

Town of Hillsborough

NPDES Phase II Stormwater Management Program



ANNUAL REPORT

Fiscal Year 2021

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INTRODUCTION

Why Care About Stormwater?

Adding impervious surface decreases the amount of stormwater that infiltrates into the ground. This increases the amount and velocity of stormwater runoff. This can cause accelerated erosion and downstream flooding. In addition, as stormwater flows across impervious surfaces, it picks up various pollutants. These include excess nutrients, oil and grease, bacteria and sediment. Polluted stormwater flows down storm drains and ditches where it is discharged, untreated, into local streams, rivers, and lakes. Stormwater runoff pollution causes adverse impacts to aquatic ecosystems, poses human health risks, and can greatly increase the cost of treating drinking water.

Program Background

In 1972, the National Pollutant Discharge Elimination System (NPDES) program was established under the authority of the Federal Clean Water Act. Phase I of the NPDES Stormwater program was established in 1990. It required NPDES permit coverage for municipalities with populations of 100,000 or more.

Phase II of the NPDES Stormwater program was signed into law in December 1999. The Phase II program extended permit coverage to smaller (< 100,000 pop.) communities and public entities that own or operate a municipal separate storm sewer system (MS4). It required these smaller communities to develop a stormwater program and obtain an NPDES permit for stormwater discharges.

In North Carolina, the Department of Environmental Quality (NCDEQ) administers the NPDES Stormwater program. NCDEQ issued the Town of Hillsborough's (Town) initial Phase II permit, on October 1, 2005. The permit required the Town to develop, implement, and enforce a stormwater program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable. The program was implemented in phases over five years of the initial permit. Pursuant to the permit the stormwater program included the following six minimum measures or best management practices (BMPs):

1. Public education and outreach on stormwater impacts;
2. Public involvement/participation;
3. Illicit discharge detection and elimination;
4. Construction site stormwater runoff control (Erosion Control);
5. Post-construction stormwater management for new development and redevelopment;
6. Pollution prevention/good housekeeping for municipal operations.

The Town's current permit, Number NCS000466, was issued on February 27, 2017. This annual report reflects reporting requirements pursuant to the permit. Numbers reported are for the fiscal year 2020-2021, which runs from July 1, 2020 to June 30, 2021 and is referred to hereafter as FY2021.

1. Storm Sewer System Information

1.1 Population Served

Estimated population served..... 7,809¹

1.2 Growth Rate

Estimated increase 2010-2018 28.3%²

Estimated annual increase 2010-2018..... 3.14%

1.3 Jurisdictional Area

Town Limits 5.7 sq. mi

ETJ..... 3.5 sq. mi.

1.4 MS4 Conveyance System

Due to the age of the town, MS4 consists of a variety of stormwater conveyances and components. These range from typical curb and gutter systems conveyed by concrete pipes to simple sheet flow. The predominate conveyance components include grass lined swales and vegetated drainage ditches with various pipes and culverts. There are also various detention systems within the Town's jurisdiction, however these are on private property.

MS4 system components are periodically inspected to ensure proper function. The North Carolina Department of Transportation (NCDOT) maintains systems within state road rights-of-way. Systems located on private property, including detention facilities and other engineered stormwater controls, are maintained by the owner.

1.5 Land Use Composition

Estimated Land Use³

Residential..... 35%

Commercial 30%

Industrial..... 5%

Open Space..... 30%

Total 100%

¹ July 2019 Data from North Carolina Office of Budget and Management, State Demographics Data, <http://www.osbm.state.nc.us/>.

² Percentage increase from 2010 to 2019 (North Carolina Office of Budget and Management, State Demographics Data, <http://www.osbm.state.nc.us/>.)

³ Land use percentages were estimated from the Town of Hillsborough Land Use GIS database. Area of parcels for each designated land use type were summed and calculated for relative percentage of the planning jurisdictional area.

1.6 TMDL Identification

Currently, no streams flowing into or out of the Town of Hillsborough’s jurisdiction have an associated Total Maximum Daily Load.

2. Receiving Streams

The Town of Hillsborough lies entirely within the Falls Lake Watershed, which is part of the Neuse River Basin. Specifically, the Town drains to the Eno River. Specific receiving waters are listed below.

Receiving Stream	Description	Classification	Index No.
Eno River (Corporation Lake, Lake Ben Johnston)	From a point 0.4 mile upstream of Dry Run to dam at Lake Ben Johnston (Orange County water supply intake & Town of Hillsborough water supply intake)	WS-II; HQW, CA, NSW	27-2-(3.5)
Eno River	From dam at Lake Ben Johnston to Orange County SR 1561	C; NSW, N	27-2-(7)
Seven Mile Creek	From a point 0.4 mile upstream of I-85 to Lake Ben Johnston, Eno River	WS-II; HQW, CA, NSW	27-2-6-(1.5)
Rocky Run	From a point 0.5 mile upstream of I-85 to Seven Mile Creek	WS-II; HQW, NSW	27-2-6-2-(2)
Cates Creek	From source to Eno River	C; NSW	27-2-8
Strouds Creek	From source to Eno River	C; NSW	27-2-9
Stony Creek	From source to a point 0.4 mile upstream of Orange County SR 1710	C; NSW	27-2-13-(1)

3. Existing Water Quality Programs

3.1 Local Programs

The following programs and ordinances are being implemented within the Town of Hillsborough’s jurisdiction.

Unified Development Ordinance (UDO) – regulates overall development and land use. Specific water quality aspects include local stream buffer rules and post construction stormwater requirements, including nutrient limits.

Flood Damage Prevention – through its UDO the Town protects water quality by preventing new development within flood hazard zones.

Local Nutrient Sensitive Waters (NSW) Strategy - through its UDO the Town adopted stormwater requirements for new development to meet the Falls Lake Nutrient Management Strategy (Falls Lake rules).

Delegated Erosion and Sediment Control Program - as noted in Section 6, the Town relies on Orange County to conduct an erosion control program. Orange County has local delegated authority from the state.

3.2 State Programs

State programs, including the Neuse, Falls Lake, and Water Supply Watershed rules are implemented at a local level. The Town of Hillsborough does rely on NCDOT to maintain stormwater facilities and programs within state-owned road rights-of-way.

4. Permitting Information

The Town's Stormwater Program is under direction of the Stormwater and Environmental Services Manager. Stormwater and Environmental Services is a division of the Town's Planning Department. The Stormwater and Environmental Services Division works closely with Utilities, Public Works and Planning departments, and is supervised by the Assistant Town Manager/Planning Director.

4.1 Responsible Party Contact List

Overall implementation and oversight of the Town's Stormwater Program is directed by:

Terry Hackett, Stormwater & Environmental Services Manager
Town of Hillsborough
P.O. Box 429
101 E. Orange Street
Hillsborough, NC 27278
Telephone: 919-296-9621
Email: terry.hackett@hillsboroughnc.gov

4.2 Signing Official

The Town of Hillsborough operates under a council-manager form of government. The town manager is responsible for management and oversight of the Town's daily operations. Contact information is listed below:

Eric Peterson, Town Manager
Town of Hillsborough
101 E. Orange Street
P.O. Box 429
Hillsborough, NC 27278
Telephone: 919-296-9421
Email: eric.peterson@hillsboroughnc.gov

5. Co-Permit Status Information

The Town of Hillsborough holds its own NPDES Phase II permit and does not co-permit with another entity.

6. Reliance on Another Entity

The Town of Hillsborough utilizes Orange County to implement the Construction Site Stormwater Runoff Control (i.e. erosion control) portion of its stormwater program.

6.1 Contact Information

Erosion Control Program: Patrick Mallet, Erosion Control Supervisor
Orange County Planning and Inspections Department
131 W Margaret Lane, Suite 201
Hillsborough, NC 27278
919-245-2577
pmallett@orangecountync.gov

6.2 Legal Agreement

The Town maintains an inter-local agreement with Orange County to provide erosion control services. The current agreement was approved in October 2012.

7. Stormwater Management Program Plan

The following sections briefly describe the Town's stormwater management program for each of the six BMPs. Detailed information regarding each program area can be found in the Town's comprehensive stormwater management plan, available on the Town's website.

7.1 Public Education and Outreach

The objective of the Town's stormwater public education and outreach program is to increase citizen awareness of stormwater runoff pollution and related issues. The Town's stormwater public education and outreach program includes the following primary components:

- *Disseminate Educational Materials*

The Town disseminates educational materials that are either developed in-house or use existing materials available from other agencies. These materials are distributed electronically, at educational programs, special events and directly to individual citizens or businesses.

- *Stormwater Newsletter, Articles and Press Releases*

The Town publishes the *Stormwater Almanac*, a newsletter that educates and informs citizens about stormwater management issues within the Town. In addition, Town stormwater staff often write articles on various stormwater program related topics that are published in other periodicals. Stormwater staff also coordinate with the town's Public Information Office for press releases from the Town highlighting stormwater management related issues, stormwater related volunteer events, etc.

- *School programs*

The Town conducts direct educational, stormwater related programs for local schools. This includes partnering with other local governmental agencies conducting environmental education programs in local schools. Annual programs include Earth Walk with local seventh grade students, Eno River field trip with Orange High AP Environmental/Earth Science classes, science night at The Expedition School, as well as other programs as requested.

- *Special Events and Civic Groups*

The Town provides stormwater education and outreach programs/materials at local special events such as “Last Fridays”, “Earth Evening” and “Citizens Academy.” Town stormwater staff also provides educational programs to various civic groups, including local scout units, homeowner associations, churches and various other groups.

- *Social Media*

The Town maintains a Facebook page (www.facebook.com/ToHGovSW/) and Twitter account (@ToHGovSW) for the Stormwater and Environmental Services Division. Weekly posts provide education on pollution prevention, encourage citizens to explore nature and enjoy the Town’s water resources, and promote special events and volunteer workdays.

- *Clean Water Education Partnership.*

The Town of Hillsborough actively participates in the Clean Water Education Partnership (CWEP). CWEP assists member governments with their stormwater outreach and education program by leveraging member dues to conduct various media campaigns. The FY2021 CWEP annual report can be accessed from their website, <http://www.nccwep.org/>.

Due to the COVID-19 Pandemic, many of the Town’s direct education programs were cancelled. FY2021 Summary statistics for the primary components of the Town’s Public Education and Outreach Program are provided in the following sections for items not cancelled due to the pandemic.

7.1.1 School Program Statistics

Most of the Town’s direct education programs to schools occur in the fall of the year. Due to the COVID-19 pandemic, in-person school programs were cancelled and therefore no statistics are provided.

7.1.2 Outreach, Special Events and Other Program Statistics

Due to the COVID-19 pandemic, Town staff had to find different ways to disseminate stormwater educational materials and participate in virtual educational programs. Town staff supported the Orange and Alamance Counties Water Quality Collaborative Project, participated in a virtual

“Creek Week,” and utilized a group of Elon University environmental science students to develop on-line educational materials.

For the virtual “Creek Week” event, town staff produced five educational videos highlighting unique characteristics of the Town’s creeks and the Eno River. Through these examples, the videos educated the public on how to protect water quality and why this protection is important to people and aquatic life. The videos were promoted through a five-day social media campaign, and CWEP provided additional promotion through their website and social media.

Elon University students supported stormwater staff in developing green infrastructure and climate impact fact sheets and ESRI story maps. Links to these materials were added to the Town’s Stormwater Education webpage and disseminated through the Town’s electronic mailing list as a press release. A two-week social media campaign promoted the materials. The green infrastructure information was also distributed electronically to a local residential property association along with other stormwater related information in conjunction with an ongoing study of the neighborhood’s stormwater infrastructure.

Likewise, both virtual and in-person meetings were held with other homeowner associations focused on SCM operation and maintenance and their function as pollution removal systems. The following table summarizes FY2021 statistics:

Outreach, Special Events and Other Programs - FY2021		
Program	Participants	Handouts/ Giveaways
Virtual Creek Week	n/a ⁴	--
Orange and Alamance Counties Water Quality Collaborative Project	30	30
Elon University GI Project	5	--
Waterstone Estates and Terraces HOA Meeting	5	
Crescent Magnolia HOA Meeting	5	
Harmony at Waterstone HOA Meeting	6	
Cornwallis Hills POA	100 ⁵	100
<i>Total</i>	<i>151</i>	<i>130</i>

⁴ Videos were posted to the Town’s stormwater Facebook page and social media statistics provided include the creek week posts.

⁵ Information was distributed via the POA’s electronic distribution list

7.1.3 Newsletters, Articles and Press Release Statistics

Newsletters, Articles and Press Release Statistics – FY2021	
Stormwater Almanac (newsletter) Issues Published	2
Stormwater Related Press Releases	5
Stormwater Related Articles Written/Published	2

7.1.4 Town of Hillsborough Social Media Statistics

Social Media Posts - FY2021		
Statistic	Facebook	Twitter
Posts	72	57
Followers	218	212
Impressions	9,288	15,947

Facebook Post Statistics - FY2021		
Statistic	Total	Average per Post
Post Reach ⁶	7,466	104
Post Impressions ⁷	8,335	116
Engaged Users ⁸	393	5

7.2 Involvement and Participation

The objective of the Town’s public involvement and participation program is to strengthen citizen engagement in stormwater and environmental issues affecting the Town. Public Involvement and participation includes providing volunteer opportunities, exchanging information with citizens and elected officials, and providing public assistance on stormwater related issues.

- *Volunteer Opportunities*

Town Stormwater and Environmental Services Division staff coordinates volunteer opportunities to raise awareness of stormwater runoff pollution, engage citizens and ultimately reduce target pollutants. Volunteer opportunities regularly include trash/litter clean-ups, wetland/riparian vegetation planting, invasive species removal/monitoring, qualitative stream monitoring, and maintenance of the Town’s pollinator/rain gardens and stormwater wetland.

⁶ Count of people for whom the post entered their screen

⁷ Count of times a post entered a person's screen

⁸ Count of people who engaged with the post, including liking, commenting, and sharing

- *Public Meetings*

At a minimum, Town Stormwater and Environmental Services Division staff presents one update to Hillsborough’s elected Town Board of Commissioners regarding the stormwater program, annually. As part of the presentation, Town Commissioners can provide input on pertinent issues. Staff may also provide presentations to other Town advisory boards as requested.

- *Public Assistance*

Town Stormwater and Environmental Services staff provides assistance to citizens regarding stormwater pollution prevention, riparian buffer regulation, drainage issues and other related topics. This includes site visits and investigations as necessary.

In addition to the items listed above, the Town maintains a website with pertinent stormwater information. This includes email and phone numbers of stormwater staff so that citizens can report concerns. Other than emails and calls received, Town Stormwater and Environmental Services staff does not report website statistics.

FY2021 Summary statistics for the primary components of the Town’s Public Involvement and Participation Program are provided in the following sections. Please note that due to the COVID-19 pandemic, some volunteer opportunities planned were canceled. For instance, no planting events were held in FY2021. Volunteer opportunities that were held, followed state and town mandated restrictions.

7.2.1 *Volunteer Opportunity Statistics*

Litter/Trash Clean-ups – FY2021	
Number of Events	1 ⁹
Number of Volunteers	114
Miles Cleaned	~5.0
Pounds Collected	1,460

Volunteer Monitoring – FY2021	
Number of Groups	1
Number of Monitoring Locations	1
Total Number of Volunteers	8
Number of Actions Completed as a result ¹⁰	1

⁹ Due to the COVID-19 pandemic, the Town combined litter cleanup into one campaign where residents could then work in small groups at their own timing and safety to collect trash and litter.

¹⁰ The monitoring was at the Gold Park stormwater wetland, where a small group of volunteers removed trash, cattails and other nuisance vegetation.

7.2.2 *Public Meeting Statistics*

Stormwater Related Public Meeting – FY2021	
Number of Public Meetings	7
Number of Attendees	134 ¹¹

7.2.3 *Public Assistance Statistics*

Public Assistance – FY2021¹²	
Number of Calls, Complaints, Issues	54
Number Resolved	51

7.3 Illicit Discharge Detection and Elimination

The Town’s stormwater illicit discharge detection and elimination program (IDDE) is outlined in its *Illicit Discharge Detection and Elimination Plan* and is enforced through the Town code. This plan details measures that Town Stormwater and Environmental Services Division staff follows to find and eliminate illicit discharges and connections to the MS4. The primary components of this plan are described below:

- *MS4 Mapping*

The Town maintains a GIS map and database of the stormwater infrastructure within town limits. This includes pipes, ditches, swales catch basins, inlets, outlets and stormwater outfalls. The Town defines stormwater outfalls more broadly than EPA definitions. This conservative approach allows Town Stormwater and Environmental Services Division staff to evaluate outfalls as time allows and may eliminate some as stormwater outfalls, if appropriate. Currently, there are approximately 123 stormwater outfalls located within the Town’s jurisdiction.

- *High Priority Areas*

The Town’s *Illicit Discharge Detection and Elimination Plan* calls for the identification of high priority areas for IDDE screening investigations. The Town has designated four high priority areas: Downtown, Central Business District, West Hillsborough, and Meadowlands. These areas reflect a relatively high development density as well as a concentration of light industrial and commercial land use.

¹¹ Includes virtual attendees through Zoom but does not include attendees that may have live streamed the meetings via the Town’s YouTube channel.

¹² Includes increased number of email requests (presumably due to COVID-19), phone calls and resulting site visits.

- Illicit Discharge Investigation**

In general, this includes screening of high priority areas, dry weather inspections of stormwater outfalls and investigation of complaints/concerns submitted by citizens or by other town employees.
- Sanitary Sewer Overflows**

While a sanitary sewer overflow (SSO) is ultimately the responsibility of the Town’s Utility Department, overflows can reach the stormwater system and/or receiving waters and are considered an illegal discharge. Therefore, statistics for SSO’s are included below.
- Employee Cross-Training**

An important aspect of the town’s IDDE program is to provide training to other town employees in recognizing and reporting possible illicit discharges and connections. In FY2020, stormwater program training materials were updated by staff and training occurred just prior to the COVID-19 pandemic. However, no training occurred in FY2021 due to the pandemic. Staff is planning to hold in-person training again in FY2022.

FY2021 Summary statistics for the primary components of the Town’s IDDE Program are provided in the following sections.

7.3.1 *Illicit Discharge Statistics*

Illicit Discharge Summary – FY2021		
<i>Illicit Discharge Screening & Inspection</i>	Screening Investigations conducted	12
	Dry weather inspections conducted	12
	Illicit discharges found	0
	Illicit connections found	0
	Illicit discharges/connections resolved	n/a
	NOVs Issued	n/a

Illicit Discharge Summary – FY2021 (continued)		
<i>Individual Complaints & Investigations</i>	Number of Complaints/Investigations	1
	Investigations resolved	0
	NOVs Issued	0

7.3.2 *Sanitary Sewer Statistics*

There were no reportable Sanitary Sewer Overflows (SSOs) in FY2021.

7.3.3 Cross-Training Statistics

Due to the COVID-19 pandemic, no employee cross-training was held. Staff expects to provide in-person training again in FY2022 and is planning to work with Human Resource staff to provide remote training options in the future.

7.4 Construction-Site Stormwater Runoff Control

Orange County implements and enforces construction site stormwater runoff control for the Town of Hillsborough through its erosion control program. Orange County has local delegated authority from the state to implement an erosion control program. Legal agreements are in place allowing Orange County to enforce its sedimentation and erosion control ordinance within the Town’s jurisdiction except for publicly funded projects, which are subject to state jurisdiction.

Active construction projects are inspected regularly by Orange County Erosion Control staff. Inspection reports, notice of violations (NOVs) and stop work orders are provided to Town Stormwater and Environmental Services staff. In addition, the Town is required to conduct periodic audits/inspections of active construction sites, including Town construction projects, to help ensure compliance. Generally, Town Stormwater and Environmental Services Division staff typically inspect active construction sites once a month and conduct brief site visits more frequently.

FY2021 Summary statistics for the primary components of the Town’s Construction-Site Stormwater Runoff Control Program are provided in the following sections.

7.4.1 Erosion Control Projects Reviewed/Permitted FY2021

ECP Review Summary – FY2021		
Project Name	Tract Size (acres)	Area Disturbed (acres)
Ellis Residence – LDP20-0045	1.79	1.0
Collins Ridge – EC17-0092 (Renewal)	139.0	103.0
Forest Ridge Phase 6 & 8 (Renewal)	14.0	0.45
Leland Little Auction Expansion	7.16	3.82
<i>Totals</i>	<i>161.95</i>	<i>108.27</i>

7.4.2 Erosion Control Inspection Statistics

Inspection Summary – FY2021		
Active Projects	Privately Owned	11
	County Owned	--
	State Owned ¹³	1
	Town Owned Projects	--
	<i>Total</i>	<i>12</i>

Inspection Summary – FY2021 (continued)		
Inspections Conducted	OCEC Staff	81
	Town Staff	21 ¹⁴
	<i>Total</i>	<i>102</i>

Enforcement Actions	NOVs Issued	0
	Stop Work Orders	0
	<i>Total</i>	<i>0</i>

7.5 Post-Construction Stormwater Management

The Town’s post-construction stormwater program includes two primary components: new development review/approval and stormwater control measure (SCM) inspection.

- *New Development Review*

Proposed development projects are reviewed to determine if the Town’s stormwater standards within the Unified Development Ordinance (UDO) are met. Projects meeting those requirements are issued a stormwater management plan approval. New development projects must currently meet both the NPDES Phase II post-construction stormwater requirements and the Falls Lake Rules nutrient loading requirements. Additionally, all SCMs must meet the state’s Minimum Design Criteria (MDCs).

- *SCM Inspection Program*

The Town is required to maintain an SCM inspection program pursuant to both the NPDES Phase II regulations and the Falls Lake rules. The Town requires the owner of each SCM to inspect at least annually and submit a report to the

¹³ The state owned UNC Hospital expansion is subject to the Town’s post-construction stormwater management requirements, but is permitted by the state’s erosion control program.

¹⁴ Town Stormwater and Environmental Services staff conduct periodic, informal inspections of active construction sites, as well as responds to complaints regarding construction site runoff. This augments the formal inspections completed by OCEC.

Stormwater and Environmental Services Division. Additionally, the Town is required to inspect (or what the Town staff now calls “audit”) SCMs approved through the UDO at least once every five years.

There are also SCMs within the Town’s planning jurisdiction that were approved prior to the Town’s NPDES stormwater permit issued in 2005. In March of 2013, Stormwater and Environmental Services embarked on a program to bring all SCMs within the Town’s planning jurisdiction into compliance. This process includes conducting onsite audits of private SCMs by Town Stormwater and Environmental Services Division staff as time and resources allow. The intent is to exceed the audit/inspection interval required by the NPDES and Falls Lake regulations. The goal is to complete at least a third of SCM on site audits annually.

Town Stormwater and Environmental Services Division staff also tracks compliance with submittal of the required annual maintenance and inspection reports. The Town’s UDO requires all SCM owners to submit their annual inspection report by September first of each year. The Town does allow exceptions to this requirement for specific situations. For instance, SCMs that are completed and closed out prior to the September first deadline are often exempted from this requirement in the first year.

Stormwater and Environmental Services began a new program in FY2018 to recognize those SCM owners who have exceptional compliance records. Annually in the early spring, staff evaluates SCM owner compliance and selects a small subset of owners to be recognized. Winners are recognized via social media, town press release, and the Stormwater Almanac publication. They are also given a certificate signed by the mayor.

FY2021 summary statistics for the primary components of the Town’s Post-Construction Stormwater Management Program are provided in the following sections.

7.5.1 New Development Review Statistics

Development Summary of Approved Projects – FY2021				
Development Name	Type	Site Acreage	Impervious Acreage	Number of SCMs
Leland Little Auction House – Second Addition	Commercial	3.47	0.69	5
Waterstone Fire & EMS Station	Institutional	2.0	0.87	2
	<i>Total</i>	<i>5.47</i>	<i>1.56</i>	<i>7</i>

SCMs Approved for Development Projects – FY2021	
Stormwater BMP Type	Quantity
Bioretention	1
Filtrerra	2
Stormwater Wetland	1
Underground Detention	3

7.5.2 *SCM Inspections Statistics*

SCM Onsite Audit Summary – FY2021	
Number of Mapped SCMs	133
SCMs Requiring 2020 Inspection	93
Audits/Inspections Conducted	39
Maintenance Issues Identified	15
Maintenance Issues Resolved as a Result	8
Violations Noted	0
NOVs Issued	0

7.5.3 *SCM Annual Maintenance Inspection Report Compliance*

Annual Inspection Reports Received – FY2021		
Year	No. of SCMs	Compliant
2013	63	13%
2014	66	47%
2015	72	71%
2016	85	73%
2017	87	76%
2018	91	78%
2019	95	87%
2020	122	72%
2021	93 ¹⁵	95%

¹⁵ Starting in FY21 the Town is reporting the number of SCMs scheduled to submit their annual inspection report rather than total SCMs to track percent compliance. For instance, there were several SCMs completed and closed-out in FY21 that do not require an inspection report until next year.

7.6 Pollution Prevention for Municipal Operations

The Town is required to develop and implement a pollution prevention program for municipal operations. In previous years, this program was guided by the Town's *Pollution Prevention/Good Housekeeping Plan*. As part of the annual assessment of the Town's stormwater program staff reviewed that plan and determined that it needed updated to better reflect NPDES permit requirements. The result is a new operation and maintenance plan that covers town-owned facilities, town-owned SCMs and the town's MS4.

The Town's *Operation and Maintenance Plan for Stormwater Pollution Prevention (OMP)* includes seven primary components and are briefly described below.

- *Inventory of Town Owned/Operated Facilities*

The OMP includes all town facilities with the potential for generating stormwater runoff pollution during town operations. The Town has developed and maintains an inventory that includes spatial data on the location, type and condition. The spatial information is maintained in a GIS system and is updated at least annually.

- *Inspection Program*

The inspection program specifies the inspection procedures for all town facilities addressed in the OMP. Procedures are tailored to each type of facility and priority level. Compliance inspections are conducted at all town-owned properties. Those identified as priority properties in the OMP are inspected annually, while non-priority properties are inspected at least once every five years. Priority facilities include the Wastewater Treatment Plant (WWTP), Water Treatment Plant (WTP), the Utility Collections and Distributions yard, the Public Works yard, and the Fleet Maintenance facility. These facilities are typically inspected at the beginning of the fiscal year.

Town facilities containing SCMs are also inspected annually, typically in May and June of each year. This timeframe allows a better assessment of the vegetative components of town-owned SCMs, lawn and other landscape or open space areas associated with town properties. Follow up inspections are conducted to ensure maintenance work is completed.

MS4 inspections are completed by "neighborhood" and a schedule is provided in the OMP. Supplemental MS4 inspections are conducted as part of our routine duties and often include citizen reported concerns. Inspections results for town-owned facilities, SCMs and MS4 are included in *Section 7.61*.

- *Routine Maintenance*

While specific maintenance items will be identified through the inspection process described previously, the OMP also identifies pollution prevention practices that are part of the routine maintenance of facilities. This includes things like stabilizing areas subject to erosion, picking up loose litter and trash, containing spills and leaks, etc. Routine maintenance covers town-owned

properties, town-maintained streets and parking lots, town-owned SCMs and the town-owned MS4. Town staff tracks and evaluates effectiveness of regular street sweeping, percentage of storm drains/catch basins cleaned, amount of trash and debris removed from streets and MS4 components, the linear feet of ditches/swales maintained, and the amount of leaves collected from streets.

- *Spill Response Procedures*

The Town's Spill Prevention, Control and Countermeasure Plan describes the procedures established to respond to and prevent spills. The plan outlines procedures for spill contingency, training, security, discharge prevention, and evaluation of risk. The plan also provides an inventory of storage facilities and specifies discharge and drainage controls. The Town of Hillsborough Safety and Risk Manager developed this plan and will be responsible for updating the plan periodically with input from facilities managers and stormwater staff.

- *Pesticide, Herbicide and Fertilizer Application Management*

As part of this plan, town operations include practices that minimize the use of pesticides, herbicide, and fertilizer and ensure the proper use, handling, storage, and disposal of these products. Stormwater pollution prevention training workshops include an overview of practices relevant to municipal use of pesticide, herbicide, and fertilizer. Within each department, supervisors are responsible for ensuring that employees and contractors are properly trained in pesticide, herbicide, and fertilizer application and all permits, certifications, and other measures for applicators are followed. Guidelines are provided in the OMP.

- *Training*

The goal of the training program is to provide staff with the resources needed to successfully minimize or eliminate stormwater pollution during daily Town operations. While the inspection program works directly with specific staff, the training program is broader in scope and includes all Town staff. The program provides a variety of training opportunities to accommodate staff needs and availability.

- *Vehicle Equipment Cleaning*

The Town provides a covered vehicle wash area located at the Fleet Maintenance Facility. The wash area consists of a concrete pad that drains to an oil and water separator, which then drains to the sanitary sewer. A roof covers the entire vehicle wash area. Staff who operate vehicles are instructed to use this wash area for all vehicle and equipment cleaning. The OMP also outlines practices related to vehicle and equipment cleaning.

Annual statistics for reportable portions of the OMP are provided in the following sections.

7.6.1 *Pollution Prevention Inspection Results*

Town facilities inspected in FY2021 are listed in the following table. No low priority facilities were inspected in FY2021 but have been inspected at least once in the last five years. Please refer to the Town’s OMP for a list of all facilities.

Town Facility Pollution Prevention Inspections - FY2021	
Facility	Status
1. Cates Creek Park	<i>Compliant</i>
2. Fleet Maintenance	<i>Compliant</i>
3. Gold Park	<i>Compliant</i>
4. Old Landfill	<i>Compliant</i>
5. Public Parking	<i>Compliant</i>
6. Public Works Yard	<i>Compliant</i>
7. Riverwalk	<i>Compliant</i>
8. Wastewater Treatment Plant	<i>Compliant w/Conditions</i>
9. Water Distribution Yard	<i>Compliant w/Conditions</i>
10. Water Tower (UNC Hospital)	<i>Compliant</i>
11. Water Treatment Plant	<i>Compliant w/Conditions</i>

7.6.2 *SCM Inspection Results*

Town-owned SCMs and inspections results are listed in the following table. Follow up inspections will be completed in the upcoming fiscal year for those listed as “needs maintenance.”

Town-Owned SCM Inspections – FY2021		
Facility	SCM Type	Status
1. Cates Creek	Bioretention	<i>Passed</i>
2. Fleet Maintenance	Level Spreader	<i>Needs Maintenance</i>
3. Fleet Maintenance	Underground Detention	<i>Passed</i>
4. Gold Park	Bioretention	<i>Needs Maintenance</i>
5. Gold Park	Stormwater Wetland	<i>Passed</i>
6. Riverwalk	Dry Detention	<i>Needs Maintenance</i>
7. Water Tower	Bioretention	<i>Needs Maintenance</i>

7.6.3 MS4 Inspection Summary

One “neighborhood” was scheduled for an MS4 assessment in FY2021. The assessment rates “level of service” of the MS4. The condition of each component in the neighborhood is maintained in a GIS database and provided to the Public Works department to schedule maintenance.

MS4 Neighborhood Assessment Completed – FY2021		
<i>Name:</i>	Cornerstone	
<i>Type:</i>	Commercial	
<i>Streets:</i>	Cornerstone Ct, Valley Forge Road	
<i>Condition^{16:}</i>	Good	20%
	Fair	50%
	Poor	30%

7.6.4 MS4 Maintenance Statistics

MS4 Maintenance/Cleaning – FY2021		
<i>Street Sweeping</i>	Linear Feet/Month	63,398
	Total Linear Feet	570,582
	Debris/Sediment Removed (tons) ¹⁷	4.61
	Percentage of Streets Noted “dirty” ¹⁸	13%
<i>Storm Drains/ Catch Basins</i>	Percent Cleaned ¹⁹	20%
	Trash/Debris/Sediment Removed (pounds)	~2,000 ²⁰
<i>Streets & Road Shoulders</i>	Leaves Collected (tons)	635
	Loose Trash/Litter Removed (pounds)	~2,500 ¹⁸
<i>Swales/Ditches</i>	Linear Feet Maintained ²¹	4,102

¹⁶ Percentages are approximated based on the number of MS4 assets that were assessed. Please refer to the Town’s OMP for a list of neighborhoods and fiscal year scheduled.

¹⁷ The Town contracts street sweeping and data was only available for the second half of the fiscal year but is now being tracked monthly.

¹⁸ The Town’s street sweeping contractor notes which streets each month that were notably “dirty.” The number noted represents the average percent of linear feet noted as dirty. The Town is using this information to determine where to focus future efforts, track trends and evaluate effectiveness.

¹⁹ This represents cleaning of loose debris and accumulated sediment. These catch basins are inspected and cleared monthly of debris.

²⁰ This number is estimated by Public Works; staff are working towards tracking these amounts more exactly.

²¹ This may include removal of debris, removal of accumulated sediment, reshaping, revegetating, etc.

7.6.5 *Employee Training Statistics*

Due to the COVID-19 pandemic, no employee training was held. Staff expects to provide in-person training again in FY2022 and is planning to work with Human Resource staff to provide remote training options in the future.