



CITY OF ANDERSON STORMWATER MANAGEMENT PLAN

City of Anderson, South Carolina

October, 2007

STORM WATER MANAGEMENT PLAN

1.0 Requirements of the NPDES Phase II Program

The City of Anderson, which is an owner/operator of an MS4, is required to develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants to the “maximum extent practicable” to protect water quality. At a minimum, the City is required to implement a Storm Water Management Plan that addresses the following issues:

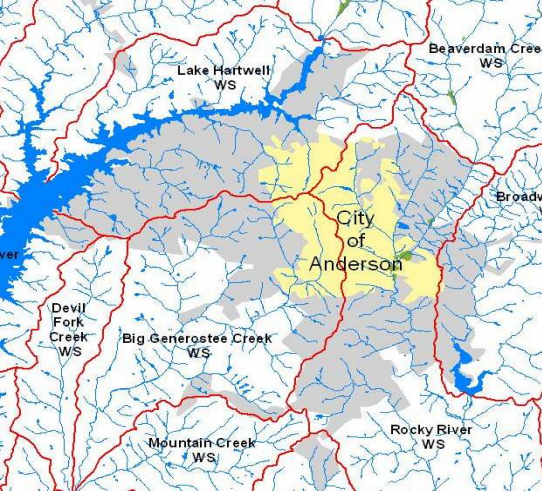
- The best management practices (BMPs) that will be implemented for each of the storm water minimum control measures;
- The measurable goals for each of the BMPs;
- The party or parties responsible for implementing or coordinating the BMPs for the SWMP; and
- A schedule for implementation of each minimum measure, including interim milestones and the frequency of the action to be undertaken.

The City prepared an assessment of its existing storm water management programs in preparation of designing a program that meets the requirements of the Phase II program. Using information from this assessment, a storm water management plan (SWMP) is being developed that includes: a description of the six minimum control measures, the best management practices selected for each measure, an implementation schedule and the party responsible for the coordination and/or implementation of each practice. A summary table is located at the end of each of the minimum measure sections.

The storm water management plan described above is to be fully developed and implemented within five years of the issuance of the certificate of coverage, in accordance with the terms of the general permit. The City may find during the permit negotiation and implementation processes that certain Best Management Practices are not feasible or may not meet the overall goals of the program. In such cases, the City shall develop alternative BMPs for submittal to the SCDHEC for review and approval. Adjustments to the proposed BMP schedules shall also be submitted.

The sections of this document address each of the requirements of the General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Permit No. SCR030000, effective March 1, 2006 (General Permit).

2.0 Notice of Intent Information

APPLICATION REQUIREMENT	DESCRIPTION
Name of Municipality (GP 2.2.1.1):	City of Anderson
Mailing Address (GP 2.2.1.1):	City of Anderson Engineering Department 1100 Southwood Street Anderson, SC 29624
Telephone Number (GP 2.2.1.1):	864-231-2246
Public Entity Type (GP 2.2.1.2):	City
Map of the City Limits (GP 2.2.2.1):	<p>MS4 Location: Anderson city limits</p> <p>Coordinates: Latitude: N34° 30.50' Longitude: W82° 39.19'</p> <p>MS4 Urbanized Area: 15 square miles</p> 
Major Receiving Waters (GP 2.2.2.2):	Bailey Creek, Big Generostee Creek, Caters Lake, Cox Creek, Dye Creek, Hartwell Lake, Hembree Creek, Rocky River, Whitner Creek
Indian Lands (GP 2.2.2.3):	No portion of the City of Anderson's MS4 is located on Indian Country Lands.
Other Governmental Entities (GP 2.2.2.4):	The Clemson Cooperative Extension Service. Responsible for the public education and outreach and public participation/involvement components of the NPDES program.
BMP's (GP 2.2.2.5):	See Section 3.0 – Storm Water Management Plan.
List of Entities (GP 2.2.2.6):	To be added.

3.0 Minimum Control Measures

The following sections describe the minimum control measures included in the City of Anderson’s SWMP.

The schedule identified in the following tables refers to months from issuance of the permit until the date of full implementation of the milestone.

3.1 PUBLIC EDUCATION AND OUTREACH (MINIMUM MEASURE #1)

PERMIT REQUIREMENTS – Minimum Measure #1
Requirement Description
<ul style="list-style-type: none"> Implement a public education program to distribute educational materials or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the general public can take to reduce pollutants in storm water runoff.

BEST MANAGEMENT PRACTICES – Minimum Measure #1			
Negotiate Agreement with Clemson Extension Service – Carolina Clear			
Milestone	Completion Date	Frequency	Responsible Party
Develop public education program.	12 months	Annually	Engineering Department
Implement public education program.	24 months	Annually	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Design and implement a program to meet the requirements of the Public Education Minimum Measure. 			

The City of Anderson is considering negotiating an agreement with Clemson University’s Extension Service – Carolina Clear Program to provide public education activities relative to storm water management. Carolina Clear will provide a variety of educational activities to a broad range of audiences.

Should negotiations fail to produce an acceptable agreement, then the City shall prepare an alternative program for review by the SCDHEC within 18 months of the issuance of the City’s permit.

3.2 PUBLIC INVOLVEMENT/PARTICIPATION (MINIMUM MEASURE #2)

PERMIT REQUIREMENTS – Minimum Measure #2			
Requirement Description			
<ul style="list-style-type: none"> Comply with state and local public notice requirements when implementing a Public Involvement/Participation program. 			

BEST MANAGEMENT PRACTICES – Minimum Measure #2			
Negotiate Agreement with Clemson University Extension – Carolina Clear			
Milestone	Completion Date	Frequency	Responsible Party
Develop public education program.	12 months	Annually	Engineering Department
Implement public education program.	24 months	Annually	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Design and implement a program to meet the requirements of the Public Education Minimum Measure. 			
Meet Public Notice Requirements for Storm Water Related Activities			
Milestone	Completion Date	Frequency	Responsible Party
Follow public notice procedures as required by federal, state and local laws on storm water related matters	As necessary	As necessary	Engineering Department/ Administration
Measurable Goal:			
<ul style="list-style-type: none"> Meet federal, state and local public notice requirements as appropriate. 			

3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION (MINIMUM MEASURE #3)

PERMIT REQUIREMENTS – Minimum Measure #3			
Requirement Description			
<ul style="list-style-type: none"> Develop, implement and enforce a program to detect and eliminate illicit discharges. 			
<ul style="list-style-type: none"> Develop a storm sewer system map showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls. 			
<ul style="list-style-type: none"> Prohibit non-storm water discharges into your storm sewer system. 			
<ul style="list-style-type: none"> Develop a program to identify and address non-storm water discharges that significantly contribute pollutants to the MS4. 			
<ul style="list-style-type: none"> Inform City employees, businesses, and the general public regarding the impacts associated with illegal discharges and the improper disposal of waste. 			

BEST MANAGEMENT PRACTICES – Minimum Measure #3

Prepare Illicit Discharge Ordinance

Milestone	Completion Date	Frequency	Responsible Party
Prepare draft illicit discharge detection and elimination ordinance (including sections on spills and illegal dumping)	Completed	Once	Engineering Department
Submit draft ordinance to City Council for review and approval	Completed	Once	Engineering Department
Implement ordinance	18 months	On-going	Engineering Department

Measurable Goal:

- Implement illicit discharge detection and elimination ordinance.

Map Major Outfalls

Milestone	Completion Date	Frequency	Responsible Party
Delineate watersheds	6 months	Once	Engineering Department
Develop field processes and procedures for inventory, screening and tracking	12 months	As necessary	Engineering Department
Map major outfalls in first watershed (Approximately 4 sq. mi.)	24 months	On-going	Engineering Department
Map major outfalls in second watershed (Approximately 4 sq. mi.)	36 months	On-going	Engineering Department
Map major outfalls in third watershed (Approximately 4 sq. mi.)	48 months	On-going	Engineering Department
Map major outfalls in last watershed (Approximately 4 sq. mi.)	60 months	On-going	Engineering Department

Measurable Goal:

- Complete mapping of major outfalls within the Anderson city limits.

Screen, Track and Eliminate Illicit Discharges

Milestone	Completion Date	Frequency	Responsible Party
Dry weather screen major outfalls in first watershed (Approximately 4 sq. mi.)	24 months	Once per permit cycle	Engineering Department
Track and eliminate illicit discharges discovered in first dry weather screening	24 months	Once per permit cycle	Engineering Department
Dry weather screen major outfalls in second watershed (Approximately 4 sq. mi.)	36 months	Once per permit cycle	Engineering Department
Track and eliminate illicit discharges discovered in second dry weather screening	36 months	Once per permit cycle	Engineering Department
Dry weather screen major outfalls in third watershed (Approximately 4 sq. mi.)	48 months	Once per permit cycle	Engineering Department
Track and eliminate illicit discharges discovered in third dry weather screening	48 months	Once per permit cycle	Engineering Department
Dry weather screen major outfalls in last watershed (Approximately 4 sq. mi.)	60 months	Once per permit cycle	Engineering Department
Track and eliminate illicit discharges discovered in last dry weather screening	60 months	Once per permit cycle	Engineering Department

Measurable Goal:

- Eliminate or bring full enforcement action on all illicit discharge activities identified in the dry weather screening process.

BEST MANAGEMENT PRACTICES (CONTINUED) – Minimum Measure #3			
Create Public Education Program			
Milestone	Completion Date	Frequency	Responsible Party
Develop public education program.	12 months	Annually	Engineering Department
Implement public education program.	24 months	Annually	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Design and implement a program to meet the requirements of the Public Education Minimum Measure. 			

3.4 CONSTRUCTION SITE STORM WATER RUNOFF MANAGEMENT (MINIMUM MEASURE #4)

PERMIT REQUIREMENTS – Minimum Measure #4
Requirement Description
<ul style="list-style-type: none"> Establish an ordinance to require erosion and sediment controls from construction activities that disturb between one (1) and two (2) acres;
<ul style="list-style-type: none"> Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
<ul style="list-style-type: none"> Requirements for construction site operators to control wastes that may cause adverse impacts to water quality;
<ul style="list-style-type: none"> Procedures for site plan review of construction plans that consider potential water quality impacts for sites that disturb between one (1) and two (2) acres;
<ul style="list-style-type: none"> Procedures for receipt and consideration of information submitted by the public; and
<ul style="list-style-type: none"> Procedures for site inspection and enforcement of sediment and erosion control measures.

BEST MANAGEMENT PRACTICES – Minimum Measure #4			
Create Development Standards and Revise Current Policies and Procedures			
Milestone	Completion Date	Frequency	Responsible Party
Review current policies and procedures related to construction sites and post construction controls	Completed	Once	Engineering Department
Prepare development standards for new developments, including post-construction controls, requirements for construction site operators to control wastes, procedures for site plan review of construction plans, and procedures for site inspection and enforcement of sediment and erosion control measures	In Process	Once	Engineering Department and Legal
Revise the current storm water management ordinance to incorporate development standards and post-development controls	Partially Completed		
Submit draft development standards and draft storm water management ordinance to City Council for review and approval	Partially Completed	Once	Engineering Department
Distribute and implement new standards, policies, and procedures	1 month	On-going	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Revise and implement development standards. Revise and implement comprehensive storm water management ordinance. 			

BEST MANAGEMENT PRACTICES (CONTINUED) – Minimum Measure #4
Create Construction Non-compliance Reporting Mechanism

Milestone	Completion Date	Frequency	Responsible Party
Establish a mechanism for the public to submit information regarding water quality violations	Completed	Once	Engineering Department
Publicize the phone number, website, etc.	Completed	Once	Engineering Department
Receive and respond to complaints, messages, etc.	Completed	On-going	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Establish mechanism for receiving information and respond to calls within 72 hours. 			

3.5 POST-CONSTRUCTION STORM WATER MANAGEMENT (MINIMUM MEASURE #5)

PERMIT REQUIREMENTS – Minimum Measure #5
Requirement Description
<ul style="list-style-type: none"> Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb between one (1) and two (2) acres; Develop and implement a strategy consisting of a combination of both structural and non-structural BMPs; Create an ordinance that requires the use of post construction runoff controls; and Ensure adequate long-term operation and maintenance of the controls.

BEST MANAGEMENT PRACTICES – Minimum Measure #5			
Create Development Standards and Revise Current Policies and Procedures (Same as Minimum Measure #4)			
Milestone	Completion Date	Frequency	Responsible Party
Review current policies and procedures related to construction sites and post construction controls	Completed	Once	Engineering Department
Prepare development standards for new developments, including post-construction controls, requirements for construction site operators to control wastes, procedures for site plan review of construction plans, and procedures for site inspection and enforcement of sediment and erosion control measures	In Process	Once	Engineering Department and Legal
Revise the current storm water management ordinance to incorporate development standards and post-development controls	Partially Completed		
Submit draft development standards and draft storm water management ordinance to City Council for review and approval	Partially Completed	Once	Engineering Department
Distribute and implement new standards, policies, and procedures	1 month	On-going	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Revise and implement development standards. Revise and implement comprehensive storm water management ordinance. 			

BEST MANAGEMENT PRACTICES (CONTINUED) – Minimum Measure #5

Create Construction Non-compliance Reporting Mechanism (Same as Minimum Measure #4)			
Milestone	Completion Date	Frequency	Responsible Party
Establish a mechanism for the public to submit information regarding water quality violations	Completed	Once	Engineering Department
Publicize the phone number, website, etc.	Completed	Once	Engineering Department
Receive and respond to complaints, messages, etc.	Completed	On-going	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Establish mechanism for receiving information and respond to calls within 72 hours. 			
Long Term Maintenance and Operation			
Milestone	Completion Date	Frequency	Responsible Party
Create inspection/maintenance program for existing City owned storm water quality facilities	In Process	Once	Engineering Department/Public Works
Begin inspections and maintain inspection logs and track follow up actions. To coincide with the mapping of the major outfalls (See Minimum Measure #3 – Map Major Outfalls and Screen, Track and Eliminate Illicit Discharges)	In Process	Annually	Engineering Department
Perform necessary maintenance activities/repairs on City owned water quality management facilities, as needed	In Process	As needed	Engineering Department/Public Works
Measurable Goal:			
<ul style="list-style-type: none"> Inspect City owned storm water quality management facilities once per permit cycle. 			

3.6 POLLUTION PREVENTION / GOOD HOUSEKEEPING (MINIMUM MEASURE #6)

PERMIT REQUIREMENTS – Minimum Measure #6
Requirement Description
<ul style="list-style-type: none"> Develop an operation and maintenance program, including a training component, with the objective of preventing or reducing pollutant runoff from municipal operations into the City's storm sewer system;

BEST MANAGEMENT PRACTICES – Minimum Measure #6			
Maintain Storm Water Pollution Prevention Plans			
Milestone	Completion Date	Frequency	Responsible Party
Create storm water pollution prevention plans for appropriate sites	42 months	Once	Engineering Department
Implement plans	60 months	Annually	Engineering Department
Measurable Goal:			
<ul style="list-style-type: none"> Maintain storm water pollution prevention plans at City owned facilities as appropriate. 			

BEST MANAGEMENT PRACTICES (CONTINUED) – Minimum Measure #5

Provide Staff Training Regarding Storm Water Quality Issues			
Milestone	Completion Date	Frequency	Responsible Party
Develop a training program for City staff regarding storm water quality	36 months	Once	Engineering Department
Implement training program	48 months	Annually	Engineering Department
<p><u>Measurable Goal:</u></p> <ul style="list-style-type: none"> Provide a minimum of one training opportunity per year for those members of City staff that have the potential to directly impact storm water quality through the normal course of their work. 			