracked by the Engineering Department. Emergency situations are addressed immediately; others generally are addressed chronologically.

During each inspection, conditions are documented on an inspection form (**Attachment 2**). The inspector will document processes and chemicals used at the facility and will document waste materials stored at the facility and how they are currently being stored. These materials are also inspected to

determine if they are exposed to stormwater. Stormwater structure inspections are documented along with any maintenance which may be necessary to keep the structures operational. Any corrective action or violations will be documented by the inspector and recorded in the County inventory. Maintenance activities follow the same pattern as the inspections. Once maintenance is conducted, information is documented in the GIS inventory regarding the efforts, final condition, and follow-up needs of the structure.

As part of each year's Annual Report, the County will submit the following information:

- Updated inventory of Municipal Facilities not subject to IGP.
- Information on facilities inspected during the reporting period, including number inspected. percentage of overall, dates, and other information.
- Copies of completed inspection reports and any corrective actions or violations.

2.7 Pesticide, Fertilizer, and Herbicide (PFH) Application

Forsyth County minimizes the use of pesticides, herbicides, and fertilizers as much as possible. In support of this approach, the County uses native and low-maintenance vegetation as much as possible. Forsyth County's website maintains a direct link to the Clean Water Campaign Web site, which contains information of the proper application, storage, and disposal. These chemicals are not stored onsite and are purchased only in quantities that will be used immediately, or a qualified third-party contractor is hired to conduct necessary applications. Should it be necessary to store chemicals, an updated inventory of chemicals will be maintained by municipal staff and included in MS4 annual reports.

If a commercial applicator is contracted, they are required to have a valid applicator license issued by the Department of Agriculture. A commercial applicator license is required for anyone that is working on another's property. To obtain a license, an examination must be passed based on proper application manuals. Commercial applicators must earn a required number of recertification credits every 5 years or be reexamined. The Department of Agriculture sends a list of educational meetings to earn recertification points each year.

Forsyth County maintains at least one certified staff member at all times. Certified staff members conduct applications on an as-needed basis; however, the County prefers to avoid widespread use of chemicals. However, as additional training is needed, due to staff turnover or attrition, it will be provided on a case by case basis. This could include any of the following:

- Conducting applicator training or certification training
- Conducting employee safety training in use, storage and disposal of chemicals
- Implementing program for municipal use of native or low-maintenance vegetation.

As part of each year's Annual Report, the County will submit the following information:

- Documentation of training provided to employees (if needed), including date(s), curricula and attendees.
- Discussion of municipal use of native and/or low-maintenance vegetation.

3. Illicit Discharge Detection and Elimination Program

For the purposes of stormwater management, federal regulations define an illicit discharge as "any discharge to an MS4 that is not composed entirely of stormwater" (40 CFR 122.26(b) (2)), with exceptions for certain NPDES-permitted industrial sources and discharges from firefighting. Since MS4s are not designed to treat non-stormwater wastes, illicit discharges result in the release of pollutants directly into streams. Illicit discharges can enter a stormwater system through accidental spills, surface disposal of wastes, dumping of wastes into stormwater catch basins, or conscious (but illegal) connection of waste lines to the stormwater system. With the exception of unpreventable accidental spills, most illicit discharges can and should be addressed through the Illicit Discharge Detection and Elimination (IDDE) Program.

3.1 Legal Authority

In 2004, Forsyth County adopted the District's model ordinance requirements into the Illicit Discharge and Illegal Connection section of Ordinance No. 75 (**Attachment 8**). The Ordinance language was designed to meet the following goals:

- Regulate the contribution of pollutants to the MS4 by any person.
- Prohibit illicit discharges and illegal connections to the MS4.
- Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the MS4.
- Establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this article.

The County's enforcement actions for violations are discussed in the Illicit Discharges section below and in the Enforcement Response Plan (**Appendix B**).

As part of each year's Annual Report, the County will submit the following information:

- Copy of revised model ordinance (if changes are made during reporting period)

3.2 Outfall Inventory and Map

As discussed in **Section 2.1**, Forsyth County maintains an inventory of all stormwater structural controls and conveyance features in unincorporated Forsyth County (**Figure 3-1**). The compilation of the digital inventory started in May 2004 and has been essentially complete since 2008. The inventory continues to be updated to reflect the changes in the system and is intended to provide an interactive platform to evaluate system growth and improvement projects. The County continues to field verify outfalls during the outfall screenings, which will periodically alter the number of structures. As noted in **Section 2.1**, the County has migrated to a DMS for inspections and has provided examples of the information collected through that system in **Attachment 2**.

The County's inventory currently includes **4,124** outfalls (**Attachment 1**). The inventory was updated to reflect the most current definition of an MS4 outfall provided to the County by GAEPD. The updated definition provided by GAEPD on March 17, 2017 stated that, Outfall means "the most downstream point (i.e., final discharge point) on an MS4 where it discharges to the receiving waters." The County's current inventory of outfalls just includes pipes; however, it recognizes that outfalls can also occur from

ditches or drainage swales, particularly in areas with no curb-and-gutter roads. The State DOT inspects ditch outfalls along its right-of-way and coordinates those inspections with the County for follow-up as needed. As listed in Section 2.1, the County is working to develop a more comprehensive digital inventory of ditches by May 15, 2019. Once complete, those features will be analyzed in GIS and refined during field inspections to determine potential ditch outfalls that would be added to the inventory for IDDE inspection.

As part of each year's Annual Report, the County will submit the following information:

- Updated inventory and map of outfalls and structures.
- Revised total number of outfalls, including the number of outfalls added during that reporting period.

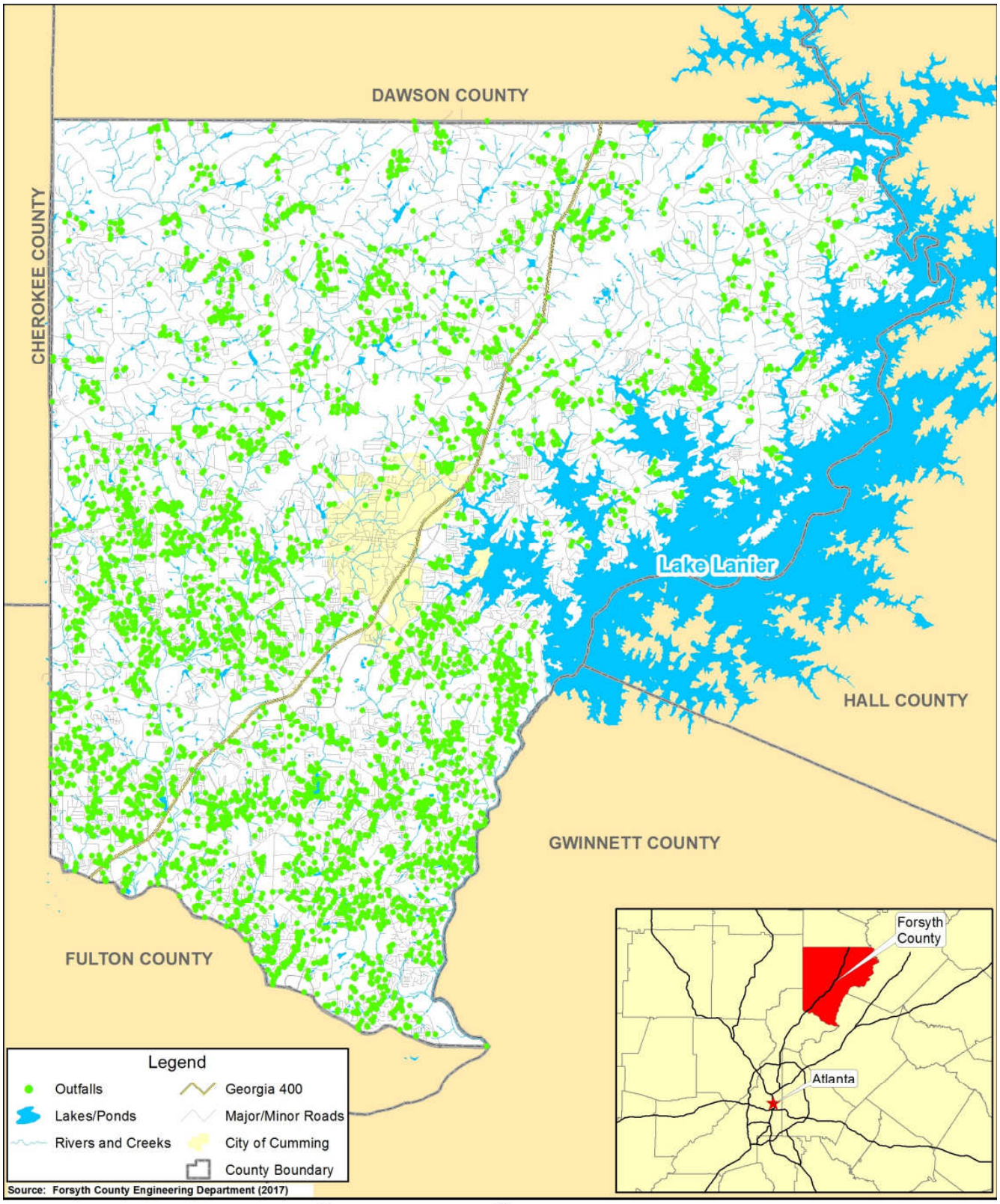

Figure 3-1
MS4 Outfall Inventory

3.3 Illicit Discharge Detection and Elimination Plan

As part of its IDDE Program, Forsyth County developed an Illicit Discharge Detection and Elimination Plan (IDDP). The procedures and method set forth in this plan are detailed in **Appendix A**.

3.4 Spill Response Procedures

The Forsyth County Emergency Management Agency (EMA) Department originally developed an incident tracking procedure in 2007. The first priority in spill response is public safety, followed by environmental protection. Staff from the Water and Sewer Department and the Roads and Bridges Division of the Engineering Department participate in containing and mitigating any spills of pollutants. The EMA Director is responsible for coordinating the activities of the various departments and divisions to ensure a timely and effective response to spills and other incidents. When spills meet the threshold quantities, they are immediately reported by the Forsyth County Fire Department to GAEPD. The County also submits a response to mitigate the effects of those spills to GAEPD. Specifically, for sewer spills, the Water and Sewer Department has been implementing procedures through their maintenance staff to respond to spills. The County also has two contractors who are hired to pump out wet wells and sewer lines in case of an overflow event. The County also has an additional contractor who has been hired to perform water sampling and report to GAEPD following an overflow event. The County also uses their pump/vacuum truck to prevent discharge to the MS4 when necessary. Forsyth County tracks spills via their incident tracking procedures.

As part of each year's Annual Report, the County will submit the following information:

- Date, time and location of any spills.
- Agencies responding, and actions taken.
- Any mitigation, or compliance actions taken.

3.5 Public Reporting Procedures

Illicit discharges and other environmental threats to surface waters can be reported to the Stormwater Supervisor in the Engineering Department by e-mail (provided on the County Website) or by phone at 770-781-2165. The public report is logged, and the procedures outlined in the Incident Tracking Procedure are followed. In non-emergency situations, staff investigates the report immediately using the procedures described in the previous section and can cite violations under County Code, Chapter 34. Fines or legal actions are pursued for failure to eliminate the illicit discharge.

Forsyth County increases public awareness of these illicit discharge reporting resources by also performing the following activities:

- Highlight phone number and e-mail contact information on www.forsythco.com.
- Work with KFCB to obtain and distribute "Preventing Water Pollution from Hazardous Wastes" brochures from the Clean Water Campaign at least annually.
- Work with the Water and Sewer Department to include information as water bill inserts on a regular basis, at least annually.

As part of each year's Annual Report, the County will submit the following information:

- Date, time and details about complaints received during the reporting period

- Agencies responding how complaints were resolved
- Documentation of which activities, at least one annually, the County performed during the reporting period. For brochure distribution, copies of brochures and inserts distributed, as well as the number of copies distributed will be provided.

3.6 Proper Management and Disposal of Used Oil and Toxic Materials

The pollution prevention practices related to discharge prevention in residential neighborhoods include storm drain stenciling, septic system maintenance, vehicle fluid changing, car washing, household hazardous waste disposal, and swimming pool draining. The Forsyth County Stormwater Division staff is working to increase public awareness of proper toxic material disposal by coordinating with KFCB to obtain and distribute "Preventing Water Pollution from Hazardous Wastes" brochures from the Clean Water Campaign, as well as working with the Water and Sewer Department to include brochures as water bill inserts.

The Stormwater Division currently inspects highly visible pollution sources and other industrial facilities to check for proper handling of waste oil and other toxics and to educate owners and operators on the proper disposal requirements. Flyer distribution and other public education activities are conducted, and field checks of potential pollution sources are completed by Stormwater Division staff. The County provides for used motor oil collection at three County-maintained recycling centers, which are open 6 days a week. Nonresidential waste must be disposed using commercial vendors.

As part of each year's Annual Report, the County will submit the following information:

- Copies of brochures, flyers and inserts related to used oil and toxic materials.
- Number of copies distributed.
- Inspection documentation provided under other sections of this document will note when Staff conducting HVPS inspections observe issues with problems with disposal of used oil have provided information to facilities.

3.7 Sanitary Sewer Infiltration Controls

Forsyth County has developed a Capacity Management, Operations, and Maintenance (CMOM) Program, consistent with U.S. Environmental Protection Agency guidelines, intended to reduce the number of sanitary sewer overflows, and also inflow and infiltration. The County follows a schedule (last updated in 2009) to maintain all infrastructure, including air release valves, wet wells, and pump stations. The Water and Sewer Department conducted an inflow and infiltration (I&I) study from 2000 to 2003. Based on the study results, the Water and Sewer Department has been implementing the recommended repairs in the identified subbasins. One outside contractor has been hired to do pressure grouting on problem areas, and an internal maintenance crew has been focusing on key problem areas identified in the study. An important part of this maintenance program involves the inspection of manholes and pipe sections. The Water and Sewer Department has staff performing I&I inspections on a continual basis. This inspection includes a physical examination of the manholes by County staff. If problems are noted during the inspection, maintenance crews are scheduled to clean and repair the manholes and/or sewer lines.

As part of each year's Annual Report, the County will submit the following information:

- An update of progress towards implementing the I&I study results.
- Inspection information (such as number of manholes, length of pipes inspected, etc.).

4. Industrial Facility Storm Water Discharge Control

Forsyth County updates and maintains an industrial facility inventory, conducts industrial inspections, and, in some cases, monitors runoff from industrial facilities. The program complies with Phase I MS4 permit requirements, as well as District guidance enforced by GAEPD through stormwater, wastewater, and water supply permits. The program is intended to prevent impacts to stormwater from industrial activity and to prevent any illicit discharges to municipal stormwater infrastructure. The components of the program are detailed below.

4.1 Industrial Facility Inventory

As part of its Industrial Facility Stormwater Runoff Control Program, Forsyth County maintains a database of industrial facilities in its service area and municipal facilities that are subject to the Industrial General Permit. This permit was issued in June of 2017 and required that current permittees to submit for NOI for coverage within 30 days.

The inventory includes each facility location and Standard Industrial Classification (SIC) code that best represents the principal manufacturing process or activity. The Engineering Department continually updates the SIC codes and adds facilities to the inventory in April of each year. As of 2018, the industrial facility inventory database contains **90** facilities. The inventory of municipal facilities that are subject to the Industrial General Permit contains **4** facilities. These inventories for facilities within Forsyth County's service area are listed in **Attachment 1**.

As part of the industrial inventory, SIC codes are also reviewed to identify HVPSs, which are commercial hotspots for potential stormwater pollution. The HVPS program is discussed in **Section 6**. SIC codes are used to identify new or existing industrial facilities without industrial stormwater permits. These facilities are included in the inventory for subsequent inspection (described in **Section 5.2**) to determine if industrial permit coverage is necessary based on whether the facility could contribute substantial pollutant loading to the storm sewer system.

As part of each year's Annual Report, the County will submit the following information:

- Updated industrial facility inventory and total number of industrial facilities.

4.2 Inspection Program

The Forsyth County Engineering Department conducts inspections at industrial facilities to ensure compliance with industrial stormwater permits using the industrial facility inspection form (**Attachment 2**). Forsyth County has steadily increased the number of inspected industrial facilities each year and, as per the new permit requirements, will inspect 100% of facilities within 5 years. To reach this requirement, the County will inspect approximately 20 percent of the inventory each year. The County prioritizes and conducts stormwater inspections based on severity, previous problems, service requests for industrial facilities that the County has determined are contributing pollutant loading to the MS4 and HVPS.

As part of each industrial facility inspection, County staff inspects the stormwater collection system for potential pollutant sources and illicit discharges. The industrial facility inspection includes identification of the following potential pollutant sources/indications:

- Industrial machinery in uncovered areas

- Improper Stormwater Pollution Prevention Plan (SWP3) implementation or documentation
- Industrial activity residuals exposed to rainfall
- Spill or leak residuals on the ground
- Materials contained in deteriorated or leaking storage drums
- Detention ponds on property
- Uncontained wash areas
- Recent spills
- Distressed vegetation
- Stained asphalt or concrete
- Material handling/process equipment exposed to rainfall, stored on roads, or stored outdoors

The industrial facility inspection includes screenings for dry weather flows at all outfalls. As noted in **Section 2.1**, the County has migrated to the use of the DMS for inspections. Details regarding any observations are noted on the industrial facility inspection form (**Attachment 2**), and the discharge is tested for pH, specific conductance, surfactants, and fluoride. Pollutant sources are documented on the inspection form, and the facility manager is notified of corrective actions. Samples may be collected for subsequent laboratory testing for fecal coliform within 6 hours of sample collection according to standard EPA methods. Fecal coliform will be collected only where there is evidence of sewage spills or water quality concerns, as described below:

- Visible sewage or sewage odor.
- Physical indicator of a potential illicit discharge (color, odor, turbidity, or floatables).
- pH lower than 6.5 or higher than 7.5 standard units.
- Specific conductance greater than 300 µmhos/cm.
- Presence of surfactants (>0.2 mg/L).

As part of each year's Annual Report, the County will submit the following information:

- The overall number of inspections, and the percentage of total facilities inspected.
- Copies of industrial facility inspection forms.

4.2.1 Industrial Facility Stormwater Runoff Monitoring

Industrial facilities are required to conduct stormwater runoff monitoring as part of industrial stormwater permit requirements. Data are submitted by the facility and submitted directly to GAEPD. If County staff suspects that an industrial facility may be contributing to downstream water quality problems caused by pollutants in stormwater runoff, facility inspections may include a request for monitoring data.

The County acknowledges that this information can also be requested from GAEPD. Should monitoring data be insufficient to document stormwater pollution, the County may elect to conduct stormwater discharge monitoring at outfalls from the industrial site entering the MS4. Parameters to be measured during monitoring will vary depending on the nature of the industrial facility and the specific noted water quality issue.

The current 2017 IGP details several monitoring options if a facility exceeds the "impaired waters benchmark". If such an exceedance were to occur, Forsyth County would require the facility to ensure

that the County had access to not only the monitoring plans, but also the resulting data, and any facility improvements required.

4.3 Enforcement Procedures

Industrial discharge violations are enforced under the Forsyth County Stormwater Management Ordinance 75 Chapter 34 Article V (Ordinance 75). When an industrial facility does not comply with the industrial permit requirements, the property owner receives a copy of the inspection form along with recommended corrective actions. If a violation is not corrected within 30 days or a greater period, which was deemed appropriate at the time the Notice of Violation was issued, the appropriate jurisdiction may impose a fine up to $1,000 (depending on the severity of the violation) for each day the violation remains unsolved after receipt of the Notice of Violation. For flagrant violations, the Stormwater Department can request a citation through Code Enforcement and fines up to $1,000 or imprisonment for 60 days or both. If deemed necessary, the County can pursue legal action in Forsyth County Superior Court in cases of continued noncompliance. Forsyth County staff will schedule a follow-up visit to ensure that corrective actions are taken. A log of inspections, corrective actions and non-compliances is maintained and is included in the annual reports to GAEPD. Additional details of enforcement procedures are found in the Enforcement Response Plan (**Appendix B**).

4.4 Educational Activities

As part of its public education effort, the County provides educational brochures at industrial facilities, most often when a Notice of Violation is issued. As part of the educational outreach, the County meets with the responsible parties to review their compliance problems and develop possible solutions. Violators are informed of proper procedures to use to prevent future discharges and violation notices are sent with defined corrective action needed. Details of the educational activities will be included in the Annual Report, such as which brochures are shared at a facility, and documentation from meetings or conversations to inform violators how to achieve compliance.

5. Construction Site Management

5.1 Legal Authority

Forsyth County is responsible for reviewing and inspecting land disturbing activities within the County to ensure environmental protection. The County acts as the local permit issuing authority for the State Erosion and Sedimentation Control Act pursuant to Chapter 7, Control of Erosion and Sedimentation (Official Code of Georgia Annotated [OCGA] 12-7-8 (a)). As such, the following construction site management activities are updated based on State regulations and implemented as part of the County's stormwater program:

- Administer a local ordinance consistent with the provisions in Title 12, Chapter 7 of the OCGA.
- Provide adequate program administration, record-keeping, and enforcement documentation.
- Provide a complaint investigation process.

Forsyth County has implemented a consistent program that has been coordinated with GAEPD on a routine basis. This section describes Forsyth County's construction site management program, which includes the ordinance listed above, and its efforts to meet the intent of the Erosion and Sedimentation Control Act.

As part of each year's Annual Report, the County will submit the following information:

- Copy of revised model ordinance (if changes are made during reporting period)

5.1.1 Erosion and Sedimentation Control Ordinance

Forsyth County's soil erosion and sedimentation control policies are included in Ordinance No. 73 (also known as Chapter 34, Article II of the County Code of Ordinances). The latest version of Ordinance No. 73, adopted in 2016, is entitled the Forsyth County Soil Erosion and Sedimentation Control Ordinance (**Attachment 9**).

5.2 Site Plan Review Procedures

The Department of Engineering and Planning and Community Development review new and re-developments and works with local developers to verify that the County's requirements for site design and stormwater management are met as new development occurs. **Attachment 10**, Forsyth County development guide documents, provides a detailed description of the site plan review process and applicable checklists in the County. This information is available on the County website http://www.forsythco.com/Departments-Offices/Planning-Community-Development/Departmental-Checklists). **Section 5.2.1** below provides further details about BMP requirements and review procedures that are completed by the Engineering Department during site plan reviews. It should be noted that the County provides two methods for submitting site plan reviews, electronically or more traditionally. The County has adopted ePlan as the system for electronical submittals.

All plans and supporting documents are submitted to the Planning and Community Development Department to obtain a Land Disturbance Permit (LDP), except for initial submittals of final plats, which are submitted to the Engineering Department. These departments are listed below.

- ***Engineering Department*** - The mission of the Engineering Department is to provide safe, efficient design, construction, maintenance, and operation of the County's surface transportation

for the public. The department also maintains all existing County roads, bridges, and surface vegetation within the ROWs, reconstructs existing roads and builds other road projects, conducts stormwater management, coordinates contracted work, and installs and maintains traffic control, striping, signs, and signals.

- ***Planning and Community Development Department*** - The function of the Planning and Community Development Department is to promote and enhance the quality of life of the residents, property owners, and businesses of Forsyth County. The department accomplishes its mission through programs and services that encourage quality development. The department consists of five divisions: Current Planning, Long Range Planning, Inspections, Business Licenses, and Business Permits.

Forsyth will provide a list of site plans received during the reporting period, with information on how many were reviewed, and how many were approved or denied with the annual report. The number of land disturbance permits (LDPs) issued will also be provided.

5.2.1 Development Review Process

Step 1 – Plan Submittal

All plans and supporting documents for new developments and redevelopments are submitted to the Planning and Community Development Department except for initial submittals of final plats, which are submitted for review to the Engineering Department. It should be noted that the County provides two methods for submitting site plan reviews, electronically or more traditionally. The County has adopted ePlan as the system for electronical submittals. Regardless of format, all final plat submittals include the following elements:

- Dedication Stamp on Plats
- Right-of-Way Warranty Deed for all road ROWs
- Attorney's Title Certificate for all roads
- Performance Bond for the topping of the streets, in the amount specified by the Engineering Department, to ensure the roadways aren't degraded during construction
- Performance Bond for the stormwater pond in the amount specified by the Engineering Department
- Maintenance Bond on all roads in the amount specified by the Engineering Department with an expiration date of no less than 18 months from the date of the final plat is recorded
- Real estate transfer tax declaration
- Indemnification and maintenance agreement
- Stormwater Management/BMP Facilities Covenant

Step 2 – Plan Review Meeting

Following Step 1, a plan review meeting is held by the Planning and Community Development Department with a representative of each reviewing department present to distribute comments back to the developer and/or their agents for corrections, if necessary. The additional documentation submitted with the final plat applications is presented to the County's Legal Staff for review and certification. Any problems with these items will be handled between the County's Legal Staff and the developer's attorney. Once certified, the Legal Staff will return the documents to the Engineering Department.

Step 3 – Walk Through

After the departmental comments have been addressed, and the corrections to the plans are made, the developer and/or their agent returns to each reviewing department to provide evidence that the required changes have been made. If the changes are satisfactory to the reviewing department, then said department may sign-off on the Application for Plan Approval and affix their departmental stamp to the plans.

Step 4 – Plan Approval

The developer and/or their agent will deliver to the Planning and Development Department the plans approved by the other reviewing departments, with the appropriate stamps affixed, and the completed Application for Plan Approval with the signature of the respective departmental plan review personnel. The Planning and Community Development Department will verify that the reviewing departments have signed the Application for Plan Approval and stamped the plans.

After the Planning and Community Development Department has verified that all plans and supporting documents are true and correct, the Director, or his designee, will sign-off on the plans and supporting documents. In the case of subdivision construction plans and final plats, the Forsyth County Planning Commission, or their representative, must participate in the final approval. Final Plats will be ready for recording after all final approvals of the plats have been granted, and the legal documentation required has been approved by the County's Legal Staff.

After a final plat is approved and recorded, the Engineering Department will schedule the right-of way documents for the next scheduled Board of Commissioners' hearing. The Board of Commissioners will either accept or reject the ROW for County maintenance, after the minimum 18-month maintenance bond has been released. Once the Board of Commissioners accepts the ROW, the Engineering Department will record the deeds.

Step 5 – Pre-construction Conference

Grading permits will be issued after approvals have been granted by the appropriate reviewing departments. The permit is issued at a pre-construction conference with the Engineering Department, the department responsible for inspection of the development site.

Step 6 – As-built Policy

An as-built is a civil drawing depicting completed commercial development and construction, as it exists in the field. As-builts are required to be submitted to the Planning and Community Development Department on all commercial and industrial sites. The as-built should be submitted at around 90 percent completion of the site, sometime between the rough plumbing inspection and the final building inspection. Upon approval of the as-built, the applicant may schedule the final building inspection. The Engineering Department, Water and Sewer Department, and Planning and Community Development Department (including County Arborist) are responsible for reviewing the as-built application.

5.3 Inspection Program

The County currently has 6 certified erosion and sedimentation (E&S) control inspectors in addition to one dedicated E&S supervisor in the Engineering Department who are responsible for completing field reports for all site inspections. The Department also has both a Stormwater supervisor and four stormwater technicians that can assist with E&S inspections. The County uses the DMS created in 2015 to monitor and track site reviews and inspections. Through this system, inspections are tracked to

assure that site visits are conducted in a timely and thorough manner. Warning and stop work notices are handled outside of the DMS but are tracked by the Engineering Department. The number of active sites and the number of inspections during each reporting period will be submitted with the annual report.

An order of precedence has been established whereby the most urgent cases are handled first. Therefore, complaints filed with the Engineering Department receive priority. Commercial and industrial developments or any other site for which a Land Disturbance Permit (LDP) was issued are inspected on a weekly basis. Residential and single-family sites for which an LDP was issued are also inspected once a week. Individual lots with building permits, but do not require a LDP, are inspected once every 2 weeks. The LDP is issued at a pre-construction conference with the Engineering Department, which is responsible for inspection of the development site.

5.4 Enforcement Procedures

Administration and enforcement of E&SC activities in Forsyth County are in accordance with the Erosion and Sedimentation Act of 1975, O.C.G.A. 12-7-1 et seq.; the Executive Reorganization Act of 1972, O.C.G.A. 12-2-1 et seq., and the Georgia Administrative Procedure Act, O.C.G.A. 50-13-1 et seq., all as amended, but also includes the authority to require corrective action and/or remediation of conditions creating adverse water quality impacts, or otherwise in violation of these rules, regulations and authorizing statutes.

In addition to the state enforcement requirements, the developer may be required to submit a Soil Erosion and Sedimentation Control Bond to ensure that BMPs are properly installed and maintained at newly developed or redeveloped sites (**Attachment 11**). If a land disturbance permit is not obtained prior to land disturbing activities, the property and the person can be subject to an immediate stop work order, revocation of their business license, work permit, and/or an administrative fine of $1,000.

Any person in violation of an Ordinance No. 73 provision will be given a notice to comply and 5 days to correct the issue(s) of noncompliance. If within the five days, the issue has not been corrected, a second Notice of Violation will be issued, and the corrective action should take place within five additional days. If the issue has not been corrected after a second Notice of Violation has been issued, a stop work order may be issued until correction. However, if the issue is deemed an imminent threat to state waters, Forsyth County has the authority to issue an immediate stop work order in lieu of a notice to comply. For a third, and each subsequent failure to comply, an immediate stop work order is issued. All stop work orders are effective upon their issuance and stay in effect until the corrective action and/or any mitigation has taken place and all fines have been paid. Additional administrative penalties, bond forfeiture, and monetary penalties, such as civil fines issued by a magistrate court, are discussed in the County's ordinance No. 73 in detail. Documentation of each enforcement action that takes place during the reporting period will be submitted with the annual report. For more information, see the Enforcement Response Plan (ERP), in **Appendix B**.

5.5 Educational/Training Activities

The County requires that all individuals involved in land disturbing activities complete the erosion and sedimentation control training offered by the Georgia Soil and Water Conservation Commission or a certified contractor. At a minimum, courses are offered on a monthly basis each year. As part of review checklists, the County tracks the certification status of builders, contractors, developers, site superintendents, grading and utility contractors, and monitoring consultants. In addition, the County also ensures that County workers are trained and certified in erosion and sedimentation control.

As part of each year's Annual Report, the County will submit the following information:

- Training and certification documentation for the County's inspectors.

6. Highly Visible Pollutant Sources (HVPS)

Highly Visible Pollutant Sources are commercial facilities that do not require an industrial stormwater permit but have a high potential for causing stormwater pollution. They include nurseries, auto part/repair shops, commercial pressure wash facilities, car washes, oil change stores, restaurants, veterinary clinics, and kennels. HVPS facilities are responsible for maintaining stormwater collection systems and good housekeeping practices to prevent pollutants from entering the MS4 or receiving waters. This section describes Forsyth County's program to inventory and inspect these facilities to ensure proper waste disposal and other stormwater-related practices. This program includes the following components:

- Develop and annually update a comprehensive inventory of HVPS as part of the annual review process.
- Develop and implement a process for capturing new HVPS in the inventory as they relocate to the service area.
- Inspect HVPS facilities routinely.
- Document and inform property owners of problems identified during inspections so that they can be promptly addressed.
- Conduct follow-up inspections to determine if corrective actions were taken.

6.1 HVPS Facility Inventory

As mentioned in **Section 3**, Forsyth County maintains a database of industrial facilities in its service area, including the location and SIC code that best represents the principal manufacturing process or activity for each facility. As part of the industrial inventory, SIC codes are reviewed to identify HVPSs. The Engineering Department continually updates the SIC codes and adds facilities to the HVPS inventory in April of each year. As of April 2018, **418** facilities in Forsyth County were identified as HVPS. The HVPS inventory is provided in **Attachment 1**.

As part of each year's Annual Report, the County will submit the following information:

- Updated inventory of HVPS facilities.
- The overall number of inspections, and the percentage of total facilities inspected.
- Copies of HVPS facility inspection forms.

6.2 HVPS Inspection Program

Forsyth County inspects 100% of HVPS facilities every 5 years, with a minimum of 5% inspected on an annual basis. Engineering Department staff conducts site inspections using the HVPS inspection form provided in **Attachment 2**.

Site inspections mainly consist of visual investigations during which the inspector will examine material storage areas, outdoor work areas, and, illicit discharges to identify contaminated runoff and possible sources. A visual inspection should include assessing the integrity of the stormwater collection system, checking for leaks, seepage, and overflows from sludge and waste disposal sites, and ensuring that dry chemicals and dust from working areas are not exposed to wind or rain that may transport them into the runoff. If flows are observed during dry periods, the inspection should focus on determining the source of the discharge as well as the presence of any stains, sludge, odors, and other abnormal conditions.

Visual inspections should be made at all stormwater discharge outlet locations. Runoff may be examined for the presence of floating and suspended materials, oil, grease, discoloration, turbidity, odor or foam. Storage areas may be inspected for leaks from containers, discolorations on the storage area floor, or other indications of a potential for pollutants to contaminate stormwater runoff.

Inspection frequency of a particular facility or area may be based in part on the history of previous spills and leaks. Experienced personnel will evaluate the causes of previous accidents, assess the risks for future accidents, and determine an inspection schedule based on these risks. Proper records of inspection results will be kept for future reference. The record for each inspection is the same as information included on the Industrial Inspection Form, including the date of the inspection, the names of the personnel who performed the inspection, and their observations.

6.3 Enforcement Procedures

HVPS violations are enforced under Ordinance 75. If violations are observed at HVPS sites, enforcement actions may include the issuance of verbal warnings or notice of violations. The property owner or person in violation may be assessed penalties associated with the observed violation. Additional details regarding enforcement procedures are included in **Section B.2.3** of the Enforcement Response Plan. In order to track violations and activities associated with enforcement actions, a log of inspections, corrective actions and non-compliances is maintained and are included in the annual reports to GAEPD.

6.4 Educational Activities

Education activities related to the Highly Visible Pollutant Sources include:

- Informing the operator or property owner of stormwater runoff and water quality, preventive pollution control, appropriate material storage, and other good housekeeping practices when illicit discharges are found
- Distributing educational brochures.
- Promoting, publicizing, and facilitating the reporting of illicit discharges and associated water quality problems.

HVPS facilities have the potential to contribute significant pollutants to the MS4 if proper precautions are not taken routinely. Thus, the Phase I MS4 program emphasizes pollution prevention and good housekeeping at HVPS facilities. Forsyth County is responsible for investigating and eliminating suspected pollutant sources, including routine inspections, enforcement, and educational activities at HVPS facilities. During routine inspections of Highly Visible Pollutant Sources, the Forsyth County inspector(s) looks for direct connections to the storm drain system, exposed material that could be washed into the storm drain system and situations that could cause a release of a substance into the storm drain system. Continual efforts are made to educate the facility staff to recognize and prevent non-point source pollution.

As part of its public education effort, the County distributes educational brochures at Highly Visible Pollutant Sources, most often when a Notice of Violation is issued. As part of the educational outreach, the County meets with the responsible parties to review their compliance problems and develop possible solutions. Violators are informed of proper procedures to use to prevent future discharges and violation notices are sent with defined corrective action as needed. Details of the educational activities will be included in the Annual Report, such as which brochures are shared at a facility, and documentation from meetings or conversations to inform violators how to achieve compliance.

7. Enforcement Response Plan (ERP)

Forsyth County developed and maintains an Enforcement Response Plan (ERP) to outline procedures the County staff will follow to identify, document, and take enforcement for a violation of a local ordinance. The purpose of this ERP is to outline the actions and procedures that will be used by the County staff during instances of non-compliance. The components of the plan are included in **Appendix B** with regards to the various aspects of the SWMP, including the Illicit Discharge Detection and Elimination Program (IDDEP), Industrial Facility Stormwater Runoff Control, Highly Visible Pollutant Sources (HVPS), Post-Construction Stormwater and GI/LID and the Construction Site Management Program. The first three of these components are handled under one section as they follow similar procedures. The Construction Site Management Program ordinances and procedures to address illicit discharges are described separately.

8. Impaired Waterbodies

Forsyth County has developed a monitoring and implementation plan that outlines steps to address impaired waterbodies (305(b)/303(d)) to which it discharges. This plan is described in **Appendix C**.

9. Municipal and Employee Training

Forsyth County recognizes that managing stormwater is dependent on the knowledge and skills of the municipal employees who are responsible for the day to day operations and enforcement of the program. Forsyth recognizes that pollution control and prevention will be more effective with properly trained employees.

9.1 Pollution Prevention

The County provides training to employees regarding pollution prevention at municipal facilities. This training includes spill response, proper disposal of waste, proper vehicle washing, and covers the procedures and protocols necessary to prevent and minimize the exposure of pollutants to stormwater. The County trains municipal staff in good housekeeping techniques in order to minimize the potential for stormwater pollution at each facility. County employees including inspection staff, stormwater technicians, and others are also certified in Erosion and Sedimentation training. Employees are trained on an annual basis or as new employees are hired and all types of training are documented and kept as a database.

The County also has an additional training program to ensure all employees are fully aware of pollution prevention protocols and procedures, spill response equipment use, handling and safety protocols for the storage and use of any materials stored on-site, function of and location of facility Best Management Practices, and any other pollution prevention mitigation practices.

Each Forsyth County owned industrial facility (offices, water treatment and wastewater reclamation facilities) has implemented procedures to ensure good housekeeping practices and pollution prevention control. Employees can be expected to more successfully identify potential problems if they are more aware of the need to protect water quality and how their actions can affect it. In addition, employees will learn to identify illicit discharges as part of their training and help to prevent pollution from facilities.

Employees at all levels of responsibility, including temporary personnel, are trained. Staff training will take advantage of scheduled venues, such as departmental staff meetings. Staff members present at these training exercises are recorded and reported to GAEPD in the annual report.

Forsyth County implements the following activities related to County-owned facilities:

- Refine and maintain current list of County-owned facilities, regulatory requirements, and responsible departments or divisions.
- Verify current SWP3s for municipal facilities covered by the General Permit for industrial sites and identify others that may be in need of coverage.
- Request SWP3s for any new municipal facilities that may be covered by the general industrial stormwater permit.
- Continue training Forsyth County employees on handling and use of potential pollutants.
- Continue inspection and maintenance of municipal and industrial facilities.

The topic, date and time(s), list of attendees, and any course materials of the educational sessions carried out by Forsyth County will be reported to GAEPD as part of the Annual Report.

9.2 Additional Training

Forsyth County conducts additional training activities annually on an as needed basis, depending on what specific staff needs are. The County will determine on an annual basis which specific topics will be address based on the most pressing issues observed. Those topics may include, but are not limited to:

- How to inspect HVPS facilities, including how to recognize and prevent non-point source pollution from HVPS facilities.
- IDDE Inspection and other violations. The Forsyth County inspector(s) is/are trained to look for direct connections to the storm drain system, exposed material that could be washed into the storm drain system and situations that could cause a release of a substance into the storm drain system.
- Additionally, Department of Engineering staff also conducts good housekeeping classes for other County departments as needed. Other trainings such as industrial facility inspections, green infrastructure and low impact development training will be conducted as necessary.

For all trainings or workshops conducted the topic, date and time(s), list of attendees, and any course materials of the training or educational sessions will be reported to GAEPD as part of the Annual Report.

9.3 Erosion and Sedimentation Control

The County requires that all individuals involved in land disturbing activities complete the erosion and sedimentation control training offered by the Georgia Soil and Water Conservation Commission (GSWCC) or a certified contractor. At a minimum, courses are offered by the GSWCC on a monthly basis each year. As part of review checklists, the County tracks the certification status of builders, contractors, developers, site superintendents, grading and utility contractors, and monitoring consultants. In addition, the County also ensures that County workers are trained and certified in erosion and sedimentation control. The training and certification documentation, including topic, date and time(s), list of attendees, and any course materials, will be provided with each annual report.

10. Public Education

Forsyth County recognizes that a robust public education program can be very effective in managing the effects of nonpoint source pollution from stormwater runoff. The County develops and provides numerous opportunities for the general public and other target audiences to learn how they can assist the County in mitigating stormwater runoff. Raising general public awareness helps local residents understand the role of individual behaviors in non-point source pollution and other problems (such as flooding, erosion, etc.) as well as practices to reduce and prevent. The County is both an EPA Water Sense Partner and a Department of Community Affairs WaterFirst Community. This demonstrates the County's continued dedication to maintaining a strong, effective public education and outreach program. These efforts complement structural BMPs, watershed monitoring, and watershed inspections by encouraging County citizens to play an active role in protecting local water resources. Educational activities are tracked in an electronic database and documented by the County and submitted as part of each year's annual report.

The County's Stormwater Education Program includes distributing information via brochures, newsletters, access to educational and informational material on the County's website, targeted outreach to specific audiences, and other educational programs. The County's Public Information and Education Plan provides a comprehensive description of existing and future mechanisms for engaging and educating the public about watershed and stormwater protection issues. Forsyth County participates in the Clean Water Campaign (CWC) efforts and works with KFCB to distribute informational literature about stormwater issues.

10.1 Brochures and Publications

The County provides educational content in the form of brochures and publications and promotes access to educational and informational material through its web site, its Public Resources Library, and in County offices.

The Resource -- The Department of Engineering has developed and published a brochure series entitled, *The Resource*, intended to provide comprehensive insight into topics directly related to local waterways. Topics vary with each publication and range from educational topics to watershed regulations (permitting and annual reporting) on the state and federal level. The brochure is free and open to County citizens. and is distributed in the Engineering Department and is available on the website. The website hits on the brochures are tracked quarterly, and all hits during the reporting period, as well as copies of the brochures, will be submitted with the annual report.

- Published yearly
- Approximately 25 copies will be printed annually
- All copies will be distributed in Engineering Department offices (more printed upon request)
- Upon publication, the document will be available online at: (www.forsythco.com/Departments-Offices/Engineering/Stormwater-Division)

The Current -- The County releases a monthly newsletter, *The Current*, which is designed to update the community on upcoming events and inform them about important topics. The County tracks the number of downloads of the newsletter for each reporting period, and will submit this information, along with copies of the newsletter, with the annual report.

- Published monthly

- Upon publication, the document will be made available online at: www.forsythco.com/Departments-and-Offices/Communications/The-Current

Stormwater Maintenance Video – Forsyth County had produced a video to educate and inform its citizens and developers of the importance of stormwater maintenance. The County can track the number of views of this video, which will be submitted with the Annual Report.

- The video is available on the Engineering Department website at: www.forsythco.com/Departments-Offices/Engineering/Stormwater-Division

10.2 Targeted Outreach

In addition to general audiences, Forsyth County specifically targets several groups that have the high potential to have positive impacts on water quality, and/or passing their knowledge on to other.

Business and Industry New to the County – KFCB works with the Water and Sewer Department to provide educational materials to new businesses when they apply for a business license. Educational materials vary, depending on the types of business targeted. This information is on an as needed basis, as new licenses are issued. Business licenses are recorded and tracked by the County. The number of brochures distributed, and the copies of the brochures will be provided in the annual report.

Homeowners Association Management Companies – Forsyth County also distributes stormwater awareness and detention pond maintenance materials to Homeowners Association (HOA) management companies and landscaping companies. County staff also continues to hold detention pond maintenance and good housekeeping meetings with landscapers. The number of brochures distributed, and the copies of the brochures will be submitted with the annual report. Information about educational meetings during the reporting period will also be submitted with the annual report.

10.3 KFCB Public Education Activities

KFCB offers educational presentations and activities that can be scheduled by contacting KFCB. The presentations can be for students K-12, community groups, or targeted for specific audience needs. The available presentations include aquatic macroinvertebrate classes and activities, Landfill Enviroscape classes, recycling center tours, Adopt-A-Stream training, macroinvertebrate mayhem, Where Does My Trash Go workshop, etc. Descriptions of the presentations and activities are available online at: https://www.keepforsythcountybeautiful.org/educational-programs See Section 11 for more information on KFCB's other activities.

Enviroscape – KFCB also involves the community with the use of the Enviroscape, an interactive watershed model. The classes included chemical, biological, bacteria, hitting the mark, leaf pack, and other activities. Both of these public involvement activities support outreach efforts to school-aged children through presentations made available to teachers.

- KFCB will present the Enviroscape to at least one class annually and distribute materials to the teachers of those students.
- Submit information on number of classes and students taught, number (and type) or presentations distributed will be submitted with the Annual Report**.**

Other Events – Conduct 2-3 additional events, such as tours of waste and recycling facilities.

11. Public Involvement

Forsyth County promotes multiple public involvement activities. Overall, these activities raise public awareness about watershed and stormwater management among various economic and demographic subsets of Forsyth County's population. The County actively encourages residents to participate in several community activities to raise awareness of water pollution, littering, and water quality concerns.

The County works closely with Keep Forsyth County Beautiful to support programs such as Adopt-A-Road, Adopt-A-Stream, Great American Cleanup, Bring One for the Chipper and various recycling events (https://www.keepforsythcountybeautiful.org/). Overall, these activities raise public awareness about watershed and stormwater management. The County actively encourages residents to participate in several community activities to raise awareness of water pollution, littering, and water quality concerns. Raising general public awareness helps local residents understand the role of individual behaviors in creating non-point source pollution and other problems (such as flooding, erosion, etc.).

11.1 Litter and Clean Up Involvement Programs

Forsyth County has multiple litter and road cleanup programs facilitated by Keep Forsyth County Beautiful (KFCB).

Adopt-A-Road – The Adopt-A-Road program hosted by KFCB typically holds numerous cleanup events annually, involving hundreds of volunteers.

- KFCB will hold at least one Adopt-A-Road clean up event annually.
- The litter pick-up efforts are conducted throughout the year and status reports on the cleanups must be submitted to KFCB. KFCB follows the rules and regulations of the State Adopt-A-Highway Program and keeps track of the participating groups in a database.
- Information on dates, locations, and number of attendees during the reporting period, including attendee lists or sign in sheets, photographs, and event advertising material, will be submitted as part of the Annual Report.

Adopt-A-Stream Events – Rivers Alive is one of the annual activities promoted by KFCB to increase public environmental awareness and involvement. A representative of KFCB is currently a member of the Rivers Alive Board (https://riversalive.georgia.gov/rivers-alive-advisory-board) The Adopt-A-Stream stream cleanup program annually cleans up dozens of sites, involving nearly 1,000 volunteers.

- KFCB will facilitate at least one Rivers Alive clean up annually.
- Locations, dates, number of volunteers (attendee lists or sign in sheets), photographs, and event advertising material, and approximate amount of trash disposed of will be submitted for the Annual Report (bags, truck loads, numbers of dumpsters etc.).

Mobile Trash Unit (MTU) – KFCB will continue their partnership with the Forsyth County Community Connection to support the Mobile Trash Unit (MTU) and target roadside litter. KFCB encourages school groups to volunteer for the weekend and/or weekday cleanups. The program was designed to not only provide volunteers with a monthly recurring event that they could depend on for service hours but also to address littered areas around the county that do not fall under the Adopt-A-Road program or other scheduled pick-ups. The two groups that meet each month are the Family MTU (meets every third Sunday at 3PM and is open to all ages) and the High School MTU (meets every second Thursday at 4PM and is open to ages 14-18). The locations change each month based on need and they are announced the week prior to the cleanup via email.

- Two monthly volunteer clean-ups
- Information on locations of clean-ups during the reporting period and number of attendees, (attendee lists or sign in sheets), photographs, and event advertising material will be submitted with the Annual Report.

11.2 Public Involvement Programs and Activities

KFCB offers educational presentations and activities that can be scheduled by contacting KFCB. The presentations can be for students K-12, community groups, or targeted for specific audience needs. The available presentations include aquatic macroinvertebrate classes and activities, Landfill Enviroscape classes, recycling center tours, Adopt-A-Stream training, macroinvertebrate mayhem, Where Does My Trash Go workshop, etc. Descriptions of the presentations and activities are available online at: https://www.keepforsythcountybeautiful.org/educational-programs. See **Section 10.3** for KFCB's additional activities.

Adopt-A-Stream – KFCB also supports a robust Adopt-A-Stream program. AAS is one of KFCB's long-term volunteering programs. The AAS program goals are to raise public awareness about water quality and coordinate activities to monitor and protect water resources. AAS workshops are available to any interested groups and are advertised on the Forsyth County website. KFCB conducts Adopt-A-Stream certification classes (including chemical, biological, and bacteria), and issues certificates to participants.

- Conduct at least one certification class annually and issue certificates,
- Submit documentation of number of Adopt-A-Stream certifications issued, description, date, and attendance of additional events and activities as a part of the Annual Report.

11.3 Recycling Programs

Recycling programs are an excellent way to reach the general public on a variety of environmental education messages, including water conservation, stormwater, clean drinking water, and so on, as well as the immediate benefits to the community of recycling materials that may otherwise end up in storm drains or landfills. In addition to specific events, the County and KFCB promote recycling information to the public, including locations of recycling centers and types of materials that each facility accepts.

Annual Christmas Tree Recycling – Forsyth County works with KFCB to hold an Annual Christmas Tree Recycling event in January every year. Forsyth County residents have now recycled more than 99,000 trees since the county first began participating in the "Bring One for the Chipper" event in 1994. Free tree seedlings and vegetable seeds are also made available on a first come, first served basis. Mulch created from the tree recycling is available to the public near the Forsyth County Roads and Bridges facility on County Way.

- Events will be held annually in January at numerous locations throughout the County
- Locations, dates, and results of recycling events will be submitted with the annual report. KFCB and Forsyth County will track the number of Christmas trees recycled on an annual basis and submit with the Annual Report.

Household Hazardous Waste Event – The County also organizes electronic and household hazardous waste recycling events The County aims to collect tens of thousands of pounds of electronics and thousands of gallons of paint for recycling.

- The County will hold at least one Household Hazardous Waste Events annually.

- Locations, dates, and results of recycling events will be submitted with the Annual Report, including pounds of electronic equipment and gallons of paint.

12. Post-Construction and Green Infrastructure/Low Impact Development (GI/LID)

12.1 Legal Authority and Ordinance Review

Since 2004, all public and private stormwater management systems in the Forsyth County service area must be based on guidance provided in the GSMM and the Forsyth County Addendum. Any property owner or developer seeking to obtain a land disturbance permit must refer to these ordinances. Forsyth County's Unified Development Code (Chapter 7) refers to the Stormwater Management Ordinance (also known as Ordinance 75 or Chapter 34, Article V of the County Code of Ordinances) (**Attachment 12**). This ordinance was amended in June 2004 to be consistent with the District's model Ordinance for Post-Construction. As part of each year's Annual Report, the County will submit a copy of a revised Ordinance (if changes are made during reporting period).

- **Stormwater Management for New Development and Redevelopment**. It includes use of the GSMM design criteria. These requirements for post-development stormwater control have been implemented and incorporated into the plan review process, as described in the Forsyth County development guide documents (**Attachment 10**). Requirements meet the criteria outlined in the following documents, which are provided in the appendices:
- **Chapter 34, Article V Stormwater Management,** of the Forsyth County Code of Ordinances provides the legal authority for stormwater management, definitions, and a description of the appeal/penalty processes.
- **GSMM Volume I, Chapter 4** provides guidance on implementing stormwater management requirements during development. Volume II provides specific guidance for unified stormwater sizing criteria and for methods of estimating stormwater runoff.
- **Forsyth County Addendum** to the GSMM provides County-specific clarification and is organized into the following sections. Revisions are expected to be made to the Forsyth County Addendum in 2018 to address the most recent changes in the GSMM.

As described in the Addendum, in addition to meeting the technical design standards and criteria in the GSMM, new developments must provide the following:

- Include oil/grit separators for water quality if the development is a "hot spot" land use such as service stations, convenience stores, and other developments with commercial fueling facilities.
- Include drainage easements suitable for the construction and maintenance of the drainage system. A minimum of 20 feet in width will be required for any drainage easement along a drainage pipe, ditch, stream, or other area that is designated for stormwater flow. All stormwater management facilities will be accessible from a public street by a minimum 20-foot access easement, and there will be an easement for detention facilities including 20 feet extending horizontally beyond the 100-year water surface elevation of the facility.
- Include a permanent fence or barrier when a stormwater management pond is more than 4 feet deep and in a location that constitutes a danger to humans.
- Install a silt gauge on all detention ponds consisting of a durable weather-resistant post.
- Submit a certified field-run topographic map including the location of stormwater management facilities, a revised Stormwater Management Report, and a Stormwater Management/BMP Facilities Covenant (**Attachment 4**) signed by the property owner or organization.

12.2 GI/LID Program, Techniques and Practices

EPD encourages the use of green infrastructure (GI) structures and low impact development (LID) practices and approaches for new and redeveloped sites. This could include site planning (i.e. protection of conservation areas), site design (i.e. reducing impervious surface), and structures (i.e. bioretention areas, vegetated filter strips, pervious pavement, green roofs, enhance swales). Forsyth County has conducted an ordinance review, developed a GI/LID program, inventoried existing GI/LID structures, and developed and implemented an inspection program as required during the previous version of the SWMP. As part of the SWMP update, the County's GI/LID Program Document has also been updated and is included as **Attachment 13**.

The MS4 permit required a review of local building codes, ordinances, and other regulations to ensure that use of green infrastructure or low impact development (LID) techniques is not prohibited or impeded. Forsyth County found that these techniques are not prohibited or impeded and reported this in the 2011-2012 Annual Report. The County is not actively revising ordinances at this time; however, it will adopt the new Post-Construction Stormwater Management Model Ordinance once finalized by the District. The County subsequently anticipates refining and revising the Stormwater GI/LID program document to include the latest requirements, incentives, and additional research in this field.

Forsyth County currently encourages GI/LID through design standards and Chapter 19, Conservation Subdivisions, of the UDC (**Attachment 14**). The ordinance allows for increased residential density when at least 40 percent of the gross tract area is preserved as open space, of which 2 acres must be contiguous. Active recreational facilities will not be located in the primary or secondary conservation areas, nor will these areas count toward required open space. All public and private stormwater systems in the Forsyth County service area must be designed according to the GSMM and Forsyth County Addendum.

Several components outlined in these documents support LID objectives of:

- Managing stormwater close to the point of origin and minimizing collection and conveyance.
- Utilizing simple, nonstructural methods for stormwater management that are lower cost and lower maintenance.
- Preventing stormwater impacts rather than mitigating them, etc.

12.3 GI/LID Service Area and Applicability.

As discussed earlier in this document, Forsyth County's MS4 service area covers all unincorporated lands within the County. The only incorporated area in the County is the City of Cumming, which is a Phase II community and manages its MS4 independently from Forsyth County. The County's service area is located north of the Atlanta area, within the Metropolitan North Georgia Water Planning District (District). A large portion of the service area is located in the Chattahoochee River basin, draining to Lake Lanier and a section of the river downstream of the lake. The northwest portion of the County, and its MS4, drains to the Coosa River basin. The County's service area is completely within the Piedmont physiographic province. As such, it has predominantly Type B and C soils, rolling hills, and a moderately deep-water table.

Site locations are always considered when reviewing applications for new development or redevelopment. Forsyth County uses the GSMM, Coastal Georgia Stormwater Supplement, and its Forsyth County Stormwater Addendum to determine feasibility, site applicability, and documents these through comments during the Plan submittal and review process. Feasibility criteria are considered during the review process of potential GI/LID BMPs, such as:

- Infiltration rates.
- Depth to water table.
- Depth to bedrock/confining layers such as clay lenses.
- Minimum setback requirements to property lines, buildings/structures, septic systems, wells, reservoirs, and/or airports.

Considering these criteria, site characteristics can limit the application of GI/LID and require design modifications or alternative practices to maximize runoff reduction and water quality benefits to reduce the effective impervious area. In some cases, GI/LID practices are determined to be not feasible for specific site when:

- Minimum soil infiltration rate cannot be achieved.
- Minimum clearance of the seasonally high-water table cannot be achieved.
- Minimum land area requirements for the proposed structure cannot be achieved.
- Minimum setbacks to property lines, building foundations, wells, septic systems, or surface waters cannot be achieved.
- Minimum space requirements for necessary pretreatment measures cannot be achieved.
- Minimum separation between infiltration practice and confining layers cannot be achieved.
- Utility conflicts cannot be resolved.
- Contaminants that cannot be remediated are present.

12.4 GI/LID Structure Inventory

Forsyth County initially considered 12 potential GI/LID BMP types for use in its program. These structures included bio-retention areas, enhanced wet swales, enhanced dry swales, vegetated filter strips, grass channels, stormwater (pocket) wetland, submerged gravel wetlands, stormwater planters, dry wells, rain gardens, permeable pavement, and green roofs. These potential GI/LID structures were reviewed in a March 2015 workshop with County Stormwater staff, which resulted in five types of structures, outlined in **Table 12-1**, being carried forward as part of the County's GI/LID program. These structures are identified in the County's Stormwater (SW) Inventory, which is used to track inspections and maintenance activities.

The County's current municipally owned GI/LID Inventory includes 10 GI/LID structures that have been verified during routine SW inventory inspections. Note there are also 3 privately owned GI/LID structures in the County. The current inventory of these structures (May 2018) is included in **Attachment 1**. In addition to the five structure types listed in **Table 12-1**, the County may decide to include additional structure types in the future. These structures would be included on the inventory, and the updated inventory would be included with each Annual Report.

Table 12-1. Forsyth County GI/LID Program Inventory - Selected Structures

GI/LID Structure (Count)	Description
Bio-retention Area (7)	Shallow sunken areas that are filled with an engineered soil mix and are planted with trees, shrubs and other herbaceous vegetation. They are designed to capture and temporarily store stormwater runoff in the engineered soil mix, where it is subjected to the hydrologic processes of evaporation and transpiration, before being conveyed back into the storm drain system through an underdrain or allowed to infiltrate into the surrounding soils. Also known as bio-retention filters and bio filters. Feasibility and design criteria found in Section 4.2 of the GSMM.

GI/LID Structure (Count)	Description
Enhanced Swale (2)	Vegetated open channels that are explicitly designed and constructed to capture and treat stormwater runoff within dry or wet cells formed by check dams or other means. The two types of enhanced swales are dry swale and wet swale/ wetland channel. • A dry swale system consists of an open conveyance channel with a filter bed of permeable soils that overlays an underdrain system. • A wet swale or wetland channel consists of an open conveyance channel which has been excavated to the water table or to poorly drained soils. Check dams are used to create multiple wetland "cells," which act as miniature shallow marshes. Feasibility and design criteria found in Section 4.8 of the GSMM.
Green Roof (0)	Green roofs typically consist of underlying waterproofing and drainage materials and an overlying engineered growing media which captures and temporarily stores stormwater runoff where it is subjected to the hydrologic processes of evaporation and transpiration before being conveyed back into the storm drain system. Feasibility and design criteria found in Section 4.11 of the GSMM.
Permeable Pavement (0)	A permeable pavement system allows stormwater runoff to pass through an overlying permeable surface layer (i.e., pavement surface) into an underlying stone reservoir, where it is temporarily stored and allowed to infiltrate into the surrounding soils or conveyed back into the storm drain system through an underdrain. Feasibility and design criteria found in Section 4.15 of the GSMM.
Stormwater (Pocket) Wetland (1)	Constructed shallow marsh systems designed and placed to control stormwater volume and facilitate pollutant removal. Designed with three distinct zones: a forebay immediately after the inlet to receive stormwater, the wetland area, and a micropool immediately prior to the outfall. (WERF, 2015) Also known as constructed wetlands. Feasibility and design criteria found in Section 4.26 of the GSMM.

12.5 GI/LID Inspection and Maintenance Program

Forsyth County's inspection and maintenance of GI/LID structures follows that of other structural stormwater controls The County is responsible for inspecting stormwater structures located on both public and non-residential private property and for ensuring maintenance of structures owned by the County. Maintenance for privately owned infrastructure is carried out by the private land owner.

As discussed further in **Section 2.1.2**, the County utilizes a holistic inspection approach such that when stormwater structures are inspected, the County also inspects other adjacent stormwater infrastructure, including culverts, conveyance channels, drop inlets, pipe discharges, weir walls, stand pipes, and junction boxes. If an issue is found or complaint filed, it is tracked as a work order by the Engineering Department. Emergency situations are addressed immediately; others generally are addressed chronologically. During each inspection, conditions are documented on an inspection form, and maintenance work orders are prepared if necessary.

Privately owned GI/LID structures, similar to all other stormwater BMPs, are maintained by the individual property owners in Forsyth County. New developments, residential as well as commercial, are required to sign a Stormwater Management/BMP Facilities Covenant before approval of the final or as-built plat, prior to the issuance of the Certificate of Occupancy (CO). The Covenant facilitates the identification of a responsible party if any maintenance issue occurs. A copy of the Covenant will accompany any transfer of property and Forsyth County will be notified in writing of the change in responsible party.

Stormwater Management/BMP Facilities Covenant requires annual inspection and maintenance reports for new (since 2005), privately owned structures be submitted by the responsible party to the Engineering Department. The report must meet the minimum recommended inspection and maintenance requirements found in Chapter 3 of the GSMM. Failure to meet the requirements of the Covenant constitutes a violation of Chapter 34 Article V. of the Forsyth County Code of Ordinances and

may be punishable under Section 7.1.7.2 of said code.

Inspections of privately owned, non-residential GI/LID structures by Forsyth County staff are documented to identify the following information:

- Adequate access to structures via drainage easements and berms.
- Stormwater facilities that require sediment removal, grassing, outlet control structure repair and erosion control.
- Accumulation of sediment or debris at the discharge of outfall structures.
- Stormwater collection and transfer structures that are not properly maintained or damaged.

In order to ensure Permit compliance, the County will inspect 100% of the inventory over 5 years, with at least 5% annually. A sample of the inspection form is attached in **Attachment 2**.

As part of each year's Annual Report, the County will submit the following information:

- Number and percent of total inspections performed each year, including the inspection forms.
- Any maintenance actions.

Appendices and Attachments

Appendices

A. Illicit Discharge Detection & Elimination Plan (IDDEP)

B. Enforcement Response Plan (ERP)

C. Impaired Waterbodies Plan

Attachments

Attachment 1. Municipal facility inventory
Attachment 2. Inspection forms
Attachment 3. Forsyth County Addendum to the GSMM
Attachment 4. Stormwater Management/BMP Facilities Covenant
Attachment 5. Forsyth County Comprehensive Plan (2017-2037)
Attachment 6. Litter Control Ordinances
Attachment 7. Flood Management Prevention Ordinance
Attachment 8. IDDE Ordinance
Attachment 9. Forsyth County Soil Erosion and Sedimentation Control Ordinance
Attachment 10. Forsyth County Development Guide Documents
Attachment 11. Soil Erosion and Sedimentation Control Bond
Attachment 12. Stormwater Ordinance
Attachment 13. GI/LID Program
Attachment 14. Conservation Subdivision Ordinance
Attachment 15. Impaired Waterbody Maps
Attachment 16. Environmental Sampling Plan
Attachment 17. Stream Buffer Ordinance

Appendix A. Illicit Discharge and Detection Plan

A.1 Inventory and Mapping

The current inventory and mapping of outfalls is provided in **Section 3.3**.

A.2 Illicit Discharge Detection and Elimination Plan

The IDDEP has the following objectives:

- Control illicit discharges by conducting field inspections of the MS4 and identify and eliminating the sources of non-stormwater discharges.
- Detect and eliminate illicit discharges and illegal connections to the MS4 through a program that combines education, alternative disposal options, and enforcement.
- Effectively coordinate spill response and cleanup with other existing programs.
- Optimize illicit discharge control activities through planning and prioritization.
- Partner with other agencies and groups to increase public awareness of ways to effectively and efficiently prevent pollutant discharges to the storm drains.

The Engineering Department currently has 4 dedicated Stormwater Technicians who conduct illicit discharge inspections. In addition, the County retains a Consultant that assists with dry weather screening of outfalls.

A.2.1 Outfall Inspections

Forsyth County conducts screenings for illicit discharges at outfalls based on location and date of last inspection, and in response to reported releases. In compliance with its MS4 permit, Forsyth County prioritizes screenings and inspections in watersheds with 303(d) listed stream segments to demonstrate compliance with TMDL implementation. Forsyth County maintains an inventory of stormwater infrastructures, including MS4 outfalls, and reports this inventory to GAEPD, in compliance with its MS4 permit. The County identified a total of **4,124** outfalls in the most recent inventory (April 2018).

As directed by GAEPD, the County inspects 100 percent of outfalls over a 5-year period with at least five percent of outfalls inspected each year to identify potential illicit discharges.

The County generally inspects outfalls by geographic area (watershed) and targets approximately 20 percent of the total inventory each year. Outfall screening is conducted during dry weather, which is defined as at least 72 hours with less than 0.1 inch of precipitation per day.

- Field crews use maps (digital and paper) to locate outfalls**.**
- Weather conditions, location information, assessor names are entered in the field database (DMS).
- The outfalls are assessed to determine whether or not dry weather flow is present. The DMS inspection form is filled out for all outfalls inspected, regardless if dry weather flow was noted or not.

- The condition of the outfall and need for maintenance is recorded and prioritized**.**
- The outfall is measured with a tape and recorded in the DMS.
- A photograph of the outfall is taken to document the conditions at the time of inspection.
- If dry weather flow is encountered, the crew traces the source of the flow to determine whether it is "natural" (i.e. piped stream, detention pond, groundwater) or potentially "illicit" (see **Section A.2.2**).
- If a "new" outfall (one not in the database) is identified, the crew will record the location (latitude/longitude, nearest address, parcel, general description), type of outfall, size, fill out the inspection information on a paper form, and take a photograph (photo should be named with the address and date).

A.2.2 Source Tracing

This section describes the procedures used when a dry weather discharge is identified by either Forsyth County staff or citizens during outfall screenings, industrial/HVPS inspections, site inspections, SWPPP audits, and yard walks. Dry weather flow inspections will be used to identify systems with potential illicit connections and discharges. Every dry weather flow will be source traced and field tested (as needed) to determine whether it is "natural" (i.e. piped stream, detention pond, groundwater) or potentially "illicit". Note that if the flow is believed to be groundwater, the EPD requires certain steps to be followed.

- Review the field maps that contain the stormwater infrastructure and hydrography to determine potential sources for the flow.
- Look for illicit connections and record any observations. Flow will be evident in the storm sewer system, even though no storm events have occurred in the past 72 hours.
- If applicable, walk the segment of stream contrary to the direction of the flow.
- If applicable, follow-up the stormwater network "upstream" and investigate at available points until the location of the flow is isolated to a particular segment.
- Investigations should continue until the problem is isolated between one or two stretches of pipe. Once the source has been isolated down to a specific reach, the work will become source confirmation. The source will be determined by walking the line up to the source and using the best professional judgment. The building owners and/or tenants must be contacted to acquire available building plans and to set up an appointment to conduct the site visit. This notification and other permits should be coordinated through the appropriate authorities. Additional notification to the local Health, Fire, and Police Departments may be required.
- The crew must record detailed notes in the field log book on source tracing activities of dry weather flows investigated. Additionally, potential sources should be annotated on the field map(s) and photographs taken to document findings.
- If the investigations results find a potential illicit discharge within the drainage system, follow-up investigations will be required.

A.2.3 Field Screening of Outfalls

If after source tracing and the discharge is believed to be illicit, then it is tested for pH, specific conductance, surfactants (detergents), fluoride, and possibly fecal coliform (if other parameter

indicates potential presence of elevated bacteria). Turbidity may also be tested if the dry weather flow is hazy/cloudy. In the instances where the discharge is originating from a detention pond or possibly piped stream, and there are no other potential inputs (i.e. drop inlet, catch basin, another headwall/pipe), then no field testing is required. When a dry-weather flow is recorded as a live stream or detention pond, there must be documented evidence of a direct connection to an upstream waterbody (in many cases, flowing streams are documented to occur at outfall structures that are no longer operational and do not control stormwater).

Specific equipment includes a LaMotte Stormwatch Drain Monitoring Kit, Hach Pocket Colorimeter II for fluoride. These are often supplemented by a YSI Pro Plus insitu meter and/or a Hach 2100P turbidimeter when more accurate measurements are required. Instruments are calibrated regularly per manufacturer guidelines.

As feasible, staff will follow the flow upstream to locate any MS4 structures and to identify if any dry weather flow is coming from a stormwater structure. Samples may be collected for subsequent laboratory testing for fecal coliform within 6 hours of sample collection according to standard EPA methods. Fecal coliform will be collected only where there is evidence of sewage spills or water quality concerns, as described below:

- Visible sewage or sewage odor.
- Physical indicator of a potential illicit discharge (color, odor, turbidity, or floatables).
- pH lower than 6.5 or higher than 7.5 standard units.
- Specific conductance greater than 300 µmhos/cm.
- Presence of surfactants (>0.2 mg/L).

Water quality concerns can indicate pollutants from a number of illicit discharge sources such as sanitary sewer, septic tanks, sulfides and organics from industries, petroleum products from vehicle maintenance areas, food waste from residents or restaurants, sediment from construction, washwater, among others. The following is a list of observations that will be considered while conducting a field screening to indicate water quality concerns:

- **Floatables:** Floatables such as oil sheens, sewage, and sanitary trash found in the storm sewer system will be considered evidence of a problem. If sewage and/or sanitary trash are observed, it is an indicator that a sanitary system is connected to the stormwater system; however, some floatables may occur naturally such as algae, bryozoans, pollen, and oil-like sheens may be caused by bacteria.
- **Odor:** Strong chemical or sewage odors may indicate a potential illicit connection or discharge. If odors are detected, it is recommended to look for other indicators including floatables, dry weather flow, water color, and/or stains inside the manhole or pipes.
- **Foam:** The accumulations of foam in a storm sewer system may indicate an illicit connection or discharge. Foam can be a natural occurrence in streams and lakes, but if the foam is concentrated around a storm outfall, or appears to be originating from a structure, it may be an indication of an illicit connection or discharge in that system.
- **Other Indicators:** Other indicators, which may not be significant by themselves, include color, turbidity, the existence of stains or deposits, and the occurrence of excessive vegetation at the discharge point. If dry weather flow is not observed, other indicators will be explored to provide

evidence of illicit connections or discharges. If the initial field screening indicates that no flow is present yet there is evidence of toilet paper, staining, grease deposits, or excessive plant growth, it is assumed that an illicit discharge has occurred. Further investigation of the drainage system will be conducted to identify the source. If there is no indication of an illicit connection or discharge, then the appropriate results will be recoded into a database.

If any one of the water quality concerns listed above are present during a field inspection, an investigation is immediately initiated to identify any illicit discharges according to procedures in above. If readings indicate a potential water quality issue in the field, an investigation is initiated by the field crew. The source of the pollutant is tracked by walking the storm sewer system. Results of dry weather screening and any follow-up activities are documented on the outfall screening form provided in **Attachment 2**. Procedures to address accidental and illicit discharges are detailed in the Enforcement Response Plan (**Appendix B**).

A.2.4 Source Elimination

The Ordinance also provides guidance on the procedures individuals should follow if there is an accidental discharge or an unavoidable loss to the MS4 of any designated hazardous waste material or any substance other than unpolluted stormwater. However, when an illicit discharge is reported during an outfall screening, the field staff immediately traces the source to determine the origin of the effluent.

A.2.4.1 Accidental Discharges

If an accidental dry weather discharge has occurred, the following actions will occur:

Notify the appropriate authorities. Depending on the severity of the discharge, the first action is to notify the emergency services. Hazardous or toxic spills or discharges will be reported to the fire department or the emergency response system through the 911 system immediately after the accident is discovered. For discharges that are unlikely to be hazardous or toxic, the Engineering Department shall be notified immediately.

- Stop the Discharge. The person concerned shall take immediate steps to stop the discharge and contain, treat, or take other actions to minimize effects of the discharge on the County separate storm sewer system and receiving streams. The person shall also take immediate steps to prevent recurrence of the discharge.
- Identify and document the nature of the accidental discharge. In non-emergency cases, Engineering Department staff will perform a field visit within five business days of notification to verify and document the discharge via the County's standard warning notice to comply. Notification shall include the nature, quantity, and time of occurrence of the discharge.
- Prepare Response Report. A written report describing the occurrence, its impact on water quality, and the clean-up response shall be prepared by the person concerned and submitted within 15 days of the occurrence to the Engineering Department.

A.2.4.2 Illicit Discharges

Since MS4s are not designed to treat non-stormwater wastes, illicit discharges result in the release of pollutants directly into streams. Illicit discharges can enter a stormwater system through accidental spills, surface disposal of wastes, dumping of wastes into stormwater catch basins, or conscious (but illegal) connection of waste lines to the stormwater system. With the exception of unpreventable

accidental spills, most illicit discharges can and should be addressed through the Illicit Discharge Detection and Elimination Program (IDDEP). The procedure necessary to address an illicit discharge varies, depending on the severity and nature of the event, and can be found in detail in the Enforcement Response Plan of this SWMP. The procedure consists of a series of steps:

- Notify the appropriate authorities. Depending on the severity of the discharge, the first action is to notify the emergency services. Hazardous or toxic spills or discharges will be reported to the fire department or the emergency response system. For discharges that are unlikely to be hazardous or toxic, the Engineering Department shall be notified immediately.
- Identify and document the nature of the illicit discharge. In non-emergency cases, staff will immediately perform a field visit to verify and document the discharge via the County's standard warning notice to comply.
- The County immediately notifies the property owner verbally. The Engineering Department provides written notification to the property owner of the discharge, the corrective action necessary, and an appropriate timeframe for eliminating the discharge. Fines of up to $1,000 per day may be imposed under the County Ordinance. Follow-up inspections are necessary to ensure that the property owner took the appropriate action to eliminate the discharge.
- The County re-inspects the site on the date the discharge was to cease to ensure that the elimination has occurred.

A.2.4.3 Enforcement and legal actions.

If an illicit discharge is not corrected, legal action may be initiated in Forsyth County Magistrate Court. Fines of up to $1,000 per day may be imposed under Chapter 34 of the County Code, which addresses non-stormwater discharges to the drainage system.

Appendix B. Enforcement Response Plan (ERP)

Forsyth County developed and maintains an Enforcement Response Plan (ERP) to outline procedures the County staff will follow to identify, document, and take enforcement for a violation of a local ordinance. The purpose of this ERP is to outline the actions and procedures that will be used by the County staff during instances of non-compliance. The components of the plan are outlined below with regards to the various aspects of the SWMP including the Illicit Discharge Detection and Elimination Program (IDDEP), Industrial Facility Stormwater Runoff Control, Highly Visible Pollutant Sources (HVPS), Post-Construction Stormwater and GI/LID, and the Construction Site Management Program. The ERP will be reviewed annually and revised as necessary. When and if the ERP is revised, the revised ERP will be submitted to EPD for review with the Annual Report.

B.1 ERP – IDDEP

B.1.1 Ordinances

Forsyth County adopted the District's model ordinance for Illicit Discharge and Illegal Connection in June 2004 (**Attachment 8**). Chapter 34, Article V Stormwater Management, of the Forsyth County Code of Ordinance provides the legal authority for stormwater management, definitions, and a description of the appeal/penalty processes. The Ordinance was designed to meet the following goals:

- Regulate the contribution of pollutants to the MS4 by any person.
- Prohibit illicit discharges and illegal connections to the MS4.
- Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the MS4.
- Establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this article.

Sections 34-185 and 34-186 of the Forsyth County Code of Ordinance established the Forsyth County Department of Engineering to have authority to administer and enforce all regulations and procedures adopted to implement the Stormwater Management Article. As per ordinance No. 75 § 6, 6-21-2004, the Department of Engineering can:

- Establish or oversee establishment of development standards and guidelines;
- Determine the manner in which stormwater facilities should be operated;
- Inspect private systems that discharge to the county separate storm sewer system;
- Advise other departments on issues related to stormwater;
- Protect facilities and properties controlled by the Department of Engineering and prescribe how they are used by others;

- Develop programs or procedures to control the discharge of pollutants into the county separate storm sewer system;

- Adopt and implement the stormwater management program for the County.

B.1.1.1 Definitions and Abbreviations

Accidental Discharge – a discharge prohibited by the Forsyth County Code of Ordinance into the County separate storm sewer system, which occurs by chance and without planning or consideration prior to occurrence

Best Management Practice (BMP) – a wide range of management procedures, activities, and prohibitions or practices which control the quality and/or quantity of stormwater runoff and which are compatible with the planned land use.

Civil Action – Civil litigation against the discharger seeking equitable relief, monetary penalties, damages.

Compliance Meeting – Formal meeting with the discharger to resolve noncompliance

Illicit Connection – A connection to the County's separate storm sewer system that is not composed entirely of stormwater runoff except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the County's separate storm sewer).

Notice of Violation (NOV) – A written notice of violation informs a person or business that a County rule, State Law, or permit condition has been violated. A NOV is issued when a violation is observed or discovered.

Municipal Separate Storm Sewer System (MS4) – A system of stormwater conveyance including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains, owned or operated by a municipality or other public body, designed or used for collecting or conveying stormwater runoff.

Outfall – The most downstream point on a municipal storm sewer system where it discharges to the waters of the State

Pollution – Contamination or other significant alteration of any water's physical, biological, or chemical properties, including change in temperature, taste, color, turbidity, or odor of such waters or the discharge of any liquid, gaseous, solid, radioactive, or other substance into such waters as will or is likely to render such waters harmful, detrimental or injurious to the public health, safety or welfare or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life.

Responsible Party or Potentially Responsible Party – Any individual or company, including owners, employees, operators, transporters, or generators, that have been found to be responsible or potentially responsible for, or contributing to, an illicit discharge through, or illegal connection to the MS4.

Stormwater (stormwater runoff) – the direct response of a land surface to precipitation and includes the surface and subsurface runoff that enters a stormwater conveyance system or other concentrated flow during and following a precipitation event.

Waters of the State – Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, wet weather streams, and all other bodies of surface or subsurface water, natural or artificial, lying within or forming part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

B.1.2 Identify Potential Violations

A variety of accidental and illicit violations may occur resulting in noncompliance of the permit. Scenarios for noncompliance include a variety of illicit connections to the MS4, and/or accidental discharge of a pollutant into the MS4. **Table B-1** lists common instances of non-compliance and responses.

Table B-1. Common instances of non-compliances and responses related to IDDEP.

EXAMPLE OF NON-COMPLIANCE/VIOLATIONS	POSSIBLE RESPONSE	POSSIBLE TIME FRAME PROVIDED FOR CORRECTIONS
Drain line discharge: e.g. washing machine	Verbal warning or NOV to stop practice and remove line	Practice to stop immediately.
Discharging/dumping pollutants to the MS4: e.g. Paint, F.O.G, motor oil	Verbal warning or NOV to stop practice	Practice to stop immediately.
Discharging/dumping pollutants to the MS4: e.g. grass clippings	Verbal warning or NOV to stop practice	Practice to stop immediately.
Leaking Dumpster	Verbal warning or NOV to stop practice	Correct problem immediately
Exposed, leaking containers	Verbal warning or NOV to stop practice protect/ cover exposed containers and move with secondary containment	Practice to stop immediately.
Dry weather outfall discharge	Investigate source and discharge. If needed, grab sample for testing. Verbal warning or NOV to stop practice	Practice to stop immediately.

Each of these scenarios constitutes a violation of the permit and must be corrected immediately. A discharge to the MS4 may be comprised of a variety of pollutants including bacteria, sediment, nutrients, surfactants, fluoride, heavy metals, gasoline/petroleum products, pesticides/herbicides/fungicides, or other potential water quality pollutants.

B.1.3 Enforcement Mechanisms

This section describes the enforcement mechanisms available to the Director of the Engineering Department or designee and is consistent with the provisions of Sections 34-195 and 34-196 of Ordinance 75.

Verbal Warning – A notice consisting of a direct conversation or telephone call to notify a responsible person/property owner of a minor violation in order to seek an explanation, suggest corrective action or to notify the violator that subsequent violations of the same type will be dealt with more severely. Verbal warnings may be used to correct minor inadvertent noncompliance. A written record of the verbal warning shall be made in the form of a memorandum to the file, an on-site inspection form or a phone call log.

Notice of Violation – A written notice to the responsible person/property owner that the County has observed a violation of the Ordinance 75 and requesting a written explanation from the responsible party/parties. A Notice of Violation typically includes a statement regarding additional enforcement actions which may be taken if the responsible party/parties fail to make necessary corrections in a timely manner.

Penalties – Upon determination that a violation of the Ordinance 75 has occurred, including noncompliance for the correction and alleviation of the violation within the specified time frame, shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. Each day the noncompliance or violation is not corrected constitutes a separate violation.

B.1.3.1 Enforcement Actions

The process described below should be considered a progressive guideline that should be followed to the extent practicable. These guidelines can, and should, be modified when site-specific conditions warrant necessary changes. Public safety and welfare along with environmental protection will be the first priority in all situations and any enforcement mechanisms shall be escalated as necessary in order to mitigate potential damages.

Step 1 – Discovery and Verbal Warning

Upon determination that a violation of the Ordinance 75 may have occurred, the inspector shall attempt to discuss any potential violations with the responsible party and provide information on actions or activities that can help eliminate immediate concerns. This can often be addressed at the time of the inspection or site visit. There can be two potential positive outcomes:

1) The condition or activity can be addressed while the inspector remains onsite; or,

2) The responsible party/parties are given up to a maximum of two weeks to correct the non-compliance conditions or activities.

Under either condition, a follow-up inspection will be conducted to verify compliance. The facility and/or responsible party/parties will also remain subject to unscheduled inspections to verify ongoing compliance.

If, however, the situation is not resolved to the inspector's satisfaction, the inspector shall elevate the issue to their immediate supervisor to determine the appropriate follow-up action.

Step 2 – Enforcement

When the County determines that a violation has occurred and needs to be corrected, the Director of the Department of Engineering, or designee, shall issue a Notice of Violation and include the following details:

- The name and address of the owner or the applicant or the responsible person;
- The address or other description of the site upon which the violation is occurring;
- A statement specifying the nature of the violation;
- A description of the outstanding noncompliance issues with the permit, the Stormwater Management Plan, or Ordinance 75 and the date for the completion of such action;
- A statement of the penalty or penalties that may be assessed against the person whom the Notice of Violation is directed; and,
- A statement that the determination of violation may be appealed to the Department of Engineering by filing a written notice of appeal within 30 days after the NOV (except that in the event the violation constitutes an immediate danger to public health or safety, 24-hours-notice shall be sufficient). A violation of the article, including any noncompliance for correction or alleviation of violations specified in the Engineering Department's first notice within the specified time for the alleviation in the notice, shall constitute a misdemeanor. In the absence of a time specified for the correction, all violations must be corrected or alleviated as specified in the first notice within 30 days from the date of such notice. Failure to comply shall also constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. The maximum penalty and punishment for any single violation of the article may not exceed that provided for in O.C.G.A. § 36-1-20(b) as that subsection now provides or as it may be hereafter amended. Each day the noncompliance or violation is not corrected constitutes a separate violation.

Step 3 – Penalties

For any violation, any person violating the provisions of the article may be subject to the following penalties:

- A failure to comply with requirements to correct a violation shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.

- The maximum penalty and punishment for any single violation of the article may not exceed that provided for in O.C.G.A. § 36-1-20(b) as that subsection now provides or as it may be hereafter amended.

- Each day the noncompliance or violation is not corrected constitutes a separate violation.

- For flagrant violations of Ordinance 75, the Stormwater Department can request a citation through Code Enforcement to the applicant or other responsible person, requiring such person to appear in Forsyth County Magistrate Court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed $1,000 or imprisonment for 60 days or both.

B.1.3.2 Appeals

Any person aggrieved by a decision of the Director of Engineering Department, including any decision with reference to the granting or denial of a variance from the terms of the article, may appeal the decision by filing a written notice of appeal with the Director of the Engineering Department within seven days of the issuance of such decision. A notice of appeal shall state the specific reason why the decision of the Director is alleged to be in error.

If the Director of the Engineering Department does not reverse the decision, then the person may file an appeal in the Planning and Community Development Department to be heard by the Zoning Board of Appeals.

If the Zoning Board of Appeals does not reverse the decision, then the person may appeal to the Forsyth County Board of Commissioners. The hearing shall be held within the next two meetings of the Board of Commissioners or a date mutually agreed upon in writing by the appellant and the Chair of the County Board of Commissioners. The County Board of Commissioners shall then make its findings within 30 days of the appeal hearing. The appellant shall not be relieved of his obligations during the appeal process.

If the appellant is dissatisfied with the findings of the Board of Commissioners decision, the decision may then be appealed to the County Superior Court.

B.1.4 Appropriate Responses

The County shall take into consideration factors to determine the type of appropriate response. These factors include a determination of the magnitude of the problem, duration of noncompliance, effects on the State waters, effect on the MS4, compliance history of the violator, and good faith of the violator.

In a scenario in which a violation has occurred, the County will determine if this is an isolated incident and a phone call or a Notice of Violation sent to the violator/property owner may be sufficient notice. Severe violations would be addressed with immediate formal notice and severe enforcement actions. If a violation has occurred over a long period of time, enforcement actions will be escalated appropriately. If the violation has resulted in environmental harm and degradation to the water quality of State waters, then the County shall respond with severe enforcement action. If a violator has damaged the MS4 or has caused such an action that will require additional costs, the County may assess the recovery of these costs as part of the assessment of penalties against the violator. If a violator has not shown a reasonable and prompt response to a notice of a violation, this history shall be taken into account when assessing enforcement actions. The County may determine that the

violator/property owner has shown good faith in an attempt to correct or resolve the violation and in such cases, the level of enforcement response may be reduced.

B.1.5 Time Frames

Once the County has been notified of a violation, the County shall contact the violator/property owner immediately. The violator/property owner shall be notified to take steps to immediately stop any ongoing violation and ensure that such a violation will not again occur. The responsible party/parties may either immediately correct the violation, or if the violation does not constitute an immediate water quality risk, will be given a maximum of two weeks to correct the problem. Enforcement actions and a formal Notice of Violation may be issued within 5 business days of discovery of a violation. Penalties may be assessed once it is determined that the responsible party/parties have failed to correct the violation. Appeals shall follow the timeframes outlined in the Appeals section of Enforcement Actions (**Section A.1.3.2**).

B.1.6 Tracking

Forsyth County Department of Engineering will continue to maintain an electronic inventory of all stormwater structural controls and conveyance features in unincorporated Forsyth County. The compilation of the digital inventory started in May 2004 and has been essentially complete since 2008. The County will continue to track information pertaining to any violation of Ordinance 75 including:

- Name of owner/operator of facility and/or the location or address;
- Type of site;
- Description of noncompliance;
- Description of issuance of enforcement actions;
- Date of inspection and time frames for each enforcement action;
- Deadlines for violator returning to compliance;
- Documentation of inspection and enforcement actions taken;
- Documentation of referral to other departments or agencies;
- Date of violation resolution; and
- Any other pertinent information regarding the illicit or accidental discharge.

A record of all actions is necessary to determine a violator's compliance history or to show that the violator has shown honest intent to correct an instance of noncompliance.

All inventories are submitted to GAEPD, including information regarding MS4 inspections and violations, on an annual basis.

B.2 ERP – Industrial Facility Stormwater Runoff Control

B.2.1 Ordinances

Forsyth County adopted the District's model ordinance for Illicit Discharge and Illegal Connection in June 2004 (**Attachment 8**). Chapter 34, Article V Stormwater Management, of the Forsyth County Code of Ordinance provides the legal authority for stormwater management, definitions, and a description of the appeal/penalty processes. The Ordinance was designed to meet the following goals:

- Regulate the contribution of pollutants to the MS4 by any person.

- Prohibit illicit discharges and illegal connections to the MS4.
- Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the MS4.
- Establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this article.

Sections 34-185 and 34-186 of the Forsyth County Code of Ordinance established the Forsyth County Department of Engineering to have authority to administer and enforce all regulations and procedures adopted to implement the Stormwater Management Article. As per ordinance No. 75 § 6, 6-21-2004, the Department of Engineering can:

- Establish or oversee establishment of development standards and guidelines;
- Determine the manner in which stormwater facilities should be operated;
- Inspect private systems that discharge to the county separate storm sewer system;
- Advise other departments on issues related to stormwater;
- Protect facilities and properties controlled by the Department of Engineering and prescribe how they are used by others;
- Develop programs or procedures to control the discharge of pollutants into the county separate storm sewer system;
- Adopt and implement the stormwater management program for the County.

B.2.1.1 Definitions and Abbreviations

Accidental Discharge – a discharge prohibited by the Forsyth County Code of Ordinance into the County separate storm sewer system, which occurs by chance and without planning or consideration prior to occurrence

Best Management Practice (BMP) – a wide range of management procedures, activities, and prohibitions or practices which control the quality and/or quantity of stormwater runoff and which are compatible with the planned land use.

Civil Action – Civil litigation against the discharger seeking equitable relief, monetary penalties, damages.

Compliance Meeting – Formal meeting with the discharger to resolve noncompliance

Illicit Connection – A connection to the County's separate storm sewer system that is not composed entirely of stormwater runoff except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the County's separate storm sewer).

Notice of Violation (NOV) – A written notice of violation informs a person or business that a County rule, State Law, or permit condition has been violated. A NOV is issued when a violation is observed or discovered.

Municipal Separate Storm Sewer System (MS4) – A system of stormwater conveyance including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains, owned or operated by a municipality or other public body, designed or used for collecting or conveying stormwater runoff.

Outfall – The most downstream point on a municipal storm sewer system where it discharges to the waters of the State

Pollution – Contamination or other significant alteration of any water's physical, biological, or chemical properties, including change in temperature, taste, color, turbidity, or odor of such waters or the discharge of any liquid, gaseous, solid, radioactive, or other substance into such waters as will or is likely to render such waters harmful, detrimental or injurious to the public health, safety or welfare or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life.

Responsible Party or Potentially Responsible Party – Any individual or company, including owners, employees, operators, transporters, or generators, that have been found to be responsible or potentially responsible for, or contributing to, an illicit discharge through, or illegal connection to the MS4.

Stormwater (stormwater runoff) – the direct response of a land surface to precipitation and includes the surface and subsurface runoff that enters a stormwater conveyance system or other concentrated flow during and following a precipitation event.

Waters of the State – Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, wet weather streams, and all other bodies of surface or subsurface water, natural or artificial, lying within or forming part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

B.2.2 Identify Potential Violations

A variety of accidental and illicit violations may occur resulting in noncompliance of the permit. Instances of noncompliance include, but are not limited, to the examples found in **Table B-2**:

Table B-2. Common instances of non-compliances and responses related to industrial facility runoff control.

EXAMPLE OF NON-COMPLIANCE/VIOLATIONS	POSSIBLE RESPONSE	POSSIBLE TIME FRAME PROVIDED FOR CORRECTIONS
Illicit connection; e.g., industrial process water to storm system	Verbal warning or NOV to stop practice and remove line	Practice to stop immediately.
Discharging/dumping pollutants to the MS4: e.g. Paint, F.O.G, motor oil	Verbal warning or NOV to stop practice	Practice to stop immediately.

EXAMPLE OF NON-COMPLIANCE/VIOLATIONS	POSSIBLE RESPONSE	POSSIBLE TIME FRAME PROVIDED FOR CORRECTIONS
Vehicle wash water discharge into MS4	Verbal warning or NOV to stop practice	Practice to stop immediately.
Leaking Dumpster	Verbal warning or NOV to stop practice	Correct problem immediately
Exposed, leaking containers	Verbal warning or NOV to stop practice protect/ cover exposed containers and move with secondary containment	Practice to stop immediately.
Drain line discharge: hosing floors into MS4	Verbal warning or NOV to stop practice	Practice to stop immediately.

Each of these scenarios constitutes a violation of the permit and must be corrected immediately. A discharge to the MS4 may be comprised of a variety of pollutants including bacteria, sediment, nutrients, surfactants, fluoride, heavy metals, gasoline/petroleum products, pesticides/herbicides/fungicides, or other potential water quality pollutants.

B.2.3 Enforcement Mechanisms

This section describes the enforcement mechanisms available to the Director of the Engineering Department or designee and is consistent with the provisions of Sections 34-195 and 34-196 of Ordinance 75.

Verbal Warning – A notice consisting of a direct conversation or telephone call to notify a responsible person/property owner of a minor violation in order to seek an explanation, suggest corrective action or to notify the violator that subsequent violations of the same type will be dealt with more severely. Verbal warnings may be used to correct minor inadvertent noncompliance. A written record of the verbal warning shall be made in the form of a memorandum to the file, an on-site inspection form or a phone call log.

Notice of Violation – A written notice to the responsible person/property owner that the County has observed a violation of the Ordinance 75 and requesting a written explanation from the responsible party/parties. A Notice of Violation typically includes a statement regarding additional enforcement actions which may be taken if the responsible party/parties fail to make necessary corrections in a timely manner.

Penalties – Upon determination that a violation of the Ordinance 75 has occurred, including noncompliance for the correction and alleviation of the violation within the specified time frame, shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. Each day the noncompliance or violation is not corrected constitutes a separate violation.

B.2.3.1 Enforcement Actions

The process described below should be considered a progressive guideline that should be followed to the extent practicable. These guidelines can, and should, be modified when site-specific conditions warrant necessary changes. Public safety and welfare along with environmental protection will be the first priority in all situations and any enforcement mechanisms shall be escalated as necessary in order to mitigate potential damages.

Step 1 – Discovery and Verbal Warning

Upon determination that a violation of the Ordinance 75 may have occurred, the inspector shall attempt to discuss any potential violations with the responsible party and provide information on actions or activities that can help eliminate immediate concerns. This can often be addressed at the time of the inspection or site visit. There can be two potential positive outcomes:

3) The condition or activity can be addressed while the inspector remains onsite; or,

4) The responsible party/parties are given up to a maximum of two weeks to correct the non-compliance conditions or activities.

Under either condition, a follow-up inspection will be conducted to verify compliance. The facility and/or responsible party/parties will also remain subject to unscheduled inspections to verify ongoing compliance.

If, however, the situation is not resolved to the inspector's satisfaction, the inspector shall elevate the issue to their immediate supervisor to determine the appropriate follow-up action.

Step 2 – Enforcement

When the County determines that a violation has occurred and needs to be corrected, the Director of the Department of Engineering, or designee, shall issue a Notice of Violation and include the following details:

- The name and address of the owner or the applicant or the responsible person;
- The address or other description of the site upon which the violation is occurring;
- A statement specifying the nature of the violation;
- A description of the outstanding noncompliance issues with the permit, the Stormwater Management Plan, or Ordinance 75 and the date for the completion of such action;
- A statement of the penalty or penalties that may be assessed against the person whom the Notice of Violation is directed; and,
- A statement that the determination of violation may be appealed to the Department of Engineering by filing a written notice of appeal within 30 days after the NOV (except that in the event the violation constitutes an immediate danger to public health or safety, 24-hours-notice shall be sufficient). A violation of the article, including any noncompliance for correction or alleviation of violations specified in the Engineering Department's first notice within the

specified time for the alleviation in the notice, shall constitute a misdemeanor. In the absence of a time specified for the correction, all violations must be corrected or alleviated as specified in the first notice within 30 days from the date of such notice. Failure to comply shall also constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. The maximum penalty and punishment for any single violation of the article may not exceed that provided for in O.C.G.A. § 36-1-20(b) as that subsection now provides or as it may be hereafter amended. Each day the noncompliance or violation is not corrected constitutes a separate violation.

Step 3 – Penalties

For any violation, any person violating the provisions of the article may be subject to the following penalties:

- A failure to comply with requirements to correct a violation shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.
- The maximum penalty and punishment for any single violation of the article may not exceed that provided for in O.C.G.A. § 36-1-20(b) as that subsection now provides or as it may be hereafter amended.
- Each day the noncompliance or violation is not corrected constitutes a separate violation.
- For flagrant violations of Ordinance 75, the Stormwater Department can request a citation through Code Enforcement to the applicant or other responsible person, requiring such person to appear in Forsyth County Magistrate Court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed $1,000 or imprisonment for 60 days or both.

B.2.3.2 Appeals

Any person aggrieved by a decision of the Director of Engineering Department, including any decision with reference to the granting or denial of a variance from the terms of the article, may appeal the decision by filing a written notice of appeal with the Director of the Engineering Department within seven days of the issuance of such decision. A notice of appeal shall state the specific reason why the decision of the Director is alleged to be in error.

If the Director of the Engineering Department does not reverse the decision, then the person may file an appeal in the Planning and Community Development Department to be heard by the Zoning Board of Appeals.

If the Zoning Board of Appeals does not reverse the decision, then the person may appeal to the Forsyth County Board of Commissioners. The hearing shall be held within the next two meetings of the Board of Commissioners or a date mutually agreed upon in writing by the appellant and the Chair of the County Board of Commissioners. The County Board of Commissioners shall then make its findings within 30 days of the appeal hearing. The appellant shall not be relieved of his obligations during the appeal process.

If the appellant is dissatisfied with the findings of the Board of Commissioners decision, the decision may then be appealed to the County Superior Court.

B.2.4 Appropriate Responses

The County shall take into consideration factors to determine the type of appropriate response. These factors include a determination of the magnitude of the problem, duration of noncompliance, effects on the State waters, effect on the MS4, compliance history of the violator, and good faith of the violator.

In a scenario in which a violation has occurred, the County will determine if this is an isolated incident and a phone call or a Notice of Violation sent to the violator/property owner may be sufficient notice. Severe violations would be addressed with immediate formal notice and severe enforcement actions. If a violation has occurred over a long period of time, enforcement actions will be escalated appropriately. If the violation has resulted in environmental harm and degradation to the water quality of State waters, then the County shall respond with severe enforcement action. If a violator has damaged the MS4 or has caused such an action that will require additional costs, the County may assess the recovery of these costs as part of the assessment of penalties against the violator. If a violator has not shown a reasonable and prompt response to a notice of a violation, this history shall be taken into account when assessing enforcement actions. The County may determine that the violator/property owner has shown good faith in an attempt to correct or resolve the violation and in such cases, the level of enforcement response may be reduced.

B.2.5 Time Frames

Once the County has been notified of a violation, the County shall contact the violator/property owner immediately. The violator/property owner shall be notified to take steps to immediately stop any ongoing violation and ensure that such a violation will not again occur. The responsible party/parties may either immediately correct the violation, or if the violation does not constitute an immediate water quality risk, will be given a maximum of two weeks to correct the problem. Enforcement actions and a formal Notice of Violation may be issued within 5 business days of discovery of a violation. Penalties may be assessed once it is determined that the responsible party/parties have failed to correct the violation. Appeals shall follow the timeframes outlined in the Appeals section of Enforcement Actions (**Section A.1.3.2**).

B.2.6 Tracking

Forsyth County Department of Engineering maintain an electronic inventory of industrial sites subject to stormwater inspection. The County will continue to track information pertaining to any violation of Ordinance 75 including:

- Name of owner/operator of facility and/or the location or address;
- Type of site;
- Dates of inspection;
- Description of noncompliance
- Description of enforcement actions issued;
- Time frames for each enforcement action and deadlines for a violator returning to compliance;
- Documentation of inspection and enforcement actions taken;
- Documentation of referral to other departments or agencies; and
- Date of violation resolution; and,
- Any other pertinent information regarding the illicit or accidental discharge.

A record of all actions is necessary to determine a violator's compliance history or to show that the violator has shown honest intent to correct an instance of noncompliance. All inventories are submitted to GAEPD, including information regarding MS4 inspections and violations, on an annual basis.

B.3 ERP – HVPS

B.3.1 Ordinances

Forsyth County adopted the District's model ordinance for Illicit Discharge and Illegal Connection in June 2004 (**Attachment 8**). Chapter 34, Article V Stormwater Management, of the Forsyth County Code of Ordinance provides the legal authority for stormwater management, definitions, and a description of the appeal/penalty processes. The Ordinance was designed to meet the following goals:

- Regulate the contribution of pollutants to the MS4 by any person.
- Prohibit illicit discharges and illegal connections to the MS4.
- Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the MS4.
- Establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this article.

Sections 34-185 and 34-186 of the Forsyth County Code of Ordinance established the Forsyth County Department of Engineering to have authority to administer and enforce all regulations and procedures adopted to implement the Stormwater Management Article. As per ordinance No. 75 § 6, 6-21-2004, the Department of Engineering can:

- Establish or oversee establishment of development standards and guidelines;
- Determine the manner in which stormwater facilities should be operated;
- Inspect private systems that discharge to the county separate storm sewer system;
- Advise other departments on issues related to stormwater;
- Protect facilities and properties controlled by the Department of Engineering and prescribe how they are used by others;
- Develop programs or procedures to control the discharge of pollutants into the county separate storm sewer system;
- Adopt and implement the stormwater management program for the County.

B.3.1.1 Definitions and Abbreviations

Accidental Discharge – a discharge prohibited by the Forsyth County Code of Ordinance into the County separate storm sewer system, which occurs by chance and without planning or consideration prior to occurrence

Best Management Practice (BMP) – a wide range of management procedures, activities, and prohibitions or practices which control the quality and/or quantity of stormwater runoff and which are compatible with the planned land use.

Civil Action – Civil litigation against the discharger seeking equitable relief, monetary penalties, damages.

Compliance Meeting – Formal meeting with the discharger to resolve noncompliance

Illicit Connection – A connection to the County's separate storm sewer system that is not composed entirely of stormwater runoff except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the County's separate storm sewer).

Notice of Violation (NOV) – A written notice of violation informs a person or business that a County rule, State Law, or permit condition has been violated. A NOV is issued when a violation is observed or discovered.

Municipal Separate Storm Sewer System (MS4) – A system of stormwater conveyance including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains, owned or operated by a municipality or other public body, designed or used for collecting or conveying stormwater runoff.

Outfall – The most downstream point on a municipal storm sewer system where it discharges to the waters of the State

Pollution – Contamination or other significant alteration of any water's physical, biological, or chemical properties, including change in temperature, taste, color, turbidity, or odor of such waters or the discharge of any liquid, gaseous, solid, radioactive, or other substance into such waters as will or is likely to render such waters harmful, detrimental or injurious to the public health, safety or welfare or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life.

Responsible Party or Potentially Responsible Party – Any individual or company, including owners, employees, operators, transporters, or generators, that have been found to be responsible or potentially responsible for, or contributing to, an illicit discharge through, or illegal connection to the MS4.

Stormwater (stormwater runoff) – the direct response of a land surface to precipitation and includes the surface and subsurface runoff that enters a stormwater conveyance system or other concentrated flow during and following a precipitation event.

Waters of the State – Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, wet weather streams, and all other bodies of surface or subsurface water, natural or artificial, lying within or forming part of the boundaries of the State which

are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

B.3.2 Identify Potential Violations

A variety of accidental and illicit violations may occur resulting in noncompliance of the permit. Instances of noncompliance include, but are not limited, to the examples found in **Table B-3**.

Table B-3. Common instances of non-compliances and responses related to HVPS.

EXAMPLE OF NON-COMPLIANCE/VIOLATIONS	POSSIBLE RESPONSE	POSSIBLE TIME FRAME PROVIDED FOR CORRECTIONS
Illicit connection; e.g., process water to storm system	Verbal warning or NOV to stop practice and remove line	Practice to stop immediately.
Discharging/dumping pollutants to the MS4: e.g. Paint, F.O.G, motor oil	Verbal warning or NOV to stop practice	Practice to stop immediately.
Vehicle wash water discharge into MS4	Verbal warning or NOV to stop practice	Practice to stop immediately.
Leaking Dumpster	Verbal warning or NOV to stop practice	Correct problem immediately
Exposed, leaking containers	Verbal warning or NOV to stop practice protect/ cover exposed containers and move with secondary containment	Practice to stop immediately.
Drain line discharge: hosing floors, garages, wash areas into MS4	Verbal warning or NOV to stop practice	Practice to stop immediately.
Discharging/dumping pollutants to the MS4: e.g. grass clippings, landscaping materials, fill dirt	Verbal warning or NOV to stop practice	Practice to stop immediately.

Each of these scenarios constitutes a violation of the permit and must be corrected immediately. A discharge to the MS4 may be comprised of a variety of pollutants including bacteria, sediment, nutrients, surfactants, fluoride, heavy metals, gasoline/petroleum products, pesticides/herbicides/fungicides, or other potential water quality pollutants.

B.3.3 Enforcement Mechanisms

This section describes the enforcement mechanisms available to the Director of the Engineering Department or designee and is consistent with the provisions of Sections 34-195 and 34-196 of Ordinance 75.

Verbal Warning – A notice consisting of a direct conversation or telephone call to notify a responsible person/property owner of a minor violation in order to seek an explanation, suggest corrective action or to notify the violator that subsequent violations of the same type will be dealt with more severely. Verbal warnings may be used to correct minor inadvertent noncompliance. A written record of the verbal warning shall be made in the form of a memorandum to the file, an on-site inspection form or a phone call log.

Notice of Violation – A written notice to the responsible person/property owner that the County has observed a violation of the Ordinance 75 and requesting a written explanation from the responsible party/parties. A Notice of Violation typically includes a statement regarding additional enforcement actions which may be taken if the responsible party/parties fail to make necessary corrections in a timely manner.

Penalties – Upon determination that a violation of the Ordinance 75 has occurred, including noncompliance for the correction and alleviation of the violation within the specified time frame, shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. Each day the noncompliance or violation is not corrected constitutes a separate violation.

B.3.3.1 Enforcement Actions

The process described below should be considered a progressive guideline that should be followed to the extent practicable. These guidelines can, and should, be modified when site-specific conditions warrant necessary changes. Public safety and welfare along with environmental protection will be the first priority in all situations and any enforcement mechanisms shall be escalated as necessary in order to mitigate potential damages.

Step 1 – Discovery and Verbal Warning

Upon determination that a violation of the Ordinance 75 may have occurred, the inspector shall attempt to discuss any potential violations with the responsible party and provide information on actions or activities that can help eliminate immediate concerns. This can often be addressed at the time of the inspection or site visit. There can be two potential positive outcomes:

1) The condition or activity can be addressed while the inspector remains onsite; or,

2) The responsible party/parties are given up to a maximum of two weeks to correct the non-compliance conditions or activities.

Under either condition, a follow-up inspection will be conducted to verify compliance. The facility and/or responsible party/parties will also remain subject to unscheduled inspections to verify ongoing compliance.

If, however, the situation is not resolved to the inspector's satisfaction, the inspector shall elevate the issue to their immediate supervisor to determine the appropriate follow-up action.

Step 2 – Enforcement

When the County determines that a violation has occurred and needs to be corrected, the Director of the Department of Engineering, or designee, shall issue a Notice of Violation and include the following details:

- The name and address of the owner or the applicant or the responsible person;
- The address or other description of the site upon which the violation is occurring;
- A statement specifying the nature of the violation;
- A description of the outstanding noncompliance issues with the permit, the Stormwater Management Plan, or Ordinance 75 and the date for the completion of such action;
- A statement of the penalty or penalties that may be assessed against the person whom the Notice of Violation is directed; and,
- A statement that the determination of violation may be appealed to the Department of Engineering by filing a written notice of appeal within 30 days after the NOV (except that in the event the violation constitutes an immediate danger to public health or safety, 24-hours-notice shall be sufficient). A violation of the article, including any noncompliance for correction or alleviation of violations specified in the Engineering Department's first notice within the specified time for the alleviation in the notice, shall constitute a misdemeanor. In the absence of a time specified for the correction, all violations must be corrected or alleviated as specified in the first notice within 30 days from the date of such notice. Failure to comply shall also constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. The maximum penalty and punishment for any single violation of the article may not exceed that provided for in O.C.G.A. § 36-1-20(b) as that subsection now provides or as it may be hereafter amended. Each day the noncompliance or violation is not corrected constitutes a separate violation.

Step 3 – Penalties

For any violation, any person violating the provisions of the article may be subject to the following penalties:

- A failure to comply with requirements to correct a violation shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.
- The maximum penalty and punishment for any single violation of the article may not exceed that provided for in O.C.G.A. § 36-1-20(b) as that subsection now provides or as it may be hereafter amended.
- Each day the noncompliance or violation is not corrected constitutes a separate violation.

- For flagrant violations of Ordinance 75, the Stormwater Department can request a citation through Code Enforcement to the applicant or other responsible person, requiring such person to appear in Forsyth County Magistrate Court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed $1,000 or imprisonment for 60 days or both.

B.3.3.2 Appeals

Any person aggrieved by a decision of the Director of Engineering Department, including any decision with reference to the granting or denial of a variance from the terms of the article, may appeal the decision by filing a written notice of appeal with the Director of the Engineering Department within seven days of the issuance of such decision. A notice of appeal shall state the specific reason why the decision of the Director is alleged to be in error.

If the Director of the Engineering Department does not reverse the decision, then the person may file an appeal in the Planning and Community Development Department to be heard by the Zoning Board of Appeals.

If the Zoning Board of Appeals does not reverse the decision, then the person may appeal to the Forsyth County Board of Commissioners. The hearing shall be held within the next two meetings of the Board of Commissioners or a date mutually agreed upon in writing by the appellant and the Chair of the County Board of Commissioners. The County Board of Commissioners shall then make its findings within 30 days of the appeal hearing. The appellant shall not be relieved of his obligations during the appeal process.

If the appellant is dissatisfied with the findings of the Board of Commissioners decision, the decision may then be appealed to the County Superior Court.

B.3.4 Appropriate Responses

The County shall take into consideration factors to determine the type of appropriate response. These factors include a determination of the magnitude of the problem, duration of noncompliance, effects on the State waters, effect on the MS4, compliance history of the violator, and good faith of the violator.

In a scenario in which a violation has occurred, the County will determine if this is an isolated incident and a phone call or a Notice of Violation sent to the violator/property owner may be sufficient notice. Severe violations would be addressed with immediate formal notice and severe enforcement actions. If a violation has occurred over a long period of time, enforcement actions will be escalated appropriately. If the violation has resulted in environmental harm and degradation to the water quality of State waters, then the County shall respond with severe enforcement action. If a violator has damaged the MS4 or has caused such an action that will require additional costs, the County may assess the recovery of these costs as part of the assessment of penalties against the violator. If a violator has not shown a reasonable and prompt response to a notice of a violation, this history shall be taken into account when assessing enforcement actions. The County may determine that the violator/property owner has shown good faith in an attempt to correct or resolve the violation and in such cases, the level of enforcement response may be reduced.

B.3.5 Time Frames

Once the County has been notified of a violation, the County shall contact the violator/property owner immediately. The violator/property owner shall be notified to take steps to immediately stop any ongoing violation and ensure that such a violation will not again occur. The responsible party/parties may either immediately correct the violation, or if the violation does not constitute an immediate water quality risk, will be given a maximum of two weeks to correct the problem. Enforcement actions and a formal Notice of Violation may be issued within 5 business days of discovery of a violation. Penalties may be assessed once it is determined that the responsible party/parties have failed to correct the violation. Appeals shall follow the timeframes outlined in the Appeals section of Enforcement Actions (**Section A.1.3.2**).

B.3.6 Tracking

Forsyth County Department of Engineering maintains an electronic inventory of HVPS sites subject to stormwater inspection. The County will continue to track information pertaining to any violation of Ordinance 75 including:

- Name of owner/operator of facility and/or the location or address;
- Type of site;
- Dates of inspection;
- Description of noncompliance
- Description of enforcement actions issued;
- Time frames for each enforcement action and deadlines for a violator returning to compliance;
- Documentation of inspection and enforcement actions taken;
- Documentation of referral to other departments or agencies; and
- Date of violation resolution; and,
- Any other pertinent information regarding the illicit or accidental discharge.

A record of all actions is necessary to determine a violator's compliance history or to show that the violator has shown honest intent to correct an instance of noncompliance. All inventories are submitted to GAEPD, including information regarding MS4 inspections and violations, on an annual basis.

B.4 ERP – Construction Site Management

B.4.1 Ordinances

Forsyth County's soil erosion and sedimentation control policies are included in Ordinance No. 73 (also known as Chapter 34, Article II of the County Code of Ordinances). The latest version of the ordinance, adopted in December 2016, is entitled the Forsyth County Soil Erosion and Sedimentation Control Ordinance No. 73 (**Attachment 9)**. It references the current state law and has been revised to include requirements for additional sedimentation and erosion control and stormwater management. Specific changes included requirements for additional sedimentation and erosion control on new development sites, additional stormwater BMPs for water quality improvement and stream channel protection and limiting clearing of natural vegetation and re-establishing permanent vegetation.

B.4.2 Identify Potential Violations

A variety of accidental and illicit violations may occur resulting in noncompliance of the permit. Instances of noncompliance include, but are not limited, to the examples found in **Table B-4**. The identification of potential violations is discussed in **Section A.1.2**.

Table B-4. Common instances of non-compliances and responses related to construction site management.

EXAMPLE OF NON-COMPLIANCE/VIOLATIONS	POSSIBLE RESPONSE	TIME FRAME PROVIDED FOR CORRECTIONS
Use of BMP not approved on the E&S Plan: e.g. wrong sediment barrier	Verbal Warning or NTC: install appropriate BMP	5 days immediate health and safety threat must be immediately corrected
Disturbing land without a permit or a riparian buffer variance	NOV and STOP WORK order	5 days Violator to take remedial actions to protect disturbed area and file for permits
Required number of BMPs not installed	NOV and STOP WORK order	5 days immediate health and safety threat must be immediately corrected
BMPs not properly designed, installed or maintained (e.g., Silt fence no longer functional, Site lacking stabilization)	NOV and STOP WORK order	5 days immediate health and safety threat must be immediately corrected
Sediment on the road	NOV or NTC	5 days immediate health and safety threat must be immediately corrected
Significant amount of sediment discharged into state waters	NOV and STOP WORK order.	5 days immediate health and safety threat must be immediately corrected
Minor inadvertent noncompliance	Verbal Warning to address noncompliance	5 days

B.4.3 Enforcement Mechanisms

This section describes the enforcement mechanisms available to the Director of the Engineering Department or designee and is consistent with the provisions of Sections 34-195 and 34-196 of the Forsyth County Ordinance No. 73.

Verbal Warning – A notice consisting of a direct conversation or telephone call to notify the responsible person/property owner of a minor violation in order to seek an explanation, suggest corrective action or to notify the violator that subsequent violations of the same type will be dealt with more severely. Verbal warnings may be used to correct minor inadvertent noncompliance. A written record of the verbal warning shall be made in the form of a memorandum to the file, an on-site inspection form or a phone call log.

Notice to Comply - Any person in violation of an Ordinance No. 73 provision will be given a Notice to Comply and 5 days to correct the issue(s) of noncompliance unless there is an immediate health and safety threat in which case the violation must be immediately corrected. If within the five days, the issue has not been corrected, a second Notice of Comply will be issued and the corrective action should take place within five additional days. If the issue has not been corrected after a second Notice to Comply has been issued, a Stop Work Order may be issued until correction. However, if the issue is deemed an imminent threat to State waters, Forsyth County has the authority to issue an immediate stop work order in lieu of a notice to comply. For a third, and each subsequent failure to comply, an immediate stop work order is issued. All stop work orders are effective upon their issuance and stay in effect until the corrective action and/or any mitigation has taken place and all fines have been paid.

Additional administrative penalties, bond forfeiture, and monetary penalties, such as civil fines issued by a magistrate court, are discussed in the County's ordinance No. 73 in detail.

Notice of Violation – A written notice to the responsible person/property owner that the County has observed a violation of Ordinance No. 73. A Notice of Violation typically includes a statement regarding additional enforcement actions which may be taken if the responsible party/parties fail to make necessary corrections in a timely manner.

Stop Work Order – A written communication by the County to the owner, operator, or person conducting land disturbance. A Stop Work Order is issued on sites where repeat violations of the Erosion and Sedimentation Ordinance No. 73 occur or when violations warrant immediate attention. The following conditions warrant an immediate Stop Work Order:

- Working without a permit
- Imminent threat to public health or waters of the State
- Significant amounts of sediment discharged into State waters
- Conducting land disturbance in a State waters buffer without a variance
- Best Management Practices not properly designed, installed, and maintained

Penalties – Upon determination that a violation of Ordinance No. 73 has occurred, including noncompliance for the correction and alleviation of the violation within the specified time frame, shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000

(depending on severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. Each day the noncompliance or violation is not corrected constitutes a separate violation.

Administration and enforcement of E&SC activities in Forsyth County are in accordance with the Erosion and Sedimentation Act of 1975, O.C.G.A. 12-7-1 et seq.; the Executive Reorganization Act of 1972, O.C.G.A. 12-2-1 et seq., and the Georgia Administrative Procedure Act, O.C.G.A. 50-13-1 et seq., all as amended, but also includes the authority to require corrective action and/or remediation of conditions creating adverse water quality impacts, or otherwise in violation of these rules, regulations and authorizing statutes.

In addition to the state enforcement requirements, the developer may be required to submit a Soil Erosion and Sedimentation Control Bond to ensure that BMPs are properly installed and maintained at newly developed or redeveloped sites (**Attachment 10**). If a land disturbance permit is not obtained prior to land disturbing activities, the property and the person can be subject to an immediate stop work order, revocation of their business license, work permit, and/or an administrative fine of $1,000.

B.4.4 Appropriate Responses and Time Frames

Any person in violation of an Ordinance No. 73 provision will be given a Notice to Comply (**Attachment 2**) and 5 days to correct the issue(s) of noncompliance unless there is an immediate health and safety threat in which case the violation must be immediately corrected. If within the five days, the issue has not been corrected, a second Notice of Comply will be issued and the corrective action should take place within five additional days. If the issue has not been corrected after a second Notice to Comply has been issued, a Stop Work Order may be issued until correction. However, if the issue is deemed an imminent threat to State waters, Forsyth County has the authority to issue an immediate stop work order in lieu of a notice to comply. For a third, and each subsequent failure to comply, an immediate stop work order is issued. All stop work orders are effective upon their issuance and stay in effect until the corrective action and/or any mitigation has taken place and all fines have been paid.

Additional administrative penalties, bond forfeiture, and monetary penalties, such as civil fines issued by a magistrate court, are discussed in the County's ordinance No. 73 in detail.

B.4.5 Tracking

The County currently has 6 certified Erosion and Sedimentation (E&S) Control Inspectors in addition to one dedicated E&S Supervisor in the Engineering Department who are responsible for completing field reports for all site inspections. The Department also has both a Stormwater Supervisor and Stormwater Technicians that can assist when it comes to E&S. The County uses the DMS created in 2015 to monitor and track site reviews and inspections. Through this system, inspections are tracked to assure that site visits are conducted in a timely and thorough manner. Warning and stop work notices are handled outside of the DMS but are tracked by the Engineering Department.
Information tacked through the DMS system includes:

- Name of owner/operator of facility and/or the location or address;
- Type of site (IDDE, construction, industrial, HVPS, etc.);
- Description of noncompliance;
- Description of enforcement action(s) used;
- Time frames for each step of enforcement action;

- Documentation of inspection and enforcement actions taken;
- Documentation of referral to other departments or agencies; and
- Date of violation resolution.

An order of precedence has been established whereby the most urgent cases are handled first. Therefore, complaints filed with the Engineering Department receive priority. Commercial and industrial developments or any other site for which a Land Disturbance Permit (LDP) was issued are inspected on a weekly basis. Residential and single-family sites for which an LDP was issued are also inspected once a week. Individual lots with building permits, but do not require a LDP, are inspected once every 2 weeks. The LDP is issued at a pre-construction conference with the Engineering Department, which is responsible for inspection of the development site.

B.5 ERP Post-Construction Stormwater and GI/LID

B.5.1 Ordinances

Forsyth County's stormwater control policies are included in Ordinance No. 75 (also known as Chapter 34, Article V of the County Code of Ordinances). The latest version of the ordinance, adopted in June 2004, is entitled the Forsyth County Stormwater Management Ordinance No. 75 (**Attachment 12)**. It references the current state law and has been revised to include requirements for additional stormwater management. Specific changes included requirements for additional stormwater BMPs for water quality improvement and stream channel protection and limiting clearing of natural vegetation and re-establishing permanent vegetation.

B.5.2 Identify Potential Violations

A variety of accidental and illicit violations may occur resulting in noncompliance of the permit. Instances of noncompliance include, but are not limited, to the examples found in **Table B-5**.

Table B-5. Common instances of non-compliances and responses related to post-construction stormwater and GI/LID.

EXAMPLE NON-COMPLIANCE/VIOLATIONS	POSSIBLE RESPONSE	TIME FRAME PROVIDED FOR CORRECTIONS
BMPs not built to specification	Verbal Warning of NTC to correct BMP to Specifications	5 days immediate health and safety threat must be immediately corrected
Wrong type of drainage materials outside the approved plans	Verbal Warning to provide materials specified in approved plans	5 days immediate health and safety threat must be immediately corrected
Failure to submit as- built plans or final plats	Verbal Warning to submit plans or plats	5 days

EXAMPLE NON-COMPLIANCE/VIOLATIONS	POSSIBLE RESPONSE	TIME FRAME PROVIDED FOR CORRECTIONS
Lack of Maintenance/Violation of Maintenance Agreement	Verbal Warning NTC or NOV, depending on severity	5 days immediate health and safety threat must be immediately corrected
Failure to Notify of accidental discharge to stormwater system	NTC or NOV	5 days Violator to take remedial actions to protect disturbed area and file for permits
Use of BMP not approved on the Plan	Verbal Warning or NTC: install appropriate BMPs	5 days immediate health and safety threat must be immediately corrected
Disturbing land without a permit or a riparian buffer variance or disturbing land outside permitted areas	NOV and STOP WORK order	5 days Violator to take remedial actions to protect disturbed area and file for permits
Required number of BMPs not installed	NOV and STOP WORK order	5 days immediate health and safety threat must be immediately corrected
BMPs not properly designed, installed or maintained	NOV and STOP WORK order	5 days immediate health and safety threat must be immediately corrected

B.5.3 Enforcement Mechanisms

This section describes the enforcement mechanisms available to the Director of the Engineering Department or designee and is consistent with the provisions of Ordinance 75 or Chapter 34, Article V of the County Code of Ordinances

Verbal Warning – A notice consisting of a direct conversation or telephone call to notify the responsible person/property owner of a minor violation in order to seek an explanation, suggest corrective action or to notify the violator that subsequent violations of the same type will be dealt with more severely. Verbal warnings may be used to correct minor inadvertent noncompliance. A written record of the verbal warning shall be made in the form of a memorandum to the file, an on-site inspection form or a phone call log.

Notice to Comply - Any person in violation of an Ordinance No. 75 provision will be given a Notice to Comply and 5 days to correct the issue(s) of noncompliance unless there is an immediate health and

safety threat in which case the violation must be immediately corrected. If within the five days, the issue has not been corrected, a second Notice of Comply will be issued and the corrective action should take place within five additional days. If the issue has not been corrected after a second Notice to Comply has been issued, a Stop Work Order may be issued until correction. However, if the issue is deemed an imminent threat to State waters, Forsyth County has the authority to issue an immediate stop work order in lieu of a notice to comply. For a third, and each subsequent failure to comply, an immediate stop work order is issued. All stop work orders are effective upon their issuance and stay in effect until the corrective action and/or any mitigation has taken place and all fines have been paid.

Additional administrative penalties, bond forfeiture, and monetary penalties, such as civil fines issued by a magistrate court, are discussed in the County's ordinance No. 73 in detail.

Notice of Violation – A written notice to the responsible person/property owner that the County has observed a violation of Ordinance No. 75. A Notice of Violation typically includes a statement regarding additional enforcement actions which may be taken if the responsible party/parties fail to make necessary corrections in a timely manner.

Stop Work Order – A written communication by the County to the owner, operator, or person conducting land disturbance. A Stop Work Order is issued on sites where repeat violations of the Erosion and Sedimentation Ordinance No. 75 occur or when violations warrant immediate attention. The following conditions warrant an immediate Stop Work Order:

- Working without a permit
- Imminent threat to public health or waters of the State
- Significant amounts of sediment discharged into State waters
- Conducting land disturbance in a State waters buffer without a variance
- Best Management Practices not properly designed, installed, and maintained

Penalties – Upon determination that a violation of Ordinance No. 75 has occurred, including noncompliance for the correction and alleviation of the violation within the specified time frame, shall constitute a misdemeanor and Forsyth County may impose a penalty not to exceed $1,000 (depending on severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation. Each day the noncompliance or violation is not corrected constitutes a separate violation.

For flagrant violations of Ordinance 75, the Stormwater Department can request a citation through Code Enforcement to the applicant or other responsible person, requiring such person to appear in Forsyth County Magistrate Court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed $1,000 or imprisonment for 60 days or both. The County may institute appropriate action or proceedings at law or equity for the enforcement of or to correct violations. Any court of competent jurisdiction may have the right to issue restraining orders, temporary or permanent injunctions, and other appropriate forms of remedy or relief.

Administration and enforcement of stormwater activities in Forsyth County are in accordance with the Executive Reorganization Act of 1972, O.C.G.A. 12-2-1 et seq., and the Georgia Administrative Procedure Act, O.C.G.A. 50-13-1 et seq., all as amended, but also includes the authority to require

corrective action and/or remediation of conditions creating adverse water quality impacts, or otherwise in violation of these rules, regulations and authorizing statutes.

B.5.4 Appropriate Responses and Time Frames

Any person in violation of an Ordinance No. 75 provision will be given a Notice to Comply and 5 days to correct the issue(s) of noncompliance unless there is an immediate health and safety threat in which case the violation must be immediately corrected. If within the five days, the issue has not been corrected, a second Notice of Comply will be issued and the corrective action should take place within five additional days. If the issue has not been corrected after a second Notice to Comply has been issued, a Stop Work Order may be issued until correction. However, if the issue is deemed an imminent threat to State waters, Forsyth County has the authority to issue an immediate stop work order in lieu of a notice to comply. For a third, and each subsequent failure to comply, an immediate stop work order is issued. All stop work orders are effective upon their issuance and stay in effect until the corrective action and/or any mitigation has taken place and all fines have been paid.

Additional administrative penalties, bond forfeiture, and monetary penalties, such as civil fines issued by a magistrate court, are discussed in the County's ordinance No. 75 in detail.

The County is responsible for inspecting stormwater structures located on both public and private property and for ensuring maintenance of public structures. Maintenance for privately owned infrastructure is carried out by the private land owner.

B.5.5 Tracking

The Department also has both a Stormwater Supervisor and Stormwater Technicians responsible for inspections of stormwater and GI/LID structures. For each inspection and enforcement action, the following information is noted and tracked:

- Name of owner/operator of facility and/or the location or address;
- Type of site;
- Description of noncompliance;
- Description of enforcement action(s) used;
- Time frames for each step of enforcement action;
- Documentation of inspection and enforcement actions taken;
- Documentation of referral to other departments or agencies; and
- Date of violation resolution.

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Appendix C. Impaired Waterbodies Monitoring and Implementation Plan

GAEPD identifies stream segments in Georgia's Integrated 305(b)/303(d) Report in accordance with Section 305(b) of the Clean Water Act. Section 305(b) requires states to monitor and report water quality conditions biannually. The 305(b)/303(d) Report provides an assessment of surface water quality by listing streams as either "supporting" or "not supporting" a designated use and, for waters not supporting a designated use, identifying the criterion exceeded and potential causes of impairment. The 305(b)/303(d) Report places waters into one of five categories, which indicate the development status of a TMDL by GAEPD. A TMDL is the amount of a pollutant which can be introduced to a stream without causing the stream to violate its designated use.

C.1 Identifying Impaired Waters and Mapping

Table C-1 summarizes the Forsyth County streams identified as not supporting the referenced designated use, based on Georgia's Draft 2016 Integrated 305(b)/303(d) Report (GAEPD, 2016), and the stream segments are shown in **Figure C-1**, **Figure C-2**, and included as individual watershed maps in **Attachment 15**.

Seventeen stream segments were listed on the report as not meeting their designated uses due to violations of one or more criteria. These included:

- 11 are listed for violating fecal coliform standards due to nonpoint sources of pollution and urban runoff.
- Six were listed for violating State biological standards for impacted fish communities.
- Two were listed for violating State biological standards for impacted macroinvertebrates.
- Johns Creek and Six Mile Creek were listed for violating standards for both fecal coliform and impacted fish communities.

For the stream segments on the 303(d) list, the U.S. Clean Water Act requires a TMDL be developed for each pollutant. GAEPD is in charge of developing segment-specific TMDLs, or the maximum amount of a pollutant which can be introduced to a stream without causing it to not meet a designated use. TMDLs estimate the sum of the individual waste load allocations from point sources, waste load allocations from stormwater runoff associated with MS4s, and load allocations from nonpoint sources, as well as natural background (40 CFR 130.2) for a given water body. The TMDL must also include a margin of safety (MOS), either implicitly or explicitly, that accounts for the uncertainty in the relationship between pollutant loads and the water quality response of the receiving waterbody. TMDLs have been developed for all Forsyth County stream segments on the 303(d) List, with the exception of Haw Creek. In 2015, TMDLs were drafted for Thalley Creek and Yellow Creek, which are listed for impacted fish communities and were recently added to the 2012 Draft Integrated 305(b)/303(d) Report. **Table C-1** summarizes TMDLs developed for Forsyth County streams.

Table C-1. Forsyth County Streams Included on Georgia's Integrated 2016 305(b)/303(d) Report

Stream Name/ Location	Water Use Classification	Criterion Violated[a]	Evaluated Causes[b]	Stream Miles	Category[c]	TMDL[d]
Chattahoochee River Basin						
Big Creek - Headwaters to Cheatham Creek	Fishing	FC	UR	3	4a	FC 2003 (revised 2008); Cu 2003
Fourmile Creek - Lake Lanier Tributary	Fishing	FC	NP	3	4a	FC 1998
Haw Creek – Headwaters to Chattahoochee River	Fishing	Bio F	NP, UR	3	5	Bio F Priority 2017
James Creek - Daves Creek to the Chattahoochee River	Fishing	FC	NP, UR	2	4a	FC 1998
Johns Creek – Headwaters to Chattahoochee River	Fishing	Bio F, FC	UR	4	4a, 5	FC 2003 (revised 2008)
Kelly Mill Branch – Headwaters to Orr Creek	Fishing	FC	UR	2	4a	FC 2003 (revised 2008)
Orr Creek - Upstream of Castleberry Rd. (Tyson Foods) to Big Creek[e]	Fishing	FC	UR	3	4a	FC 2003 (revised 2008); Cu 2003
Sawnee Creek - Lake Lanier Tributary	Fishing	FC	NP	2	4a	FC 1998
Six Mile Creek - Headwaters to Lake Lanier	Fishing	FC, Bio F	UR, NP	2	4a	FC 1998; Bio F 2008
Taylor Creek - Headwaters to Lake Lanier	Fishing	FC	NP	3	4a	FC 1998
Two Mile Creek - Headwaters to Lake Lanier	Fishing	FC	NP	5	4a	FC 1998
Chattahoochee River – Dicks Creek to Johns Creek	Recreation / Drinking Water	FC	UR	12	5	N/A
Coosa River Basin						
Bannister Creek - Reservoir #4 to Etowah River	Fishing	Bio M	NP	2	4a	Bio M 2004
Settingdown Creek - Squattingdown Creek to Thalley Creek	Fishing	Bio F	NP	3	4a	Bio F 2009

Stream Name/ Location	Water Use Classification	Criterion Violated[a]	Evaluated Causes[b]	Stream Miles	Category[c]	TMDL[d]
Settingdown Creek –Thalley Creek to Hurricane Creek	Fishing	Bio M	NP	8	4a	Bio M 2004
Thalley Creek – Headwaters to Settingdown Creek	Fishing	Bio F	NP	4	5	Bio F Drafted 2015
Yellow Creek – Headwaters to Settingdown Creek	Fishing	Bio F	NP	4	5	Bio F Drafted 2015

Source: Georgia Department of Natural Resources (GADNR), May 2014 (Draft).

[a] FC = fecal coliform bacteria, Bio F = impacted biota (fish community); Bio M = impacted biota (macroinvertebrate community)

[b] UR = urban runoff/urban effects; NP = nonpoint sources/unknown sources

[c] Category 1 indicates that waters are supporting their designated use(s); Category 4a indicates that a TMDL has been developed for parameter violated; Category 5 indicates that a TMDL has not been developed for parameter violated.

[d] Proposed year by which a TMDL was or will be developed for the pollutant of concern.

[e] TMDL completed for copper, de-listed for copper since 2008.

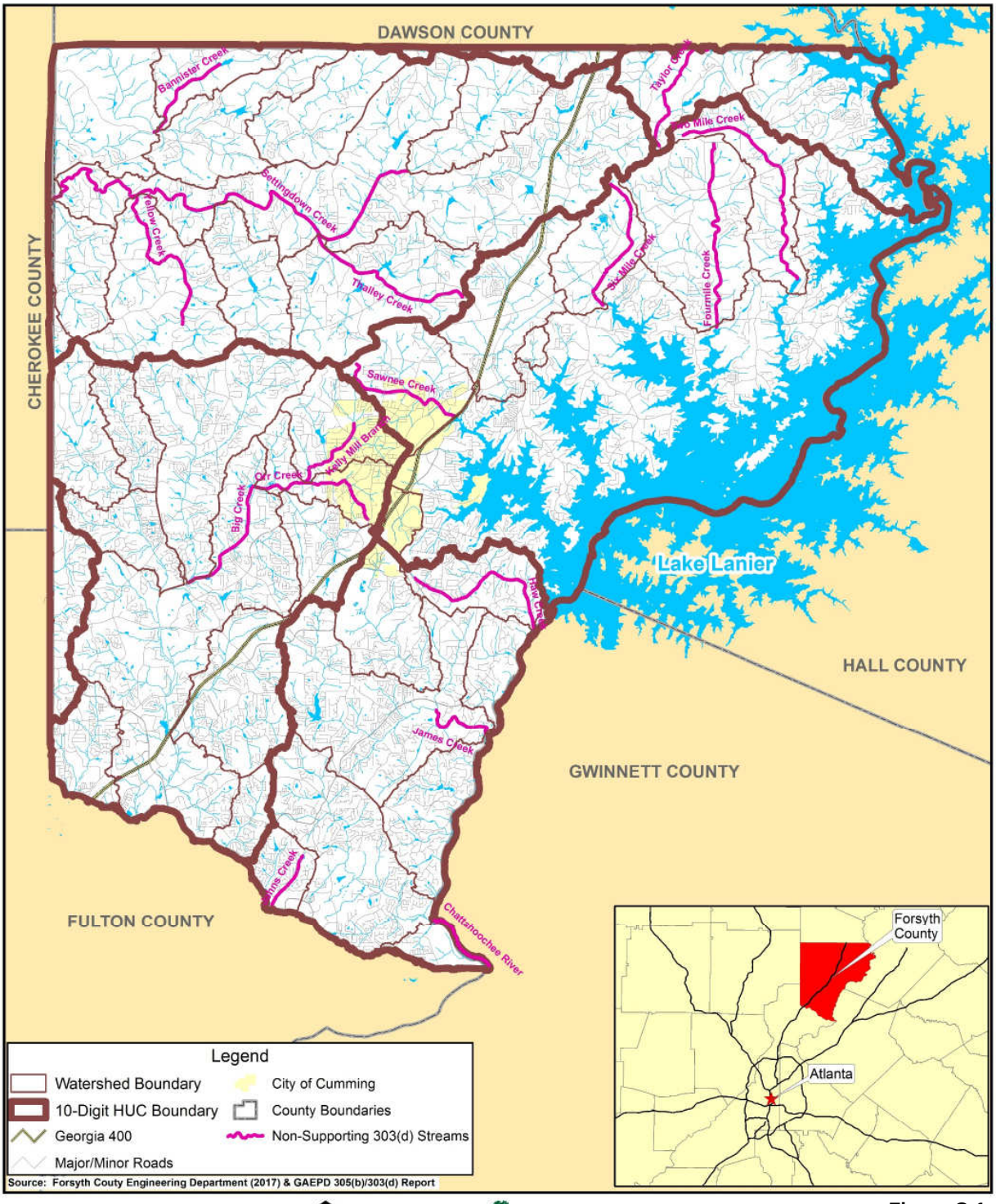

Figure C-1
Non-Supporting 303(d) Listed Streams

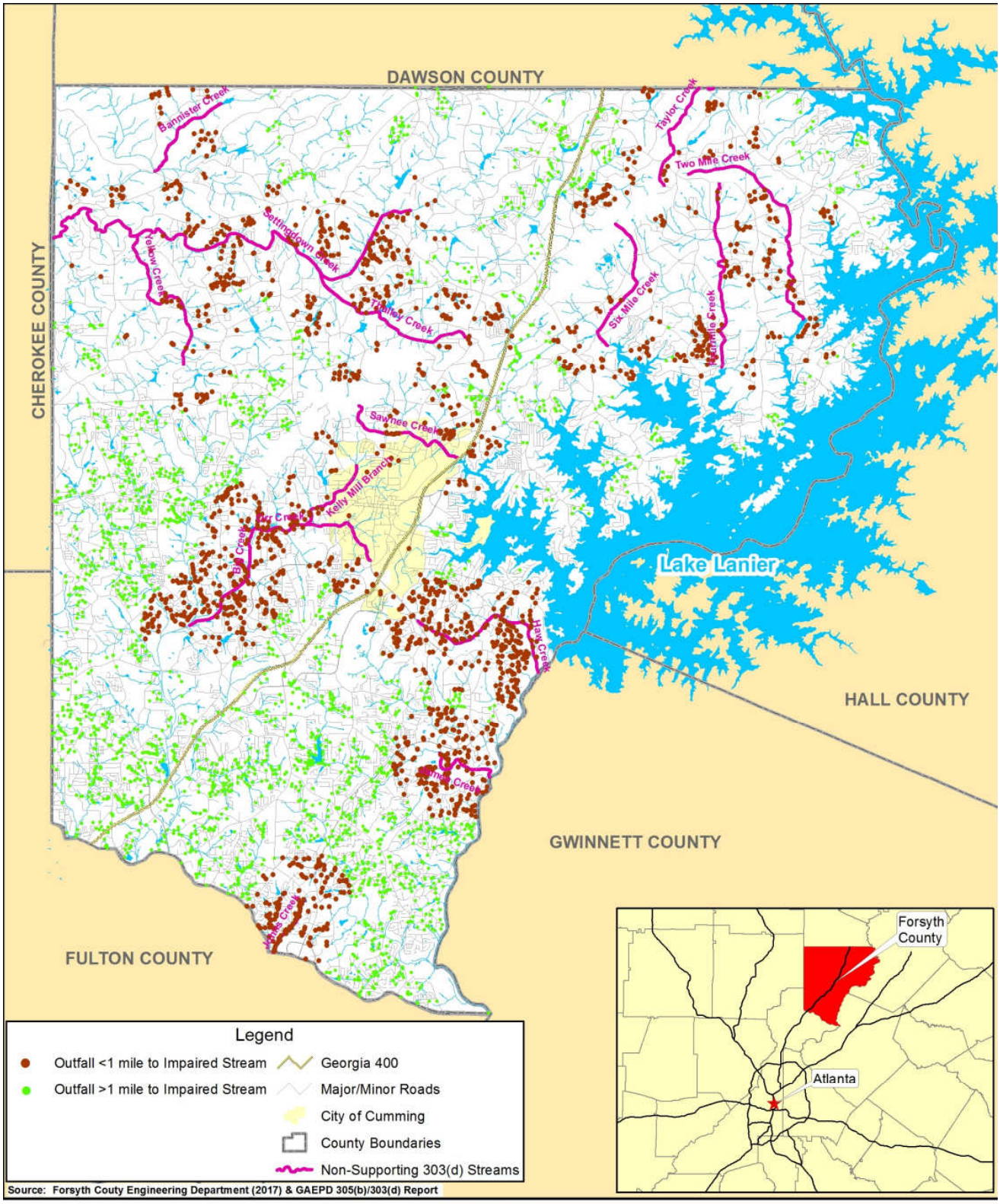

Figure C-2
MS 4 Outfalls and 303(d) Listed Streams

C.2 Monitoring Plan

Forsyth County submits all water quality and biological data collected to GAEPD in its Phase I MS4 Annual Reports and WPP Annual Reports.

- Updates to 303(d) list of streams changes are made and subsequent changes to the monitoring plan;
- Bar charts of the geometric means for bacteria data;
- Line graphs with trend lines for biota (EPD MMI & IBI scores); and,
- Summary of the effectiveness of BMPs being implemented by the County.

If improvements in water quality or biological communities are observed, the County will develop a Sampling Quality Assurance Plan with a more intensive sampling regime, as required to remove the stream from the 303(d) List. Where appropriate, the County will submit data biannually to GAEPD to be used for delisting stream segments for the 303(d) List.

Forsyth County understands that long-term monitoring of 303(d)-listed streams is essential to tracking future changes in water quality, early detection of infrastructure maintenance issues, and the long-term goal of meeting the water's designated use. Since 2003, the County has conducted bacteriological and biological water quality monitoring as part of its Environmental Monitoring Program (EMP). The County updates the EMP, as needed, to include monitoring of all 303(d)-listed stream segments for the parameters of concern, as well as to incorporate any changes to regulatory guidelines. The goals of the EMP are consistent with the GAEPD's position that all jurisdictions should implement effective nonpoint source programs to achieve and maintain beneficial uses of its State-regulated waters.

The County is finalizing a complete revision of its Environmental Monitoring Program (EMP) document along with an update to its Watershed Protection Plan. Both of these plans are being submitted to EPD by the end of September 2018. Once finalized, the County will provide a copy of the new EMP to EPD under separate cover. For reference, the current draft of the revised EMP is included in **Attachment 16**.

The draft of the revised EMP includes monitoring stations that represent the streams that are 303(d)-listed within the County boundary, including the addition of short-term monitoring stations on the Chattahoochee River at McGinnis Ferry Road (CHF-1) and on Johns Creek at McGinnis Ferry Road (JNF-1). On the 2016 Draft 305(b)/303(d) report, the listed segment for Johns Creek is described as Fulton County with a four-mile reach between the headwaters and the Chattahoochee River. The headwaters for Johns Creek are in Forsyth County, and it was listed for fecal coliform and impacted biota (fishing). Sampling at this station will include bacteria and TSS in lieu of formal biological sampling. The Chattahoochee River segment between Dick Creek and Johns Creek was listed in 2016 for fecal coliform and will include bacteria sampling.

Bacteria Sampling

Each year, 8 grab samples are collected to calculate 2 seasonal 30-day geometric means for fecal coliform and *E. coli*. Both geometric means are calculated from samples collected between May and October, during the period when State standards for fecal coliform are lowest (200 colonies/100 mL). Four samples are collected at each station over a 30-day period at approximately 1-week intervals (not less than 24 hours) regardless of weather conditions. Recent bacteria monitoring trends suggest

that fecal coliform geometric means are commonly above State standards and will not likely result in delisting. Current 303(d) delisting guidelines require 16 events (4 geometric means). If a stream segment has not had a fecal coliform exceedance for 3 consecutive geometric means, then a Sampling Quality Assurance Plan will be submitted to GAEPD, as required to provide a monitoring plan to delist the stream segment. There is currently no State standard for *E.coli*, and concurrent monitoring efforts in the County have shown a strong correlation between the two parameters.

Biological Sampling

In accordance with the District-wide Watershed Management Plan, Forsyth County wastewater permits (through the Watershed Assessment and Management Plan), and 303(d) listings for affected biota, Forsyth County conducts biological monitoring on a biannual basis. Although the most recent Plan does suggest alternate sampling frequencies, the County has decided to go with the same timing it has used historically. The County uses biological data to analyze trends in aquatic communities over time and to identify streams in which the biota is qualified as affected. Biological monitoring is important in assessing the overall ecological health of a watershed and will become more important as GAEPD develops de-listing criteria for biological parameters. As with bacteria sampling, the County updates its monitoring stations based off the most recent 303(d) list (**Table C-2** and **Figure C-2)**.

At all of the biological monitoring stations except for Johns Creek, sampling will be conducted by at least two aquatic biologists utilizing the most current GADNR sampling and data analysis protocols; including, Standard Operating Procedures for Conducting Biomonitoring on Fish Communities in Wadeable Streams of Georgia (GADNR, 2005) and Standard Operating Procedures-Macroinvertebrate Biological Assessment of Wadeable Streams (GADNR, 2007). For Johns Creek, TSS will be sampled in lieu of formal biological monitoring. Fish sampling will be conducted during a separate event from macroinvertebrate sampling and physical habitat assessments in accordance with respective GADNR recommended sampling periods. According to GADNR protocols, benthic macroinvertebrate sampling should occur between mid-September and February, while fish sampling should occur between April and mid-October. Biological monitoring activities will be scheduled to occur within these seasons and also during a similar time period to previous sampling years in order to reduce environmental variations inherent in the datasets (fish sampled in August, benthic macroinvertebrates sampled in October). In situ water quality measurements will be made during both events to represent water quality conditions at the time of sampling.

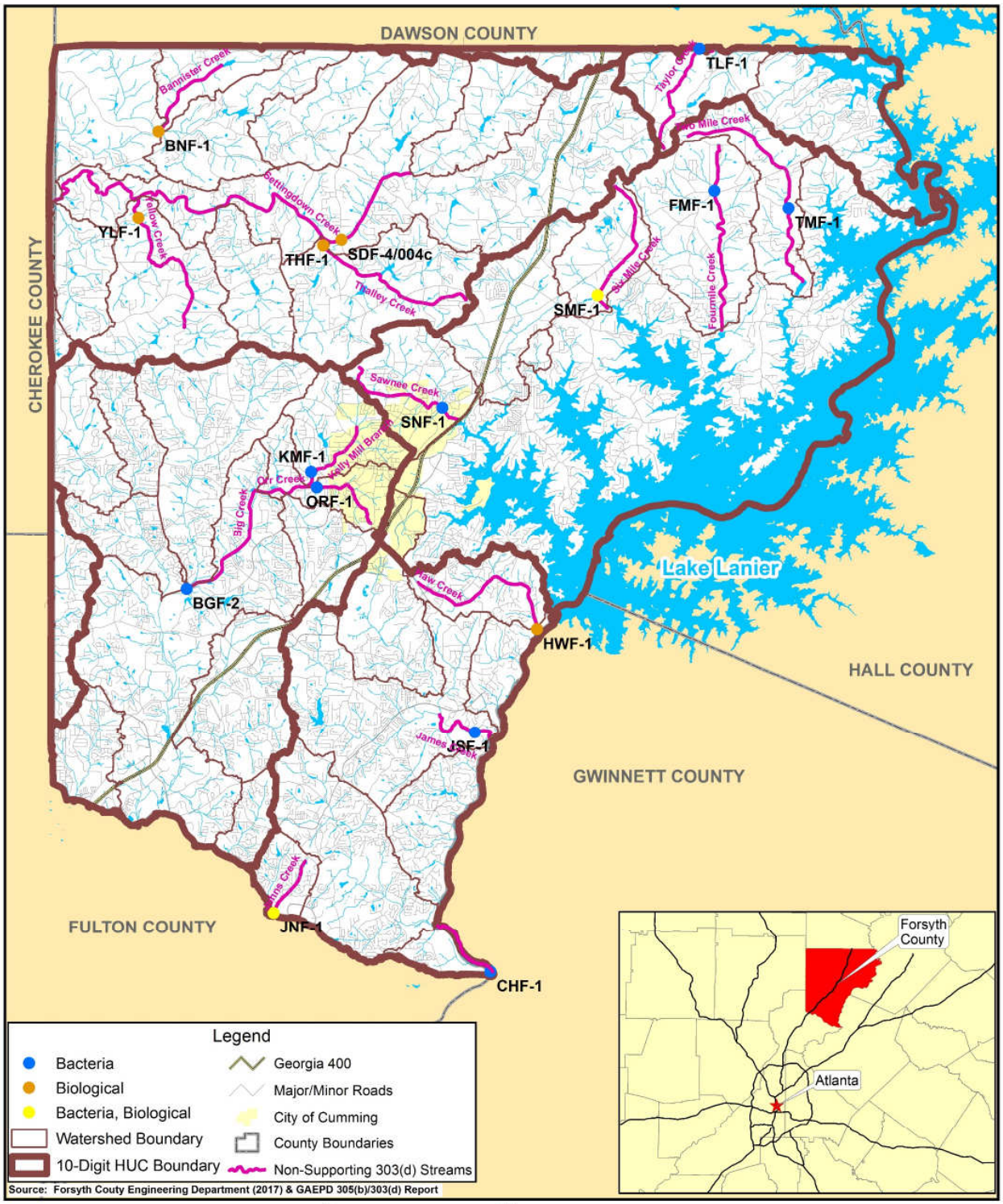

Figure C-3
Sample Station Locations

Table C-2. Summary of Locations, Selection Rationale, and Type of Sampling Conducted at Forsyth County Monitoring Stations.

Station ID	Station Location	Station Rationale	Bacteria	Biota
BGF-2	Big Creek at Majors Road	Long-term monitoring station for the central and western portions of the County; potential for watershed management to affect data; changing upstream land use. 305(b)/303(d) listed for fecal coliform.	X	
BNF-1	Bannister Creek at Nicholson Road	Added in 2009 as a biological monitoring station due to new 305(b)/303(d) listing for impacted biota (macroinvertebrates).		X
CHF-1	Chattahoochee River at McGinnis Ferry Road	Added in 2018 (sampling starting 2019). 305(b)/303(d) listed for fecal coliform.	X	
FMF-1	Four Mile Creek at Keith Bridge Road	Pollutant loads already characterized, similar watershed and upstream land use types as TMF-1 and SMF-1, 305(b)/303(d) listed for fecal coliform.	X	
HWF-1	Haw Creek at Little Mill Road	Added in 2012 as a biological monitoring station due to new 305(b)/303(d) listing for impacted biota (fish).		X
JNF-1	Johns Creek at McGinnis Ferry Road	Added in 2018 (sampling starting 2019). 305(b)/303(d) listed for fecal coliform and impacted biota (fishing).	X	X[1]
JSF-1	James Creek at James Burgess Road	305/303(d) listed for fecal coliform.	X	

Station ID	Station Location	Station Rationale	Bacteria	Biota
KMF-1	Kelly Mill Branch at Kelly Mill Road	305(b)/303(d) listed for fecal coliform.	X	
ORF-1	Orr Creek at Jason Drive	305(b)/303(d) listed for fecal coliform.	X	
SDF-4	Settingdown Creek at John Burruss Road	Long-term monitoring station since 2003, represents watershed conditions in northern Forsyth County, 305(b)/303(d) listed for impacted biota (fish and macroinvertebrates).		X
SMF-1	Six Mile Creek at Burruss Mill Road	Long-term monitoring station since 2003, represents less developed watershed with potential to change, direct tributary to Lake Lanier in the eastern portion of the County, 305(b)/303(d) listed for fecal coliform and impacted biota (fish).	X	X
SNF-1	Sawnee Creek at Pilgrim Mill Road	Pollutant loads already characterized, land-use unlikely to change due to Sawnee Mountain Park, 305(b)/303(d) listed for fecal coliform.	X	
THF-1	Thalley Creek at Memphis Street	Added in 2012 as a biological monitoring station due to new 305(b)/303(d) listing for impacted biota (fish).		X
TLF-1	Taylor Creek at Highway 53	Pollutant loads already characterized, relatively small proportion of County, 305(b)/303(d) listed for fecal coliform.	X	

Station ID	Station Location	Station Rationale	Bacteria	Biota
TMF-1	Two Mile Creek at Wallace Wood Road	Long-term monitoring station since 2003, less developed watershed with potential to change, direct tributary to Lake Lanier in the northeast portion of the County. 305(b)/303(d) listed for fecal coliform.	X	
YLF-1	Yellow Creek at Hurt Bridge Road	Added in 2012 as a biological monitoring station due to 305(b)/303(d) listing for impacted biota (fish).		X

[1] A single TSS sample will be collected annually in lieu of formal fish and macroinvertebrate sampling.

C.3 Implementation Plans

The County understands that authorization to discharge MS4 stormwater to State waters is met through multiple environmental responsibilities, including, but not limited to, the identification of impaired stream segments within its jurisdiction, the identification of outfalls from the MS4 to these impaired streams, the creation of a monitoring plan which addresses pollutants of concern, and reporting of appropriate activities and findings to the Georgia Environmental Protection Division (GAEPD). **Table C-3** summarizes activities that the County participates in that contribute to improvement of 303(d) listed streams. Key activities/programs are discussed below.

Table C-3. Summary of Watershed Implementation Activities from the WPP

Pollutant of Concern	Potential Pollutant Sources	BMPs	BMP Implementation
Fecal Coliform	MS4 discharges Leaks and overflows of sanitary sewers Illicit discharges of sanitary waste, and leaking septic systems	**Water quality sampling and monitoring** - continuous and consistent data collection has been used to establish over 10 years of water quality data and has provided the means to evaluate the health of the streams at multiple locations across the County.	Multiple times annually per EMP
		NPDES permit compliance - monitoring NPDES permit compliance allows the County to keep track of any major permitted discharges that may be correlated to spikes in the monitoring data.	Reviewed annually or more often as needed
		Illicit Discharge Detection and Elimination Program – inspection of stormwater outfall locations annually to monitor for illicit discharges/illegal connections. Dry-weather screenings are also useful to note structural maintenance needs.	Multiple times annually (100% of inventory every 5 years)
		Sewer line inspections – inspections not only identify leaks but help to note the condition of the sewer system.	Ongoing
		Public education and cleanup activities – provide awareness and understanding on the actions that can cause the degradation of the County's waterways as well as an understanding of the rules, inspections and enforcement actions.	Semi-annually

Pollutant of Concern	Potential Pollutant Sources	BMPs	BMP Implementation
	Confined animal feeding operations (CAFOs) Animals grazing in pastures Domestic animals	**NRCS Conservation Practices** - the County will continue to work with NRCS to encourage livestock exclusion practices to prevent bacteria from entering streams from primarily agricultural lands.	The County is evaluating additional approaches to this BMP during the next reporting period. As discussed in greater detail elsewhere in this report, the County is planning the development of a pilot project to improve bacteria levels in the Fourmile Creek watershed. The efforts would leverage public education and outreach for local landowners, particularly farmers and those with septic tanks, to evaluate the effectiveness of the BMPs. Reviewed as needed
		Agricultural education and cost share program – Distributing educational information to agricultural property owners on sources of fecal coliform and BMPs that can be installed to minimize stormwater runoff into County streams.	The County plans to provide additional services related to agricultural education and cost-sharing in the next reporting period (see bullet above). Periodically
		Ordinances requiring septic system maintenance - Septic tanks are regulated by the Forsyth County Environmental Health Department (EHD). The County does not have any ordinances in place requiring septic tank maintenance but does recommend it every 5 years. Information on septic tank maintenance has been distributed and is available in the EHD office.	The County is currently identifying additional activities to educate and provide maintenance options in certain critical areas of concern within the County. Periodically
		Pre and post development stormwater management practices – the implementation of these practices has significantly prevented further degradation of the County's streams by slowing down erosion and the loss of habitat.	Daily
TSS (Bio F) (Bio M) (Nutrients)	Residential and commercial runoff Agriculture practices Infrastructure development	**Construction site inspections** – informing the appropriate use of erosion and sedimentation controls in construction sites has prevented the intrusion of large amounts of TSS into the County's waters.	Daily
		Greenspace preservation – the preservation of buffers and natural greenspace has reduced the impact of runoff.	On going

Pollutant of Concern	Potential Pollutant Sources	BMPs	BMP Implementation
		Public education and cleanup activities - provide awareness and understanding on the actions that can cause the degradation of the County's waterways as well as an understanding of the rules, inspections and enforcement actions.	Semi-annually
		Watershed improvement projects – the County has successfully completed the restoration of a stream located in Midway Park and was at 90 percent complete as of the end of the 2015-2016 reporting period for the construction of the Fowler Park Stream Restoration project.	Reviewed annually
		NRCS technical and cost share assistance - for protection of ground and surface water, erosion control, air quality, wildlife habitat, and plant health (Environmental Quality Incentives Program [EQIP]) and assistance for the creation of high quality wildlife habitat (Wildlife Habitat Incentives Program [WHIP]).	BMP has not been fully implemented. The County is considering a focus on BMP implementation in the Six Mile Creek watershed during the next reporting period due to elevated nutrient concentrations during recent water quality monitoring events. Reviewed annually