

# **NPDES Phase II Stormwater Annual Report Town of Haw River**

**Fiscal Year**

**2023 – 2024**

**PERMIT NO: NCS000404**

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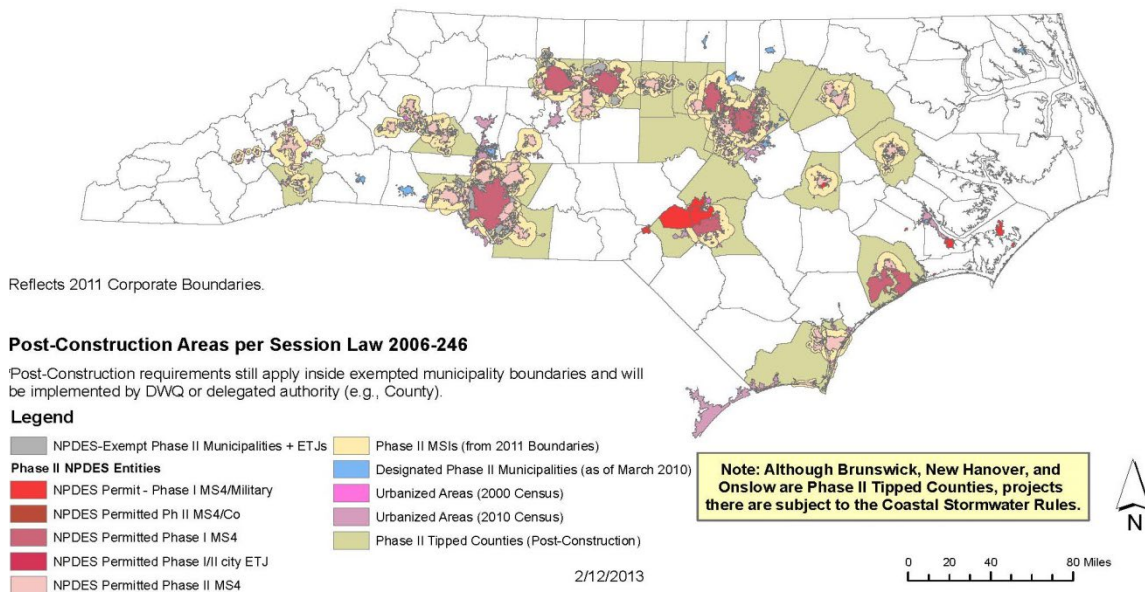
## Report Outline

- Introduction
- NPDES Phase II
  - Minimum Control Measures
    - Public Education and Outreach
    - Public Involvement and Participation
    - Illicit Discharge Detection and Elimination
    - Construction Site Runoff Controls
    - Post Construction Stormwater Management
    - Pollution Prevention and Good Housekeeping
- Impaired Waters and TMDL Waters
  - Listing of Impaired Waters
    - Impairment Type
    - Timeline for Improvements
    - Current Status
- Jordan Lake Rules Compliance
  - Overview, Background, and Implementation Schedule
  - Riparian Buffer Protection Program
  - New Development Program
  - Existing Development Stage 1 Programs
  - Future Existing Development Stage 2 Programs
- Stormwater Funding
- Future Issues
- Program Contacts

## Introduction

On July 1, 2005, The North Carolina Division of Water Quality (DWQ) in the Department of Environment and Natural Resources (DENR) began issuing Phase II stormwater permits to municipalities in North Carolina under the National Pollutant Discharge Elimination System Program (NPDES). At the time, the NPDES Phase II Program was the latest stormwater program stemming from the Federal Clean Water Act of 1972. Prior to the Phase II program, EPA and NC DEQ had issued NPDES Phase I Stormwater Permits to Cities larger than 100,000 persons. In North Carolina these cities were Raleigh, Charlotte, Fayetteville, Durham, Greensboro, and Winston Salem. The Phase II Program included distribution of Phase II permits to municipalities less than 100,000 residents and began with municipalities within Municipal Spheres of Influence (MSI) that were greater than 50,000 citizens. The Burlington Corridor represented a MSI of greater than 50,000 residents and each municipal separate storm sewer system (MS4) was given a Phase II permit.

### NPDES Phase I/II Communities, Exempted Municipalities\*, & Tipped Counties with County-wide Post-Construction



The Phase II stormwater program was created with the intention of improving the quality of the nation’s waterways by reducing the quantity of pollutants that stormwater transports into stormwater systems and discharges to surface water bodies. The permit requires permittees at a minimum to develop, implement, and enforce a stormwater program designed to reduce the discharge of pollutants from the municipal separate storm sewer system (MS4) to the maximum extent practicable.

The stormwater program is composed of the following six management measures:

1. **Public Education and Outreach**
2. **Public Involvement and Participation**
3. **Illicit Discharge Detection and Elimination**
4. **Construction Site Runoff Controls**
5. **Post-Construction Site Runoff Controls**
6. **Pollution Prevention and Good Housekeeping for Municipal Operations**

Each of these measures consists of required Best Management Practices (BMPs), measurable goals for each BMP and an implementation schedule for the 5 year permit cycle. Additionally, the Town of Haw River has a Comprehensive Stormwater Management Plan. Because the NPDES Program concentrates on water quality it has limited provisions concerning water quantity and flooding controls.

In early 2017, NC DWQ issued a renewal of the Town's NPDES Phase II Permit. This renewed permit is similar to the original permit with a few additional requirements included. A copy of the permit is available either through Josh Johnson, P.E. or through NC Division of Energy, Minerals, and Land Resources. The Town was audited on May 6, 2021. DEQ is reviewing an updated Comprehensive Stormwater Management Plan that will be adopted once it is approved by DEQ and the Town Council.

This Report is intended to complete the Annual Report specifying the Town's progression in implementing the NPDES Permit and Comprehensive Stormwater Management Plan. It is also a staff review of the items implemented during this fiscal year.

It is intended to give readers a comprehensive idea of the Town's full Stormwater Program including the Town's Jordan Lake, Water Supply Watershed and Water Quantity Programs as well as the Town's current funding structure.

## **NPDES Phase II Minimum Control Measures**

Each of the 6 Minimum Control Measures (MCM's) has a set of best management practices (BMP's) that are intended to foster compliance with both the Town's Permit and CSWMP. These specific BMP's can be found in both the Permit and the CSWMP but highlights and specific actions will be noted in the report.

## **Public Education and Outreach**

The Town operates a Public Education and Outreach program that is designed to educate the general public about the need to improve water quality in stormwater. The general objectives are to distribute education materials to the community and/or to conduct equivalent outreach activities about the

impacts of storm water discharges on surface waters and the steps the public can take to reduce pollutants in stormwater runoff. These objectives have been further refined to target residents, school children, local businesses (specifically gas station owners and landscaping companies) and industry because these groups have the most impact on stormwater pollution prevention.

The education program targets total suspended solids (TSS and Sediment) and nutrient loading because turbidity, sedimentation, and nutrients are the pollutants of concern in downstream waters.

The Town partners with Stormwater SMART, an education and outreach organization hosted by the Piedmont Triad Regional Council (PTRC). Stormwater SMART is a cooperative group that is funded by several Piedmont municipalities. It was created in 2005 to provide education and outreach for MS4 Permittees (like Haw River) and concentrates on direct education of school children and residents.

Danica Heflin is the Stormwater Smart Outreach and Education Coordinator, and a copy of Stormwater SMART’s Annual Report is available upon request. It provides a comprehensive outlook for the Fiscal Year 2023-2024 period. The annual report provides specific details of outreach efforts within the Town of Haw River and the Alamance County Area. Danica Heflin can be contacted at [dheflin@ptrc.org](mailto:dheflin@ptrc.org) or at: (336)904-0300 ext.3008

<b>Alamance County Area FY 2023 – 2024</b>			
<b>Location/Event</b>	<b>Date</b>	<b>Program</b>	<b># Participants</b>
Alamance County Public Libraries (May Memorial, Graham Public Library, & North Park)	Ongoing	Educational Stormwater Activity Books (2024 Nature Notebook)	70
Bookmobile	May 7, 2024	Alamance Creek Week Outreach – Haw River Civic Center Parking Lot	15
Social Media Outreach Litter and Pet Waste messages	July 1, 2023 – June 30, 2024	Impressions on Meta (Facebook & Instagram): 1.3M Visits to <a href="http://www.stormwatersmart.org">www.stormwatersmart.org</a> : 23,789	

**Stormwater Smart Outreach Efforts in Haw River**

The Town has Stormwater handouts on display at Town Hall available to the public. The town also maintains an educational website located at <http://townofhawriver.com/Stormwater>. It can also be found through navigating the top bar menu on the town’s website, from Government, to Public Works, then Stormwater Information will be an option in the side bar menu on the left portion of the screen.

## Public Participation and Involvement

The Town has a responsibility to solicit and consider public opinion on all matters, including stormwater management. The Town originally involved the public with a public hearing in 2005 and attempted to create a citizen's committee during the first permit cycle but could not generate adequate interest.

The Town has been receptive to any questions from citizens, maintains a **HELPLINE - Town Hall at: (336)578-0784** and works with Stormwater SMART to educate the public but continues to struggle to establish effective Public Participation and Involvement. Efforts will be made to have a public hearing upon completion of the DEQ's review of the Town's new Comprehensive Stormwater Management Plan. These public meetings will seek input on the stormwater program and will provide both input to the Town as well as education to the citizens. Citizens can also voice concerns at Town Council meetings as needed.

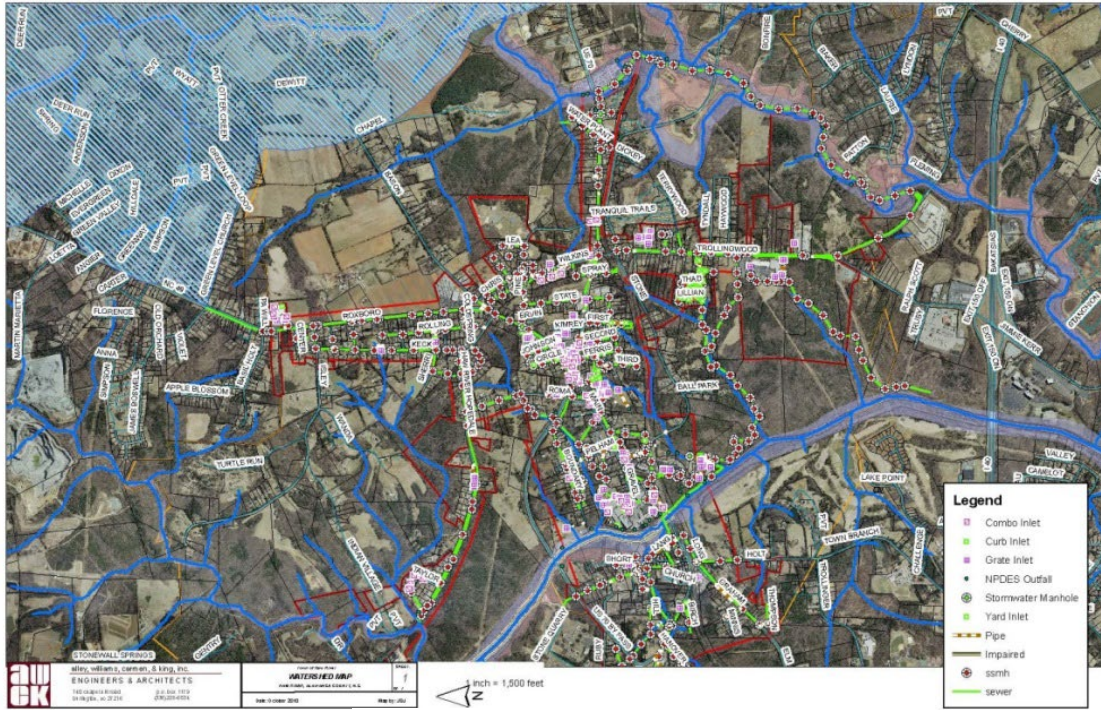
## Illicit Discharge Detection and Elimination

The Town of Haw River has a full Illicit Discharge Detection and Elimination (IDDE) Program. The IDDE Program is intended to reduce discharges to the stormwater system that are not entirely composed of stormwater. There are a few permitted discharges and firefighting related discharges that are allowed.

An illicit discharge is typically dirt, soap, pet waste, litter, oil, fertilizer, pesticides, or raw sewage and often times comes from "generating sites." Generating sites are points of pollution that continue over a period and are recurring at regular or irregular intervals.

The backbone of the IDDE program is the IDDE Ordinance that the Town passed in April 2007. The IDDE ordinance provides permits specific discharges into the MS4 as legal, provides legal authority to restrict illegal discharges, prohibits illicit connections, provides conditions for cleaning up and preventing polluted spills, provides for right of entry into property to investigate prohibited activities, and provides the Town with options for enforcing the Ordinance. The IDDE Ordinance is based on the NC DWQ's Model Ordinance.

The second basis for the IDDE program is the Town's MS4 Map. The mapping program was completed in the first permit cycle by GPS mapping and is now usable in a GIS format. The map includes the entire MS4 system and provides for easy access to aid in the investigation of illicit discharges. An investigator with the map could find an illicit discharge and then easily follow the flow of the discharge upstream until finding a source of the discharge.



Sample Watershed and MS4 Map



MS4 Sample Map

The map was originally published as a map book but generally is used on a watershed basis or through ArcGIS software. If a specific area is needed it can be printed by either Stormwater or Town Staff. The map is intended to be updated on a regular basis as new development happens but updates since the completion of the map have been sporadic.

The IDDE program also includes dry weather testing of outfalls into the stream system. In the first permit cycle this was conducted in coordination with the mapping. Outfalls that had dry weather flows were reported and investigated. Since the first permit cycle, most dry weather flow testing has been done in conjunction with complaints or Town staff investigations. Stream walks were completed in 2021.

The Town did not have any sanitary sewer overflows in Fiscal year 2023-2024. There were also No illicit connections, No illegal dumping, and No wastewater connections rerouted to the stormwater system found. The Town also checks all storm drains on an as needed basis and uses jet trucks to clean storm drain pipes that have issues as well as cleaning some storm drain inlets by hand and with a backhoe, and videos the collection system as needed in an effort to reduce sanitary sewer overflows. Through an Asset Inventory and Assessment (AIA) grant, The Town of Haw River had 14,700ft of sewer CCTV'd. These maintenance activities are intended to reduce Sanitary Sewer Overflows and infiltration/Inflow into the system and therefore prevent illicit discharges to the MS4. There are currently no pet waste stations.

Town Staff are trained on an as needed basis to identify illicit discharges and the reporting process for these discharges. This training is combined with the Pollution Prevention and Good Housekeeping training of public works, recreation, and administrative staff.

## Construction Site Runoff Controls

The Town of Haw River delegates the Construction Site Runoff Controls to the NC Division of Energy, Mineral, and Land Resources Sediment and Erosion Control Program. The Town of Haw River does not have a delegated erosion control program but does make sure that plans it approves that will disturb greater than 1.0 acres of land apply for, and receive, an erosion control plan. The Town of Haw River also has the ability to call NC DEMLR to report known sedimentation issues.

## Post Construction Site Runoff Controls

The Town of Haw River has a typical NPDES Phase II Post Construction Program. This includes a Post Construction Ordinance, administrative forms that support it, and a review process. The Post Construction Program applies to projects that exceed 1 acre of disturbance or have a common plan of development that will cumulatively exceed 1.0 acres of disturbance. Projects that exceed 24% built-



upon area are considered high density projects, projects that are less than 24% BUA are low density projects. High Density Projects are then required to meet the following requirements:

- Treat runoff from the first 1" of rain (the first flush).
- Treated Runoff is to be for 85% TSS removal.
- Discharge treated water at a rate less than or equal to the Predevelopment rate for the 1 year 24 hour storm.
- Discharge treated water between 48-120 hours.
- Stormwater Control Measures must be in easements and must have a recorded operation and maintenance agreement.
- Compliance with the Jordan Lake Riparian Buffer Protection Ordinance.

Stormwater Control Measures, as well as runoff calculations, are prepared based upon the NC DWQ BMP Manual and then reviewed by Josh Johnson, P.E.

Low Density projects are required to comply with the Jordan Lake Buffer Protection Ordinance that went into effect in fall 2011. Both Low and High Density Projects are required to comply with the Town's Storm Sewer Design Manual which governs storm drainage design as well as peak runoff rates and provides for evaluation of the 10 and 100 year design storms.

The Town upgraded its Water Supply Watershed (WSW) Program to a high density program in 2013. The Town's WSW is to the northeast of Town along Highway 70 and is for the protection of the Graham-Mebane Reservoir. The WSW allows for development up to 24% BUA with structural stormwater controls.

The Town had four new projects that triggered the stormwater ordinance FY23-24. Four plan reviews were conducted. There were not any completed projects during this period. There are three active SCMs in Town and one was inspected. In the future, property owners will be notified to complete the inspections and maintenance and to submit inspection reports annually to the Town.

When a project is submitted to the Town, it is reviewed by the Town Manager, Public Works Director, and Town Engineer. The Town Engineer is also the Stormwater Reviewer. At this point the project is determined to be subject to the Stormwater Ordinance and High Density or Low Density. After review, comments are made about the project and addressed. After approval of the project, the owner is required to complete an Operation and Maintenance Agreement for the stormwater control measures. This O&M agreement is then recorded with the register of deeds so that it can be reviewed at a later point in time. The Town of Haw River requires as-builts and annual inspection reports from new stormwater control measures (SCM).

## **Pollution Prevention and Good Housekeeping**

Pollution Prevention is an overall goal of the Town's stormwater management plan and Good Housekeeping is a key to that goal. Municipalities in general conduct many activities that can pose a

threat to water quality. Municipal facilities can be a primary potential source of contamination, but with good housekeeping habits this potential can be reduced or eliminated. The Town attempts to minimize stormwater pollution from municipal operations by complying with best management plans for each Town facility. The BMP's are written into a Town Facilities O&M Plan that is intended to reduce or eliminate stormwater exposure of oil, grease, pesticides, herbicides, fertilizers, sediment, and other materials used by the Town. Each of the Town facilities is inspected annually and any issues are noted, written into the Facility O&M Plan, and discussed with the facility supervisor.

The Town operates a Town Hall/Fire Department, Police Department, Public Works Storage Yard, Recreation Maintenance Facility, two parks, Civic Center, Museum, and a main pump station. Each of the Town facilities is inspected annually and any new facilities will be added to the inspection list.

The Town's streets are swept on an as needed basis, approximately 1,500 lbs. of material is collected annually. Weather conditions did not require the Town of Haw River to use any road salt or alternative in 2023-2024 season. The Town also recycled 45 gallons of oil, with a private vendor (O'Reilly Auto Parts).

Town staff with the greatest exposure to stormwater are trained on PPGH once annually. It was held on 1/29/24 with 6 Public Works staff. The training is combined with illicit discharge detection and elimination training. The PPGH portion of the training concentrates on good housekeeping functions. This often includes identification of bad habits that can take place and how to fix the situation to reduce the risk of pollution to stormwater. One licensed pesticide applicator maintains continuing education credits.

## **Impaired Waters and Total Maximum Daily Loads (TMDL)**

The Haw River (16-(1)d3) runs through the Town of Haw River and is impaired for Fecal Coliform through the Town's jurisdiction. This section of the Haw River has a very large watershed and is directly below the discharge of the City of Burlington's East Waste Water Treatment Plant. However, the Town of Haw River has, and continues to, seek funding for collection system improvements which should reduce mixing of surface waters with the collection system.

## **Nutrient Sensitive Waters**

Environmental conditions in North Carolina's rivers, estuaries and reservoirs are driven by complex interactions among rainfall, flows, temperatures, biological factors, and chemistry. Some of the waters of the state have a history of exceeding nutrient and chlorophyll a standards and are deemed nutrient sensitive waters (NSW). Currently, the following watersheds have active nutrient sensitive waters strategies: Neuse River Basin, Tar-Pamlico River Basin and Jordan Lake Watershed.

The Town of Haw River is located wholly within the Jordan Lake watershed and the Town is required to comply with the Jordan Nutrient Strategy. The Town is required to have its own Nutrient Sensitive Water (NSW) strategy. The Town's NSW strategy is to comply with the Jordan Nutrient Strategy. This

includes the Town's riparian buffer program and compliance with the Town's Stage 1 Jordan Lake Existing Development Program. These new programs combine with the Town's existing Jordan Lake Riparian Buffer and Jordan Lake Stage 1 programs to form the Town's NSW Strategy. The Town's NSW Strategy is intended to, and does, accomplish reductions in nutrient loading and is the maximum extent practicable per NC law. The Town cannot legally implement a Jordan Lake New Development program.

## Jordan Lake Rules

The Town of Haw River is within the Jordan Lake Watershed and is subject to the Jordan Lake Nutrient Strategy. The Jordan Lake Nutrient Strategy is composed of a set of regulatory rules enacted in 2009 that have since been augmented or replaced by a series of NC General Assembly Session Laws. Future Jordan Lake rules are currently being written by NC DEQ's Division of Water Resources – Nonpoint Source Planning Section.

## Jordan Lake Background, Rules, and Implementation Schedules

Jordan Lake was impounded in 1983 by damming the Haw River near its confluence with the Deep River. It was created to provide flood control, water supply, protection of water quality downstream, fish and wildlife conservation, and recreation.

The lake has had water quality issues from the beginning, with the North Carolina Environmental Management Commission declaring it as nutrient-sensitive waters (NSW) the same year it was impounded. Since that time, Jordan Lake has consistently rated as eutrophic or hyper-eutrophic, with excessive levels of nutrients present. "Eutrophic" is an over-abundance of nutrients in the lake, primarily nitrogen and phosphorus, which can result in algal blooms and poor water quality. Nutrients make their way to the lake from sources such as wastewater discharges, rainfall runoff from agriculture and stormwater runoff from new and existing developed lands throughout the watershed. Excessive nutrient inputs can drive excessive growth of microscopic algae, which imparts a greenish, murky appearance to the water, causes taste and odor problems in potable water, and robs the water of oxygen. This can then stress or kill fish and other aquatic life. Excess nutrients also favor the growth of undesirable algae that does not support the food chain and can release toxins into the water. While not necessarily making the lake unfit for fishing, swimming or drinking uses, excessive nutrients can impact these uses and produce undesirable algae in the lake.

The Jordan Lake Rules are designed to protect and improve water quality in the lake. The rules were developed over several years through a process that involved extensive meetings, public hearings and negotiations between residents, environmental groups, local and state government agencies and other stakeholders in the watershed. Specific issues addressed by the rules include reducing pollution from wastewater discharges, stormwater runoff from new and existing development, agriculture and fertilizer application. The Rules continue to be discussed and amended through the NC General Assembly.

The primary rules that affect local governments (like the Town of Haw River) are the Stormwater Management for New Development, Stormwater Management for Existing Development, Protection of

Existing Riparian Buffers, Wastewater Discharge Requirements, Options for Offsetting Nutrients Loads, Session Law 2009-216, Session Law 2009-484, Session Law 2011-394 and to a lesser extent the Fertilizer Management Rule. The Protection of Existing Riparian Buffer Rules was implemented in 2011 after the Stage 1 Existing Development Programs were adopted in 2009 and Waste Water Treatment Plant compliance with Total Phosphorous limitations by January 1, 2010. The New Development Programs, Stage 2 Existing Development Program, and Wastewater Treatment Plant Compliance with Total Nitrogen Limitations have all been delayed several times. The current implementation schedule is cloudy because of delays that are contingent upon future monitoring results.

Session Law 2016-94 and 2018-5 established the NC Policy Collaboratory; directed the Collaboratory to begin a three-year study on areas subject to the Jordan Lake Water Supply Nutrient Strategies relative to the readoption of the Jordan Rules; directed the Collaboratory to commence modeling of Jordan Lake and its watershed; and set the final date for receipt of the study and modeling at Dec. 31, 2019, at which time Jordan Rules readoption could begin. The Collaboratory submitted its final report of the Jordan Lake Nutrient Management Study in December 2019. The individual research reports can be found on that same website under the resources tab. The 2024 Jordan Lake model final report can be found on the DWR Modeling and Assessment Branch Special Studies website under Jordan Lake.

Jordan Lake Nutrient Strategy rules readoption began in 2020. As part of this ongoing process DWR is participating in facilitated stakeholder engagement beginning in 2023. In anticipation of the rules readoption process, Jordan Lake One Water (JLOW) was formed by local stakeholders to develop an integrated watershed management plan and inform future rulemaking.

### **Jordan Lake One Water**

As water quality and water supply challenges continue to increase from growing populations, there is an opportunity to reevaluate water resource management within the Jordan Lake Watershed and move towards a more collaborative, interdisciplinary, and innovative approach. Jordan Lake One Water (JLOW) is a partnership to facilitate cooperation and integrated water resource management in the Jordan Lake watershed. The group is comprised of local governments, conservation groups, universities, water utilities, agriculture, and private industry stakeholders interested in sharing the cost of water quality and quantity improvements in order to realize watershed-wide social, economic, and environmental benefits. In 2017, Triangle J Council of Governments (TJCOG) began holding meetings to discuss One Water management concepts in the Jordan Lake watershed. Interest was so high, among so many different groups, including elected officials, that a JLOW advisory committee was formed to develop a work plan and begin moving forward on collaborative planning efforts. The Advisory Committee, NCDWR, and numerous stakeholders will now be collaborating to develop a recommended One Water/Integrated Water Management framework for the Jordan Lake watershed as part of the Jordan Lake Nutrient Management Strategy Rules Readoption opportunity.

One Water is a transformative approach to how we view, value, and manage water. The One Water approach views all water – from the water resources in our ecosystems to our drinking water,

wastewater, and stormwater – as resources that must be managed holistically and sustainably in order to secure a bright, prosperous future for our children, our communities, and our country. A One Water approach can take many different forms, but has some unifying characteristics:

- A mindset that all water has value
- A focus on achieving multiple benefits - economic, environmental, & social
- Approaching decisions with a systems mindset
- Utilizing watershed-scale thinking & action
- Relying heavily on partnerships & inclusion

The Town is supportive of the JLOW process and is very interested in alternative compliance strategies for Jordan Lake. The Town has been represented in the JLOW process through their AWCK representative, Josh Johnson.

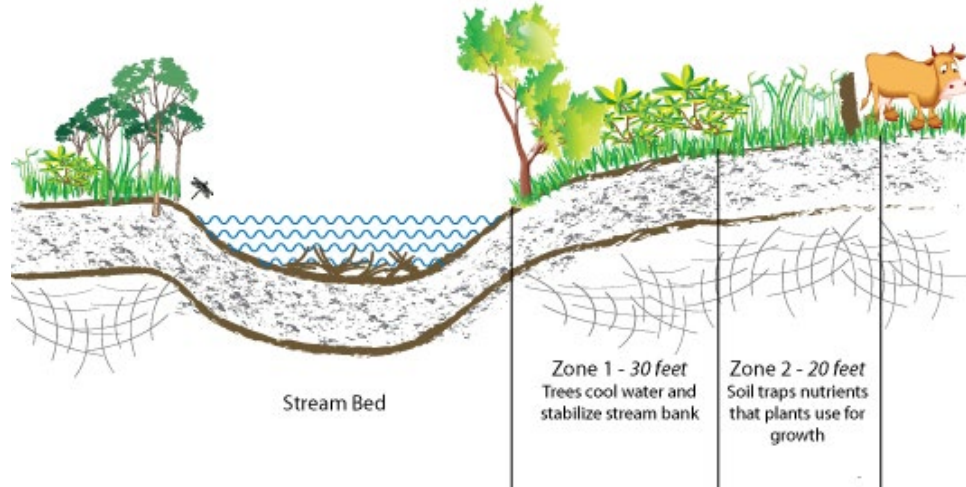
### **Jordan Lake Rulemaking**

To prepare for the Jordan Lake rule readoption process, DWR has started stakeholder engagement meetings and interviews. We aim to hear feedback on current implementation and new rule concepts. Due to readoption deadlines we aim to deliver draft rules to the Water Quality Committee (WQC) of the Environmental Management Commission (EMC) in 2025. Additional information is available by contacting Ellie Rauh, [ellie.rauh@deq.nc.gov](mailto:ellie.rauh@deq.nc.gov) with NC DWR.

### **Riparian Buffer Protection Program**

The Town's Riparian Buffer Protection Program was implemented in November 2010. The enforcement mechanism for the Buffer Protection Program is the Jordan Riparian Buffer Protection Ordinance that was approved by DWR. The Buffer Program establishes a protected buffer along surface waters (primarily perennial and intermittent streams but also ponds and other surface waters) shown on the USGS Quad maps or the NRCS Soil Survey Maps. The buffer has two different zones: Zone 1 is the closest 30' from the top of bank in all directions; Zone 2 is from 30' to 50' from the top of bank in all directions. Zone 1 is to remain undisturbed while Zone 2 is to remain vegetated.

The Buffer Ordinance is a change of use ordinance; therefore, the regulations only apply if new development or a change in use takes place within the buffer. Changes in use can range from new development that goes through an approval process to clearing of the buffer for residential or commercial landscaping but any change of use within the buffer is subject to the buffer ordinance. The Buffer Ordinance also includes a Table of Uses that breaks down uses within the buffer to Exempt, Allowable, and Allowable with Mitigation. Any uses not in the Table of Uses are prohibited without a variance. Uses that fall in the Allowable or Allowable with Mitigation categories must submit a request to the Town for written authorization prior to disturbing the buffer. These uses also must show that there are no practical alternatives to the requested use. In showing the no practical alternatives, users must show how they are minimizing the impacts if possible.



The Town includes Riparian Buffer Protection Program training with its annual employee training but generally limits inspections of buffers to complaints about buffer clearing or Town Staff reporting of impacts. The Town tracks buffer impacts but tries to handle first time offenders by requiring replacement of the buffer and education of the offender, rather than fining first time offenders. Two buffer applications were processed. The Town's buffer program was revised in the calendar year of 2016 to comply with Session Law 2015-246.

### New Development Programs

The Jordan Lake New Development Rule, 15A NCAC2B .0265, sets out standards that named communities are to incorporate into local stormwater programs, and requires the Division of Water Quality to develop a model local stormwater program for those communities to use to create a New Development Program that complies with the rule. The Jordan Lake New Development Ordinance is the legal mechanism that local governments will use to enforce these standards on new development projects greater than  $\frac{1}{2}$  acre in disturbed area (or 1 acre for single family residential).

Most communities within the Jordan Lake watershed are existing NPDES MS4 Phase II communities that have existing Phase II Stormwater Post-Construction Ordinances which are centered around 85% TSS treatment of the 1" storm for developments over 24% impervious and a 1 acre disturbance threshold. The Jordan Lake New Development Rule is centered on removal of Nitrogen and Phosphorous from stormwater and a  $\frac{1}{2}$  acre disturbance threshold. These two pollutants can be removed with many of the same processes as TSS but at differing removal rates and with a different calculation to determine the effectiveness of the treatment processes.

The Town of Haw River will combine its NPDES Phase II and Jordan Lake New Development Standards into one comprehensive stormwater ordinance. This will reduce confusion between the two ordinances

on the part of developers, designers, reviewers, staff, and the public by creating one set of standards for review.

The Town created, submitted, and had a full program approved in the summer of 2012. However, the Town chose to delay implementation until a future date (in accordance with legislation from 2012 and 2013). The Town's future study of the overall Jordan Lake Compliance Strategies may contain recommendations about early adoption of the Program. In order to gather data for future compliance, the Town may begin requiring new development to complete the Jordan/Falls Nutrient Load Accounting Tool in 2014. Stormwater Nitrogen and Phosphorus (SNAP Version 4.2.0) tool was released in March 2023. The tool will not be used for regulatory compliance at this time but will be used to educate the Town on future development.

### Existing Development Stage 1 Programs

The Town of Haw River submitted a Stage 1 Adaptive Management Program to reduce existing nutrient loading to Jordan Lake in 2009. Often referred to as the Stage 1 Existing Development Program, the Program credits the NPDES Phase II Stormwater Program as the primary steps in the program along with requiring the Town to create a Retrofit Identification Program. The Existing Development Program requires annual updates, but full reporting is only required for the Retrofit Program because of this annual NPDES Phase II Report.

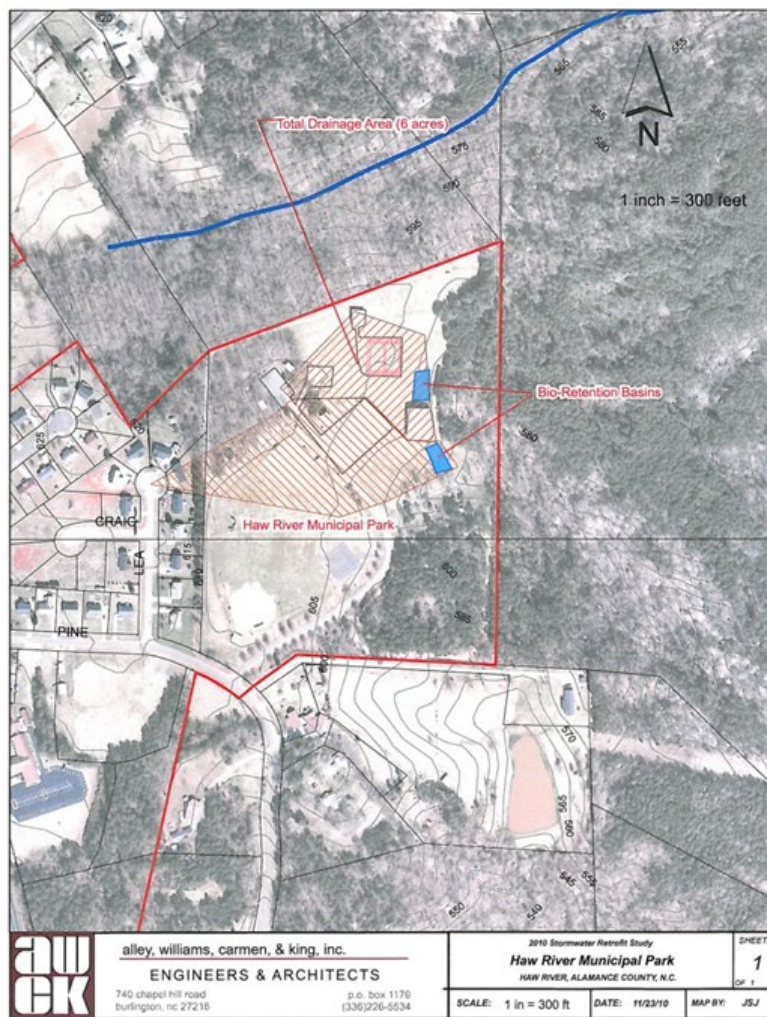
This retrofit program is intended to provide a framework for identifying retrofit opportunities to reduce nutrient loading in the Jordan Lake Watershed. The program is intended to identify both structural and non-structural retrofits that seek to reduce pollution, and nutrients, from being carried downstream by stormwater runoff. By either controlling stormwater runoff or reducing the pollution in the runoff, stormwater retrofits reduce downstream pollution in streams, rivers, and lakes. Typical structural stormwater retrofits are stormwater wetlands, bio-retention basins, water quality ponds, and other devices found in the NC Division of Water Quality Best Management Practices Manual (NC DWQ BMP Manual). Non-structural retrofits include but are not limited to fertilizer programs, reducing animal waste programs, urban forestry programs, and leaking septic tank replacement programs.

The Town of Haw River will use this program annually in a review of the stormwater program that will include reviewing the public education program, reviewing the illicit discharge program, and using this program to have an accurate and up to date list of potential retrofit projects. The Town is required to select a number of projects based on the following chart:

**Table 1: Minimum Number of Existing Development Nutrient Load-Reducing Projects**

Population in the Jordan Lake Watershed	Minimum Number of Existing Development Load Reducing Activities to be Identified Annually
Less than 15,000	1
15,000-30,000	2
30,000-60,000	3
60,000+	4

In 2016 the Town of Haw River identified four projects to pursue in the future. No additional projects were identified in 2023. The 2016 proposed four sites were at the municipal park, the main pump station property, the old Lowes Foods parking lot, and the Lang Street Haw River Park. The potential Bio-retention Basins at the Haw River- J. Earp Municipal Park received the highest score. The Park is municipally owned, has a significant impervious area, and has the space for installation of a structural stormwater retrofit. The potential retrofit would be two bio-retention basins, one below the main parking lot and one below the tennis courts in the park.





## Future Existing Development Programs

The Town of Haw River should expect future requirements for addressing nutrient loading off of existing developed lands with the current readoption process. The reductions, process for calculating, and exact rules are under discussion with the DWR rules readoption process.

## Stormwater Funding

The Town of Haw River funds its Stormwater Programs through a Stormwater Fee. The Town collects a flat fee of \$2/month from all utility users within the Town Limits. This fee produces \$24,000 annually. The Town uses this fee to pay for its Water Quality Programs including its NPDES Phase II and Jordan Lake Programs. The Town has also used excess funding from the stormwater fund to fund other stormwater or water quality projects. Capital Improvement budgeted included Lang St. Pump Station Improvements. An SRP-W-ARP-0151 grant is being used to build a new sewer lift station at a cost of \$5M. Stormwater funds also include investigating drainage complaints from residents and investigating potential inflow/infiltration/exfiltration between the collections system and the MS4.

In the future, the stormwater budget may need to be increased in order to cover additional expenses for the Jordan Lake Rules. These increases may be done through creation of an Existing Residential Unit (ERU) style fee. The ERU is based on an impervious area per property calculation and is considered an equitable fee for stormwater cost calculations. However, the ERU will have a substantially higher startup and maintenance costs than a flat fee does.

## The Future of Stormwater

Stormwater, and Water Quality in particular, is an evolving field of regulation. The Town of Haw River is already involved in NPDES Phase II and Nutrient Sensitive Waters. Within the next decade the Town needs to plan for further regulation of these issues as well as several other outstanding issues. As stormwater information and regulation continue to evolve, the Town should expect to see additional regulations, costs, and improvements within their stormwater program.

## Stormwater Program Contacts

Name	Position	Phone#	Email
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