



The Town of Summerville
Stormwater Management Plan (SWMP)

Revised July 1, 2018

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Prepared in accordance with SCDHEC Permit #SCR030000

CERTIFICATION OF STORMWATER MANAGEMENT PLAN

"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 fine and imprisonment for knowing violations."

Name (Print)

Title

Signature

Date

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- Appendix G: Interlocal Agreement (ILA) with Dorchester County for MCMs# 1, 2, and 3

List of Acronyms and Abbreviations

BMP	Best Management Practice
CEPSCI	Certified Erosion Prevention and Sediment Control Inspector
CSR	Construction Site Runoff
ERP	Enforcement Response Plan
EPA	Environmental Protection Agency
IDDE	Illicit Discharge Detection and Elimination
IECA	International Erosion Control Association
MEP	Maximum Extent Practicable
MCM	Minimum Control Measure
MS4	Municipal Separate Storm System
NPDES	National Pollutant Discharge Elimination System
NOI	Notice of Intent
PP&GH	Pollution Prevention and Good House Keeping
PCR	Post Construction Runoff
PEO	Public Education and Outreach
PIP	Public Involvement and Participation
SMS4	Small Municipal Separate Storm System
SCDHEC	South Carolina Department of Health and Environmental Control
SOP	Standard Operating Procedure
SWMP	Stormwater Management Plan
SWP3	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load

The Town of Summerville

NPDES Stormwater Management Plan (SWMP)

1.0 Introduction

This Stormwater Management Plan (SWMP) is designed to reduce the discharge of pollutants from the Town of Summerville's Municipal Separate Storm Sewer System (MS4) to the maximum extent practicable, to protect water quality and to satisfy the appropriate requirements of the Clean Water Act. The contents are expected to change with time due to the iterative process of developing the SWMP recognized by the Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control (SCDHEC). EPA predicts that it will likely take two to three SMS4 general permit terms (5-year terms) to fully develop and implement the SWMP. The first permit term focused heavily on data collection, organization, development of necessary programs, and initial implementation. During the current second SMS4 general permit cycle, the SWMP will need to be amended based on the observed effectiveness of existing plan components and to address the terms and conditions of the new permit. This document is meant to be a living document that will be reviewed and revised on an annual basis to reflect accomplishments, revisions to plan components, and additions of other or expanded efforts.

This SWMP addresses the requirements of the NPDES General Permit for Discharges from Regulated Small MS4s; Permit No. SCRO30000, effective January 1, 2014 and expiring December 31, 2018. Specific language from the SMS4 general permit has been copied and pasted into this SWMP for consistency. The section numbers used in this SWMP correspond with the general permit section numbers.

2.0 Notice of Intent (NOI) Information

The following information is applicable to the Town of Summerville.

Table 1: NOI Information

General Permit Section	NOI Requirement	Description
2.2.1 INFORMATION ON THE PERMITTEE:		
2.2.1.1	Name of Municipality:	The Town of Summerville
	Mailing Address:	Bonnie Miley Assistant Town Engineer Town of Summerville 200 South Main Street Summerville, SC 29483
	Telephone Number:	843-851-4235
2.2.1.2	Public Entity Type:	Town
2.2.2 INFORMATION ON THE SMS4:		
2.2.2.1	Map of [SMS4 Area]:	<p><u>SMS4 Location:</u> MS4 Regulated Area</p> <p><u>SMS4 Center Coordinates:</u> Latitude: N33° 01.05' Longitude: W80° 10.34'</p> <p><u>SMS4 Urbanized Area:</u> Approximately 19 square miles</p> <p>See Appendix A for Town of Summerville Urbanized Area Map.</p>
2.2.2.2	Major Receiving Waters:	Ashley River**, Chandler Bridge Creek, Coosaw Creek, Dorchester Creek**, Eagle Creek*, Hurricane Branch, Negro Branch, Platts Branch, Rumphs Hill Creek, Sawmill Branch**
2.2.2.3	Indian Lands:	No portion of Town of Summerville's MS4 is located on Indian Country Lands.
2.2.2.4	List of MS4s Operating within Town of Summerville's SMS4 Area:	<p>The following entities operate a small separate storm sewer system within the regulated SMS4 area of Town of Summerville.</p> <p><u>Highway Departments:</u></p> <ul style="list-style-type: none"> • SCDOT

General Permit Section	NOI Requirement	Description
2.2.2.5	Other Governmental Entities:	<p><u>Dorchester County:</u> Responsible for Implementing and managing Minimum Control Measures 1, 2, and 3 for the Town of Summerville under the NPDES Permit. The Town and County are in an Intergovernmental Local Agreement that states this.</p> <p><u>Clemson University Cooperative Extension Service:</u> Responsible for implementing Minimum Control Measures 1 and 2 of the NPDES program. The County and Town are members of the Ashley Cooper Stormwater Education Consortium (ACSEC). The County pays the Towns annual fee to participate in the ACSEC.</p>
2.2.2.6	BMP Information:	See Section 4.0 for a discussion of the BMPs for each minimum measure. Each minimum measure contains all available information on the BMPs that are to be implemented, their measurable goals, a schedule for their implementation, and the person(s) responsible.

*Listed on the CWA §303(d) list; **Allocated a TMDL

3.0 Special Conditions Applicable to Permitted Stormwater Discharges to Sensitive Waters

The SMS4 general permit requires that the Town of Summerville determine whether its systems discharge to sensitive waters. For the purpose of the permit, sensitive waters are waters:

- With a Total Maximum Daily Load (TMDL) developed and approved, or established by EPA,
- Included in the most recent SCDHEC Section 303(d) impaired waters list,
- Pursuant to DHEC Water Classifications & Standards (R.61-68) and Regulations (R.61-69) classified as either:
 - Outstanding National Resource Waters (ONRW)
 - Outstanding Resource Waters (ORW)
 - Trout Waters, or
 - Shellfish Harvesting Waters (SFH), and
- In Source Water Protection Areas (SWPA).

3.1 Determination of Receiving Water Conditions and Impacts

The SMS4 general permit requires the Town of Summerville to determine whether their SMS4 discharges to receiving waters within a TMDL watershed or on the most recent SCDHEC

Section 303(d) impaired waters list. To meet this permit requirement, the Town of Summerville has collected information from SCDHEC on the location of existing TMDLs and impaired waters, as determined from results of the State’s monitoring program, that could potentially be impacted by discharges from the Town of Summerville’s SMS4. Tables 2 and 3 in the sections below provide a list of approved TMDLs and the impaired waterbodies on the 2016 303(d) list that the Town of Summerville’s SMS4 contributes to, either directly or indirectly.

3.2 TMDL Monitoring and Assessment

In compliance with Section 3.2.1 of the SMS4 general permit, TMDL monitoring and assessment plans will be developed for all TMDL waters receiving SMS4 discharges of pollutant(s) of concern, except where Section 3.1.1.2 of the SMS4 general permit is applicable. For TMDLs existing before the effective date of permit coverage, TMDL monitoring and assessment plans will be completed, submitted to SCDHEC, and appended to this SWMP within 12 months of the effective date of permit coverage. For newly established TMDLs, the Town of Summerville will complete a TMDL monitoring and assessment plan within 12 months of the effective date of the TMDL. As completed, TMDL monitoring and assessment plans will be submitted to SCDHEC and attached to this SWMP in Appendix C. Sampling will be initiated within 18 months of the effective date of permit coverage for TMDLs existing before the effective date of permit coverage. For newly established TMDLs, the Town of Summerville will initiate sampling within 18 months of the effective date of the TMDL.

A list of waterbodies within the Town of Summerville’s regulated MS4 area, and/or which the Town of Summerville’s MS4 area drains to, can be found in Table 2.

Table 2: List of Approved TMDLs

TMDL Watershed	Pollutant of Concern	Monitoring Stations	Effective Date
Ashley-Cooper-Wando-Charleston Harbor	Dissolved Oxygen	CSTL-102*, RT-032046*	2002 (Original) 2013 (Revision)
Sawmill Branch - Dorchester Creek	Fecal Coliform	CSTL-013, CSTL-043	2003

*Station not located inside the Town of Summerville’s Urbanized Area

3.3 TMDL Implementation and Analysis

In compliance with Section 3.3.2 of the SMS4 general permit, TMDL implementation and analysis plans will be developed for all TMDL waters receiving SMS4 discharges of pollutant(s) of concern, except where Section 3.1.1.2 of the SMS4 general permit is applicable. TMDL implementation and analysis plans will be completed and submitted to SCDHEC within 48

months from the effective date of permit coverage, or, for TMDLs established after the effective date of permit coverage, within 48 months of the effective date of the TMDL.

3.4 Discharges to Impaired Waterbodies

For discharges to Impaired Waterbodies, protection will be provided through BMP applications conducted through implementation of the minimum control measures in section 4.2. The BMP implementation strategies will not cause or contribute to violations of water quality standards in water bodies with impaired monitoring stations.

A list of all impaired water bodies receiving discharges from the Town of Summerville SMS4 can be found in Table 3 below.

Table 3: 2016 303(d) List of Impaired Stations within the Town of Summerville’s SMS4 Area and/or that the SMS4 Area Drains Into

Basin	Station Description	Station	Use	Pollutant of Concern
Santee	Sawmill Branch at SC 78 E of Summerville	CSTL-043	AL	DO
Santee	Dorchester Creek at SC 165	CSTL-013	AL	DO
Santee	Ashley River at SC 165 4.8 MI SSW of Summerville	CSTL-102	REC	ENTERO
Santee	Eagle Creek at SC 642 5 MI SSE of Summerville	CSTL-099	REC	ENTERO
Santee	Ashley River at Dorchester State Park	CSTL-560	FISH	HG
Santee	Ashley River 1.8 MI NW Runnymede Plantation	RT-032046	REC	ENTERO
Santee	Ashley River at Magnolia Gardens	MD-049	REC, AL	ENTERO, PH, TURBIDITY

3.5 Discharges to Classified Waters

The Town of Summerville does not discharge to any classified waters.

3.6 Discharges to Source Water Protection Areas

The Town of Summerville is not aware of any discharges to Source Water Protection Areas.

4.0 Stormwater Management Plan (SWMP)

Table 4: SWMP Requirements

SWMP REQUIREMENTS			
Develop and Implement SWMP	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.1.2		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Revise and update written SWMP document and submit the SWMP to SCDHEC Bureau of Water.	Deadline: July 1, 2014	Once	Town of Summerville
Update Stormwater Management Ordinance	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.1.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Review and revise the Stormwater Management Ordinance, or adopt any new ordinances or other regulatory mechanisms that provide adequate legal authority to control pollutant discharges into and from the SMS4, and to meet the requirements of the SMS4 general permit.	Deadline: December 31, 2014	Once	Town of Summerville
Enforcement Response Plan (ERP)	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.1.5		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop & Implement an enforcement response plan (ERP).	Deadline: December 31, 2014	Once	Town of Summerville
Update Stormwater Management Plan	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.1.10		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Review and revise the SWMP document to keep it up to date during the term of the permit.	Throughout the Permit Term	Annually	Town of Summerville

4.1.1 Requirements of the NPDES SMS4 General Permit

The Town of Summerville will implement this SWMP to reduce the discharge of pollutants from its SMS4 to the maximum extent practicable to protect water quality.

4.1.2 SWMP Development

The Town will revise and update the written SWMP document and submit the SWMP to SCDHEC Bureau of Water by July 1, 2014.

4.1.3 Contents of the SWMP

At a minimum, the Town must include ordinances, or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of the latest NPDES Phase II MS4 general permit. The Town reviewed and updated the Stormwater Management Ordinance and the most recent revision is pending adaptation by Town Council. See Appendix D for the Town of Summerville's Stormwater Management Ordinance.

4.1.4 Requirement to Develop Adequate Legal Authority

At a minimum the legal authority will address the following:

- Authority to Prohibit Illicit Discharges
- Determination of Allowable Non-Stormwater Discharges
- Authority to Prohibit Spills or Other Releases
- Authority to Require Compliance
- Authority to Require Installation, Implementation, and Maintenance of Control Measures
- Authority to Receive and Collect Information
- Authority to Inspect
- Response to Violations
- Monetary Penalties
- Civil/Criminal Penalties
- Interagency Agreements (if applicable)

A certification statement has been included in this SWMP that certifies the Town of Summerville has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in the NPDES SMS4 general permit (see Page i).

4.1.5 Enforcement Measures and Tracking

The Town originally adopted an Enforcement Response Plan (ERP) in December 2014 and recently developed a revised version (dated June 2018) to more clearly define the process of enforcement actions based. The ERP outlines the Town of Summerville's potential responses to violations and addresses repeat and continuing violations through progressively stricter responses as needed to achieve compliance.

4.1.5.2 Enforcement Tracking - The Town will track instances of non-compliance either in hard-copy files or electronically.

4.1.5.3 Recidivism Reduction - The Town will summarize inspection results by consuetudinary violators and include incentives, disincentives, or an increased inspection frequency at the operator's sites.

4.1.6 Report Requirements

The Town of Summerville will at a minimum submit the following information in the report (See Section 5.3 for details).

-
- The status of implementing the components of the SWMP that are established as permit conditions;
 - Proposed changes to the SWMP that are established as permit conditions;
 - Revisions, if necessary, to the assessment of controls and the fiscal analysis, including a description of staff resources necessary to meet the requirements of the permit;
 - A summary of data, including monitoring data, that is accumulated throughout the reporting year; and,
 - A summary describing the number and nature of enforcement actions, inspections, and public education programs.

4.1.7 SWMP Minimum Control Measure Requirements

The Town of Summerville SWMP will include the following information for each of the six minimum control measures (MCM) described in Section 4.2 of this SWMP in detail:

- Best management practices (BMP) that the Town or another entity will implement for each of the MCM;
- Measurable goals for each of the BMP including, as appropriate, the months and years in which the Town will undertake required actions, including interim milestones and the frequency of the action; and,
- Person, or persons, responsible for implementing or coordinating the BMP for the Town's SWMP.

4.1.10 SWMP Modifications

SCDHEC Bureau of Water may notify the Town of Summerville of the need to modify the SWMP document to be consistent with the permit, in which case the Town of Summerville will have 90 days to finalize such changes to the plan.

The Town of Summerville will keep the SWMP document up to date during the term of the permit. Where the Town of Summerville determines that Ordinance modifications are needed to address any procedural, protocol, or programmatic change, such changes must be made as soon as practicable, but not later than 360 days.

4.2 Minimum Control Measures

In compliance with SMS4 general permit requirements; this SWMP includes a description of the six minimum control measures (MCMs) and details on the development and implementation of the plan to address MCM requirements. The details on each minimum measure include the measurable goals for each proposed BMP, the responsible departments and staff to implement the BMP, and the implementation schedule for the BMP (i.e. start date, frequency of activities, etc.)

4.2.1 Public Education and Outreach (Minimum Measure #1)

4.2.1.1 Minimum Measure #1 Permit Requirements

In order to meet the requirements of Minimum Measure #1, the Town of Summerville has partnered with Dorchester County and Clemson University/Carolina Clear to focus on the development and implementation of educational programs designed to inform the public about the impacts that stormwater discharges could have on local waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff. The Town of Summerville intends to work in cooperation with Dorchester County and Clemson University/ Carolina Clear in order to efficiently reach as many citizens as economically possible through public education and outreach efforts.

Table 5: Minimum Measure #1 Permit Requirements

4.2.1.1.1	Identify the pollutant(s) of concern (POC) within the City of Summerville's watershed area(s).
4.2.1.1.2	Analyze the POC(s) listed, above, to be targeted.
4.2.1.1.3	Initiate a planning process that defines the goals and objectives of the program as they relate to at least three high priority community issues with potential to decrease the POC's effect on water quality.
4.2.1.1.4	Identify and analyze audience(s) that is believed to have an influence on the POC identified and that is believed to have an influence on the goals and objectives identified.
4.2.1.1.5	Create appropriate message(s) directed at the target audience(s) listed above to achieve the program goals and objectives.
4.2.1.1.6	Develop education campaign(s) and materials, as needed, to convey any messaging created in accordance with program goals and objectives and based on knowledge of the target audience(s).
4.2.1.1.7	Determine methods and process of distribution for campaign materials in accordance with a knowledgebase of the target audience(s).
4.2.1.1.8	To the MEP utilize quantitative and/or qualitative formative assessment of programs to guide and/or change the program goals and objectives and/or program activities as needed. Evaluate the effectiveness of the program.
4.2.1.1.9	Utilize public input into the development of this program to the MEP.
4.2.1.1.10	Implement the program goals and objectives identified to the MEP.
4.2.1.1.11	Assess the stormwater education/outreach program annually. Adjust education materials and the delivery of such materials to address any shortcomings found as a result of these assessments.

4.2.1.2 Minimum Measure #1 BMP Implementation

Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure.

In order to meet the requirements of Minimum Measure #1, The Town of Summerville will implement the following BMPs:

- Continue Agreement with Dorchester County and Clemson University/Carolina Clear to Implement a Public Education and Outreach Program. See Appendix G for Contract.

Table 6: Best Management Practices - Minimum Measure #1

PUBLIC EDUCATION AND OUTREACH BMPS			
Agreement with Clemson University Cooperative Extension Service - Carolina Clear	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.1.1		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Contract with Clemson University via agreement with Dorchester County to implement a public education/outreach program for the Town of Summerville.	Throughout Permit Term	Annually	Dorchester County and Clemson University/Carolina Clear
Measurable Goal:			
<ul style="list-style-type: none"> • A program that provides public education concerning water quality issues in the watershed area of the Town of Summerville 			
Support Ashley-Cooper Stormwater Education Consortium	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.1.1.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
The Town of Summerville will support the Ashley-Cooper Stormwater Education Consortium by: participating in meetings/workshops, promoting/advertising events, distributing water quality awareness campaign items, and providing other general assistance as resources allow.	Throughout Permit Term	Annually	Dorchester County and Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Support Ashley-Cooper Stormwater Education Consortium 			

4.2.2 Public Involvement/Participation (Minimum Measure #2)

4.2.2.1 Minimum Measure #2 Permit Requirements

The Town of Summerville will partner with Dorchester County and Clemson University/Carolina Clear in order to efficiently reach as many citizens as economically possible through public involvement and participation efforts. Clemson University/Carolina Clear will provide the citizens of the Town of Summerville opportunities to participate in activities and events relating to water quality preservation and water quality education.

Table 7: Minimum Measure #2 Permit Requirements

4.2.2.1.1	Create opportunities for citizens to participate in the implementation of stormwater controls.
4.2.2.1.2	Provide access to information on this SWMP.
4.2.2.1.3	Incorporate written procedures for implementing the public involvement/participation (PIP) MCM in the SWMP.

4.2.2.2 BMP Implementation

The measurable goals for each BMP for the Public Participation and Involvement minimum measure will be used to evaluate the success of each BMP. The following sections describe the components of the Town of Summerville's Public Involvement/Participation program:

In order to meet the requirements of Minimum Measure #2, the Town of Summerville will:

- Continue to implement its written procedures (Contract) with Dorchester County who uses Clemson University/Carolina Clear to Implement a Public Involvement and Participation Program. See Appendix G for Contract and written procedures.
- Provide Access to Information for the SWMP

The following sections describe the components of the Town of Summerville's Public Involvement/Participation program:

Table 8: Best Management Practices - Minimum Measure #2

PUBLIC EDUCATION/PARTICIPATION BMPS			
Opportunities for Citizen Participation	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.2.1.1		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Contract with Clemson University via agreement with Dorchester County to implement a public education/outreach program for the Town of Summerville.	Throughout Permit Term	Annually	Dorchester County, and Clemson University/Carolina Clear
Measurable Goal:			
<ul style="list-style-type: none"> A program that provides public education concerning water quality issues in the watershed area of the Town of Summerville 			
Provide Access to Information for the SWMP	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.2.1.2		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Ensure the public can easily find information about the SWMP.	Deadline: December 31, 2014	Once during permit term.	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> The Town of Summerville will include the SWMP on the Town's webpage. 			
Written Procedures for Implementing MCM#2	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.2.1.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop written procedures for implementing the public involvement program.	Throughout Permit Term	Annually	Dorchester County, and Clemson University/Carolina Clear
Measurable Goal:			
<ul style="list-style-type: none"> Signed Contract with Clemson University/Carolina Clear. 			

4.2.3 Illicit Discharge Detection and Elimination (Minimum Measure #3)

4.2.3.1 Minimum Measure #3 Permit Requirements

The Town of Summerville will partner with Dorchester County and will locate and eliminate illicit discharges by developing BMPs in accordance with the SMS4 general permit requirements. Priority areas will be established based on the higher likelihood of illicit connections, and outfalls located within the priority areas will be visited to check for dry weather flow. Outfalls with dry weather flow will be screened to identify potential illicit discharges. Prior to illicit tracking activities, the Town will develop illicit tracking procedures. After illicit tracking procedures have been established, illicit discharges will be tracked to a source and eliminated when possible. Illicit tracking activities will be documented for review.

Table 9: Minimum Measure #3 Permit Requirements

4.2.3.2.1	Develop storm sewer system map.
4.2.3.2.2	Identify priority areas.
4.2.3.2.3.a	Conduct field screening to detect illicit discharges.
4.2.3.2.3.b	Assess field screening to detect illicit discharges.
4.2.3.2.3.c	Notify another MS4 of an illicit discharge if illicit connection or illicit discharge is observed.
4.2.3.2.3.d	Address a notification of an illicit discharge by another operator.
4.2.3.2.3.e	Include procedures for implementing program into SWMP document.
4.2.3.2.4/5	Develop procedures for tracing the source of an illicit discharge and include the minimum investigation requirements stated in NPDES General Permit for Storm Water Discharges from Regulated SMS4, SCRO3000.
4.2.3.2.6	Determine and document the source of the illicit.
4.2.3.2.7	Follow the Corrective Action plan to eliminate illicit discharges as seen in NPDES General Permit SCRO30000.
4.2.3.2.8	Promote, publicize, and facilitate a reporting mechanism for the public and staff to report illicit discharges.
4.2.3.2.9	Train appropriate employees regarding illicit discharges and illicit connections.

4.2.3.2 Minimum Measure #3 BMP Implementation

In order to meet the requirements of Minimum Measure #3, the Town of Summerville has listed BMPs that focus on the detection and elimination of illicit discharges into the SMS4. In order to provide a summative document for the various IDDE permit requirements, the Town of Summerville (Dorchester County) will develop a document which includes the following

sections: map of priority areas, list of screening points in the priority area, dry weather screening procedures, illicit tracking procedures, illicit elimination procedures, and IDDE documentation procedures. Evaluation of the success of this minimum measure will be based on the level of implementation of the BMPs included in this minimum measure. The following sections describe the components of the Town’s Illicit Discharge Detection and Elimination (IDDE) program. The Town of Summerville (Dorchester County) will review and update their IDDE manual to incorporate requirements of the new SMS4 general permit (i.e. response timeframes, etc.).

In order to meet the requirements of Minimum Measure #3, Dorchester County and the Town of Summerville will:

- Update the Storm Sewer Map
- Identify Priority Areas for Illicit Discharges
- Identify Screening Points
- Conduct Field Screening (Dry Weather Screening)
- Develop Illicit Tracking Procedures
- Conduct Illicit Tracking
- Eliminate Illicit Discharges
- Document Illicit Discharge Investigations
- Assess Field Screening Procedures
- Provide Employee Training on Illicit Discharge Identification

The following sections describe the components of the Town of Summerville’s Illicit Discharge Detection and Elimination (IDDE) program.

Table 10: Best Management Practices - Minimum Measure #3

IDDE BMPs			
Update Storm Sewer Map	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.1		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Update the storm sewer map showing the location of all outfalls and names and locations of all waters of the United States that receive discharge from those outfalls.	Throughout permit term	Annually	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • The storm sewer map will provide a visual means to observe the location of outfalls in relation to waters of the United States. 			

Identify Priority Areas	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
Section: 4.2.3.2.2			
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Create a map and GIS layer for illicit priority areas based on the higher likelihood or illicit connections. The map will be updated Annually.	Deadline: December 31, 2014	Annually	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> The priority area map and GIS layer will be used to set the boundaries for SMS4 Dry-Weather Screening for the given permit year. 			

Develop Field Screening & Illicit Tracking Procedures	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.3a/3c/3d/4/5/7/8		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop Illicit section for the ERP Update the IDDE Manual to include: <ul style="list-style-type: none"> • A description of the screening methods to be used • A description of field screening equipment with respective methodologies to be used • Procedures for notifying another MS4 of an illicit discharge • Procedures for addressing notifications from another MS4 of an illicit discharge • A map of the priority area (updated annually) • A schedule for screening • List of outfalls to be screened in priority area (updated annually) • Field screening documentation procedures • Illicit tracking procedures • Illicit discharge elimination procedures • Illicit discharge reporting procedures • Illicit discharge documentation procedures • Procedures for responding to public notices of illicit discharge • Corrective action plan 	Deadline: December 31, 2014	As needed	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • The Field Screening and Illicit Tracking procedures will provide the methodology in which outfall screening and illicit tracking will be conducted. 			

Conduct Field Screening	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.3a		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
<ul style="list-style-type: none"> Conduct dry weather flow screening at outfalls in the priority areas and at dry weather discharges. 	Deadline: December 31, 2015	Annually	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> The Field Screening activities will be used to identify potential illicit discharges. 			
Conduct Illicit Tracking	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.4/5		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
<ul style="list-style-type: none"> Conduct illicit tracking at outfalls identified as potential illicit discharges by the field screening effort. 	Deadline: December 31, 2015	Once during permit term	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Determine source and eliminate illicit discharges. 			
Field Screening Assessment	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.3b		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
<ul style="list-style-type: none"> Create a report assessing the effectiveness of the Field Screening program by the end of permit year 3. 	Deadline: December 31, 2016	Once during permit term	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> The Field Screening Assessment document will determine the effectiveness of the program, and potentially provide recommendations for changes in field screening procedures. 			

Document Illicit Discharge Investigations	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.5/6		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
<p>Create a document for illicit discharge tracking and elimination activities to include:</p> <ul style="list-style-type: none"> • Date(s) the illicit discharge was observed • Results of the illicit investigation • Results of any follow-up investigations; • Date the investigation was closed. • Source of illicit discharge • Documentation for unresolved illicit tracking investigations in which no source is located. 	Deadline: December 31, 2016	Annually	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Document of Illicit Tracking and Elimination activities. 			
Develop Public Reporting Mechanism	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.8		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
<ul style="list-style-type: none"> • Develop a written spill/dumping response to promote, publicize, and facilitate a reporting mechanism for the public and staff to report illicit discharge. 	Deadline: December 31, 2016	Once	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Provide a means for the public to report potential illicit discharges. 			

Employee Training	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.3.2.9		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
<ul style="list-style-type: none"> Provide internal staff training for identifying potential illicit discharges. This BMP will be implemented through training and Pollution Prevention in Section 4.2.6.5. 	Deadline: December 31, 2016	Ongoing	Dorchester County/Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Provide training to appropriate staff for identifying potential illicit discharges. 			

4.2.4 Construction Site Stormwater Runoff Control (Minimum Measure #4)

4.2.4.1 Minimum Measure #4 Permit Requirements

The Town of Summerville will revise the construction program by developing and implementing BMPs in order to meet the SMS4 general permit requirements. The Town will update appropriate design requirements, the Stormwater Management Design Manual, Stormwater Ordinance and revise the corresponding SWP3 plan review procedures. Site inspection procedures will be updated to conform to the SMS4 general permit requirements, and an enforcement response plan (ERP) will be developed to determine how the Town will use specific type of responses to address various types of violations.

Table 11: Minimum Measure #4 Permit Requirements

4.2.4.4.1	Develop and implement a regulatory mechanism for erosion and sediment controls as well as sanctions to ensure compliance.
4.2.4.4.2	Develop and implement requirements for erosion and sediment controls and soil stabilization practices.
4.2.4.4.3	Develop and implement requirements for pollution prevention measures.
4.2.4.4.4	Develop and implement requirements for Stormwater Pollution Prevention Plans (SWP3).
4.2.4.4.5	Implement site plan review procedures of SWP3 that meet the requirements stated in the NPDES General Permit SCR030000.
4.2.4.6	Maintain an inventory of all active construction projects and inspect construction projects in accordance with the frequency stated in the NPDES General Permit SCR030000.
4.2.4.7	Develop an Enforcement Response Plan (ERP).
4.2.4.8	Ensure that the appropriate MS4 staff is trained.
4.2.4.9	Construction site operator and public involvement:
4.2.4.9.a	Develop and implement an effective communication process with construction contractors to educate them on areas in which improvements are needed and to enforce any required actions.
4.2.4.9.b	Implement procedures for receipt and consideration of information submitted by the public.

4.2.4.2 Minimum Measure #4 BMP Implementation

In order to meet the requirements of Minimum Measure #4, the Town of Summerville has listed BMPs that focus on the reduction of pollutants in stormwater runoff to the SMS4 from construction activities that result from a land disturbance greater than or equal to one acre, or located within ½ mile of a receiving waterbody and disturbing 0.5 acre or more. The Town of Summerville will continue existing BMPs that provide assistance and ensure compliance through routine inspections. Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure. Measurable goals for each BMP were selected by formulating attainable goals for the various BMP implementation steps or tasks. In order to meet the requirements of Minimum Measure #4, the Town of Summerville will:

- Update Pollution Prevention BMP Requirements
- Revise SWP3 Submittal & Review Requirements
- Develop SWP3 Review Procedures for Discharges to Impaired Waters
- Develop and Maintain a Construction Site and Site Inspection Inventory
- Develop/Modify Site Inspection Procedures
- Develop Section of ERP for Construction Activities
- Update the Town’s Stormwater BMP Manual
- Update the Town’s Stormwater Management Ordinance
- Construction Operator Training/Education

The following sections describe the components of the Town of Summerville’s construction site stormwater runoff control program:

Table 12: Best Management Practices - Minimum Measure #4

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPs			
EPSC Requirements	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.4.4.2		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Update the Storm Water Management Design Manual to include requirements for Erosion and Sediment Controls and Soil Stabilization Practices.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Provide a tool to assist with construction site operators to implement appropriate EPSC BMPs. 			
Pollution Prevention Requirements	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.4.4.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Update the Storm Water Management Design Manual to include requirements for Pollution Prevention Measures listed in Section 4.2.2.4.3.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Provide a tool to assist construction site operators to implement appropriate Pollution Prevention BMPs. 			

Revise Plan Review Procedures	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.4.5		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Approve SWP3 that complies with the technical requirements of the effective NPDES General Permit for Storm Water Discharges from Construction Activities, SCR100000, or establish alternative technical criteria that are equally, or more, protective of water quality. Procedures for SWP3 review, including the review of pre-construction site plans, for construction activity that discharge pollutant(s) of concern to TMDL waters and to waters on the 303(d) List of Impaired Waters must identify potential water quality impacts the permitted discharges may have. The SWP3 shall limit sediment discharges to the MEP, and shall protect water quality.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Revise plan review procedures. 			
Maintain Construction Site and Site Inspection Inventory	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.4.6(a)		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Maintain an inventory of all active construction projects to include information for: <ul style="list-style-type: none"> Relevant contact information The size of the project Area of disturbance Number of inspections by Town of Summerville for each construction site Inspection activities and enforcement activities 	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Develop a database for construction sites to provide general site information and ensure appropriate site inspections are conducted by the construction operator. The database will be available for review upon request. 			

Develop/Modify Site Inspection Procedures	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.4.6(b-d)		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Modify the Storm Water Management Design Manual (or other document) for site inspection procedures to include: <ul style="list-style-type: none"> • Updated inspection frequency requirements • Procedures for inspecting all phases of construction • Ensuring coverage under SCR100000 • Determining if control measures have been selected, installed, implemented, and maintained according to the SWP3 • Ensuring compliance with Town of Summerville's ordinances and design manuals • Assessing the effectiveness of control measures • Addressing and documenting nonstormwater discharges • Electronic inspection documentation procedures 	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Modify the Town's Stormwater Management Design Manual and Ordinance for site inspection procedures that includes items listed above. 			
Develop Section of ERP for Construction Activities	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.4.7		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop enforcement responses for permit violations, SWP3 violations, and EPSC BMP installation, operation, and maintenance violations.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Develop and enforcement response plan (ERP) to clearly identify types of violations, response to violations, and enforcement measures. 			

4.2.5 Post-Construction Stormwater Management for New Development and Redevelopment (Minimum Measure #5)

4.2.5.1 Minimum Measure #5 Permit Requirements

The post construction stormwater management program is designed to give the Town of Summerville the authority to require structural and non-structural stormwater quality BMPs on sites being developed. The Town of Summerville currently provides design requirements to control stormwater discharges from new development and redeveloped sites. The Town of Summerville will improve the post construction program by developing additional or revising existing site performance standards and ensuring post construction BMPs are inspected and maintained appropriately.

Table 13: Minimum Measure #5 Permit Requirements

4.2.5.1.	Implement a Post-Construction Stormwater Management Program.
4.2.5.2	Establish, implement, and enforce Site Performance Standards.
4.2.5.3	Implement project review, approval, and enforcement procedures for site plan review.
4.2.5.4	Ensure the long-term maintenance of post-construction stormwater control measures.
4.2.5.5	Maintain an inventory of post-construction stormwater control measures.
4.2.5.6	Inspections and Enforcement:
4.2.5.6.1	Conduct inspections of each project site covered under Part 4.2.5.2 performance standards, at least one time during the permit term.
4.2.5.6.2	Conduct post-construction inspection within 30 days of completion of construction.
4.2.5.6.3	Document inspection findings and inspection reports. Maintain records of inspection findings and enforcement actions.

4.2.5.2 Minimum Measure #5 BMP Implementation

In order to meet the requirements of Minimum Measure #5, the Town of Summerville will:

- Develop Water Quality Design Requirements
- Develop Site Performance Standards
- Revise Plan Review Checklist & Design Manual for Post Construction SWP3 Submittal Requirements
- Develop Long Term Maintenance Requirements for Post Construction BMPs
- Create Post Construction BMP Inventory
- Develop Post Construction BMP Inspection Procedures
- Conduct Initial Post Construction BMP Installation Inspections
- Conduct Post Construction BMP Maintenance and Operation Inspections
- Document Post Construction BMP Inspections

The following sections describe the components of the Town of Summerville's Post-Construction stormwater management plan:

Table 14: Best Management Practices - Minimum Measure #5

POST-CONSTRUCTION STORMWATER MANAGEMENT BMPs			
Develop Water Quality Design Requirements	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.5.1		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop post-construction program requirements to be implemented in the Storm Water Management Design Manual to control stormwater discharges from new development and redeveloped sites that disturb at least one acre and are within ½ mile of a receiving waterbody and disturb 0.5 acre or more.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Provide design community with design guidance for Post Construction BMPs. 			
Develop Site Performance Standards	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.5.2		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Update Storm Water Management Design Manual to include Post Construction Site Performance Standards.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Provide design community with performance and design standards for Post Construction BMPs. 			

Revise Plan Review Checklist for Post Construction SWP3 Submittal Requirements	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.5.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Revise the Plan Review Checklist to include SWP3 submittal requirements for Post Construction Site Performance Standards.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Develop SWP3 requirements for Post Construction Site Performance Standards. 			
Develop Long Term Maintenance Requirements for Post Construction BMPs	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 4.2.5.4		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Update the long term maintenance agreement form for post construction BMPs to be signed by the property owner. Develop maintenance verification process to ensure post construction BMPs are properly maintained.	Deadline: December 31, 2015	Update as needed	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Develop a post construction BMP maintenance restrictive covenant and a post construction BMP maintenance verification process. 			
Post-Construction BMP Inventory	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.5.5		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop an inventory of all Town permitted post-construction BMPs constructed since the effective date of permit SCR030000 (January 1, 2014).	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Update Town permitted Post-Construction BMP inventory.	Throughout Permit Term beginning in Year 2	Annually	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Provide an inventory of Town permitted post-construction BMPs. 			

Post-Construction BMP Inspections Program	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.5.6		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop procedures and forms for post-construction BMP installation inspections.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Conduct post-construction BMP inspections on Town permitted post-construction BMPs within 30 days of construction completion to ensure BMP is installed per approved plans.	Throughout Permit Term Beginning in Year 2	Annually	Town of Summerville
Develop procedures and forms for post-construction BMP maintenance inspections.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Conduct post-construction BMP inspections on Town permitted post-construction BMPs to ensure BMPs are maintained properly after the Town is notified through a Notice of Termination (NOT).	Throughout Permit Term Beginning in Year 2	Once during permit term	Town of Summerville
Document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.	Throughout Permit Term Beginning in Year 2	Annually	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Develop procedures and forms for Post-Construction BMP installation inspections and include procedures in this document. Inspect all Town permitted post-construction BMPs within 30 days of construction completion. Develop procedures and forms for Post-Construction BMP maintenance inspections and include procedures in this document. Inspect appropriate construction sites to ensure Town permitted post-construction BMPs are maintained and operating correctly. Provide documentation of Post-Construction BMP inspections. 			

4.2.6 Pollution Prevention / Good Housekeeping (Minimum Measure #6)

4.2.6.1 Minimum Measure #6 Permit Requirements

In order to meet the requirements of Minimum Measure #6, the Town of Summerville will implement a range of BMPs targeted to reduce pollutants from Town-Owned facilities and storm sewer systems. A Town wide inventory of major municipal facilities will be developed, and each facility will be assessed for the potential pollutant discharges. Based on the assessment, a list of high priority facilities will be developed, and annual inspections will be conducted at the high priority facilities. The Town of Summerville will prioritize their owned and /or operated stormwater management systems and implement a maintenance schedule. All Town-Owned structural controls (stormwater BMPS) will be inspected and maintained. In addition, the Town will develop a set of pollution prevention measures for operation and maintenance activities. The Town of Summerville will provide training to appropriate employees to ensure pollution prevention and good housekeeping activities are practiced throughout the Town's separate departments.

Table 15: Minimum Measure #6 Permit Requirements

4.2.6.1	Develop a municipal facility and stormwater control inventory.
4.2.6.2.1	Develop a comprehensive assessment of pollutant discharge potential.
4.2.6.2.2	Identify high priority facilities.
4.2.6.2.3	Document comprehensive assessment results.
4.2.6.3	Perform annual comprehensive inspections of high priority facilities.
4.2.6.4	Storm Sewer System Maintenance Activities - MS4 Maintenance:
4.2.6.4.1	Prioritize and implement a maintenance schedule for MS4 owned and operated catch basins.
4.2.6.4.2	Develop pollution prevention measures for operation and maintenance activities that will reduce the discharge of pollutants in stormwater.
4.2.6.4.3	Inspect and maintain municipally-owned and/or maintained structural stormwater controls.
4.2.6.5	Develop an annual employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices.
4.2.6.6	Provide oversight of contractor activities to ensure that contractors are using appropriate control measures and procedures. Contractors must be contractually required to comply with all of the SMS4 stormwater control measures, good housekeeping practices, and facility-specific stormwater management procedures.

4.2.6.2 Minimum Measure #6 BMP Implementation

In order to meet the requirements of Minimum Measure #6, the Town of Summerville will:

- Develop a Municipal Facility Inventory
- Conduct Assessment of Non-Permitted Municipal Facility & Identify High Priority Facilities
- Conduct High Priority Facility Inspections
- Prioritization Stormwater Management Systems/Structures
- Develop and Implement Pollution Prevention Measures for Operation and Maintenance Activities
- Inspect and Maintain Town-Owned Structural Controls (stormwater BMPs)
- Conduct Pollution Prevention and Good House Keeping Employee Training

The following sections describe the components of the Town of Summerville’s pollution prevention/good housekeeping for municipal operations program:

Table 16: Best Management Practices - Minimum Measure #6

POLLUTION PREVENTION/GOOD HOUSEKEEPING BMPS			
Municipal Facility Inventory	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.6.1		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop an inventory of all Town-owned facilities and stormwater controls that are not covered under a separate NPDES permit. In addition, include a list of all municipally owned facilities that are covered under a separate NPDES permit.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • An inventory of non-permitted municipal facilities. • A list of all municipally owned facilities that are covered under a separated NPDES permit. 			

Assessment of Non-Permitted Municipal Facilities	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.6.2		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Based on the results of the GIS analysis, identify high priority facilities.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Create a site evaluation checklist that will be used to conduct an assessment of all facilities.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Conduct facility site inspections with evaluation checklist at each facility identified in the inventory from Section 4.2.6.1.	Deadline: December 31, 2018	Once during permit term	Town of Summerville
Document results of facility evaluations.	Deadline: December 31, 2018	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • A GIS analysis to identify potential high priority facilities. • A site evaluation checklist for facility assessment. • Conduct inspections at municipal facilities and complete site evaluation checklist. • Documentation of site evaluation checklists. • A list of high priority facilities. 			
Conduct High Priority Facility Inspections	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.6.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Conduct High Priority Facility Inspections	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Conduct High Priority Facility Inspections. 			

Develop Long Term Maintenance Requirements for Post Construction BMPs	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.5.4		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Create a high priority inspection report template with sections for identified deficiencies and corrective action taken for each site inspection.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Conduct annual facility site inspections including evaluations of potential "pollutant generating" areas.	Throughout Permit Term Beginning in Year 3 (January 1, 2016)	Annual	Town of Summerville
Document inspection reports.	Deadline: December 31, 2018	Annual	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • A high priority facility inspection report form. • Conduct annual inspections and determine potential "polluting generating" areas at high priority facilities. • Documentation of facility inspection report forms. 			
Prioritization of Stormwater Management Systems/Structures	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.6.4.1		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Prioritize storm water management systems / structures and implement a maintenance schedule.	Deadline: December 31, 2015	Once during permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> • Create a maintenance schedule based on the prioritization of the storm water management systems / structures 			

Develop Pollution Prevention Measures for Operation and Maintenance Activities	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.6.4.2		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop a written set of pollution prevention measures for municipal operation and maintenance activities.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Implement pollution prevention measures for municipal operation and maintenance activities.	Deadline: December 31, 2015	Throughout permit term	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Create a set of pollution prevention measures for municipal operation and maintenance activities. 			
Inspect and Maintain Town Owned Structural Controls	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.6.4.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Create a structural control inspection and maintenance form.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Conduct inspections for City Owned structural controls.	Ongoing	Annually	Town of Summerville
Perform necessary maintenance for City-Owned structural controls.	Ongoing	Annually	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> A structural control inspection and maintenance form. Conduct inspections for City-Owned structural controls. Conduct maintenance for City-Owned structural controls. Documentation of completed inspection and maintenance forms. 			

Pollution Prevention and Good Housekeeping Employee Training	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.2.6.5		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop an annual employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices. Include training for IDDE.	Deadline: December 31, 2014	Once during permit term	Town of Summerville
Conduct pollution prevention and good housekeeping training.	Deadline: December 31, 2015	Annually	Town of Summerville
Create a list of employees that have been identified for pollution prevention training.	Deadline: December 31, 2014	Annually	Town of Summerville
Measurable Goal:			
<ul style="list-style-type: none"> Conduct employee training. 			

4.5 Reviewing and Updating Storm Water Management Plans

Table 17: Reviewing and Updating SWMP

SWMP REQUIREMENTS			
Update Storm Water Management Plan	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.5.1 & 4.5.2		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Review and revise the SWMP document to keep it up to date during the term of the permit.	Deadline: December 31, 2018	Annually	Town of Summerville
Storm Water Management Plan Updates Required by SCDHEC	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 4.5.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Make SCDHEC requested changes to the SWMP.	Deadline: December 31, 2018	As required	Town of Summerville

This SWMP is a living document and will be updated and revised throughout the permit term. In accordance with Section 4.5.2 of the SMS4 general permit, additions (but not subtracting or replacing) components to the SWMP will be made at any time with a written notification made to SCDHEC.

Any changes intended to replace an ineffective or unfeasible BMP with an alternate BMP will be requested and submitted in written form to SCDHEC at any time. Unless denied SCDHEC, changes proposed in accordance with the criteria below will be deemed approved and may be implemented sixty (60) days from submittal of the request. If request is denied, SCDHEC will send the Town of Summerville a written response giving a reason for the decision. The modification requests must include the following:

- An analysis of why the BMP is ineffective or infeasible (including cost prohibitive),
- Expectations on the effectiveness of the replacement BMP, and
- An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.

Additionally, SCDHEC may request the Town of Summerville to make changes to the SWMP at any time to:

- Address documented impacts on receiving water quality caused, or contributed to, by discharges from the SMS4;
- Include more stringent requirements necessary to comply with new Federal statutory or regulatory requirements; or
- Include such other conditions deemed necessary by the Department to comply with the goals and requirements of the Clean Water Act.

- Changes requested by SCDHEC must be made in writing, set forth the time schedule for the Town to develop the changes, and offer the Town the opportunity to propose alternative plan changes to meet the objective of the requested modification. All changes required by SCDHEC will be made in accordance with South Carolina Water Pollution Control Permits Regulation 61-9 124.5, 122.62, or as appropriate 122.63.

5.3 Reporting

Table 18: Reporting

REPORTING			
1st Report	Not Started: <input type="checkbox"/>	In Progress: <input type="checkbox"/>	Completed: <input checked="" type="checkbox"/>
	Section: 5.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Complete and Submit 1 st Report (covering years 1 and 2)	Deadline: April 01, 2016	Once	Town of Summerville
2nd Report	Not Started: <input type="checkbox"/>	In Progress: <input checked="" type="checkbox"/>	Completed: <input type="checkbox"/>
	Section: 5.3		
Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Complete and Submit 2 nd Report (covering years 3 and 4)	Deadline: July 4, 2018	Once	Town of Summerville

Unless DHEC requires more frequent reports, reports will be submitted based on the following schedule:

1. The first report covering years 1 and 2 must be submitted to the Department twenty-seven (27) months after the effective date of the permit.
2. The following report, covering years 3 and 4 shall be submitted 180 days before the permit expiration date as part of the renotification.
3. While, and if the expired permit is continued, Reports are due every year on the anniversary date of the expired permit.

All reports shall be sent to the address below unless the Department instructs permittees to submit via alternate mechanisms (i.e. electronic mechanisms):

SCDHEC Bureau of Water
Water Pollution Compliance & Enforcement
2600 Bull Street
Columbia, SC 29201-1708

All reports will include:

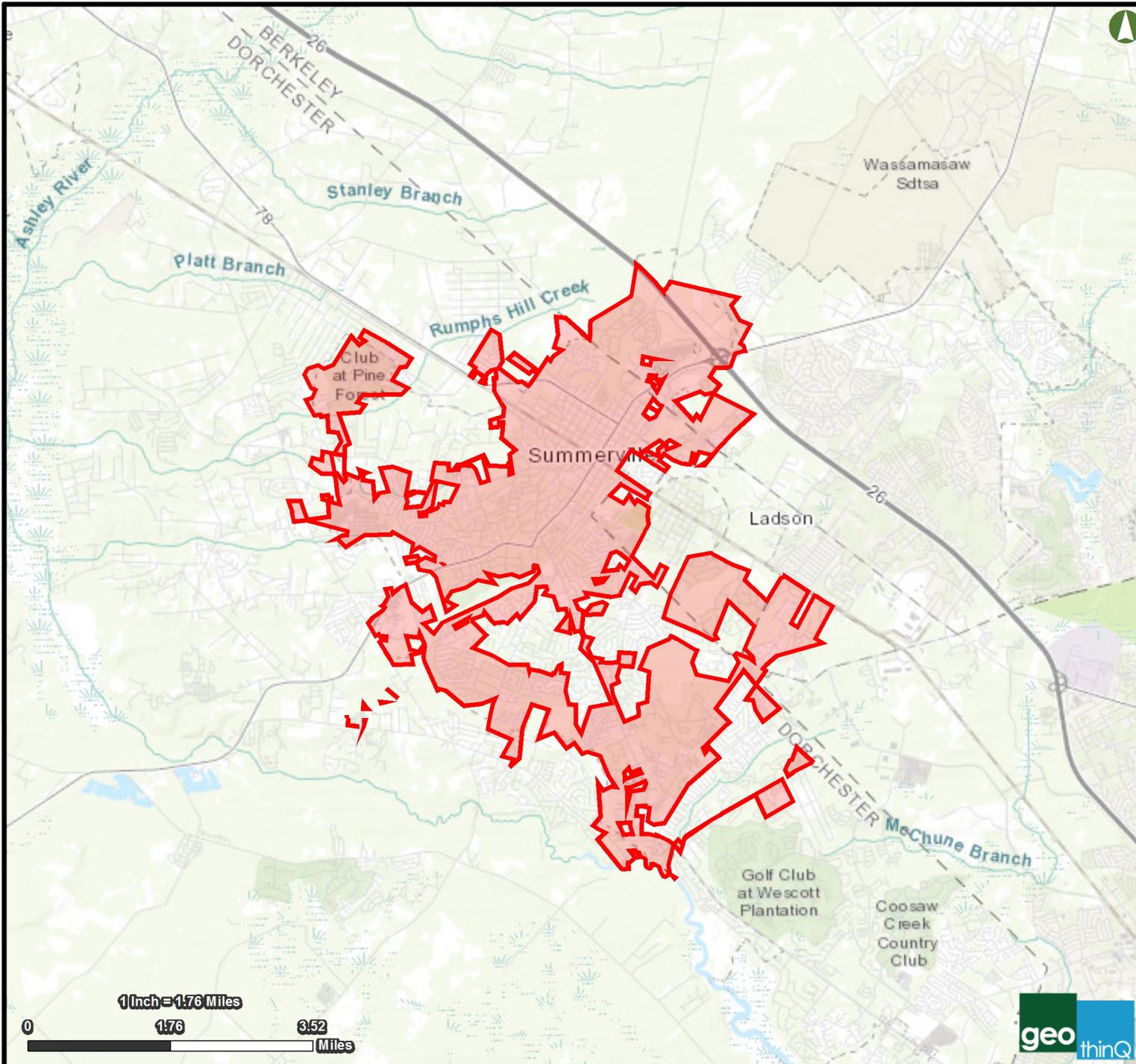
- The status of the Town's compliance with permit conditions, an assessment of the appropriateness of the identified BMP under Part 4, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and the measurable goals for each of the minimum control measures;
- Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the plan at reducing the discharge of pollutants to the MEP;
- A summary of the storm water activities the Town plans to undertake during the next reporting cycle (including an implementation schedule);
- Proposed changes to the Town's SWMP, including changes to any BMP or any identified measurable goals that apply to the plan elements; and
- Notice that the Town is relying on another entity to satisfy some of the Town's SMS4 general permit obligations (if applicable).
- Information requested in the SMS4 general permit including, but not limited to: sections 1.4.7, 3.1.1.1, 3.2.1.1, 3.2.1.2.2, 3.3.6, 4.1.6 and in the additional conditions applicable to NPDES MS4 permits contained in Appendix B of the SMS4 general permit.

Appendix A
The Town of Summerville
Urbanized Area



Town of Summerville

MS4 Boundary
06/28/2018



Appendix B
Annexation/SWMP Updates

ANNEXATION REPORT FOR PERIOD 01/01/18 - 12/31/18

ORD #	TMS#	OWNER	ADDRESS	TOWN ZONING	APPLICATION DATE	APPROVAL DATE	ACREAGE	# OF HOMES	POPULATION	RACE
1	17-1201	Patricia Wheeler	223 Wilson Dr.	R-2	10/19/17	01/11/18	0.48	0	0	N/A
	18-0301	Greenwave Self Storage, LLC	434 Orangeburg Rd.	B-3	01/16/18	04/12/18	2.37	0	0	N/A
2	18-0302	Town of Summerville	off Ridge Rd./Sawmill Branch Canal	PL	02/02/18	04/12/18	7.26	0	0	N/A
	18-0303	various	Sam Ln., Cone Ln., Lazy Acres Loop, and 803 Orangeburg Rd.	PUD	01/19/18	04/12/18	73.91	1	1	White
3	18-0303	John T. Knight	809 Orangeburg Rd.	B-2	01/19/18	04/12/18	0.58	0	0	N/A
	18-0303	Terry L. Stayt; Ruth B. Knight; Margaret Ann McClendon	824 Orangeburg Rd.; 100 Claussen St.; and 810 Orangeburg Rd.	R-5	01/19/18	04/12/18	1.86	2	2	White
4	144-16-03-006	Whitney Kriewaldt	115 King Charles Cir.	R-2	02/05/18		0.54	1	4	White
	145-09-02-006	Edward Joseph and Brittany Lynn Kirsch	102 King Charles Ct.	R-2	3/28/2018		0.78	1	3	White
5	144-16-02-003	Bryan and Madelin Schwitzke	104 King Charles Cir.	R-2	04/11/18		0.7	1	2	White
6										
7										
8										
9										
10										
Totals:							88.48	6	12	

Appendix C
TMDL Monitoring and Assessment Plan



TMDL Monitoring and Assessment Plan Sawmill Branch - Dorchester Creek

**Dorchester County Public Works Department
SC NPDES SMS4 General Permit**

December 2014

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List of Acronyms and Abbreviations

CFU	Colony Forming Units
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
POC	Pollutant of Concern
SCDHEC	South Carolina Department of Health and Environmental Control
TMDL	Total Maximum Daily Load
WLA	Wasteload Allocation

DORCHESTER COUNTY

TMDL MONITORING AND ASSESSMENT PLAN

SAWMILL BRANCH-DORCHESTER CREEK

Introduction

TMDL and SMS4 Permit Requirements

A Total Maximum Daily Load (TMDL) has been developed for fecal coliform bacteria in the Sawmill Branch-Dorchester Creek watershed, which includes portions of the urbanized area within Dorchester County. The TMDL became effective in March 2003 and does not identify any point sources in the Sawmill Branch or Dorchester Creek watersheds. If this TMDL is revised and includes wasteload allocations (WLAs) to point sources, then the County will implement the following plan in the Sawmill Branch-Dorchester Creek TMDL watershed.

The Small Municipal Separate Storm Sewer System (SMS4) permit, which Dorchester County is subject to, requires the development of a TMDL Monitoring and Assessment Plan as an attachment to the County's Stormwater Management Plan (SWMP) for any watershed in which a WLA has been issued for point sources. Dorchester County's MS4 area is not designated as a point source under the Sawmill Branch-Dorchester Creek TMDL, and as such is not required to develop the following Monitoring and Assessment Plan. The TMDL Monitoring and Assessment Plan presented here will be included as an attachment to the County's SWMP and will be updated annually or as necessary to maintain compliance with the conditions of the SMS4 permit.

Pollutant of Concern

Due to the recent change in preferred fresh water indicator bacteria by SCDHEC from fecal coliform to *Escherichia coli* (*E. coli*), the proposed pollutant of concern (POC) to be sampled by the County at a representative location(s) within the urbanized area is *E. coli*.

Monitoring and Assessment Plan Details

The following monitoring and assessment plan was developed in accordance with the requirements of Section 3 of SCDHEC SMS4 permit number SCR030000, and its purpose is to provide an *in-stream monitoring strategy* [SMS4 Permit Sec. 3.2.1.2.1.b.iii] to characterize the quality and quantity of County discharges and to evaluate the progress toward ultimately meeting the state water quality standards.

Monitoring Location Description - In order to better determine Dorchester County's contribution to the 21 square mile Sawmill Branch-Dorchester Creek TMDL watershed, the County will sample at two locations (see map in Appendix A). One location will be near the Dorchester/Berkeley/Charleston County boundary, along Sawmill Branch. This location is also near the boundary of the Dorchester County urbanized area where E. 5th N. St (U.S. Hwy 78) crosses Sawmill Branch. The second sampling location will be where Dorchester Road (Hwy 642) crosses Dorchester Creek, near the southern extent of the urbanized area boundary. A map of the selected monitoring location can be found in Appendix A, and more information on the site can be found in the sections below. [SMS4 Permit Sec. 3.2.1.2.1.b.ii.(1)]

The selected locations will provide data most representative of Dorchester County's urbanized area within the Sawmill Branch-Dorchester Creek TMDL watershed due to the size of the subwatershed and the amount of urbanized area within the subwatershed. The entire Sawmill Branch-Dorchester Creek TMDL watershed is approximately 21 square miles, with Dorchester County's urbanized area comprising approximately 12.6 square miles of that area. The proposed monitoring station will collect runoff from approximately 99% of the entire TMDL watershed. Of the approximately 12.6 square miles of the subwatershed in Dorchester County, approximately 12 square miles are urbanized area, thus the proposed station will collect approximately 96% of Dorchester County's urbanized area within the Sawmill Branch-Dorchester County TMDL watershed. [SMS4 Permit Sec. 3.2.1.2.1.b.ii.(3)] and [SMS4 Permit Sec. 3.2.1.2.1.b.iii]

Monitoring Location Rationale - Due to the size of the Dorchester Creek and Sawmill Branch watershed, multiple entities discharge into the watershed and contribute to the TMDL. The chosen locations to sample include a large portion of the urbanized area and drainage area in the Dorchester Creek and Sawmill Branch watershed. In order to account for discharges coming from Berkeley and Charleston County, samples will be collected where Sawmill Branch first enters the County. Additional samples will be collected approximately 7.75-miles downstream near the urbanized area boundary on Dorchester Creek. The difference between the results from the two stations will provide a general assessment of bacteria within the Dorchester County urbanized area in the Dorchester Creek and Sawmill Branch watershed. [SMS4 Permit Sec. 3.2.1.2.1.b.ii.(2)]

Regardless of the location(s) selected for sampling, the contributing watershed will always include sources of bacteria that are unrelated to the MS4 and are not within the authority of the MS4 to control. However, as discussed above (3.2.1.2.1.b.ii.(3)), due to the size of the watershed and the landuse makeup, these proposed stations will be reflective of the urbanized contributions to the MEP within the portion of the watershed accounted for by Dorchester County's urbanized area. [SMS4 Permit Sec. 3.2.1.2.1.b.ii.(7)]

Sample Collection Protocol

The County will monitor the POC (*E. coli*) on a frequency necessary to determine a statistically significant seasonal pollutant loading baseline. Samples and measurements will be:

Representative of SMS4 Discharge - The proposed sampling locations will provide representative data for the Dorchester County's urbanized area. Approximately 99% of the entire TMDL watershed is draining the selected sampling locations. [SMS4 Permit Sec. 3.2.1.2.1.b.i.1]

Distributed In Time - Multiple samples will be collected during each event, distributed through time, to characterize each sampled event. Samples will be collected once per season per year, at a minimum. To

the MEP, an attempt will be made to sample storm events with a variety of rainfall intensities and precipitation totals. [SMS4 Permit Sec. 3.2.1.2.1.b.i.2]

Valid and Complete – Dorchester County will not terminate sampling for the purpose of preventing the results from indicating a permit or water quality violation. [SMS4 Permit Sec. 3.2.1.2.1.b.i.3]

Useful and Unit Converted – Dorchester County will describe and consider frequency, mass and/or rate of discharge, as appropriate. The approximate depth of the stream where the sample is collected will be noted during sampling for reference. [SMS4 Permit Sec. 3.2.1.2.1.b.i.4]

E. coli sample concentrations will be expressed by the certified laboratory as MEP/100 mL. The County will utilize guidance from SCDHEC to convert the Sawmill Branch-Dorchester Creek TMDL targeted loads from fecal coliform to *E. coli* for comparison to the sampled concentrations and approximated loads. [SMS4 Permit Sec. 3.2.1.2.1.b.i.5]

Sample Collection Schedule - Multiple grab samples will be collected for each storm event at least once per season. Seasons will be described as:

Winter: December 1 to February 30
Spring: March 1 to May 30
Summer: June 1 to August 30
Fall: September 1 to November 30

Samples taken for each storm event will be reasonably distributed in time, pending appropriate weather conditions, watershed hydrologic response, and sample holding times. [SMS4 Permit Sec. 3.2.1.2.1.b.ii.(4)]

Pollutant of Concern (POC) - Due to the recent change in preferred indicator bacteria by SCDHEC, from fecal coliform bacteria to *E. coli* for fresh water, the proposed POC to be sampled by the County is *E. coli*. The *E. coli* samples will be collected at the Highway 78 stream crossing as well as the Dorchester Road stream crossing. [SMS4 Permit Sec. 3.2.1.2.1.b.ii.(5)]

All samples and measurements taken for the purpose of the TMDL Monitoring Plan will meet the requirements of Sec. 3.2.1.2.1.b.iv-x of the SMS4 permit number SCR030000.

Sampling Equipment - The County will use sealed, sterile sample bottles provided by a contracted, SCDHEC-certified laboratory to collect manual grab samples. [SMS4 Permit Sec. 3.2.1.2.1.b.ii.(6)]

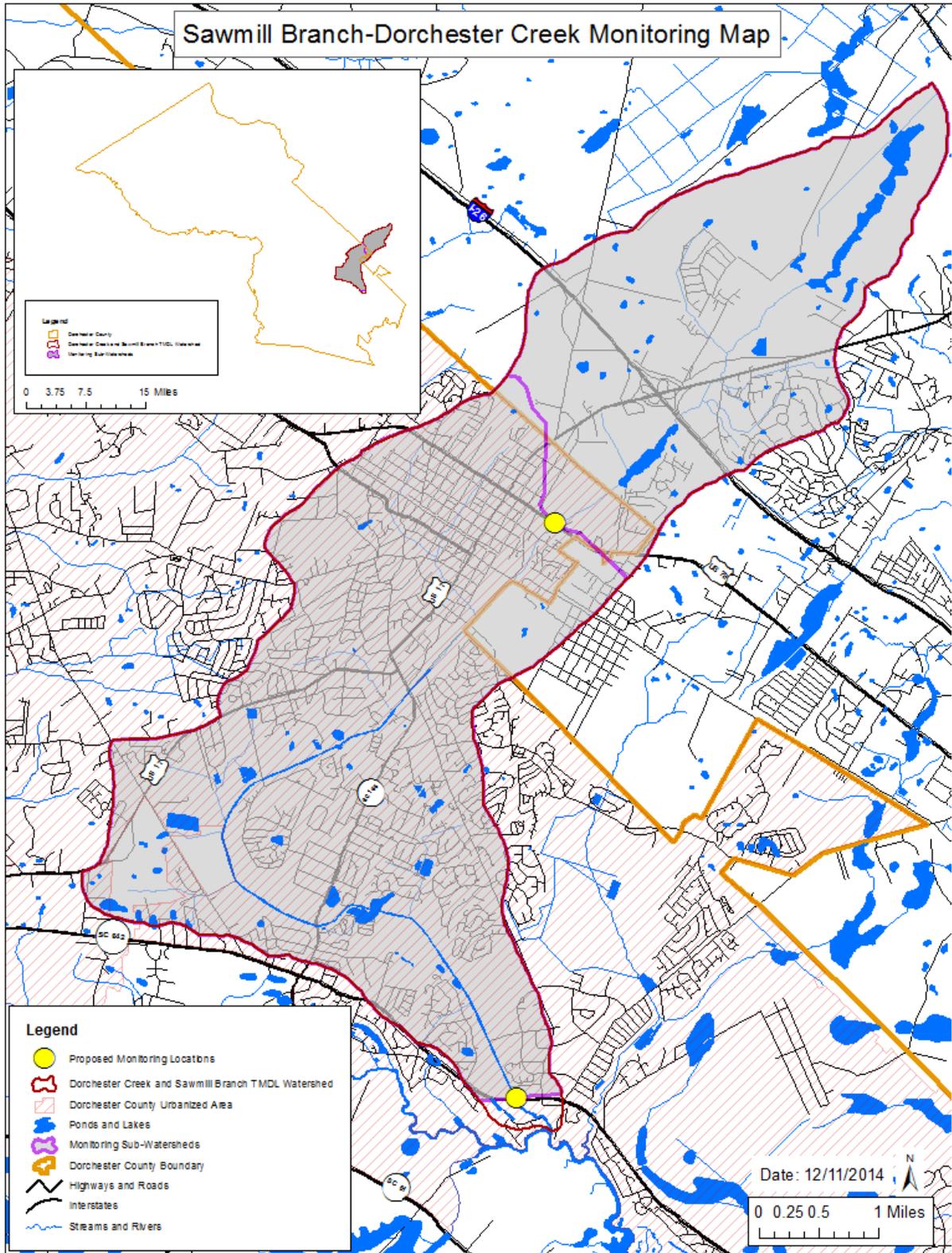
Tidal Influence - The site located at the crossing of Sawmill Branch at Dorchester Road is tidally influenced. The County will consider tidal waters by testing the salinity/specific conductivity or other parameters at the sampling location at the time the sample is collected. The sampling location may be moved upstream during required sampling periods that occur during high-tide. [SMS4 Permit Sec. 3.2.1.2.1.b.x]

Reporting

[SMS4 Permit Sec. 3.2.1.2.1.d]

Dorchester County will report on the progress of its monitoring and assessment program. This reporting will include a characterization of the POC within the Sawmill Branch-Dorchester Creek watershed. Resulting data will be included in each annual report following the commencement of monitoring for TMDL pollutant characterization.

Appendix A
Dorchester County
Sawmill Branch-Dorchester Creek
Monitoring Map



Appendix D
Stormwater Management Ordinance

Sec. 22-1. - Findings of fact.

The Mayor and Council find that:

- (1) In the Town the management of stormwater runoff and sediment is necessary to reduce pollution, siltation, sedimentation, local flooding, inflow and infiltration of stormwater into the public sewer collection system, and stream channel erosion, all of which impact adversely on land and water resources and the health, safety, property and welfare of the residents of the Town.
- (2) The Town maintains a system of stormwater management facilities including, but not limited to, inlets, conduits, manholes, channels, ditches, drainage easements, retention and detention basins, infiltration facilities, and other components as well as natural waterways.
- (3) The stormwater management facilities and components of the Town need to be regularly rehabilitated, upgraded or expanded, and additional stormwater management facilities and measures need to be installed throughout the Town.
- (4) There is no comprehensive mapping system or base line data to assist in analysis, design and/or development of comprehensive maintenance and retrofit programs, and there is no longterm comprehensive drainage infrastructure maintenance program/plan in the Town.
- (5) There is a lack of resources (equipment, manpower, funds) in the Town to address problems comprehensively and within a defined time frame.
- (6) In the Town current and anticipated growth will contribute to the need for improvements in and maintenance of the stormwater management system.
- (7) The Town needs to upgrade its capability to maintain existing and future stormwater management facilities and measures.
- (8) Every parcel of real property in the Town either uses or benefits from the stormwater management system and the improvement of existing facilities and construction of additional facilities in the system will directly benefit the owners of all real property.
- (9) In the Town the extent of use of the stormwater management system by each classification of real property is dependent on a variety of factors that influence runoff, such as land use, topography, intensity of development, amount of impervious surface, and location in a particular watershed or basin.
- (10) In the Town property owners and users should finance the stormwater management system to the extent they contribute to the need for the system and benefit from the system, and charges therefore should bear a reasonable relationship to the cost of the service, and every effort should be made to fairly and reasonably spread the cost of the system to all property owners and users.
- (11) It is in the best interests of the citizens of this Town and, most specifically, the owners of real property, that a stormwater management utility with fees and classifications thereunder be established by ordinance and implemented as part of the Town's utility enterprise system as authorized by S.C. Code 1976, §§ 48-14-10 to 48-14-150, S.C. Code 1976, § 5-7-30, and other relevant laws and regulations of the state.

(Ord. No. 1996-1002, § I, 11-13-1996)

Sec. 22-2. - Chapter designation and authority.

This chapter may be cited as the "Stormwater Management Utility Ordinance" and is adopted pursuant to S.C. Code 1976, § 48-14-10 et seq., S.C. Code 1976, § 5-7-30, and S.C. Admin. Regs. § 72-300 et seq. and S.C. Code 1976, § 5-31-10 et seq.

(Ord. No. 1996-1002, § II, 11-13-1996)

Sec. 22-3. - Definitions.

Unless the context specifically indicates otherwise, the meanings of words and terms used in this chapter shall be as set forth in S.C. Code 1976, § 48-14-20 and S.C. Admin. Regulations. § 72-301.

(Ord. No. 1996-1002, § III, 11-13-1996)

Cross reference— Definitions generally, § 1-2.

Sec. 22-4. - Establishment of a stormwater management utility; administration; duties and powers.

The Town Council hereby establishes a stormwater management utility (utility) to carry out the purposes, functions and responsibilities set forth in this section. The governing body of the utility shall be the mayor and Town Council. The mayor shall administer the utility under the department of public works. The utility shall have the powers and duties set out in this section, which powers are not necessarily exclusive to the utility:

- (1) Stormwater management planning and preparation of comprehensive watershed master plans for stormwater management.
- (2) Regular inspections of public and private stormwater management facilities and measures and the construction thereof.
- (3) Maintenance and improvement of stormwater management facilities that have been accepted by the Town for that purpose.
- (4) Plan review and inspection of sediment control and stormwater management plans, measures, and practices.
- (5) Retrofitting designated watersheds to reduce existing flooding problems or to improve water quality.
- (6) Acquisition of interests in land, including easements.
- (7) Design and construction of stormwater management facilities and measures and acquisition of equipment.
- (8) Water quantity and water quality management, including monitoring and surveillance.
- (9) Billing and collecting a stormwater management utility fee shall be by agreement with the commissioners of public works of the Town.
- (10) Any and all powers and duties delegated or granted to it as a local government implementing agency under the laws and regulations of the state, and the ordinances of this Town.

(Ord. No. 1996-1002, § IV, 11-13-1996)

Sec. 22-5. - Boundaries and jurisdiction.

The boundaries and jurisdiction of the stormwater management utility shall extend to the corporate limits of the Town, including all areas hereafter annexed thereto, and such additional areas lying outside the corporate limits of the Town as shall be approved by the Town Council.

(Ord. No. 1996-1002, § V, 11-13-1996)

Sec. 22-6. - Town regulations of land-disturbing activity.

The Town Council shall establish by ordinance a system regulating land-disturbing activities including, but not limited to, provisions for reviewing and approving stormwater management and sediment control plans; creating design requirements for such plans and land-disturbing activities; and providing operational and maintenance requirements for stormwater management facilities and measures.

(Ord. No. 1996-1002, § VI, 11-13-1996)

Sec. 22-7. - Stormwater utility fees.

The Town Council shall establish by ordinance the amounts and classifications of stormwater management utility fees to be implemented to help fund the utility and its programs and projects. The Town Council shall consider, among other things, the following criteria in establishing fees:

- (1) The fee system must be reasonable and equitable so that property owners and users pay to the extent they contribute to the needs for and benefit from the utility. The fees shall be apportioned with approximate equality and upon a reasonable basis of equality with due regard for the benefits conferred. The Town Council recognizes that these benefits, while substantial, in many cases cannot be measured directly.
- (2) Cost analysis, construction, maintenance, and the overall operation of the stormwater system should be borne equally by all classifications of property owners in the Town in that all will enjoy the direct and indirect benefits of an improved and well-maintained system.
- (3) Any fee established should be in an amount that is reasonable and equitable and not unduly burdensome on each property owner and user.
- (4) The components of the calculations used to establish fees may include, but shall not be limited to, the following cost factors:
 - a. Stormwater management planning and preparation of comprehensive watershed master plans for stormwater management;
 - b. Regular inspections of public and private stormwater management facilities and measures and the construction thereof;
 - c. Maintenance and improvement of stormwater management facilities that have been accepted by the city for that purpose;
 - d. Plan review and inspection of sediment control and stormwater management plans, measures, and practices;
 - e. Retrofitting designated watersheds to reduce existing flooding problems or to improve water quality;
 - f. Acquisition of interests in land, including easements;
 - g. Design and construction of stormwater management facilities and measures and acquisition of equipment;
 - h. Administration of enforcement;
 - i. Water quantity and water quality management, including monitoring and surveillance; and
 - j. Debt service and financing costs.
- (5) The practical difficulties and limitations related to establishing, calculating, and administering such fees.
- (6) The components of the calculations used to establish fees shall be based on whatever is determined to be reasonable and fair, to be approved by the Town Council.

(Ord. No. 1996-1002, § VII, 11-13-1996)

Sec. 22-8. - Investment and reinvestment of funds and borrowing.

Funds generated for the stormwater management utility from fees, bond issues, other borrowing, and other sources shall be utilized only for those purposes for which the utility has been established including, but not limited to, planning; acquisition of interests in land including easements; design and construction of facilities; maintenance of the stormwater system; billing and administration; and water quality and water quantity management, including monitoring, surveillance, private maintenance inspection, construction inspection, and other activities which are reasonably required. Such funds shall be invested and reinvested pursuant to the same procedures and practices established by the Town for investment and reinvestment of funds. The Town Council may use any form of borrowing authorized by the laws of the state to fund capital acquisitions or expenditures for the stormwater management utility.

(Ord. No. 1996-1002, § VIII, 11-13-1996)

Sec. 22-9. - Billing of stormwater management utility fee.

- (a) The Town Engineer, along with the Town administrator, shall prepare and forward all information necessary to the commissioners of public works of the Town, for the purpose of monthly billing of fees. The fee shall appear as a separate item on the water and/or sewer bill. The fee may be billed separately to utility customers, in cases where the use of commissioners of public works billing system is deemed inappropriate.
- (b) If the fees are not paid when due, interest and/or late fees shall accrue at a rate equal to the interest and/or late fees charged for water and sewer fees by the commissioners of public works, until such time as the overdue payment and interest are paid. Additionally, the commissioners of public works shall have the authority to terminate water and/or sewer service for nonpayment of the stormwater management utility fee.
- (c) Developed properties shall be subject to the imposition of a fee upon final approval of site development by the Town.

(Ord. No. 1996-1002, § IX, 11-13-1996)

Sec. 22-10. - Enforcement and penalties.

- (a) The Town Engineer, the manager of the commissioners of public works of the Town, or such other officials as the mayor shall designate, shall be the enforcement officers for the provisions of this chapter.
- (b) In addition to any other penalties provided in this chapter, the Town Engineer may assess a civil penalty not to exceed \$200.00 against any person violating any provision of this chapter. In setting the amount of the civil penalty, the Town Engineer shall consider the type, duration, and severity of the violation and the responsiveness of the person against whom the penalty is assessed in remedying the violation. Each day a violation continues constitutes a separate violation that may be the subject of such a penalty. The Town Engineer, with the assistance of the Town attorney, shall make a written demand for payment of the civil penalty upon the person, including an explanation of the basis of the violation and penalty. If full payment of the penalty is not made within 30 days after such demand is mailed or delivered to the person, the Town attorney may commence a civil action in the appropriate court to recover the penalty.
- (c) In addition to any other penalties or remedies provided in this chapter, the Town, upon the recommendation of the Town attorney and approval of the mayor, may institute a civil action in the

appropriate court to obtain compliance with the provisions of this chapter or remedy or prevent the violation or threatened violation of any provision of this chapter.

- (d) The billing and collections of the stormwater management utility fee shall be affected by an agreement with the commissioners of public works and shall provide that the failure to pay the stormwater management utility fee can be enforced through the termination of water and/or sewer services.

(Ord. No. 1996-1002, § X, 11-13-1996)

Sec. 22-11. - Municipal liability.

Nothing in this chapter and no action or failure to act under this chapter shall or may be construed to:

- (1) Impose any liability on the Town, or its departments, agencies, officers or employees for the recovery of damages; or
- (2) Relieve any person engaged in a land-disturbing activity of duties, obligations, responsibilities, or liabilities arising from or incident to operations associated with such activity or imposed by the provisions of this chapter or the laws and regulations pursuant to which it was adopted.

(Ord. No. 1996-1002, § XI, 11-13-1996)

Sec. 22-12. - Requests for reconsideration.

- (a) A utility customer may request a reconsideration of any determination or interpretation by the Town Engineer in the operation of the stormwater management utility. Such request must be in writing specifically explaining the grounds for the request and filed with the Town Engineer.
- (b) The Town Engineer shall review the application and make a decision on the request within 30 working days.
- (c) The request shall be made upon such forms and be accompanied by such information as the Town Engineer, by written policy, shall require.
- (d) In cases where the applicant believes the fee to be inappropriate based on the actual impervious area of the property in which he has interest, the applicant shall submit a site survey of such property. The survey shall include, at a minimum:
 - (1) Property boundaries;
 - (2) Parking areas;
 - (3) Driveways;
 - (4) Buildings;
 - (5) Storm drainage facilities;
 - (6) Any other surface improvements;
 - (7) Calculation of total impervious area;
 - (8) Calculation of total pervious area.
- (e) The survey shall be prepared by a licensed land surveyor and shall contain the name and license number of the surveyor and the date when the field survey was conducted.

(Ord. No. 1996-1002, § XII, 11-13-1996)

Sec. 22-13. - Appeals.

Any person aggrieved by the stormwater management utility fee charged with respect to property in which he has an interest or against whom a civil penalty is imposed may appeal the fee or penalty by filing a written explanation of the grounds of the appeal with the Town Engineer within 30 days of the mailing or delivery of the notification of the fee or penalty to the utility customer, real property owner, or person. The Town Engineer shall render his decision on the appeal in writing within 20 days after receipt of the written appeal. Any person aggrieved by the decision of the Town Engineer may appeal, pursuant to the foregoing procedures, to the mayor/Town Council, whose decision is final with respect to utility fees and civil penalties. At each level of appeal, the reviewing official or body shall conduct a de novo review of the fee or civil penalty, provide the appellant with notice of the review, and allow the appellant an opportunity to be heard orally or in writing upon request.

(Ord. No. 1996-1002, § XIII, 11-13-1996)

Sec. 22-14. - Classification of property and determination of utility fee.

The classification of all property in the Town and the determination of the stormwater utility fee shall be made from time to time by the Council, and a schedule of such fees is on file and available in the Town offices.

(Ord. No. 1996-1102, 12-11-1996)

Secs. 22-15—22-19. - Reserved.

ARTICLE II. - STORMWATER QUALITY MANAGEMENT

Sec. 22-20. - Definitions and synopses of referenced regulations.

(a) *Definitions.* The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Best management practices mean stormwater management practices that have been demonstrated to effectively control movement of pollutants, prevent degradation of soil and water resources, and that are compatible with the planned land use.

Clean Water Act means the Federal Water Pollution Control Act, as amended, codified at 33 U.S.C § 1251 et. seq.

County means Dorchester County, South Carolina.

County Council means the elected officials of Dorchester County, South Carolina.

Development or *develop land* means any of the following actions undertaken by any person, including, without limitation, any public or private individual or entity:

- (1) Division of a lot, tract, or parcels, or other divisions by plat or deed with the intent of construction of a residential or commercial structure(s).
- (2) The construction, installation, or alteration of a structure, impervious surface or drainage facility.
- (3) Clearing, scraping, grubbing or otherwise significantly disturbing the soil, vegetation, mud, sand or rock of a site.
- (4) Adding, removing, exposing, excavating, leveling, grading, digging, burrowing, dumping, piling, dredging, or otherwise disturbing the soil, vegetation, mud, sand or rock of a site.

Disconnected impervious areas or *disconnected impervious surfaces* means those impervious areas or impervious surfaces which produce stormwater runoff that discharges through or across a nonimpervious area or surface (i.e. vegetated cover), of sufficient width to reduce or eliminate pollutants associated with stormwater runoff, prior to discharge to the stormwater system.

Environment means the complex of physical, chemical, and biotic factors that act upon an ecological community and ultimately determine its form and survival.

Illicit connection means a connection to the Town stormwater system, which results in a discharge that is not composed entirely of stormwater runoff except discharges pursuant to an NPDES permit.

Illicit discharge means any activity which results in a discharge to the Town of Summerville Stormwater System or receiving waters that is not composed entirely of stormwater except; (a) discharge pursuant to an NPDES permit; and (b) other allowable discharges as defined in this article.

Impervious coverage or *impervious surface* means those surfaces that can not effectively infiltrate rainfall (i.e. building rooftops, pavements, sidewalks, driveways, etc.), and that is not constructed using pervious pavement technology.

Improper disposal means any disposal other than through an illicit connection that result in an illicit discharge, including, but not limited to, the disposal of used oil and toxic materials resulting from the improper management of such substances.

Industry or *enterprise* means an organization created for business venture.

Land disturbance means the use of land by any person that results in a change in the natural vegetated cover or topography, including clearing that may contribute to or alters the quantity and/or quality of stormwater runoff.

Land-disturbing activity means any use of the land by any person that results in a change in the natural cover or topography that may cause erosion and contribute to sediment and alter the quality and quantity of stormwater runoff.

Maintenance means any action necessary to preserve stormwater management facilities in proper working condition, in order to serve the intended purposes set forth in this article and to prevent structural failure of such facilities.

Major violation means any action (knowingly or otherwise) that creates or has the potential to create an adverse impact due to flooding or water quality impairment to more than one property, as a result of nonconformance with the stormwater management ordinance.

Minor violation means any action (knowingly or otherwise) that creates or has the potential to create an adverse impact due to flooding or water quality impairment to an adjacent property or the property owner's own facilities, as a result of nonconformance with the stormwater management ordinance.

Modeling plan means a submittal of documents, calculations, data, and results demonstrating the attainment of a specified water quality performance standard. The submittal shall include the following, but not necessarily be limited to: an explanation of the analysis approach, identification of pollutants or indicators and relationships thereof, description of model methodology, expected range of accuracy in result prediction, and sources of all data to be used for modeling.

MS4 means municipal separate storm sewer system.

Natural resources mean land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the federal, state or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.

NPDES means National Pollutant Discharge Elimination System (see "Clean Water Act").

NPDES permit means the NPDES permit for stormwater discharges issued pursuant to the Clean Water Act and the Federal Stormwater Discharge Regulations (40 CFR 122.26).

Outfall means the point where the Town of Summerville Stormwater System discharges to waters of State or the United States.

Person means any and all persons, natural or artificial and includes any individual, association, firm, corporation, business trust, estate, trust, partnership, two or more persons having a joint or common interest, state or federal or an agent or employee thereof, or any other legal entity.

Pollutant means those manmade or naturally occurring constituents that when introduced to a specific environment creates undesirable effect. Typical pollutants found in stormwater include, but are not limited to, sediment (suspended and dissolved), nutrients (nitrogen and phosphorus), oxygen demanding organic matter, heavy metals (iron, lead, manganese, etc.), bacteria and other pathogens, oil and grease, household hazardous waste (insecticide, pesticide, solvents, paints, etc.) and Polycyclic Aromatic Hydrocarbons (PAHs).

Property owner or *owner* means the legal or beneficial owner of land, including, but not limited to, a mortgagee or vendee in possession, receiver, executor, trustee, or long-term or commercial lessee, or any other person or entity holding proprietary rights in the property or having legal power of management and control of the property.

Receiving waters means all natural water bodies, including oceans, salt and freshwater marsh areas, lakes, rivers, streams, ponds, and wetlands which are located within the jurisdictional boundaries of the Town of Summerville. Stormwater management ponds, wetlands, ditches, and swales constructed for the sole purpose of controlling and treating stormwater are excluded.

Regulation means any regulation, rule or requirement prepared by the Town, and adopted by the Town Council pursuant to this article.

Riparian areas mean vegetated ecosystems along a waterbody through which energy, materials, and water pass. Riparian areas characteristically have a high water table and are subject to periodic flooding and influence from the adjacent waterbody. These systems encompass wetlands, uplands, or some combination of these two land forms. They will not in all cases have all of the characteristics necessary for them to be classified as wetlands.

Stormwater means stormwater runoff, snowmelt runoff, and surface runoff and drainage.

Stormwater management means the collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner to meet the objectives of this article and its terms, including, but not limited to, measures that control the increased volume and rate of stormwater runoff and water quality impacts caused by manmade changes to the land.

Stormwater management facilities means the conveyance or system of conveyances (including roads with drainage systems, highways, right-of-way, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, storm drains, detention ponds, and other stormwater facilities) which is; (a) designed or used for collecting or conveying stormwater; (b) not a combined sewer system; and (c) not part of a publicly owned treatment works (POTW).

Stormwater management plan or "*SWMP*" means the set of drawings and other documents that comprise all of the information and specifications for the programs, drainage systems, structures, BMPs, concepts, and techniques for the control of stormwater and which is incorporated as part of the NPDES permit for Town of Summerville and as part of this article.

Subdivision means a division of a tract or parcel of land into two or more lots, building sites, or other divisions as defined in current Town of Summerville Ordinances.

Total impervious coverage means all impervious coverage or impervious surfaces on a site regardless if it is directly connected to each other, and that is not constructed using pervious pavement technology.

Town Engineering office means the Town Engineer or any duly authorized representatives.

Town of Summerville Stormwater System means the conveyance or system of conveyances (including roads with drainage systems, highways, right-of-way, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, storm drains, detention ponds, and other stormwater facilities) which is; (a)

owned or operated by the Town of Summerville; (b) designed or used for collecting or conveying stormwater; (c) not a combined sewer system; and (d) not part of a publicly owned treatment works (POTW).

Unincorporated areas mean the areas of Dorchester County, Charleston County and Berkeley County that have not been incorporated as a single governing body separate from that of the county.

Urbanized Area (UA) means land designated within the Town having a small municipal separate storm sewer system (MS4) and having a geographical boundary as defined by the most current NPDES Phase II Regulations.

Variance means the modification of the minimum stormwater management requirements contained in this article and the stormwater management program for specific circumstances where strict adherence of the requirements would result in unnecessary hardship and not fulfill the intent of this article.

Water quality means those characteristics of stormwater runoff that relate to the physical, chemical, biological, or radiological integrity of water.

Water quantity means those characteristics of stormwater runoff that relate to the rate and volume of the stormwater runoff.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar type areas.

Working day means Monday through Friday, excluding all Town-observed holidays.

(b) *Synopses of referenced regulations.*

72-300 Standards for Stormwater Management and Sediment Reduction.

These proposed regulations pursuant to the Stormwater Management and Sediment Reduction Act of 1991, establish the procedure and minimum standards for a state-wide uniform program for stormwater management and sediment reduction with the option of being operated locally. The regulations establish the procedure for local governments or conservation districts to apply for program component delegation. They also establish the criteria to be met for delegation. Minimum standards and specifications are established for land-disturbing activities that require a permit.

R. 61-9.122 The National Pollutant Discharge Elimination System.

The NPDES program requires permits for the discharge of "pollutants" from any "point source" into "waters of the state" and into "waters of the United States."

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-21. - General provisions.

- (a) *Title.* This article shall be known as the "Stormwater Management Program Ordinance of The Town of Summerville, South Carolina (Ordinance)."
- (b) *Authority.* This article is adopted pursuant to the authority conferred upon the Town of Summerville (the "Town") by the South Carolina Constitution, the South Carolina General Assembly and in compliance with the requirements imposed upon the Town by the National Pollutant Discharge Elimination System (NPDES) Permit No. SC230001, issued in accordance with the Federal Clean Water Act, the South Carolina Pollution Control Act, and regulations promulgated thereunder.
- (c) *Findings.* The Town Council makes the following findings:
 - (1) Uncontrolled stormwater runoff has significant, adverse impact on the health, safety and general welfare of the Town and the quality of life of its citizens by transporting pollutants into receiving

waters and by causing erosion and/or flooding. Development and redevelopment alter the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint and point source pollution, and sediment transport and deposition, as well as reducing groundwater recharge. These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology which are harmful to public health and safety, as well as to the natural environment.

- (2) Development within the Town and the effects of alterations to existing land use have shown evidence of downstream degradation of the Town's receiving waters, thereby adversely effecting the unique qualities of the Town's estuaries, its commercial and recreational fishing, the ecosystems's ability to naturally reproduce, and the general ability of the area to sustain its natural coastal resources. Development within the Town that has created concentrated urbanized areas have also affected the Town's receiving waters and aquatic species.
- (3) The Town is required by Federal Law [33 U.S.C 1342(p) and 40 CFR 122.26] to obtain a NPDES permit from the South Carolina Department of Health and Environmental Control (SCDHEC), for stormwater discharges from the Town of Summerville Stormwater System. The NPDES permit requires the Town to impose controls to reduce the discharge of pollutants in stormwater to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions that are determined to be appropriate for the control of such pollutants.
- (4) Additionally, certain facilities that discharge stormwater associated with an industrial activity, including land-disturbing activities, are required to obtain their own respective NPDES permits. Also, the South Carolina Stormwater Management and Sediment Reduction Act [S.C. Code 1976, § 48-14-10 et seq.] requires the Town to obtain a permit for certain land-disturbing activities.

(d) *Purpose.*

- (1) It is the purpose of this article to protect, maintain, and enhance the environment of the Town and the short and long-term public health, safety, and general welfare of the citizens of the Town by establishing requirements and procedures to control the potential adverse effects of increased stormwater runoff associated with both future development, redevelopment, and existing developed land. Proper management of stormwater runoff will minimize damage to public and private property, ensure a functional drainage system, reduce the effects of development on land and stream channel erosion, attain and maintain water quality standards, enhance the local environment associated with the drainage system, reduce local flooding, reduce pollutant loading to the maximum extent practicable and maintain to the extent practicable the predeveloped runoff characteristics of the area, and facilitate economic development while minimizing associated pollutant, flooding, and drainage impacts.
- (2) It is further the purpose of this article to comply with the federal and corresponding state stormwater discharge (NPDES) regulations (40 CFR 122.26 and SC Regulation 61-9.122.26) developed, pursuant to the Clean Water Act and to assure the Town the authority to take any action required by it to obtain and comply with its NPDES permit for stormwater discharges. Among other things, these regulations require the Town to establish legal authority which authorizes or enables the Town at a minimum to:
 - a. Prohibit illicit discharges to the Town stormwater system and receiving waters.
 - b. Control the discharge of spills, dumping or disposal of materials other than stormwater to the Town stormwater system and receiving waters.
 - c. Address specific categories of nonstormwater discharges and similar other incidental nonstormwater discharges listed in the Town stormwater management plan (SWMP).
 - d. Require temporary erosion and sediment controls to protect water quality to the maximum extent practicable during construction activities, in accordance with current state regulations.
 - e. Define procedures for site plan review, inspection, and enforcement.

- f. Define procedures for receipt and consideration of information submitted by the public.
 - g. Address post-construction runoff particularly volume, rate, and quality through the control and treatment of stormwater with stormwater management facilities and/or best management practices (BMPs).
 - h. Develop post-construction stormwater quality performance standards, through enforcement of minimum design standards for BMPs.
 - i. Ensure effective long-term operation and maintenance of BMPs.
 - j. Carry out all inspection, surveillance and monitoring, and enforcement procedures necessary to determine compliance and noncompliance with stormwater permit (permit) conditions including the prohibition of illicit discharges to the Town stormwater system and the protection of water quality of the receiving waters.
- (3) This article is to be construed to further its purpose of controlling and reducing pollutant discharges to the Town stormwater system and to the waters of the state to assure the obligations under its NPDES permit issued by the SCDHEC as required by 33 USC 1342 and 40 CFR 122.26.
 - (4) The article requires prudent site planning, including special considerations for the purposes of preserving natural drainage ways; incorporating on-site stormwater retention and infiltration; to minimize runoff from individual sites to streams, rivers, and the ocean by use of effective runoff management, structural and nonstructural BMPs, drainage structures, and stormwater facilities.
- (e) *Liability to discharger.* The application of this article and the provisions expressed herein are the minimum stormwater management requirements and shall not be deemed a limitation or repeal of any other powers granted by statute. In addition, if site characteristics indicate that complying with the Town's minimum stormwater management requirements will not provide adequate design or protection for local property or residents, the Town, as part of its review process will require the owner and operator of these facilities to exceed the minimum stormwater management practices, control techniques design and engineering methods and such other programs and controls as are required to comply with the Town's NPDES permit.
 - (f) *Construction and scope.*
 - (1) It is the goal of the Town Council that the provisions of this article will result in reduction of the discharge of pollutants to the Town stormwater system and its receiving waters to the maximum extent practicable using management practices, control techniques and systems, design and engineering methods and such other programs and controls as are required by the Town's NPDES permit.
 - (2) The application of this article, the provisions expressed herein, and the federal and state stormwater regulations are the minimum stormwater management requirements and should not be deemed a limitation or repeal of any other ordinances of the Town or powers granted to the Town by the State of South Carolina Statutes, including, without limitation, the power to require additional or more stringent stormwater management requirements.
 - (3) This article shall be applicable to all development and redevelopment, including, but not limited to, site plan applications, subdivision applications, land grading applications, and any other land-disturbing activity, unless specifically exempt.
 - (4) The provisions of this article apply throughout the incorporated boundaries of the Town of Summerville, as defined in subsection 22-20(a).
 - (g) *Severability.* Should any word, phrase, clause or provision of this article be declared invalid or unconstitutional by a court of competent jurisdiction, such declaration shall not affect this article as a whole, or any part hereof, except that specific provision declared by such court to be invalid or unconstitutional.
 - (h) *Definitions.* For the purpose of this article, definitions contained in South Carolina regulations 61-9.122.2 and 72-301 are incorporated herein by reference. Where the same words are defined in both

the aforementioned regulations, but are not the same, the definitions contained in R. 61-9.122.2 will be used for the purposes of this article. A synopsis for each referenced regulation can be found in the subsection 22-20(b). Additional terms, phrases, and words will have the meaning given in the subsection 22-20(a).

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-22. - Organization and administration.

- (a) *Regulations.* The Town Council, may, in its discretion, amend or change this article or adopt additional regulations or resolutions to implement this article in order to comply with the NPDES permit, implement the SWMP, or to otherwise further the goal of protecting the quality of the receiving waters into which the Town of Summerville MS4 outfalls flow.
- (b) *Town stormwater management program.*
 - (1) The stormwater management program (SWMP) developed by the Town to comply with the NPDES stormwater permit, serves as the basis for the Town's program implementation and administration. The SWMP, as amended from time to time by the Town, is hereby adopted for the duration of the Town's stormwater system NPDES permit as the official operational program.
 - (2) The Town Engineer, with guidance and direction from the director of operations and Town administrator, shall administer, implement, and enforce provisions of this article on behalf of the Town. Any powers granted or duties imposed upon the Town Engineer may be delegated in writing by the Town Engineer to persons or entities acting in the beneficial interest of or in the employment of the Town.
- (c) *Coordination with other agencies.* The Town Engineer will coordinate the Town's activities with other federal, state, and local agencies, which manage and perform functions relating to the protection of receiving waters. Authority not expressly reserved for other agencies or restricted by statute is placed with the Town Engineer for the protection and preservation of receiving waters.
- (d) *Cooperation with other governments.* The Town may enter into agreements with other governmental and private entities to carry out the purposes of this article. These agreements may include, but are not limited to; enforcement, resolution of disputes, cooperative monitoring, and cooperative management of stormwater systems and cooperative implementation of stormwater management programs.

Nothing in this article or in this section should be construed as limitation or repeal of any ordinances of these local governments or of the powers granted to these local governments by the South Carolina Constitution or Statutes, including, without limitation, the power to require additional or more stringent stormwater management requirements within their jurisdictional boundaries.

- (e) *Design/engineering standards.* The Town has developed, maintains, and implements such design or engineering standards that are consistent with the SWMP and provide a sound technical basis for the achievement of stormwater management and water quality objectives. All stormwater management facilities shall be designed in such a way as to allow for maximum removal of pollutants and maximum reduction in flow velocities, in accordance with this article and the stormwater management design manual.
- (f) *Stormwater management design manual.* The Town has developed and maintains a "stormwater management design manual (manual)" in accordance with the approved SWMP. The manual serves as minimum criteria for the design, construction, and maintenance of facilities which collect, control, treat (through pollutant removal), and convey stormwater. This manual includes, but is not limited to, the following information:
 - (1) Details describing the policies, goals, and tasks of the stormwater management program.

- (2) Design requirements and specifications for the preparation of stormwater management plans. Acceptable techniques for obtaining, calculating and presenting the information required in the plans shall be described, as will design conditions which must be accounted for.
- (3) Minimum specifications for designing, constructing, and maintaining stormwater management facilities. These specifications shall be established in accordance with current good engineering practices.
- (4) Minimum easement requirements for the inspection and maintenance of stormwater management facilities.
- (5) Site design approaches that minimize the impact of development on runoff, and protect natural resources and sensitive areas.

The manual shall be reviewed and, if needed, updated periodically (at a minimum every three years) to reflect the most current and effective practices, regulations and most current water quality standards, and shall be made available to the public. Although the intention of the manual is to establish minimum design practices for the protection of water quality and downstream impacts, it neither replaces the need for engineering judgment nor precludes the use of information not presented. Other accepted engineering procedures may be used to conduct stormwater studies as required by the Town Engineer.

(g) *Best management practices.* The Town has developed and maintains a set of BMP designs in accordance with the approved SWMP. The BMP designs are located in a section of the manual, and shall serve as minimum criteria for the design, construction, and maintenance of facilities which collect, control, treat (for pollutant removal), and discharge stormwater. This section of the manual includes, but is not limited to, the following information:

- (1) Guidance in selecting environmentally sound practices for managing and treating stormwater. Development and use of techniques emphasizing the use of natural systems shall be strongly encouraged.
- (2) Minimum specifications for designing, constructing, and maintaining stormwater management facilities. These specifications shall be established in accordance with current good engineering practices.
- (3) Easement, setback, and buffer requirements.
- (4) Post-development water quality performance standards for stormwater management facilities and practices. Methodology/criteria for evaluation will include; (1) hydrologic and hydraulic evaluations; (2) chemical and biological evaluations; (3) evaluation of BMPs; and (4) evaluation of downstream impacts. BMPs can be either structural or nonstructural and may be enforced by specific prescription in zoning requirements, subdivision regulations, or on a site-specific basis as shall be prescribed to meet SWMP objectives. The practices shall be updated periodically to reflect the most current and technologically effective practices and shall be made available to the public.

These practices are not designed to replace the need for sound engineering judgment. Rather, other accepted engineering procedures may be used to conduct stormwater studies if they equal or exceed the procedures contained in the manual or if they are required by the Town Engineer.

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-23. - Stormwater control.

(a) *Regulations.*

- (1) Federal regulations governing stormwater management, as specified in 40 C.F.R. 122.26, and state regulations, as specified in R. 61-9.122.26, adopted pursuant thereto, and state regulation R. 72.300 et. seq., are adopted as the minimum requirements for all facilities as defined in the respective regulations.
- (2) The Town Engineer will be responsible for day to day coordination, implementation and enforcement of this article and the SWMP. This includes, but is not limited to; requirements for commercial and residential activities, construction site runoff, industrial and related facilities, and illicit discharges and improper disposal. Without limitation of the foregoing, the Town Engineer has the following specific powers and duties:
 - a. To issue any permit, certification or license that may be required by the SWMP.
 - b. To issue any permit, certification or license that meets the minimum requirements under this article and state or federal statutes and regulations.
 - c. To approve a facility connection to the stormwater system or discharge to waters of the state (including ocean outfalls) if state, or federal regulations or requirements under this article are met.
 - d. To approve stormwater plans, and to require as a condition of such approvals structural and/or nonstructural controls, practices, devices, or operating procedures, required under the SWMP.
 - e. To require financial guarantees of any person to secure that person's compliance with any stormwater plan, permit, certificate, license or authorization issued or approved by the Town Engineer pursuant to the SWMP.
 - f. To comply with all federal and state regulatory requirements, promulgated or imposed pursuant to the Clean Water Act and the South Carolina Stormwater Management Act, applicable to the management of stormwater discharges to or from the Town of Summerville Stormwater System.
 - g. To conduct all activities necessary to carry out the SWMP and other requirements included in the Town's NPDES permit, the SWMP and this article, and to pursue the necessary means and resources required to properly fulfill this responsibility.
 - h. To enter into agreements with other governmental entities or private persons or entities to provide or procure services to conduct and carry out stormwater management activities.
 - i. Plans must meet the minimum requirements of this article in order for a permit to be issued. An approval by other state and federal agencies does not constitute approval by the Town.

(b) *Prohibitions and exemptions.*

- (1) No person may: (1) develop or redevelop any land; (2) engage in any industry or enterprise; (3) construct, operate or maintain any landfill, hazardous waste treatment, disposal or recovery facility, or any other industrial or related facility; or (4) dispose of any hazardous or toxic substance or other pollutant without having first obtained a permit issued pursuant to this article and having complied with any program, plan, permit, or regulation of the Town's SWMP adopted in accordance with this article, and having complied with the policies of the South Carolina Coastal Zone Management Program.
- (2) No person may obtain a permit issued pursuant to this article for any activity impacting wetlands or other waters of the state without first having complied with the policies of the South Carolina Coastal Zone Management Program. All permits must be reviewed by SCDHEC's Office of Ocean and Coastal Resources Management (OCRM) for consistency with the coastal zone management program. If the department suspects that there are wetlands or other waters of the state not

disclosed in the application, the applicant shall obtain Army Corps of Engineers delineation and submit the delineation to SCDHEC's Office of Ocean and Coastal Resources Management for certification that the project is consistent with the coastal zone management program.

- (3) No person shall create or cause a blockage of an open channel or pipe system used to convey or transport stormwater runoff from one property to another separately owned property.
 - (4) No person shall modify the topography of a property such that stormwater runoff is diverted from its original path such as to cause it to be directed onto an adjacent property.
 - (5) The following development activities are exempt from the provisions of this article:
 - a. Construction or improvement of single-family residences or their accessory buildings which are separately built and not part of a larger subdivision development.
 - b. Land-disturbing activities on agricultural land for production of plants and animals useful to man, including, but not limited to: forages and sod crops, grains and feed crops, tobacco, cotton, and peanuts; dairy animals and dairy products; poultry and poultry products; livestock, including beef cattle, sheep, swine, horses, ponies, mules, or goats, including the breeding and grazing of these animals; bees; fur animals and aquaculture (under the condition they are in compliance with SCDHEC agriculture regulations), except that the construction of an agricultural structure of one or more acres, such as broiler houses, machine sheds, repair shops and other buildings and which require the issuance of a building permit will require the submittal and approval of a stormwater plan prior to the start of the land-disturbing activity.
 - c. Land-disturbing activities undertaken on forestland for the production and harvesting of timber and timber products.
 - d. Activities undertaken by persons who are otherwise regulated by the provisions of Chapter 20 of Title 48, the South Carolina Mining Act.
 - e. Certain land-disturbing activities undertaken by persons who are exempt from the provisions of the Stormwater Management and Sediment Reduction Act as set forth in S.C. Code 1976, § 48-14-40, as amended.
 - f. Industrial facilities having a valid NPDES general stormwater permit issued by SCDHEC, and if the facility is in compliance with the conditions contained in the NPDES general permit will be deemed in compliance with the requirements of this article.
- (c) *Scope of development plans.*
- (1) For all residential subdivision and commercial development with land disturbance of more than one half (1/2) acre, all the requirements of a stormwater permit, as defined in the design manual, apply. If a residential or commercial development disturbs one half (1/2) acre or less but is part of a larger common plan (LCP) of development, the project will require stormwater permitting as well.
 - (2) For single-family residential construction by individuals and construction of one half (1/2) acre or less of commercial properties that are not part of a larger common plan (LCP) of development, the person responsible for the land-disturbing activity shall conform to the residential stormwater requirements as defined in the design manual. By obtaining a Town building permit, the owner grants the right to the Town Engineer to conduct on-site inspections.
 - (3) Construction projects that disturb less than ½ acre shall not impede the natural flow of runoff from adjacent properties; and they shall not dispel their runoff in a manner that will negatively impact adjacent properties. The current standards set forth in our state law are for owners to be responsible for managing water naturally traversing their property and to take reasonable action to prevent their runoff from inundating or causing appreciable damage to downstream property when creating a drainage plan. Emphasis is to be placed on the current flow patterns and natural topography when developing projects that disturb less than ½ acre.

- (4) In developing plans for residential subdivisions, each individual lot shall be required to obtain and comply with the subdivision's overall stormwater permit, including specified BMPs for addressing stormwater quality. The residential subdivision development, as a whole, is considered to be a single land-disturbing activity requiring a permit. Hydrologic parameters that reflect the fully-built subdivision development will be used in all engineering calculations.
 - (5) If individual lots or sections in a residential subdivision are being developed by different property owners, all land-disturbing activities related to the residential major subdivision shall be covered by the approved stormwater plan for the residential subdivision. Individual lot owners or developers will sign a certificate of compliance that all activities on that lot will be carried out in accordance with the approved stormwater plan for the residential subdivision.
- (d) *Stormwater plan process.*
- (1) The applicant shall submit a stormwater plan (as part of the construction plans) through the department for review and approval. Requirements for the stormwater plan are detailed in the manual.
 - (2) Should any stormwater plan involve any future stormwater management facilities or land to be dedicated to public use, the same information will also be submitted to the Town Engineer for review and approval.
 - (3) The review and approval of a stormwater plan will follow the procedures outlined for development review and approval by the Town, and as detailed in this article and the design manual. The review of the stormwater plan shall be performed by the Town Engineer or his appointed representative.
- (e) *Permit requirements.*
- (1) An application is not complete until the following information is submitted to the Town Engineer:
 - a. Name and address of applicant.
 - b. A stormwater plan meeting the requirements set forth in the design manual.
 - c. A narrative statement meeting the requirements set forth in the design manual.
 - d. Design calculations meeting the requirements set forth in the design manual.
 - e. An operations and maintenance plan meeting the requirements set forth in the design manual.
 - f. A completed permit application and the appropriate permit fee.
 - (2) No permit for a land-disturbing activity shall be issued or modified without the following being secured:
 - a. An approved stormwater plan, as appropriate.
 - b. Right of entry for emergency maintenance if necessary.
 - c. Right of entry for inspections and monitoring.
 - d. Any off-site easements needed.
 - e. Proposed locations of all public easements for stormwater management facilities should be identified.
 - f. As applicable, evidence of a receipt of all other required permits including, but not limited to: erosion and sediment control, endangered species, historic properties, archaeological and all other state and federal permits.
 - g. Where land-distributing activity may impact wetlands or any other waters of the state, evidence of receipt of the following is required: 1) all state and federal permits, and a state

coastal zone consistency certification, including nationwide wetlands permit; and 2) a copy of the Army Corp of Engineers letter of verification for wetlands. Revocation of any state and/or federal permit will constitute revocation of any local permit.

- (3) No final occupancy permit shall be issued without the following items.
 - a. Receipt of the recorded Stormwater Practices Permanent Maintenance Covenants.
 - b. Receipt of an as-built plan, signed and sealed by a registered professional stating that the project was built in compliance with the permitted stormwater plan. The as-built plan shall include a post-construction maintenance plan designed to meet the requirements of the BMP maintenance templates included in the Design Manual.
 - c. An approved Town of Summerville final stormwater inspection.
- (4) Any and all site grading permits will, as determined by the Town, be revoked at any time if the construction of stormwater management facilities is not in strict accordance with approved plans.
- (5) The Town reserves the right to reject any plan, or require additional information and/or requirements to be met as a condition of Town approval.
- (f) *Minimum runoff control requirements.* Minimum runoff control requirements for stormwater management facilities have been outlined in detail in the manual. Before beginning the stormwater permit process, the permit applicant shall ensure that the most updated manual is being used. The following outlines the general requirements for controlling stormwater runoff rate and pollutant discharge:
 - (1) For all single-family residential individual lots or commercial properties that disturb one half (1/2) acre or less, and are not part of a larger common plan of development, control of the peak runoff discharge or post-construction water quality control is not required unless specifically required by current state or federal regulations.
 - (2) For nonresidential development and all multi-lot residential development within the Town's MS4 Urbanized Area (UA):
 - a. New development on undisturbed tracts of land: Follow requirements as outlined in Section 3.6 of the design manual. Pervious pavement technology will be strongly encouraged for all driveways and parking lots for new development, in accordance with the design manual.
 - b. Redevelopment or expansion of existing development: Both existing and future development will follow requirements as outlined in Sections 3.1 and 3.6, of the design manual.
 - c. Redevelopment, defined as any construction, alteration or improvement of more than one-half (0.5) acre of land disturbance on sites where existing land use is commercial, industrial, institutional, or multi-family residential, is governed by the following:

Redevelopment which has no increase or a net decrease in impervious area yet lacks evidence of a functioning retention/detention facility will be required by the Town engineer to retrofit the site to current Town of Summerville standards for peak attenuation and stormwater volume and water quality controls.
 - d. Redevelopment or expansion of existing development not meeting subsection (f)b., above: All new driveways and parking lots should be constructed with pervious pavement technology, and all building roof drains and downspouts should be disconnected from impervious pavement/surfaces, and directed to vegetative ground cover for conveyance through a properly designed filter strip or vegetated swale (in accordance with the manual). Properly installed and maintained porous paving technologies, including pervious concrete and pavers, will be considered 100 percent pervious and will not count against any total allowable impervious percentage on-site, nor will it be considered impervious in determining the hydrologic runoff properties.

- e. Buffer requirements. Buffer requirements shall be in accordance with SCDHEC and Town zoning regulations.
- (3) Construction site runoff control measures for all qualifying developments shall be in accordance with the most current version of the SCDHEC erosion and sediment reduction and stormwater management regulations.
- (g) *Stormwater management facilities.*
 - (1) Stormwater management facilities may include natural and manmade elements. Natural swales and other natural runoff conduits shall be retained to the maximum extent practicable.
 - (2) Where additional stormwater management facilities are required to satisfy the minimum control requirements, the following measures are examples of what may be used along with other measures subject to the approval of the Town Engineer:
 - a. Facilities designed to encourage overland flow, slow velocities of flow, and allow for sheet flow through buffer zones.
 - b. Infiltration practices.
 - c. Bioretention facilities.
 - d. Swales and filter strips.
 - e. Constructed wetlands.
 - f. Pervious paving technologies, including pervious concrete, asphalt and pavers.
 - g. Natural and vegetated buffers.
 - h. Stormwater detention structures (dry basins used for reducing peak discharge only).
 - i. Stormwater retention structures (wet ponds used for reducing peak discharge and reducing pollutant discharge).
 - j. Retention of natural landscape and trees in parking lots.
 - k. Other BMPs aimed at reducing the discharge of polluted stormwater.
 - (3) Where detention and retention structures are used, designs which consolidate these facilities into a limited number of large structures will be preferred over designs which utilize a large number of small structures.
 - (4) When wet ponds are employed, retention/planting of littoral vegetation, particularly native wetland plants selected for nutrient and contaminant uptake capacity should be included.
 - (5) Drainage plans can be rejected by the Town Engineer if they incorporate structures and facilities that will demand considerable maintenance and will be difficult to maintain, or utilize numerous small structures if other alternatives are physically possible.
 - (6) The drainage system and all stormwater management structures within the Town (including both public and private portions) will be designed to the same engineering and technical criteria as provided in the manual. The department's review will be the same whether the portion of the drainage system will be under public or private control or ownership.
- (h) *Stormwater plan requirements.* Stormwater plan requirements for stormwater permit submittal are outlined in the design manual.
- (i) *Plan hydrologic criteria.* Plan hydrologic criteria for stormwater management facilities are outlined in the design manual.
- (j) *Ownership and Town participation.*
 - (1) All stormwater management facilities should be privately owned and maintained, unless the Town accepts the facility for Town ownership and maintenance. Should the owner of a private facility

desire the Town to assume operation and maintenance of a stormwater management facility, the owner shall grant to the Town, a perpetual, nonexclusive easement that allows for public inspection, maintenance, and monitoring, and emergency access. Owners of privately owned stormwater management facilities shall grant the Town right of entry to inspect and monitor the performance of the stormwater management facilities upon appropriate notice to the property owner. In emergency cases where the potential exists where the blockage of stormwater facilities may be causing structural or roadway flooding, the Town will make all reasonable attempts to notify the effected property owner(s) prior to entering the property but will maintain the right to enter the property if such flooding is a danger to the public or off-site property owners.

- (2) All stormwater management measures relying on designated vegetated areas or special site features (including buffers) will be privately owned and maintained as defined in the stormwater plan.
 - (3) When the Town Engineer determines that additional storage and/or treatment capacity beyond that required by the applicant for on-site stormwater management is necessary or additional BMP's may be required in order to enhance or provide for the public health, safety and general welfare, to correct unacceptable or undesirable existing conditions or to provide protection in a more desirable fashion for future development, the Town may:
 - a. Require that the applicant grant any necessary easements over, through or under the applicant's property to provide access to or drainage for such a facility.
 - b. Require that the applicant attempt to obtain from the owners of property over, through or under where the stormwater management facility is to be located, any easements necessary for the construction and maintenance of same (and failing the obtaining of such easement the Town may, at its option, assist in such matter by purchase, condemnation, dedication or otherwise, and subject to subsection (j)(4) below, with any cost incurred thereby to be paid by the Town).
 - c. Participate financially in the construction of such facility to the extent that such facility exceeds the required on-site stormwater management as determined by the Town Engineer.
 - (4) To implement this provision both the Town and developer will be in agreement with the proposed facility that includes the additional storage and/or treatment capacity and jointly develop a cost sharing plan which is agreeable to all parties.
- (k) *Construction, inspection, and maintenance.*
- (1) All temporary and permanent on-site stormwater management facilities and BMPs required by this Ordinance shall be maintained by the owner during and after site development, unless the facility is officially accepted by the Town of Summerville for Town maintenance. The requirements of a properly executed Town of Summerville Stormwater Practices Permanent Maintenance Covenants, which is adopted as a supplement to this ordinance shall be followed to ensure long-term maintenance of stormwater facilities. The owner shall provide adequate ingress and egress for Town of Summerville personnel to inspect the premises at reasonable times. For purposes of this section, the term owner shall also mean Homeowner Association or other collective member organizations.
 - (2) Prior to the approval of the stormwater plan; the applicant will submit a proposed staged construction and inspection control schedule. This plan will indicate a phase line for approval otherwise the construction and inspection control schedule will be for the entire drainage system.
 - (3) No subsequently staged work, related to the construction of stormwater management facilities, may proceed until the preceding stage of work, according to the sequence specified in the approved staged construction and inspection control schedule, is inspected and approved, unless otherwise approved by the Town Engineer.
 - (4) The permittee shall notify the Town Engineer before commencing any work to implement the stormwater plan and upon completion of the work.

- (5) The permittee shall provide an "as-built" plan certified by a registered professional engineer to be submitted upon completion of the stormwater management facilities included in the stormwater plan. The registered professional engineer will certify that:
 - a. The facilities have been constructed as shown on the "as-built" plan.
 - b. The facilities meet the approved stormwater plan and specifications or achieve the function for which they were designed.
- (6) Acceptable "as-built" plans shall be submitted prior to:
 - a. The use or occupancy of any commercial or industrial site.
 - b. Final acceptance of any road into the official Town road inventory.
 - c. Release of any financial guarantees held by the Town.
 - d. Approval and/or acceptance for recording of maps, plats or drawings, the intent of which is to cause a division of a single parcel of land into two or more parcels.
 - e. A final inspection will be conducted by the Town Engineer upon completion of the work included in the approved stormwater plan to determine if the completed work is constructed in accordance with the plan.
- (7) In general, **within conveyed Town of Summerville Permanent Drainage Easements**, the Town will only perform the necessary maintenance activities and repairs to ensure the proper functionality of the drainage systems located within the easements. This includes:
 - a. Removing fallen trees and large debris from creeks when those obstructions create a qualifying drainage problem;
 - b. Clearing storm drain pipes, catch basins and culverts;
 - c. Repairing or replacing broken storm drainage infrastructure or systems; and
 - d. Controlling severe creek bank erosion when necessary to protect water quality and adjacent properties. Channel/creek bank erosion is considered severe when it is causing a threat to adjacent habitable structures or resulting in significant downstream sedimentation problems. This work will only be performed by the Town when natural channel flows are causing the erosion and not due to runoff from adjacent properties.

Activities that the Town will **not** perform within Town of Summerville Permanent Public Drainage Easements:

- a. Clearing up sticks, leaves or debris on private property after heavy rain or flooding;
- b. Repairing or replacing private property damaged stormwater runoff or flooding, including but not limited to indoor damages, air conditioners, heating units, fences, gardens, lawns, shrubs, mail boxes, and dog houses;
- c. Clearing out incidental debris from creeks and drainage ditches such as trash, leaves, clippings or small tree branches;
- d. Clear cutting vegetation from creek banks as part of routine maintenance;
- e. Mowing a ditch or storm drainage easement on private property;
- f. Re-grading or re-seeding a storm drainage easement after project warranty period; or
- g. Other actions that do not prohibit or impact the functionality of the public drainage system.

SECTION D. Approval and Permit Requirements

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-24. - Detection and removal of illicit connections and discharges and improper disposal.

(a) *Illicit connections, illicit discharges and improper disposal.*

- (1) It is unlawful for any person to connect any pipe, open channel, or any other conveyance system that discharges anything except stormwater or unpolluted water, which is approved by the Town Engineer, into receiving waters or the Town system.
- (2) It is unlawful for any person to continue the operation of any such illicit connection regardless of whether the connection was permissible when constructed. Improper connections in violation of this article will be disconnected and redirected, if necessary, to the satisfaction of the Town Engineer and any other federal, state, or local agencies or departments regulating the discharge.
- (3) It is unlawful for any person to throw, drain, run or otherwise discharge to any component of the Town's stormwater system or to the waters of the state or to cause, permit or allow to suffer to be thrown, drained, run, or allow to seep or otherwise discharge into such system or receiving water all matter of any nature excepting only such storm or surface water as herein authorized.
- (4) The department may require controls for or exempt from the prohibition provision in subsections (1), (2) and (3) above, the following, provided it is determined that they are not a significant source of pollution, but the permissibility of the following depends on their discharge into a vegetated area where practicable rather than onto an impervious surface or directly into a receiving water body:
 - a. Unpolluted industrial cooling water, but only under the authorization and direction of the Town Engineer and appropriate NPDES permit.
 - b. Water line flushing performed or required by a government agency, diverted stream flows, rising groundwaters, and unpolluted pumped groundwaters, and unpolluted groundwater infiltration.
 - c. Unpolluted pumped groundwater.
 - d. Discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual car washing, residential pool backwashing, de-chlorinated pool water, flows from riparian habitats and wetlands, and street wash water.
 - e. Discharges or flows from fire-fighting.
 - f. Other unpolluted water.
 - g. Any of the permitted discharges are only to be approved if suitable protection is provided by use of approved methods to prevent the erosion or conveyance of silts or contaminants into the MS4.
 - h. In the event of an accidental discharge or an unavoidable loss to the Town stormwater system of any pollutant, the person concerned will abide by requirements as regulated by the SCDHEC, informs the Town Engineer's office as soon as possible, but not to exceed 12 hours from time of discovery, of the nature, quantity and time of occurrence of the discharge. The person concerned must take immediate steps to contain the waste, treat the waste or other actions to minimize effects of the discharge on the stormwater system and receiving waters. The person will also take immediate steps to ensure no recurrence of the discharge.

(b) *Detection of illicit connections and improper disposal.*

- (1) The Town Engineering department will take appropriate steps to detect and eliminate illicit connections to Town stormwater system, including the adoption of a program to screen illicit discharges and identify their source or sources.
- (2) The Town Engineering department shall take appropriate steps to detect and eliminate improper discharges, including programs to screen for disposal and programs to provide for public

education, public information, and other appropriate activities to facilitate the proper management and disposal of used oil, toxic materials and household hazardous waste.

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-25. - Inspections.

- (a) The Town Engineer, or its designee, bearing proper credentials and identification, may enter and inspect all properties for regular inspections, periodic investigations, monitoring, observation measurement, enforcement, sampling and testing, to effectuate the provisions of this article that the SWMP promotes. The Town Engineering office will duly notify the owner of said property or the representative on-site and the inspection should be conducted at reasonable times.
- (b) Upon refusal by any property owner to permit an inspector to enter or continue an inspection, the inspector may terminate the inspection or confine the inspection to areas concerning which no objection is raised. The inspector should immediately report the refusal and the grounds to the Town Engineer. The Town Engineer will promptly seek the appropriate compulsory process.
- (c) In the event that the Town Engineering office appropriately credentialed designee, reasonably believes that discharges from the property into the Town stormwater system may cause an imminent and substantial threat to human health or the environment, the inspection may take place at any time upon an initial attempt to notify the owner of the property or a representative on-site. The inspector should present proper credentials upon reasonable request by the owner or representative.
- (d) Inspection reports will be maintained in a permanent file located in the Town Engineering office.

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-26. - Enforcement, penalties, and abatement.

An Enforcement Response Plan (ERP) has been developed and is included as an appendix to the Town's stormwater management design manual. The ERP contains a summary of the overall process related to the Town's enforcement including, but not limited to, the following:

- (a) *Violations.* Upon determination that a violation of any of the provisions of this article has occurred, the Town Engineering office may give timely actual notice at the property where the violation has occurred or at the address of the permit holder, and shall give written notice to the violator within 15 days. This notice will specify: the nature of the violation, the proposed penalty, and the amount of time in which to correct deficiencies. It should be sufficient notification to deliver the notice to the person to whom it is addressed, or to deposit a copy of such in the United States mail, properly stamped, certified and addressed to the address used for tax purposes.
- (b) *Civil penalties.* Any person or entity that violates any provision of this article shall be assessed either a minor violation or major violation as defined in section 22-20. Fines for minor violations shall be \$250.00 per day and \$1,000.00 per day for major violations. Each separate day of a violation constitutes a new and separate violation.
- (c) *Additional legal measures.*
 - (1) Where the Town is fined and/or placed under a compliance schedule by the state or federal government for a violation(s) of its NPDES permit, and the Town can identify the person(s) who caused such violation(s) to occur, the Town may pass through the penalty and cost of compliance to that person(s).

- (2) The Town attorney may institute injunctive, mandamus or other appropriate action or proceedings at law or equity, including criminal conviction, for the enforcement of this article or to correct violations of this article, and any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.
- (d) *Corrective action.* In the event a violation of this article has not been corrected within the applicable time period for correction, the Town, or its contractor, may enter upon the lot or parcel of land and correct the violation, and the costs incurred as a result of such action (including inspection, administration, labor and equipment costs) will be collected from the bond, if in place and sufficient to cover such costs, or shall become a lien upon the property and should be collected in the same manner as Town taxes are collected.
- (e) *Stop work.*
- (1) A stop work order shall be issued by the Town if, as determined by the Town Engineering office, one or more of the following violations have been committed:
 - a. Any person who proceeds with any work which requires a stormwater plan hereunder without first submitting a plan and obtaining a permit.
 - b. Violation(s) of the conditions of the stormwater management and sediment control plan approval.
 - c. Construction not in accordance with the intent of the approved plans.
 - d. Noncompliance with correction notice(s).
 - e. The existence of an immediate danger in a downstream area in the judgment of the Town Engineer.
 - (2) When one or more of these conditions are found, a written notice of violation will be served upon the owner of the property or an authorized representative. The time in which to correct the deficiencies will be specified in the notice of violation. The notice of violation will set forth the measures necessary to achieve compliance with the plan. Corrective actions must be started immediately or the owner will be deemed in violation of this article.
 - (3) If appropriate remedial actions as outlined in the written notice are not completed within the specified time period, a stop work order will be issued within seven days. The stop work order will then be in force until the development is in compliance with this article.
 - (4) If a violation of this article is occurring that the Town Engineer determines in his or her judgment, will cause significant damage to off-site property or structures, the Town Engineer can issue an immediate stop work order.
 - (5) Prior to lifting of the stop work order, fees double the normal amount of applicable bond and fees, with a minimum of \$250.00, and payment of any other applicable penalties will be paid. The stop work order may allow or require correction of violations, but no other project related activities.
- (f) *Permit suspension and revocation.* A site grading permit may be suspended or revoked if one or more of the following violations have been committed:
- (1) Violations of the conditions of the stormwater plan approval.
 - (2) Construction not in accordance with the letter or intent of the approved plans.
 - (3) Noncompliance with correction notice(s) or stop work order(s).
 - (4) The existence of an immediate danger in a downstream area in the judgment of the department.

Work authorized by permits issued under this article must be completed within five years after the date of issuance. The time limit may be extended for good cause showing that due diligence toward completion of the work has been made as evidenced by significant work progress. An extension only may be granted if the permitted project meets the policies and regulations in force when the extension is requested, or the

permittee agrees to accept additional conditions which would bring the project into compliance. The time periods required by this subsection must be acted on during the pendency of an administrative or a judicial appeal of the permit issuance.

- (g) *Criminal penalties.* In addition to any applicable civil penalties, any person who negligently, willfully or intentionally violates any provision of this article will be guilty of a misdemeanor and shall be punished within the jurisdictional limits of magistrate's court per the Town of Summerville Code of Ordinances General Provisions.
- (h) *After-the-fact permits.* The Town does not have authority to consider an after-the-fact application unless:
 - (1) All fines are paid before application.
 - (2) The permit would legitimize an activity that is a routine permitting matter that will meet all the standards under this article.
 - (3) Mitigation for any damage caused by the activity has been completed.
 - (4) Any portion of the activity or structure that is in violation of the ordinance is corrected prior to the approval.

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-27. - Variances.

Individuals submitting for a stormwater permit may submit to the Town Engineer for approval a variance from the requirements of this article if exceptional circumstances applicable to a site exist, such that adherence to the provisions of the ordinance will result in unnecessary hardship and will not fulfill the intent of the ordinance, as defined in subsection 22-21(d), "Purpose".

- (1) *Requests for variances.* A written request for a variance is required and shall state the specific variance sought and the reasons, with supporting data, a variance should be granted. The request should include all information necessary to evaluate the proposed variance. The applicant will address the three areas of consideration for variance approval as follows:
 - a. What exceptional circumstances to the site are evident.
 - b. What unnecessary hardship is being caused.
 - c. How will failure to grant the variance be inconsistent with the intent of the ordinance.
- (2) *Review of variances.* The Town Engineer will conduct a review of the request for a variance and issue a decision within 30 working days of receiving the request.

(Ord. No. 07-0914, 10-10-2007)

Sec. 22-28. - Charges and fees.

- (a) *Funding.* In addition to all other charges, fees, and penalties, the Town has the right to develop and impose a stormwater service fee to fund implementation of this article and its associated programs and plans.
- (b) *Connection to conveyances.* The Town Council has the right to establish a schedule of appropriate fees for any person or property owner establishing a new discharge to waters of the state within the Town, or to any part of the Town stormwater system. Such fee should be payable as part of any permit application or submission, regulating the discharge of stormwater runoff. Permit fees will be established on the basis of land use classes relating to the quantity and quality of permitted discharge.

- (c) *Field inspection.* Costs associated with field inspection of land development or construction activities other than those routinely performed by the Town Engineering office, as part of compliance monitoring shall be assessed a fee representing the cost in labor, equipment, and materials expended in the conduct of the inspection. Such fees will be applied only to those activities covered under a previously submitted and approved stormwater plan.
- (d) *Permit fee development.* A nonrefundable permit fee will be collected at the time the stormwater management plan or application is submitted. The permit fee will provide for the cost of plan review, administration, and management of the permitting process, and inspection of all projects subject to this article. A permit fee schedule shall be established by the Town Council based upon the relative complexity of the project and may be amended from time to time.

(Ord. No. 07-0914, 10-10-2007)

Appendix E
IDDE Guidance Document

Dorchester County
Illicit Discharge Detection & Elimination
Standard Operating Procedures



Dated: June 2009

Revised: July 2010

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Chapter 1. Introduction

An understanding of the nature of illicit discharges in urban watersheds is essential to find, fix, and prevent them. This document presents Dorchester County’s initial plan for illicit discharge detection and elimination in compliance with NPDES requirements for Phase II MS4 communities. The NPDES Phase II MS4 permit required Dorchester County to develop an Illicit Discharge Detection and Elimination (IDDE) program that contains a set of standard investigative procedures to identify the source of illicit connections or discharges and enforce their removal. Although the permit does not specifically dictate these procedures, the IDDE program must, to the maximum extent practical (MEP), increase knowledge of the County’s stormwater collection system and pollutants of concern.

The remaining portion of this chapter provides the specific requirements from the NPDES Phase II permit and definitions. Chapter 2 provides a summary of the state of the County’s IDDE program and the various procedures. There are a few appendices which provide supplemental and detailed information for sampling procedures, GIS applications, reporting forms, and technical references.

1.1. Permit Requirements

In the regulation, EPA recommends that the plan to detect and address illicit discharges include procedures for:

- Locating priority areas likely to have illicit discharges (which may include visually screening outfalls during dry weather and conducting field test of selected pollutants) (see Section 2.2).
- Tracing the source of an illicit discharge (see Section 2.3).
- Removing the source of the discharge (see Section 2 and 3).
- Program evaluation and assessment.

The table below outlines the NPDES MS4 Phase II permit requirements.

Table 1: Permit Requirements - Minimum Measure #3

Requirements Description
<ul style="list-style-type: none"> • Develop, implement and enforce a program to detect and eliminate illicit discharges.
<ul style="list-style-type: none"> • Develop a storm sewer system map showing the location of all outfalls and the names and location of all waters of the state that receive discharges from those outfalls.
<ul style="list-style-type: none"> • Prohibit non-stormwater discharges into your storm sewer system.
<ul style="list-style-type: none"> • Develop a program to identify and address non-stormwater discharges that significantly contribute pollutants to the MS4, such as illegal dumping.
<ul style="list-style-type: none"> • Inform public employees, businesses, and the general public regarding the impacts associated with illegal discharges and the improper disposal of waste.

1.2. Important Terminology and Key Concepts

Pollutants of Concern

The three illicit discharges most commonly found are as follows:

The *pathogenic and toxic pollutants* should be considered the most sever since contact or consumption of stormwater contaminated by these pollutants could cause illness and significant water treatment problems for downstream users. These pollutants may originate from:

- Sanitary, commercial, and industrial wastewater;
- Inappropriate household toxicant disposal;
- Automobile engine de-greasing; and
- Excessive use of chemicals (pesticides, herbicides, and fertilizers).

Nuisance pollutants may contribute to aquatic life threatening conditions in the storm drainage system. These pollutants can cause excessive dissolved oxygen depletions, tastes, odors, and colors in downstream water supplies, algal blooms, offensive floatables, and noticeable turbid water. These pollutants may originate in residential areas from:

- Sanitary wastewaters;
- Laundry wastewaters;
- Lawn irrigation runoff;
- Automobile wash waters;
- Construction site dewatering; and
- Washing of concrete ready-mix trucks.

Clean water discharge through a storm drainage system is commonly found during an outfall inventory. Clean water discharges can originate from the following:

- Natural springs in urban areas that have been piped to a nearby creek or stream;
- Infiltrating groundwater; and
- Infiltrating from potable waterline leaks.

Pathogenic and nuisance pollutants should be prioritized in a manner that ensures prompt action in the source identification process as these types of pollutants have the most harmful effects to the environment. Any future outfall inventories or illicit tracking efforts should make use of the following illicit tracking procedures. Additional outfall inventory or illicit tracking projects, already in progress, can enter the procedural flowchart at anytime and work towards completion.

Allowable Discharges

Non-stormwater discharges (e.g. non-commercial or charity car washes, etc.) that discharge less than significant sources of pollutants to the MS4, due to either the nature of the discharge or because there are conditions Dorchester County has established for allowing these discharges to their MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive water bodies, BMPs on the wash water, etc.), are allowed. Significant contributors of pollutants to your MS4 are:

- 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
- Street wash water

Illicit Discharge

The term illicit discharge is defined in four parts.

1. Illicit discharges are defined as a storm drain that has measureable flow during dry weather containing pollutants and/or pathogens. A storm drain with measureable flow but containing no pollutants is simply considered a discharge.
2. Each illicit discharge has a unique frequency, composition and mode of entry in the storm drain system.
3. Illicit discharges are frequently caused when the sewage disposal system interacts with the storm drain system. A variety of monitoring techniques are used to locate and eliminate illegal sewage connections. These techniques

tract sewage flows from the stream or outfall, and require going back up the pipes or conveyances to reach the problem connection.

4. Illicit discharges of other pollutants are produced from specific source areas and operations known as “generating sites”. Knowledge about these generating sites can be helpful to locate and prevent non-sewage illicit discharges. Depending on the regulatory status of specific “generating sites,” education, enforcement and other pollution prevention techniques may be the most appropriate way to manage this class of illicit discharges.

MS4

Dorchester County’s MS4 includes all conveyances or system of conveyances (including roads with drainage systems, highways, right-of-way, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, storm drains, detention ponds, and other stormwater facilities) which inlets, transports, stores, or treats stormwater runoff and which is (a) owned or operated by Dorchester County; (b) designed or used for collecting or conveying stormwater; (c) not a combined sewer system; and (d) not part of a Publicly Owned Treatment Works (POTW). The Dorchester County MS4 is further refined to be contained within the Urbanized Area of the County, as defined by the 2000 census. This definition also applies to partner MS4s, which as of the date of this manual includes: the Town of Summerville.

Source Identification

These are the office and field tasks used to track potential illicit discharges to the source, and determine if the discharge is in fact an illicit based on an analysis of samples taken.

Discharge Frequency

The **frequency** of dry weather discharges in storm drains is important and can be classified as *continuous, intermittent or transitory*.

Continuous discharges occur most or all of the time, are usually easier to detect, and typically produce the greatest pollutant load.

Intermittent discharges occur over a shorter period of time (e.g., a few hours per day or a few days per year). Because they are infrequent, intermittent discharges are hard to detect, but can still represent a serious water quality problem, depending on their flow type.

Transitory discharges occur rarely, usually in response to a singular event such as an industrial spill, ruptured tank, sewer break, transport accident or illegal dumping episode. These discharges are extremely hard to detect with routine monitoring, but under the right conditions, can exert severe water quality problems on downstream receiving waters.

Discharge Flow Types

Dry weather discharges are composed of one or more possible **flow types**:

- *Sewage and septage* flows are produced from sewer pipes and septic systems.
- *Washwater* flows are generated from a wide variety of activities and operations. Examples include discharge of gray water (laundry) from homes, commercial carwash wastewater, fleet washing, commercial laundry wastewater, and floor washing to shop drains.
- *Liquid wastes* refer to a wide variety of flows, such as oil, paint, and process water (radiator flushing water, plating bath wastewater, etc.) that enter the storm drains system.
- *Tap water* flows are derived from leaks and losses that occur during the distribution of drinking water in the water supply system. Tap water discharges in the storm drain system may be more prevalent in communities with high

loss rates (i.e., greater than 15%) in their potable water distribution system. (source of 15% is from National Drinking Water Clearinghouse)

- *Landscape irrigation* flows occur when excess potable water used for residential or commercial irrigation ends up in the storm drain system.
- *Groundwater and spring water* flows occur when the local water table rises above the bottom elevation of the storm drain (known as the invert) and enters the storm drain either through cracks and joints, or where open channels or pipes associated with the MS4 may intercept seeps and springs.

Water quality testing is used to identify flow types found in storm drains. Testing can distinguish illicit flow types (sewage/septage, washwater and liquid wastes) from cleaner discharges (tap water, landscape irrigation and ground water). Each flow type has a distinct chemical fingerprint. The chemical fingerprint for each flow type can differ regionally, so it is a good idea to develop your own “fingerprint” library by sampling each local flow type.

Mode of Entry

Illicit discharges are classified based on the owner of the system to which the potential illicit discharge drains and how the discharge enters the storm drain system. The **mode of entry** can either be **direct** or **indirect**.

Direct Entry means that the discharge is directly connected to the storm drain pipe through a sewage pipe, shop drain, or other kind of pipe. Direct entry usually occurs when two different kinds of “plumping” are improperly connected. The three main situations where this occurs are:

1. **Sewage cross-connections**: A sewer pipe that is improperly connected to the storm drain system produces a continuous discharge of raw sewage to the pipe. Sewage cross-connections can occur in catchments where combined sewers or septic systems are converted to a separate sewer system, and a few pipes get “crossed.”
Straight pipe: This term refers to relatively small diameter pipe that intentionally bypass the sanitary connection or septic drain fields, producing a direct discharge.
2. **Industrial and commercial cross connections**: These occur when a drain pipe is improperly connected to the storm drain system producing a discharge of wash water, process water or other inappropriate flows into the storm drain pipe. Older industrial areas tend to have a higher potential for illicit cross-connections.

Indirect means that flows generated outside the storm drain system enter through storm drain inlets or by infiltrating through joints of the pipe. Generally, indirect modes of entry produce intermittent or transitory discharges, with the exception of groundwater seepage. The five main modes of indirect entry for discharges include:

1. **Groundwater seepage into the storm drain pipe**: Seepage frequently occurs in storm drains after long periods of above average rainfall. Seepage discharges can be either continuous or intermittent, depending on the depth of the water table and the season. Groundwater seepage usually consists of relatively clean water that is not an illicit discharge by itself, but can mask other illicit discharges. If storm drains are located close to sanitary sewers, groundwater seepage may intermingle with diluted sewage.
2. **Spills that enter the storm drain system at an inlet**: These transitory discharges occur when a spill travels across an impervious surface and enters a storm drain inlet. Spills can occur at many industrial, commercial, and transport-related sites. A very common example is an oil or gas spill from an accident that then travels across the road and into the storm drain system.
3. **Dumping a liquid into a storm drain inlet**: This type of transitory discharge is created when liquid wastes such as oil, grease, paint, solvents, and various automotive fluids are dumped into the storm drain. Liquid dumping occurs intermittently at sites that improperly dispose of rinse water and wash water during maintenance and cleanup operations. A common example is cleaning deep fryers in the parking lot of fast food operations.

4. Outdoor washing activities that create flow to a storm drain inlet: Outdoor washing may or may not be an illicit discharge, depending on the nature of the generating site that produces the wash water. For example, hosing off individual sidewalks and driveways may not generate significant flows or pollutant loads. On the other hand, routine washing of fueling areas, outdoor storage areas, and parking lots (power washing), and construction equipment cleanouts may result in unacceptable pollutant loads.
5. Non-target irrigation from landscaping or lawns that reaches the storm drain system: Irrigation can produce intermittent discharges from over-watering or misdirected sprinklers that send tap water over impervious areas. In some instances, non-targeted irrigation can produce unacceptable loads of nutrients, organic matter or pesticides. The most common example is a discharge from commercial landscaping areas adjacent to parking lots connected to the storm drain system.

Chapter 2. Summary of County IDDE Procedures

This section provides a summary of the County's IDDE program. There are several major topics that will be discussed that provide a systematic approach to eliminating illicit discharges. These include notification to the Stormwater Department of a potential illicit discharge, determination and notification of the owner of the system receiving the discharge, source identification of the discharge, and enforcement. **Figure 1** provides a flowchart summarizing the County's IDDE program.

2.1. Report of Potential Illicit Discharges to the Stormwater Department

The process begins through the identification of a potential illicit. Identification is expected to be achieved through outfall screening by Stormwater Department personnel, internal reporting from other County personnel, external reporting/citizen complaints, or other watershed planning efforts by the field investigations of prioritized land uses.

2.1.1. Outfall Screening

The Stormwater Department is expected to find some potential illicit discharges through system inventory efforts for the County's MS4 Permit as well as that of the SWMP Partner MS4 Permit (Summerville).

2.1.2. Internal Reporting

The Stormwater Department also expects to find some potential illicit discharges through various County Departments (e.g., Law Enforcement, Public Works maintenance crews, etc.).

2.1.3. External observation

County citizens, visitors, and others are also expected to notify the Stormwater Department of some potential illicit. Suspected illicit discharges can be reported to the Public Works office at (843) 832-0070 or (843) 563-0070.

2.1.4. Watershed-based Planning

The County is currently exploring other potential ways to identifying possible illicit discharges. These would include watershed planning and prioritization tasks to systematically address potential illicit at perceived "hotspots" such as restaurants, dry cleaners, auto shops, and car washes.

2.2. Determination of Receiving System Owner

Once a potential illicit is made known to the Stormwater Department through one of the above referenced methods, field operations will commence to first determine the owner of the system receiving the potential illicit discharge. There are several potential owners.

If receiving system owner is the County or a partner MS4, a Source Identification operation will begin to determine the source and if the discharge is truly illicit, as defined in this manual (see Section 2.3). Enforcement procedures will be implemented if necessary, to include follow-up field visits.

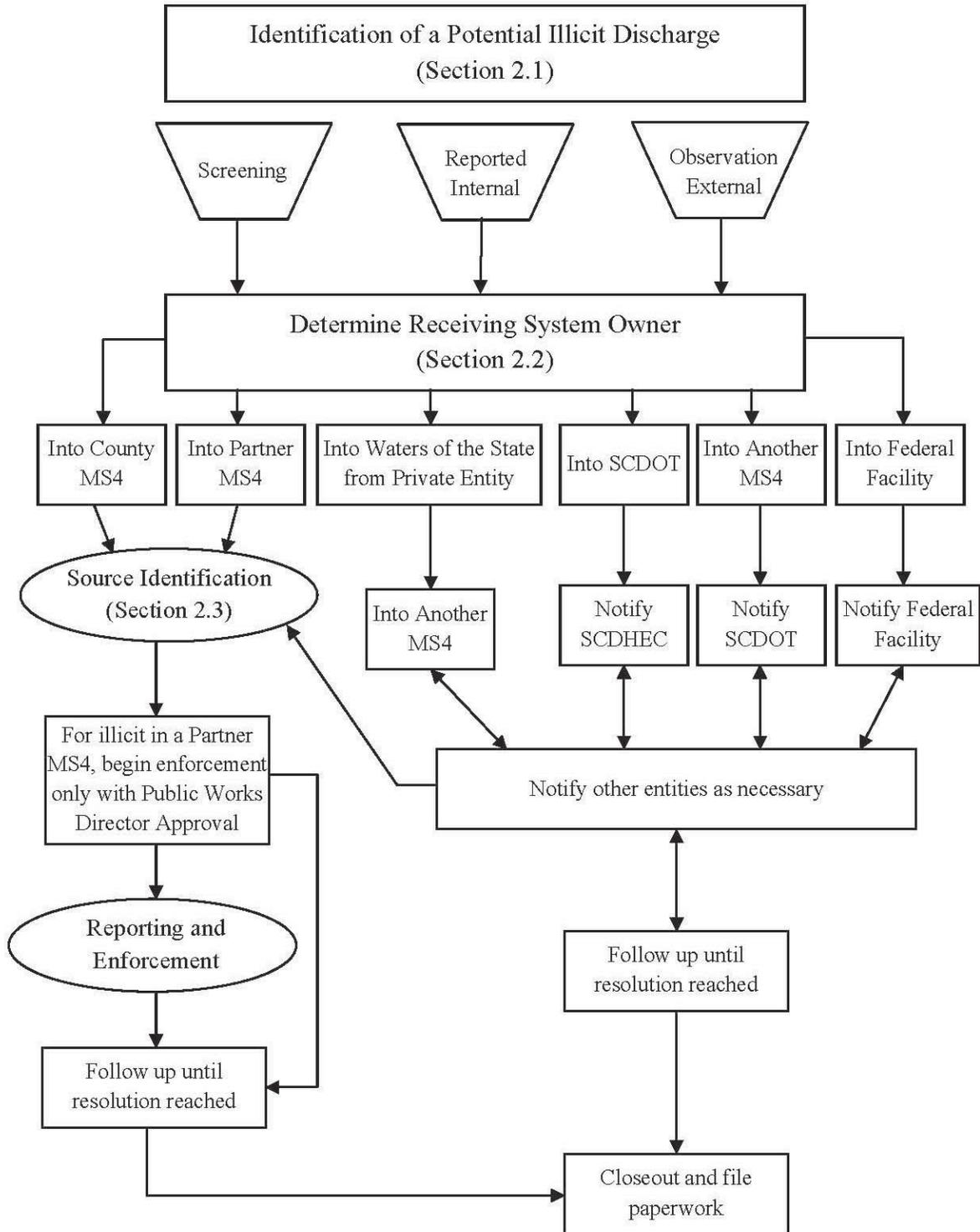
If the system receiving the identified potential illicit is owned by another MS4 or a federal facility, that owner will be notified by a letter of the discharge. The County will implement follow-up procedures for the potential illicit. See Section 2.2.1 below for more detail.

If the receiving system is a Water of the State, SCDHEC/OCRM will be notified by a letter. See Section 2.2.1 below for more detail.

Given the topography of the County and interconnectivity of the various drainage systems, the County expects some illicit to flow through multiple systems and therefore effect multiple owners. By first establishing the receiving system owner, the enforcement process can then begin, either by the County, SCDHEC, or other MS4s. If a discharge is tracked by one of these parties, it is possible that eventually the responsibility for the discharge will fall back on the County or yet another party. This may cause in some cases a roundabout approach, but is systematic and contributes to communication among various MS4s.

Figure 1: Dorchester County IDDE Program – See next page...

Figure 1: Dorchester County IDDE Program



2.2.1. Notification to Other MS4s, SCDHEC, and Federal Facilities

If the receiving system owner of the potential illicit discharge is neither Dorchester County nor one of its partner MS4s, then the Stormwater Department will notify the determined owner through a letter. The list below provides contact information for the potential entities. If the potential illicit discharge is a Water of the State, SCDHEC-EQC is to be contacted.

Template notification letters are provided in Appendix C.

2.2.1.1. MS4s

SCDOT

Po Box 191
Columbia, SC 29202
(803) 737-6378

Berkeley County

Engineering Dept
Po Box 6122
Moncks Corner, SC 29461

City of North Charleston

1021 Aragon Ave
Charleston, SC
(843) 554-5700

Town of Summerville

Department of Public Works
104 civic Center
Summerville, SC 29483
(843) 871-6000

Colleton County

SCDHEC-OCRM
Stormwater Permitting
1362 McMillan Ave, 400
Charleston, SC 29405
(843) 953-0200

Charleston County

Stormwater Division
4045 Bridge View Drive
North Charleston, SC 29405
(843) 202-7600

2.2.1.2. Federal Facilities

N/A

2.2.1.3. Discharges to Waters of the State

SCDHEC-EQC

2600 Bull Street
Columbia, SC 29201
(803) 896-8986

2.2.1.4. Follow-up Procedures

The Stormwater Department will routinely follow-up on notifications sent to other entities. Follow-up procedures will include a periodic check of the potential IDDE location database to see which locations may need to be addressed, phone calls to the appropriate entities to check for resolution, and if necessary, re-visiting locations to clarify ownership and/or source. For more detail, see Section 2.3.4.

2.3. Illicit Source Identification

The next step has three primary components: illicit tracking to identify the source, dry weather flow screening to determine if the discharge is truly an illicit and to assist with source identification, and finally illicit elimination through enforcement or notification. These steps apply only to the instances in which the potential illicit discharge is flowing into the MS4 owned either by Dorchester County or a partner Ms4.

2.3.1. Potential Illicit Discharge Tracking

The first step in the source identification process is to track the discharge up to the source. The source can either be the actual pollution causing the event (e.g. sanitary sewer overflow or leak, illegal connection of car wash drain to storm system) or a system owned by another entity. If another entity is encountered, refer to section 2.2.1 for notification procedures.

Field crews will begin the tracking process at the potential illicit discharge during a dry weather condition. The procedure is the same regardless of how the discharge was discovered (screening, internal, or external reporting). A dry weather condition is defined as one in which no rain event exceeding 0.1” of precipitation has occurred in the past 72 hours. The following steps should be generally followed.

1. At an outfall in which a dry weather flow was found or at the initial point of discovery of the discharge, field crews will record physical data from visual inspections. Field crews should note algae, scum, solids, or oil sheen, as well as odor, color, flow depth, and flow quantity.
2. If the discharge continues upstream and can be tracked, move upstream in the direction of the discharge. Repeat step 1 at each intersection until 1) the source is found, 2) the discharge can no longer be tracked upstream (e.g. underground), or 3) another entity is encountered.

No sample should be taken at any intermediate point if the discharge can be tracked further upstream.

3. If the source is raw sewage, and this should be immediately apparent, tracking will hopefully lead to a determination of whether the source is a sanitary sewer system or a septic tank. If the source is a sanitary sewer system, a phone call should be placed as soon as possible to the proper sewer authority. Below is a list of potential contacts.

Summerville CPW
135 West Richardson Ave
Summerville, SC 29483
(843) 871-0810
<http://www.summervillecpw.com/>

North Charleston Sewer District
7225 Stall Road
North Charleston, SC 29406
(843) 764-3072
<http://www.ncsd-sc.com/>

Charleston CPW
103 St. Philip Street
Charleston, SC 29403 or
6296 Rivers Ave, Ste 104
N Charleston, SC 29418
(843) 727-6800
<http://www.charlestoncpw.com/>

**Dorchester County
Water & Sewer**
2120 East Main Street
Po Box 9
Dorchester, SC 29437
(843) 832-0075
<http://www.dorchestercounty.net/>

If the source is a septic system, SCDHEC-EQC should be contacted. See section 2.2.1 for contact information.

4. Once the discharge has been tracked as far upstream as possible, the discharge should be sampled and analyzed to determine the pollutant levels and if the flow is truly an illicit discharge.

2.3.2. Illicit Discharge Detection

Once a potential illicit flow has been tracked up either to the source of where no further visual evidence can be collected, field crews must determine if the flow is an illicit discharge. Below is an overview of the illicit discharge investigation procedures.

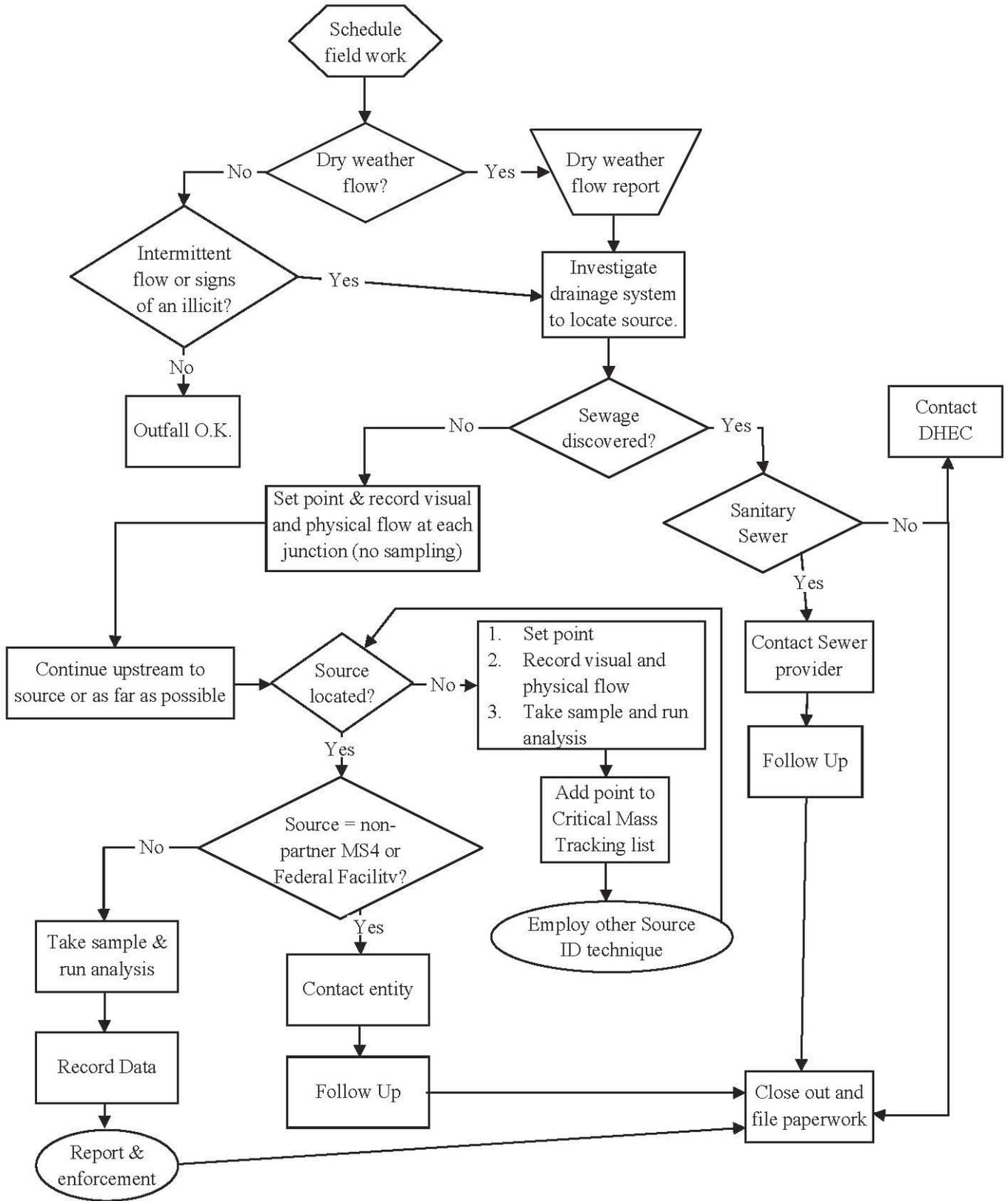
1. Obtain appropriate equipment and data from office assessment.
2. Make sure no rain has occurred in the last 72 hours and locations are inspected to the extent practicable during “dead low” to mid-incoming tides if the location is tidally influenced.
3. At the source of the illicit discharge or last accessible area with dry weather flow, record visual inspection information, and take the first grab sample, using a clean sample bottle. Procedures for collecting the sample are provided in Appendix B.
4. Perform the analysis of the sample taken for water temperature, pH, Total Chlorine, Total Copper, Surfactants/Detergents, and Phenols. Procedures for collecting the sample are provided in Appendix B. Record all analysis results.

Typically it will be more efficient to take samples from several different locations and then perform the analysis on all of the samples at once. This is due to the long holding time required for analysis for Phenols and Surfactants, as well as lab setup and safety precautions. However, the analysis should occur no longer than 4 hours after the sample was taken.

5. Compare the analysis results to the allowable limits and note any exceedances of the limits of the various parameters set in Appendix A.
6. Go back to the sample location and take a second sample using another clean sample bottle. This should be taken no sooner than 6 hours from the previous sample time and no more than 24 hours after the first sample. Rerun the chemical analysis on this second sample. Record all analysis results.
7. If both sample analysis resulted in an exceedance of the limits in Appendix A for the same parameters, then the flow is considered an illicit. Begin enforcement procedures (see Section 2.3.4).
8. If either sample analysis contained an exceedance of the set limits, but not for the same parameter, then a third sample and analysis needs to be performed.
9. If two exceedances of the set limits were observed in any of the three sample analysis for any one parameter, then the flow is considered an illicit. Begin enforcement procedures (see Section 2.3.4).

Figure 2: Source Identification Procedures – See next page...

Figure 2: Source Identification Procedures



2.3.3. Additional Illicit Tracking – Efforts Dry Weather Screening

If a given discharge has been identified as an illicit, some additional tracking options should be considered. These include the use of a crawler, tracer dyes, or smoke tests.

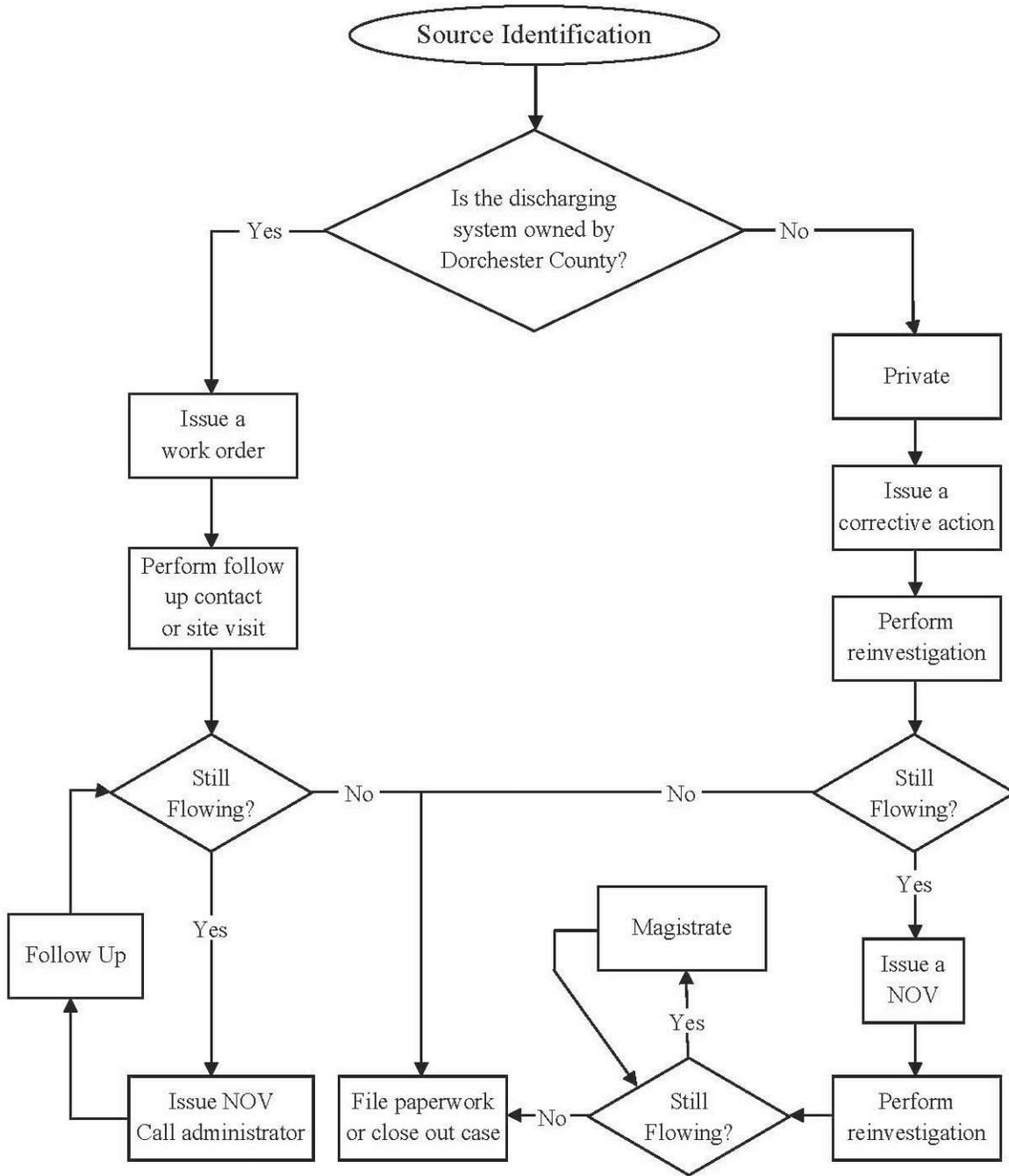
2.3.4. Reporting and Enforcement

Reporting and enforcement are the final steps to removing illicit. At this point, a discharge is known to be an illicit and the source has been positively identified or the discharge was tracked as far as possible. Procedures are split amongst the receiving system owner of the potential or determined illicit discharge.

Template notification letters are provided in Appendix C.

Figure 3: Reporting and Enforcement – See next page...

Figure 3: Reporting and Enforcement



2.3.4.1. Source – Dorchester County MS4

The following steps outline the procedures to be conducted if the source is from a County/public facility.

1. Determine owner(s) contact information and generate corrective action letter discussing County illicit requirements.
2. Generate a report of sample analysis data (see Appendix B).
3. Submit letter and report to appropriate entity.
4. Copy letter and report to SCDHEC-EQC.
5. Schedule a follow-up visit to the site approximately 2 weeks later to determine if illicit discharge has been removed.
6. If flow is still present, issue a Notice of Violation (NOV) (see Appendix C) and schedule another follow-up visit.
7. If flow is still present after third visit, report case to Magistrate’s office with all paperwork.
8. Once flow has been removed, file paperwork and close case.

2.3.4.2. Source – Partner MS4

If enforcement procedures need to be conducted for an illicit discharge located in a partner MS4, then approval from Town or City Councils, as appropriate, is needed prior to beginning. Initial contact information for these entities is provided below. If permission is granted, perform steps in Section 2.3.4.1

Town of Summerville

104 Civic Center
Summerville, SC 29483
(843) 871-6000
Russ Cornette

2.3.4.3. Source – Private Property

If the illicit originates from a private owner or operation within Dorchester County, follow these steps.

1. Determine owner name(s) and address(s) and generate corrective action letter discussing County illicit requirements.
2. Generate a report of sample analysis data (see Appendix B).
3. Submit report to owner(s).
4. Schedule a follow-up visit to the site approximately 2 weeks later to determine if illicit discharge has been removed.
5. If flow is still present, issue a NOV (see Appendix C) and schedule another follow-up visit.
6. If flow is still present after third visit, report case to Magistrate’s office with all paperwork.
7. Once flow has been removed, file paperwork and close case.

2.3.4.4. Source – County Non-partner-MS4s or Federal Facilities

Enforcement procedures for illicit discharges determined to come from other entities will essentially be notification and follow-up steps. These are listed below.

1. Determine owner name(s) and address(s) and generate corrective action letter discussing County illicit requirements.
2. Generate a report of sample analysis data (see Appendix B).
3. Submit report to entity. See Section 2.2.1 for contact information.
4. Schedule a follow-up phone call and/or site visit approximately 2 weeks later to determine if illicit discharge has been removed.
5. Continue step 4 until illicit resolved.
6. Once flow has been removed, file paperwork and close case.

Appendix A

Selection of Trace Parameters

- A.1. Selection of Tracer Parameters
- A.2. Physical Parameters
- A.3. Further Descriptions of Physical Parameters
 - A.3.1 Overview of Sampling Procedures
 - A.3.2 Sanitary Wastewaters

A.1. Selection of Tracer Parameters

Chemical Parameters

As previously mentioned, Regulation 61-9 122.26(d)(1) requires that only major outfalls with observed dry weather flow be sampled. It has been determined that the following chemical parameters are sufficient in helping to detect the major pollutants found in the stormwater runoff from the major land use categories, and thus enabling identification of sources of polluted stormwater.

- pH;
- Phenols;
- Fluoride;
- Total chlorine;
- Copper; and
- Surfactants

pH

The normal pH of ground water typically ranges from 6.6 to 8.8. Values outside of this range are an indicator of an illicit discharge. Water with values less than 6.6 are acidic and may indicate discharges from textile mills, pharmaceutical manufacturers, metal fabricators and companies that produce resins, fertilizers, or pesticides. Water with values greater than 8.8 may indicate discharges from industries such as the following: textile mills, metal plating facilities, steel mills, and producers of rubber and plastic. Wash water used to clean floors and industrial machinery may also produce alkaline wastewater.

Copper

Elevated levels of copper may indicate discharges from cooling, boiler, or industrial re-circulation systems. Copper sulfate is typically used as an algacide in all of these systems. Copper can also be an indicator of discharges from an automobile manufacturing or maintenance facility.

Phenols

Phenols are defined as hydroxyl derivatives of benzene and its condensed nuclei, may occur in domestic and industrial wastewaters, natural waters, and potable water supplies. Chlorination of such waters may produce odorous and objectionable-tasting chlorophenols. Phenols removal processes in water treatment include super chlorination, chlorine dioxide or chloramines treatment, ozonation, and activated carbon adsorption. Caution should be exercised, however, since phenols may also be present in other waste streams. Phenols should be considered in relation to other parameters in determining the potential source.

Surfactants/Detergents

Typically, the presence of surfactants and detergents will indicate a connection to either an automobile wash facility or a laundry facility. High surfactants/detergents and elevated temperatures are a good indicator of laundry facilities. Lower levels of surfactants/detergents may indicate a connection to a residential laundry or industrial facility. Per the SCDHEC, normal ranges of surfactants/detergents are 0.0 to 5.0 mg/L.

Chlorine

The absence of chlorine may indicate a natural water source. However, due to chlorine's ability to quickly dissipate, caution should be used when making judgments based on its absence. Generally only potable water sources will contain chlorine. Therefore, the presence of chlorine insures that the source is not a natural water source. Very high levels (above 5.0 mg/L) of chlorine typically indicate connection to a swimming pool or other potable water source.

Fluoride

Past field testing procedures did not include testing for the presence of Fluoride in stormwater discharge. It is recommended that any field testing in the future include testing for Fluoride, which is a good indicator of potable water where fluoride levels in the raw water supply are adjusted to consistent levels and where groundwater has low to non-measurable natural fluoride levels. It is common practice for communities to add fluoride to their drinking water in order to improve dental health. Typical fluoride levels in fluoride treated potable waters are usually in the

range of 1.0 to 2.5 mg/L. Fluoride can be tested in the field using a field spectrophotometer (HACH DR/2000/2010™ and AccuVac™ ampoules using SPADNS reagent, without distillation).

Table 2 is a list of additional chemicals that may be associated with a variety of different industrial activities. If the industrial activities in an outfall are known, it may be possible to examine the dry-weather (non-stormwater) flow for specific chemicals to identify which industrial activities may be responsible for the dry-weather flow. This will be conducted on a case-by-case basis.

A.2. Physical Parameters

Furthermore, the detection of a variety of other parameters during the physical inspection can be useful indicators of outfall problems. The following is a description of these physical parameters.

Odor

The odor of stormwater discharge will vary widely. Odor can be a good indicator of the type of pollutant in the water. For instance, stormwater discharges may smell like sewage, oil, gasoline, or may contain a chemical smell. Decomposition of organic materials can also cause a distinctive sulfur odor. Odors may vary greatly with changes in temperature and time of year.

Color

Color can also be an important factor in determining the source of an illicit discharge. The particular color should be noted and tracked upstream as far as possible. Sewage will typically have a gray or brown color, whereas industrial wastes may have a variety of colors.

Turbidity

Turbidity is a measure of the amount of suspended matter in the water and affects the clarity of the discharge. Discharges from industrial facilities are often highly turbid. Although erosion can also create highly turbid water, this should not be the case during dry weather flows. Each inspection should note the relative degree of turbidity.

Floatables

Floatables are solids and liquids that float on the surface of the water. Floatables may include substances such as animal fats, food products, trash, oils, plant materials, solvents, foams, or gasoline. Floatable can often lead directly to the manufacturing process or other source of the illicit discharge. A full description of the type and quantity of the floatables and a photograph of the discharge should be included in the report.

Residue

Residue left on the conveyance system can be an indicator of an illicit discharge. Discoloration of the pipe or channel should be tracked upstream. It is also important to note the location of the discoloration or stain within the conveyance system. For example, is it just a line of residue half way up the pipe or is the pipe completely stained for some depth?

Vegetation

Vegetation growing in the immediate discharge area should be noted in relation to vegetation growing in the general vicinity of the outlet. Certain discharges can cause substantial changes in plant growth. Discharges containing a high nutrient content may cause increased growth while discharges with severe changes in pH may cause a decrease in growth. Although vegetation patterns may serve as an indicator of non-stormwater discharges, they are also difficult to interpret. Time of year, rainfall patterns, exposure to sun all affect plant growth and may be contributing factors to the change in vegetation patterns. Caution should be used when considering vegetation as an indicator of an illicit discharge.

Structural Damage

Like residue, structural damage to the conveyance system can also be an indicator of an illicit discharge. Structural damage is typically more noticeable in concrete pipes. Acidic discharges may cause cracking, spalling, or deterioration of the concrete. The location of the damage within the pipe and the distance upstream will be important in determining the type of pollutant and the source of the discharge.

Temperature

Water temperature that varies greatly from the ambient air temperature is a good indicator that there is an illicit discharge to the system.

A.3. Further Descriptions of Physical Parameters

Table 2 provides additional information on the physical characteristics that should be recorded. Interpretive information is also provided.

Table 2: Interpretations of Physical Observation Parameters and Likely Associated Flow Sources

Physical Observation Parameter	Description
Odor – Most strong odors, especially gasoline, oils, and solvents, are likely associated with high responses to the toxicity screening test. Typical obvious odors include: gasoline, oil, sanitary wastewater, industrial chemicals, decomposing organic wastes, etc.	
Sewage:	Smell associated with stale wastewater, especially in pools near outfall.
Sulfide (rotten eggs):	Industries (e.g., meat packers, canneries, dairies, etc.; and stale sanitary wastewater).
Oil and gas:	Petroleum refineries or facilities associated with vehicle maintenance and operation or petroleum product storage.
Rancid-sour:	Food preparation facilities (e.g., restaurants, hotels, etc.).
Color – Important indicator of inappropriate industrial sources. Industrial dry-weather discharges may be of various colors, but dark colors, such as brown, gray, or black, are most common.	
Yellow:	Chemical, textile, and tanning plants.
Brown:	Meat packers, printing plants, metal works, stone and concrete works, fertilizer application, and petroleum refining facilities.
Green:	Chemical plants and textile facilities.
Red:	Meat packers.
Gray:	Dairies.
Turbidity – Often affected by the degree of gross contamination. Dry-weather industrial flows with moderate turbidity can be cloudy, while highly turbid flows can be opaque. High turbidity is often a characteristic of undiluted dry-weather industrial discharges.	
Cloudy:	Sanitary wastewater, concrete or stone operations, fertilizer facilities, and automotive dealers.
Opaque:	Food processors, lumber mills, metal operations, and pigment plants.
Deposits and Stains – Refer any type of coating near the pitfall and are usually of a dark color. Deposits and stains often will contain fragments of floatable substances. These situations are illustrated by the grayish-black deposits that contain fragments of animal flesh and hair which often are produced by leather tanneries, or the white crystalline powder which commonly coats outfalls due to nitrogenous fertilizer wastes.	
Sediment:	Construction site erosion.
Oily:	Petroleum refineries or storage facilities and vehicle service facilities.
Vegetation – Vegetation surrounding an outfall may show the effects of industrial pollutants. Decaying organic materials coming from various food product wastes would cause an increase in plant life, while the discharge of chemical dyes and inorganic pigments from textile mills could noticeably decrease vegetation. It is important not to confuse the adverse scouring effects of high stormwater flows on vegetation with highly toxic dry-weather intermittent flows.	
Excessive growth:	Food product facilities.
Inhibited growth:	High stormwater flows, beverage facilities, printing plants, metal product facilities, drug manufacturing, petroleum facilities, vehicle service facilities and automobile dealers.
Damage to Outfall Structures – Another readily visible indication of industrial contamination. Cracking, deterioration, and spalling of concrete or peeling of surface paint, occurring at an outfall are usually caused	

Physical Observation Parameter	Description
	<p>by severely contaminated discharges, usually of industrial origin. These contaminants are usually caused by severely contaminated discharges, usually of industrial origin. These contaminants are usually very acidic or basic in nature. Primary metal industries have a strong potential for causing outfall structural damage because their batch dumps are highly acidic. Poor construction, hydraulic scour, and old age may also adversely affect the condition of the outfall structures which are not indications of upstream contaminating entries.</p>
Concrete cracking:	Industrial flows.
Concrete spalling:	Industrial flows.
Peeling paint:	Industrial flows.
Metal corrosion:	Industrial flows.

A.3.1 Overview of Sampling Procedures

A number of tracer parameters may be useful for distinguishing treated potable water from natural waters:

- Major ions or other chemical/physical characteristics of the flow components can vary substantially depending upon whether the water supply sources are groundwater or surface water, and whether the sources are treated or not. Specific conductance may also serve as a rough indicator of the major water source.
- Fluoride can often be used to separate treated potable water from untreated water sources. Untreated water sources can include local springs, groundwater, regional surface flows or non-portable industrial waters. If the treated water has no fluoride added, or if the natural water has fluoride concentrations close to potable water fluoride concentrations, then fluoride may not be an appropriate indicator.
- Hardness can also be used as an indicator if the potable water source and the base flow are from different water sources. An example would be if the base flow is from hard groundwater, and the potable water is from softer surface supplies.
- If the concentration of chlorine is high, then a major leak of disinfected potable water is likely to be close to the outfall. Because of the rapid dissipation of chlorine in water (especially if some organic contamination is present) it is not a good parameter for quantifying the amount of treated potable water observed at the outfall.

Water from potable water supplies (that test for fluorides, or other suitable tracers) can be relatively uncontaminated, e.g., potable waterline leakage or irrigation runoff, or heavily contaminated, e.g., sanitary wastewater.

A.3.2 Sanitary Wastewaters

In areas containing no industrial or commercial sources, sanitary wastewater is probably the most severe dry-weather contaminating source of storm drain flows. The following parameters can be used for quantifying the sanitary wastewater components of the treated potable water portion:

- Surfactant analysis may be used in determining the presence of sanitary wastewaters. However, surfactants present in water originating from potable water sources could indicate sanitary wastewaters, laundry wastewaters, car washing wastewater, or any other waters containing surfactants. If surfactants (or fluorescence) are not present, then the potable water could be relatively uncontaminated (potable waterline leaks or irrigation runoff).
- The presence of fabric whiteners (as measured by fluorescence using a fluorometer in the laboratory or field) can also be used in distinguishing laundry and sanitary wastewaters.
- Sanitary wastewaters often exhibit predictable trends during the day in flow and quality. In order to maximize the ability to detect direct sanitary wastewater connections into the storm drainage system, it would be best to survey the outfalls during periods of highest sanitary wastewater flows (mid to late morning hours).
- The ratio of surfactants to ammonia or potassium concentrations may be an effective indicator of the presence of sanitary wastewaters or septic tank effluents. If the surfactant concentrations are high, but the ammonia and potassium concentrations are low, then the contaminated source may be laundry wastewaters. Conversely, if ammonia, potassium, and surfactants are low, but potassium and ammonia are both high, septic tank effluent may be present.
- Obviously, odor and other physical characteristics, e.g., turbidity, coarse and floating solids, foaming, color, and temperature would also be very useful in distinguishing sanitary wastewater from wash water or laundry

wastewater sources. However, these indicators may not be very obvious for small levels of sanitary wastewater contamination.

Appendix B

Water Quality Sampling Procedures

- B.1. Overview of Sampling Procedure
- B.2. Sampling Procedures
 - B.2.1 Prior to Starting Point Collection
 - B.2.2 Grab Sampling
 - B.2.3 pH
 - B.2.4 Total Residual Chlorine
 - B.2.5 Total Copper
 - B.2.6 Total Phenols
 - B.2.7 Surfactants/Detergents
 - B.2.8 Cleaning Procedures
 - B.2.9 End of Day

B.1. Overview of Sampling Procedure

One-liter samples should be taken in clean Nalgene bottles.

Temperature, and pH should be taken in the field using a Hach SensION pH/temperature meter, or equivalent, as soon after the sample is taken as possible. Odor, color, turbidity, scum, oil sheen, and flow rate are also observed and recorded on site. The samples should be tested for Total Chlorine, Total Copper, Phenols, and Surfactants/Detergents using HACH DR/2000/2010 Spectrophotometer, or equivalent, in a mobile laboratory.

B.2. Sampling Procedures

B.2.1 Prior to Starting Point Collection

pH Calibration (Every Monday morning before entering the field.)

1. Make sure the meter is in pH mode.
2. Remove the dust cover from the pH probe.
3. Rinse pH probe with DI water and dry by gently blotting with a soft tissue.
4. Press the CAL key.
5. Place the pH probe into 4.00 buffer solution, press the dispenser button, and then the read button. When reading stabilizes, the meter will beep and a small padlock will appear on the screen of the meter to indicate the reading is locked.
6. Rinse pH probe with DI water and dry by gently blotting with a soft tissue.
7. Place the pH probe into 7.00 buffer solution, press the dispenser button, and then the read button. When reading stabilizes, the meter will beep and a small padlock will appear on the screen of the meter to indicate the reading is locked.
8. Rinse pH probe with DI water and dry by gently blotting with a soft tissue.
9. Place the pH probe into 10.00 buffer solution, press the dispenser button, and then the read button. When reading stabilizes, the meter will beep and a small padlock will appear on the screen of the meter to indicate the reading is locked.
10. The slope will appear in the display. It should be 59.0 plus/minus 3 (mV/decade). Press Enter to accept this slope.
11. Rinse pH probe with DI water and dry by gently blotting with a soft tissue.
12. Replace the dust cover on the pH probe with the cotton inside saturated with pH buffer 7.00.

pH Calibration Check (Prior to entering field)

1. Rinse pH probe with DI water and dry by gently blotting with a soft tissue.
2. Place the pH probe in QC standard of pH 10.00; depress the dispenser button once and then the read button.
3. Let the pH reading stabilize and when a lock is achieved it should read the pH of the known QC standard.
4. If the reading does not match the pH QC standard then calibrate pH meter.
5. Always remember to rinse probe with DI water when done.

B.2.2 Grab Sampling

1. Using the 1000 mL sample bottle, rinse the sample bottle 3 times with stormwater.
2. Fill the sample bottle from the horizontal and vertical center of the stormwater stream, being careful not to pick up sediment from the bottom.

B.2.3 pH

1. Rinse the probe with DI water and dry gently by blotting with a tissue.
2. Immerse the pH probe into the sample, press the dispenser button once and then press the read button. Be careful not to let the probe touch the bottoms or sides of the sample container.
3. The meter will beep a small padlock will appear on the screen with when the pH and temperature are locked.
4. Rinse the probe with DI water and replace dust cover with pH buffer 7.00 on cotton ball in dust cover.
5. At the end of the day store the clean pH probe with dust cover in place.

Operational Check: Once per sampling day, check the calibration against 7.0 pH, if the reading is not between 6.95 and 7.05 then you must recalibrate the meter.

B.2.4 Total Residual Chlorine

1. Enter the stored program number **80 ENTER** for total chlorine. The display will show **“Dial nm to 530”**.
2. Rotate the wavelength dial until the small display shows **“530 nm”**. When the correct wavelength is dialed in, the display will quickly show **“Zero Sample”** then **“mg/L Cl₂”**.
3. Rinse the chlorine sample cell with stormwater 3 times.
4. Fill the sample cell with 10 mL of stormwater.
5. Empty the contents of one (1) total chlorine DPD reagent packet into the sample cell.
6. Stopper the sample cell and shake for 20 seconds. Remove the stopper.
7. Press **SHIFT TIMER**; a 3 minute reaction period will begin.
8. When the timer beeps, the display will show: **“mg/L Cl₂”**. Place a 10 mL blank sample into the cell holder (be sure to wipe the outside of the sample cell with kimwipes).
9. Press **ZERO** and the display will show **“Zeroing”**... then **“0.00 mg/L Cl₂”**.
10. Within three minutes of the timer beeping, put the sample into the cell holder (be sure to wipe the outside of the sample cell with a kimwipe) and press **READ**. The display will show **“Reading”**, and then the result in mg/L will be shown.

****Note:** DPD reagent packets deteriorate in the presence of moisture. The packets should be discarded if they have caked or turned brown.

B.2.5 Total Copper

1. Enter the stored program number **135 ENTER** for copper (cu) bicinchoninate powder pillows; the display will show **“Dial nm to 560”**.
2. Rotate the wavelength dial until the small display shows **“560 nm”**. When the correct wavelength is dialed in, the display will quickly show **“Zero Sample”**, then **“mg/L Cu Bicn”**.
3. Rinse the copper sample cell with stormwater 3 times.
4. Fill the sample cell with 10 mL of stormwater.
5. Empty the contents of one (1) Cu Ver 1 Copper reagent packet into the sample cell and swirl to mix.
6. Press **SHIFT TIMER** and a two minute reaction period will begin.
7. When the timer beeps the display will show **“mg/L Cu Bicn”**.
8. Place the blank (filled with sample water) into the cell holder, after wiping the outside of the sample cell with a kimwipes, and close the light shield.
9. Press **ZERO**, the display will show **“Zeroing”**... then **“0.00 mg/L Cu Bicn”**.
10. Within thirty minutes after the timer beeps, place the prepared sample into the cell holder and close the light shield.
11. Press **READ**, and the display will show **“Reading”**. Then the results in mg/L will be shown.

B.2.6 Total Phenols

1. Measure 300 mL of deionized water in a 500 mL graduated cylinder.
2. Pour the measured DI water into a 500 mL separatory funnel (the blank).
3. Measure 300 mL of sample into a 500mL cylinder.
4. Pour the measured sample into a second 500 mL separatory funnel (the sample).
5. Add 5 mL of Hardness 1 buffer to each separatory funnel, stopper, and shake to mix.
6. Add the contents of one Phenol Reagent powder Pillow to each separatory funnel, stopper, and shake to mix.
7. Add the contents of one Phenol 2 Reagent Powder Pillow to each separatory funnel, stopper, and shake to mix.
8. Add 30 mL of chloroform to each separatory funnel and stopper.
9. Invert each funnel and temporarily vent. Shake each funnel briefly and then vent. Then shake each funnel vigorously for 30 seconds.
10. Remove the stoppers and allow the funnels to stand until the chloroform settles to the bottom of the funnel.

11. Insert a pea size cotton plug into the delivery tube of each funnel.
 12. Drain the chloroform layer into separate 25 mL sample cells.
 13. Enter the stored program number for phenols: **470 ENTER**. The display will show *“Dial nm to 460”*.
 14. Rotate the wavelength dial until the small display shows *“470 nm”*. When the correct wavelength is dialed in, the display will quickly show *“Zerp Sample”* then *“mg/L PHENOL”*.
 15. Place the blank (filled with sample water) into the cell holder, after wiping the outside of the sample cell with a kimwipe, and close the light shield.
 16. Press **ZERO**, the display will show *“Zeroing”*... then *“0.00 mg/L PHENOL”*.
 17. Place the prepared sample into the cell holder and close the light shield.
 18. Press **READ**. The display will show *“Reading”* then the results in mg/L will be shown.
- **Note:** When venting a separatory funnel be sure to point the funnel away from people.

B.2.7 Surfactants/Detergents

1. Enter the stored program number **710 ENTER** for anionic surfactants powder pillows. The display will show *“Dial nm to 605”*.
2. Rotate the wavelength dial until the small display shows *“605 nm”*. When the correct wavelength is dialed in, the display will quickly show *“Zero Sample”* then *“mg/L SURF.ANION”*.
3. Measure out 300 mL of sample with a 500 mL graduated cylinder and pour into a 500 mL separatory funnel.
4. Add 10 mL of Sulfated Buffer Solution, stopper, and shake the funnel for five seconds.
5. Add the contents of one Detergents Reagent Powder Pillows to the funnel, stopper, and shake to dissolve the powder.
6. Add 30 mL of benzene to the funnel, stopper, and shake gently for one minute.
7. Place the separatory funnel in a support stand and then press **SHIFT TIMER**. A thirty minute reaction period will begin.
8. When the timer beeps, the display will show *“mg/L SURF.ANION”*.
9. Remove the stopper, drain off the bottom water layer and discard it.
10. Drain the top benzene layer into a clean 25 mL sample cell (the sample).
11. Fill a second 25 mL sample cell with pure benzene (the blank).
12. Place the blank, after wiping the outside of the sample cell with a kimwipe, into the cell holder and close the light shield.
13. Press **ZERO**. The display will show *“Zeroing”*... then *“0.00 mg/L SURF.ANION”*.
14. Place the prepared sample into the cell holder (after wiping the sample cell with kimwipes) and close the light shield.
15. Press **READ**. The display will show *“Reading”* then the results in mg/L will be shown.

B.2.8 Cleaning Procedures

1. Rinse with tap water.
2. Scrub with non-phosphate detergent and tap water rinse.
3. Tap water rinse.
4. Rinse with deionized water, and air dry.

B.2.9 End of Day

1. Do a pH meter check by running a pH test with the pH 10 buffer.
2. Make sure all equipment has been cleaned (glassware with non-phosphate detergent) and set out to dry, especially the sample cells
3. Charge the batteries for all equipment.
4. Prepare for the next day of sampling.

Appendix C

Reporting Forms

- C.1 Illicit Discharge Corrective Order for Owner
- C.2 Illicit Discharge Notice of Violation for Owner
- C.3 Illicit Discharge Reported to Magistrate
- C.4 Illicit Removal Letter to Other Municipality
- C.5 Illicit Removal Letter to SCDHEC

C.1 Illicit Discharge Corrective Order for Owner



DORCHESTER COUNTY PUBLIC WORKS
2120 EAST MAIN STREET
DORCHESTER, SC 29437

(843) 832-0087 – (843) 563-0087 * Fax (843) 832-0073 – (843) 563-0073

Date:

Re: Illicit Discharge Corrective Order

Dear:

The purpose of this letter is to serve notice that you are in violation of Dorchester County's Stormwater Management, Sediment and Erosion Control Ordinance at (insert address of other positional information) due to an illicit discharge. Dorchester County Public Works has determined through visual evidence and/or water sample analyses that the discharge from your property contains pollutants not acceptable.

This violation is a first offense based on an inspection conducted on (date). The Dorchester County Public Works Department requests that you promptly remove the illicit discharge before additional action is taken. Dorchester County Public Works personnel will revisit the location of the illicit discharge in approximately two weeks or sooner if a hazardous condition warrants it, to see if you have removed it.

Failure to comply with this Corrective Order may result in a court proceeding issued to you and/or a civil penalty of up to \$1,000 per day for each deficiency.

If you have any questions concerning this violation you can contact our office at 843-832-0087.

Sincerely,

CC:

Enclosures:

C.2 Illicit Discharge Notice of Violation for Owner



DORCHESTER COUNTY PUBLIC WORKS
2120 EAST MAIN STREET
DORCHESTER, SC 29437

(843) 832-0087 – (843) 563-0087 * Fax (843) 832-0073 – (843) 563-0073

Date:

Re: Illicit Discharge Notice of Violation

Dear:

The purpose of this letter is to serve notice that you are in violation of Dorchester County's Stormwater Management, Sediment and Erosion Control Ordinance at (insert address of other positional information) due to an illicit discharge. Dorchester County Public Works has determined through visual evidence and/or water sample analyses that the discharge from your property contains pollutants not acceptable.

This violation is due to failure to comply with a past corrective order and an inspection conducted on (date). The Dorchester County Public Works Department requests that you promptly remove the illicit discharge before additional action is taken. Dorchester County Public Works personnel will revisit the location of the illicit discharge in approximately two weeks or sooner if a hazardous condition warrants it, to see if you have removed it.

Failure to comply with this Notice of Violation prior to the re-inspection will result in an immediate report to the Magistrate's office and/or a civil penalty of up to \$1,000 per day for each deficiency.

If you have any questions concerning this violation you can contact our office at 843-832-0087.

Sincerely,

CC:

Enclosures:

C.3 Illicit Discharge Reported to Magistrate



DORCHESTER COUNTY PUBLIC WORKS
2120 EAST MAIN STREET
DORCHESTER, SC 29437

(843) 832-0087 – (843) 563-0087 * Fax (843) 832-0073 – (843) 563-0073

Date:

Re: Illicit Discharge Final Notice of Violation Letter

Dear:

The purpose of this letter is to serve notice that you are in violation of Dorchester County's Stormwater Management, Sediment and Erosion Control Ordinance at (insert address of other positional information) due to an illicit discharge. Dorchester County Public Works has determined through visual evidence and/or water sample analyses that the discharge from your property contains pollutants not acceptable.

Previous requests to you to remove the discharge have been unsuccessful. Therefore, the Dorchester County Public Works Department has reported the violation to the Magistrate's office for further action.

If you have any questions concerning this violation you can contact our office at 843-832-0087.

Sincerely,

CC:

Enclosures:

C.4 Illicit Removal Letter to Other Municipality



DORCHESTER COUNTY PUBLIC WORKS
2120 EAST MAIN STREET
DORCHESTER, SC 29437

(843) 832-0087 – (843) 563-0087 * Fax (843) 832-0073 – (843) 563-0073

Date:

Re: Illicit Discharge Removal Letter

Dear:

The purpose of this letter is to inform you that Dorchester County has determined that an illicit discharge is occurring into your stormwater system at (insert address of other positional information). This location is beyond the scope of the County's Stormwater Management, Sediment and Erosion Control Ordinance, and the County cannot therefore enforce its removal. However, the illicit discharge must be removed since it eventually finds its way into the County-owned system. Please find the attached report that provides greater detail on the investigation and results of visual evidence and/or water sample analyses. A copy of this letter and investigation report has also been sent to SCDHEC-EQC.

If you have any questions concerning this violation you can contact our office at 843-832-0087.

Sincerely,

CC:

Enclosures:

C.5 Illicit Removal Letter to SCDHEC



DORCHESTER COUNTY PUBLIC WORKS
2120 EAST MAIN STREET
DORCHESTER, SC 29437

(843) 832-0087 – (843) 563-0087 * Fax (843) 832-0073 – (843) 563-0073

Date:

Re: Illicit Discharge Removal Letter

Dear:

The purpose of this letter is to inform you that Dorchester County has determined that an illicit discharge is occurring at (insert address of other positional information). This location is beyond the scope of the County's Stormwater Management, Sediment and Erosion Control Ordinance, and the County cannot therefore enforce its removal. The County is hereby releasing responsibility of removing this illicit to you or another entity that you identify.

Please find the attached report that provides greater detail on the investigation and results of visual evidence and/or water sample analyses. A copy of this letter and investigation report has also been sent to (insert municipal name) .

If you have any questions concerning this violation you can contact our office at 843-832-0087.

Sincerely,

CC:

Enclosures:

Appendix D

Additional Illicit Tracking Procedures

- D.1 Data Collection & Development
 - D.1.1 Outfall Catchment Areas
- D.2 Mapping
 - D.2.1 Mapping and Preliminary Watershed Evaluation
- D.3 Prioritization

Illicit discharges are not uniformly distributed across a community, but tend to be clustered within certain land uses, subwatersheds, and sewage infrastructure areas. The office procedures help narrow the search for the most severe illicit discharge problems through rapid analysis of existing mapping and water quality monitoring data. Office procedures for IDDE are referred to as a desktop assessment. Simple desktop assessment methods can rapidly determine the severity of illicit problems in a community. The desktop assessment also provides insight on how to narrow your illicit discharge search, and is helpful when designing a discharge tracking system to best suit your needs. The desktop assessment method has five basic elements:

1. Delineate subwatersheds or other drainage units within your community.
2. Compile available mapping and data for each drainage unit (e.g., land use, age, outfalls, infrastructure history).
3. Derive subwatershed discharge screening factors using GIS analysis.
4. Screen and rank illicit discharge potential at the subwatershed and community level.
5. Generate maps to support field investigations.

The desktop assessment is used to guide initial field screening, and support initial IDDE program decisions. Key outcomes include:

- Screening problem catchments or subwatersheds.
- Creation of GIS or other database system to track outfalls.
- Gaining an overall assessment as to the severity of illicit discharge problems in the community.
- Generation of basic mapping for subsequent field work.

D.1 Data Collection & Development

In order to narrow the illicit discharge search, certain GIS shapefiles are needed to provide the necessary information to design an illicit discharge tracking system. **Table 3** provides a list of data that is useful when performing the desktop assessment. Maps generated from this data can be as simple as the hydrological, land use, and road layers which can be beneficial to field crews. Additional information regarding the classification of subwatersheds may be found in Section D.2 (Mapping) and examples of sources of industrial non-stormwater entries into storm drainage systems can be found in **Table 4**. In addition to the files recommended below, additional data collected in the field from previous outfall inventories, flood studies, etc. Digital format suggests but are not limited to GIS based shape files. Each of the following layers should be imported into the data collector if possible for the use of field crews when searching for or tracking illicit discharges to the waters of the state.

Table 3: Useful Data for the Desktop Assessment – See next page...

Table 3: Useful Data for the Desktop Assessment

	Data	Likely Format
Recommended	Aerial photos or Ortho-photos	Digital
	Subwatershed or catchment boundaries	Digital
	Hydrology including piped streams	Digital
	Land use or zoning	Digital or hardcopy map
	NPDES stormwater permittees	Digital data or map
	Outfalls	Digital
	Sewer system, 1" = 200' scale or better	Digital
	Standard Industrial Classification codes for all industries	Digital or hardcopy data
	Storm drain system, 1" = 200' scale or better	Digital
	Street map or equivalent GIS layers	Digital
	Topography (5 ft contours or better)	Digital
Optional	Age of Development	Narrative data
	As-builts or construction drawings	Hardcopy map
	Condition of infrastructure	Narrative data
	Field inspection records	Hardcopy or digital data
	Depth to water table and groundwater quality	Digital data or maps
	Historical industrial uses or landfills	Narrative data or hardcopy map
	Known locations of illicit discharges (current and past)	Narrative data or digital map
	Outfall and stream monitoring data	Digital data
	Parcels boundaries	Digital or hardcopy map
	Pollution complaints	Narrative data
	Pre-development hydrology	Narrative data or hardcopy map
	Sanitary sewer infiltration and inflow surveys (I/I)	Hardcopy or digital data
	Septic tank locations or area served by septic systems	Hardcopy or digital map
Sewer system evaluation surveys	Hardcopy or digital data	

D.1.1 Outfall Catchment Areas

The drainage area for each outfall must be delineated on all maps used in the illicit tracking process. Adding the facility inventory information to the drainage areas will enable potential pollutant source locations to be assigned to the correct outfall. Land use coverage can also be of use when determining which kind of pollutants can populate individual watershed areas. Ultimately, maps should be produced having the following information:

- Drainage areas with complete descriptions;
- Outfall locations;
- NPDES permittees;
- Critical land uses;
- Drainage boundaries for each outfall;
- City/County limits;
- Major streets; and
- Streams.

D.2 Mapping

Once subwatersheds or catchments are delineated, Dorchester County should begin to acquire and compile exiting data for each drainage area which will allow the analyses and manipulation of spatial data, update and creation of data layers, and attribute data with each map layer. Maps created in GIS can help manage the entire IDDE program and demonstrate compliance in annual reports. The maps are also very useful to help communicate with the public.

Once an illicit source is located by Dorchester County field crews, a map should be created to show the exact location of the discharge and the source. The map should include hydrological data, roads, buildings, outfalls, and pollutant(s) that are not within the set parameters. This map should be included in any letter or correspondence sent to SCDHEC and the person(s)/owner at fault.

D.2.1 Mapping and Preliminary Watershed Evaluation

The data collected during the mapping process is important as it forms the basis for the rest of the more detailed field investigations. Maps with information such as watershed boundaries and land usage can help to provide a basis to prioritize the outfalls and watershed by potential to contribute non-stormwater entries into the storm drainage system. When preparing the maps full advantage should be taken of any existing and available information, specifically data listed in **Table 3**. The receiving waters and stormwater drainage outfalls must be identified and accurately located on the appropriate maps. Possible sources of documented information include:

- City records, drainage maps, and storm drainage maps;
- Previous surveys, e.g., sanitary sewer infiltration/inflow (I/I) and sewer system evaluations survey (SSES) studies;
- Topographic maps;
- Existing GIS data;
- Pre-development stream locations;
- City/County department personnel having knowledge of the area; and
- Aerial surveys.

D.3 Prioritization

The desktop assessment shapes the overall direction of a local IDDE program. For example, if the desktop assessment indicates that the risk of illicit discharges is low in the community, program managers may want to shift resources to other minimum management measures and integrate them into a broader watershed assessment and restoration effort. By contrast, if the desktop assessment reveals significant potential for severe discharges, program managers will need to allocate significant program resources to find and fix the discharge problems. **Table 4** can be used to identify the local industries in each drainage area most likely to contribute non-stormwater entries into the storm drainage system. The categories considered in this table include loading and unloading of dry bulk or liquid

metals, outdoor storage or processing, water usage (cooling and process waters), dust or particulate generating processes, and illicit or inadvertent industrial connections. The likelihood of an industry producing dry weather or wet weather discharges in each of these categories was rated on the basis of high (H), moderate (M), or low (L) potential and not applicable if there was no relationship evident.

A research effort should draw on existing background data and anecdotal information to initially characterize illicit discharge potential at the subwatershed level. Subwatersheds are then screened based on their composite score, and are diagnosed as having a low, medium, or high risk;

- Low – no known illicit discharge problems in the subwatershed.
- Medium – problems are confined to a few stream reaches, outfalls, or specific generating sites in the subwatershed.
- High – problems are suspected to be severe throughout the subwatershed.

Table 4: Sources of Industrial Non-Stormwater Entries Into Storm Drainage System – See next page...

Table 4: Sources of Industrial Non-Stormwater Entries Into Storm Drainage System

Industrial Categories			Loading/ Unloading		Outdoor Storage/ Processing	Water Usage		Particle Gener. Process	Illicit/ Inadvertent Connections
Major Class.	SIC Group	Industrial Description	Dry Bulk	Liquid		Cooling	Process		
Primary Industries									
20		Food & Kindred Products							
20	201	Meat Products	H	L	H	H	H	L	H
20	202	Dairy Products Processing Industry	H	H	N/A	H	H	N/A	H
20	203	Canned & Preserved Fruits & Vegetables	H	H	H	H	H	M	H
20	204	Grain Mill Products	H	H	L	H	H	H	H
20	205	Bakery Products	H	M	N/A	N/A	H	M	L
20	206	Sugar & Confectionery Products	H	M	N/A	L	M	H	L
20	207	Fats & Oils	H	H	N/A	M	H	N/A	M
20	208	Beverages	H	H	N/A	H	H	M	L
21		Tobacco Manufactures	H	M	N/A	N/A	M	H	M
22		Textile Mill Products	H	L	N/A	H	H	M	H
23		Apparel & Other Finished Products Made from Fabrics	H	L	N.A	N.A	M	M	L
Material Manufacture									
24		Lumber & Food Products	H	L	H	N/A	M	H	L
25		Furniture & Fixture	H	M	N/A	N/A	L	M	L
26		Paper & Allied Products	H	H	H	H	H	H	H
27		Printing, Publishing, & Allied Industries	H	M	N/A	N/A	M	H	L
31		Leather& Leather Products	H	H	L	L	H	H	H
32		Stone, Clay, Glass & Concrete Products	H	M	H	L	H	H	L
33		Primary Metal Industries	H	M	H	H	H	H	H
34		Fabricated Metal	H	H	L	H	H	H	H

Illicit Discharge Detection & Elimination SOP

Industrial Categories			Loading/ Unloading		Outdoor Storage/ Processing	Water Usage		Particle Gener. Process	Illicit/ Inadvertent Connections
Major Class.	SIC Group	Industrial Description	Dry Bulk	Liquid		Cooling	Process		
		Products							
37		Transportation Equipment	L	H	L	H	H	L	H
Note: H: High Potential, M: Medium Potential, L: Low Potential, N/A: Not Applicable									
Chemical Manufacture									
28	Chemicals & Allied Products								
	281	Industrial Inorganic Chemicals	H	H	N/A	H	H	H	H
	282	Plastic Materials & Synthetics	H	H	L	H	M	L	H
	283	Drugs	L	L	N/A	H	M	L	L
	284	Soaps, Detergents, & Cleaning Preparations	H	H	N/A	H	H	H	H
	285	Paints, Varnishes, Lacquers, Enamels & Allied Products	H	H	N/A	L	H	H	L
	286	Industrial Organic Chemicals	H	H	N/A	H	H	H	M
	287	Agriculture Chemicals	L	L	N/A	H	L	L	L
29	Petroleum Refining & Related Industries								
	291	Petroleum Refining	L	H	H	H	L	N/A	H
	295	Paving & Roofing Materials	H	H	H	N/A	M	M	L
30		Rubber & Misc. Plastic Products	H	H	N/A	H	H	H	M
Transportation & Construction									
15		Building Construction	M	L	H	N/A	L	H	L
16		Heavy Construction	M	L	H	N/A	L	H	L
Retail									
52		Building Materials, Hardware Garden Supply & Mobile Home Dealers	H	L	H	N/A	L	N/A	L
53		General Merchandise Stores	H	M	L	N/A	L	N/A	L
54		Food Stores	H	H	N/A	N/A	M	L	L

Industrial Categories			Loading/ Unloading		Outdoor Storage/ Processing	Water Usage		Particle Gener. Process	Illicit/ Inadvertent Connections
Major Class.	SIC Group	Industrial Description	Dry Bulk	Liquid		Cooling	Process		
55		Automotive Dealers & Gasoline Service Stations	H	H	H	N/A	M	L	M
56		Apparel & Accessory Stores	H	L	N/A	N/A	L	N/A	L
Note: H: High Potential, M: Medium Potential, L: Low Potential, N/A: Not Applicable									
57		Home Furniture, Furnishings and Equipment Stores	H	L	L	N/A	L	N/A	L
58		Eating & Drinking Places	H	M	N/A	N/A	M	N/A	M
Other									
		Coal Steam Electric Power	H	L	H	H	L	H	L
		Nuclear Steam Electric Power	N/A	L	N/A	H	L	N/A	N/A
Note: H: High Potential, M: Medium Potential, L: Low Potential, N/A: Not Applicable									

The industrial categories listed in **Table 4** were defined according to the 1987 Standard Industrial Classification Manual codes (SIC code). The industries were classified according to six main categories. The category for “Primary Industries” includes facilities involved in the production of food products and other basic goods. The category of “Material Manufacturing” includes those industries producing materials such as lumber, paper, glass, and leather. Similarly, the “Chemical Manufacturing” category includes those industries making products such as plastics, paints, detergents, fertilizers, pesticides, and other related substances. “Transportation and Construction” primary concerns the discharge of contaminants from building or other types of outdoor development. The “Retail” category includes establishments engaged in the selling of merchandise or offering merchandise related to services. Finally, all other industries, which did not fit into any of the above classifications, were placed into a “General” category. Those industries, which are not specifically listed, should have characteristics resembling the industries of the major groups with which they are classified by SIC code.

Using data from the maps and desktop assessment, initial characterization of subwatersheds can allow field techs to prioritize their investigations. In addition to the low, medium, high characterization, land use can provide information and guidance where generating sites are found within the subwatershed.

Land Use and Potential Generating Sites

Land use can predict the potential for indirect discharges, which are often intermittent or transitory. Many indirect discharges can be identified and prevented using the concept of “generating sites,” which are sites where common operations can generate indirect discharges in a community. Both research and program experiences indicate that a small subset of generating sites within a broader land use category can produce most of the indirect discharges. Consequently, the density of potential generating sites within a subwatershed may be a good indicator of the severity of local illicit discharge problems. Some common generating sites within major land use categories are listed in **Table 5**.

Residential Generating Sites: Failing septic systems were the most common residential discharge reported in 33% of IDDE programs surveyed (CWP, 2002). In addition, indirect residential discharges were also frequently detected in 20% of the IDDE programs surveyed, which consisted of oil dumping, irrigation overflows, swimming pool discharges, and car washing. Many indirect discharges are caused by common residential behaviors and may not be classified as “illicit” even though they can contribute to water quality problems. With the exception of failing septic systems and oil dumping, most communities have chosen education rather than enforcement as the primary tool to prevent illicit discharges from residential areas.

Commercial Generating Site: Illicit discharges from commercial sites were reported as frequent in almost 20% of local IDDE programs surveyed (CWP, 2002). Typical commercial discharge generators included operations such as outdoor washing, disposal of food wastes; car fueling, repair, and washing; parking lot power washing; and poor dumpster management. Recreational areas, such as marinas and campgrounds, were also reported to be a notable source of sewage discharges. It is important to note that all businesses within a generating category actually produce illicit discharges; generally only a relatively small fraction do. Consequently, on-site inspections of individual businesses are needed to confirm whether a property is actually a generating site.

Industrial Generating Site: Industrial sites produce a wide range of flows that can cause illicit discharges. The most common continuous discharges are operations involving the disposal of rinse water, process water, wash water and contaminated, noncontact cooling water. Spills and leaks, ruptured pipes, and leaking underground storage tanks are also a source of indirect discharges. Illicit discharges from industry were detected in nearly 25% of the local IDDE programs surveyed (CWP, 2002). Industries are classified according to hundreds of different standard Industrial Classification (SIC) codes. The SIC coding system also includes commercial, institutional, and municipal operations. Many industries are required to have stormwater pollution prevention and spill response plans under EPA’s Industrial Stormwater NPDES Permit Program.

Institutional Generating Sites: Institutions such as hospitals, corporate campuses, colleges, churches, and cemeteries can be generating sites if routine maintenance practices/operations create discharges from parking lots and other areas. Many large institutional sites have their own areas for fleet maintenance, fueling, outdoor storage, and loading/unloading that can produced indirect discharges.

Municipal Generating Sites: Municipal generating sites include operations that handle solid waste, water, wastewater, street and storm drain maintenance, fleet washing, and yard waste disposal. Transport-related areas such as streets and highways, airports, rail yards, and ports can also generate indirect discharges from spills, accidents and dumping.

Table 5: Land Uses, Generatin Sites and Activities that Produce Indirect Discharges

Land Use	Generating Site	Activity that Produces Discharge
Residential	<ul style="list-style-type: none"> - Apartments - Multi-Family - Single Family Detached 	<ul style="list-style-type: none"> - Car Washing - Driveway Cleaning - Dumping and Spills (e.g., leaf litter or RV and boat holding tank effluent) - Equipment Washdowns - Lawn and Landscape Watering - Septic System Maintenance and Overflow - Swimming Pool Discharges
Commercial	<ul style="list-style-type: none"> - Campgrounds and RV parks - Car Dealers and Rental car Companies - Car Washes - Commercial Laundry and Dry Cleaners - Gas Stations and Auto Repair Shops 	<ul style="list-style-type: none"> - Building Maintenance (power washing) - Dumping and Spills - Landscaping and Grounds Care (Irrigation) - Outdoor Fluid Storage

Land Use	Generating Site	Activity that Produces Discharge
Commercial	<ul style="list-style-type: none"> - Marinas - Nurseries and Garden Centers - Oil Change Shops - Restaurants - Swimming Pools 	<ul style="list-style-type: none"> - Parking Lot Maintenance (power washing) - Vehicle Fueling - Vehicle Maintenance and Repair - Vehicle Washing - Washdown of greasy equipment and grease traps
Industrial	<ul style="list-style-type: none"> - Auto Recyclers - Beverages and Brewing - Construction Vehicle Washouts - Distribution Centers - Food Processing - Garbage Truck Washouts - Marinas, and Boat Repair & Building - Metal Plating Operations - Paper and Wood Products - Petroleum Storage and Refining - Printing 	<ul style="list-style-type: none"> - All commercial activities - Industrial process water or rinse water - Loading and un-loading area washdowns - Outdoor material storage (fluids)
Institutional	<ul style="list-style-type: none"> - Cemeteries - Churches - Corporate Campuses - Hospitals - Schools and Universities 	<ul style="list-style-type: none"> - Building Maintenance (e.g., power washing) - Dumping and Spills - Landscaping and Grounds Care (irrigation) - Parking Lot Maintenance (power washing) - Vehicle Washing
Municipal	<ul style="list-style-type: none"> - Airports - Landfills - Maintenance Depots - Municipal Fleet Storage Areas - Ports - Public Works Yards - Streets and Highways 	<ul style="list-style-type: none"> - Building Maintenance (e.g., power washing) - Dumping and Spills - Landscaping and Grounds Care (irrigation) - Outdoor Fluid Storage - Parking Lot Maintenance (power washing) - Road Maintenance - Spill Prevention and Response - Vehicle Fueling - Vehicle Maintenance and Repair - Vehicle Washing

Preventing Illicit Discharges/Resolution

Preventing illicit discharges from neighborhoods: Outreach programs and public education are some of the more effective practices to influence neighborhoods to become more aware of their runoff potential.

- Storm drain stenciling
- Car washing
- Vehicle fluid changing/recycling
- Septic system maintenance
- Swimming pool draining
- Household hazardous waste storage and disposal

Included in **Table 6** is the list of activities that originates from land uses above and if provides the potential pollutant and ways to help educate or prevent these activities from discharging harmful pollutants to the waters of the state. When Dorchester County field crews detect an illicit discharge from one of the following sources, the flowcharts should be used to determine how to resolve or eliminate the discharge. Once the field operations have been successful in locating a source of the illicit discharge, the office personnel should contact the following groups appropriately:

- All municipalities (MS4s) – Send letter to appropriate City/County’s department
- Non MS4s – Send letter to appropriate department and to SCDHEC
- Private Citizens – Send a letter to the appropriate party and to SCDHEC

Table 6: Pollution Causing Activities

Activity	Pollutant	Resolution and Prevention
Car Wash	<ul style="list-style-type: none"> - Surfactants and detergents - Oil and Grease - Metals - Xylene 	<ul style="list-style-type: none"> - Nozzles with shut off valves - Storm drain plug and wet vacuum provisions for charity carwash events - Water bill inserts promoting environmentally safe car washing products - Promote car wash on grass vs. pavement or in the street - Require a permit - Include a kit of environmental safe soaps, etc...
Driveway Cleaning and Parking Lot Maintenance	<ul style="list-style-type: none"> - Oil and Grease - Chemicals - Hydrocarbons - Ethylene glycol 	<ul style="list-style-type: none"> - Installation and maintenance of filters
Lawn and Landscape Watering and Maintenance	<ul style="list-style-type: none"> - Fecal Coliform - Sediment - Nutrients 	<ul style="list-style-type: none"> - Public Education indicating importance of site specific application rather than broad casting pesticides, herbicides, and fertilizers - Signs and public pet waste bags with disposal cans
Swimming Pool Discharge	<ul style="list-style-type: none"> - Chlorine - Back flush water 	<ul style="list-style-type: none"> - Educational kiosks at retail outlets selling chemicals - Changes in local plumbing codes to require discharge to sanitary sewer systems
Building Maintenance (power-washing)	<ul style="list-style-type: none"> - Oil and Grease - Chemicals - Fecal Coliform 	<ul style="list-style-type: none"> - Educational Brochures

Continue on the next page...

Activity	Pollutant	Resolution and Prevention
Dumping and Spills	<ul style="list-style-type: none"> - Hydrocarbons - Oil and Grease - Metals - Xylene - Ethylene glycol 	<ul style="list-style-type: none"> - Community recycling centers - Pollution hotlines - Fines - Outreach material at auto parts stores
Vehicle Fueling	<ul style="list-style-type: none"> - Oil and Grease - Hydrocarbons - Xylene 	<ul style="list-style-type: none"> - Educational posted signs at fueling stations - Fueling area must be covered
Vehicle Maintenance and Repair	<ul style="list-style-type: none"> - Oil and Grease - Hydrocarbons - Ethylene glycol 	<ul style="list-style-type: none"> - Outreach materials at auto parts stores and service stations - Community oil recycling stations - Directories of used oil collection stations - Pollution hotlines
Outdoor Fluid Storage	<ul style="list-style-type: none"> - Oil and Grease - Hydrocarbons 	<ul style="list-style-type: none"> - Posted signs of potential hazard - Covered with secondary containment
Road Maintenance	<ul style="list-style-type: none"> - Hydrocarbons - Oil and Grease - Trash and Pollutants 	<ul style="list-style-type: none"> - Education information
Septic System Maintenance and Overflow	<ul style="list-style-type: none"> - Surfactants - Fecal Coliform 	<ul style="list-style-type: none"> - Water bill inserts informing the need for routine visual inspections
Loading and Unloading Areas	<ul style="list-style-type: none"> - Oil and Grease - Hydrocarbons 	<ul style="list-style-type: none"> - Spill prevention and response training - Identification of potential spill areas - Inventory of harmful materials - Employee training
Industrial Process Water and Rinse Water	<ul style="list-style-type: none"> - Temperature - Surfactants - Phenols - Chlorine 	<ul style="list-style-type: none"> - Business outreach and education - Spill prevention and response training - Employee training - Site Inspections

Appendix F
Enforcement Response Plan

Town of Summerville

Enforcement Response Plan



June 2018

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Introduction

The purpose of this Enforcement Response Plan (ERP) is to provide guidance for identifying types of violations and enforcement responses available to the Town of Summerville which can be used to achieve compliance for practices as stated in the Stormwater Management Ordinance (No. _____) and meet the requirements of the SCDHEC Small Municipal Separate Storm Sewer System (MS4) Permit. The ERP also specifies criteria by which Town personnel can determine the enforcement response most appropriate for violations and noncompliance in regards to construction, post construction, and illicit discharge detection and elimination (IDDE). The ERP is designed to achieve the following objectives:

- Prevent pollutants from entering the Municipal Separate Storm Sewer System (MS4) and causing environmental harm.
- Establish definitions for noncompliance.
- Provide equitable and consistent enforcement actions to the extent possible.
- Recover costs incurred by the Town due to site operator noncompliance.
- Penalize non-compliant site operators for violations.

Violations can be categorized as either minor or major. The severity of the violation can be based on the duration of the violation, the effect the violation caused on the environment, and whether or not the violator is a repeat offender. These key factors can be used in determining the severity of the violation but the classification is not limited to these only. Minor violations typically have not caused an immediate threat to the environment or MS4 and most often only require a verbal or written warning. Major violations are assessed when the operator has failed to comply with the stormwater ordinance or has not complied with violation notices, and such negligence has caused an immediate or significant impact on the environment or MS4. The Town may determine the severity of a violation at its discretion.

Enforcement Response Actions

If Town of Summerville officials determine that a project is not being carried out in accordance with the approved plan or that any project or action subject to Stormwater Management Ordinance (No. _____) is being carried out without approval, Town officials are authorized to take the following actions:

- (1) **Verbal Warnings:** given at the discretion of the inspector when the violation can be corrected within a reasonable amount of time as determined by the inspector and the violator is contacted and agrees to correct the problem. Verbal warnings should be noted on the inspection report, however, no formal Notice of Violation (NOV) is required. Verbal warnings are to be issued within twenty-four (24) hours of inspection.
- (2) **Written Warnings:**
 - a. **Notice of Violation (NOV)** – must specify the nature of the violation, required corrective action and date of a follow up inspection. Upon receipt of a NOV, the violator should submit a response and a plan for the correction and prevention of the violation conditions in writing within three (3) business days to the Town of

Summerville Engineering Department.

- b. **Stop Work Order** – applies to active construction sites. Can be issued when a site is determined to be active without proper permits or for failure to respond to a previously issued NOV. May also be issued by the Town/inspector if a major violation of the stormwater ordinance or illicit discharge is present that requires immediate action. Stop Work Orders are to be issued within three (3) business days of inspection.
- (3) **Revocation of approval:** Should the applicant or owner fail to bring the project into compliance with the written notice and stop work order, he shall then be subject to immediate revocation of the stormwater management plan permit and all building permits issued by the Building department with respect to the project and to the penalties described in this article. Notice of such revocation shall be made by certified receipted delivery. In the event of such revocation, no stormwater management plan permit fees or building permit fees shall be refunded.
- (4) **Denial of Certificate of Occupancy (CO):** Upon final inspection of a construction site, if the site is not properly stabilized or the operator has failed to comply with an outstanding notice of violation, then the Town inspector may deny the issuance of a Certificate of Occupancy (CO) until final stabilization or compliance has been achieved.
- (5) **Civil Penalties:** The Town may impose a monetary civil penalty of no more than two hundred fifty dollars (\$250) per day for minor violations of the Town’s stormwater ordinance and no more than one thousand dollars (\$1,000) per day for major violations. Each day of a violation constitutes a separate violation. Major and minor violations are defined in section 22-20 of the Town ordinance as follows:

Major violation means any action (knowingly or otherwise) that creates or has the potential to create an adverse impact due to flooding or water quality impairment to more than one property, as a result of nonconformance with the stormwater management ordinance.

Minor violation means any action (knowingly or otherwise) that creates or has the potential to create an adverse impact due to flooding or water quality impairment to an adjacent property or the property owner's own facilities, as a result of nonconformance with the stormwater management ordinance.

If an enforcement action results in civil litigation, the violator shall be responsible for court costs related to the litigation. Civil penalties can be assessed based on the following criteria:

- a. Severity of impact to public health and/or the environment.
- b. Economic benefit gained by the violator.
- c. Amount of effort put forth by the violator to correct the violation.
- d. Enforcement costs incurred by the Town.
- e. Recurring violations or repeat violators.

Civil litigation may be used as a response in the following situations:

- a. Previous efforts have failed to restore compliance.
- b. The violator fails to pay assessed fines.
- c. The Town determines it needs to recover losses due to the violator's noncompliance.
- d. It is necessary to stop or prevent activities that threaten human health and/or the environment.

(6) **Criminal penalties:** In addition to any applicable civil penalties, any person who negligently, willfully or intentionally violates any provision of the Stormwater Management Ordinance will be guilty of a misdemeanor and shall be punished within the jurisdictional limits of the municipal court per the Town of Summerville Code of Ordinances' General Provisions. This includes a fine of up to \$500 and/or imprisonment for a period not to exceed thirty (30) days.

(7) **Appeal of Civil Penalties:** Any civil penalty for a violation of the Town's Stormwater Ordinance shall become final unless the person named therein requests a hearing before the Construction and Code Board of Adjustments and Appeals. Such request shall be made in writing no later than thirty (30) calendar days after the date such notice order or revocation is served.

(8) **Appeal of Criminal Penalties:** Any appeal from a conviction in municipal court for a violation of the Town's Stormwater Ordinance shall be to the Circuit Court for the 1st Judicial Circuit in the manner prescribed by state statute.

Enforcement Response Levels

Violations can vary and the corrective action taken will be on a case by case basis. The following levels can be used as guidance on determining the best course of action to take for the different types of violations.

Level 1 – Administrative issues with relatively low environmental risk and an infrequent record of violation by the operator should cause the following enforcement sequence: **Verbal Warning -> Notice of Violation -> Stop Work Order -> Citation -> Civil Litigation.**

Level 2 – Record keeping and site conditions that pose a relatively moderate/significant environmental risk to discharge pollutants into the MS4 or adjacent receiving waterbody should cause the following enforcement sequence: **Verbal or Written Warning -> Notice of Violation -> Stop Work Order -> Citation -> Denial of Certificate of Occupancy -> Civil Litigation.**

Level 3 – Any immediate threat to human health and/or the environment or demonstrated willful noncompliance by an operator should cause the following enforcement sequence: **Stop Work Order -> Citation -> Civil Litigation and/or Criminal Prosecution.**

Construction Site Violations

Table 1 identifies the resulting environmental impact of the violation, whether or not it is a reoccurring offense or offender, whether it has a minor or major environmental impact, and the recommended level of enforcement responses. The recommended enforcement response, as indicated by the levels described above, can be utilized at the discretion of the Town or its designee.

Table 1. Construction Violation Responses

Result of Violation	Repeat Offense/Offender	Category	Recommended Enforcement Response
Potential for or minimal sediment deposition	No	Minor	Level 1
	Yes	Minor	Level 2
Sediment deposition occurs without impacting sensitive areas	No	Minor	Level 1
	Yes	Major	Level 2
Major sediment deposition or pollutant discharge	No	Major	Level 2
	Yes	Major	Level 3
Construction occurring without a land disturbance permit	No	Major	Level 3
	Yes	Major	Level 3

Illicit Discharge Detection and Elimination (IDDE)/Improper Disposal

Evidence of an illicit discharge or improper disposal must be reported immediately to the Town Engineer. Since the Dorchester County Public Works Department is responsible for implementation of Section 4.2.3 (Illicit Discharge Detection and Elimination) of the Town's MS4 Permit, as per the Intergovernmental Agreement (ILA) between the Town and the County, the Town Engineer will coordinate with the County in regards to enforcement of potential illicit discharges. If the illicit discharge is suspected to be an immediate danger to the health of humans and animals and/or the environment, the Town is to immediately contact SCDHEC Emergency Response Section (ERS) at 1-888-481-0125.

The following procedures shall be used when an illicit discharge is discovered:

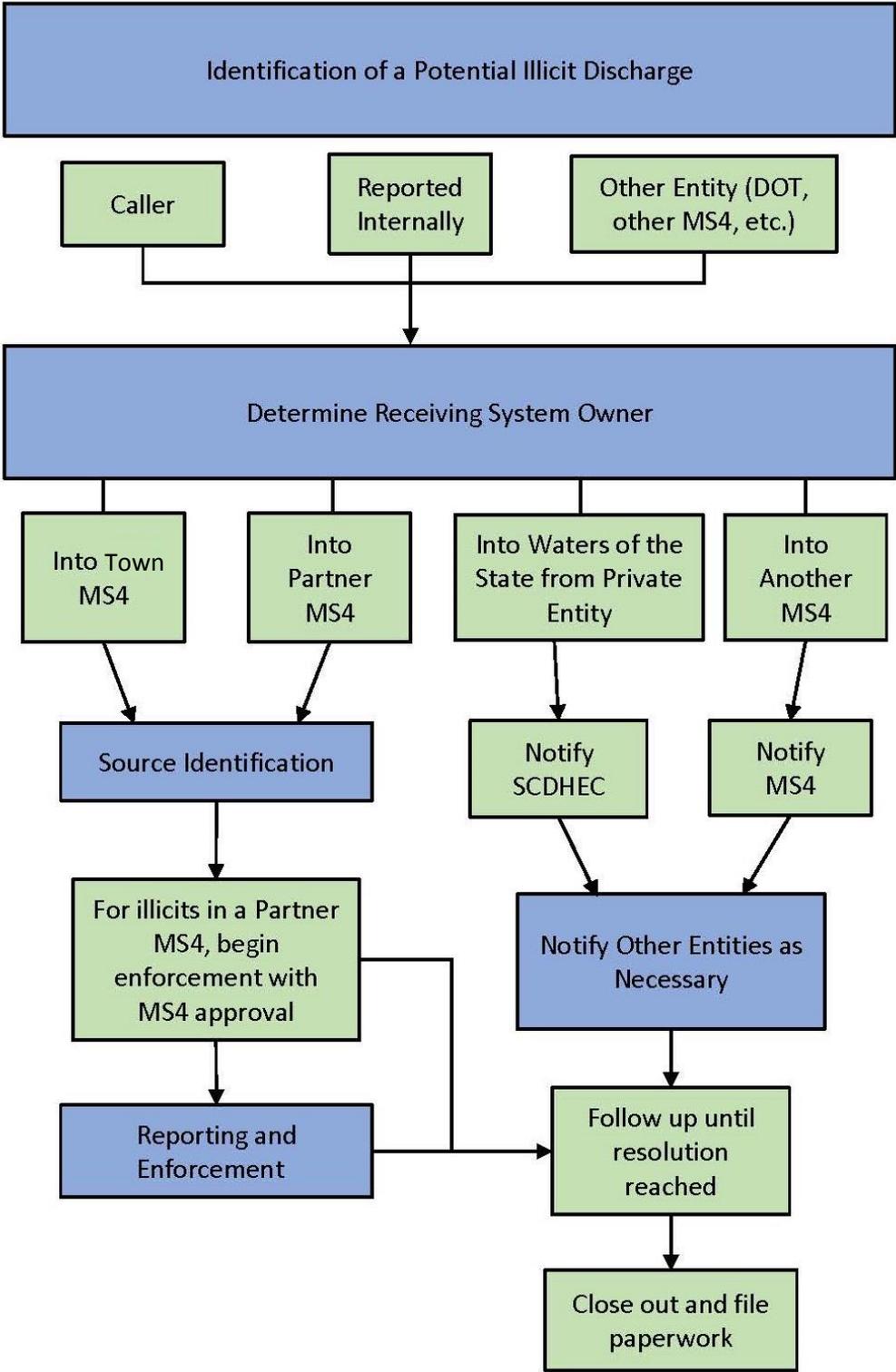
- If the source of the illicit discharge is evident at the time of inspection, a verbal notice may be issued to the responsible party.
- A NOV or stop work order depending on the severity and nature of the illicit, must be issued within twenty-four (24) hours after the source of the discharge is located. The operator or party responsible for the source of the illicit discharge will be required to eliminate the discharge within five (5) business days of written notification. The Town has the option of changing the required elimination time based on the severity of the

illicit discharge.

- A follow up inspection will be performed within ten (10) business days of the initial notification. If the illicit discharge has not been corrected at the time of the follow-up inspection, a second NOV will be issued within twenty-four (24) hours. The operator or responsible party will have three (3) business days from the second NOV to eliminate the illicit discharge.
- A second follow-up inspection will be performed within five (5) days after issuance of the second NOV. If the illicit discharge has not been corrected, the Town may proceed with civil action against the operator or responsible party.
- The Town may impose Civil and/or Criminal penalties, at the Town's discretion.

Figure 1 represents the steps to be taken for illicit detection or improper disposal.

Figure 1. Illicit Discharge/Improper Disposal Responses



Post Construction Violations

The Town of Summerville requires all developers of new and re-development projects to sign a Permanent Maintenance Covenant which designates the developer or designee/owner as the responsible party for maintaining and ensuring the proper function of all post construction BMPs. As per the SCDHEC MS4 Permit (effective January 1, 2014) the Town will be responsible for inspecting all post construction BMPs, permitted by the Town after the effective date, at least once during the permit cycle. Following the Town's inspection, an inspection report will be generated and sent to the BMP owner.

If no problems are noted during the inspection, then the inspection report will indicate that no "recommended items" or "required items" exist at that time. If minor maintenance issues are discovered during the inspection, then the inspection report will identify "recommended items" and indicate that the owner should take action to address those issues and that the owner is responsible if those issues lead to BMP failure. If major maintenance issues are found during the inspection, then the inspection report will identify "required items" and indicate that the owner must take action to address those issues. Required items are those that directly relate to the safety and primary design function of the BMP, such as but not limited to: excessive woody vegetation on slope of dam/spillway; evidence of burrowing animals; leaks; seepage; or cracks in or major erosion of the dam of a detention pond.

The following levels of enforcement response will apply to post-construction inspections:

Level 1 – Inspection indicates that no recommended or required items exist at this time:

Inspection Report

Level 2 – Inspection indicates that recommended items exist: **Inspection Report -> Verbal Consultation-> Verbal or Written Follow-up**

Level 3 – Inspection indicates that required items exist: **Inspection Report (requests corrective action plan) -> Notice of Violation -> Town Corrective Action (costs assessed to owner) -> Civil Litigation and/or Criminal Prosecution**

Table 2 outlines the actions to be taken if a post construction BMP is determined, upon inspection, to have failed or have the potential to fail or cause sediment or pollutants to enter a receiving waterbody, sensitive areas, or the MS4. The Town reserves the right to skip any intermediary steps dependent upon the severity of the environmental impact and/or the duration of the violation.

Table 2. Post Construction Inspection Responses

Result of Violation	Category	Recommended Response
Inspection report indicates no recommended or required items	Initial Contact	Level 1
Inspection report indicates recommended items only	Initial Contact	Level 2: Verbal Consultation
	Follow-up Contact	Level 2: Verbal or Written Follow-up
Inspection report indicates required items (may also include recommended items)	Initial Contact	Level 3: Notice of Violation (Corrective action plan requested)
Corrective action to repair required items not taken	Compliance Inspection	Level 3: Town Corrective Action; Civil Litigation and/or Criminal Prosecution, if warranted

Appendix G
ILA with Dorchester County

2. The Town shall implement and operate three (3) of the six (6) minimum control measures as identified in the NPDES Phase II MS4 General Permit. The Town shall operate the following sections of the NPDES General Permit: Section 4.2.4, Construction Site Runoff Control, Section 4.2.5, Post Construction Stormwater Management in New Development and Redevelopment, and Section 4.2.6, Pollution Prevention/Good Housekeeping for Municipal Operations. While the Town will be responsible for conducting and ensuring adequate plan review, inspections and enforcement activities for compliance with Sections 4.2.4 and 4.2.5 of the NPDES Permit, this does not exclude the County from assisting in these activities when deemed necessary or appropriate by the Town and County.

B. Obligations of the County

1. The County agrees to fulfill the responsibilities granted it by the Town pursuant to this Agreement.
2. The County shall implement and operate three (3) of the six (6) minimum control measures as identified in the NPDES Phase II MS4 General Permit. The County shall operate the following sections of the MS4 Permit: Section 4.2.1, Public Education and Outreach on Stormwater Impacts, Section 4.2.2, Public Involvement/Participation, and Section 4.2.3, Illicit Discharge Detection and Elimination (IDDE).
3. Any costs for Public Education/Outreach or Public Involvement/Participation (i.e. contractual costs for the Ashley-Cooper Stormwater Education Consortium or the Clemson Extension Service Clear Water Program) shall be the responsibility of the County.
4. To address Section 4.2.3 (IDDE) responsibilities, the County must perform any required dry weather field screening, monitoring, recordkeeping and reporting for potential illicit discharges. Any potential illicit discharge identification, subsequent investigation, and follow-up procedures performed by the County must be reported to the Town.
5. The County agrees to assist with information and non-legal advice regarding defense of any challenges to the Town's Ordinances and program compliance.

C. Miscellaneous

1. This Agreement will become effective upon execution by authorized representatives of both parties.
2. This Agreement may not be revised or modified except by written mutual agreement of the Town and the County.
3. The Town and County reserve the right to challenge any of the terms, conditions, or provisions of the Permit, its enabling laws, rules and regulations and/or interpretations thereof by authorities asserting jurisdiction.
4. If any section, subsection, sentence, clause, phrase, or portion of this Agreement is for any reason held invalid or unconstitutional by any court or competent jurisdiction, such provision and such holding shall not affect the validity of the remaining portion of this Agreement.

5. Those rights and obligations under this Contract, which, by their nature should survive, shall remain in effect after termination, suspension or expiration hereof.
6. The failure of either Party to enforce at any time any of the provisions of this Contract shall in no way be construed as a waiver of such provision not in any way affect the right of either Party thereafter to enforce each and every provision of this Contract. There can be no assignment by either party of any rights or responsibilities hereunder without the consent of the other party.
7. All parties acknowledge that nothing under this agreement creates a right of action for any person or entity, and that this contract does not create or otherwise permit third party beneficiary rights or related causes of action. It is further acknowledged that the parties hereto are governmental entities providing these services in a governmental capacity. Accordingly, it is agreed that the parties are sovereigns that are, to the extent permitted by the South Carolina Tort Claims Act, and other applicable law, protected by sovereign immunity with respect to all acts and omissions related hereto.
8. The Town and County agree to enact, follow and enforce such ordinances, rules, policies, and regulations as may be necessary to carry out the terms of this Agreement.
9. Any notices which may be permitted or required hereunder shall be in writing and shall be deemed to have been duly given as of the date and time the same are personally delivered or are deposited with the United States Postal Service, postage prepaid, and addressed as follows:

If to the County:
Attn: Stormwater Program, Dorchester County Public Works, 2120 E. Main Street, Dorchester, S. C. 29437

If to the Town:
Town Engineer, Town of Summerville, 200 S. Main Street, Summerville, S. C. 29483
10. This agreement shall be effective as of the date listed above, and shall continue from year to year unless terminated. Either party may terminate this agreement by delivering 12 months' advance written notice of termination to the other Party's address listed above.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals, by and through the undersigned agents, this _____ day of _____, 20_____.

**SIGNED, SEALED & DELIVERED
IN THE PRESENCE OF:**

DORCHESTER COUNTY

By: _____

Its: _____

(as to County)

THE TOWN OF SUMMERSVILLE

By: _____

Its: _____