

TOWN *of*  
WAKE FOREST

**NPDES PHASE II  
STORMWATER MANAGEMENT PROGRAM**

**FOR THE  
TOWN OF WAKE FOREST**

**Submitted to NC Division of Water Quality:  
September 2010**

*Approved by Town Staff:  
September 2010*

*Public Hearing:  
September 2010*

*Approved by Board of Commissioners:  
October 2010*

# NPDES PHASE II STORMWATER MANAGEMENT PROGRAM

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**State of North Carolina**  
**Department of Environment and Natural Resources**  
**Division of Water Quality**  
**Small Municipal Separate Storm Sewer System**  
**NPDES STORMWATER Permit Application Form**

This application form is for use by public bodies seeking NPDES Stormwater permit coverage for small municipal separate storm sewer systems pursuant to Title 15A North Carolina Administrative Code 2H .0126. A complete application form includes three copies of the narrative documentation required in Section IX of this form. This application and the accompanying narrative documentation must be completed in accordance with Instructions for Completing Form SWU-264 to be considered a complete application submittal. Incomplete application submittals may be returned to the applicant.

## **1.0 STORM SEWER SYSTEM INFORMATION**

1. Name of Public Body Seeking Permit Coverage: Town of Wake Forest
2. Ownership Status (federal, state, public, private, or other): Public
3. Type of Public Body (city, town, county, prison, school, etc.): Town
4. Federal Standard Industrial Classification Code: SIC 91-96
5. County: Wake
6. Jurisdictional Area: 11.37 Square Miles
7. Population:
  - Permanent: 27,600
  - Basis of Population statistic: Based on census plus adjusted for new construction, building permits
  - Seasonal: N/A
  - Method used to create seasonal estimates: N/A
8. Growth Rate: +1.6%
9. Located on Indian Lands? No
10. Latitude of Center of MS4 Service Area: 35-28'-30" N  
Longitude of Center of MS4 Service Area: 78-30'-27" S

### **1. RPE/MS4 (Municipal Storm Sewer System) Information**

1. Storm Sewer Service Area (square miles): 15.67 square miles
2. River Basin(s): Neuse River
3. Number and name of Primary Receiving Streams or bodies of water: Austin Creek, Horse Creek, Sanford Creek, Smith Creek, Richland Creek

4. Estimated percentage of jurisdictional area containing the following four land use activities.

Residential: 36%

Commercial: 9 %

Industrial: 4 %

Open Space: 51 %

5. Is there significant water quality issues detailed in the attached application report?  
NO
6. Do you discharge to territorial seas, oceans or within the contiguous zone? No
7. Do you discharge to a TMDL controlled water body? Yes
8. Describe your system, in narrative, identifying use of pipe, open channels, to give a general feel for how the system performs and the general condition of the streams and other water bodies receiving runoff: The Town of Wake Forest's storm system is a combination of pipes, detention/retention ponds, and open ditches (including streams, creeks, ponds and the Neuse River) in both public and private storm easements. Several of the creeks including Richland Creek were identified as degraded, but are currently under rehabilitation through local, state and federal partnerships. Overall the system is in good condition.
9. Describe the maintenance activities: The Town of Wake Forest's Street Division is currently responsible for maintenance of the public storm system. A pass over the entire system is made at least once a year to inspect and clean as necessary. Otherwise, it is maintained on a response to a problem or on an "as needed" basis.
10. How many full time equivalent positions are used to provide maintenance services annually? 4 Positions
11. How often is the system inspected for maintenance problems? Annually
12. Do you clean catch basins, pipes, and other man-made structures? Yes
13. What is the frequency of cleaning and the method used? As needed, by hand and sewer jet
14. What is the annual budget for maintenance activities? \$20,000

15. Describe the methodology used to calculate land use percentages: The areas were calculated from shape files from the Land Use Map. (GIS map) (See the attached Town of Wake Forest's Hydrology Map)

## **2. RECEIVING STREAMS**

1. Receiving Stream Name: Austin Creek  
Stream Segment: 27-23-3  
Water Quality Classification: C NSW  
Use Support Rating: ST  
Water Quality Issues: P,NP
2. Receiving Stream Name: Horse Creek  
Stream Segment: 27-17-(.07)  
Water Quality Classification: WS-IV NSW  
Use Support Rating: S  
Water Quality Issues: NP
3. Receiving Stream Name: Sanford Creek  
Stream Segment: 27-23-5  
Water Quality Classification: C NSW  
Use Support Rating: ST  
Water Quality Issues: NP
4. Receiving Stream Name: Smith Creek (Wake Forest Reservoir)  
Stream Segment: 27-23-(1.5)  
Water Quality Classification: WS-II NSW CA  
Use Support Rating: ST  
Water Quality Issues: NP,P
5. Receiving Stream Name: Toms Creek  
Stream Segment: 27-243  
Water Quality Classification: C NSW  
Use Support Rating: PS  
Water Quality Issues: P, NP
6. Receiving Stream Name: Richland Creek  
Stream Segment: 27-21  
Water Quality Classification: C, NSW  
Use Support Rating: PS  
Water Quality Issues: P,NP

## **3. EXISTING WATER QUALITY PROGRAMS**

- a. Local Nutrient Sensitive Waters Strategy: No

- b. Local Water Supply Watershed Program: No
- c. Delegated Erosion and Sediment Control Program: Yes
- d. CAMA Land Use Plan: No

#### 4. PERMITTING INFORMATION

##### 4.1 Contacts:

Eric Keravuori, P.E. <a href="mailto:EKeravuori@wakeforestnc.gov">EKeravuori@wakeforestnc.gov</a>	Director of Engineering	919-435-9441
Scott Miles, P.E. <a href="mailto:SMiles@wakeforestnc.gov">SMiles@wakeforestnc.gov</a>	Assistant Town Engineer	919-435-9442
Holly Spring, E.I.T. <a href="mailto:HSpring@wakeforestnc.gov">HSpring@wakeforestnc.gov</a>	Assistant Town Engineer	919-435-9443
Mike Barton <a href="mailto:MBarton@wakeforestnc.gov">MBarton@wakeforestnc.gov</a>	Director of Public Works	919-435-9571
Al Jones <a href="mailto:AJones@wakeforestnc.gov">AJones@wakeforestnc.gov</a>	Construction Inspector	919-435-9444
Bryan Smith <a href="mailto:BSmith@wakeforestnc.gov">BSmith@wakeforestnc.gov</a>	Construction Inspector	919-435-9445
Blake Haley <a href="mailto:BHaley@wakeforestnc.gov">BHaley@wakeforestnc.gov</a>	Construction Inspector	919-435-9446
Steve Meyer <a href="mailto:SMeyer@wakeforestnc.gov">SMeyer@wakeforestnc.gov</a>	Construction Inspector	919-435-9447
Ben Naprstek <a href="mailto:BNaprstek@wakeforestnc.gov">BNaprstek@wakeforestnc.gov</a>	Safety Coordinator	919-435-9494
Drew Brown <a href="mailto:ABrown@wakeforestnc.gov">ABrown@wakeforestnc.gov</a>	Customer Service/Billing	919-435-9466
Donald Cook <a href="mailto:DCook@wakeforestnc.gov">DCook@wakeforestnc.gov</a>	Fleet Maintenance Supervisor	919-435-9576

##### Other Key Staff:

Mark Williams <a href="mailto:MWilliams@wakeforestnc.gov">MWilliams@wakeforestnc.gov</a>	Town Manager	919-435-9411
Roe O'Donnell, P.E. <a href="mailto:ROdonnell@wakeforestnc.gov">ROdonnell@wakeforestnc.gov</a>	Deputy Town Manager	919-435-9412

Deeda Harris  
[DHarris@wakeforestnc.gov](mailto:DHarris@wakeforestnc.gov)

Town Clerk

919-435-9413

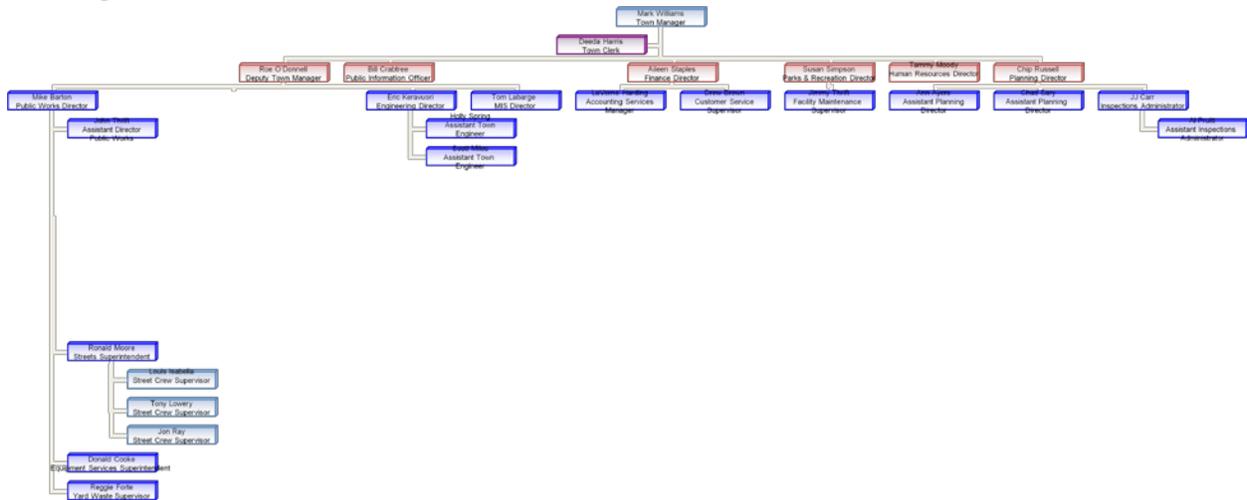
Chip Russell, AICP

Planning Director

919-435-9511

[CRussell@wakeforestnc.gov](mailto:CRussell@wakeforestnc.gov)

## 4.2 Organization Chart



## 4.3 Signing Official Statement

**Signature:** \_\_\_\_\_

Mark Williams, Town Manager  
301 S. Brooks Street  
Wake Forest, N.C. 27587  
(office) 919-435-9411  
(fax) 919-435-9419  
[MWilliams@wakeforestnc.gov](mailto:MWilliams@wakeforestnc.gov)

## 4.4 Duly Authorized Representative

Scott A. Miles, PE  
Assistant Town Engineer  
Town of Wake Forest  
301 S. Brooks St  
Wake Forest, NC 27587

(919) 435-9442

(919) 435-9539 (fax)

## **5. CO-PERMIT APPLICATION STATUS INFORMATION**

The Town of Wake Forest does not intend to share responsibilities with another municipality to fulfill its NPDES Phase II permit obligations. Therefore co-permitting information is not applicable.

## **6. RELIANCE ON ANOTHER ENTITY TO SATISFY ONE OR MORE OF YOUR PERMIT OBLIGATIONS**

1. Do you intend that another entity perform one or more of your permit obligations? No
2. If yes, identify each entity and the element they will be implementing:

Name of Entity:

Element they will implement

Contact Person:

Contact Address:

Contact Telephone Number:

3. Are legal agreements in place to establish responsibilities? N/A

## **7. STORMWATER MANAGEMENT PROGRAM**

### **7.1 Public Education**

#### **7.1.1 Target Audience**

The target audience includes, but is not limited to; Households, School Children, Hispanic community and the business/development community.

#### **7.1.2 Target Pollutant Sources**

The Town of Wake Forest's public education program will target three main pollutants to begin with: sediment, nitrogen and phosphorous. These pollutants are the major concerns for the Neuse River Basin and Wake County as a whole. The Town will expand the public education program to include other pollutants, as they become a problem for the area.

#### **7.1.3 Outreach Program**

The Town of Wake Forest's public education and outreach program will continue to develop its comprehensive Annual Education Plan. The Education Plan will include the specific

Public Education/Outreach BMP's to be implemented, a schedule for the implementation and targeted audiences for each BMP, and measurable goals for all aspects of the Plan.

Another outreach program will be to distribute pollution prevention brochures and posters created in concert with TJCOG. In addition to distributing educational material throughout the year, Town staff will participate in the annual "Meet in the Street" by staffing a booth. The Town will use the festival to provide messages on the importance of clean water and on specific activities that will help keep storm water clean.

#### **7.1.4 Evaluation:**

The public education measure is evaluated in several different ways. The number of educational events, estimated number of educational participants, bags of trash removed, number of educational information distributed, number of storm drain markers installed, number of radio and TV ads are all tracked to evaluate the outreach component.

### **7.2 Public Involvement and Participation Program**

The Town of Wake Forest will implement a public involvement and participation program that will at the minimum throughout the development of the storm water management program and implementation of all the BMP's for all six minimum measures. Public notification will especially be important during the development and approval of all new ordinances and ordinance modifications that will be a part of the Town's stormwater management program. In addition, the Town will establish public participation and involvement programs to foster broader public support and take advantage of the community's intellectual resources.

The Town of Wake Forest will actively strive to involve all potentially affected stakeholders in its public involvement and participation program. Affected stakeholders include, but are not limited to, Town citizens, commercial and industrial businesses, the development community, trade organizations, environmental groups, homeowners associations and education organizations.

A public meeting was held on September 2010. Staff made a presentation of this application and solicited comments from the board of commissioners and the general public.

The Town of Wake Forest is required to hold public hearing regarding any ordinance revisions or new ordinances. The Town will also facilitate public meetings as needed on specific stormwater-related topics.

The Town of Wake Forest already has established public notification processes and procedures in place for standard Town activities. The Board of Commissioner meetings are open to the public and time is set aside for public comment. In addition, any ordinance revisions are open to public review and comment before the Board of Commissioners can adopt them. These existing procedures will be used during further development and implementation of the Town's Stormwater Management program. In addition special public meetings and information sessions will be held as needed throughout the implementation of the new programs.

### **7.3 Illicit Discharge Detection and Elimination Illicit Discharge Detection and Elimination Storm**

#### **7.3.1 Regulatory Mechanism**

The Town of Wake Forest Board of Commissioners adopted an Illicit Discharge Ordinance. A copy of the ordinance is attached.

#### **7.3.2 Enforcement Actions**

As soon as an illicit connection is identified, written notification will be given. Time will be given to offender to take the necessary corrective action depending on the nature of the offense. Also depending on the nature of the offense, civil or criminal penalty may be instituted. An appeals process is available. If offender refuses to comply, the case will be turned over to the Wake County District Attorney's Office.

#### **7.3.3 Detection and Elimination**

Dry Weather inspections will be made at points along the outfall along with Records of calls from the twenty four hour hotline will be charted so that high priority and problem areas can be given proper attention. After identifying illicit connections, the procedures, per the Illicit Discharge Ordinance will be followed.  
routine passes.

##### **7.3.3.1 Finding illicit connections**

Illicit connections will be identified through frequent inspections at points along the outfalls by the Town's Engineering Inspections department.

##### **7.3.3.2 Addressing of spills within the Town's operation and within the community**

The Town of Wake Forest will set up a twenty four hour hotline to report any spill in the community. Town crews will be dispatched to clean up and correct any such event.

##### **7.3.3.3 Eliminate of Illicit Connections or Discharges**

To locate problem areas, town crews, cross trained to conduct proper inspections, will inspect and visually pass and screen storm system at regular intervals. Water will be sampled periodically. Complaints from citizens will be investigated.

Enforcement to insure corrective measures are taken are addressed in the attached Illicit Discharge Ordinance

The Town staff will constantly assess and evaluate the program as well as meet regularly with other municipalities to address regional needs and concern. Changes and amendments will be brought before the Board of Commissioners for prompt approval as necessary.

#### **7.3.4 Illicit or Allowable**

1. Water line flushing: Allowable
2. Landscape irrigation: Allowable
3. Diverted stream flows: Allowable
4. Rising ground waters: Allowable
5. Uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)): Allowable
6. Uncontaminated pumped ground water: Allowable
7. Discharges from potable water sources: Allowable
8. Foundation drains: Allowable
9. Air conditioning condensation: Allowable
10. Irrigation water: Allowable
11. Springs: Allowable
12. Water from crawl space pumps: Allowable
13. Footing drains: Allowable
14. Lawn watering: Allowable
15. Individual residential car washing: Allowable
16. Flows from riparian habitats and wetlands: Allowable
17. Dechlorinated swimming pool discharges: Allowable
18. Street wash water: Allowable

There are some other incidental discharges that are defined as NON-STORMWATER and ILLICIT for purposes within your community and are worthy of being noted.

Additionally, charity car washes will be permitted provided they are held in contained areas that minimize impact to the storm system.

### **7.3.5 Public Outreach**

The Public and Town employees will be informed and educated on the hazards of illicit connections and illegal dumping as part of the Town's Public Education Program and your Good Housing Keeping Program. This will be met through the Town's Public Education system which will include mailings, postings on the Web site and coordination with TJCOG

### **7.3.6 Program Approach**

The Town is still developing our illicit discharge elimination program. The first step was establishing an ordinance to address illicit discharge. The next step, which is still on-going, is to map out and inventory the system. In fiscal Year 07-10, the Town of Wake Forest contracted with WK Dickson, a professional engineering, surveying and GIS/GPS consultant, to inventory and digitally map the Town's storm water system. The format and subsequent layers will be in ARCView tied to the State Plane North Carolina 3200, horizontal datum NAVD83 and vertical datum NAVD 88. In fiscal year 2011 and beyond additional basins will be mapped. The entire system will be completed in 2014. The Assistant Town Engineer will keep the map current and up to date. As-built drawings will be required to be submitted in compatible format before acceptance by the Town. A read-only version of the map will be available to be viewed by the general public. Using Town crew's to visibly pass each structure and system is a very effective way of identifying illicit discharge. Dry weather

inspections will be conducted at outfall nodes.

### **7.3.7 Measurable Goals**

A summary report of each complaint received will be investigated immediately. The results of the investigation and the specific actions taken will be prepared. Suspicious outfalls that had a dry weather flow during visual screening will be tested for suspected pollutants. A summary report of all premises found to be improperly connected to the storm sewer or sanitary sewer will be prepared. A summary report of on-site sewage systems found to be improperly functioning and actions taken to correct problems will be prepared. The number of suspicious manholes that were tested (as appropriate) and test results will be prepared.

### **7.4 Construction Site Stormwater Runoff Controls Construction Site Stormwater Runoff Controls**

The Town of Wake Forest administers its own state approved Soil and Erosion Control program. The purpose of the ordinance is to regulate certain land disturbing controlled and that the accelerated erosion and sedimentation of lakes and natural watercourses and damage to public and private property by sedimentation be inhibited. Also, the purpose of the ordinance is to establish procedures through which the measures can be fulfilled. See attached Erosion and Sediment Control Ordinance. activities to control accelerated erosion in order that water pollution from sedimentation may be

Staff engineers review the erosion control plan and if it is found to be incomplete or inadequate, the designer will be requested to provide additional information or to revise the plan. Once the plan is approved, a Land-Disturbing Permit is issued. During implementation of the plan and subsequent construction, Construction Inspection staff visit the site to determine if the approved plan has been implemented and to ensure compliance with the law. Any person or party engaging in a non-compliant land-disturbing activity will be directed to stop work and will be issued a Notice of Violation. Violators are subject to a fine of \$5000 per day for each day that the site is not in compliance, and may be charged with a Class 2 misdemeanor, which may include a fine not exceeding \$5000.

The Town of Wake Forest encourages citizens to contact us via the Muddy Water Watch program. Citizens can call the Town directly to report possible violations. Periodic stream walks take place to inform the public of sources of sediment pollution.

Town staff makes regular visits to every site within the Town currently under an erosion and sediment control permit to ensure compliance under the ordinance.

### **7.5 Post Construction Site Management Post Construction Management for New and Re-development activities**

The Town of Wake Forest has a stormwater management ordinance for control of post-construction stormwater runoff. The current program was developed to comply with the State's Watershed Water Supply Protection requirements and the Neuse NSW requirements for urban stormwater. The current program addresses storm water runoff from new

development and redevelopment projects that disturb an area greater than or equal to one acre. All projects must control peak flow and meet designated water quality targets. The Current Town of Wake Forest Stormwater Management Ordinance is attached.

The Town of Wake Forest will assess and evaluate, and revise as necessary its stormwater management ordinances to meet the State's Phase II rules for post-construction. The Town of Wake Forest will partner with the State as needed to develop and implement area-specific watershed plans which may have alternate strategies for preventing or minimizing water quality impacts using structural and non-structural BMP's. The amended stormwater ordinances became effective on October 16, 2007.

#### **7.5.1 BMP Operations and Maintenance**

The Town of Wake Forest's program includes an operation and maintenance component that ensures the adequate long-term operation of the structural BMP's required by the program. These BMP's are privately owned and operated. The Town of Wake Forest staff will review and approve maintenance inspection reports from appropriate, qualified licensed design professionals. Staff will correspond with the BMP owners to facilitate needed maintenance or corrective actions.

#### **7.5.2 Requirements for Controlling Sources of Fecal Coli form (Septic Systems)**

The Wake county Environmental Services Department has jurisdiction over most typical on-site wastewater systems, or septic systems, in the Town's planning area and surrounding rural areas. Some large, non-typical septic systems or other on-site wastewater systems may be referred to the NC Department of Environmental Health. The County currently approves plans and inspects construction of newly installed septic systems. The county also assists owners of failing septic systems by evaluation the system and recommending short-term or long-term solutions. The Town does not anticipate any change in Wake County's jurisdiction over septic systems and will continue to rely on the County and/or State Departments to provide these services that aid in controlling fecal coli form sources.

#### **7.5.3 Requirements for Development Projects Draining to Nutrient Sensitive Waters (NSW)**

The Town of Wake Forest's basin drains into nutrient sensitive waters with the Neuse River being the final receiving stream. The Neuse River holds the supplemental classification of NSW along with other main tributaries in the Town's basin Area. The Town will implement a NSW Nutrient Reduction Stormwater Program as directed by the State within the area that drains to the Neuse River and Falls Lake.

#### **7.5.4 Structural BMP's:**

The Town of Wake Forest anticipates allowing any structural BMP recommended by agencies of the State of North Carolina in order to accomplish specific stormwater goals. Some of the specific goals as described herein include runoff volume goals restricting post-development runoff to pre-development as well as water quality goals for total suspended solids (TSS) removal and specific goals for nitrogen removal. The Town reserves the right to exclude any BMP that it deems not in the best interest. A source of information from

NC DENR regarding acceptable BMPs include, but is not limited to; NC DWQ's BMP Manual.

### **7.5.5 Operation and Maintenance**

The long term operation and maintenance of private storm systems (that may or may not connect to the Town storm system) and structural BMPs will require a responsible party (ie. homeowner's association, property manager, etc.). Prior to final acceptance of any project, the Town will require the developer to identify, most likely in writing the initial party responsible for all stormwater maintenance and structural BMPs and all other common areas, open space, private easements, etc. that require maintenance after construction is complete. All deeds of easement, plat maps, as-builts etc. shall identify the responsible party to the complete satisfaction of the Town or its Attorneys prior to the recording of any such documents. Public recording of these rights to easements and the responsible parties will ensure perpetual responsibility, even if/when ownership changes. Additionally, the developer shall deliver a certified O&M Plan to the Town for approval that includes, at a minimum, provisions for an annual approval, the O&M Plan and any O&M manuals or instruction shall be delivered to the Town Engineering Department as well as the party responsible for O&M within the development. The Town may consider the development of a Standard O&M Plan or Model O&M Plan as this program is developed. The responsible party for the development will be held accountable for ensuring that all maintenance operations are carried out according to the approved O&M Plan and will be required to retain a copy of such plan on his premises. The responsible party will also submit the required BMP inspection reports to the Engineering Department so that the Town can maintain a tracking system of the condition of all BMPs in its jurisdiction.

### **7.5.6 Decision Process**

The Construction Site Runoff Program will begin with site plan review. This will be the "front line" for ensuring that construction projects comply with the requirements of the program. The Town's Engineering Staff will generate comments and site plans will not receive a grading permit until all requirements have been met. Plan review may also reveal that other state agencies (ie. NC Division of Water Quality) are required to approve the plans prior to the Town's approval. After the plans have been accepted and the developer has satisfied all other permitting requirements, as may be required by the Town or other agencies, then all Town permits will be issued and construction may begin. From that point, The Town's inspectors attend pre-construction meetings and will ensure that the project is constructed according to the approved plans, taking enforcement actions as may be necessary to ensure compliance. From this point forward, the decision process diverges for the requirements of the Construction Site Runoff Program. Whereas requirements for construction site runoff control end when the project is finally accepted, the requirements for post-construction stormwater control continue in perpetuity. The primary mechanism that allows the Town to track the condition of all private stormwater systems and structural BMPs after construction is the responsible party's submittal of annual inspection reports to the Engineering Department. Engineering will develop a tracking system that efficiently identifies the condition of all private stormwater systems and structural BMPs, identifies whether or not responsible parties have submitted annual inspection reports, and identifies the responsible party's compliance with the O&M Plan. Non-compliance by the responsible

party will result in enforcement actions as sanctioned by the Ordinance. Additionally, Engineering and Public Works staff will be trained to observe storm systems and BMPs throughout their day-to-day operations in the field in order to detect devices that may not be in compliance.

#### **7.5.7 Open Space Protection**

The Town of Wake Forest has adopted an extensive Open Space and Greenway Plan. The goal of the plan is to identify parcels and corridors of land that are in need of protection and conservation measures; to establish a comprehensive approach that will link greenspace lands and corridors to residential, commercial, industrial and central business areas of the community; and to define a concise set of strategies for protecting and conserving these corridors and at the same time developing public use facilities that would provide residents of the town with access to these lands and corridors. The Open Space Plan was prepared to be consistent with a larger plan for Wake County. The County has encouraged and supported the preparation and adoption of municipal open space plans to ensure that there is continuity across jurisdictions.

#### **7.5.8 Tree Preservation**

The Town of Wake Forest is dedicated to the preservation of its trees. All trees located throughout the Town of Wake Forest make up the "Urban Forest." Trees located in the public right-of-way, on public grounds, and within street tree easements are municipal-owned trees and are an important component of the Town of Wake Forest's urban infrastructure. Trees provide a wide variety of social, community, economic and environmental benefits for us all that include such things as climate moderation, better air quality, water conservation, habitat for birds and other wildlife and increased property values. All street trees located on municipally owned property are protected by the Vegetation Ordinance of the Municipal Code. The Town of Wake Forest is responsible for the planting, protection, maintenance and removal of these trees.

#### **7.5.9 Street Design**

The Town of Wake Forest has developed an extensive transportation plan. The [Wake Forest Transportation Plan](#) identifies specific and general transportation system improvement recommendations and strategies to help accommodate growth in travel demand, while supporting a diversified transportation system that considers not only the automobile, but also the cyclist, the pedestrian, and the transit patron. A plan that does not consider implementation is faulted from the start. With this in mind, the Wake Forest Transportation Plan includes discussion on strategies, methods, and sources of funding for implementation.

#### **7.5.10 Green Infrastructure and Design**

The Town of Wake Forest is currently developing a new Unified Development Ordinance. This new ordinance will allow for alternatives for traditional design standards such as paving for curb and gutter and sidewalks. The UDO will also allow for the reduction of required parking below the current industry norms. The UDO will coordinate all environmental protection standards to ensure adequate, yet practical and flexible landscape protection. The UDO will also adopt a public space dedication and improvement standards that will in the long term provide a range of open space types based on context in all new developments.

The UDO will also evaluate the existing stormwater ordinance to apply a palette of context sensitive standards. This include the encouragement of green infrastructure practices such as rainwater harvesting and payment in lieu programs for off-site stormwater mitigation.

#### **7.5.11 Green Infrastructure Practices**

The Town of Wake Forest allows and encourages the use of cisterns and rain barrels. As a water conservation community, the Town sells rain barrels to citizens. The Town regularly holds scheduled pre-submittal meetings with developers and engineers. At these meetings, the staff discusses board topics effecting the development including stormwater management, overall site water quality, erosion control and long term BMP operation and maintenance.

### **7.6 Pollution Prevention/Good Housekeeping for Municipal Operations**

#### **7.6.1 Current BMP strategies**

The Town of Wake Forest will develop and implement an operations and maintenance program that includes a training component and has the ultimate goal of preventing or reducing runoff from municipal operations.

Using training materials that are available from EPA and other organizations, The Town of Wake Forest will train employees to prevent and reduce storm water pollution from activities such as parks and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

#### **7.6.2 Affected Operations**

The Following Town of Wake Forest facilities and operations are impacted by this operation and maintenance program. These programs will be evaluated and revised to ensure that the programs minimize pollutant loading. Facilities will be inspected to identify and eliminate exposure to stormwater. Corrective actions will be taken or BMP's installed as needed:

Operations Center  
234 Friendship Chapel Rd  
Wake Forest, NC 27587  
919-435-9570

#### **7.6.3 Maintenance and Inspection**

Streets and Town maintained parking lots are routinely cleaned and cleared of any debris. A street sweeper has been purchased. Streets are currently cleaned regularly.

The Street Department currently inspects the storm system including grates, catch basins and rip rap aprons for accumulated debris. The department also responds to calls from citizens and other department's complaints of debris. All trash, both yard waste and other items of are disposed of properly.

#### **7.6.4 Controls for reducing pollutants**

After the initial assessment and inventory of the Town's maintenance facilities, the Engineering Department will educate Town Staff and municipal employees on how to reduce pollutants from public parking lots, storage yards, waste transfer stations, outdoor storage areas at vehicle maintenance shops, salt storage and snow disposal areas and any other publicly maintained facilities.

**7.6.5 Waste Disposal**

Yard waste, including leaves branches and other natural waste are transported to: Rowland Landfill, Inc., 2730 Rowland Rd., Suite 105, Raleigh, NC, 27615.

**7.6.6 Measurable goals and Evaluation**

The Town staff will record the number of employees attending a pollution reduction educational meeting. The number of facility cleanings and amount of pollutants collected will also be recorded.

## Appendix A

## Appendix B

Illicit Discharge Ordinance – contact Scott Miles for copy

301 S. Brooks Street  
Wake Forest, NC 27587

(919) 435-9442

[SMiles@wakeforestnc.gov](mailto:SMiles@wakeforestnc.gov)

## Appendix C

Phase II storm water ordinance – please contact Scott Miles for copy

301 S. Brooks Street  
Wake Forest, NC 27587

(919) 435-9442

[SMiles@wakeforestnc.gov](mailto:SMiles@wakeforestnc.gov)