

Town of Holly Springs

Wake County, North Carolina

# NPDES Phase II Stormwater Application

June 15, 2016

**Permit #: NCS000495**

Developed By:

The Town of Holly Springs, Department of Engineering  
Kendra D. Parrish, PE, CFM, Director of Engineering  
Aaron Levitt, PE, Senior Engineer  
J. Daniel Colavito, CFM, Environmental Specialist  
128 South Main Street  
PO Box 8  
Holly Springs, NC 26540  
919.557.3938 – fax 919.552.9881  
[www.hollyspringsnc.us](http://www.hollyspringsnc.us)  
[stormwater@hollyspringsnc.us](mailto:stormwater@hollyspringsnc.us)



## TABLE OF CONTENTS

<b>1. STORM SEWER SYSTEM INFORMATION</b>	<b>Pages 1-3</b>
1.1. Population Served	Page 1
1.2. Growth Rate	Page 1
1.3. Jurisdictional and MS4 Service Areas	Page 1
1.4. MS4 Conveyance System	Pages 1-2
1.5. Land Use Composition Estimates	Page 2
1.6. Estimate Methodology	Pages 2-3
1.7. TMDL Identification	Page 3
<b>2. RECEIVING STREAMS</b>	<b>Pages 4-5</b>
<b>3. EXISTING WATER QUALITY PROGRAMS</b>	<b>Pages 6-7</b>
3.1. Local Programs	Pages 6-7
3.2. State programs	Page 7
<b>4. PERMITTING INFORMATION</b>	<b>Pages 8-12</b>
4.1. Responsible Party Contact List	Pages 8-9
4.2. Organizational Chart	Pages 10-11
4.3. Signing Official	Page 12
4.4. Duly Authorized Representative	Page 12
<b>5. Co-Permitting Information</b>	<b>Page 13</b>
5.1. Co-Permittees	Page 13
5.2. Legal Agreements	Page 13
5.3. Responsible Parties	Page 13
<b>6. Reliance on Other Government Entity</b>	<b>Page 14</b>
6.1. Name of Entity	Page 14
6.2. Measure Implemented	Page 14
6.3. Contact Information	Page 14
6.4. Legal Agreements	Page 14
<b>7. STORMWATER MANAGEMENT PROGRAM</b>	<b>Pages 15-39</b>
7.1. Public Education and Outreach on Storm Water Impacts	Pages 15-16
7.2. Public Involvement and Participation	Page 17
7.3. Illicit Discharge Detection and Elimination	Pages 18-22
7.4. Construction Site Stormwater Runoff Control	Pages 23-26
7.5. Post-Construction Management in New Development and Redevelopment	Pages 27-37
7.6. Pollution Prevention/Good Housekeeping for Municipal Operations	Pages 37-39

### Appendix

BMPs and Measureable Goals Table

### Attachments

On Submittal CD

## NPDES STORMWATER PERMIT RENEWAL APPLICATION FORM

This application form is for use by Local Governments seeking NPDES stormwater permit coverage for Regulated Public Entities (RPE) pursuant to Title 15A North Carolina Administrative Code 2H .0126. A complete application package includes this form and one copy of a Narrative of The Stormwater Management Program. The required Narrative of The Stormwater Management Program is described in Section VII of this form.

### I. NAME OF LOCAL GOVERNMENT, PERMIT NUMBER, AND EXPIRATION DATE

Name of Local Government	Town of Holly Springs
Permit Number	NCS000495
Expiration Date	November 30, 2016

### II. CO-PERMIT APPLICATION STATUS INFORMATION

(Complete this section only if co-permitting)

a. Do you intend to co-permit with another regulated public entity?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b. If yes, name of regulated public entity	
c. If yes, have legal agreements been finalized between the co-permittees?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

### III. RELIANCE ON ANOTHER ENTITY TO SATISFY ONE OR MORE OF YOUR PERMIT OBLIGATIONS (If more than one, attach additional sheets)

a. Do you intend that another entity perform one or more of your permit obligations?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b. 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	
c. Are legal agreements in place to establish responsibilities?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## NPDES RPE Stormwater Permit Application

### IV. DELEGATION OF AUTHORITY (OPTIONAL)

The signing official may delegate permit implementation authority to an appropriate staff member. This delegation must name a specific person, their title/position. Documentation of board action delegating permit authority to this person/position must be provided.

a. Name of person to which permit authority has been delegated	NA
b. Title/position of person above	NA

### V. SIGNING OFFICIAL'S STATEMENT

If authority for the NPDES stormwater permit has been appropriately delegated through board action and documented in this permit application, the person/position listed in Section IV above may sign the official statement below.

*I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Signature	
Name	Charles Simmons
Title	Town Manager
Street Address	128 South Main St.
PO Box	PO Box 8
City	Holly Springs
State	NC
Zip	27540
Telephone	919.557.3924
E-Mail	charles.simmons@hollyspringsnc.us

### VI. LOCAL GOVERNMENT CONTACT INFORMATION

Provide the following information for the person/position that will be responsible for day to day implementation and oversight of the stormwater program.

a. Name of Contact Person	Kendra Parrish, PE, CFM
b. Title	Director of Engineering
c. Street Address	128 South Main
d. PO Box	PO Box 8
e. City	Holly Springs
f. State	NC
g. Zip	27540
h. Telephone Number	919.557.3935
j. E-Mail Address	kendra.parrish@hollyspringsnc.us

## NPDES RPE Stormwater Permit Application

### VII. NARRATIVE STORMWATER MANAGEMENT PROGRAM

Attach one copy of a narrative describing the stormwater management program. The report must be presented in the following order.

1. Population and Estimated Growth Rate
2. Jurisdictional Area
3. Describe Stormwater Conveyance System
4. Estimated Land Use
5. Identify the Receiving Streams
6. Identify TMDLs (if applicable)
7. Identify impaired streams, likely sources, and existing programs that address the impairment (if applicable)
8. List any existing water quality programs
9. Identify and describe any partnerships and/or inter-local agreements
10. Describe any state programs
11. Identify any other entity that the regulated public entity relies on to implement or manage its stormwater program.
12. Identify points of contacts
13. Describe the public education and outreach program
14. Describe the public involvement and participation program.
15. Describe the Illicit Discharge Detection and Elimination Program.
16. Describe the post-construction stormwater program  
Describe practices to inspect and maintain municipally-owned facilities
17. Describe practices to inspect and maintain structural stormwater control devices
18. Describe practices to reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots, piped and vegetative conveyances, manholes, cleanouts, drop inlets, and drainage structures.
19. Describe any training programs for municipal staff.
20. Describe spill response procedures for those at Municipally Owned and/or Operated Facilities as well as those in the public right-of-way.

# **NARRATIVE APPLICATION SUPPLEMENT: STORMWATER MANAGEMENT PROGRAM REPORT**

## **1. STORM SEWER SYSTEM INFORMATION**

### **1.1 Population Served:**

The permanent population for the Town of Holly Springs in 2015 is estimated to be approximately 31,391 per the Town of Holly Springs population estimates. The Town's population estimates are prepared annually to determine the estimated July 1 population number. The estimate is determined by multiplying the total number of single-family and townhome certificates of occupancy issued during the past year by 3.05 persons/dwelling unit and multi-family certificates of occupancy by 2.68 persons/dwelling unit. This number is then added to the previous year's estimated population. Every 10 years, the Town's population estimates are updated by utilizing the official US Census Decennial Population Number and the persons/dwelling unit are also updated to reflect the most current numbers established by the official census count.

### **1.2 Growth Rate:**

The growth rate for the service area is calculated based on the simple analysis of the relative change between the US Census population in 1990 and 2000 stated as a percent change, annualized by dividing the percent change by 10 yields a growth rate of 79.77% for 1990-2000 and 26.83% for 2000-2010. 1990 census population was 1,024; 2000 census population was 9,192. Total percentage increase for the 10-year period was 797.7%. 2010 census population was 24,661. Total percentage increase for the 10-year period was 268.3%.

### **1.3 Jurisdictional and MS4 Service Areas:**

The jurisdictional area is approximately 22.21 square miles, including city limits and the Town's ETJ. The MS4 service area is approximately 16.63 square miles.

### **1.4 MS4 Conveyance System:**

Downtown Holly Springs lies on the watershed divide between two major river basins: Middle Creek and its tributaries (Basal Creek and Rocky Branch) in the Neuse River basin, drain the eastern one-fourth of the Holly Springs planning area. Buckhorn Creek and its tributaries (Little White Oak Creek, White Oak Creek, Big Branch, Little Branch, Utley Creek, Norris Branch, Cary Branch and Jim Branch) in the Cape Fear River basin, drain the western three-fourths of the planning area. NC-55 north of Holly Springs and SR 1115 and SR 1101 south of Town lie along the watershed divide between these two river basins. Stormwater is collected via open swales and ditches, curb and gutter or yard inlets to a closed system of pipes with flared end sections. Some flared end sections outlet into Stormwater Control Measures (SCMs), such as level spreaders, bioretention areas or riparian buffers. A predominant amount of the streams in the Neuse River Basin flow through Bass Lake and/or Sunset Lake, prior to leaving the Town's service area. Most streams in the Cape Fear River Basin drain into Harris Lake prior to reaching the Cape Fear River.

The Town regulates all stormwater collection system design and construction. The Town maintains all stormwater systems on Town property and within its street rights-of-ways. The Public Works Department maintains these areas as needed to keep inlets clear of debris. Stormwater systems within the State's right-of-way are maintained by the North Carolina Department of Transportation. Systems on private property or private drainage easements are solely the landowner's responsibility. The Town may take corrective action on these systems when improper causes an emergency situation; the property owner may then be subsequently billed for these activities. Proper maintenance includes insuring that outfalls are free from pollutants and obstructions, and securely in accordance with local, state, and federal regulations.

1.5 Land Use Composition Estimates:

LAND USE	ACRES	PERCENT
Residential	5371.71	42.49%
Commercial	1798.45	14.23%
Industrial	187.5	1.48%
Open Space	5285.1	41.8%

1.6 Estimate Methodology:

For this project, the existing land use inventory was determined using GIS data based upon the Town of Holly Springs Certified Zoning Map for parcels within the Town Corporate Limits and Extraterritorial Jurisdiction (ETJ), as well as approved preliminary site and development plans.

Residential classification is based upon the existing subdivision, subdivisions currently under construction and land currently zoned residential that includes farm land in the ETJ. Commercial classification is based on existing commercial property including parcels with approved development plans. Industrial classification includes existing industrial properties, landfills and quarries. Open space classification is a combination of schools, parks, cemeteries Homeowner Owner Association lands that will remain undeveloped and land reserved for future parks. The remainder of the open space classification are undeveloped properties.

#### 1.7 TMDL Identification:

NC DENR has developed a TMDL for addressing impaired biological integrity in the headwaters of the Swift Creek Watershed. The Town of Holly Springs drains into Middle Creek, near its confluence with Swift Creek East of NC 210 in Johnston County. Holly Springs is not tributary to the TMDL in the Swift Creek Watershed. The NC Division of Water Quality's TMDL website states that NC DENR is developing a TMDL for the Middle Cape Fear for the pollutant Chlorophyll a. It has not been determined how this TMDL will affect Holly Springs.



## 2 RECEIVING STREAMS

**Table 1. Neuse River Basin**

Receiving Stream Name	Stream Segment	Water Quality Classification	Use Support Rating	Water Quality Issues	303(d) List <i>**Listings based upon 2016 draft list and 2010 listing</i>
Middle Creek From 0.8 miles south of US1 to ut on west of creek 3.0 miles	27-43-15-(1)b1	C; NSW	Aquatic Life: Impaired	<ul style="list-style-type: none"> <li>Habitat Degradation from MS4 NPDES (Apex) &amp; Stormwater Runoff</li> <li>Low Dissolved Oxygen from WWTP NPDES (Apex)</li> <li>Upper portion of the Middle Creek watershed having elevated levels of turbidity &amp; fecal coliform.</li> </ul>	Yes: 303d list for impairments due to Low Dissolved Oxygen & Habitat Degradation.
Middle Creek From ut on west side of creek 3.0 miles downstream to backwaters of Sunset Lake	27-43-15-(1)b2	C; NSW	Aquatic Life: Supporting  Recreation: Not Rated	<ul style="list-style-type: none"> <li>Elevated turbidity levels</li> </ul>	no
Middle Creek Sunset Lake	27-43-15-(2)	B; NSW	n/a	n/a	no
Middle Creek From dam at Sunset Lake to Swift Creek	27-43-15-(4)a	C; NSW	Aquatic Life: Not Rated, Zinc & Iron; Supporting, Ecological/biological integrity FishCom & Benthos; Impaired, Turbidity  Recreation: Supporting	<ul style="list-style-type: none"> <li>Fecal Coliform Bacteria from MS4 NPDES (Apex) &amp; Stormwater Runoff</li> <li>Nutrient Impacts from General Agriculture/Pasture &amp; Stormwater Runoff</li> <li>Turbidity from Construction &amp; Stormwater Runoff.</li> </ul>	Yes: 2010 303d 4.5 PW miles impaired due to turbidity.
Middle Creek Subbasin 03-04-03	n/a	n/a	n/a	n/a	Yes: 2010 and 2016 draft 303d list 8.9 Impaired Miles
Basil Creek Bass Lake, Mills Pond	27-43-15-(3)	B; NSW	No data collected July 2009 Basinwide Plan	n/a	No
Rocky Branch	27-43-15-4.5	C; NSW	No data collected July 2009 Basinwide Plan	n/a	No

- information for this table has been obtained from the NC DENR 2009 Neuse River Basinwide Water Quality Plan, BIMS 2010 and the 2010 Draft 303d list.

**Table 2. Cape Fear River Basin**

Receiving Stream Name	Stream Segment	Water Quality Classification	Use Support Rating	Water Quality Issues	303(d) List
Little White Oak Creek From Source to Harris Lake, Buckhorn Cr.	18-7-7	C		n/a	No
White Oak Creek From Source to Harris Lake, Buckhorn Cr.	18-7-6	C	No data collected October 2005 Basinwide Plan	n/a	No
Big Branch From Source to Harris Lake, Buckhorn Cr.	18-7-8	C		n/a	No
Little Branch From Source to Big Branch	18-7-6-1-1	C	Not Rated	n/a	No
Utley Creek From Source to Harris Lake, Buckhorn Cr.	18-7-5.5	C	No data collected October 2005 Basinwide Plan  Not Rated July 2000 Basinwide Plan	The "Cape Fear River Basinwide Water Quality Plan" October 2005 current status and recommendations noted that earlier studies indicated the Holly Springs WWTP as a significant contributor of nutrients to the creek and recommends that the town find another wastewater disposal alternative and to protect streams in the urbanizing areas. No recent WQ issues reported.	No
Norris Branch From Source to Cary Branch	18-7-5-1	C			No
Cary Branch From Source to Harris Lake, Buckhorn Cr.	18-7-5	C	No data collected October 2005 Basinwide Plan		No
Jim Branch From Source to Harris Lake, Buckhorn Cr.	18-7-4	C			No
Buckhorn Creek From Source to Norfolk Southern Railroad	18-7-(1)	C			No

- information for this table has been obtained from the NC DENR 2005 Cape Fear River Basinwide Water Quality Plan , BIMS 2010 and the 2010 Draft 303d List.

**Water Quality Classification:**

C = Secondary Recreation  
 B = Primary Recreation  
 NSW = Nutrient Sensitive Waters

**Information Sources:**

Stream Index Numbers: <http://nc.maps.arcgis.com/home/webmap/viewer.html?useExisting=1>  
 BasinwideWaterQualityPlans:<http://deq.nc.gov/about/divisions/water-resources/planning/basin-planning/map-page/neuse-river-basin> <http://deq.nc.gov/cape-fear-river-basin>  
 303(d)List:<http://deq.nc.gov/about/divisions/water-resources/planning/classification-standards/303d/303d-files>

## WATER QUALITY PROGRAMS

### 3.1 Local Programs:

<b>Water Quality Program</b>	<b>Attachment</b>
▪ Erosion & Sedimentation Control Program, Delegated by the Sediment Control Commission	
- Soil Erosion & Sedimentation Control Ordinance Town Code, Chapter 8, Article II	2
- Town of Holly Springs Engineering Design and Construction Standards - Section 4, Sedimentation & Erosion Control; Section 10, Environmental	3
▪ Floodplain Management Program	
- Flood Damage Prevention Ordinance Town Code, Chapter 8, Article II	2
- Drainage Policies: Including the use of three drainage basin HEC-HMS models to identify changes in surface water elevation and provide information to ensure that new development will not negatively affect adjacent properties.	4
▪ Timbering	
- Timbering Regulations Town Code, Chapter 8, Article IV	2
▪ Stormwater Management	
- Town-mandated riparian buffer regulations: Section 7.06 of the Town of Holly Springs Unified Development Ordinance.	5
- NPDES Phase II Post-Construction Stormwater Regulations Town Code, Chapter 8, Article V	2
- NPDES Phase II Stormwater Illicit Discharge Detection & Elimination Regulations Town Code, Chapter 8, Article VI	2
- Town of Holly Springs Engineering Design and Construction Standards - Section 8, Stormwater Design	3
- Storm Drain Marker Program	6
▪ Water Conservation	
- Water Conservation Ordinance Town Code, Chapter 16, Article II, Division 2	7

- Reclaimed Water Ordinance	7
Town Code, Chapter 16, Article IV	
- Town of Holly Springs Engineering Design and Construction Standards - Section 11, Reclaimed Water Distribution System	3
▪ Other Documents & Programs	
- Unified Development Ordinance	5
- Vision Holly Springs, Town of Holly Springs Comprehensive Plan	8
- Town of Holly Springs Master Open Space Plan	9
- Town of Holly Springs Secondary and Cumulative Impacts Master Mitigation Plan.	10
- Yard and Leaf Waste, White Goods and Bulky Trash Collection - Town Code, Chapter 14, Article II	11

Copies of ordinances and policies for the existing water quality programs are available on the CD attached with this application.

### 3.2 State Programs:

- Neuse Riparian Buffer Rules
- Erosion and Sedimentation Control (for all construction projects one acre of disturbed area or greater that are not permitted through the Town of Holly Springs)

## 4 PERMITTING INFORMATION

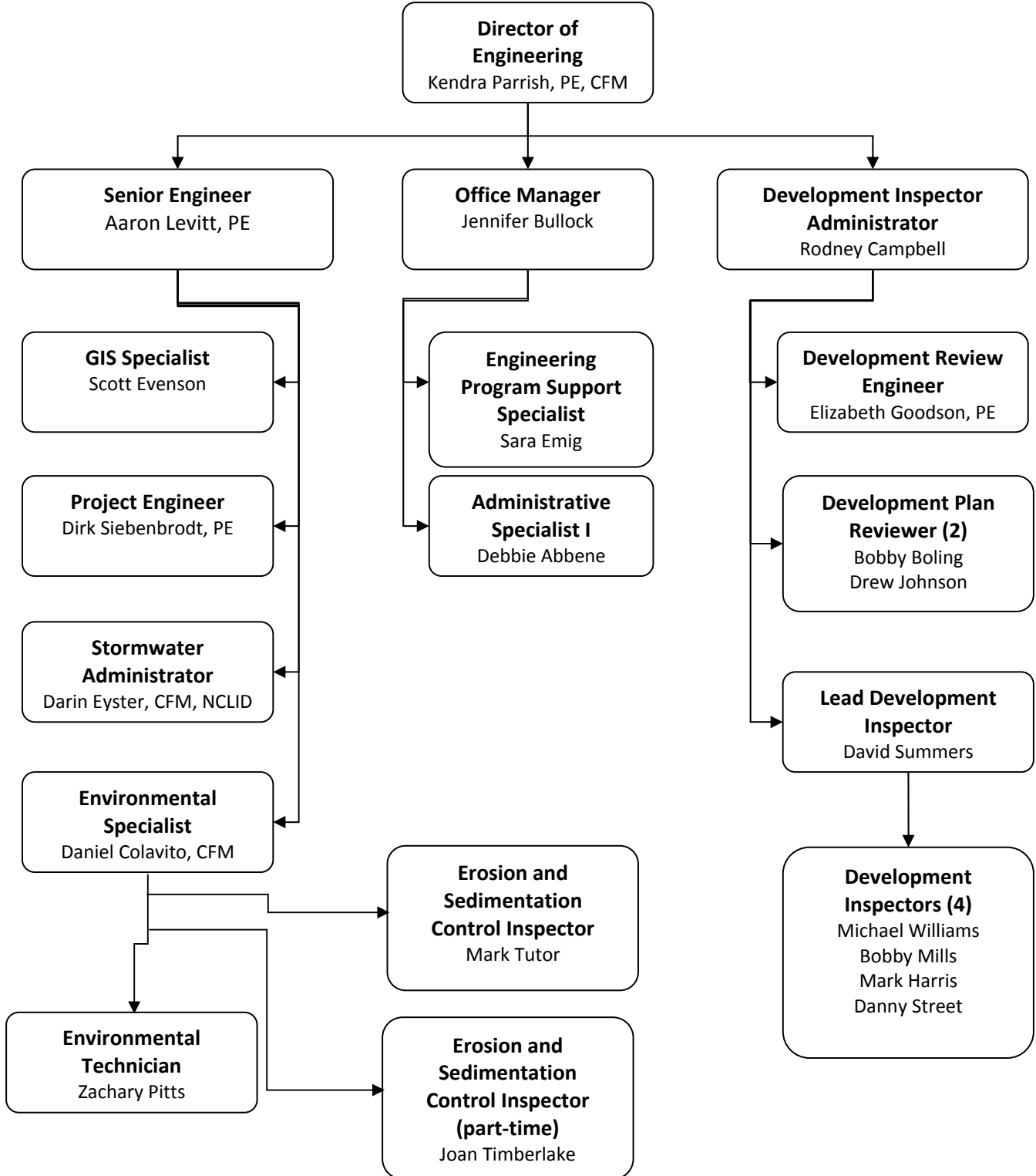
### 4.1 RESPONSIBLE PARTY CONTACT LIST

Department	Position/Name	Phone #	Fax #	Email
Administration	Charles Simmons, Assistant Town Manager	(919) 557-3924	(919) 567-1472	<a href="mailto:charles.simmons@hollyspringsnc.us">charles.simmons@hollyspringsnc.us</a>
Administration	Daniel Weeks, Assistant Town Manager	(919) 557-2924	(919) 567-1472	<a href="mailto:daniel.weeks@hollyspringsnc.us">daniel.weeks@hollyspringsnc.us</a>
Administration	Eric Tayler, IT Manager	(919) 557-3909	(919) 567-1472	<a href="mailto:eric.tayler@hollyspringsnc.us">eric.tayler@hollyspringsnc.us</a>
Governing Body	Richard "Dick" Sears, Mayor	(919) 557-3900	(919) 552-0654	<a href="mailto:dick.sears@hollyspringsnc.us">dick.sears@hollyspringsnc.us</a>
Governing Body	Joni Powell, Town Clerk	(919) 557-3900	(919) 552-0654	<a href="mailto:joni.powell@hollyspringsnc.us">joni.powell@hollyspringsnc.us</a>
Governing Body	Linda Harper, Deputy Town Clerk	(919) 557-3904	(919) 552-0654	<a href="mailto:linda.harper@hollyspringsnc.us">linda.harper@hollyspringsnc.us</a>
Governing Body	Mark Andrews, Public Information Officer	(919) 557-2918	(919) 552-0654	<a href="mailto:mark.andrews@hollyspringsnc.us">mark.andrews@hollyspringsnc.us</a>
Governing Body	Tamara Ward, Publications Specialist	(919) 557-2936	(919) 552-0654	<a href="mailto:tamara.ward@hollyspringsnc.us">tamara.ward@hollyspringsnc.us</a>
Engineering	Kendra Parrish, PE, CFM Director & Department Head	(919) 557-3935	(919) 552-9881	<a href="mailto:kendra.parrish@hollyspringsnc.us">kendra.parrish@hollyspringsnc.us</a>
Engineering	Aaron Levitt, PE Senior Engineer & Division Head	(919) 567-4025	(919) 552-9881	<a href="mailto:aaron.levitt@hollyspringsnc.us">aaron.levitt@hollyspringsnc.us</a>
Engineering	Rodney L. Campbell, Development Inspector Administrator	(919) 557-2908	(919) 552-9881	<a href="mailto:rodney.campbell@hollyspringsnc.us">rodney.campbell@hollyspringsnc.us</a>
Engineering	Elizabeth Goodson, PE, Development Review Engineer	(919) 557-3936	(919) 552-9881	<a href="mailto:elizabeth.goodson@hollyspringsnc.us">elizabeth.goodson@hollyspringsnc.us</a>
Engineering	Bobby Boling, Development Plans Reviewer	(919) 557-3919	(919) 552-9881	<a href="mailto:bobby.boling@hollyspringsnc.us">bobby.boling@hollyspringsnc.us</a>
Engineering	Drew Johnson, Development Plans Reviewer	(919) 557-2930	(919) 552-9881	<a href="mailto:drew.johnson@hollyspringsnc.us">drew.johnson@hollyspringsnc.us</a>
Engineering	Daniel Colavito, CFM, Environmental Specialist	(919) 567-4027	(919) 552-9881	<a href="mailto:daniel.colavito@hollyspringsnc.us">daniel.colavito@hollyspringsnc.us</a>
Engineering	Darin Eyster, CFM, Stormwater Administrator	(919) 557-2921	(919) 552-9881	<a href="mailto:darin.eyster@hollyspringsnc.us">darin.eyster@hollyspringsnc.us</a>
Engineering	Zachary Pitts, Environmental Technician	(919) 557-2909	(919) 552-9881	<a href="mailto:zachary.pitts@hollyspringsnc.us">zachary.pitts@hollyspringsnc.us</a>
Engineering	Mark Tutor, Erosion Control Inspector	(919) 215-2249	(919) 552-9881	<a href="mailto:mark.tutor@hollyspringsnc.us">mark.tutor@hollyspringsnc.us</a>
Engineering	Joan Timberlake, Erosion Control Inspector, Part-time	(919) 805-8346	(919) 552-9881	<a href="mailto:joan.timberlake@hollyspringsnc.us">joan.timberlake@hollyspringsnc.us</a>
Engineering	Dirk Siebenbrodt, PE Engineering Project Coordinator	(919) 557-3931	(919) 552-9881	<a href="mailto:dirk.siebenbrodt@hollyspringsnc.us">dirk.siebenbrodt@hollyspringsnc.us</a>
Engineering	Scott Evenson, Engineering/GIS Technician	(919) 557-3932	(919) 552-9881	<a href="mailto:scott.evenson@hollyspringsnc.us">scott.evenson@hollyspringsnc.us</a>
Engineering	David Summers, Lead Development Inspector	(919) 557-2910	(919) 552-9881	<a href="mailto:david.summers@hollyspringsnc.us">david.summers@hollyspringsnc.us</a>
Engineering	Mike Williams, Development Inspector	(919) 557-2911	(919) 552-9881	<a href="mailto:michael.williams@hollyspringsnc.us">michael.williams@hollyspringsnc.us</a>
Engineering	Mark Harris, Development Inspector	(919) 557-2928	(919) 552-9881	<a href="mailto:mark.harris@hollyspringsnc.us">mark.harris@hollyspringsnc.us</a>

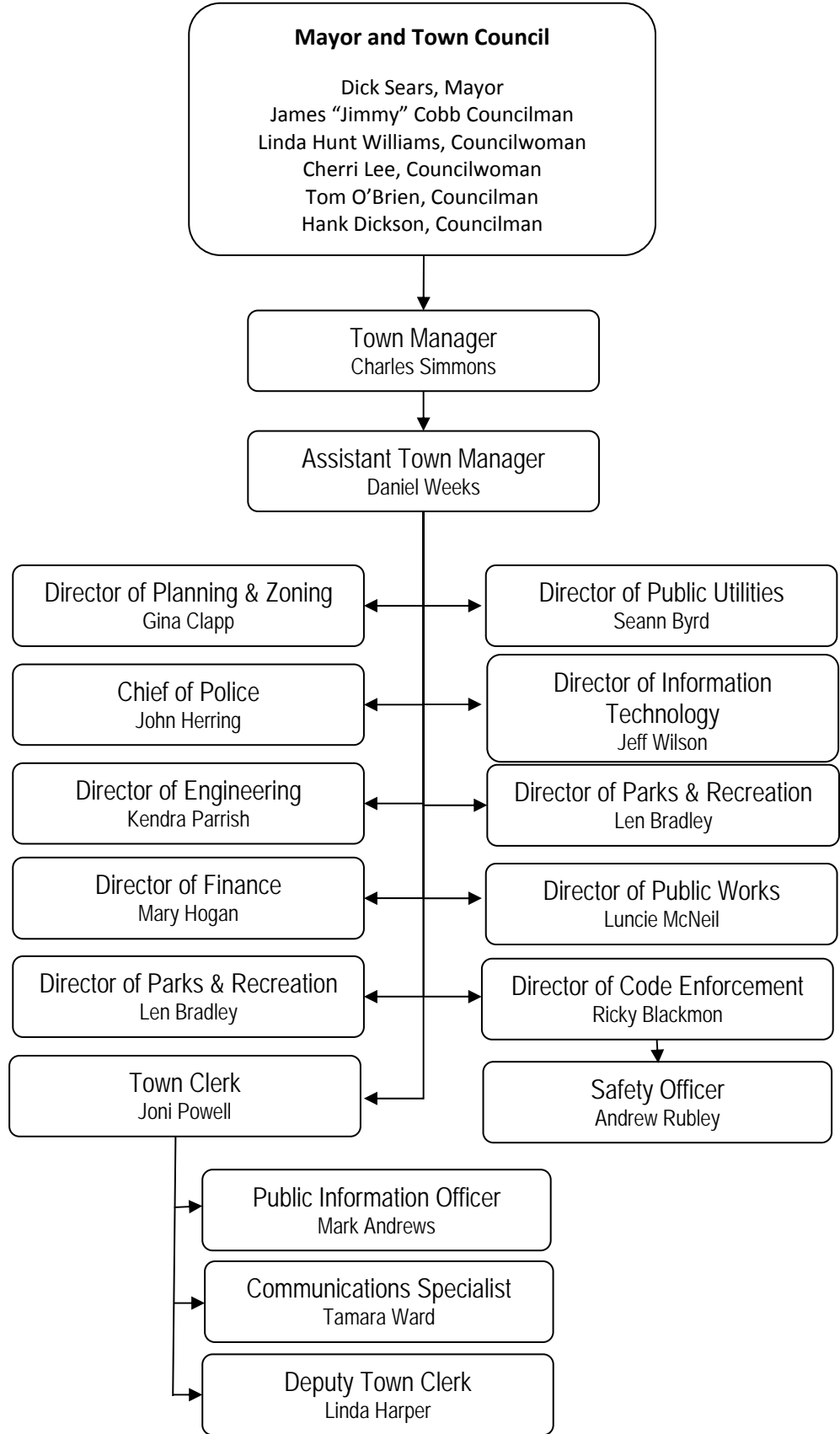
Engineering	Danny Street, Development Inspector	(919) 557-2912	(919) 552-9881	<a href="mailto:danny.street@hollyspringsnc.us">danny.street@hollyspringsnc.us</a>
Engineering	Bobby Mills, Development Inspector	(919) 557-2938	(919) 552-9881	<a href="mailto:bobby.mills@hollyspringsnc.us">bobby.mills@hollyspringsnc.us</a>
Engineering	Jennifer Bullock, Office Manager	(919) 557-3933	(919) 552-9881	<a href="mailto:jennifer.bullock@hollyspringsnc.us">jennifer.bullock@hollyspringsnc.us</a>
Engineering	Sara Emig, Engineering Program Support Specialist	(919) 557-3926	(919) 552-9881	<a href="mailto:sara.emig@hollyspringsnc.us">sara.emig@hollyspringsnc.us</a>
Engineering	Debbie Abbene, Administrative Assistant I	(919) 557-3939	(919) 552-9881	<a href="mailto:debbie.abbene@hollyspringsnc.us">debbie.abbene@hollyspringsnc.us</a>
Code Enforcement	Ricky Blackmon, Department Head	(919) 557-3915	(919) 557-7551	<a href="mailto:ricky.blackmon@hollyspringsnc.us">ricky.blackmon@hollyspringsnc.us</a>
Code Enforcement	Andrew Rubley, Code Enforcement/Safety Officer	(919) 557-2914	(919) 557-7551	<a href="mailto:andrew.rubley@hollyspringsnc.us">andrew.rubley@hollyspringsnc.us</a>
Economic Development	Jennifer Mizelle, Department Head	(919) 557-3923	(919) 567-1472	<a href="mailto:jennifer.mizelle@hollyspringsnc.us">jennifer.mizelle@hollyspringsnc.us</a>
Human Resources	Erika Philips, Department Head	(919) 557-3911	(919) 567-2569	<a href="mailto:erika.philips@hollyspringsnc.us">erika.philips@hollyspringsnc.us</a>
Parks & Recreation	Len Bradley, Department Head	(919) 557-3930	(919) 552-5569	<a href="mailto:len.bradley@hollyspringsnc.us">len.bradley@hollyspringsnc.us</a>
Parks & Recreation	Carolyn Couch, Bass Lake Park Manager	(919) 557-2906	(919) 552-5569	<a href="mailto:carolyn.couch@hollyspringsnc.us">carolyn.couch@hollyspringsnc.us</a>
Parks & Recreation	Steve McElhaney, Bass Lake Park Naturalist	(919) 557-2906	(919) 552-5569	<a href="mailto:steve.mcelhaney@hollyspringsnc.us">steve.mcelhaney@hollyspringsnc.us</a>
Planning & Zoning	Gina Clapp, Department Head	(919) 557-3908	(919) 557-2067	<a href="mailto:gina.clapp@hollyspringsnc.us">gina.clapp@hollyspringsnc.us</a>
Police	John Herring, Chief	(919) 567-4701	(919) 552-0533	<a href="mailto:John.herring@hollyspringsnc.us">John.herring@hollyspringsnc.us</a>
Fire	Leroy Smith, Chief	(919) 567-4001	(919) 567-4001	<a href="mailto:leroysmith@hollyspringsnc.us">leroysmith@hollyspringsnc.us</a>
Public Utilities	Seann Byrd, Department Head	(919) 577-2273	(919) 577-2280	<a href="mailto:seann.byrd@hollyspringsnc.us">seann.byrd@hollyspringsnc.us</a>
Public Works	Luncie McNeil, Department Head	(919) 552-5920	(919) 552-7947	<a href="mailto:Luncie.McNeil@hollyspringsnc.us">Luncie.McNeil@hollyspringsnc.us</a>

4.2 Organizational Chart

**Department of Engineering**



# Governing Body





#### 4.3 Signing Official:

Charles Simmons, Town Manager

The Town Manager is the appropriate person to sign the application as this position has direct supervision and management control over those departments that have roles and responsibilities in the administration of this program.

Please refer to Attachment 3: Resolution of the Holly Springs Town Council authorization to submit National Pollutant Discharge Elimination System Phase II Permit Application and Stormwater Management Plan.

#### 4.4 Duly Authorized Representative- **N/A**

## **5 Co-Permitting Information (if applicable)**

5.1 Co-Permittees - **N/A**

5.2 Legal Agreements - **N/A**

5.3 Responsible Parties - **N/A**

## **6 Reliance on Other Government Entity**

- 6.1 Name of Entity - **N/A**
- 6.2 Measure Implemented - **N/A**
- 6.3 Contact Information - **N/A**
- 6.4 Legal Agreements - **N/A**

## 7 STORMWATER MANAGEMENT PROGRAM

To protect water quality the Town of Holly Springs will develop, implement, and enforce a stormwater management program (SWMP) designed to reduce the discharge of pollutants from Holly Springs to the maximum extent practicable (MEP) and to satisfy the appropriate water quality requirements of the Clean Water Act.

### 7.1 Public Education and Outreach on Stormwater Impacts

7.1.1 BMP Summary Table: Appendix A

7.1.2 Target Pollutant Sources: The primary targets will include sediment, nitrogen, fecal coliform all have negative impacts to water quality as a result of increased runoff from development pollutant and debris transport, and stream bank erosion and flooding. Other pollutants targeted will be disposal of hazardous products and application of pesticides.

7.1.3 Target Audience: The target audiences for our education program are those likely to have significant stormwater impacts. These include: commercial, industrial, residential development, schools located within the Town's service area (three elementary, two middle schools, one charter high school, and one high school), residents of the Town of Holly Springs, and Town staff.

7.1.4 Outreach Program: The Town will continue implementation of our outreach strategy will include methods such as social media, printed brochures, newspapers, water bill and "The Springs" the Town's e-newsletter, stormwater information library, booths at local Town events, Town website, Town TV channel, preconstruction and informational workshops and other mass media to reach our target audiences. We expect to reach the bulk of our population as well as developers and others who do not reside within the limits of the Town. The above methods of outreach will provide individuals and households about the steps they can take to reduce stormwater pollution by promoting environmentally conscious daily activities such as, yard and vehicle maintenance activities to reduce loss of pollutants into the stormwater system. We also plan to inform individuals and groups on how to become involved in the stormwater program with the tools listed above and the development of workshops and coordination with local businesses and existing "adopt a stream" programs.

The Town will develop a Communications & Involvement Plan, to more efficiently utilize existing resources that the town has to convey stormwater information to our target audience and focus on citizen's involvement and education. This plan will be submitted to the Town Council for approval via a Public Hearing and be open for public comments.

7.1.5 Evaluation: Evaluation of the program will be made annually and recommended changes will be made accordingly.

## 7.2 Public Involvement and Participation

### 7.2.1 BMP Summary Table: Appendix A

7.2.2 Target Audience: The target audiences for our public involvement program will be focused on all residents and stakeholders in the community. Information and programs will be designed to accommodate all ethnicities, economic groups, and people with varying abilities. We will actively involve all potentially affected stakeholder groups, including commercial and industrial businesses, trade associations, environmental groups, homeowners associations, and educational organizations among others.

7.2.3 Participation Programs: All stormwater management program documents will be available for public viewing. Staff will make a presentation to the Town Council and the general public summarizing the content of the permit, and public comments will be accepted.

An education and outreach program will be implemented to engage all economic and ethnic groups and provide opportunities for the public to participate in program development and implementation. We plan to incorporate the following BMPs (with measurable goals) as outlined in the BMP and Measurable Goals Table located in Appendix A, including but not limited to, citizen representatives on regional and local stormwater management committees, public hearings for new ordinances and management plans, working with citizen volunteers willing to educate others about the program, and continue administration or coordination with existing "adopt a stream", Big Sweep and mini-sweeps, Storm Drain Marker Program, Dog Waste Signage Program and as other opportunities for public participation arise.

The Town will develop a Communications & Involvement Plan which will focus on citizen involvement and education. This plan will be submitted to the Town Council for approval via a Public Hearing and be open for public comments.

7.2.4 Evaluation: Evaluation of the program will be made annually and recommended changes will be made accordingly.



## 7.3 Illicit Discharge Detection and Elimination

### 7.3.1 BMP Summary Table: Appendix A

7.3.2 Storm Sewer System Map: The Town will maintain a storm sewer map showing outfall locations and stormwater drainage system components. The Town currently has GIS layers of stormwater pipes, inlets and existing structural post-construction stormwater BMPs contained within the MS4. Other GIS layers that have been created for stormwater management purposes include the Town's Stream Protection Plan showing both state and town regulated stream buffers, Floodplain and drainage area maps, containing Federal Emergency Management Agency (FEMA) floodplain and Town regulated floodplain. New infrastructure will be updated with as-built information provided by developers, and field verification of the outfall locations. This information will be compiled through the development inspection process, field inspections, and incorporating it into our GIS/GPS utility mapping program. GIS layers for the maps will be reviewed annually and updated as needed when program needs arise. This map will be created and maintained within the Town of Holly Springs Department of Engineering.

7.3.3 Regulatory Mechanism: The Town will continue legal authority to regulate Illicit Discharges and Illegal Connections through the Town's NPDES Phase II Stormwater Illicit Discharge Detection & Elimination Regulations, Chapter 8, Article IV of the Holly Springs Code of Ordinances, Attachment 2.



7.3.4 Enforcement: The Town will ensure appropriate enforcement procedures and actions implementing our Illicit Discharge Detection and Elimination Regulations by maintaining a section of our Environmental Tracking Spreadsheet which lists the date and types of violation, enforcement actions, penalty assessments and other pertinent information. Annually or as needed this document will be reviewed to determine if updated to forms, policies, procedures or regulations are required.

7.3.5 Detection and Elimination: The town has developed a form for staff and citizens to report an illicit discharge and provide basic information for stormwater staff to inspect and enforce as required. Staff has been trained to detect illicit discharges during I&I inspections and during their routine activities around town. The staff will be expanding this training to cover all departments including office staff that does not work out in the field.

Priority areas include stormwater outfalls that are adjacent a sanitary sewer outfall, on-site wastewater facilities or a business or industry that could have the potential for illicit discharges. Staff plans to incorporate these areas on a GIS layer of the existing GIS Storm drainage map and develop an inspection schedule to monitor areas that are more probable to have an illicit discharge.

Procedures for tracing the source of an illicit discharge, including the specific techniques used to detect the location of the source of an illicit discharge will be found through techniques such as citizen complaints and staff dry weather inspections. As required, samples will be collected will then be tested either by either the Town's lab or an independent lab depending on the pollutant and party responsible for the testing.

Procedures for removing the source of the illicit discharge will be determined by the type of discharge. Areas where an illicit discharge or connection is found by the Town's inspector one of the enforcement requirements will be for the person(s) in violation to clean up or remove the illicit discharge or connection. If the Town or a contractor for the Town performs actions to remove the source the person(s) will be charged in addition to any civil penalties assessed for the violation. In areas where the person responsible for the illicit discharge is unknown the town with coordination between the fire Department, the City of Raleigh who is currently contracted to remove Hazardous Materials and the Public Works Department. In areas where an illicit discharge is the result of a sanitary sewer overflow, Public Works and Public Utility department processes are followed for testing removal and reporting of the spill.

7.3.6 Outreach: The Town will provide educational materials

- 7.3.7 Staff Training: The Town has developed a training mechanism for Town staff in the form of biennial training events, as well as onsite facility training performed during Good Housekeeping and Pollution Prevention inspections of Town-operated facilities.
- 7.3.8 Evaluation: Town will annually evaluate the data obtained and the effectiveness of the programs to detect and eliminate illicit discharges.

7.3.9 Non-Stormwater Discharges: The following categories of non-stormwater discharges or flows (i.e., illicit discharges) will be added in a program they are identified as significant contributors of pollutants to your small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities excluded)

1. Water line flushing: Allowable
2. Landscape irrigation: Allowable
3. Diverted stream flows: Allowable
4. Rising ground waters: Allowable
5. Uncontaminated ground water infiltration: Allowable  
(as defined at 40 CFR §35.2005(20))
6. Uncontaminated pumped ground water: Allowable
7. Discharges from potable water sources: Allowable
8. Foundation drains: Allowable  
(Unless found to exceed State standards)
9. Air conditioning condensation: Allowable  
(Unless found to exceed State standards)
10. Irrigation water: Allowable
11. Springs: Allowable
12. Water from crawl space pumps: Allowable  
(Unless found to exceed State standards)
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

**7.3.10** Occasional incidental non-stormwater discharges that will not be addressed as illicit discharges: Wash water from the cleaning of exterior buildings, including gutters, provided that the discharge does not pose an environmental or health threat.

**7.3.11** Outreach: The public and Town employees are informed about the hazards of illicit connections and illegal dumping through the public education and outreach plan. The good housekeeping component also trains Town staff in identifying and eliminating illicit connections and discharges.

**7.3.12** Staff Training: Staff training occurs on an as needed basis to based on staff duties and projects that may involve the possibility of identifying and illicit discharge such as our sanitary sewer outfall maintenance crew. The Town is developing information to be provided to all Town staff to be able to identify an illicit discharge and report to the appropriate stormwater staff for follow up and enforcement.

**7.3.13** Evaluation: Outreach and training for the illicit discharge and connection program will be incorporated into the communications plan and it will be evaluated annually.

## 7.4 Construction Site Stormwater Runoff Control

### 7.4.1 BMP Summary Table: Appendix A

- 7.4.2 Regulatory Mechanism: The Town has an existing Sedimentation and Erosion Control, Stream and Wetlands Protection Land Disturbance Ordinance in place since November 1, 2000. Chapter 8, Article II of the Holly Springs Code of Ordinances, Attachment 2.

We have established requirements for construction site operators to implement appropriate erosion and sediment control best management practices via ordinances, construction standards and mandatory pre-construction conference which includes an environmental education section, Certificate of Compliance inspection, will verify that the measures are installed as per the approved plan.

The Town will enforce requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality by enforcement of our Illicit Discharge Detection and Elimination Regulations, Chapter 8, Article IV of the Holly Springs Code of Ordinances, Attachment 2. Contractors will be informed of these regulations through pre-construction conference as well as local and regional contractor training programs.

7.4.3 Plan Reviews: All development plans that have at least 20,000 square feet of disturbed area are reviewed for erosion and sedimentation control measures. Developers, or their consultants, submit an application identifying the Financially Responsible Party (FRP) and other pertinent project information, and pay associated fees for erosion control plan review with the first plan submittal. The plan is reviewed in the Construction Drawing review cycle, which includes a two week plan review turn around with comments issued at the end of the two week period. The plans are reviewed with the use of a erosion control plan review checklist which outlines standards that should appear on every erosion control plan and assist in the identification of problem areas. Erosion control devices from the clearing and grubbing stages of the project through the final grading are reviewed at this time. Potential water quality impacts are looked at during the plan review such as encroachment into floodplains, wetlands and riparian buffers. Staff requires the developer to provide information that the applicable permits associated with impacts to these areas have been obtained prior to the issuance of a Land Disturbance Permit. Once the plan is approved, or approved with conditions, a pre-construction meeting is held to go over site specific concerns, the Town's ordinance, inspection, and enforcement procedures, as well as site specific critical areas that need to be protected throughout construction. The Town also provides a copy of the NCG1000 NPDES Construction Permit with the Erosion Control Plan Approval at the pre-construction meeting.

7.4.4 Enforcement: Once a Land Disturbance Permit is issued a Certificate of Compliance must be issued prior to starting clearing, grubbing and construction (installation of storm drainage water and sewer, curb & gutter etc.). If the site is in excess of 20,000 square feet of disturbed area and has not obtained Erosion Control Plan approval, Land Disturbance Permit, or Certificate of Compliance prior to clearing and grubbing, a Notice of Violation is issued. If a site is not in compliance at any time through the construction process, a Notice of Violation can be issued. This violation can be issued at the time of the violation or for not meeting compliance dates set forth in sedimentation inspection reports. Fines can be assessed up to \$5,000 for the initial violation and each day the site is not in compliance with the ordinance. The Town also has the ability to hold building permits, inspections, and Certificates of Occupancy to assist in the enforcement of its ordinance. The ordinance also allows for criminal penalties for noncompliance. Projects disturbing less than 20,000 square feet are required to provide erosion control measures to keep sediment from leaving their site or entering watercourses on the tract. If a site is found to be not in compliance with the ordinance, the Town will also seek corrective actions to bring the site back into compliance and assess penalties as needed. A copy of all Notice of Violations is forwarded to the NC Division of Water Quality, Raleigh Regional Office which then can be used for their enforcement of NCG10000 Permit for the project.



7.4.5 Inspections: Site inspections are made on a regular basis (multiple times in a one month period) for all sites that have an open Land Disturbance Permit or Building Permit. The Town's Environmental Specialist and Development Inspectors provide erosion and sedimentation control inspections for these sites. Inspection reports are written primarily by the Development Inspector for sites with open Land Disturbances Permits and Building Permits. Inspection reports list general site information such as project name and phase, location, weather, date, and FRP. It also includes if the site is under Notice of Violation, if it is compliance with the ordinance, what items are not in compliance, corrective actions needed, and specified timeframe for repairs. Upon the receipt of Citizen Complaints for possible violations of the Town's ordinance, the Development Inspector, or other trained engineering department staff, investigate the complaint, make field inspections, and provide necessary enforcement actions to resolve the violation and bring it into compliance. These complaints are logged on the citizen complain log and used to evaluate the program.

7.4.6 Public Information: Revisions to the ordinance are made through the Town's Public Hearing process. Education is directed specifically to various different stakeholders: design consultants, developers, home builders, contractors, residents, and Town staff. This information will be summarized in the Communications Plan. Currently the Town provides education to the stakeholders mentioned above by using various media. Regional Contractor training with coordination of other local Erosion & Sedimentation Control Programs, NC DENR Land Quality Section, and provides education to the developers onsite during field inspections, during pre-construction meetings, with brochures and newspaper articles. Education for residents has been targeted with brochure information available at Town Hall, the Environmental booth at festivals and events, the Town website, newsletters and through local newspaper. Any changes of the construction site stormwater runoff control program will include public involvement at minimum by holding a Public Hearing for ordinance revisions.

7.4.7 Evaluation: Monthly reports are made listing the amount of plans reviewed, plans approved, Land Disturbance Permits issued, Citizen Complaints, inspections and Notices of Violation. This information is then compiled in the Engineering Departments quarterly report. The use of this information Staff will review this information and make changes to the policies and procedures to ensure an effective program. The Town staff will also keep up to date of changes to the States Sedimentation and Erosion Control regulations and will revise the ordinance to be at least as restrictive as the states rules.

## 7.5 Post-Construction Stormwater Management in New Development and Redevelopment

### 7.5.1. BMP Summary Table

7.5.2. Regulatory Mechanism: The Town will continue legal authority to regulate Post-Construction Stormwater Management in new and redevelopment through the Town's NPDES Phase II Post-construction Stormwater regulations, Chapter 8, Article V of the Holly Springs Code of Ordinances, Attachment 2. This program ensures that all projects that disturb 20,000 square feet of disturbed area obtain Stormwater Management Plan approval. Town's existing post-construction stormwater plan review processes which includes three stages, 1. Concept Stage: Scoping Meeting and Concept Plan Review Meetings, Preliminary Plan Review & Approval. 2. Construction Stage: Construction Drawing & Environmental Plan Review, Environmental Development Approval including the erosion control, floodplain development and post-construction stormwater plan approvals, Performance sureties and draft Operation & Maintenance (O&M) approvals as well as construction of the project including construction of the structural stormwater BMPs. 3. Post-Construction Stage: Final O&M approvals, easement recordation, digital & mylar as-built submittals, establishment of a maintenance surety, homeowner education packets certifications & reporting.

7.5.3. Operation and Maintenance: We will continue to implement and develop policies and procedures to ensure the long-term O&M of our BMPs and will be consistent with state regulations. This will include but is not limited to requiring the following for each structural BMP subject to the Town's regulations: Operation & Maintenance manuals requiring quarterly self inspections and annual certifications by a Professional Engineer, reporting and enforcement; recording drainage and access easements; establishing performance and maintenance sureties with agreements (Stormwater Development Improvements Agreement (SDPIA) with stormwater development and maintenance agreement (SMA) respectively,) between the Town and the developer, property owner or Home Owners Association (HOA).

7.5.4. Enforcement: The post-construction stormwater program has two stages of enforcement, during construction and post-construction. The Environmental Technician is responsible for enforcing of the post-construction regulations in the field. This starts with the required Environmental Pre-construction meeting where the contractor, developer and Town staff to discuss the installation of each structural BMP and the Town's required inspections and regulations. The Environmental Technician coordinates with the projects Development Inspector to enforce the transition of erosion control required for the construction of the BMP and/or conversion of erosion control devices from a sediment basin to permanent stormwater BMPs. The Environmental Technician inspects and enforces as necessary the installation of the BMP and receives certifications from the projects engineer ensuring that the volume, structural integrity, soils and other required elements have been installed as designed. If the BMP is not installed per the approved plan the Town will have the developer come into compliance with the approved stormwater management plan. The Town can issue a Notice of Violation and civil penalties if the developer/owner does not come into compliance within the specified timeframe. Once the BMP has been constructed the Town has a one year performance monitoring to verify that the BMP is still functioning properly and required plantings have survived the first year. The punch list inspection identifies required corrective actions and finalization of O&M documentation for the Town to establish the maintenance surety and transfer maintenance of the structural BMPs to the property owner or HOA. Annually the Environmental Technician will verify that the owner or HOA is maintaining the BMPs as outlined in the approved O&M Manual for the BMPs, in the event that the HOA is not following the Manual the Environmental Technician will provide both education and enforcement accordingly.

- 7.5.5. Control of sources of Fecal Coliform: The Town controls sources of fecal coliform to the maximum extent practicable by include education material targeted to the community through pet waste management and on-site wastewater system maintenance. The Town regulations for sewer service, Chapter 16 Article III, Division 2 of the Town Code of Ordinances and Section 7.08 prohibit the construction of on-site treatment systems for domestic wastewater and require all owners of improved real property Town limits and within a reasonable distance of any sewer collection line, owned or leased, and operated by the Town to connect their lines to the Town's sanitary sewer system. In instances where the use of an on-site wastewater treatment system is required the Town coordinates with Wake County Health Department to permit and enforce regulations to ensure that the system designed, constructed, operated and maintained properly.

The Town's Post-Construction Stormwater program has established both structural and non-structural BMP to reduce nutrient loading in both the Cape Fear and Neuse River Basins by requiring structural BMPs to require performance standards to control the total nitrogen (TN) export limitations, per the Neuse Basin Rules, 15A NCAC 2B.0233, for both new and redevelopment in the Town and extra territorial jurisdiction. In addition to these requirement the Town continue to maintain 30-foot stream buffers in the Cape Fear River Basin and 100-foot buffers on perennial streams in the Neuse River basin, which exceeds the required 50-foot Neuse Riparian Buffer. The Town will continue to develop and distribute materials to homeowners and businesses promote the use of soil testing and proper application of inorganic fertilizer and organic nutrients.

- 7.5.6. Non-Structural BMPs: The Town's Unified Development Ordinance (UDO), Sedimentation and Erosion Control, Stream and Wetlands Protection, Land Disturbance Ordinance; Flood Damage Prevention Ordinance; Comprehensive Plan and Open Space Plan currently provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space and provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation. These ordinances will be revised accordingly to meet the State's minimum requirements

The Town's Unified Development Ordinance and Comprehensive Plans can encourage various types of development. The Downtown Development Incentives Policy P-033 was adopted in December 2008 to encourage development in compliance with the Village District Area Plan, part of the Town's comprehensive plan, which promotes the use of design criteria that would provide for shared parking, pocket parks, architectural features where the use of three story buildings incorporating residential above commercial versus a typical two story building and the possibility of assistance with regional stormwater management in the Downtown area. Other incentives may be developed to promote infill in sections of the Town where there is existing storm sewer infrastructure.

As described above in Section 7.1 of this narrative, education programs for developers, contractors and the public about the Town's Post-Construction stormwater management program that minimize impacts to water quality. These existing tools and others will be incorporated in the Communications & Involvement Plan focuses on the post-construction stormwater management program in new development and redevelopment. Some current practices that area directly related to the post-construction program is the requirement to provide educational signage at structural stormwater BMPs, Homeowners Education Packets, NPDES post-construction stormwater updates during the Town's Developers Workshops, environmental pre-construction meetings to ensure the proper construction and maintenance of structural stormwater BMPs.

The Town minimizes the percentage of impervious area after development by enforcing our stream buffer and floodplain rules by regulating or prohibiting parking, patio and accessory structures in these protected areas. When building or UDO permit applications are received for structures in areas that have existing stormwater management plans the Town requires the applicant to verify that the new impervious surface meets the approved stormwater management plan for that drainage area or provide new BMPs or upgrades to existing BMPs for the new impervious surface. The Town will continue to develop other methods to reduce the percentage of impervious areas after development and the addition of measures to minimize directly connected impervious areas, and source control measures often thought of as good housekeeping, preventive maintenance and spill prevention have been or will be incorporated into the six minimum measures of the Town's stormwater management program, as well as other land development regulations and guidance documents.

- 7.5.7. Structural BMPs: Previously structural BMPs such as wet ponds and extended detention outlet structures were only required on sites that had known drainage or flooding problems. The adoption of the Town's post-construction stormwater regulations in 2007 require new and redevelopment project to provide structural BMPs to meet the required water quality performance standards in addition to the volume control performance standards for areas where known drainage or flooding problems exist. The Town has adopted structural BMPs consistent with the NC Stormwater BMP Manual. Some of the structural BMPs found in the Town of Holly Springs include constructed wetlands, bioretention areas, level spreaders and vegetated filter strips. The design guidelines for stormwater quality, quantity and conveyance are included in Section 8 of the Town's Engineering Design and Construction Standards and have been included for reference in Attachment 3.
- 7.5.8. Natural Resource Protection: The Town has polices, regulations and incentives in place to protect natural resource areas and critical habitat from future development. Through its Comprehensive Plan and Open Space Master Plan and Unified Development Ordinance.

The Town currently has various riparian buffers required in the Town's Planning Jurisdiction which includes 10-foot undisturbed buffers tributary to Bass Lake, 100-foot buffers on perennial streams and 50-foot buffers on intermittent streams in the Neuse River Basin and 30-foot streams in the Cape Fear River Basin. The

Town does not allow residential lot development in both FEMA and Town regulate floodplains and is in the process of developing more restrictive requirements which would limit non-residential development in the floodplain as well as platting of residential lots in riparian buffers and floodplain. The Town also has approximately a 40 acre area in the Middle Creek watershed that has been protected for the Eastern Tiger Salamander, a State Threatened Species. The Town requires conservation easements on the Bass Lake buffers and coordinates with the local US Army Corps of Engineers staff to require conservation easements on wetlands that are not protected by stream buffers.

The Town coordinates with the Parks and Recreation on various stewardship activities and programs held at Bass Lake Park which includes stream cleanup programs. The Town also holds roadside and stream clean-up days where all Town staff can participate by cleaning up trash in the right-of-way and stream corridors. The Town provides various methods of outreach to citizens to reduce the risk of watershed contamination. On occasion staff will provide assistance including but not limited to soil test kits and other educational resources to homeowners or homeowners associations that are experiencing problems on their property.

The Town has participated in various Wake County watershed planning programs and is currently participating with the Wake County Sustainability Task Force. The Town plans to develop other resource management strategies as a result of participation with these programs.

- 7.5.9. Open Space Protection: Both managed and natural open space is required for development seeking approval through the Unified Development Ordinance and in a manner consistent with the Parks and Recreation Master Open Space Plan.



- 7.5.10. Tree Preservation: The Town currently requires a Timbering Plan for all tree removal that is not an exempt Forestry activity. The Town requires riparian and perimeter buffers around development and replanting of planning buffers where trees have died or removed. In some areas throughout Town conditional zoning requirements or conditions of plan approval have been placed on specific projects to retain the natural topography and vegetation on the site. The Planning Department is currently in the process to develop more standard tree preservation requirements for new development.

Street trees are required in various

- 7.5.11. Redevelopment, Development in Areas with Existing Infrastructure and Mixed Use Development: Currently the Town does not have much opportunity for redevelopment and development in areas with existing infrastructure due to the growth in the past ten to fifteen years. The main area for redevelopment and infill is located in the downtown area or Village District Area other areas where there is this potential is the Northeast Gateway and Southern Gateway areas. The Town has developed specific small area plans for these areas to highlight development opportunities for mixed residential, mixed use commercial and office/professional in that area. In addition the Town Council approved development incentives for the Downtown area which includes the use of shared parking, mixed use development with multiple floors in one building containing retail, office and residential uses and small scale regional stormwater management opportunities. Currently the Town has one Engineer that is LEED certified and three that are North Carolina Low Impact Development (LID) Certified. The Town plans to incorporate both LEED and LID principals in future updates of the Unified Development Ordinance and Engineering Design and Construction Standards and other planning documents.

- 7.5.12. Transportation Demand and Management Alternatives: The Town's Thoroughfare Plan, Section 2 Transportation of the Town's Comprehensive Plan and Engineering Design and Construction standards that determine the type of road required for new development or to be undertaken as a Town project. The Town is currently in the process of undertaking a multi-modal transportation plan which will look at various transportation management alternatives.
- 7.5.13. Reduced Parking Requirements and Minimizing Stormwater from Parking Lots: The Town's Comprehensive Plan and Unified Development Ordinance has regulations that promote shared parking and reduction of required parking spaces in new development.
- 7.5.14. Green Infrastructure Strategies: The Town's current regulations will allow for green infrastructure strategies to be used, this includes the use of reclaimed water for irrigation or bulk use and the ability to use Low Impact Development techniques to meet the Town's post-construction stormwater requirements. Town will continue to incorporate green infrastructure strategies in future updates to the Unified Development Ordinance and other planning documents and train staff to be knowledgeable in these development techniques as discussed in section 7.5.11 of this document.
- 7.5.15. Evaluation: Evaluation of the program will meet the minimum requirement every five years. Regular monitoring of the success of the program will occur through tracking post-construction stormwater plan review, approvals, BMP inspections and certifications and citizen complaints. Post-construction Stormwater Design and Construction Standards will be included in updated to the Town of Holly Springs Engineering Design and Construction Standards which will include any NC Division of Water Quality BMP manual updates that were not already included into the Town's stormwater management program.

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

7.6.1 BMP Summary Table: Appendix A

7.6.2 Affected Operations: The Town has an inventory of facilities that will be evaluated through environmental audits to determine the potential pollution contributions. A stormwater pollution prevention plan will be established for each facility that has been identified as a potential pollution contributor that is required to have a General Industrial Stormwater Permit. The plan includes BMPs that target the identified pollutants, spill prevention and feasible alternatives on the site to reduce surface water pollution. Operations may be affected by this measure but not limited to would include maintenance yards, parks maintenance, vehicle equipment maintenance, drainage system maintenance, storage facilities, street sweeping, ground maintenance and chemical applications.

**7.6.3 Training**: The Town performs biennial training, performs onsite training during facility inspections and utilizes any available government employee training programs available through NC DENR, NC State University, NC League of Municipalities or other available resources. The trainings focus on use to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance with funds that are available for training in the approved fiscal budget. The Town will compile a library of training materials on pollution prevention for public facilities using existing materials gathered from other organizations or creating new tools as needed. Training of staff will be included in the communications plan.

7.6.4 Maintenance and Inspections: We currently have an existing drainage maintenance program that is designed to remove floatables and sediment from the storm sewer system located in the Town's right-of-way on an as needed basis. The Town is in the process of evaluating the desired level of service for stormwater maintenance within the MS4 and determining the appropriate funding source to provide the desired level of service to the community.

7.6.5 Vehicular Operations: An inspection of municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations, and snow disposal areas the Town operates will have potential BMP areas identified for reducing or eliminating the discharge of pollutants. This will be included in an environmental audit and necessary actions to come into compliance with State regulations.

7.6.6 Waste Disposal: Waste is collected and deposited in an approved land fill, evaluation of collection procedures specifically of yard waste and leaf collection will occur annually and recommendations will be made to the Public Works Department that administers the program for implementation.

7.6.7 Other evaluations: Other procedures to evaluate spill response, oil recycling program, maintenance of hazardous chemical inventory, sanitary sewer supply and maintenance programs, and the evaluation of road construction and maintenance procedures will be evaluated annually and recommendations will be made to the department that administers the program for implementation.

7.6.8 Evaluation: Evaluation of the program will be made annually and recommended changes will be made accordingly.

APPENDIX A: BMPs and Measurable Goals

1. BMP's and Measurable Goals for Public Education and Outreach

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
1	Develop an multiyear communications plan	Prepare multiyear communications plan. Include in Plan the BMPs, type of media, schedule, targeted audiences, messages, strategies, activities, and measurable goals. Summarize plan, track information provided and target audiences associated with implementation of the plan annually.	X	X	X	X	X	Environmental Specialist/ Public Information Officer/ Publications Specialist
2	Informational Website	Maintain a stormwater information page for the Town of Holly Springs existing internet website. Provide water quality information as determined in the communications plan. Link to outer water quality related websites and post stormwater staff and stormwater hotline information for the public to ask questions or express concerns.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
3	Information for homeowners	Develop stormwater tips to be used in "the Springs" water bill mail newsletter and e-newsletter, as determined in the communications plan. Place a minimum of 6 tips a year in the newsletters. Maintain a log of the tips used and targeted pollutants annually.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
4	Newspaper advertising	Provide press releases to run in the local newspaper on activities and topics focusing on water quality and pollution prevention. Maintain a log of the number of articles that have run in the paper, newspapers used and targeted pollutants annually	X	X	X	X	X	Environmental Specialist/ Environmental Technician Public Information Officer
4	Mass media campaign	Continue participation with TJCOG (CWEP) to develop mass media campaign messages for use on regional TV stations, local government cable channel, and regional radio in both (English and Spanish). Target message about the importance of clean water and how stormwater gets dirty. Give tips on reducing pollution. Identify target audience and track the number of time shown annually.	X	X	X	X	X	Environmental Specialist
4	Information for Homeowners	Distribute brochures and other information pieces to citizens via the storm drain marker program and as other opportunities arise. Include information on steps to reduce pollution sources including proper disposal of used oil and toxic materials, public reporting of illicit discharges and awareness of nutrient and fecal coliform issues.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
5	Festivals and Events	Participate in at least 2 local festivals annually by staffing a booth and report annually on event and	X	X	X	X	X	Environmental Specialist/ Environmental

APPENDIX A: BMPs and Measurable Goals

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
		messages provided. Provide messages on the importance of clean water and on specific activities that can be carried out to help keep stormwater clean. Events may include but are not necessarily limited to the Town's annual TurtleFest, Bass Lake Day and HollyFest.						Technician
6	Presentations for Schools	Maintain and develop age-specific educational information for use in schools and for presentations to school age children based on the statewide curriculum. Log information provided and target audience annually.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
8	Business Outreach Program	Coordinate with the Town's Economic Development Department and Public Works Department to develop and provide information for businesses on illicit discharges, reporting, and improper waste disposal, sources of nutrient and fecal coliform loading and actions they can take to minimize them. Log information provided and target audience annually.	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Director of Economic Department

APPENDIX A: BMPs and Measurable Goals

2. Public Involvement Program BMP Summary Table

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
1	Storm Drain Marker Program and Storm Drain Casting Requirement	Complete marking of existing storm drainage in the Town and develop a maintenance program to repair or reinstall markers. Continue to require all new storm drains to have a cast that states "Do not dump, drains to stream" or similar text. Maintain a storm drain marker map to identify all structures marked or cast in town. Log the amount of marking events and educational materials distributed annually.	X	X	X	X	X	Environmental Technician
2	Stormwater "hotline"	Continue to manage a database and GIS layer of calls and emails received by the existing stormwater hotline, email and citizen complaints that have reached stormwater staff. Information shall include date, person calling, contact information, and content of the call or email report annually on number of calls and emails.	X	X	X	X	X	Environmental Technician
3	Citizen surveys	Conduct research on target stormwater education and management efforts. Methods to be used may include but are not necessarily limited to web polls, mail in surveys and focus groups. Conduct a Town wide survey once every two years from the first town survey in spring 2010.		X		X		Environmental Specialist/ Environmental Technician
4	Boards, Committees & Groups	Meet at least once a year with local boards such as the Town Council, Planning Board, Environmental Appeal Committee and other stakeholder or citizens groups to weigh in on stormwater management programs and stormwater issues. Provide a stormwater update and obtain recommendations for the stormwater management program with focus on pollution prevention. Log meetings held and topics discussed annually.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
5	"Adopt a Stream" & "Big Sweep" programs	Coordinate with the Town's Parks and Recreation Department to hold "Big Sweep" and "mini-sweep" events and continue to provide support to the existing "Adopt a Stream" programs in Town. Log the amount of events and participants annually.	X	X	X	X	X	Environmental Specialist/ Environmental Technician

APPENDIX A: BMPs and Measurable Goals

3. Illicit Discharge Detection and Elimination BMP Summary Table

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
1	Legal Authority	Amend when needed existing ordinance on illicit detection, right of entry, prohibition of certain discharges, enforcement actions and penalties for dumping, spills, and willful illicit connections.	X	X	X	X	X	Environmental Specialist/
2	Stormwater Infrastructure Inventory	The Town currently has a GIS Storm Drain Map which includes all of the piped stormwater conveyance structures and approximately half of the stormwater BMP structures within the MS4. drainage areas, riparian buffers, FEMA Floodplain and Town flood studies and streams in the Town's land use area. Continue to maintain and update these layers as new development occurs and to meet the expanding needs of the stormwater management program.	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Engineering GIS Technician
3	Database Tracking System	Continue to maintain a database tracking system for tracking citizen complaints and requests. All complaints will be logged into New World Systems database including information on follow-up and develop a layer to track the geographical location of illegal discharge or spill. GIS will be used to track "hot spots".	X	X	X	X	X	Environmental Technician
4	Outfall Inspections	Inspect 10% of community annually during dry weather conditions (i.e., hasn't rained in 72 hours) and test flows found at discharge points where possible illicit discharges are suspected on an as needed basis. Cross train inspectors to look for illicit discharges during I&I inspections. Document outfalls that require testing inspection date, tests conducted, findings and follow up procedures. Report on number and actions taken in each annual report.	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Public Works Director
5	Direct Mail	Create and distribute letters targeting business owners. The letter shall inform business owners of the illegal discharge ordinance and inform them of potential inspection. At a minimum letters shall target landscapers, painting companies, carpet cleaners, automotive businesses and restaurants.		X		X		Environmental Specialist/ Environmental Technician



APPENDIX A: BMPs and Measurable Goals

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
6	Inspection / Training Program	Town staff will be cross-trained to recognize and report illegal discharges. Staff to be trained includes development inspectors, code enforcement officers, public works and utilities staff, inspectors and police & fire personnel. Provide materials through Human Resources to train employees in organization on illicit connections and how to recognize them	X	X	X	X	X	Environmental Specialist/ Environmental Technician
7	Fact Sheets	Develop fact sheets on illicit connections and spill management. Provide to other departments including but not limited to Code Enforcement, Public Works and Fire Department for distribution to businesses as determined by the communications plan. Prepare fact sheets for commercial property managers, restaurant owner/operators, and automotive businesses. Make available to general public via the Town's Web site. Note date completed and number of copies placed for distribution.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
8	On-site Wastewater Systems	Coordinate with local health department on failing septic systems, locating problem areas in the system map. Provide a link to Wake County information on septic system inspection and maintenance on Town's web site. Distribute information to homeowners association in areas outside sewer service. Note date of distribution and number of copies placed.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
9	Evaluate on-site wastewater system policies and procedures	Develop a program that will require evaluation of existing septic systems by the Wake County EHD in the MS4. Amend existing building permit review and inspection processes to implement this program.		X	X	X	X	Environmental Specialist/ Environmental Technician/ Code Enforcement Director

APPENDIX A: BMPs and Measurable Goals

4. Construction Site Program BMP Summary Table

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
1	Legal Authority	Review /amend existing erosion control ordinance as needed to improve sediment and erosion control program and comply with Neuse Rules and Phase II requirements.	X	X	X	X	X	Environmental Specialist
2	Plan review	Review site plans for all new development with disturbed area greater than 20,000 square feet. All site plans are reviewed to ensure compliance with sedimentation and soil erosion, stormwater, and flood plain management ordinances and state laws. Review storm drainage systems to ensure they meet the design and Town criteria. Report on plan review in each Engineering Department Quarterly Report	X	X	X	X	X	Stormwater Administrator
3	Pre-construction Meetings	Hold a preconstruction meeting prior to issuance of each Land Disturbance Permit for all projects equal to or exceeding 20,000 square feet of disturbed area. Include a portion of the meeting to provide environmental and stormwater education to both the developer and contractors in attendance.	X	X	X	X	X	Environmental Specialist/ Lead Development Inspector
4	Inspection Program	Inspect all construction sites greater than 20,000 square feet of disturbed area to ensure that grading and construction operations comply with the erosion control and sedimentation control ordinance. Verify through on site inspections that the erosion control measures on the approved plan are properly installed and function as designed. Inspect all single family residences for Silt Fence and Residential Construction Entrance. Provide quarterly audits of sites and files to verify that the program is being implemented appropriately	X	X	X	X	X	Environmental Specialist/ Lead Development Inspector
6	Local program meetings	Attend quarterly local program meetings to stay abreast of State regulations and share information with other locally delegated sediment & erosion programs in the region.	X	X	X	X	X	Environmental Specialist
7	Town projects	Inspect Town Projects regularly and upon request to ensure compliance with state approved erosion control plan.	X	X	X	X	X	Environmental Specialist/ Development Inspector Administrator
8	Contractor Education	Provide one training event each year with other local programs in the region. Document the event, the amount of attendees and topics covered.	X	X	X	X	X	Environmental Specialist
9	Coordination of NPDES permitted sites	Provide contractors with NPDES permit requirements with construction sites greater than 1 acre of	X	X	X	X	X	Environmental Specialist

APPENDIX A: BMPs and Measurable Goals

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
		disturbance.						
10	Standard specifications for BMPs	Revise / amend standard specifications for sediment and erosion control BMPs as needed	X	X	X	X	X	Environmental Specialist/ Stormwater Administrator
11	Stormwater "hotline"	Promote the use of the stormwater hotline and email for citizens to report observed erosion and sedimentation control problems and continue to coordinate with NCDENR Land Quality Staff when responding to calls that have come in through the "Stop Mud" hotline						

APPENDIX A: BMPs and Measurable Goals

5. Post Construction Runoff Control Program BMP Summary Table

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
1	Legal Authority	Review /amend existing stormwater ordinances for new development as needed to comply with Neuse Rules, and Phase II requirements	X	X	X	X	X	Environmental Specialist
2	Plan review	Reviews site plans for all new development with disturbed area greater than 20,000 square feet. All site plans are reviewed to ensure compliance with the Town's ordinance and Engineering Design and Construction Standards. Review all water quality and quantity Best Management Practices (BMPs) designs to ensure they are effective.	X	X	X	X	X	Stormwater Administrator
3	BMP documentation	Ensure that BMP documentation requirements are provided to contractors and owners during the environmental preconstruction meetings prior to installation of the BMP and that all necessary documentation has been received prior to accepting transfer of maintenance responsibly from the developer to the property owner or Home Owners Association.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
4	Inspection Program	Inspect all construction sites greater than 20,000 square feet of disturbed area verify that the BMPs for water quality and quantity control on the approved plan are properly installed and function as designed.	X	X	X	X	X	Environmental Technician/ Lead Development Inspector
5	Database tracking system	Track each project to include but not limited to the date of approval, BMP location, stormwater sureties, inspections, certifications and as-built information.	X	X	X	X	X	Environmental Specialist
6	BMP Inspections	Conduct annual inspection of Stormwater Best Management Practices to ensure proper operations & maintenance. Correspond with responsible party to request corrective actions and enforce as necessary.	X	X	X	X	X	Environmental Technician
7	Local program meetings	Attend local program meetings to stay abreast of State regulations and share information with other locally delegated stormwater programs in the region.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
8	Town projects	Inspect Town Projects upon request to ensure compliance with stormwater regulations.	X	X	X	X	X	Environmental Technician
9	Standard specifications for BMPs	Revise / amend standard specifications for stormwater BMPs as needed	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Stormwater Administrator
10	Post-Construction Operation & Maintenance Education	Provide education as required or requested to property owners and Home Owners Associations regarding what the purpose of their stormwater BMPs and how to	X	X	X	X	X	Environmental Specialist/ Environmental Technician

APPENDIX A: BMPs and Measurable Goals

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
		maintain the device so it functions properly.						
11	Nutrient Application	Develop educational materials and update policies procedures as needed to address nutrient applications (fertilizer and organic nutrients) management component of the post-construction stormwater management program.	X	X	X	X	X	Environmental Specialist/ Environmental Technician

APPENDIX A: BMPs and Measurable Goals

6. Good Housekeeping and Pollution Prevention BMP Summary Table

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
1	Environmental Audit	Perform environmental audits at priority sites annually. Prioritize recommendations as each audit is completed and initiate recommendations in the fiscal year following the audit, except where any extreme hazard or potential human risk is identified. High hazards will be addressed immediately upon identification. Report annually on progress toward meeting recommendations. Objective is to reduce pollutant loading from municipal sites.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
3	Train Staff	Educate all employees on clean water issues and on workplace responsibilities to reduce or eliminate pollutants from stormwater. Incorporate this training as a component of the Communications plan and maintain programs held, number of employees trained and subjects covered annually	X	X	X	X	X	Environmental Specialist/ Environmental Technician
4	Train Stormwater Maintenance Staff	Provide training to all employees who maintain the drainage system on Town properties and in the Town's right-of-way with a focus on floatable, grit, sediment, and disposal of pollutants removed from the drainage system. Log annually on number of employees trained and subjects covered.	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Public Works Director
5	Evaluate stormwater maintenance programs	Determine the level of service required for Town Maintenance of the stormwater system and determine training and funding required to maintain that level of service. Develop a program for inspection and maintenance of structures located in the right-of-way.		X	X	X	X	Environmental Specialist/ Senior Engineer
6	Train Buildings & Grounds staff	Provide training to all employees who manage and apply chemicals to address safe storage, application and disposal of residual chemicals. Repeat training annually throughout the permit. Report on number of employees trained and subjects covered.	X	X	X	X	X	Environmental Technician/ Safety Officer/ Department Director
7	Inspect Vehicle Washing and Fueling Operations	Annually inspect vehicle washing and fueling operations to ensure that they are in good working order and that they minimize exposure of stormwater to chemicals, fuels, and other liquids. Document findings and actions taken to address any problems identified. Report on finding in annual permit report.	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Public Works Director
8	Inspect materials storage areas	Inspect material storage facilities and establish priorities for addressing issues identified. Address corrective activity within 24 months of inspection. Report on number and type of sites inspected and actions taken in	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Public Works Director

APPENDIX A: BMPs and Measurable Goals

	BMP	Measurable Goals	YR 1	YR 2	YR 3	YR 4	YR 5	Responsible Position/Party
		each annual report.						
9	Inspect salt storage facility and evaluate snow/ice management program	Annually inspect salt storage facility and application equipment annually to identify and eliminate exposure to stormwater and/or ineffective / inappropriate application.	X	X	X	X	X	Environmental Specialist/ Environmental Technician Public Works Director
10	Develop standard operating procedures	Review and make recommendations of standard operating procedures for various facilities and/or operations such as street sweeping activities and parking lot (garage) maintenance activities to ensure that the greatest reduction of pollutant loading to stormwater that can be achieved. Annually report on facilities and/or operations targeted and results of activities.	X	X	X	X	X	Environmental Specialist/ Environmental Technician Public Works Director
12	Evaluate solid waste collection procedures	Evaluate solid waste collection practices (including leaf pick up and yard wate) to determine if procedures or equipment adjustments need to be made to address potential for pollution of stormwater. Focus on issues such as spills in the street, hydraulic hose ruptures, customer storage practices. Report on findings and any work plan that develops as a result.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
13	Evaluate spill response	Evaluate current spill response practices and determine if adjustments are needed to reduce the risk of polluting bodies of water (streams, ponds, lakes, ocean) and create an implementation schedule of the recommendations.	X	X	X	X	X	Environmental Specialist/ Environmental Technician
14	Maintain hazardous chemical inventory	Maintain inventory of hazardous chemicals and other potentially hazardous materials and ensure that limited but sufficient quantity of items are on hand to minimize risk of spill or contamination of stormwater. Train staff on use and clean up of these materials.	X	X	X	X	X	Environmental Specialist/Code Enforcement, Safety Officer
15	Evaluate sanitary sewer and water supply maintenance programs	Evaluate sanitary sewer and water supply maintenance activities to ensure that the greatest reduction of pollutant loading to stormwater that can be achieved. Revise procedures as needed to minimize pollutant loading. Track cross connections found and eliminated.	X	X	X	X		Environmental Specialist/ Environmental Technician
16	Evaluate road construction and maintenance practices	Evaluate road maintenance activities to ensure that the greatest reduction of pollutant loading to stormwater that can be achieved. Revise procedures as needed to minimize pollutant loading.	X	X	X	X	X	Environmental Specialist/ Environmental Technician/ Public Works Director