Horry County Stormwater Management Plan (SWMP)

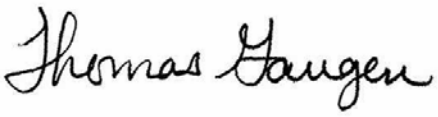
Adopted July 1, 2014

4401 Privetts Road
Conway, SC 29526
Telephone: (843) 915-5160

Prepared in accordance with SCDHEC Permit #SCR030000

CERTIFICATION OF STORMWATER MANAGEMENT PLAN

I certify that Horry County has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in the NPDES General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems (SMS4), Permit Number SCR030000.

Thomas Garigen	Horry County Stormwater Manager
Name (Print)	Title
	June 30, 2014
Signature	Date

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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

Horry County
NPDES Stormwater Management Plan (SWMP)

1.0 Introduction

This Stormwater Management Plan (SWMP) is designed to reduce the discharge of pollutants from Horry County'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 program components and to address the terms and conditions of the new permit. This document is meant to be a living document that will be revised on an annual basis to reflect accomplishments, revisions to program 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. SCR030000, 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.

Updates to the SWMP will be included in Appendix B.

Horry County, including all of its municipalities, has over 200,000 residents and encompasses more than 1,100 acres from the Little Pee Dee River to the Atlantic Ocean and bordered by North Carolina to the north and Georgetown County to the south. The western portion of the County is rural and is dominated by forest and agricultural land. The eastern portion of the County is suburban and has numerous residential neighborhoods and commercial establishments, many of which are geared towards the tourism industry. The County is bisected by the Waccamaw River and the Intracoastal Waterway, and has extensive wetlands throughout its landscape. Soils range from fine sands to mucky clays. Much of the suburban development is served by sewer provided by Grand Strand Water and Sewer Authority, while the rural areas depend largely on onsite wastewater treatment systems (i.e. septic systems. The County operates numerous buildings and facilities and owns thousands of miles of roadways and drainage easements.

Horry County manages stormwater via its Stormwater Management Department and its Stormwater Utility Fee, which were both established in 2000. The Department currently has a

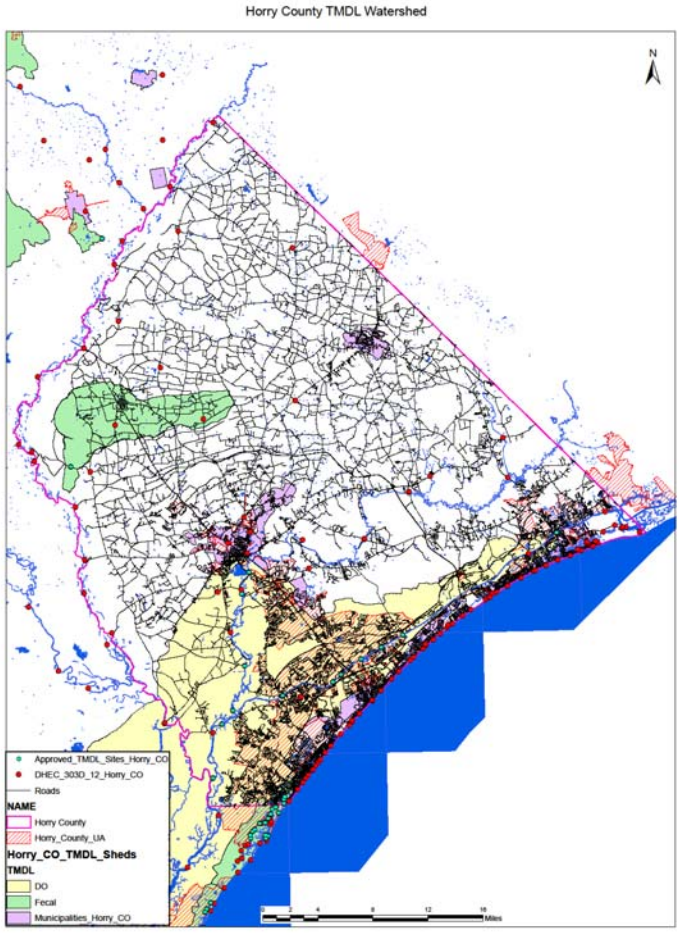
budget of more than $4.5 million and employs more than 25 staff. The Department maintains a fleet of vehicles and heavy equipment. In addition to drainage improvement and stormwater management activities, the Department also operates a mosquito control program. The Department shares space in the Public Works Building and operates two satellite offices. The Department is also responsible for maintenance of several managed watershed conservation districts that were established by the South Carolina Legislature as tax districts with elected commissioners. These watersheds are mostly rural, agricultural areas.

2.0 Notice of Intent (NOI) Information

The following information is applicable to Horry County.

Table 1: NOI Information

General Permit Section	NOI Information	Description
2.2.1 Information on the Permittee:		
2.2.1.1	Name of Municipality:	Horry County
	Mailing Address:	Tom Garigen Stormwater Manager 4401 Privetts Road Conway, SC 29526
	Telephone Number:	(843) 915-5160
2.2.1.2	Public Entity Type:	County
2.2.2 Information on the SMS4:		

General Permit Section	NOI Information	Description
2.2.2.1	Map of Horry County:	**SMS4 Location:** Horry County **SMS4 Center Coordinates:** Latitude: N33° 58.05' Longitude: W79° 01.64' **SMS4 Urbanized Area:** Approximately 130 square miles 

General Permit Section	NOI Information	Description
2.2.2.2	Major Receiving Waters:	Alfred Creek, Alligator River, Atlantic Ocean*, Bear Creek, Bear Swamp*, Big Buckskin Creek, Black Creek, Bob's Branch*, Boyd Canal, Brown Swamp*, Buck Creek, Bull Creek, Calabash River, Cedar Creek*, Chinners Swamp**, Clark Creek, Collins Creek, Crab Tree Swamp*, Crooked Creek, Cypress Creek, Dunn Sound, Dunn Sound Creek*, Dwight Creek, Eden Saltworkers Creek, Enterprise Creek, Fisherman Creek, Garden City Canal**, Great Pee Dee River*, Hellhole Swamp*, Horse Creek, Horse Ford Creek, Horsepen Creek, House Creek*, Huggins Creek, Intracoastal Waterway**, James Creek, Jordan Creek, Kingston Lake*, Lake Swamp*, Little Pee Dee River*, Little River*, Lumber River*, Main Creek**, Marsh Creek, Mill Creek, Milliken Cove, Mullet Creek, Ned Creek, Nimrod Creek, Nixon Creek, Oatbed Creek, Old Dead River, Old Dock Creek, Old River, Peach Creek, Prince Creek, Reedy Creek, Salt Flat Creek, Savannah Creek, Sheephead Creek, Silver Creek, Silvers Creek, Simpson Creek*, Singleton Creek, Socastee Creek, Stanley Creek, Steritt Swamp*, Thorofare Creek, Trippiloo Creek, Waccamaw River**, Williams Creek

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

2.2.2.3	Indian Lands:	No portion of Horry County's SMS4 is located on Indian Country Lands.
2.2.2.4	List of Significant Entities within Horry County:	**The following entities operate a municipal separate storm sewer system within the Horry County portion of the Myrtle Beach Urbanized Area.** • SCDOT • Town of Atlantic Beach • Town of Briarcliffe Acres • City of Conway • City of Myrtle Beach • City of North Myrtle Beach • Town of Surfside Beach

2.2.2.5	Other Governmental Entities:	**Coastal Waccamaw Stormwater Education Consortium:** Responsible for the public education and outreach and the public participation/involvement components of the NPDES program. **Clemson University Cooperative Extension Service:** Responsible for the public education and outreach and the public participation/involvement components of the NPDES program.
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.

3.0 Special Conditions Applicable to Permitted Stormwater Discharges to Sensitive Waters

The SMS4 general permit requires that Horry County 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 SC DHEC Section 303(d) list,
- In Source Water Protection Areas (SWPA), and
- 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
  - Shellfish Harvesting Waters (SFH), or
  - Source Protection Waters.

3.1 Determination of Receiving Water Conditions and Impacts

The general permit requires Horry County to determine whether their SMS4 discharges to receiving waters within a TMDL watershed or on the most recent SC DHEC Section 303(d) impaired waters list. To meet this permit requirement, Horry County 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 Horry County's SMS4. Table 3 in Section 3.4 provides a list of the impaired waterbodies on the 2012 303(d) list to which Horry County's SMS4 contributes, 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, Horry County 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, Horry County will initiate sampling within 18 months of the effective date of the TMDL.

A list of water bodies within Horry County's regulated SMS4 area, and/or to which Horry County's SMS4 area drains, can be found in Table 2. Note that no WLA are allocated to SMS4 in the TMDL for AIWW-Waccamaw River

Table 2: List of Approved TMDLs

TMDL Watershed	Pollutant of Concern	Monitoring Stations	Effective TMDL Date
AIWW-Waccamaw River	DO	MD-110, MD-111, MD-127, MD-136, MD-145, MD-137, MD-146, MD-085, MD-087, MD-088, MD-089, MD-091, MD-125	7/27/99
Murrells Inlet Estuary	FC	04-26, 04-01, 04-01A	7/19/05

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 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 Horry County SMS4 can be found in the Table 3 below.

Table 3: 2012 **303(d) List of Impaired Stations within Horry County's SMS4 Area and/or that the SMS4 Area Drains Into**

Basin	Station Description	Station	Pollutant of Concern	Projected TMDL Date
PEEDEE	Lumber River @ Ricefield Cove	PD-038	DO, HG, FC	2021, 2025, 2021
PEEDEE	Lumber River @ Causey Landing	PD-664	HG	2025
PEEDEE	Bob's Branch @ Bridge on S-26-637 2.2 MI N of Green Sea	RS-06009	DO	2022
PEEDEE	Lake Swamp @ S-26-99	PD-176	FC	2014
PEEDEE	Loosing Swamp @ S-26-23 3.7 MI NE of Aynor	RS-03513	DO	2014
PEEDEE	Cedar Creek @ S-26-23	PD-351	DO	2013
PEEDEE	Little Pee Dee River @ Sandy Bluff	PD-054	HG	2025
PEEDEE	Little Pee Dee River @ Gunter's Lake	PD-657	HG	2025
PEEDEE	Little Pee Dee @ Hughes Landing	PD-691	HG	2025
PEEDEE	Little Pee Dee River off end of S-26-135 at Punchbowl Landing	PD-350	HG	2025
PEEDEE	Little Pee Dee River @ Hwy 378	PD-620	HG	2025
PEEDEE	Waccamaw River @ S-26-105 Reeves Ferry Road	PD-369	FC	2023
PEEDEE	Waccamaw River @ SC 9 7.0 MI W of Cherry Grove	MD-124	HG	2024
PEEDEE	Simpson Creek @ SC 905	PD-363	FC	2024
PEEDEE	Hellhole Swamp @ S-26-67 6.6 MI SW of Loris	RS-05561	DO	2021
PEEDEE	Kingston Lake NR Pump Station on Lakeside Dr. Conway	MD-107	DO, FC	2022, 2013
PEEDEE	Crab Tree Swamp @ Long St BL Outfall of Conway #1	MD-158	DO, FC	2021, 2015
PEEDEE	Crab Tree Swamp @ Bridge on US 501 1.5 MI NW of Conway	RS-04375	FC	2015
PEEDEE	Brown Swamp @ US 701	RS-10389	DO	2022
PEEDEE	Waccamaw River @ SC 31	CSTL-553	HG	2025

Basin	Station Description	Station	Pollutant of Concern	Projected TMDL Date
PEEDEE	Waccamaw River @ SEC RD 105	CSTL-554	HG	2025
PEEDEE	Steritt Swamp @ Bridge on Unnumbered Dirt Rd (Steritt Swamp Rd) Across from Horry CO Solid Waste Authority 4.8 MI E of Conway	RS-06165	DO,FC	2020, 2015
PEEDEE	Waccamaw River @ SEC RD 901	CSTL-555	HG	2025
PEEDEE	Waccamaw River @ Pitch Landing	CSTL-556	HG	2025
PEEDEE	Waccamaw River @ Toddville	MD-144	HG	2025
PEEDEE	Bear Swamp @ S-26-110	PD-638	BIO	2018
PEEDEE	Intracoastal Waterway @ Socastee	CSTL-558	HG	2025
PEEDEE	Unnamed Tributary to Intracoastal Waterway @ SC 707 1.2 MI ENE of Socastee & SC 544	RS-03332	FC	2015
PEEDEE	Waccamaw River ¼ MI Upstream of JCT with Intracoastal Waterway	MD-136	HG	2025
PEEDEE	Waccamaw River 1 MI Downstream of Bucksville Landing at Big Bend in River	MD-145	HG	2025
PEEDEE	Waccamaw River @ Bucksport Landing	CSTL-557	HG	2025
PEEDEE	Great Pee Dee River Above Hwy 701 Bridge	CSTL-559	HG	2025
PEEDEE	Intracoastal Waterway @ North Myrtle	MD-163	HG	2025
PEEDEE	Little River Jetty	01-01	FC	2015
PEEDEE	Mouth of Dunn Sound Creek	01-02	FC	2015
PEEDEE	Bid Bend Up Dunn Sound Creek	01-05	FC	2015
PEEDEE	42nd Avenue – Cherry Grove	01-17	FC	2018
PEEDEE	53rd Avenue Bridge on Canal	01-17A	FC	2018
PEEDEE	Main Creek @ 53rd Avenue	01-19	FC	2018
PEEDEE	White Point Swash	02-01	FC	2018
PEEDEE	House Creek @ 53rd AVE Out From Boat Landing (01-19)	MD-276	DO, ZN	2018, 2024
PEEDEE	WAC-09A-Whitepoint Swash	WAC-009A	ENTERO	2019
PEEDEE	8th Avenue North Myrtle Beach	WAC-021	ENTERO	2019
PEEDEE	23rd Avenue South North Myrtle Beach	WAC-024	ENTERO	2019
PEEDEE	Singleton Swash	02-02	FC	2018
PEEDEE	Canepatch Swash	02-03	FC	2018

Basin	Station Description	Station	Pollutant of Concern	Projected TMDL Date
PEEDEE	WAC-015-Singleton Swash Arcadia	WAC-015	ENTERO	2019
PEEDEE	Bear Branch Swash	WAC-015A	ENTERO	2019
PEEDEE	11th Avenue N Surfside	WAC-031	ENTERO	2019
PEEDEE	3rd Avenue N Surfside	WAC-032	ENTERO	2019
PEEDEE	3rd Avenue S Surfside	WAC-033	ENTERO	2019
PEEDEE	13th Avenue S Surfside	WAC-035	ENTERO	2019
PEEDEE	Withers Swash	03-01	FC	2018
PEEDEE	Midway Swash – Pebble Beach	03-02	FC	2018
PEEDEE	WAC-025A-Midway Swash	WAC-025A	ENTERO	2019
PEEDEE	64th Avenue North Myrtle Beach	WAC-017	ENTERO	2019
PEEDEE	50th Avenue North Myrtle Beach	WAC-018	ENTERO	2019
PEEDEE	Ocean Lakes Campground	WAC-029	ENTERO	2019
PEEDEE	WAC-016A-Cane Patch Swash Myrtle Beach	WAC-016A	ENTERO	2019
PEEDEE	WAC-020-24th Avenue North Myrtle Beach	WAC-020	ENTERO	2019
PEEDEE	WAC-022A-Withers Swash	WAC-022A	ENTERO	2019
PEEDEE	WAC-028-Pirateland Swash	WAC-028	ENTERO	2019
PEEDEE	WAC-29A-S Ocean Lakes	WAC-029A	ENTERO	2019
PEEDEE	WAC-31A-Swash at 5th	WAC-031A	ENTERO	2019

3.5 Discharges to Classified Waters

For discharges to Classified Waters, protection will be provided through BMP applications conducted through implementation of the minimum control measures in section 4.2. The BMP implementation will not cause or contribute to violations of water quality standards in water bodies with impaired monitoring stations. A list of Classified Waters in Horry County is provided in the Table 4 below.

Table 4: Classified Waters

Water Body	Classification	Description
Coastal Waters (Atlantic Ocean)	SFH	From the land to the 3 mile limits of State jurisdiction in the Atlantic Ocean
Dunn Sound	SFH	The entire sound

Water Body	Classification	Description
Hog Inlet/Cherry Grove Inlet	SFH	The entire inlet
Little River Inlet	SFH	The entire inlet from its confluence with the Atlantic Intracoastal Waterway to its confluence with the Atlantic Ocean
Murrells Inlet	SFH	The entire inlet

3.6 Discharges to Source Water Protection Areas

For discharges to Source Water Protection Areas, protection will be provided through BMP applications conducted through implementation of the six minimum control measures in Section 4.2.

4.0 Stormwater Management Plan (SWMP)

Table 5: SWMP Requirements

SWMP REQUIREMENTS			
Develop and Implement SWMP	**Not Started:** ☐ **In Progress :** ☐ **Completed:** ☒		
	Section: 4.1.2		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Revise and update written SWMP document and submit the SWMP to SC DHEC Bureau of Water	Deadline: July 1, 2014	Once	Horry County Stormwater Management
Update Stormwater Management Ordinance	**Not Started:** ☒ **In Progress :** ☐ **Completed:** ☐		
	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	Horry County Stormwater Management
Enforcement Response Plan (ERP)	**Not Started:** ☒ **In Progress :** ☐ **Completed:** ☐		
	Section: 4.1.5		

Milestone(s)	Schedule/Deadline	Frequency	Responsible Party
Develop & Implement an enforcement response plan (ERP)	Deadline: December 31, 2014	Once	Horry County Stormwater Management
Update Stormwater Management Plan	**Not Started: ☒ In Progress : ☐ Completed: ☐**		
	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	Horry County Stormwater Management

4.1.1 Requirements of the NPDES SMS4 General Permit

Horry County 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 County will revise and update the written SWMP document and submit the SWMP to SC DHEC Bureau of Water by July 1, 2014.

4.1.3 Contents of the SWMP

At a minimum, the County must include ordinances, or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of the SMS4 general permit. See Appendix D for Horry County's Stormwater Management Ordinance. By January 1, 2015, the County will 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.

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 Horry County 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 County will implement an enforcement response plan (ERP) by January 1, 2015, and revise as necessary. The ERP sets out Horry County'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 County will track instances of non-compliance either in hard-copy files or electronically.

4.1.5.3 Recidivism Reduction. – The County 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

Horry County 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

Horry County 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 County 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 County 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 County's SWMP.

4.1.10 SWMP Modifications

SC DHEC Bureau of Water may notify Horry County of the need to modify the SWMP document to be consistent with the permit, in which case Horry County will have ninety (90) days to finalize such changes to the plan.

Horry County will keep the SWMP document up to date during the term of the permit. Where Horry County 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 the 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, Horry County has partnered with both the Coastal Waccamaw Stormwater Education Consortium (CWSEC) 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. Horry County intends to work in cooperation with CWSEC and Clemson University/Carolina Clear in order to efficiently reach as many citizens as economically possible through public education and outreach efforts.

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, Horry County will implement the following BMPs:

- Continue Agreement with Coastal Waccamaw Stormwater Education Consortium (CWSEC) to Implement a Public Education and Outreach Program. See Appendix G for Contract.

- Continue Agreement with Clemson University/Carolina Clear to Implement a Public Education and Outreach Program. See Appendix H for Contract.
- Support Horry Soil and Water Conservation District Essay Contest
- Maintain Informational Website
- Target Audience Training

Table 6: Best Management Practices – Minimum Measure #1

PUBLIC EDUCATION AND OUTREACH BMPS			
Agreement with Coastal Waccamaw Stormwater Education Consortium	**Not Started:** ☐ **In Progress :** ☒ **Completed:** ☐		
	Section: 4.2.1.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Contract with the Coastal Waccamaw Stormwater Education Consortium (CWSEC) to implement a public education/outreach program for Horry County by utilizing: meetings, workshops, outreach materials and giveaways, presentations, and a website.	Throughout Permit Term	Annually	Horry County Stormwater Manager and CWSEC
Measurable Goal:			
• A program that provides public education concerning water quality issues in the watershed area of Horry County.			
Agreement with Clemson University Cooperative Extension Service – Carolina Clear	**Not Started:** ☐ **In Progress :** ☒ **Completed:** ☐		
	Section: 4.2.1.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Contract with Clemson University to implement a public education/outreach program for Horry County by utilizing: mass media campaigns, telephone surveys, and other outreach tools	Throughout Permit Term	Annually	Horry County Stormwater Manager and Clemson University/Carolina Clear
Measurable Goal:			
• A program that provides public education concerning water quality issues in the watershed area of Horry County.			
Support Horry Soil and Water Conservation District Essay Contest	**Not Started:** ☐ **In Progress :** ☒ **Completed:** ☐		
	Section: 4.2.1.1.3		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Horry County will support the Horry Soil and Water Conservation District and Horry County Schools Essay Contest for 5th and 7th graders	Throughout Permit Term	Annually	Horry County Stormwater Manager
Measurable Goal:			
• Support Horry Soil and Water Conservation District Essay Contest.			

Maintain Informational Website	Not Started: ☐ In Progress : ☒ Completed: ☐ Section: 4.2.1.1.3		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Horry County has developed and continues to maintain an informational website with specialized information for target audiences.	Throughout Permit Term	Ongoing	Horry County Stormwater Manager
Measurable Goal:			
• Active informational website containing information for target audiences.			
Target Audience Training	Not Started: ☐ In Progress : ☒ Completed: ☐ Section: 4.2.1.1.7		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Use training materials and workshops to communicate educational information to target audiences, such as HOAs and design professionals.	Throughout Permit Term	Ongoing	Horry County Stormwater Manager and CWSEC/Carolina Clear
Measurable Goal:			
• Distribute educational information and hold educational workshops for target audiences.			

4.2.2 Public Involvement/Participation (Minimum Measure #2)

4.2.2.1 Minimum Measure #2 Permit Requirements

Horry County will partner with Coastal Carolina University, the Coastal Waccamaw Stormwater Education Consortium, and Clemson University/Carolina Clear in order to efficiently reach as many citizens as economically possible through public involvement and participation efforts. These entities will provide the citizens of Horry County 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:
	Opportunities for citizen participation in the implementation of stormwater controls in Horry County will be provided by the Coastal Waccamaw Stormwater Education Consortium and Clemson University/Carolina Clear. Opportunities for citizen participation in volunteer water quality monitoring in Horry County will be provided by Coastal Carolina University and the Waccamaw Riverkeeper. Opportunities for citizen participation in litter cleanups in Horry County will be provided by Keep Horry County Beautiful and the Waccamaw Riverkeeper. Opportunities for citizen participation in Stormwater Advisory Board

4.2.2.1.2	Accessing information on this SWMP:
	Horry County will include the SWMP on the County's Stormwater Management webpage.
4.2.2.1.3	Incorporate written procedures for implementing the public involvement/participation (PIP) MCM in the SWMP:
	Horry County will continue to implement its written procedures (Contract) with Clemson University/Carolina Clear to Implement a Public Involvement and Participation Program

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 Horry County's Public Involvement/Participation program:

In order to meet the requirements of Minimum Measure #2, Horry County will:

- Continue to implement its written procedures (Contract) with the Coastal Waccamaw Stormwater Education Consortium and Clemson University/Carolina Clear to Implement a Public Involvement and Participation Program. See Appendix H for Contract and written procedures.
- Provide Access to Information for the SWMP
- Provide Opportunities to Participate in Volunteer Water Quality Monitoring
- Provide Opportunities to Participate in Litter Cleanups
- Provide Opportunities to Participate in a Stormwater Advisory Board

The following sections describe the components of Horry County's Public Involvement/Participation program:

Table 8: Best Management Practices – Minimum Measure #2

PUBLIC INVOLVEMENT/PARTICIPATION BMPS			
Opportunities for Citizen Participation	**Not Started:** ☐ **In Progress :** ☒ **Completed:** ☐		
	Section: 4.2.2.1.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Contract with the Coastal Waccamaw Stormwater Education Consortium (CWSEC) and Clemson University's Carolina Clear to implement a public involvement/participation program for Horry County, such as storm drain marking	Throughout Permit Term	Annually	Horry County Stormwater Manager and CWSEC/Clemson's Carolina Clear
Measurable Goal:			
• A program that will provide the citizens of Horry County opportunities to participate in activities and events relating to water quality preservation and water quality education.			

Provide Access to Information for the SWMP	Not Started: ☒ In Progress : ☐ Completed: ☐ 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	Horry County Stormwater Manager
Measurable Goal: • Horry County will include the SWMP on the County's webpage.			
Written Procedures for Implementing MCM#2	Not Started: ☒ In Progress : ☐ Completed: ☒ 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	Horry County Stormwater Manager and CWSEC/Clemson's Carolina Clear
Measurable Goal: • Signed Contract with the Coastal Waccamaw Stormwater Education Consortium and Clemson University/Carolina Clear.			
Support Volunteer Water Quality Monitoring	Not Started: ☐ In Progress : ☒ Completed: ☐ Section: 4.2.2.1.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Support Coastal Carolina University and the Waccamaw Riverkeeper in coordinating a volunteer water quality monitoring program	Throughout Permit Term	Annually	Horry County Stormwater Manager and Coastal Carolina University
Measurable Goal: • Active volunteer water quality monitoring program.			
Support Litter Cleanups	Not Started: ☐ In Progress : ☒ Completed: ☐ Section: 4.2.2.1.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Horry County will support litter cleanups sponsored by the Waccamaw Riverkeeper and Keep Horry County Beautiful	Throughout Permit Term	Annually	Horry County Stormwater Manager
Measurable Goal: • Provide the opportunity for public participation in litter cleanups.			
Stormwater Advisory Board	Not Started: ☐ In Progress : ☒ Completed: ☐ Section: 4.2.2.1.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Horry County will support a Stormwater Advisory Board	Throughout Permit Term	Ongoing	Horry County Stormwater Manager
Measurable Goal: • Provide the opportunity for public participation in a Stormwater Advisory Board.			

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

4.2.3.1 Minimum Measure #3 Permit Requirements

Horry County 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 County 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	Development of the storm sewer system map:
	In previous years, Horry County has developed a storm sewer system map showing the location of known outfalls, and names and locations of all waters of the United States that receive discharges from those outfalls. In addition, the County has performed full system inventory in high priority areas of the County. The storm sewer map will be updated as needed to show new outfalls due to new developments.
4.2.3.2.2	Identification of priority areas.
	Horry County will identify priority areas for more detailed screening of the SMS4 based on higher likelihood of illicit connections. The County will document the basis for its selection of each priority area and create a list of all priority areas identified in the system no later than 12 months after the effective date of permit coverage. The priority area list will be updated *annually* to reflect changing priorities and be available for review by the permitting authority.
4.2.3.2.3.a	Field screening procedures and implementation:
	Horry County will conduct dry weather field screening and / or analytical monitoring, when necessary, to identify the source of illicit discharges. At a minimum, Horry County will: Identify all field screening points within the priority areas where field screening and analytical monitoring will take place. A list of screening points will be developed. The County will also conduct field screening and analytical monitoring outside the priority areas at known non-stormwater discharges. The areas and the schedule for conducting the screening, and field screening points will be identified annually. Horry County will develop dry weather screening procedures which: Provide a description of which screening methods will be used and a description as to why it is appropriate; Provides a description of field screening equipment with respective methodologies for use; and All dry weather screening activities will be conducted after 72-hours of continuous dry conditions following at least 0.10 inch of rainfall.

The elimination of all illicit discharges will be documented. Documentation procedures will be developed as described in section 4.2.3.2.5/6

4.2.3.2.3.b Field screening assessment:

Horry County will assess the effectiveness of the Field Screening component of their IDDE program in the third permit year to determine if the level of effort is adequate in attaining the effective prohibition of non-stormwater discharges into the SMS4. Where updates are found to be necessary, Horry County will make such changes and include them as part of the re-notification required under Part 2.5 of Permit SCR030000.

4.2.3.2.3.c Procedures for notifying another MS4 of an illicit discharge:

For non-traditional MS4 permittees, if illicit connections or illicit discharges are observed related to another operator's municipal storm sewer system then Horry County will notify the other operator as soon as practical but no later than 3 business days.

4.2.3.2.3.d Addressing a notification of an illicit discharge by another operator:

Horry County will follow appropriate procedures when notified of an illicit discharge by another MS4 operator.

4.2.3.2.4/5 Tracing the source of an illicit discharge:

Horry County will develop procedures for conducting illicit tracking and elimination procedures.

After becoming aware of an illicit discharge, Horry County will initiate an investigation(s) to attempt to identify and locate the source of any continuous or intermittent non-stormwater discharge on as soon as practical.

Horry County will report immediately the occurrence of any dry weather flow believed to be an immediate threat to human health of the environment to SC DHEC Emergency Response, 1-888-481-0125.

Illicit Discharges suspected of being sanitary sewer overflows and/or significantly contaminated will be considered a high priority and will be reported to appropriate public utility owner within 24 hrs. Those discharges suspected of being associated with septic systems will be reported to SC DHEC as soon as practical but no later than 3 business days.

Investigations of illicit discharges suspected of being cooling water, wash water, or natural flows may be delayed until after all discharges suspected of having the potential to adversely impact either human health or water quality have been investigated, eliminated, and/or resolved.

At a minimum, Horry County will document the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.

4.2.3.2.6 Determining the source of the illicit discharge:

Horry County will determine and document through their investigations the source of all confirmed illicit discharges. If the source of the suspected illicit discharge is found to be a suspected non-compliance with an NPDES permit, the appropriate SCDHEC Regional Office will be notified.

a. If an illicit discharge is found, but within six (6) months of the beginning of the investigation neither the source nor the same non-stormwater discharge has been identified/observed, then Horry County will maintain written documentation for review by the permitting authority.

	b. If the observed discharge is intermittent, Horry County will document that a minimum of three (3) separate investigations were made to observe the discharge when it was flowing. If these attempts are unsuccessful, Horry County will maintain written documentation for review by the permitting authority. However, since this is an ongoing program, Horry County will periodically recheck these suspected intermittent discharges.
4.2.3.2.7	Corrective Action plan to eliminate illicit discharges:
	Once the source of the illicit discharge has been determined, Horry County will: a. Notify the responsible party of the problem as soon as practical but no later than 3 business days. b. Require the responsible party to conduct all necessary corrective actions to eliminate the non-stormwater discharge within 30 days. When, and if, elimination will take longer than 30 days, Horry County will require responsible parties to submit a plan with a schedule for elimination c. Conduct a follow-up investigation and field screening, consistent with Part 4.2.3.4/5 of this SWMP, to verify that the discharge has been eliminated. d. Document their follow-up investigations. e. Follow the SWMP ERP and include the resulting enforcement actions in the subsequent report.
4.2.3.2.8	Public reporting mechanism:
	Horry County will establish an illicit reporting hotline for the public and staff to report illicit discharges. The hotline number is (843) 381-8000. The County will also establish an online form for reporting suspected illicit discharges. The County will establish and implement citizen request response procedures in the illicit tracking procedures document created for section 4.2.3.2.4/5. The citizen response procedures in the illicit tracking procedures document will: a. Develop a written spill/dumping response procedure for responding to public notices of illicit discharges, the various responsible agencies and their contacts, and who would be involved in illicit discharge incidence response. b. Include procedures for inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party to achieve and maintain compliance.
4.2.3.2.9	Employee training:
	Horry County will implement a training program for all appropriate municipal staff, which, as part of their normal job responsibilities, may come into contact with, or otherwise observe, an illicit discharge or illicit connection to the storm sewer system. This BMP will be implemented through training for Pollution Prevention in Section 4.2.6.5

4.2.3.2 Minimum Measure #3 BMP Implementation

In order to meet the requirements of Minimum Measure #3, Horry County 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, Horry 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 County's Illicit Discharge Detection and Elimination (IDDE) program. Horry County will review and update its 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, Horry County 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 Horry County's Illicit Discharge Detection and Elimination (IDDE) program.

Table 10: Best Management Practices - Minimum Measure #3

IDDE BMPs			
Update Storm Sewer Map	**Not Started:** ☐ **In Progress :** ☒ **Completed:** ☐		
	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	Horry County Stormwater Manager
Measurable Goal:			
• 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: ☒ In Progress : ☐ Completed: ☐ Section: 4.2.3.2.2		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Create a map and GIS data layer for illicit discharge priority areas based on the higher likelihood or illicit connections. The map will be updated annually.	Deadline: December 31, 2014	Annually	Horry County Stormwater Manager
Measurable Goal: • The priority area map and GIS data 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: ☒ In Progress : ☐ Completed: ☐ Section: 4.2.3.2.3a/3c/3d/4/5/7/8		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Develop illicit discharge section for the ERP Update the IDDE Manual to include: • 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 field screening • List of outfalls to be screened in priority areas (updated annually) • Field screening documentation procedures • Illicit discharge tracking procedures • Illicit discharge elimination procedures • Illicit discharge reporting procedures • Illicit discharge documentation procedures • Procedures for responding to public reports of suspected illicit discharge • Corrective action plan	Deadline: December 31, 2014	As Needed	Horry County Stormwater Manager
Measurable Goal: • The Field Screening and Illicit Discharge Tracking procedures will provide the methodology by which outfall screening and illicit tracking will be conducted.			

Conduct Field Screening	Not Started: ☒ In Progress : ☐ Completed: ☐ Section: 4.2.3.2.3a		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Conduct dry weather flow screening at outfalls in the priority areas and at dry weather discharges.	Deadline: December 31, 2015	Annually	Horry County Stormwater Manager

Measurable Goal:

- The Field Screening activities will be used to identify potential illicit discharges.

Conduct Illicit Tracking	**Not Started:☒ In Progress :☐ Completed:☐** **Section: 4.2.3.2.4/5**		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Conduct illicit discharge tracking at outfalls identified as potential illicit discharges by the field screening effort	Deadline: December 31, 2015	Annually	Horry County Stormwater Manager

Measurable Goal:

- Determine source and eliminate illicit discharges.

Field Screening Assessment	**Not Started:☒ In Progress :☐ Completed:☐** **Section: 4.2.3.2.3b**		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
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	Horry County Stormwater Manager

Measurable Goal:

- 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:☒ In Progress :☐ Completed:☐** **Section: 4.2.3.2.5/6**		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Create a document for illicit discharge tracking and elimination activities to include: • 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	Horry County Stormwater Manager

Measurable Goal:

- Document of Illicit Tracking and Elimination activities.

Develop Public Reporting Mechanism	Not Started: ☐ In Progress : ☐ Completed: ☒		
	Section: 4.2.3.2.8		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Create a hotline and online form to promote, publicize, and facilitate a reporting mechanism for the public and staff to report illicit discharges	Deadline: December 31, 2016	Once	Horry County Stormwater Manager
Measurable Goal:			
• Provide a means for the public to report potential illicit discharges.			
Employee Training	Not Started: ☐ In Progress : ☒ Completed: ☐		
	Section: 4.2.3.2.9		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Provide internal staff training for identifying potential illicit discharges. This BMP will be implemented through training for Pollution Prevention in Section 4.2.6.5	Deadline: December 31, 2016	Ongoing	Horry County Stormwater Manager
Measurable Goal:			
• 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

Horry County will revise the construction program by developing and implementing BMPs in order to meet the SMS4 general permit requirements. The County will review and update as necessary appropriate design requirements, the BMP Design Manual, Stormwater Ordinance and 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 County will use specific type of responses to address various types of violations. In addition, the County will develop educational materials for construction site operators to educate them about areas in which improvements are needed.

Table 11: Minimum Measure #4 Permit Requirements

4.2.4.4.1 Regulatory requirement for erosion and sediment controls:
Below is a copy of the relevant sections of the existing ordinance which requires erosion and sediment controls as well as sanctions to ensure compliance. Ordinance section requiring erosion and sediment controls can be found in Horry County Ordinance Section 17.7-46 et seq. Stormwater Concept and Stormwater Management and Sediment Control Plans. Ordinance section for sanctions to ensure compliance can be found in Horry County Ordinance Section 17.7-90 Penalties. A copy of Horry County's Ordinance can be found in Appendix D.
4.2.4.4.2 Requirements for erosion and sediment controls and soil stabilization practices:
Horry County will provide requirements for construction site operators to implement appropriate BMP such as, a. Erosion and Sediment Controls, and b. Soil Stabilization Practices
4.2.4.4.3 Requirements for pollution prevention measures:
Horry County will provide requirements for the design, installation and maintenance of effective pollution prevention measures for construction site operators to: a. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge. b. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on site to precipitation and to stormwater runoff that may cause adverse impacts to water quality, and, c. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. d. The following discharges from sites are prohibited: i. Wastewater from washout of concrete, unless managed by an appropriate control; ii. Wastewater from washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials iii. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and, iv. Soaps or solvents used in vehicle and equipment washing.

4.2.4.4.4 Requirements for Stormwater Pollution Prevention Plans (SWP3):

Horry County will require each operator of a construction activity to prepare and submit a Stormwater Pollution Prevention Plan (SWP3) prior to the disturbance of land for the SMS4 to review and approve. Requirements for the SWP3 are included in Horry County's Plan Review Checklist.

4.2.4.5 Review of SWP3:

Horry County's plan review procedures will at a minimum meet the following:

a. Make clear to operators of construction activity that they are prohibited from commencing construction activity until they receive of written approval of the plans.

b. Approve SWP3 that complies with the technical requirements of Horry County's plan review checklist which effectively meets the requirements of NPDES General Permit for Storm Water Discharges from Construction Activities, SCR100000.

c. The SWP3 must include the rationale used for selecting control measures, including how the control measure protects a waterway or stormwater conveyance.

d. Horry County will use qualified individuals, knowledgeable in the technical review of SWP3 to conduct reviews.

e. Document the review of each SWP3 plan using a checklist or similar process.

f. 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, the SWP3 must identify potential water quality impacts the permitted discharges may have. The SWP3 shall limit sediment discharges to the MEP, shall protect water quality. Procedures for SWP3 review shall:

i. Incorporate consideration of potential water quality impacts,

ii. Include the review of construction site plans,

iii. For construction projects that disturb less than 25 acres, carefully evaluate all selected BMPs and their ability to control the pollutant(s) of concern.

iv. For construction projects that disturb 25 acres or more, require a written quantitative and qualitative assessment showing that the selected BMP will control the discharge of the pollutant, or pollutants, of concern from construction and post construction within a TMDL watershed, or to a water on the 303(d) List of Impaired Waters, and,

v. Require that SWP3 prepared by construction activity applicants for SMS4 review and approval must demonstrate that stormwater discharges will neither cause nor contribute to a violation of water quality standards.

4.2.4.6 Site inspections:

a. Horry County will maintain an inventory of all active construction projects. The inventory will be

continuously updated as new projects are permitted and projects are completed. The inventory will contain relevant contact information for each project (e.g., name, address, phone, etc.), the size of the project and area of disturbance. Horry County will make the inventory available to SC DHEC upon request. As part of this inventory,

i. Horry County will track the number of inspections for the inventoried construction sites throughout the reporting period to verify that the sites are inspected at the minimum frequencies required, and,

ii. Document inspections and enforcement activities for each site in the inventory.

b. Horry County will implement procedures for inspecting construction projects in accordance with the frequency listed in the SMS4 General Permit.

c. Horry County will adequately inspect all phases of construction. At a minimum, inspections must occur following installation of initial BMPs, during active construction, and after final site stabilization.

d. Horry County will have trained and qualified inspectors. Horry County will also continue to follow, and revise as necessary, written procedures outlining the inspection and enforcement procedures.

Inspections of construction sites must, at a minimum:

i. Check for coverage under SCR100000 by requesting a copy of any application or Notice of Intent (NOI), the stamped approved stormwater pollution prevention plan or other relevant application form during initial inspections.

ii. Review the applicable stormwater pollution prevention plan and conduct a thorough site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the plan.

iii. Assess compliance with Horry County's ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum control measures.

iv. Assess the effectiveness of control measures.

v. Visually observe and record non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.

vi. Provide a written or electronic inspection report generated from findings in the field.

4.2.4.7 Enforcement Response Plan (ERP):

Horry County will develop an Enforcement Response Plan (ERP). The ERP will contain descriptions of how Horry County will use specific type of responses to address various types of violations. The ERP will include, but is not limited to:

a. Types of response;
i. Verbal warnings,
ii. Written notices, and
iii. Escalated enforcement measures such as citations, fines, stop work orders, etc.

	b. Specific strategies for escalating enforcement response, where necessary, to address persistent, repeat or escalating violations. c. Ensure ERP is reasonably effective in reducing pollutant discharges to the MEP and to protect water quality.
4.2.4.8	SMS4 staff training:
	Horry County will ensure that all staff, whose primary job duties are related to implementing the construction stormwater program, including permitting, plan review, construction site inspections, and enforcement, is trained to conduct these activities.
4.2.4.9	Construction site operator and public involvement:
4.2.4.9.a	Construction operator education:
	Horry County will 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	Public involvement:
	Horry County will consider public responses for program modifications during public education and outreach programs.

4.2.4.2 Minimum Measure #4 BMP Implementation

In order to meet the requirements of Minimum Measure #4, Horry County 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-half acre. Horry County will continue implementing 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, Horry County will:

- Review and Update Pollution Prevention BMP Requirements
- Review and 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
- Review and Update the County's Stormwater Design Manual
- Review and Update the County's Stormwater Management Ordinance
- Construction Operator Training/Education

The following sections describe the components of the Horry County'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:☒ In Progress :☐ Completed:☐**		
	Section: 4.2.4.4.2		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Review and update as necessary 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	Horry County Stormwater Manager
Measurable Goal:			
• Provide information to assist construction site operators to implement appropriate EPSC BMPs			
Pollution Prevention Requirements	**Not Started:☒ In Progress :☐ Completed:☐**		
	Section: 4.2.4.4.3		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Review and update as necessary the Storm Water Management Ordinance and Design Manual to include requirements for Pollution Prevention Measures listed in Section 4.2.4.4.3 of Table 11.	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal:			
• Provide information to assist construction site operators to implement appropriate Pollution Prevention BMPs			
Revise Plan Review Procedures	**Not Started:☒ In Progress :☐ Completed:☐**		
	Section: 4.2.4.5		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**

Review and update as necessary the Storm Water Management Ordinance and Design Manual and Plan Review Checklist to include: (Bulleted items below will be required in the SWP3 submittal and reviewed by Plan Reviewers) • A statement that construction operators are prohibited from commencing construction activity until they receive of written approval of the plans. • Rationale used for selecting control measures, including how the control measure protects a waterway or stormwater conveyance • Notification requirement for construction sites that discharge to a TMDL watershed or to a water on the 303(d) List of Impaired Waters Identify potential water quality impacts the permitted discharges may have on TMDL watershed, or to a water on the 303(d) List of Impaired Waters Rationale for how the SWP3 will limit sediment discharges to the MEP, and protect water quality for discharges to a TMDL watershed, or to a water on the 303(d) List of Impaired Waters For construction projects that disturb 25 acres or more, require a written quantitative and qualitative assessment showing that the selected BMP will control the discharge of the pollutant, or pollutants, of concern from construction and post construction within a TMDL watershed, or to a water on the 303(d) List of Impaired Waters, and, Require a rationale that demonstrates stormwater discharges will neither cause nor contribute to a violation of water quality standards	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal:			
• Provide verification that each SWP3 was reviewed to ensure compliance with permit SCR030000			

Document Plan Review of SWP3s	Not Started: ☒ In Progress : ☐ Completed: ☐ Section: 4.2.4.5		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Document the review of each SWP3 plan using an internal plan review checklist	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal: • Provide verification that each SWP3 was reviewed to ensure compliance with permit SCR030000			

Maintain Construction Site and Site Inspection Inventory	Not Started: ☒ In Progress : ☐ Completed: ☐ 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: • Relevant contact information • The size of the project • Area of disturbance • Number of inspections by Horry County for each construction site • Inspection results and enforcement activities	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal: • 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: ☒ In Progress : ☐ Completed: ☐ Section: 4.2.4.6(b-d)		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Review and modify as necessary the Storm Water Management Ordinance and Design Manual (or other document) for site inspection procedures to include: • 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 Horry County's ordinances and design manuals • Assessing the effectiveness of control measures • Addressing and documenting non-stormwater discharges • Electronic inspection documentation procedures	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal: • Review and modify as necessary the County Stormwater Management Ordinance and Design Manual.			

Develop Section of ERP for Construction Activities	Not Started: ☒ In Progress : ☐ Completed: ☐ 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	Horry County Stormwater Manager
Measurable Goal: • Develop an enforcement response plan to clearly identify types of violations, response to violations, and enforcement measures. The response plan will be made available to construction site operators and SCDHEC.			

Provide Staff Training for Construction Inspections and Plan Review	Not Started: ☐ In Progress : ☒ Completed: ☐ Section: 4.2.4.8		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Require the lead plan reviewer to pass the CSPR class and exam provided by Clemson University Conduct internal training of all plan reviewers to ensure compliance with proper plan review procedures	Deadline: December 31, 2014	As Needed	Horry County Stormwater Manager

Measurable Goal:			
• Providing adequate training for staff whose primary job duties are related to implementing the construction stormwater program			
Construction Operator Training/Education	**Not Started:** ☐ **In Progress :** ☒ **Completed:** ☐ **Section: 4.2.4.9**		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Provide training and materials for construction site operators regarding erosion and sediment controls, including during pre-construction conferences	Deadline: December 31, 2015	As Needed	Horry County Stormwater Manager
Measurable Goal:			
• Provide training and materials for construction site operators.			

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 Horry County the authority to require structural and non-structural stormwater quality BMPs on sites being developed. Horry County currently provides design requirements to control stormwater discharges from new development and redeveloped sites and has established performance standards for addressing the first inch of runoff. Horry County 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.	Post-construction stormwater management program:
	Horry County will provide water quality design requirements to control stormwater discharges from new development and redeveloped sites that disturb at least one-half acre (including projects that disturb less than one-half acre that are part of a larger common plan of development or sale, LCP) that discharge into an SMS4. The requirements apply to private and public development sites, including roads.
4.2.5.2	Site performance standards:
	In accordance with Section 4.2.5.2 of the SMS4 general permit, Horry County will produce a set of site performance standards which will be applied to all new development and redevelopment sites discharging to Horry County's SMS4, which disturb greater than or equal to one-half acre. These standards will ensure that projects approximate pre-development conditions to the MEP to protect water quality.

4.2.5.3	Site plan review:
	To ensure that all applicable new development and redeveloped sites conform to the performance standards required in Section 4.2.5.2, Horry County will implement project review, approval, and enforcement procedures. Horry County will conduct site plan reviews of all new development and redeveloped sites which will disturb greater than or equal to one-half acre and discharge to the SMS4 (including sites that disturb less than one-half acre that are part of a LCP). The site plan review will specifically address how the project applicant meets the performance standards and how the project will ensure long-term maintenance of post construction BMP.
4.2.5.4	Long-term maintenance of post-construction stormwater control measures:
	All structural stormwater control measures installed and implemented to meet the site performance standards will be maintained in perpetuity. Horry County will ensure the long-term maintenance of structural stormwater control measures installed. Horry County will ensure that property owners or operators of any new development or redeveloped site subject to the site performance standards will provide verification of maintenance for the approved structural stormwater control measures used to comply with the performance standards.
4.2.5.5	Inventory of post-construction stormwater control measures:
	Horry County will maintain an inventory of all post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permit area. At a minimum, the inventory shall contain all BMP constructed since the effective date starting with the effective date of this permit.
4.2.5.6	Inspections and enforcement:
4.2.5.6.1	Inspection procedures:
	To ensure that all stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance agreement, Horry County will conduct inspections of each project site covered under the performance standards listed in the Stormwater Design Manual, *at least one time during the permit term*.
4.2.5.6.2	Post-construction notification:
	Within 30 days of completion of construction of any project required to meet the performance standards, Horry County will conduct a post construction inspection to verify that BMP have been installed as per approved plans.
4.2.5.6.3	Inspection reports:
	Horry County will document its inspection findings in an inspection report. Horry County will document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.

4.2.5.2 Minimum Measure #5 BMP Implementation

In order to meet the requirements of Minimum Measure #5, Horry County 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 Horry County's Post-Construction stormwater management program:

Table 14: Best Management Practices – Minimum Measure #5

POST-CONSTRUCTION STORMWATER MANAGEMENT BMPS			
Develop Water Quality Design Requirements	**Not Started:** ☒ **In Progress :** ☐ **Completed:** ☐		
	Section: 4.2.5.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Review and update as necessary water quality design requirements to be implemented in the Storm Water Management Ordinance and Design Manual to control stormwater discharges from new development and redeveloped sites that disturb at least one-half acre.	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal:			
• Provide design community with design guidance for Post Construction BMPs			
Develop Site Performance Standards	**Not Started:** ☒ **In Progress :** ☐ **Completed:** ☐		
	Section: 4.2.5.2		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Review and update as necessary the Post Construction section of the Storm Water Management Ordinance and Design Manual to include Post Construction Site Performance Standards	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal:			
• Provide design community with performance and design standards for Post Construction BMPs			

Revise Plan Review Checklist & Design Manual for Post Construction SWP3 Submittal Requirements	Not Started: ☒ In Progress : ☐ Completed: ☐ **Section: 4.2.5.3**		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Review and update as necessary the Storm Water Management Ordinance and Design Manual and Plan Review Checklist to include SWP3 submittal requirements for Post Construction Site Performance Standards.	Deadline: December 31, 2015	Once during permit term	Horry County Stormwater Manager
Measurable Goal:			
• Implement SWP3 requirements for Post Construction Site Performance Standards.			

Develop Long Term Maintenance Requirements for Post Construction BMPs	Not Started: ☒ In Progress : ☐ Completed: ☐ **Section: 4.2.5.4**		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Develop a 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	Horry County Stormwater Manager
Measurable Goal:			
• Develop a post construction BMP maintenance agreement form and a post construction BMP maintenance verification process			

Create Post Construction BMP Inventory	Not Started: ☐ In Progress : ☒ Completed: ☐ **Section: 4.2.5.5**		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Develop an inventory of all County permitted post construction BMPs constructed since the effective date of permit SCR030000 (January 1, 2014).	Deadline: December 31, 2014	Once during permit term	Horry County Stormwater Manager
Update County permitted Post-Construction BMP Inventory.	Throughout Permit Term Beginning in Year 2	Annually	Horry County Stormwater Manager
Measurable Goal:			
• Provide an inventory of County permitted Post-Construction BMPs.			

Post-Construction BMP Inspections Program	Not Started: ☐ In Progress : ☒ Completed: ☐ 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	Horry County Stormwater Manager
Conduct post-construction BMP inspections on County 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	Horry County Stormwater Manager
Develop procedures and forms for post-construction BMP maintenance inspections.	Deadline: December 31, 2014	Once during permit term	Horry County Stormwater Manager
Conduct post-construction BMP inspections on County permitted post-construction BMPs to ensure BMPs are maintained properly.	Throughout Permit Term Beginning in Year 2	Once during permit term	Horry County Stormwater Manager
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	Horry County Stormwater Manager
Measurable Goal:			
• Develop procedures and forms for Post-Construction BMP installation inspections and include procedures in this document.			
• Inspect all County 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 County 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, Horry County will implement a range of BMPs targeted to reduce pollutants from County-Owned facilities and storm sewer systems. A Countywide 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. Horry County will prioritize their owned and /or operated stormwater management systems and implement a maintenance schedule. All County-Owned structural controls (stormwater BMPs) will be inspected and maintained. In addition, the County will develop a set of pollution prevention measures for operation and maintenance activities. Horry County will provide training to appropriate employees to ensure pollution prevention

and good housekeeping activities are practiced throughout the County's separate departments.

Table 15: Minimum Measure #6 Permit Requirements

4.2.6.1	Development of a municipal facility and stormwater control inventory:
	Horry County will update and maintain an inventory of municipally-owned and stormwater controls that are not covered under a separate general or individual NPDES permit (i.e. industrial, solid waste, etc.). Examples of these types of facilities may include but are limited to composting facilities, equipment storage and maintenance facilities, landscape maintenance on municipal property, material storage yards, public buildings, golf courses, public work yards, recycling facilities, salt storage facilities, municipally owned and/or maintained structural stormwater controls. Horry County will also include a list of industrial facilities owned or operated by the County that are subject to SCDHEC NPDES General Permit for Storm Water Discharges associated with Industrial Activity (SCR000000) or individual NPDES permits for discharges of storm water associated with industrial activity that ultimately discharge to the County's SMS4. The SCDHEC permit number or a copy of the Industrial NOI form for each facility will be included.
4.2.6.2	Municipally-owned or operated facility assessment:
4.2.6.2.1	Comprehensive assessment of pollutant discharge potential:
	Horry County will develop a comprehensive assessment of all County-owned or operated facilities identified in Part 4.2.6.1 at least once during the permit term and include it in the permit reapplication for their potential to discharge pollutants in stormwater.
4.2.6.2.2	Identification of high priority facilities:
	Horry County will identify "high-priority" facilities that have a high potential to generate stormwater pollutants.
4.2.6.2.3	Documentation of comprehensive assessment results:
	Horry County will document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the comprehensive assessment. The documentation will include the results of Horry County's initial assessment, any identified deficiencies and corrective actions taken.
4.2.6.3	Annual comprehensive inspections of high priority facilities:
	Starting no later than 24 months from the effective date of coverage and at least once per year thereafter, a comprehensive inspection of "high priority" facilities (Part 4.2.6.2.2), including all stormwater controls, must be performed by Horry County. Specific attention will be given to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The yearly inspection results will be documented and records will be maintained by Horry County. The inspection report will also include any identified deficiencies and the corrective actions taken to fix the deficiencies.
4.2.6.4	Storm Sewer System Maintenance Activities – SMS4 Maintenance:

4.2.6.4.1	Assessment/prioritization of stormwater management systems/structures:
	Horry County will prioritize their owned and /or operated storm water management systems / structures and implement a maintenance schedule.
4.2.6.4.2	Municipal activities and operation::
	Horry County will develop a set of pollution prevention measures that, when applied during municipal O&M activities, will reduce the discharge of pollutants in stormwater. Municipal operation and maintenance activities to be considered include but are not limited to; pavement and rights-of-way maintenance, bridge maintenance, cold weather operations, and municipally sponsored events.
4.2.6.4.3	Maintenance of municipally-owned and/or maintained structural stormwater controls:
	Horry County will inspect, and maintain, wherever and whenever necessary, all County owned or maintained structural stormwater controls. Horry County will also maintain all municipally owned green infrastructure practices through regularly scheduled maintenance activities.
4.2.6.5	Employee training and education requirements:
	Horry County will develop an annual employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices. This annual training will include a general stormwater education component, any new technologies, operations, or responsibilities that arise during the year, and the Permit Requirements that apply to the staff being trained. A description of the program will be maintained for review by the permitting authority. Horry County will also identify and track all personnel requiring training and records must be maintained. Training will begin within the first year from the effective date of permit authorization.
4.2.6.6	Requirements for contractor oversight:
	Contractors hired by Horry County to perform municipal maintenance activities will be contractually required to comply with all of Horry County's stormwater control measures, good housekeeping practices, and facility-specific stormwater management procedures. Horry County will provide oversight of contractor activities to ensure that contractors are using appropriate control measures and procedures.

4.2.6.2 Minimum Measure #6 BMP Implementation

In order to meet the requirements of Minimum Measure #6, Horry County will:

- Develop a Municipal Facility Inventory
- Conduct Assessment of Non-Permitted Municipal Facility & Identify High Priority Facilities
- Conduct High Priority Facility Inspections
- Prioritize Stormwater Management Systems/Structures

- Develop and Implement Pollution Prevention Measures for Operation and Maintenance Activities
- Inspect and Maintain County-Owned Structural Controls (stormwater BMPs)
- Conduct Pollution Prevention and Good House Keeping Employee Training

The following sections describe the components of Horry County'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: ☐ In Progress : ☒ Completed: ☐**		
	Section: 4.2.6.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Develop an inventory of all County-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 the permit term	Horry County Stormwater Manager
Measurable Goal:			
• An inventory of non-permitted municipal facilities			
• A list of all municipally owned facilities that are covered under a separate NPDES permit.			
Assessment of Non-Permitted Municipal Facilities	**Not Started: ☐ In Progress : ☒ Completed: ☐**		
	Section: 4.2.6.2		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Conduct a GIS analysis based on type of facility/use, locations to waterbody, county owned BMPs to rank County facilities.	Deadline: December 31, 2014	Once during permit term	Horry County Stormwater Manager
Based on the results of the GIS analysis, identify high priority facilities.	Deadline: December 31, 2014	Once during permit term	Horry County Stormwater Manager
Create a site evaluation checklist that will be used to conduct an assessment of all facilities.	Deadline: December 31, 2014	Once during permit term	Horry County Stormwater Manager
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	Horry County Stormwater Manager
Document results of facility evaluations.	Deadline: December 31, 2018	Once during permit term	Horry County Stormwater Manager
Measurable Goal:			
• 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: ☐ In Progress : ☒ Completed: ☐**		
	Section: 4.2.6.3		
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	Horry County Stormwater Manager
Conduct annual facility site inspections including evaluations of potential "pollutant generating" areas.	Throughout Permit Term Beginning in Year 3 (January 1, 2016)	Annual	Horry County Stormwater Manager
Document inspection reports.	Deadline: December 31, 2018	Annual	Horry County Stormwater Manager

Measurable Goal:

- 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 MS4 Stormwater Management Systems/Structures	**Not Started: ☒ In Progress : ☐ Completed: ☐**		
	Section: 4.2.6.4.1		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Prioritize storm water management systems / structures.	Deadline: March 1, 2015	Once during permit term	Horry County Stormwater Manager
Implement a maintenance schedule for stormwater management systems/structures	Deadline: May 1, 2015	Once during permit term	Horry County Stormwater Manager

Measurable Goal:

- A schedule to maintain the stormwater management system.

Develop Pollution Prevention Measures for Operation and Maintenance Activities	**Not Started: ☒ In Progress : ☐ Completed: ☐**		
	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, 2015	Once during permit term	Horry County Stormwater Manager

Measurable Goal:

- Create a set of pollution prevention measures for municipal operation and maintenance activities.

Inspect and Maintain County Owned Structural Controls	Not Started: ☐ In Progress : ☒ Completed: ☐		
	Section: 4.2.6.4.3		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Conduct inspections and perform necessary maintenance for County owned structural controls	Deadline: December 31, 2015	Annually	Horry County Stormwater Manager
Measurable Goal:			
• Document inspections with inspection reports and create work orders as needed for maintenance.			
Pollution Prevention and Good House Keeping Employee Training	Not Started: ☐ In Progress : ☒ Completed: ☐		
	Section: 4.2.6.5		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Conduct pollution prevention and good housekeeping employee training.	Deadline: December 31, 2015	Annually	Horry County Stormwater Manager
Measurable Goal:			
• 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: ☐ In Progress : ☒ Completed: ☐		
	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	Horry County Stormwater Manager
Storm Water Management Plan Updates Required by SCDHEC	Not Started: ☒ In Progress : ☐ Completed: ☐		
	Section: 4.5.3		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
SCDHEC requested changes to the SWMP	Deadline: December 31, 2018	As Required	Horry County Stormwater Manager

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 by 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 Horry County 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 Horry County 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 County to develop the changes, and offer the County the opportunity to propose alternative program 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: ☒ In Progress : ☐ Completed: ☐**		
	Section: 5.3		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Complete and Submit 1st Report (covering years 1 and 2).	Deadline: April 01, 2016	Once	Horry County Stormwater Manager
2nd Report	**Not Started: ☒ In Progress : ☐ Completed: ☐**		
	Section: 5.3		
Milestone(s)	**Schedule/Deadline**	**Frequency**	**Responsible Party**
Complete and Submit 2nd Report (covering years 3 and 4).	Deadline: July 4, 2018	Once	Horry County Stormwater Manager

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 County'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 program at reducing the discharge of pollutants to the MEP;

- A summary of the storm water activities the County plans to undertake during the next reporting cycle (including an implementation schedule);

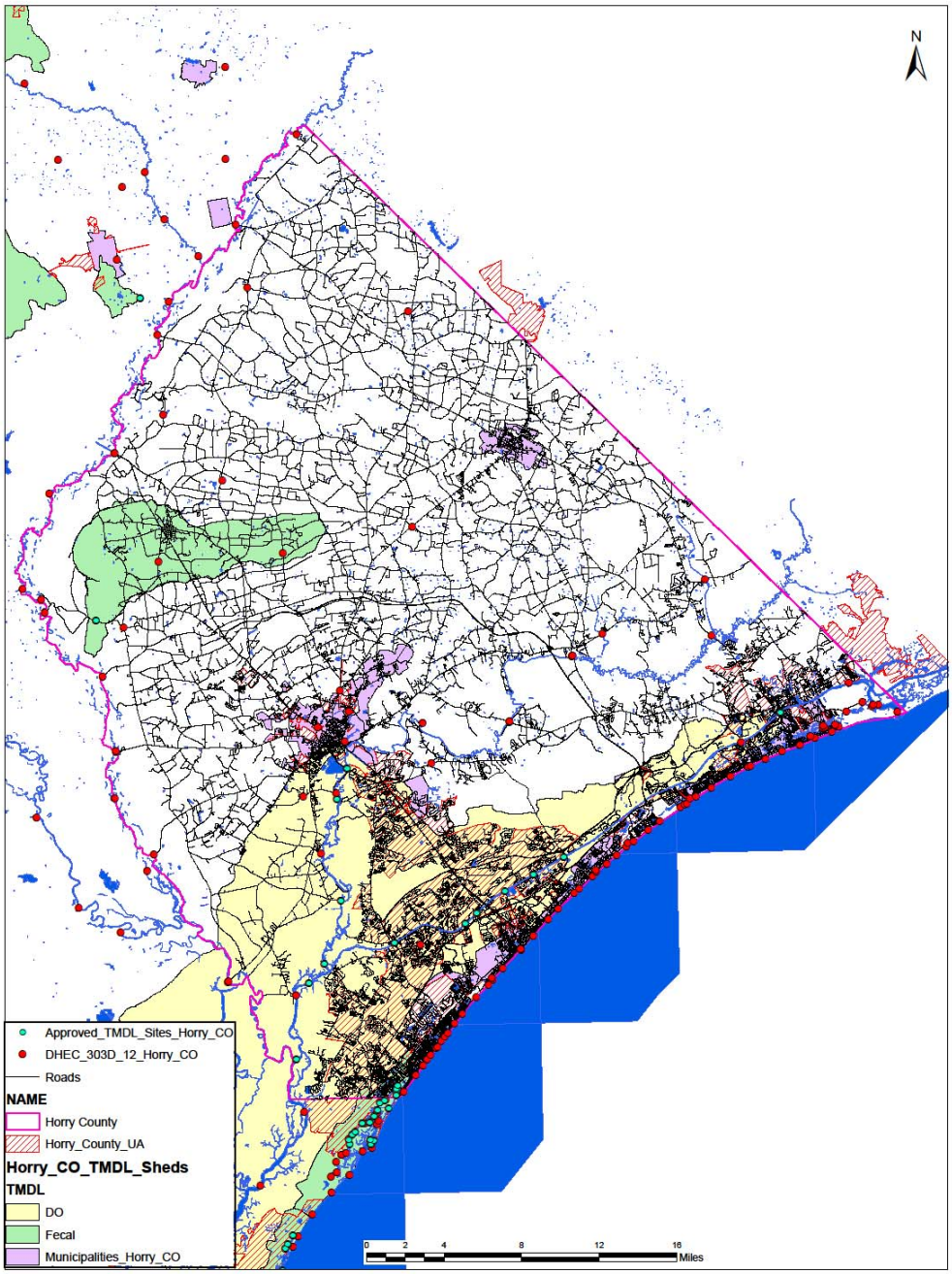
- Proposed changes to the County's SWMP, including changes to any BMP or any identified measurable goals that apply to the program elements; and

- Notice that the County is relying on another entity to satisfy some of the County's permit obligations (if applicable).

- Information requested in the 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
Horry County
Urbanized Area

Horry County TMDL Watershed



Appendix B
Horry County
SWMP Updates

Appendix C
TMDL Monitoring and Assessment Plans

Appendix D
Horry County
Stormwater Management Ordinance

Horry County, South Carolina, Code of Ordinances >> - CODE OF ORDINANCES >> Chapter 17.7 - STORMWATER MANAGEMENT >> ARTICLE I. STORMWATER MANAGEMENT UTILITY >>

ARTICLE I. STORMWATER MANAGEMENT UTILITY

Sec. 17.7-1. Findings of fact.

The county council makes the following findings of fact:

(1) The professional engineering and financial analyses conducted on behalf of and submitted to the county properly assess and define the stormwater management problems, needs, goals, program priorities and funding opportunities of the county.

(2) Given the problems, needs, goals, program priorities, and funding opportunities identified in the professional engineering and financial analyses submitted to the county, it is appropriate to authorize the establishment of a separate enterprise accounting unit which shall be dedicated specifically to the management, maintenance, protection, control, regulation, use, and enhancement of stormwater systems in the county in concert with other water resource management programs.

(3) Stormwater management is applicable and needed throughout the unincorporated portions of the county. Intense urban development in some portions of the unincorporated county has radically altered the natural hydrology of the area and the hydraulics of stormwater systems, with many natural elements having been replaced or augmented by man-made facilities. Other unincorporated areas of the county remain very rural in character, with natural stormwater systems predominating except along roads where ditches and culverts have been installed. As a result, the specific service, system, and facility demands differ from area to area in the county. While the county manages, operates, and improves stormwater systems and facilities in the rural as well as urban areas, the need for improved stormwater management is greatest in the urban areas and nearby. Therefore, a stormwater utility service area subject to stormwater service charges should encompass the entirety of the unincorporated portions of the county, and the service charge rate structure should reflect both the gross area of individual properties and the intensity of development that exists on said properties.

(4) The stormwater needs in the unincorporated portions of the county include but are not limited to protecting the public health, safety, and welfare. Provision of stormwater management programs, systems, and facilities therefore renders and/or results in both service and benefit to individual properties, property owners, citizens, and residents of the unincorporated county

and to properties, property owners, citizens, and residents of the unincorporated county concurrently in a variety of ways as identified in the professional engineering and financial analyses.

(5) The service and benefit rendered or resulting from the provision of stormwater management programs, systems, and facilities may differ over time depending on many factors and considerations, including but not limited to location, demands and impacts imposed on the stormwater programs, systems, and facilities, and risk exposure. It is not practical to allocate the cost of the county's stormwater management programs, systems, and facilities in direct and precise relationship to the services or benefits rendered to or received by individual properties or persons over a brief span of time, but it is both practical and equitable to allocate the cost of stormwater management among properties and persons in proportion to the long-term demands they impose on the county's stormwater programs, systems, and facilities which render or result in services and benefits.

(6) The county presently owns and operates stormwater management systems and facilities which have been developed, installed, and acquired through various mechanisms over many years. The future usefulness and value of the existing stormwater systems and facilities owned and operated by the county, and of future additions and improvements thereto, rests on the ability of the county to effectively manage, protect, control, regulate, use, and enhance the stormwater systems and facilities in the county in concert with the management of other water resources in the county. In order to do so, the county must have adequate and stable funding for its stormwater management program operating and capital investment needs.

(7) The county council finds, concludes, and determines that a utility provides the most practical and appropriate means of properly delivering stormwater management services and benefits throughout the unincorporated portions of the county, and the most equitable means to fund stormwater services in the unincorporated area of the county through stormwater service charges and other mechanisms as described in the professional engineering and financial analyses prepared for the county.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-2. Article designation and authority.

This article may be cited as the "Stormwater Management Utility Ordinance of Horry County" and is adopted pursuant to S.C. Code Sections 48-14-10, et seq., S.C. Code Section 5-7-30, and 26 S.C. Code Regulations 72-300 through 72-316.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-3. Definitions.

Unless the context specifically indicates otherwise, the meaning of words and terms used in this article shall be as set forth in S.C. Code Section 48-14-20, and 26 S.C. Code Regulation 72-301, mutatis mutandis.

(1) *Customers of the stormwater utility.* Customers of the stormwater utility shall include all persons, properties, and entities served by and/or benefiting from the utility's acquisition, management, maintenance, extension, and improvement of the stormwater management programs, systems, and facilities and regulation of public and private stormwater systems, facilities, and activities related thereto, and persons, properties, and entities which will ultimately be served or benefited as a result of the stormwater management program.

(2) *Hydrologic response.* The hydrologic response of a property is the manner whereby stormwater collects, remains, infiltrates, and is conveyed from a property. It is dependent on several factors including but not limited to the presence of the size and overall intensity of

development of each property, its impervious area, shape, topographic, vegetative, and geologic conditions, antecedent moisture conditions, and groundwater conditions. Extremely large properties naturally attenuate the discharge of stormwater during and following rainfall events.

(3) *Intensity of development.* In the context of stormwater runoff, the intensity of development of a property is influenced by the installation of impervious surfaces, grading and other alteration of the topography, removal of vegetation and natural surface water collection areas, the collection and channeling of stormwater runoff from the property, and other factors. Impervious surfaces are those areas which prevent or impede the infiltration of stormwater into the soil as it entered in natural conditions prior to development. Common impervious areas include, but are not limited to, rooftops, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, compacted gravel and soil surfaces, awnings and other fabric or plastic coverings, and other surfaces which prevent or impede the natural infiltration of stormwater runoff which existed prior to development. The intensity of development may also influence the water quality of stormwater exiting a property and receiving waters to which stormwater is ultimately discharged, affecting its use and value to the community.

(4) *Stormwater management systems and facilities.* Stormwater management systems and facilities are those natural and man-made channels, swales, ditches, swamps, rivers, streams, creeks, branches, reservoirs, ponds, drainage ways, inlets, catch basins, pipes, head walls, storm sewers, lakes, and other physical works, properties, and improvements which transfer, control, convey or otherwise influence the movement of stormwater runoff.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-4. Establishment of a stormwater management utility and enterprise fund.

(a) There is hereby established a stormwater management utility within the infrastructure and regulation division which shall be responsible for stormwater management programs throughout the unincorporated county, and which shall provide for the management, protection, control, regulation, use, and enhancement of stormwater systems and facilities.

(b) The county administrator shall establish a stormwater enterprise fund in the county budget and accounting system for the purpose of dedicating and protecting all funding applicable to the purposes and responsibilities of the stormwater management utility, including but not limited to rentals, rates, charges, fees, and licenses as may be established by the county council and other funds that may be transferred or allocated to the stormwater management utility. All revenues and receipts of the stormwater management utility shall be placed in the stormwater enterprise fund and all expenses of the utility shall be paid from the stormwater enterprise fund, except that other revenues receipts, and resources not accounted for in the stormwater utility enterprise fund may be applied to stormwater management programs, facilities, operations, and capital investments as deemed appropriate by the county council, upon recommendation by the county administrator.

(c) The county council hereby transfers to the stormwater management utility (stormwater department) operational control over the existing stormwater management programs, systems, and facilities performed, provided, or owned and heretofore operated by the county and other related assets, including but not limited to properties other than roadways upon which such systems and facilities are located, easements, rights-of-entry and access, and certain equipment used solely for stormwater management.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-5. Scope of responsibility for the county stormwater system and facilities.

(a) The county owns or has legal access for purposes of operation, maintenance, and improvement of those systems and facilities which are:

(1)

Located within public streets, rights-of-way, and easements;

(2) Subject to easements, rights-of-entry, rights-of-access, rights-of-use, or other permanent provisions for adequate access for operation, maintenance, and/or improvement of systems and facilities; or

(3) Located on public lands to which the county has adequate access for operation, maintenance, and/or improvement of systems and facilities.

(b) Operation, maintenance, and/or improvement of stormwater systems and facilities which are located on private property or public property not owned by the county and for which there has been no public dedication of such systems and facilities for operation, maintenance, and/or improvement of the systems and facilities shall be and remain the legal responsibility of the property owner, except as that responsibility may be otherwise affected by the laws of the State of South Carolina and the United States of America.

(c) It is the express intent of this ordinance to protect the public health, safety, and welfare of all properties and persons in general, but not to create any special duty or relationship with any individual person or to any specific property within or outside the boundaries of the county. The county expressly reserves the right to assert all available immunities and defenses in any action seeking to impose monetary damages upon the county, its officers, employees and agents arising out of any alleged failure or breach of duty or relationship as may now exist or hereafter be created.

(d) To the extent any permit, plan approval, inspection or similar act is required by the county as a condition precedent to any activity or change upon property not owned by the county, pursuant to this or any other regulatory ordinance, regulation, or rule of the county or under federal or state law, the issuance of such permit, plan approval, or inspection shall not be deemed to constitute a warranty, express or implied, nor shall it afford the basis for any action, including any action based on failure to permit or negligent issuance of a permit, seeking the imposition of money damages against the county, its officers, employees, or agents.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-6. Boundaries and jurisdiction.

The boundaries and jurisdiction of the stormwater management utility shall encompass all those portions of the unincorporated county, as they may exist from time to time and such additional areas lying inside the corporate limits of those jurisdictions in the county as shall be approved by county council.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-7. Requirements for on-site stormwater systems; enforcement methods and inspections.

(a) All property owners and developers of real property to be developed within the unincorporated portions of the county shall provide, manage, maintain, and operate on-site stormwater systems and facilities sufficient to collect, convey, detain, control, and discharge stormwater in a safe manner consistent with all county development regulations and the laws of the State of South Carolina and the United States of America. Any failure to meet this obligation shall constitute a nuisance and be subject to an abatement action filed by the county in a court of competent jurisdiction. In the event a public nuisance is found by the court to exist, which the owner fails to properly abate within such reasonable time as allowed by the court, the county may enter upon the property and cause such work as is reasonably necessary to be performed, with the actual cost thereof charged to the owner in the same manner as a stormwater service charge.

(b) In the event that the county shall file an action pursuant to subsection (a) above, from the date of filing such action the county shall have all rights of judgement and collection through a court of competent jurisdiction as may be perfected by action.

(c) The county shall have the right, pursuant to the authority of this article, for its designated officers and

employees to enter upon private property and public property owned by other than the county, upon reasonable notice to the owner thereof, to inspect the property and conduct surveys and engineering tests thereon in order to assure compliance with any order or judgment entered pursuant to this section.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-8. General funding policy.

(a) It shall be the policy of the county that funding for the stormwater management utility advanced program, systems, and facilities shall be equitably derived through methods which have a demonstrable relationship to the varied demands and impacts imposed on the stormwater program, systems, and facilities by individual properties or persons and/or the level of service rendered by or resulting from the provision of stormwater programs, systems, and facilities. Stormwater service charge rates shall be structured so as to be fair and reasonable, and the resultant service charges shall bear a substantial relationship to the cost of providing services and facilities throughout the unincorporated county. Similarly situated properties shall be charged similar rentals, rates, charges, fees, or licenses. Service charge rates shall be structured to be consistent in their application and shall be coordinated with the use of other funding methods employed for stormwater management within the county, including but not limited to watershed districts supported by assessment, whether wholly or partially within the unincorporated portions of the county. Plan review and inspection fees, special fees for services, fees in-lieu of regulatory requirements, impact fees, system development charges, special assessments, general obligation and revenue bonding, and other funding methods and mechanisms available to the county may be used in concert with stormwater service charges and shall be coordinated with such charges in their application to ensure a fair and reasonable service charge rate structure.

(b) The cost of stormwater management programs, systems, and facilities subject to stormwater service charges may include operating, capital investment, and nonoperating expenses, prudent operational and emergency reserve expenses, and stormwater quality as well as stormwater quantity management programs, needs, and requirements.

(c) To the extent practicable, credits against stormwater service charges and/or other methods of funding stormwater management shall be provided for on-site stormwater control systems and activities constructed, operated, maintained and performed to the county's standards by private property owners which eliminate, mitigate, or compensate for the impact that the property or person may have upon stormwater runoff discharged to public stormwater systems or facilities or to private stormwater facilities which impact the proper function of public stormwater systems or facilities.

(d) To the extent practicable, credits against stormwater service charges and/or other methods of funding stormwater management shall be provided for those portions of a property permanently and perpetually dedicated by a conservation or other protective easement which eliminates, mitigates, or compensates for the impact that the property or person or other unrelated properties or persons may have upon stormwater runoff discharged to public stormwater systems or facilities or to private stormwater facilities, or which improves the function of public stormwater systems or facilities or water quality conditions in receiving waters.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-9. Stormwater utility fees.

The county 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.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-10. 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: regulation; planning; acquisition of interests in land, including easements; design and construction of facilities; maintenance of the stormwater system; billing and administration; water quantity and water quality 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 county for investment and reinvestment of funds. The county council may use any form of borrowing authorized by the laws of the State of South Carolina to fund capital acquisitions or expenditures for the stormwater management utility. The county council, in its discretion and pursuant to standard budgetary procedures, may supplement such funds with amounts from the general fund.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-11. Stormwater advisory board.

(a) *Established.* The county council hereby creates the Horry County Stormwater Advisory Board (hereinafter, "the advisory board") effective July 1, 2000. The advisory board shall be appointed in the manner set out in section 2-75 of this Code.

(b) *Purposes and duties.* The advisory board shall provide guidance and advice to the county council pertaining to the stormwater management program, including but not limited to, program activities, functions, systems, management, and funding.

(c) *Operation.* The advisory board shall operate under and by the conditions as set forth in Chapter 2, Administration, of this Code, for boards, commissions, committees and agencies of the county.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-12. Severability.

If a section, subsection, or part of this article shall be deemed or found to conflict with a provision of South Carolina law, or other pre-emptive legal principle, then that section, subsection, or part of this article shall be deemed ineffective, but the remaining parts of this article shall remain in full force and effect.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-13. Conflict with preceding ordinances.

If a section, subsection or provision of this article shall conflict with the provisions of a section, subsection or part of a preceding ordinance of the county, then the preceding section, subsection or part shall be deemed repealed and no longer in effect.

(Ord. No. 187-99, 4-18-00)

Sec. 17.7-14. Effective date.

This article shall become effective on July 1, 2000.

(Ord. No. 187-99, 4-18-00)

ARTICLE II. STORMWATER UTILITY FEES

Sec. 17.7-15. Findings of fact.

The county council makes the following additional findings of fact:

(1) The county council finds, concludes, and determines that a schedule of stormwater utility service charges based on the total area of each property and its intensity of development is the most appropriate and equitable means of allocating the cost of stormwater management services and stormwater management systems and facilities throughout the unincorporated portion of the county. Such charges can be complemented by other funding methods which address specific needs, including but not limited to allocations of other revenues available to the county, special service fees, special assessments of the county or watershed districts within the county, various taxes as allowed by law, and other revenues as deemed appropriate by the county council.

(2) The county council finds that credits against stormwater utility service charges are an appropriate means of adjusting fees, rates, rentals, charges, fines, and penalties in certain cases, and should be granted for properties providing on-site or off-site services, systems, facilities, activities, easements, or assets which reduce or otherwise mitigate the impact of said property on the county's cost of providing stormwater management services and/or stormwater management systems and facilities, and that such credits should be conditional upon continuing provision of such services, systems, facilities, activities, easements, or assets in a manner complying with the standards and codes as determined by the county engineer. Credits for on-site stormwater management systems and facilities and conservation or other protective easements shall be generally proportional to the affect that such systems have on the peak rate of runoff from the site.

(3) The county council finds that the total land area on each property and the overall intensity of development of each property are the most important factors influencing the cost of the stormwater management services and stormwater management systems and facilities provided by the county or to be provided by the county in the future, and that the total land area of each property and its overall intensity of development are therefore the most appropriate parameters for calculating a periodic stormwater service charge. In determining the total land area on each property, the county council finds that it is appropriate to remove from that total land area figure the amount of land area on each property that is designated as river or marsh as these areas are vital portions of the county's stormwater management systems and facilities and should be maintained as such.

(4) The county council finds that it is imperative that all revenues raised or otherwise allocated specifically to stormwater management services, inclusive of stormwater quality issues and requirements along with stormwater public education and relations, and stormwater management systems and facilities be dedicated solely to those purposes and directs that such revenues shall therefore be deposited into the enterprise accounting fund of the stormwater management utility and shall remain in that fund and be dispersed only for stormwater management capital, operating, and non-operating costs, debt service of bonds for stormwater management purposes, and other appropriate uses as determined by the county council.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-16. Definitions.

As used in this article, unless the context specifically indicates otherwise, the following definitions shall apply:

Credits. Credit shall mean a conditional reduction in the amount of a stormwater service charge or other fees, rates, rentals, charges, fines, and penalties to an individual property based on the provision and continuing presence of an effectively maintained and operational on-site stormwater system or facility, conservation or other protective easement, or continuing provision of a service or activity that reduces the stormwater management utility's cost of providing stormwater management services and stormwater management systems and facilities.

Detached single-family dwelling unit. Detached single-family dwelling unit shall mean developed land containing one (1) structure which is not attached to another dwelling and which contains one (1) or more bedrooms, with a bathroom and kitchen facilities, designed for occupancy by one (1) family. Detached dwelling units may include single-family houses, single duplex units under common ownership, patio homes, manufactured homes, and mobile homes located on one (1) or more individual lots or parcels of land and residential condominium and townhouse units. Developed land may be classified as a detached single-family dwelling unit despite the presence of incidental structures associated with residential uses such as barns, garages, carports, or small storage buildings. Detached single-family dwelling units shall not include developed land containing: structures used primarily for nonresidential purposes, manufactured homes and mobile homes located within manufactured home or mobile home parks where the land is owned by others than the owners of the manufactured homes or mobile homes, or multiple residential properties.

Developed land. Developed land shall mean property altered from its natural state by construction or installation of improvements such as buildings, structures, or other impervious surfaces, or by other alteration of the property that results in a meaningful change in the hydrology of the property during and following rainfall events.

Development intensity factor. A development intensity factor shall be determined for each property other than those containing one detached single-family dwelling unit. The development intensity factor shall numerically represent the hydrologic response consistent with generally accepted engineering values in a manner that allows a fair and reasonable structure of service charge rates for all properties, treating those properties with similar intensities of development in a similar manner and those with differing intensities of development in a consistent and balanced manner. The development intensity factor applicable to undeveloped properties of varying size shall incorporate consideration of the total area of properties to account for the mitigative effect of lengthy travel time of stormwater runoff flows across properties. The development intensity factor of a property may be determined by a composite calculation that considers portions of the property to have differing development intensities.

Duplexes and triplexes. Duplexes and triplexes shall mean developed land containing two (2) (duplex) or three (3) (triplex) attached residential dwelling units located on one (1) or more parcels of land.

Equivalent residential unit. For the purposes of this ordinance, an equivalent residential unit shall mean twenty thousand (20,000) square feet of total property area with a development intensity factor of 0.25. The equivalent residential unit shall be used as the basis for determining stormwater service charges to detached single-family dwelling unit properties or classes of detached dwelling unit properties and other properties.

Exemption. Exemption shall mean not applying to or removing the application of the stormwater management utility service charge from a property. No permanent exemption shall be granted based on taxable or nontaxable status or economic status of the property owner. An exemption may be granted based on agreements between the county and other persons, governmental and nongovernmental entities, and organizations whereby the other persons, governmental and nongovernmental entities, and organizations perform on-site and/or off-site stormwater quantity and quality management, including acquiring, designing, building, operating, and maintaining systems and facilities, and performing measures and actions which equal or exceed the stormwater management program performed by the stormwater management utility. Exemptions may be removed or rescinded at any time by the county.

Impervious surfaces. Impervious surfaces shall be a consideration in the determination of the development intensity factor. Impervious surfaces are those areas which prevent or impede the infiltration of stormwater into the soil as it entered in natural conditions prior to development. Common impervious surfaces include, but are not limited to, rooftops, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, compacted gravel and soil surfaces, awnings and other fabric or plastic coverings, and other surfaces which prevent or impede the natural infiltration of stormwater runoff which existed prior to development.

Marsh areas. Marsh areas shall be those areas of the county that have been delineated as "marsh" on the most current digital mapping on file in the county engineering department. Where applicable, these areas shall be deducted from a property's total land area in determining its stormwater service charge.

Multiple-dwelling unit residential properties. Multiple-dwelling unit residential properties shall mean developed land whereon more than one (1) residential dwelling unit is located, and shall include, but not be limited to triplexes, apartment houses, attached single-family homes, boarding houses, group homes, hotels and motels, retirement centers, and other structures in which more than one (1) family group commonly and normally reside or could reside. In the application of stormwater service charges, multiple-dwelling unit properties shall be treated as other developed lands as defined in this article.

Other developed lands. Other developed lands shall mean, but not be limited to, multiple-dwelling residential unit properties, manufactured home and mobile home parks, commercial and office buildings, public buildings and structures, industrial and manufacturing buildings, storage buildings and storage areas covered with impervious surfaces, parking lots, parks, recreation properties, public and private schools and universities, research facilities and stations, hospitals and convalescent centers, airports, agricultural uses covered by impervious surfaces, water and wastewater treatment plants, and lands in other uses which alter the hydrology of the property from that which would exist in a natural state. Properties which are used for other than single-family residential use located in detached single-family dwelling units shall be deemed other developed lands for the purpose of calculating stormwater service charges.

River areas. River areas shall be those areas of the county that have been delineated as "rivers" on the most current digital mapping on file in the county engineering department. Where applicable, these areas shall be deducted from a property's total land area in determining its stormwater service charge.

Stormwater service charges. Stormwater service charges shall mean the periodic service charge imposed pursuant to this article for the purpose of funding costs related to stormwater management services and stormwater management systems and facilities. The use of the total land area of each property and its intensity of development as stormwater service charge rate parameters shall not preclude the use of other parameters, or of grouping of properties having similar characteristics into classes or

categories, grouping of properties having similar characteristics through the use of ranges or rounding up or down to a consistent numerical interval, or the use of flat-rate charges for one (1) or more classes of similarly-situated properties whose impact on the county's cost of providing stormwater management services and stormwater management systems and facilities is relatively consistent. Stormwater service charges may also include special charges to individual properties or persons for services, systems, or facilities related to stormwater management, including but not limited to charges for development plan review, inspection of development projects and on-site stormwater control systems, and enhanced levels of stormwater service above and beyond the levels normally provided by the county.

Undeveloped land. Undeveloped land shall mean property not altered from its natural state by construction or installation of improvements such as buildings, structures, or other impervious surfaces, or which has less than one (1) percent of its property covered by impervious surfaces.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-17. Stormwater service charge rates.

Stormwater service charge rates may be determined and modified from time to time by the county council so that the total revenue generated by said charges and any other sources of revenues or other resources allocated to stormwater management by the county council to the stormwater management utility shall be sufficient to meet the cost of stormwater management services, systems, and facilities, including but not limited to the payment of principal and interest on debt obligations, operating expense, capital outlays, nonoperating expense, provisions for prudent reserves, and other costs as deemed appropriate by the county council. The following stormwater service charge rates shall apply:

(1) *Detached single-family dwelling units.* Detached single-family dwelling units, as defined by this article, shall be billed for one (1) equivalent residential unit, as defined in this article, except as provided below in subsection 17.7-17(2), large detached single-family dwelling units applicable to detached single-family dwelling units exceeding twelve (12) acres in total land area.

(2) *Large detached single-family dwelling units.* Detached single-family dwelling units, as defined by this article, that are comprised of more than twelve (12) acres in total land area, once the areas of rivers and marshes have been deducted from the original total land area, shall be billed a composite fee. This composite fee shall consist of combining the service charges from the following:

a. The detached single-family dwelling unit and the first twelve (12) acres of land shall be billed for one (1) equivalent residential unit, as defined in this article; and

b. The remaining total land area shall be considered as undeveloped land, assigned a development intensity factor of 0.01, and billed according to the declining block rate as provided below in subsection 17.7-17(4).

(3) *Other developed and undeveloped lands.* All developed and undeveloped lands not classified as detached single-family dwelling units, as defined by this article, shall be assigned a development intensity factor reflecting the overall development intensity of the property ranging from 0.01 for undeveloped land to 0.95 for very heavily developed land, and shall be billed for each twenty thousand (20,000) square feet of total land area, once the areas of rivers and marshes have been deducted from the original total land area, at a rate wherein the development intensity factor applicable to the subject property is divided by the development intensity factor applicable to the equivalent residential unit, as defined in this article, except as provided below in either subsection 17.7-17(4) or subsection 17.7-17(5). For these properties, the total amount of impervious area on each parcel shall be compared to that parcel's total land area to determine that parcel's impervious percentage. The parcel's impervious percentage will be used to assign a development intensity factor to that parcel based on the following table:

Impervious Percentage	Development Intensity Factor
90% to 100%	0.95
75% to 89.9%	0.80
55% to 74.9%	0.65
30% to 54.9%	0.40
10% to 29.9%	0.20
1% to 9.9%	0.05
Less than 1%	0.01

(4) *Declining block rate applicable to undeveloped lands.* Large undeveloped properties shall be billed in a declining block rate using development intensity factors as follows:

Total Land Areas	Development Intensity Factor
Up to 12 acres	0.01
12.1 to 100 acres	0.001
100.1 to 1,000 acres	0.0001
Above 1,000 acres	0.00001

The total stormwater service charge for these properties will be a composite fee. This composite fee shall consist of combining all of the service charges from the respective categories of the above total land areas that are applicable to that particular property into a single service charge.

(5) *Threshold charge applicable to all properties.* There will be a minimum threshold charge of fifty cents ($0.50) per month or six dollars ($6.00) per year that is applicable to all properties. Based on the above categories and the determination of stormwater service charges if a property has a computed service charge of less than six dollars ($6.00) per year, it will be charged the threshold charge of six dollars ($6.00) per year.

(6) *Charge per equivalent residential unit.* The stormwater service charge rate per equivalent residential unit, as defined in this article, shall be two dollars and forty-five cents ($2.45) per month or twenty-nine dollars and forty cents ($29.40) per year.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-18. Exemptions and credits applicable to stormwater service charges.

Except as provided in this section, no public or private property shall be exempt from stormwater utility service charges or receive a credit or offset against such service charges. No exemption, credit, offset, or other reduction in stormwater service charges shall be granted based on the age, tax, or economic status, race, or religion of the customer, or other condition unrelated to the stormwater management utility's cost of providing stormwater management services and stormwater management systems and facilities. A stormwater management utility service charge credit manual shall be prepared by the county engineer specifying the design and performance standards of on-site stormwater services, systems, facilities, and activities that qualify for application of a service charge credit, and how such credits shall be calculated.

(1) *Credits.* The following types of credits against stormwater service charges shall be available:

a. *Existing watershed districts.* For those properties currently located in one of the county's watershed districts, they are paying a watershed district millage for certain storm drainage services. All of these applicable properties will have the amount of their watershed district millage for that property deducted from their computed stormwater service charge to determine their resulting service charge. This credit will be applied to all properties in the existing watershed districts. If the watershed district millage for a particular property is greater than its computed stormwater service charge, that property will not be charged a stormwater service charge.

b. *Freshwater wetlands.* All properties except those classified as detached single-family dwelling units may receive a credit against the stormwater service charge applicable to the property based on granting and dedicating a perpetual conservation easement on those portions of the property that are classified as freshwater wetlands and as detailed in the stormwater management utility service charge credit manual. The conservation easement shall remove that portion of the subject property from any future development. Once this credit has been granted to a particular property, that portion of the property will be treated similar to the river and marsh areas and shall be deducted from the property's total land area in computing its stormwater service charge. This credit shall remain in effect as long as the conditions of the conservation easement are met.

c. *On-site detention and retention facilities.* Developed land other than detached single-family dwelling units with on-site detention or retention facilities may receive a credit against the stormwater service charge applicable to the property based on attaining and continuing compliance with the technical requirements and performance standards contained in the stormwater management utility service charge credit manual. The stormwater utility service charge credit for on-site stormwater control systems or facilities that reduce or mitigate the impact of impervious surfaces on the subject property shall be proportional to the extent that the on-site stormwater control systems or facilities provided, operated, and maintained by the property owner reduce or mitigate the stormwater management utility's cost of providing stormwater management services and stormwater management systems and facilities. The stormwater utility service charge credit for services and activities that reduce or mitigate the stormwater management utility's cost of providing stormwater management services and stormwater management systems and facilities shall be proportional to the reduced costs realized by the stormwater management utility, but shall not be related to the cost of such services and activities to the person or entity providing same.

(2) *Exemptions.* The following exemptions from the stormwater service charges shall be allowed:

a. Improved public road rights-of-way which have been conveyed to and accepted for maintenance by the state department of transportation and are available for use in common for vehicular transportation by the general public.

b. Improved public road rights-of-way which have been conveyed to and accepted for maintenance by the county and are available for use in common for vehicular transportation by the general public.

c. Improved private roadways which are shown as a separate parcel of land on the most current county tax maps and are used by more than one property owner to access their property.

d. Railroad tracks shall be exempt from stormwater service charges. However, railroad stations, maintenance buildings, or other developed land used for railroad purposes shall not be exempt from stormwater service charges.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-19. Stormwater service charge billing, delinquencies and collections.

A stormwater service charge bill may be attached as a separate line item to the county's property tax billing or may be sent through the United States mail or by alternative means, notifying the customer of the amount of the bill, the date the payment is due, and the date when past due. The stormwater service charge bill may be billed and collected along with other charges, including but not limited to the county property tax billing, other county utility bills, or assessments as deemed most effective and efficient by the county council. Failure to receive a bill is not justification for nonpayment. Regardless of the party to whom the bill is initially directed, the owner of each parcel of land shall be ultimately obligated to pay such charges and any associated fines or penalties, including but not limited to interest on delinquent service charges. If a customer is underbilled or if no bill is sent for a particular property, the county may backbill for a period of up to one (1) year, but shall not assess penalties for any delinquency during that backbilled period.

A stormwater service charge shall be declared delinquent if not paid within sixty (60) days of the date of billing or upon the date of delinquency of the annual property tax billing if the stormwater service charge is placed upon the annual property tax billing or enclosed with or attached to the annual property tax billing.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-20. Appeals.

Any customer who believes the provisions of this article have been applied in error may appeal in the following manner and sequence:

(1) An appeal of a stormwater service charge must be filed in writing with the county engineer within thirty (30) days of the charge being mailed or delivered to the property owner and stating the reasons for the appeal. In the case of stormwater service charge appeals, the appeal shall include a survey prepared by a registered land surveyor or professional engineer containing information on the total property area, the impervious surface area, and any other features or conditions that influence the overall intensity of development of the property and its hydrologic response to rainfall events.

(2) Using information provided by the appellant, the county engineer (or his or her designee) shall conduct a technical review of the conditions on the property and respond to the appeal in writing within thirty (30) days. In response to an appeal, the county engineer may adjust the stormwater service charge applicable to the property in conformance with the general purposes and intent of this article.

(3) A decision of the county engineer that is adverse to an appellant may be further appealed to the county administrator or his designee within thirty (30) days of the adverse decision. Notice of the appeal shall be delivered to the county administrator or his designee by the appellant, stating the grounds for further appeal. The county administrator or his designee shall issue a written decision on the appeal within thirty (30) days. All decisions by the county administrator or his designee shall be served on the customer personally or by registered or certified mail, sent to the billing address of the customer. All decisions of the county administrator or his designee shall be final.

(4) The appeal process contained in this section shall be a condition precedent to an aggrieved customer seeking judicial relief. Any decisions of the county administrator or his designee may be reviewed upon application for writ of certiorari before a court of competent jurisdiction, filed within thirty (30) days of the date of the service of the decision.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-21. No suspension of due date.

No provision of this article allowing for an administrative appeal shall be deemed to suspend the due

date of the service charge with payment in full. Any adjustment in the service charge for the person pursuing an appeal shall be made by refund of the amount due.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-22. Enforcement and penalties.

Any person who violates any provision of this article shall be subject to a civil penalty of not more than one thousand dollars ($1,000.00), or such additional maximum amount as may become authorized by state law, provided the owner or other person deemed to be in violation has been notified of a violation. Notice shall be deemed achieved when sent by regular United States mail to the last known address reflected on the county tax records, or such other address as has been provided by the person to the county. Each day of a continuing violation shall be deemed a separate violation. If payment is not received or equitable settlement reached within thirty (30) days after demand for payment is made, a civil action may be filed on behalf of the county in the circuit court to recover the full amount of the penalty. This provision on penalties shall be in addition to and not in lieu of other provisions on penalties, civil or criminal, remedies and enforcement which may otherwise apply.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-23. Severability.

If a section, subsection, or part of this article shall be deemed or found to conflict with a provision of South Carolina law, or other preemptive legal principle, then that section, subsection, or part of this article shall be deemed ineffective, but the remaining parts of this article shall remain in full force and effect.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-24. Conflict with preceding ordinances.

If a section, subsection or provision of this article shall conflict with the provisions of a section, subsection or part of a preceding ordinance of the county, then the preceding section, subsection or part shall be deemed repealed and no longer in effect.

(Ord. No. 44-00, 5-2-00)

Sec. 17.7-25. Effective date.

This article shall become effective on July 1, 2000.

(Ord. No. 44-00, 5-2-00)

Horry County, South Carolina, Code of Ordinances >> - CODE OF ORDINANCES >> Chapter 17.7 - STORMWATER MANAGEMENT >> ARTICLE III. - STORMWATER MANAGEMENT AND SEDIMENT CONTROL >> DIVISION 1. GENERAL PROVISIONS >>

DIVISION 1. GENERAL PROVISIONS

Sec. 17.7-26. Title, purpose, objectives, application.

(a) *Title.* The provisions of this article shall constitute and be known as the "Stormwater Management and Sediment Control Ordinance for Horry County, South Carolina".

(b) *Purpose.* The purpose of this article is to protect, maintain, and enhance the public health, safety, and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased stormwater runoff associated with both future land development and existing developed land within the county. 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, assist in the attainment and maintenance of water quality standards, enhance the local environment associated with the drainage system, reduce local flooding, maintain as nearly as possible the pre-developed runoff characteristics of the area, and facilitate economic development while mitigating associated flooding and drainage impacts.

(c) *Objectives.* The objectives of this article include the following.

(1) Protect, maintain, and enhance the short-term and long-term public health, safety, and general welfare. This objective will be achieved by:

a. establishing minimum requirements and procedures to control the adverse effects of increased stormwater runoff associated with both future land development and existing developed land within Horry County;

b. providing proper management of stormwater runoff to minimize damage to public and private property and reduce the effects of land disturbing activities on land and stream channel erosion;

c. protecting, preserving, and enhancing water quality and fish and wildlife habitat within Horry County and in downstream receiving waters; and,

d. alleviate street and property flooding and its adverse impacts caused by urban development.

(2) Comply with state and federal (EPA) stormwater regulations developed pursuant to the Clean Water Act. These requirements include:

a. Control pollutants from stormwater discharges associated with commercial and industrial activity and the quality of stormwater discharge from residential, commercial and industrial developments;

b. Prohibit illicit connections to the stormwater drainage system;

c. Control discharges to the stormwater drainage system from spills and dumping or disposal of materials other than stormwater;

d. Control, through intergovernmental agreements, contribution of pollutants from one (1)

municipal system to another.

(3) Require plans to minimize the transport of pollutants to the local stormwater drainage system by requiring approval and implementation of stormwater management and sediment control plans for activities which may have an adverse impact on Horry County waters.

(4) Establish procedures, which minimize damage from flooding caused by development, while recognizing that natural fluctuations in water levels are beneficial.

(5) Require construction, where possible, of drainage facilities/systems, which aesthetically and functionally approximate natural systems.

(6) Establish procedures for the planning and implementation of stormwater improvements using a basin-wide or sub-basin approach which considers the total stormwater basin system, or major portions of the basin system, beyond individual subdivisions and developments.

(7) To design, construct, and maintain stormwater management facilities to minimize mosquito-related problems.

(8) To protect the water quality of the ocean and the physical characteristics of the beach area by minimizing the rates, volumes, and velocities of stormwater entering drainage systems discharging to the beach.

(d) *Application.* The application of this article and the provisions expressed herein shall be the minimum stormwater management requirements and shall not be deemed a limitation or repeal of any other powers granted by state statute. In addition, if site characteristics indicate that complying with these minimum requirements will not provide adequate designs or protection for local property or residents, it is the designer's responsibility to exceed the minimum requirements as necessary. The county engineer or designee shall be responsible for the coordination and enforcement of the provisions of this article.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-27. Definitions.

For the purpose of this article, the following terms, phrases and words, and their derivatives, shall have the meaning given herein.

Accidental discharge shall mean a discharge prohibited by this article into the drainage system, which occurs by chance and without planning or consideration prior to occurrence.

Adequate channel shall mean a natural or man-made channel or pipe which is capable of conveying the runoff from the design storm events without flooding existing structures or causing property damage.

As-built plan shall mean a set of engineering or site drawings that delineate the specific permitted stormwater management facility(ies) and BMPs as actually constructed, as outlined in the Horry County Stormwater Design Criteria Manual.

Berm shall mean a mound of soil, either natural or man-made, intended to buffer land uses or limited access.

Best management practices (BMPs) shall mean a wide range of management procedures, schedules of activities, prohibitions on practices and other management practices which have been demonstrated to effectively control the quality and/or quantity of stormwater runoff and which are compatible with the planned land use.

Board of zoning appeals shall mean the Horry County Board of Zoning Appeals established pursuant to the South Carolina Planning Enabling Act of 1994.

Buffer shall mean an area within a property or site, generally adjacent to and parallel with the property line, either consisting of natural existing vegetation or created by the use of trees, shrubs, and/or

berms, designed to continuously limit the view of and sound from the site to adjacent sites or properties.

County shall mean Horry County, South Carolina.

County council shall mean the duly elected council within Horry County.

County engineer shall mean the county engineer of Horry County, South Carolina.

Clean Water Act shall mean the Federal Water Pollution Act, as amended (33 U.S.C. 1251 et seq.).

Conveyance shall mean stormwater features designed for the movement of stormwater through the drainage system, such as concrete pipes, ditches, depressions, swales, channels etc.

Culvert shall mean a structure designed to convey a watercourse under a roadway, railway, pedestrian walk, or through an embankment.

Design report shall mean the report that accompanies the stormwater management and sediment control plan and includes data used for engineering analysis, results of all analysis, design and analysis calculations (including results obtained from computer programs), and other engineering data that would assist the county engineer in evaluating proposed stormwater management facilities.

Design storm events shall mean the frequency storm used for the design of stormwater management facilities (ten-year through twenty-five-year frequency storms).

Designer shall mean a registered professional who is permitted to prepare plans and studies required by this article.

Detention structure shall mean a permanent stormwater management structure whose primary purpose is to temporarily store stormwater runoff and release the stored runoff at controlled rates.

Developed land use conditions shall mean the land use conditions according to the current county land use map or proposed site plan. Also the conditions which exist following the completion of the land disturbing activity in terms of topography, vegetation, land use and rate, quality, volume or direction of stormwater runoff.

Developer shall mean the legal or beneficial owner(s) of a lot of any land included in a proposed development. Also, the holder of an option or contract to purchase, or any other person having enforceable proprietary interest in such land.

Development activity should generally mean any of the following actions undertaken by a public or private individual or entity:

(1) The division of a lot, tract or parcel of land into two (2) or more lots, plots, sites, tracts, parcels or other divisions by plat or deed;

(2) The construction, installation or alteration of a structure, impervious surface, or drainage facility;

(3) Any land change, including, without limitation, clearing, tree removal, grubbing, stripping, dredging, grading, excavating, transporting and filling of land; and,

(4) Adding, removing, exposing, excavating, leveling, grading, digging, burrowing, dumping, piling, dredging, or otherwise disturbing the soil, vegetation, and mud, sand or rock of a site.

Drainage system shall mean all structures used to convey stormwater runoff.

Easement shall mean a grant of one (1) or more property rights by a property owner to or for use by any person, firm, corporation, the general public, or another person or entity. Not inclusive of fee simple ownership.

Erosion shall mean the wearing away of land surface by the action of wind, water, gravity, ice, or any combination of those forces.

Erosion and sediment control shall mean the control of solid material, both mineral and organic, during a land disturbing activity to prevent its transport out of the disturbed area by means of air, water, gravity, or ice.

Exemption shall mean those land disturbing activities that are not subject to the sediment and stormwater requirements contained in this article.

Existing land use conditions shall mean the land use conditions shown on the March 1998 aerial photographs available from the county. Engineering hydrologic coefficients to be used for existing land use conditions are contained in the Horry County Stormwater Design Criteria Manual.

Filter strips shall mean vegetated sections of land designated to accept runoff as overland sheet flow from upstream developments.

Flood shall mean a general and temporary condition of partial or complete inundation of land areas from the overflow of inland waters, tidal conditions, or the unusual and rapid accumulation of runoff of surface waters from any source.

Grading shall mean excavating, filling (including hydraulic fill) or stockpiling of earth material or any combination thereof, including the land in its excavated or filled condition.

Illicit connection shall mean a connection to the drainage system of any discharge that is not composed entirely of stormwater runoff and is expressly prohibited by this article.

Impervious shall mean the condition of being impenetrable by water.

Imperviousness shall mean the degree to which a site is impervious.

Impervious surface shall mean a surface that has been highly compacted or covered with a layer of material so that it is highly resistant to infiltration by water.

Infiltration shall mean the passage or movement of water through the soil profile.

Land disturbing activity shall mean any use of the land by any person that results in a change in the physical characteristics or topography that may cause erosion and contribute to sediment and alter the quality and/or quantity of stormwater runoff.

Linear projects shall mean any project that is over one thousand (1,000) linear feet.

Lot shall mean a piece, parcel, tract or plot of land intended as a unit for building development or other purpose, for purposes of sale, rent, or lease.

Maintenance shall mean 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. Maintenance shall not include actions taken solely for the purpose of enhancing the aesthetics aspects associated with stormwater management facilities and BMPs.

Minor subdivision shall mean the division of land as defined in the current Horry County Land Development Regulations.

Non-erodible shall mean a material, e.g., natural rock, riprap, concrete, plastic, etc., that will not experience surface wear due to natural forces of wind, water, ice, gravity or a combination of those forces.

Nonpoint source pollution shall mean pollution contained in stormwater runoff from undefined, diffuse

sources.

One hundred-year frequency storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in one hundred (100) years. It also may be expressed as an exceedance probability with a one (1) percent chance of being equaled or exceeded in any given year.

On-site stormwater management shall mean the design and construction of a facility necessary to control stormwater runoff within and for a single development.

Owner shall mean the person in who is vested the fee ownership, dominion, or title of the property. This term may also include a tenant, if chargeable under his lease for the maintenance of the property, and any agent of the owner or tenant including a developer.

Person shall mean any association, company, corporation, firm, individual, organization, or partnership, singular or plural, of any kind.

Person responsible for the land disturbing activity shall mean the:

(1) Person who has or represents having financial or operational control over the land disturbing activity; and/or

(2) Landowner or person in possession or control of the land who directly or indirectly allowed the land disturbing activity or has benefited from it or who has failed to comply with any provision of this article.

Pollution shall mean the contamination or other alteration of any water's physical, chemical or biological properties, including change in temperature, taste, color, turbidity, or odor of such waters or the discharge of any liquid, gaseous, solid, radioactive, or other substance into any such waters that is harmful, detrimental or injurious to the public health, safety or welfare or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life.

Preliminary plat shall mean the preliminary plat pursuant to the current Horry County Land Development Regulations.

Private shall mean property or facilities owned and maintained by individuals, corporations, and other organizations and not by the county.

Procedure shall mean a procedure adopted by the county to implement a regulation or regulations adopted under this article, or to carry out other responsibilities as may be required by this article or other codes, ordinances, or resolutions of the county.

Regional stormwater management shall mean the design and construction of a facility necessary to control stormwater runoff within or outside a development and for one (1) or more developments.

Registered civil engineer shall mean a registered professional engineer in good standing with the South Carolina Board of Registration for Professional Engineers and Land Surveyors.

Registered land surveyor shall mean a professional registered land surveyor in good standing with the South Carolina Board of Registration for Professional Engineers and Land Surveyors.

Registered landscape architect shall mean a landscape architect properly registered and licensed to conduct work in South Carolina.

Responsible personnel shall mean any foreman, superintendent, or similar individual that is the on-site person in charge of land disturbing activities.

Retention structure shall mean a permanent structure whose primary purpose is to permanently store a given volume of stormwater runoff. Release of the given volume is by infiltration, overflow structures, and/or evaporation.

Sediment shall mean solid particulate matter, both mineral and organic, that has been or is being transported by water, air, ice, or gravity from its site of origin.

Site shall mean any lot, plot, parcel or tract of land.

Single family residence - separately built shall mean a noncommercial dwelling that is occupied exclusively by one (1) family and not part of a residential subdivision development.

Stabilization shall mean the installation of vegetative or structural measures to establish a soil cover to reduce soil erosion by stormwater runoff, wind, ice and gravity.

Stage work or stage construction shall mean a plan for the staged construction of stormwater facilities where portions of the facilities will be constructed as different stages of the proposed development are started or completed.

Stop-work order shall mean an order directing the person responsible for the land disturbing activity to cease and desist all or any portion of the work which violates the provisions of this article.

Stormwater concept plan shall mean the overall proposed concept for a storm drainage system to serve the entire development including future phases. The concept plan shall include stormwater management structures and BMPs, and supporting documentation as specified in this article and the Horry County Stormwater Management Design Manual, for each proposed private or public development to the extent permitted by law. Also included are the supporting engineering calculations and results of any computer analysis, if necessary.

Stormwater management shall mean, for: quantitative control, a system of vegetative or structural measures, or both, that control the increased volume and rate of stormwater runoff caused by manmade changes to the land; qualitative control, a system of vegetative, structural, or other measures that reduce or eliminate pollutants that might otherwise be carried by stormwater runoff.

Stormwater management and sediment control plan shall mean the set of drawings and other documents that comprise all of the information and specifications for the drainage systems, structures, concepts and techniques that will be used to control stormwater and sediment as required by this article and the Horry County Stormwater Design Criteria Manual. Also included are the supporting engineering calculations and results of any computer analysis.

Stormwater Design Criteria Manual (Horry County) shall mean the current version of the manual of design, performance, and review criteria for stormwater management practices, prepared under the direction of the county engineer. The original of this manual may be inspected at the office of the county engineer, and copies may be obtained from the county stormwater department, in payment of a reasonable fee. Those persons seeking reliance on the manual shall assume the burden of ensuring that the manual to which they refer is the most current version.

Stormwater management facilities shall mean those structures and facilities that are designed for the collection, conveyance, storage, treatment and disposal of stormwater runoff into and through the drainage system. In most cases stormwater management facilities will refer to facilities whose primary purpose is related to the quantity of stormwater while BMPs primary purpose will be related to water quality concerns of stormwater.

Stormwater runoff shall mean the direct response of a watershed to precipitation and includes the surface and subsurface runoff that enters a ditch, stream, storm drain or other concentrated flow during the

following the precipitation.

Subdivision shall mean a division, whether by deed, plat, or other recorded or unrecorded instrument, of a tract or parcel of land into two (2) or more lots, building sites, or other divisions. The land is divided for sale, lease, mortgage, or building development, whether immediately or in the future. The definition includes all land divisions involving a new street or change in existing streets. It includes re-subdivisions involving the further division or relocation of lot lines of any lot lines of any lot or lots within a previously approved or recorded subdivision as well as combinations of recorded lots. The following exceptions are included within this definition only for the purpose of requiring that the county be informed and have a record of the subdivisions.

(1) Combining or re-combining portions of previously platted lots where the total number of lots is not increased and the resultant lots are equal to the ordinance standards.

(2) Dividing land into parcels of five (5) acres or more where no new street is involved. The planning commission must receive plats of these exceptions as information and indicate that fact on the plats.

(3) Combining or re-combining entire lots of record where no new street or change of existing street in involved.

Swale shall mean a structural measure with a lining of grass, riprap or other materials, which can function as a detention structure or BMP and convey stormwater runoff without causing erosion.

Ten-percent point is the location in the drainage system downstream from the proposed development, where the proposed development represents less than ten (10) percent of the total watershed draining to this location.

Ten-year frequency storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in ten (10) years. It may also be expressed as an exceedance probability with a ten-percent chance of being equaled or exceeded in any given year.

Twenty-five-year frequency storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in twenty-five (25) years. It may also be expressed as an exceedance probability with a four (4) percent chance of being equaled or exceeded in any given year.

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

Waiver shall mean the relinquishment from stormwater management requirements by the county engineer for a specific land disturbing activity on a case-by-case review basis, based on detailed engineering analysis submitted by the owner or his/her representative.

Water quality shall mean those characteristics of stormwater runoff from a land disturbing activity that relate to the physical, chemical, biological, or radiological integrity of water.

Water quantity shall mean those characteristics of stormwater runoff that relate to the rate and volume of the stormwater runoff within the development and to downstream areas resulting from land disturbing activities.

Watershed shall mean the drainage area contributing stormwater runoff to a single point.

Wetland shall mean those areas that are inundated or saturated by surface or ground water 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 include swamps, marshes, bogs, and similar areas as determined by the Army Corps of Engineers.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-28. Scope of article.

(a) No person shall conduct any land disturbing activities without having provided for appropriate stormwater management measures that control or manage runoff, in compliance with this article, unless exempted in section 17.7-30.

(b) The provisions of this article shall apply throughout the unincorporated areas in Horry County, South Carolina.

(c) The county stormwater department shall be responsible for the coordination and enforcement of the provisions of this article, and shall have the authority to issue summons for violations hereof.

(d) The Horry County Stormwater Design Criteria Manual shall give guidance to persons preparing stormwater management and sediment control plans, and designing or operating stormwater management systems.

(e) The application of this article and the provisions expressed herein shall be the minimum stormwater management requirements and shall not be deemed a limitation or repeal of any other local requirements authorized by state statute. Where other requirements are more stringent those shall apply. This article does not eliminate the necessity for obtaining other permits as may be required by other governmental entities.

(f) The same design standards will be used for drainage systems, stormwater management facilities, and BMPs that will be either privately or publicly owned or maintained.

(g) No person shall conduct any land disturbing activity that will displace sediment onto adjacent lot(s) or roads both during and after construction. The property must be designed to account for all grading and drainage issues that will keep the stormwater from running off their property and creating a nuisance.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-29. Powers of the department.

(a) The county stormwater department shall have the power to administer and enforce all regulations and procedures adopted to implement this article, including the right to maintain an action or procedure in any court of competent jurisdiction to compel compliance with or restrain any violation of this article, and to issue summons pursuant to the provisions of the county summons ordinance, subsection 1-12(a), which shall be amended to include reference to the authority of the county stormwater department to issue summons in this regard.

(b) The county stormwater department can:

(1) Administer, coordinate and oversee, design, construction, and operation and maintenance of county stormwater facilities and conveyances;

(2) Establish or oversee establishment of development standards and guidelines;

(3) Determine the manner in which stormwater facilities should be operated;

(4) Inspect private systems which discharge to a public drainage system;

(5) Require compliance with maintenance requirements;

(6) Advise the other county departments on issues related to stormwater;

(7) Protect facilities and properties controlled by the county and prescribe how they are used by others;

(8) Require proposed developments, not exempt from this article, to comply with the terms of this article;

(9) Develop programs or procedures to control the discharge of pollutants into the public drainage system; and

(10) Implement the stormwater management program for Horry County, South Carolina.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-30. Exemptions from requirements.

The following land disturbing activities are exempt from the provisions of the article and the requirements of providing stormwater management measures. Even if exempt from this article, the following, as well as all land disturbing activity is not allowed to divert water to adjacent property to cause a nuisance and/or property damage and should comply with the intent of this article. These activities are also not exempt from implementing proper sediment and erosion control best management practices.

(1) Construction or improvement of a single-family residence (single family residence - separately built) or their accessory buildings, or mobile home, that is separately built and not part of multiple construction or a subdivision development approved under this article. If included in a subdivision plan, all land disturbing activities must follow the stormwater management and sediment control plan that has been approved for the subdivision.

(2) Minor land disturbing activities that do not disturb more than one-half (0.5) acre of land area.

(3) Any maintenance or renovation of an existing structure or system not materially changing or affecting the rate, concentration or volume of stormwater runoff.

(4) Land disturbing activities for agricultural uses.

(5) Land disturbing activities undertaken on forest land for the production and harvesting of timber and timber products under the condition that the practices included in the South Carolina Forestry Commission's "Best Management Practices for Forestry" are implemented.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-31. Stormwater design criteria manual.

To assist in the design and evaluation of stormwater management facilities in Horry County, a Stormwater Design Criteria Manual has been developed. Design procedures and criteria are presented for conducting hydrologic and hydraulic evaluations and evaluation of best management practices (BMPs). Although the intention of the manual is to establish uniform design practices, 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 hydrologic and hydraulic studies if approved by the county. This stormwater design criteria manual is adopted by the county by reference in this article. The Horry County Stormwater Design Criteria Manual will be reviewed and updated annually, if necessary, by the county engineer and any changes adopted by the county council by resolution.

(Ord. No. 107-08, § 1, 1-6-09)

Secs. 17.7-32—17.7-45. Reserved.

Horry County, South Carolina, Code of Ordinances >> - CODE OF ORDINANCES >> Chapter 17.7 - STORMWATER MANAGEMENT >> ARTICLE III. - STORMWATER MANAGEMENT AND SEDIMENT CONTROL >> DIVISION 2. STORMWATER CONCEPT AND STORMWATER MANAGEMENT AND SEDIMENT CONTROL PLANS >>

DIVISION 2. STORMWATER CONCEPT AND STORMWATER MANAGEMENT AND SEDIMENT CONTROL PLANS

Sec. 17.7-46. Scope of plans.

(a) The following items relate to the general scope of plans required by this article.

(1) In developing plans for subdivisions, individual lots in a residential development shall not be considered to be separate land disturbing activities and shall not require individual permits. Instead the subdivision development, as a whole, shall be considered to be a single land disturbing activity. Hydrologic parameters that reflect the ultimate subdivision development shall be used in all engineering calculations.

(2) If individual lots or sections in a subdivision are being developed by different property owners, all land disturbing activities related to the subdivision shall be covered by the approved stormwater management and sediment control plan for the subdivision. A statement shall be included on the final plat that all activities, including activities by individual lot owners, will be carried out in accordance with the approved stormwater management and sediment control plan for the subdivision.

(3) For developments that have different planned phases of development, if all phases are covered by the approved concept or stormwater management and sediment control plan, one (1) permit will be given for the entire development so that new permits will not be needed for each phase of development. A detailed phasing plan shall be required that demonstrates the sequencing of sediment controls and the stormwater management facilities will be adequate for each phase.

(4) Subdivisions, which received preliminary plat or final planned development district (PDD) approval prior to the effective date of the ordinance from which this article derives, are exempt from these requirements. Development of new phases of existing subdivisions shall comply with the provisions of this article.

(b) In subdivisions, the following requirements apply.

(1) The design surface runoff across lots shall not have erosive velocities.

(2) Quantities of surface runoff greater than three (3) cfs that flow through lots shall be collected and conveyed in a system of open channels, closed conduits, or a combination of both.

(3) Lots should generally be graded in such a manner that surface runoff does not cross more than two (2) lots before it is collected in a system of open channels, closed conduits, or a combination of both.

(c) General grading guidelines:

(1) Must also meet the county's most recent flood damage and control ordinance, or building code whichever is more strict.

(2) The first floor elevation of all structures shall be at least twelve (12) inches above the center of the road in front of the structure. Garages shall be a minimum of nine (9) inches above the centerline of the road and have a minimum of 6 inches of fall away from the structure. In all cases, positive drainage shall be established away from the structure. This regulation does not apply to sheds, barns, and other auxiliary buildings.

(3) If a crawlspace is proposed the bottom of the floor structure shall be a minimum of twenty-four (24) inches above the finished grade.

(4) In cases where the lot is designed to be lower than the road and is intended to drain away from the road to a rear or side lot swale, ditch, pond or water course, the first floor shall be at least twelve (12) inches above all surrounding ground at a distance of ten (10) feet around the structure.

(d) For all land disturbing activities, concentrated stormwater runoff leaving a development site must be discharged directly into a well-defined, natural or man-made offsite receiving channel or pipe. If the receiving channel is found to be inadequate, the developer must incorporate measures to either improve the receiving channel to an adequate condition, or detain (retain) runoff on the site to a level that can be accommodated by the receiving channel. Newly constructed channels shall be designed as adequate channels. Velocity dissipation devices and/or erosion control measures shall be placed at the outfall of all stormwater management facilities as necessary to provide a protected flow path(s). If a stormwater system is discharged into existing wetlands, the proposed water surface elevation, within and adjacent to the wetlands, must be determined for design conditions.

The development site should be designed to maximize the amount of rainfall that infiltrates into the soils and minimize the amount of direct flow into public drainage facilities, adjoining streets, waterbodies, watercourses, and wetlands, to the extent feasible.

(e) Design configurations, which create stagnant water conditions, such as hydraulically dead end canals, are prohibited regardless of the type of development.

(f) Concentrated stormwater shall not be discharged directly into wetlands without first routing through some type of approved water quality BMP.

(g) Linear projects shall require a detailed erosion and sediment control plan as well as a SWPPP as required under DHEC regulations.

(h) For redevelopment sites show the ten- and twenty-five-year flood elevations for any special flood hazard areas on or within one hundred (100) feet of the property. The source of these elevations shall also be shown on the plans.

(i) A ten (10) percent downstream analysis shall be performed to determine the effects from the project downstream and any potential flooding issues. The analysis shall include but not limited to the following:

- Develop hydrographs for the design storms at the discharge point(s) from the proposed development. The proposed developed land use conditions within the development should be used to develop these hydrographs.
- Route these hydrographs through the downstream drainage system to a point downstream where the size of the proposed development represents ten (10) percent or less of the total drainage area that contributes runoff to this point. This point is called the ten-percent point.
- For all points of interest in the downstream drainage system, between the exit of the proposed development to the ten-percent point, develop hydrographs from the contributing areas. Existing land use conditions should be used for this analysis for all areas not included in the

proposed development. Points of interest would include locations where drainage from sub-watersheds intersects, where known drainage and flooding problems exist, where structures might be affected by storm runoff, etc. As a minimum, hydrographs at the ten-percent point should be developed with and without the proposed development. The point of interest shall be noted in the narrative and on a map detailing the flow path.

- A comparison of the routed hydrograph from the proposed development with the other downstream hydrographs should indicate whether or not the proposed development will increase downstream peak flows or have little or no affect on these peak flows.
- If major constructions (e.g., storage facilities, undersized culverts) are present in the downstream analysis area that will affect the general characteristics of the hydrographs, the associated engineering parameters of these constructions should be included in the analysis.
- In most cases, general topographic maps, soils information, and a field check of the drainage system will provide the data needed for this analysis.
- Detailed survey information may be required.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-47. Stormwater concept and stormwater management and sediment control plans and approval process.

(a) Unless granted an exemption from this article, a stormwater concept plan for each land disturbing activity shall be submitted for review by the county engineer prior to submission of the stormwater management and sediment control plan and construction plans for the entire land disturbing activity, or any portion thereof.

(b) The stormwater concept plan may be reviewed, if needed, with the designer, after county review, where it will be approved, approved with changes, or rejected. If rejected, changes, additional analysis, or other information needed to approve the next submittal of the concept plan shall be identified. The county review of the stormwater concept plan will be completed within fifteen (15) working days from and after the receipt of the plan.

(c) Upon approval of the concept plan, the applicant may proceed with the development of the stormwater management and sediment control plan, prepared in accordance with the Horry County Stormwater Design Criteria Manual (as part of the construction plans).

(d) All plans which are subject to approval by the county planning commission shall be submitted to the planning department and shall be subject to the review and approval time frames established by the planning commission. The required set of plans will correspond to those established by the planning department. These plans shall not be forwarded to the county planning commission for their review and consideration until the stormwater management and sediment control plans have been approved by the stormwater department.

(e) All other stormwater management and sediment control plans as required by this article shall be submitted to the county stormwater department for review and approval. The applicant shall submit two (2) copies (unless the plans are submitted digitally) of the final plans in accordance with the Horry County Stormwater Design Criteria Manual. Within thirty (30) calendar days from and after receipt of the plans, the county engineer shall issue a decision approving, rejecting, or conditionally approving the plans with modifications. The review and approval time frames for all subsequent submittals on the same plans, if required, shall also be thirty (30) calendar days.

(f) The county engineer may accept and submit into the review process a stormwater concept plan if it identifies the location and type of facilities to be constructed in sufficient detail to accurately estimate construction costs and the county engineer determines that a stormwater management and sediment control plan is not needed. If accepted under this provision, the stormwater concept plan then becomes the stormwater management and sediment control plan for this land disturbing activity.

(g) All preliminary plats of the development shall be consistent with the stormwater concept plan required in subsection (a).

(h) Should any stormwater management and sediment control plan involve any stormwater management facilities or land to be dedicated to public use, the same information shall also be submitted for review and approval to the department having jurisdiction over the land or other appropriate departments or agencies identified by the county engineer for review and approval. This stormwater management and sediment control plan shall serve as the basis for all subsequent construction.

(i) A stormwater management and sediment control plan shall not be considered approved without the inclusion of an approval stamp with a signature and date on the plans. The stamp of approval on the plans is solely an acknowledgement of satisfactory compliance with the requirements of these regulations. The approval stamp does not constitute a representation or warranty to the applicant or any other person concerning the safety, appropriateness or effectiveness of any provision, or omission from the stormwater management and sediment control plan.

(j) Upon approval of the stormwater management and sediment control plan an approval letter shall be issued along with the approved NOI. The approvals shall be submitted to DHEC within one (1) year for a NPDES permit, if after one (1) year the NPDES permit has not been applied for then the approvals shall become null and void. The plans shall have to be resubmitted or a variance will have to be given by the county engineer. Upon receiving the NPDES permit from DHEC, the county shall issue a stormwater permit which shall remain valid for five (5) years from the date of issuance. If the project has not been started, or completed within the required time frame another permit will have to be applied for along with a new NPDES permit.

(k) A notice of intent (as per DHEC most recent approved forms) shall be submitted along with the stormwater management and sediment control plans, and shall be completely filled out and signed by the owner or person financially responsible for the project.

(l) A properly executed stormwater facility maintenance agreement shall be submitted with the permit application.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-48. Plan requirements.

(a) *Concept plan.* Concept plans shall include as a minimum the following:

(1) A narrative description of topographic and soil conditions, hydrologic conditions of the upstream drainage basin, and the condition of the downstream drainage system (outfall) from the development site.

(2) A narrative description of the stormwater management facilities to be used.

a. A narrative of the existing tailwater conditions and any assumptions made in arriving at the tailwater conditions used in the design.

b. An analysis and details for any streams that may be affected or within one-half (½) mile radius of a water body listed on the 303D DHEC list or if a TMDL is established. If the project does not fall into these criteria then this shall be clearly stated in the narrative.

(3) A general description of adjacent property and a description of existing structures, buildings, and other fixed improvements located on surrounding properties.

(4) A plan to accompany the narrative which shall contain:

- a vicinity map, using the appropriate USGS quadrangle sheet, showing the location of the proposed project in relation to roadways, jurisdictional boundaries, streams and rivers;
- the maximum scale shall be one (1) inch = two hundred (200) feet or other scale approved by the county engineer in order to properly delineate the property;
- the boundary lines of the site on which the work is to be performed;
- all areas within the site which will be included in the land disturbing activities shall be identified and the total disturbed area calculated;
- a topographic map of the site showing existing and proposed contours to include

twenty-five (25) feet outside of all property lines and further if engineering judgment deems necessary;

- anticipated starting and completion dates of the various stages of land disturbing activities and the expected date the final stabilization will be completed;
- location of all existing stormwater conveyances, within the study area, such as ditches, storm pipes, easements, etc.;
- the location of proposed temporary and permanent vegetative and structural stormwater management control measures, BMPs, and easements;
- location and configuration of all proposed parking lot(s) and landscaping buffers;
- location and configuration of existing and proposed impervious areas such as buildings, roadways, etc. (for single-family developments, road and lot layout is sufficient);

(5) To be approved as the final stormwater management and sediment control plan by the county engineer, the concept plan must be signed and sealed by a professional as outlined in section 17.7-57, Professional registration requirements.

(6) To be approved by the county engineer as the final stormwater management and sediment control plan, the concept plan shall contain a statement that the land disturbing activity will be accomplished pursuant to the concept plan and that the county has the right to conduct on-site inspections.

(7) Stormwater pollution prevention plan consistent with DHEC guidelines. To include all elements as required by DHEC regulations.

(8) Stormwater management and sediment control plans shall include designation of all easements needed for inspection and maintenance of the proposed drainage system and stormwater management facilities and BMPs. As a minimum, easements shall have the following characteristics:

- Provide adequate access to all portions of the proposed drainage system, stormwater management structures and BMPs.
- Provide sufficient land area for maintenance equipment and personnel to adequately and efficiently maintain the system.
- Prohibit all fences and structures, which would interfere with access to the easement areas and/or the maintenance function of the drainage system.
- Drainage easements for those systems or portions of systems dedicated to the county for maintenance shall be provided in accordance with the following criteria:

  1. The width of piped drainage easements shall be determined using the following equation:

     Easement Width = [Pipe Depth (in feet) × 3] + [Pipe Diameter (in feet)]

     The calculated piped drainage easement shall always be rounded up to the next higher five-foot increment. Also, the minimum width for any piped drainage easement shall be twenty (20) feet.
  2. Minimum pipe size acceptable for county maintenance shall be fifteen (15) inches.
  3. For multiple pipes, box culverts or multiple box culverts, the easement width shall be the outside diameter or width of the system plus ten (10) feet on one side and fifteen (15) feet on the other side of the system, but the minimum total shall not be less than thirty (30) feet.
  4. For open channel easements, the following widths shall apply:
     a) When the top width of the channel is equal to or less than fifteen (15) feet, the following equation shall be used:

        Easement Width = (25-foot offset on one side) + (Channel Top Width) + (5-foot offset on the other side)

b) When the top width of the channel exceeds fifteen (15) feet, the following equation shall be used:

Easement Width = (25-foot offset on one side) + (Channel Top Width) + (25-foot offset on the other side)

5. For minor swales along lot lines where the side slopes are equal to or flatter than 5:1 and the depth does not exceed twenty-four (24) inches, a drainage easement not less than twenty (20) feet in width shall be provided.
6. Open ditches within street rights-of-way or along roadways shall have side slopes no steeper than 3:1. Open ditches along rear lot lines shall have side slopes no steeper than 3:1.
7. All perimeter ditches shall be cleaned and regarded for positive flow regardless of being public or private.
8. All roadside ditches deeper than thirty-six (36) inches shall be piped.
9. All stormwater storage facilities and infiltration systems shall not be located within fifty (50) feet of a potable water well.
10. For detention basins and other stormwater management facilities, a maintenance easement shall be provided around the facility and shall be twelve (12) feet from the top of bank or from the normal water elevation when the side slopes are 5:1 or flatter.

(b) *Stormwater management and sediment control plan.* Stormwater management and sediment control plans shall include as a minimum the following.

(1) A vicinity map, using the appropriate USGS quadrangle sheet, indicating a north arrow, scale, boundary lines of the site, and other information necessary to locate the development site.
(2) The maximum scale shall be one (1) inch = one hundred (100) feet.
(3) The existing and proposed topography of the development site except for individual lot grading plans in single family subdivisions.
(4) Physical improvements on the site, including present development and proposed development.
(5) Location, dimensions, elevations, and characteristics of all existing and proposed stormwater management facilities.
(6) All areas within the site, which will be included in the land disturbing activities, shall be identified and the total disturbed area calculated.
(7) The location of BMPs for stormwater quality and sediment control including temporary and permanent vegetative and structural measures.
(8) An anticipated starting and completion date of the various stages of land disturbing activities and the expected date the final stabilization will be completed.
(9) A determination that no occupied first floor elevation of any structure is below the one-hundred-year plus one (1) foot flood elevation.
(10) For subdivisions, directional arrows should be shown on the plan for each planned lot in the subdivision to show the drainage direction. The direction of flow cannot be changed without a revision to the plan.
(11) Stormwater management and sediment control plans shall include designation of all easements needed for inspection and maintenance of the drainage system and stormwater management facilities and BMPs. As a minimum, easements shall have the following characteristics.

a. Provide adequate access to all portions of the drainage system, stormwater management structures and BMPs.
b. Provide sufficient land area for maintenance equipment and personnel to adequately and efficiently maintain the system, as outlined in the Horry County Stormwater Design Criteria Manual.
c. Restriction on easements shall include prohibiting all fences, berms, and structures,

which would interfere with access to the easement areas and/or the maintenance function of the drainage system.

(12) To improve the aesthetic aspects of the drainage system, a landscape plan for all portions of the drainage system shall be part of the stormwater management and sediment control plan. This landscape plan shall address the following.

a. Tree saving and planting plan.

b. Types of vegetation that will be used for stream bank stabilization, erosion control, sediment control, aesthetics and water quality improvement.

c. Any special requirements related to the landscaping of the drainage system and efforts necessary to preserve the natural aspects of the drainage system.

d. Landscaping shall not be installed within the easement unless it is a part of the drainage system (for example low impact development).

(13) The stormwater management and sediment control plan shall include all engineering calculations needed to design the system and associated structures including existing and developed velocities, hydraulic grade lines, peak rates of discharge, and hydrographs of stormwater runoff at all existing and proposed points of discharge from the site. A table on the grading and drainage plan page shall be utilized to provide the following information:

a. Pre and post stormwater discharges for the ten-, twenty-five-, and one-hundred-year storms

b. Tailwater conditions used.

c. Rainfall intensities used.

d. Shape factors (peaking factors used).

e. Pond information (normal water level (NWL), top of bank (TOB), bottom of pond, twenty-five-year and one-hundred-year water elevations).

(14) Description of site conditions around points of all surface water discharge including vegetation and method of flow conveyance from the land disturbing activity.

(15) Construction and design details for structural controls.

(16) If the county engineer's review of the stormwater management and sediment control plan and/or design report indicates that there may be drainage or flooding problem at the exit to the proposed development or at any location between the exit point and the ten (10) percent downstream point, the county engineer may require:

a. water surface profiles plotted for the conditions of existing and developed conditions for the twenty-five-year design storm;

b. water surface profiles plotted for the conditions of existing and developed conditions for the one-hundred-year design storm; and

c. elevations of all structures potentially damaged by twenty-five- and/or one-hundred-year flows.

(17) All stormwater management and sediment control plans submitted for approval shall contain a statement by the person responsible for the land disturbing activity that the land disturbing activity will be accomplished pursuant to the approved plan and that responsible personnel will be assigned to the project.

(18) All stormwater management and sediment control plans shall contain a statement by the person responsible for the land disturbing activity, of the right of the county engineer to conduct on-site inspections.

(19) A stormwater pollution prevention plan as per DHEC guidelines. To include all elements as required by DHEC regulations.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-49. Plan hydrologic criteria.

The hydrologic criteria to be used for the stormwater concept and stormwater management and sediment control plans shall be as follows:

(1) Twenty-five-year design storm for all culverts, open channels (including streams, creeks, etc.), stormwater conveyance systems and drainage designs. Culverts and other stormwater conveyance systems under arterial roads shall be designed using the fifty-year design storm.

(2) Ten-year and twenty-five-year design storms for all detention and retention storage facilities using procedures contained in the stormwater design criteria manual or approved by the county engineer.

(3) All drainage designs shall be checked using the one-hundred-year storm, plus one (1) foot, for analysis of local flooding and possible flood hazards to adjacent structures and/or property.

(4) All hydrologic analysis will be based on land use conditions as specified in section 17.7-50.

(5) For the design of storage facilities, a secondary outlet device or emergency spillway shall be provided to discharge the excess runoff in such a way that no danger of loss or life or facility failure is created. The size of the outlet device or emergency spillway shall be designed to pass the one-hundred-year storm as a minimum requirement.

(6) In determining downstream effects from stormwater management structures, BMPs, and the development, hydrologic-hydraulic engineering studies shall extend downstream to a point where the proposed development represents less than ten (10) percent of the total watershed. The results of the extended downstream point analysis (ten-percent point) shall be included in the hydrologic-hydraulic study submitted with the stormwater management and sediment control plan.

(7) All stormwater best management designs shall be in accordance with the Horry County Stormwater Management Design Manual. All calculations used to determine these designs shall be included design plan.

(8) The precipitation values for each frequency storm to be analyzed (two-, ten-, twenty-five-, and one-hundred-year) shall be the precipitation frequency estimates developed by the National Oceanic and Atmosphere Administration as set forth in the NOAA Atlas 14, Volume 2.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-50. Plan land use conditions criteria.

For all stormwater management facilities, a hydrologic-hydraulic study shall be done showing how the drainage system will function with and without the proposed facilities. For such studies the following land use conditions shall be used. Existing land use data shall be taken from the March 1998 aerial photograph and field checked and updated.

(1) For the design of the facility outlet structure, use developed land use conditions for the area within the proposed development and existing land use conditions for upstream areas draining to the facility.

(2) For any analysis of flood flows downstream from the proposed facility, use existing land use conditions for all downstream areas.

(3) All stormwater management facilities, emergency spillways shall be checked using the one-hundred-year storm and routing flows through the facility and emergency spillways. For this analysis, developed land use conditions shall be used for all areas within the analysis.

(4) The effects of existing upstream detention facilities can be considered in the hydrologic-hydraulic study if these facilities have been accepted for county maintenance.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-51. Plan wetlands criteria.

Wetland areas shall not be disturbed until documentation is provide to the county engineer to show that the applicant has received approval from the U.S. Army Corps of Engineers regarding appropriate permits and approval of development activities. No stormwater shall be discharged directly into any wetlands unless first being treated through an approved water quality BMP.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-52. Minimum stormwater quantity control requirements.

(a) The minimum stormwater quantity control requirements shall provide management measures necessary to accomplish the following.

(1) For projects greater than five (5) acres install stormwater management facilities to reduce the ten-year and twenty-five-year developed peak discharge rates by twenty (20) percent from the existing peak discharge rates. Runoff calculations shall include all areas proposed to be disturbed and or regarded. The design of these facilities shall be based on procedures contained in the Stormwater Design Criteria Manual or approved by the county engineer.

(2) Infiltration practices shall be provided that capture and infiltrate at least the first one-half (0.5) inch of runoff generated by each rainfall event from all impervious areas to assure protection of ground water recharge.

(3) The requirements, or portions thereof, of subsection (1) may be waived by the county engineer if it can be shown by detailed engineering calculations and analysis supplied by the applicant which are acceptable to the county engineer that one (1) of the following exists:

a. The installation of stormwater management facilities would have insignificant effects on reducing downstream flood peaks; or

b. Stormwater management facilities are not needed to protect downstream developments and the downstream drainage system has, or can and will be made to have, sufficient capacity to receive any increase in runoff for the design storm; or

c. The county engineer determines that stormwater management facilities are not needed to control developed peak discharge rates and installing such facilities would not be in the best interest of the county.

(4) The requirements, or portions thereof, of subsection (1) may not be waived if the county engineer determines that not providing peak flood controls would increase known flooding problems, or exceed the capacity of the downstream drainage system.

(5) A waiver of these minimum runoff quantity control requirements shall only be granted after a written request is submitted by the applicant containing descriptions, drawings, and any other information that is necessary to evaluate the proposed land disturbing activity. A separate written waiver request shall be required if there are subsequent additions, extensions, or modifications, to the development which would alter the approved stormwater runoff characteristics to a land disturbing activity receiving a waiver.

(b) Stormwater management facilities may include both structural and nonstructural elements. Natural swales and other natural runoff conduits shall be retained where practicable.

(c) Where additional stormwater management facilities are required to satisfy the minimum control requirements, the following measures are examples of what may be used:

(1) Stormwater detention structures;

(2) Stormwater retention structures;

(3) Facilities designed to encourage overland flow, slow velocities of flow, and flow through vegetated facilities and buffer zones; and

(4) Infiltration and filtration practices.

(d) Where detention and retention structures are used, designs, which consolidate these facilities into a limited number of large structures, will be preferred over designs that utilize a large number of small structures. In addition, designs that utilize weirs to control the discharge for the ten-year and twenty-

five-year storms are preferred to multiple pipes used for outlet control; rip-rap weirs will not be acceptable.

(e) Discharge velocities shall be reduced to provide a nonerosive velocity flow from a structure, channel, or other control measure as outlined in the Horry County Stormwater Design Criteria Manual.

(f) Stormwater management and sediment control plans can be rejected by the county engineer if they incorporate structures and facilities that will demand considerable maintenance, will be difficult to maintain, or utilized numerous small structures if other alternatives are physically possible.

(g) The drainage system and all stormwater management structures within the county (including both public and private portions) will be designed to the same engineering and technical criteria and standards. The county stormwater department's review will be the same whether the portion of the drainage system will be under public or private control or ownership.

(h) All stormwater management measures shall be designed in accordance with the design criteria and procedures contained in the Horry County Stormwater Design Criteria Manual or procedures approved by the county engineer.

(i) Detention facilities, detention swales, infiltration systems, and similar stormwater quantity management facilities should be located in right-of-way or common areas rather than on individually owned lots in residential areas.

(j) Catch basins shall be spaced so that the spread in the street for the twenty-five-year design flow shall not exceed the following, as measured from the face of the curb:

(1) Eight (8) feet if the street is classified as a collector or arterial (for two-lane streets spread may extend to one-half (½) of the travel lane, for four-lane streets spread may extend across one (1) travel lane);

(2) Sixteen (16) feet at any given section, but in no case greater than ten (10) feet on one (1) side of the street, if the street is classified as a local or sub-collector street.

(3) For grated inlets located in residential areas, a clogging factor of twenty-five (25) percent shall be used in the design of these systems.

(4) For grated inlets located in commercial areas, a clogging factor of zero (0) percent shall be used.

(5) For curb opening or open throat inlets located in either residential or commercial areas, a clogging factor of zero (0) percent shall be used.

(k) Whenever feasible the reduction of impervious area should be considered as a nonstructural tool in controlling stormwater management. This can be accomplished by utilizing a variety of best management procedures as outlined in the stormwater design manual.

(l) For redevelopment activities one (1) of the following minimum performance standards shall be accomplished (selection of the most appropriate standard shall be determined by the engineer and accepted by the county engineer):

(1) Reduce the impervious cover on the site by at least twenty (20) percent, based on a comparison of existing impervious cover to proposed impervious cover, or

(2) Achieve a ten (10) percent reduction in the total volume of runoff generated from the site by a two-year storm event. Runoff calculations shall be based on a comparison of existing site conditions to post development site conditions, or

(3) Reduce the post development peak discharge rates by twenty (20) percent of the predevelopment peak discharge rates for the ten-year and the twenty-five-year twenty-four-hour storm events based on a comparison of existing ground cover to post development site conditions.

(m) The standard recommended maximum and minimum slopes for storm drains should conform to the following criteria:

(1) The maximum hydraulic gradient should not produce a velocity that exceeds fifteen (15) feet per second.

(2) The minimum desirable physical slope should be one-half (0.5) percent or the slope which will

produce a velocity of three (3) feet per second when the storm sewer is flowing one-half (½) full.

(3) The twenty-five-year HGL shall be calculated for all storm drains and a profile shown on the plans indicating that the twenty-five-year hydraulic gradient shall stay within the grate of the inlet.

(n) The minimum allowable size for any culvert shall be fifteen (15) inches.

(1) Reinforced concrete pipe (RCP) shall be used under all roads and driveways.

(2) High density polyethylene pipe may be used for installations that do not involve traffic bearing applications.

(o) All drainage inlets shall be installed with a twelve-inch sump for water quality benefits.

(p) The maximum length of drainage pipe shall be based on the following criteria:

(1) If both ends of a pipe are in or next to a road, driveway, or parking lot then the pipe length can be up to four hundred (400) feet.

(2) In situations where the access point of a pipe is some distance from a road, then the maximum pipe length shall be reduced from the four hundred (400) feet maximum by the distance from the road (four hundred (400) feet — distance from the road).

(3) No pipe end or outfall can be more than four hundred (400) feet from a roadway, driveway or parking lot.

(4) All pipes must have at least one (1) access point available for cleaning purposes and all access points must be above the twenty-five-year hydraulic grade line.

(q) The following criteria shall be required for designs of open channel systems:

(1) Channels with bottom widths greater than ten (10) feet shall be designed with a minimum bottom cross slope of 12 to 1.

(2) Channel side slopes shall be stable throughout the entire length and side slope shall depend on the channel material. A normal maximum for open channels should be 3:1 and a maximum of 3:1 on roadside ditches.

(3) Trapezoidal or parabolic cross sections are preferred over triangular shapes.

(4) For vegetative channels, design stability should be determined using low vegetative retardance conditions (Class D) and for design capacity higher vegetative retardance conditions (Class C) should be used. If permanent vegetation can not be established immediately then an erosion control blanket (ECB) or turf reinforcement mat (TRM) shall be installed, and designed to handle the maximum velocities for the channel.

(5) For vegetative channels, flow velocities within the channel should not exceed the maximum permissible velocities given in Tables 5-2 and 5-3.

(6) If relocation of a stream channel is unavoidable, the cross-sectional shape, meander, pattern, roughness, sediment transport, and slope should conform to the existing conditions insofar as practicable. Some means of energy dissipation may be necessary when existing conditions cannot be duplicated.

(7) Stream bank stabilization should be provided, when appropriate, as a result of any stream disturbance such as encroachment and should include both upstream and downstream banks as well as the local site.

(8) Open channel drainage systems are sized to handle a twenty-five-year design storm. The one-hundred-year design storm should be routed through the channel system to determine if the one-hundred-year plus applicable building elevation restrictions are exceeded, structures are flooded, or flood damages increased.

(9) A cross section should be obtained at each location where there are significant changes in stream width, shape, or vegetal patterns. Sections should usually be no more than four (4) to five (5) channel widths apart or one hundred (100) feet apart for ditches or streams and five hundred (500) feet apart for flood plains, unless the channel is very regular.

(r) Infiltration practices shall include all forms of structural controls that will incorporate recharging the ground water table through exfiltration and shall meet all requirements as determined by the most recent DHEC Stormwater Best Management Practices Handbook, Horry County Stormwater Design Manual as well as the following:

(1) During the design phase of the project soil borings shall be obtained from a third party geotechnical consultant and the percolation rate and seasonal high water table determined.

(2) A minimum of one soils boring is required for every one hundred fifty (150) feet, and no less than two (2) soils logs for each proposed location.

(3) Each soils boring should extend a minimum of three (3) feet below the bottom of the trench, describe the NRCS series of the soil, the textural class of the soil horizon(s) through the depth of the log, and note any evidence of high ground water level, such as mottling. In addition, the location of impermeable soil layers or dissimilar soil layers should be determined.

(4) The design infiltration rate should be equal to one-half (frax;1;2;) the infiltration rate found from the soil textural analysis.

(5) An observation well shall be installed for every one hundred (100) feet of trench length.

(6) The observation well should consist of perforated PVC pipe, six (6) inches in diameter, located in the center of the structure, and be constructed flush with the ground elevation.

(7) Infiltration practices shall not be located with in a right of way.

(8) Infiltration systems shall not be utilized for stormwater runoff until the surrounding area is stabilized.

(9) Water quality infiltration systems must be preceded by a pretreatment BMP.

(10) The infiltration system shall also be designed to meet all of the design standards in the most current DHEC BMP design manual.

(s) Structural controls that do not involve infiltration shall also meet the most recent DHEC Stormwater Best Management Practices Handbook, Horry County Stormwater Design Manual as well as the following:

(1) Wet ponds:

- Trash racks, filters, hoods or other debris control provided on riser.
- The minimum water quality orifices shall be three (3) inches.
- Stormwater ponds and lakes shall be constructed with a vegetated aquatic bench/shelf at least ten (10) feet wide, six (6) to twelve (12) inches in depth under the normal water level and shall be provided around the entire perimeter of the pond or lake, or a 5:1 slope from the top of bank to the bottom of the pond. Aquatic benches shall meet the requirements for constructed wetlands in the design manual.
- Stormwater ponds that are constructed with an aquatic shelf shall also have no greater slope than 3:1 from bottom of the pond to the top of bank.
- All proposed ponds and proposed conveyance channels shall be constructed to have one (1) foot of freeboard from the twenty-five-year storm elevation.
- All ponds shall have a twelve-foot maintenance easement that shall be established from the top of bank, or from the normal water level if the slope on the pond is 5:1 or flatter.
- A sign shall be installed at all permanent wet ponds that state as a minimum "No Swimming Allowed" along with the international symbol. This sign shall be installed at a minimum of every two hundred fifty (250) feet of pond circumference with a minimum of two (2) signs per pond and shall be installed in the pond itself and at an average height that is visible from the shoreline. The sign size shall also be at a minimum twelve (12) inches by eighteen (18) inches.

(2) Dry detention ponds:

- Shall have a minimum of 3:1 side slopes.
- Inlet and outlet located to maximize flow length.

- One (1) foot of minimum freeboard above peak stage of the designed storm.
- Do not utilize a dry pond in an area with high water table, the seasonal high water table must be determined and stated in the project narrative.
- The outfall elevation must be a minimum of one (1) foot below the outlet for the dry pond.
- The minimum water quality orifices shall be three (3) inches.
- Trash racks, filters, or other debris protection devices must be provided on the outlet.
- The bottom of the pond shall have a one (1) percent slope from the inlet to the outfall.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-53. Minimum stormwater quality control requirements.

(a) The minimum stormwater quality requirements shall provide stormwater quality management facilities - best management practices (BMPs) - necessary to accomplish the following:

(1) Provide storage volume and release rates sufficient to comply with the South Carolina Coastal Zone Management stormwater quality BMP requirements, as amended from time to time. These requirements for different BMPs recommended for use in the county are contained in the Horry County Stormwater Design Criteria Manual.

(2) Provide BMPs to control discharges into the local drainage system of any organic or inorganic matter that shall cause or tend to cause pollution of such waters.

(b) Water quality BMPs must be installed on all developments (regardless of size) to control the water quality of the storm runoff from the development site. Acceptable BMPs and information needed for their design and analysis are included in the Horry County Stormwater Design Criteria Manual.

(c) Minimization of impervious areas within developments and minimization of impervious areas directly connected to the local drainage system is encouraged as a non-structural BMP for water quality and quantity control.

(d) Stormwater shall not be released from a site without going through some form of water quality BMP.

(e) Storm drainage systems that collect water runoff from parking areas and/or loading areas exceeding ten thousand (10,000) square feet of impervious coverage and discharge to stormwater management systems, including surface or subsurface infiltration systems shall have a minimum of at least one (1) water quality inlet per each acre of drainage area. The purpose of water quality inlets is to remove grease, oil and heavy particulates or suspended solids, hydrocarbons and other floating substances from stormwater runoff. An alternative method may be permitted by approval from the county engineer.

(f) For all projects regardless of size, which are located within one-half (½) mile of a receiving water body in the coastal zone shall provide storage for the first one-half (½) inch of runoff from the entire site or storage of the first one (1) inch of runoff from the built upon portion of the property, whichever is greater. In addition, for those projects which are located within one thousand (1,000) feet of shellfish beds, the first one and one-half (1½) inches of runoff from the built upon portion of the property must be retained on site. Receiving water bodies include all regularly tidally influenced salt and freshwater marsh areas, all lakes or ponds which are used primarily for public recreation or a public drinking supply, and other water bodies within the coastal zone (east of Highway 17 bypass), excluding wetlands, swamps, ditches and stormwater management ponds which are not contiguous via an outfall or similar structure with a tidal water body.

(g) The following criteria shall be used to address stormwater management for bridges traversing saltwater and or critical areas:

(1) No treatment is necessary for runoff from bridge surfaces spanning SB or SA waters. This runoff can be discharged through scupper drains directly into surface waters. However, the use of scupper drains should be limited as much as feasibly possible.

(2) If the receiving water is either ORW (outstanding resource waters) or SFH (shellfish

harvesting waters) then the stormwater management requirements shall be based on projected traffic volumes and the presence of any nearby shellfish beds. The following matrix lists the necessary treatment practices over the different classes of receiving waters.

(3) The average daily traffic volume (ADV) is based upon the design carrying capacity of the bridge.

Water Quality Class	ADT 0-30,000	ADT over 30,000
ORW (within 1,000 feet of shellfish beds)	***	***
ORW (not within 1,000 feet of beds)	**	**
SFH (within 1,000 feet of beds)	**	***
SFH (not within 1,000 feet of beds)	**	**
SA	*	*
SB	*	*

*** The first one (1) inch of runoff from the bridge surface must be collected and routed through to an appropriate stormwater management system or routed so that maximum overland flow occurs encouraging exfiltration before reaching the receiving body. Periodic vacuuming of the bridge surface should be considered.

** A stormwater management plan must be implemented which may require the over treatment of runoff from associated roadways to compensate for the lack of direct treatment of runoff from the bridge surface itself. Periodic vacuuming should be considered. The use of scupper drains should be limited as much feasibly possible.

* No treatment is required. The use of scupper drains should be limited as much as feasibly possible.

(h) When golf courses are constructed adjacent to receiving water the following practices shall be incorporated:

(1) Minimum setbacks from the receiving water body of twenty (20) feet for all manicured portions of the golf course (fairways, greens and tees) are required unless other acceptable management techniques are approved and implemented to mitigate any adverse impacts.

(2) All drainage from greens and tees must be routed to interior lagoons or an equivalent stormwater management system.

(3) To prevent the conversion of the stormwater system to critical area and to maintain positive drainage at high tides, all outfalls from the lagoon system must be located at an elevation above the critical area (if the discharge is to critical area) AND above the normal water elevation a distance to allow for storage of the first one (1) inch of runoff. The volume which must be stored shall be calculated by multiplying the area of all greens and tees by one (1) inch. (Previously constructed stormwater management systems which meet all current and future storage requirements will not be required to modify outfalls.)

(4) No greens or tees shall be located on marsh hummocks or islands unless all drainage can be conveyed to the interior lagoon system or to an equivalent onsite stormwater management system.

(5) Stormwater impacts to freshwater wetlands shall be limited by providing minimum twenty-foot buffers, or an accepted alternative, between manicured areas (fairways, greens and tees) and the wetlands. This buffer must be increased if land application of treated effluent is utilized in the area.

(6) An integrated pest management system designed in accordance with the current best technology practices must be employed on the course to limit the application of chemicals

which, if over applied, may leach into the ground and adjacent surface waters.

(7) In accordance with S.C. Department of Health and Environmental Control requirements, a two-foot separation must be maintained between the surface of the golf course and the ground water table where effluent is applied.

(8) The normal ground water elevation must be established by a registered engineer or soil scientist.

(9) All projects which are within one thousand (1,000) feet of shellfish bed must retain the first one and one-half (1½) inches of runoff as otherwise described in subsection (f) above.

(10) If spray effluent or chemicals are applied to the turf via the irrigation system, all spray heads must be located and set to prevent any aerosols from reaching adjacent critical areas.

(i) When mining or landfill projects are located within one-half (½) mile of receiving water bodies, pumping of ground water from the sediment basins must be done with floating intakes only. Pumping of these basins must cease whenever water levels come to within two (2) feet of the pond bottom. In addition, landfill planning must be designed on a comprehensive site basis for stormwater management and sediment/erosion control to include management practices for each separate cell as it is phased into the landfill.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-54. Minimum erosion and sediment control requirements.

The sediment control portion of the stormwater management and sediment control plan shall provide effective measures to control erosion and sedimentation caused by the removal of ground surface cover. Proper design shall include measures for erosion control and provide for the establishment of vegetation that will help avoid erosion problems during and after land disturbing activities. Alignment, grades, area of disturbed soil and bank slopes shall be based on soil erodibility, climatic exposure, geology, proposed vegetative restoration and expected maintenance. Following are some general guidelines that shall be followed:

(1) Provide sediment control facilities designed using the standards in the South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities, as amended from time to time.

(2) For sediment basins and other BMPs for sediment control, the design must meet a removal efficiency of eighty (80) percent suspended solids or one-half (0.5) ml/l peak settleable solids concentration from a ten-year, twenty-four-hour design storm. Calculations shall be provided in the stormwater report supporting the design.

(3) Slopes should be protected from erosion by establishment of vegetative cover, benches or terraces slope protection structures, mulches, or a combination of these practices within fourteen (14) days from final grade or within fourteen (14) days from discontinuing any land disturbance.

(4) Drainage channels should be designed to avoid erosion problems. Wide channels with flat slopes lined with grass or other vegetation should be used where practical. Where channel gradients are steep, concrete linings or grade control structures such as check dams may be required. Every effort should be made to preserve natural channels.

(5) Sediment basins may be constructed to trap sediment. The basins should be constructed with a positive outfall to discharge stormwater runoff while retaining sediment loads. Sediment basins may be temporary or permanent as required by the county engineer.

(6) Detention basins may also be used to trap sediment during and after development. Where used for this purpose, the basin shall continue to detain stormwater in accordance with the hydraulic design criteria, but allow for the settlement and retention of sediment in the basin calculations shall be provided whenever detention basins are used to trap sediment. Added storage volume for stormwater shall be required to account for the volume lost to

sedimentation. Sediment must be removed periodically to insure the intended performance of the basin. A clean-out elevation or maximum sediment storage volume shall be calculated for the basin and a marker installed in the basin to indicate when sediment must be removed to provide required storage for stormwater discharge control.

(7) Good stands of existing vegetation adequate to control erosion shall be preserved whenever possible. Regeneration of native vegetation should be encouraged wherever possible.

(8) Silt fencing, sediment tubes, or other approved BMPs shall be placed around storm sewer inlets and at the boundaries of disturbed areas to trap sediment.

(9) Contents of the sediment control portion of the stormwater management and sediment control plan shall include as a minimum the following items.

a. Location, scope, and manner of performing sediment and erosion control measures.

b. Proposed construction sequence and time schedule for all earth disturbing activities and installation of provisions for sediment and erosion control. The sequence and phasing shall take into account exposing the smallest practical areas for the shortest period of time and retain as much natural vegetation as possible to prevent erosion.

c. Design computations and applicable assumptions for all structural measures for sediment and erosion control. Volume and velocity must be given for all surface water conveyance measures and piped outfalls.

d. All components of a stormwater pollution prevention plan as outlined by DHEC.

e. Sediment control practices shall be used around the perimeter of the site to prevent off-site sediment damage.

f. Methods to be used for controlling dust during construction.

(10) Final stabilization shall be established prior to installation or integration of any water quality BMPs consisting of infiltration, exfiltration or bioretention.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-55. Approval and permit requirements.

(a) No site development or subdivision plan approval shall be issued or modified without the following items:

(1) An approved stormwater concept plan or stormwater management and sediment control plan, as appropriate.

(2) An approved NPDES permit issued by DHEC.

(3) Right of entry given to the county for county personnel to enter property for emergency maintenance if necessary.

(4) Any off-site easements needed.

(b) No final occupancy permit shall be issued without the following items.

(1) Recorded easements for stormwater drainage systems, management facilities, and BMPs.

(2) Receipt of an as-built plan, signed and sealed by a registered professional (as outlined in section 17.7-57) stating that the project was built in compliance with the permitted stormwater plan.

(c) In addition to the plans and permits required from the county, applicants shall obtain all state and federal permits required for the proposed development.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-56. Issuance of stop-work orders.

A stop-work order may be issued if one (1) or more of the following violations have been committed:

(1) Violation(s) of the conditions of the stormwater management and sediment control plan

approval;

(2) Construction not in accordance with the intent of the approved plans;

(3) Approval of a stormwater management and sediment control plan has not been obtained;

(4) Non-compliance with correction notice(s); or

(5) The existence of an immediate danger in a downstream area in the judgment of the county engineer.

If one (1) or more of these conditions are found, a written notice of violation shall be served upon the owner or authorized representative and the time in which to correct the deficiencies shall be specified. The notice shall set forth the measures necessary to achieve compliance with the plan. Correction of these violations must be started immediately or the owner shall be deemed in violation of this article. The county engineer may determine if all other inspections for the site shall be discontinued until the deficiencies are addressed and field verified.

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 (7) days. The stop-work order will then be in force until the development is in compliance with this article.

If a violation of this article is occurring that the county engineer determines in his/her judgment will cause significant damage to downstream property or structures, the county engineer can issue an immediate stop-work order.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-57. Professional registration requirements.

Stormwater concept and stormwater management and sediment control plans and design reports that are incidental to the overall or ongoing site design shall be prepared, and stamped/sealed by a qualified registered professional engineer, Tier 2B land surveyor or landscape architect, using acceptable engineering standards and practices. All other stormwater concept and stormwater management and sediment control plans and design reports shall be prepared, and stamped/sealed by a qualified registered professional engineer, using acceptable engineering standards and practices.

The engineer, surveyor, or landscape architect shall perform services only in areas of his/her competence, and shall undertake to perform engineering or land surveying assignments only when qualified by education and/or experience in the specific technical field. In addition, the engineer, surveyor, or landscape architect must verify that the plans have been designed in accordance with this article and the standards and criteria stated or referred to in this article.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-58. Fees.

The initial fees associated with the operation of this article shall be set annually by county council as part of the annual budget ordinance, or by an amendment thereto. If no amendment to the prior year's fees is proposed or adopted by county council as part of the budget ordinance, then the prior year's fees shall continue in full force and effect. A list of the fees proposed at the enactment of the ordinance from which this article derives for plan review and other fees associated with this article may be obtained from the county stormwater department.

(Ord. No. 107-08, § 1, 1-6-09)

Secs. 17.7-59—17.7-65. Reserved.

DIVISION 3. OWNERSHIP AND COUNTY PARTICIPATION

Sec. 17.7-66. Ownership of stormwater management facilities and BMPs.

(a) All stormwater management facilities and BMPs shall be privately owned and maintained unless the county accepts the facility for county ownership and maintenance.

(b) All stormwater management measures relying on designated vegetated areas or special site features shall be privately owned and maintained as defined on the stormwater management and sediment control plan.

(c) Most regional stormwater management facilities may be publicly owned and/or maintained, but nothing in this article shall be deemed to require such manner of ownership.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-67. County participation.

When the county engineer determines that additional storage capacity beyond that required by the applicant for on-site stormwater management is necessary 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 county engineer may:

(1) 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;

(2) 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 county may, at its option, assist in such matter by purchase, condemnation, dedication or otherwise, and subject to subsection (3) below, with any cost incurred thereby to be paid by the county); and/or

(3) 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 county engineer.

To implement these provisions both the county and developer must be in agreement with the proposed facility that includes the additional storage capacity and jointly develop a cost sharing plan which is agreeable to all parties.

(Ord. No. 107-08, § 1, 1-6-09)

Secs. 17.7-68—17.7-75. Reserved.

DIVISION 4. CONSTRUCTION, INSPECTION AND MAINTENANCE

Sec. 17.7-76. Construction and inspection.

(a) Prior to the approval of the stormwater management and sediment control plan, the applicant shall submit a proposed staged construction and inspection control schedule. This plan shall indicate a phase line for approval; otherwise the construction and inspection control schedule will be for the entire drainage system.

(b) The applicant shall notify the county engineer before commencing any work for a preconstruction meeting prior to implementing the stormwater management and sediment control plan for all projects greater than one (1) acre.

(c) The county engineer shall maintain a file of inspection reports and provide copies of all inspection reports to the applicant that includes the following.

(1) The date and location of the site inspection.

(2) Whether the approved plan has been properly implemented.

(3) Any approved plan deficiencies and any actions taken.

(d) Any portion of the work, which does not comply with the stormwater management and sediment control plan, shall be promptly corrected by the applicant.

(e) The county engineer will notify the person responsible for the land disturbing activity in writing when violations are observed describing the following.

(1) Nature of the violation.

(2) Required corrective actions.

(3) The time period for violation correction.

(f) A final inspection shall be conducted by the county engineer upon completion of the work included in the approved stormwater management and sediment control plan to determine if the completed work is constructed in accordance with the plan. Prior to inspection the stormwater system shall be cleaned of all sediment and debris and all lids shall be removed for inspection.

(g) (1) The applicant shall provide an "as-built" plan signed and sealed by a registered professional (as outlined in section 17.7-57) to be submitted upon completing of the stormwater management facilities included in the stormwater management and sediment control plan. The registered professional shall state that:

a. The facilities have been constructed as shown on the "as-built" plan; and

b. The facilities meet the approved stormwater management and sediment control plan and specifications or achieve the function for which they were designed.

(2) Also, the minimum information to be provided on the "as-built" plans shall include the following:

a. Boundary, phase and lot lines.

b. Lot numbers and street names.

c. Easements.

d. Road locations with centerline stationing and curve data.
e. Road centerline elevations at one-hundred-foot intervals.
f. Drainage structures with elevations.
g. Drainage pipes with size, material, length, slope and invert elevations.
h. Ponds or lakes with average bottom and water surface elevations, storage capacity in acres feet, and any control structures shall be shown in detail.
i. Drainage ditches and swales, with elevations at one-hundred-foot intervals.
j. Water and sewer as-built information as required by the appropriate utility company.

(h) No stage work, related to the construction of stormwater management facilities and BMPs, shall proceed until the next preceding stage of work, according to the sequence specified in the approved staged construction and inspection control schedule, is inspected and approved.

(i) The owner shall be responsible for conducting their onsite erosion control inspections as per the SWPP plan with a certified inspector as outlined in the SCDHEC regulations. Reports for the inspections shall be kept on site and made available to the county upon request.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-77. Maintenance responsibility.

All temporary and permanent on-site stormwater management facilities and BMPs required by this article shall be maintained by the owner during and after site development, unless the facility is officially accepted by the county for county maintenance. The owner shall provide adequate ingress and egress for county 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.

No property owner shall obstruct or alter the flow, location or carrying capacity of a stream, channel or drainage swale to the detriment of any other property owner, whether upstream or downstream. All subdivision and/or land development plans containing streams, channels, drainage swales, storm sewers or other conveyance systems that cross property boundaries shall contain a note stating the above.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-78. Failure to maintain.

Should the owner fail to properly maintain the drainage system, stormwater management facilities, and BMPs as required by this article, the county engineer shall give written notice to the owner of record as appears on the latest property tax rolls, by certified mail, of the nature of the violation and order the corrective action necessary. Should the owner fail, within thirty (30) days from the date of the notice, to take corrective action to the satisfaction of the county engineer or appeal the notice and order, the county may enter upon the lands, take corrective action as the county engineer may deem necessary, and place a lien on the property of the owner for the costs thereof.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-79. County maintenance.

Certain off-site systems as may be identified by the county engineer, which are to provide general public benefits, may be accepted by the county for maintenance. All areas and/or structures to be maintained by the county must be dedicated to the county by plat or separate instrument.

(Ord. No. 107-08, § 1, 1-6-09)

Secs. 17.7-80—17.7-85. Reserved.

DIVISION 5. MISCELLANEOUS PROVISIONS

Sec. 17.7-86. Off-site drainage facilities.

The county engineer may allow stormwater runoff that otherwise is of unacceptable quality or which would be discharged in volumes or at rates in excess of those otherwise allowed by this article, to be discharged into drainage facilities off site of the development, provided the applicant has demonstrated:

(1) Off-site drainage facilities and channels leading to them are designed, constructed and maintained in accordance with requirements of this Ordinance; and

(2) Adequate provisions are made for sharing of construction, maintenance and operating cost of facilities as a condition to receiving approval of the stormwater management and sediment control plan; and

(3) It is not feasible to completely manage runoff on site in a manner that meets the design and performance standards found in the Horry County Stormwater Design Criteria Manual.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-87. Prohibitions and illicit connections.

(a) *Prohibitions.*

(1) It is unlawful for any person, company, corporation, etc., to throw, drain, run, or otherwise discharge to any component of the county's stormwater system, including streets, highways, right-of-ways, or to cause, permit or suffer to be thrown, drain, run, or allow to seep or otherwise discharge into such system, any organic or inorganic matter that shall cause or tend to cause pollution or blockages to such waters, as provided for in this article.

(2) The county exempts the following from the prohibition provision above.

a. Water line flushing performed by a government agency, diverted stream flows, rising ground waters, and polluted ground water infiltration.

b. Unpolluted pumped ground water.

c. 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, and street wash water.

d. Discharges or flows from fire fighting.

e. Other unpolluted water.

(3) In the event of an accidental discharge to the county drainage system of any material or substance other than stormwater runoff, the person concerned shall inform the county stormwater department immediately of the nature, quantity and time of occurrence of the discharge. The person concerned shall take immediate steps to contain, treat or take other actions to minimize the effects of the discharge on the county drainage system and receiving streams. The person shall also take immediate steps to ensure no recurrence of the discharge.

(b) *Illicit connections.*

(1) It is unlawful for any person, company, corporation, etc., to connect any pipe, open channel, or any other conveyance system to the county drainage system that discharges anything except stormwater discharges that are identified on the approved stormwater management and sediment control plan.

(2) Improper connections in violation of this article must be disconnected and redirected to an acceptable outlet, as approved by the county engineer.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-88. Variances from requirements.

(a) The zoning board of appeals may grant a variance from the requirements of this article if there are exceptional circumstances applicable to the site such that strict adherence to the provisions of the article will result in unnecessary hardship and not fulfill the intent of the article.

(b) A written request for a variance shall be required and shall state the specific variance sought and the reasons, with supporting data, for their granting. The request shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed variance.

(c) Any substantial variance from the stormwater management and sediment control plan or concept plan shall be referred to all agencies, which reviewed the original plan.

(d) The county engineer will conduct a review of the request for a variance and submit a report to the zoning board of appeals.

(e) The zoning board of appeals may grant a variance from the requirements of this article if the proposed development activity will not:

(1) Change the rate or volume of runoff significantly;

(2) Have a significant, negative impact on wetland, watercourse, or water body; or

(3) Contribute to degradation of water quality.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-89. Appeals.

Any person who may have a substantial interest in any decision of the zoning board of appeals may appeal from any decision of the board to the Circuit Court in and for the County of Horry by filing with the clerk of court a petition in writing setting forth plainly, fully and distinctly wherein such decision is contrary to law. Such appeal shall be filed within thirty (30) days after the decision of the board is rendered.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-90. Penalties.

(a) Any person violating this article or any part thereof, including failing to stop-work upon order, shall be punished as set forth in section 1-8 of this Code, as amended from time to time.

(b) In addition to any proceedings under the foregoing provision of this article, the county attorney may institute injunctive, mandamus or other appropriate action or proceedings at law or equity 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.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-91. Conflict with other laws.

Whenever the provisions of this article impose more restrictive standards than are required in or under any other ordinance, the regulations herein contained shall prevail. Whenever the provisions of any other ordinance require more restrictive standards than are required herein, the requirements of such shall prevail.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-92. Severability.

If any term, requirement or provision of this article or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this article or the application of such terms, requirements and provisions to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term, requirement or provision of this article shall be valid and be enforced to the fullest extent permitted by law.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-93. Amendments.

This article may be amended in the manner as prescribed by law for its original adoption. Before the county council amends this article, it must seek the advice of the county engineer who will make a recommendation for each amendment within thirty (30) days of this request.

(Ord. No. 107-08, § 1, 1-6-09)

Sec. 17.7-94. Liability.

Neither the approval of a plan under the provisions of this article nor the compliance with the provisions of this article shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law nor shall it impose any liability upon the county for damage to any person or property.

(Ord. No. 107-08, § 1, 1-6-09)

Appendix E
Horry County
Dry Weather Screening and Field Investigations for Illicit Discharges Guidance Document

Appendix F
Horry County
Enforcement Response Plan

Coastal Waccamaw Stormwater Education Consortium

The primary mechanism used for public education and outreach in the Grand Strand region is the Coastal Waccamaw Stormwater Education Consortium (CWSEC). Coordinated by Coastal Carolina University, the Consortium includes membership from the eight SMS4s and five other education providers, including Clemson University's Carolina Clear Program, SC Sea Grant Consortium, North Inlet-Winyah Bay National Estuarine Research Reserve, Waccamaw Riverkeeper, and Murrells Inlet 2020. The full group meets twice a year to establish an annual activity plan and review the annual report. Throughout the year, education and outreach activities are carried out based on the activity plan that includes target pollutants, target audiences, and types of activities. The Consortium's planning and operations process is summarized in ***Figure 1***.

Annually, the Consortium's activities include the following categories:

- Mass media campaign (e.g. television, radio, billboards)
- Education materials (e.g. informational cards, promotional giveaways)
- Hands-on student education
- Technical workshops for specific target audiences
- Newsletters and news coverage
- Demonstration projects and educational presentations
- Websites

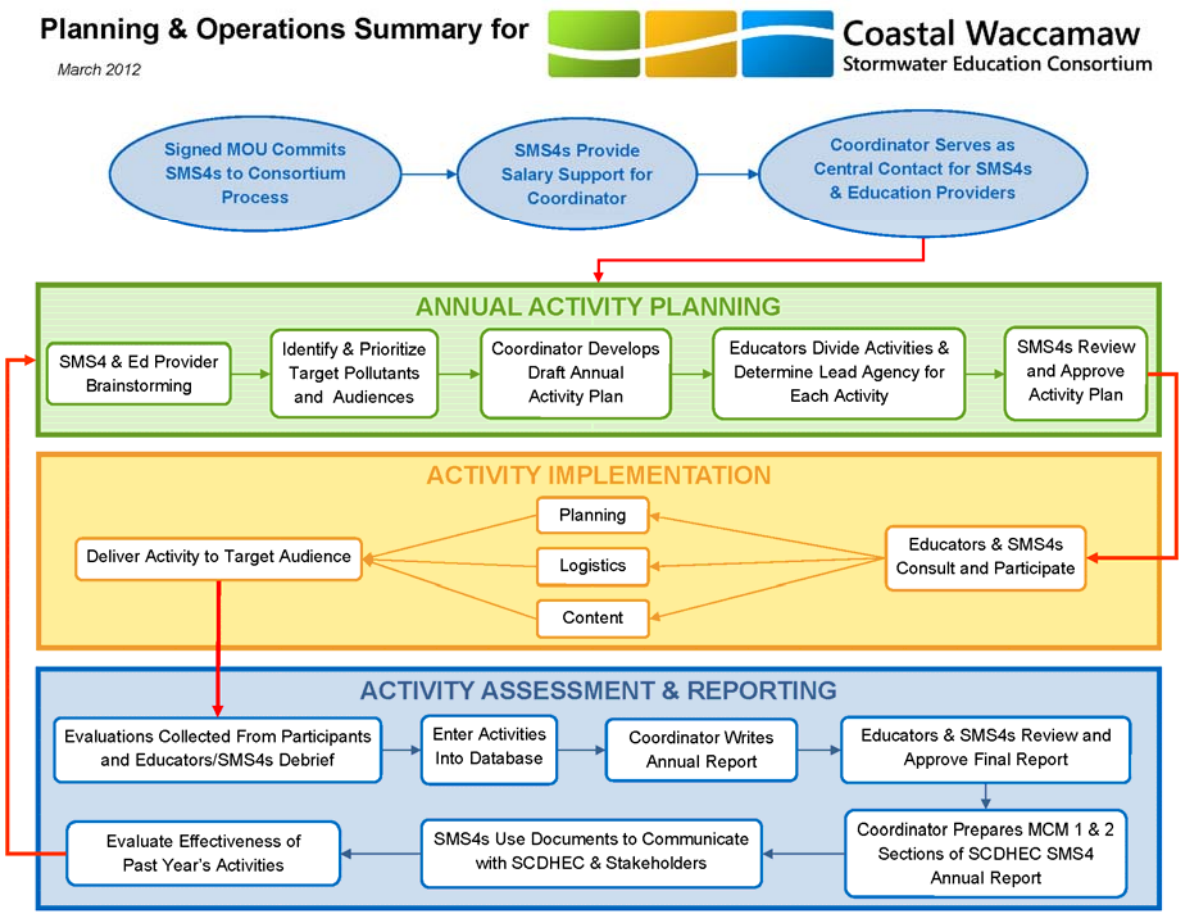


Figure 1. Planning and Operations Summary for the Coastal Waccamaw Stormwater Education Consortium

Coastal Waccamaw Stormwater Education Consortium

Funding Contract

CONTRACT AGREEMENT NUMBER: CA-HC-CWSEC-0714

EFFECTIVE DATES: July 1, 2014 – June 30, 2015

Project Title: Coastal Waccamaw Stormwater Education Consortium

This Agreement is entered into by and between the **COASTAL CAROLINA UNIVERSITY,** hereinafter referred to as 'CCU', and **HORRY COUNTY,** hereinafter referred to as 'Partner' with terms and conditions as follows:

Partner will pay fifteen thousand dollars ($15,000) to CCU as its share of funding to cover stormwater educational services on behalf of the Coastal Waccamaw Stormwater Education Consortium (CWSEC). The principal objective of this Agreement is for CCU and Partner to combine resources to accomplish work requested by Partner in regards to meeting NPDES Phase II stormwater permit requirements for Minimum Control Measures 1 (Public Education and Outreach) and 2 (Public Involvement/Participation).

A. Scope of Work

This scope of work is for stormwater educational services performed by the CWSEC coordinator and/or part-time assistant and student intern(s) on behalf of Horry County. Services the coordinator will oversee include the following: serve as liaison between Consortium members and the education providers; coordinate and facilitate biannual meetings including delegation of duties to education service providers as needed; cover logistics of scheduling and organizing presentations for the participating SMS4 communities; perform and delegate, when appropriate, other administrative duties; and coordinate and facilitate activities included in the annual activity plan. Specific educational services that CCU will perform will be based on prioritized feedback from the Partner on the annual activity plan. In addition to paying for the coordinator's efforts, funding will support salary for a part-time assistant and/or student intern(s). The fee will also be used for travel to local, regional and national conferences, workshops, presentations and meetings; creation of exhibit materials such as brochure cards and posters; and supplies and equipment for educational programming, storm drain marking and office as needed. In addition to the above services, CCU would provide to Partner an annual report of its activities in a format suitable for submission by each SMS4 community in their annual NPDES Phase II stormwater program report.

B. Schedule

The Contract Agreement is for a one year period beginning July 1, 2014 and ending June 30, 2015.

C. Billing

Horry County will be invoiced for $15,000 upon signing of this contract.

FOR COASTAL CAROLINA UNIVERSITY

Signature: _____ **Date:** 04/21/14

Name: Dr. Edgar L. Dyer

Title: Executive Vice President and Chief Operating Officer

Witness: Rose Marie Johnson

FOR HORRY COUNTY

Signature: _____ **Date:** 5/13/14

Name: Steven S. Gosnell, P.E.

Title: *Asst. County Administrator/ County Engineer- I&R Division*

Witness: Sandra Garigen

Appendix H
Horry County
Contract with Clemson University/Carolina Clear

Clemson's Carolina Clear

Horry County also contracts directly with Clemson University's Carolina Clear Program to conduct public education and outreach activities. As an education provider for CWSEC, the Carolina Clear Program undertakes specific activities according to the approved CWSEC annual activity plan. These activities focus on mass media campaigns, informational cards, and websites.

Contractual Agreement
between
CLEMSON UNIVERSITY
and
HORRY COUNTY

PUBLIC awareness and education about natural resources is crucial in the process of protecting and restoring water quality. Clemson University (Clemson) and Horry County will partner to deliver education and involvement programming to general and targeted audiences towards achieving compliance with Phase II Clean Water Act: Stormwater Education and Awareness and Public Involvement/Participation. More specifically, these are referred to as Minimum Control Measures One and Two.

NOW, the parties agree as follows:

1. Clemson will deliver public education and outreach with a goal to influence a more aware and involved public in regards to stormwater management decisions. The educational programs will include components designed for various residential and commercial audiences and others targeted for their impact to stormwater and nonpoint source pollution. This effort will be delivered through various means, as detailed below in items 4 and 5. Events will be held at Clemson and/or other available facilities in such a way to reach diverse and regionally distributed audiences. Such instruction may include the furnishing of informational handouts, instructional manuals, promotional materials, webpages and similar such materials, as deemed appropriate by Clemson and the participating entity.

2. Horry County will participate in a regional decision-making process to define regional priorities in regards to behaviors, pollutants and audiences to be targeted for outreach. Horry County shall provide input as available on audience demographics, behaviors based on staff observations, commercial impacts related to stormwater management that may lead to compliance and enforcement actions, and other input based on stormwater operations.

3. Horry County shall provide information regarding readily available delivery modes for education and involvement programming (e.g., newsletters, community calendars, government access channels, community-mayor meetings, tax or water bills, etc.).

4. Clemson will raise public awareness using a mass media approach. Billboard and television public service announcements, radio broadcasts and interviews, newspaper articles, stories and advertisements, and publications are among the outlets considered for use in this effort.

5. On an annual basis, partners Horry County and Clemson will determine an annual scope of work, outlining stormwater-related public education and involvement activities of which Clemson is the lead responsible party. This annual scope of work will include a brief description of activities to be accomplished, anticipated timing of each effort, and target audience and region to receive this outreach. This annual activity plan will be developed in conjunction with and in support of the regional stormwater education and outreach group, as expressed in Item 2.

   Annually, this scope of work will be included as an addendum to this contract, agreed upon by Horry County and Clemson.

6. Clemson will provide accountability statistics for each of the activities as best can be estimated. The statistics will include the following accomplishment indicators:
   1. Number of educational programs and activities conducted.

2. Number of people reached through educational programs or involved by outreach programs according to audience or targeted behavior.
3. Number of people receiving information through "non-program" contacts such as telephone, office, visits, website contacts, visual and print media.
4. Evaluation of activities and the pollutant or behavior targeted.
5. As available, feedback on programs and anecdotal evidence of successful program implementation.

7. At a minimum of *once per permit cycle* (anticipated as no less than 3 years and no more than 5 years), and on the Carolina Clear statewide schedule so as to gain regional comparison information, implement statistically relevant survey instruments to gain insight on the awareness, knowledge and behaviors of the general public related to stormwater and watershed management, as well as regional effort awareness.

8. Horry County shall provide payment in the amount of $35,000, annually for the base program. This cost will be invoiced quarterly following submittal of a quarterly update on planned activities and meeting contractual requirements expressed in Item 5. Fees for additional services will be negotiated based on cost. These costs are based on the urbanized area population of each MS4, county and/or defined area(s).

9. A mutually agreeable estimated delivery schedule shall provide activities distributed through each year in an Annual Activity Plan (as default) or on an otherwise agreed upon multi-year activity plan, which will be noted as a regional decision documented in writing for the regional entity.

10. Clemson is insured by the State Insurance Reserve Fund pursuant to the State Tort Claims Act. Horry County is also insured by the State Insurance Reserve Fund. The parties agree that each shall be responsible for the negligent acts or omissions of its own officers, employees and agents and that neither is responsible for the negligent acts or omissions of the other's officers, employees and agents in the performance of the requirements of this agreement.

This contract is subject to the terms and conditions of the Memorandum of Understanding between Clemson and Horry County, dated 9/30/11, which are fully incorporated herein by reference.

John Kelly, Vice President

Vice President for PSA

9/30/11
Date

Steven S. Gosnell, Assistant County Administrator

Horry County

9-24-11
Date

Memorandum of Understanding

between

CLEMSON UNIVERSITY

and

Horry County

WHEREAS, Clemson University (hereinafter, CLEMSON) possesses in its Extension faculty and staff various levels of expertise concerning stormwater compliance requirements as promulgated by SC DHEC and USEPA, and

WHEREAS, Horry County is desirous of obtaining access to education and public awareness of stormwater; and

WHEREAS, Clemson University has developed an environmental program (Carolina Clear), portions of which apply to the impact of stormwater on natural resources;

THEREFORE, be it resolved that since one of the goals of the Carolina Clear program is to educate people about the impacts of stormwater and since this program provides educational opportunities to address a broad range of water quality issues including the impact of stormwater on natural resources, Clemson and Horry County will collaborate to address stormwater education. Carolina Clear is a comprehensive approach developed by Clemson University Cooperative Extension Service to inform and educate communities about, among other issues, water quality, water quantity and the cumulative effects of stormwater. Carolina Clear addresses the special significance of South Carolina's water resources and the role these resources play in the state's economy, environmental health, and overall quality of life.

In order to help Horry County satisfy the Public Education and Outreach Minimum Control Measure as required by the EPA Phase II Storm Water Program, the Clemson University Cooperative Extension Service (CUCES) proposes to utilize selected components of the Carolina Clear program in order to

- Implement a public education program to distribute education materials to Horry County, or conduct equivalent outreach activities about the impacts of stormwater and the steps that can be taken to reduce storm water pollution; and
- Determine the appropriate public awareness campaign with Horry County. Some program implementation approaches, BMPs (i.e., the program actions/activities), and measurable goals are contained in the individual agreement and seek to
    - Form partnerships,
    - Use education materials and strategies, and
    - Reach diverse audiences.

In order to satisfy the Public Participation/Involvement Minimum Control Measure, the Clemson Cooperative Extension Service proposes to

- When asked and as appropriate, assist local entities with complying with applicable local public notice requirements,
- Provide program accountability measures which provide feedback and reporting data to include number of people contacted, publications produced and distributed, and other specifics as appropriate, and
- Other programs and measures as specified in the Contractual Agreement.

Because each agreement is unique to the requirements of the circumstances, Clemson and Horry County agree that the specific metrics of each contract shall be individually negotiated and delineated in the Contractual Agreement. Neither party has any responsibility for any performance obligations except as indicated in a subsequently negotiated Contractual Agreement.

This Memorandum of Understanding will commence upon the date of the signature of the last party to this contract and will run thereafter for a period of five (5) years from the date of the last signature. The parties may agree in writing to extend this agreement for an additional 5-year period, provided such agreement is executed no later than 30 days prior to the expiration of this contract. No amendments, changes or modifications will be effective until and unless reduced to writing and signed by the parties. Either party may cancel this agreement upon the giving of 30 days written notice.

John Kelly, Vice President

Clemson University PSA

9/30/11
Date

Steven S. Gosnell, Assistant County Administrator

Horry County

9/24/11
Date