

SC DHEC's Stormwater Pollution Prevention Plan (SWPPP) Template

Overview

To aid in the development of a site-specific Comprehensive Stormwater Pollution Prevention Plan (C-SWPPP) and an On-site Stormwater Pollution Prevention Plan (OS-SWPPP) for construction sites seeking coverage under the South Carolina's NPDES General Permit for Stormwater Discharges from Construction (CGP), the following template has been provided as guidance. It is recommended that this template be use in conjunction with the [NPDES General Permit for Stormwater Discharges from Construction Activities \(CGP\)](#) and the latest editions of the [SC DHEC's Plan Review Checklist for Design Professionals](#) and [Stormwater BMP Handbook](#). All are available for download on SC DHEC's Stormwater website, <http://www.scdhec.gov/stormwater>.

This template covers the majority of the requirements that may need to be addressed to obtain coverage under the CGP for most construction sites located within South Carolina. However, additional provisions may need to be included within the C-SWPPP or OS-SWPPP to address site-specific conditions. Please review the current edition of the [CGP](#) to ensure all requirements have been met before submitting your C-SWPPP for review and approval.

As noted above, this template has been designed to create both the C-SWPPP and the OS-SWPPP. Sections 1 through 3 should be the same for each document, with the bulk of the differences between the C-SWPPP and OS-SWPPP will be within the appendices.

Using this Template to Create the C-SWPPP

This template includes an example of a site-specific [Comprehensive SWPPP](#) as a Microsoft Word document. A set of instruction has been provided for each section and some sections have been provided with sample language. The SWPPP preparer can easily add tables, diagrams, text and other sources of information to address the needs for a specific construction site. The C-SWPPP derived from this template can then be sent in for review and approval.

Using this Template to Create the OS-SWPPP

After approval, this template may also be used to generate the required [On-Site SWPPP](#). Simply rename the approved C-SWPPP document to the OS-SWPPP and remove the Engineering Report Appendix. Be sure that Appendix E, F, G and H are included. If they were not included with the C-SWPPP, please add them prior to implementation of the approved C-SWPPP at the construction site.

Disclaimer

The information and guidance presented within this document represent design templates that are recommended, however their effectiveness is dependent on the proper identification of stormwater management BMPs to address site-specific conditions. No guarantee of permit coverage is implied upon inclusion or acceptance of the use of this template within a Permittee's application package for coverage under the NPDES General Permit for Stormwater Discharges from Construction Activities (SCR100000).

Comprehensive Stormwater Pollution Prevention Plan (C-SWPPP) For Construction Activities:

Project/Site Name:

Insert Company or Organization Name

Primary Permittee:

Insert Company or Organization Name

Project Address/Location:

Insert Address

Insert City, State, Zip Code

Insert Telephone Number

Insert Fax/Email

Permittee/Owner Contact:

Insert Address

Insert City, State, Zip Code

Insert Telephone Number

Insert Fax/Email

SWPPP Preparer:

Insert Company or Organization Name

Insert Name

Insert Address

Insert City, State, Zip Code

Insert Telephone Number

Insert Fax/Email

Day-to-Day Operator:

Insert Company or Organization Name

Insert Name

Insert Address

Insert City, State, Zip Code

Insert Telephone Number

Insert Fax/Email

(Leave Blank if not known.)

C-SWPPP Preparation Date:

___/___/_____

Modification Dates:

Modification I: ___/___/_____

Modification II: ___/___/_____

Table of Contents

Section 1

PROJECT OVERVIEW

1.1 Narrative	5
1.2 Stormwater Management and Sediment Control.....	7
1.3 Sequence of Construction	10
1.4 Non-Numeric Effluent Limits.....	11
1.5 Buffer Zone Management.....	14
1.6 Certification Statement	17

Section 2

SITE FEATURES AND SENSITIVE AREAS

2.1 Sources of Pollution.....	18
2.2 Surface Waters.....	19
2.3 Impairments And TMDLs.....	20
2.4 Critical Areas (Coastal Zone Only)	24

Section 3

COMPLIANCE REQUIREMENTS

3.1 SWPPP Availability	25
3.2 Pre-Construction Conferences	25
3.3 Inspection Requirements.....	25
3.4 Maintenance Policies	25
3.5 Record Keeping	25
3.6 Final Stabilization.....	26

Appendices

REFERENCE MATERIAL

Appendix A - Site Maps	27
Appendix B - Drainage Maps.....	28
Appendix C - Additional Approvals/Certifications.....	29
Appendix D - Engineering Report (C-SWPPP* Only).....	31
Appendix E - Inspection Log and Reports (OS-SWPPP** Only)	32
Appendix F - Rainfall Records (OS-SWPPP** Only).....	35
Appendix G - Additional Site Logs and Records (OS-SWPPP** Only).....	38
Appendix H - Construction General Permit (CGP) - <i>SCR100000</i>	47

**C-SWPPP is acronym for Comprehensive Storm Water Pollution Prevention Plan*

***OS-SWPPP is acronym for On-Site Storm Water Pollution Prevention Plan*

Section 1

PROJECT OVERVIEW

1.1 Narrative (CGP Section 3.2.1)

Construction Activities and BMP Summary

Instructions: *Include a brief summary of the proposed construction activities and the BMPs that will be implemented to manage stormwater and to provide sediment and erosion control. Identify if the construction activities are required to be implemented through phased plans as specified in Section 3.2.9.B. Also, identify any proposed permanent water quality/quantity BMPs.*

- Sample Language - Project Summary -

This construction site includes the clearing and grubbing of existing agricultural land, grading of the existing contours, and the construction of two commercial buildings and a large parking lot.

Perimeter Control BMPs and a sediment basin will be installed prior to the initiation of the mass clearing/grubbing and grading of the site, and the sediment basin will be the primary sediment control BMP used during the lifespan of all construction activities, until final stabilization is reached. Once final stabilization is reached the sediment basin will be converted into a wet detention pond to treat post-development water quality and quantity.

The construction activities at this site will be implemented in 3 distinct Erosion Prevention and Sediment Control Phases. The first phase includes the initial installation of perimeter controls, sediment control BMPs, and the construction entrance. The second phase includes the bulk of the construction activities and the implementation of internal stormwater management BMPs. The final phase, Phase 3, includes the final stabilization of the site and conversion of the sediment basin into a permanent water quality and quantity control structure.

Pre-Development Conditions

Instructions: *Include a brief summary of the pre-development drainage conditions. Identify the number of outfall locations and any pre-existing stormwater management structures. Reference the Site Maps, Drainage Maps, and Engineering Reports that may provide more details on these conditions.*

Post-Development Conditions

Instructions: *Include a brief summary of the post-development drainage conditions. Identify the number of outfall locations and any changes from pre-development stormwater drainage. Reference the Site Maps, Drainage Maps, and Engineering Reports that may provide more details on these conditions. Include a pre/post peak discharge table summarizes these flows.*

- Sample Language - Peak Discharges -

As shown in **Table 1.1-A**, the post-development peak discharges are less than or equal to the pre-development peak discharges for each of the **4** identified outfalls.

Table 1.1-A: Pre/Post Peak Discharges

Summary of Pre/Post Peak Discharges					
Outfall A			Outfall B		
	Pre	Post		Pre	Post
2-YR			2-YR		
10-YR			10-YR		
100-YR			100-YR		
Outfall C			Outfall D		
	Pre	Post		Pre	Post
2-YR			2-YR		
10-YR			10-YR		
100-YR			100-YR		

Flooding Issues

Instructions: *Include a description of existing and potential flooding problems at the site due to pre-construction drainage conditions, and any potential flooding problems within the surrounding area that may be a direct result of current site conditions or the proposed site development. Identify if the site is located within a floodplain. Reference any appendix that contains additional information.*

Residential Subdivision Information (As Applicable)

Instructions: *Identify if this C-SWPPP was developed for a Primary or a Secondary Permittee. If for a Primary Permittee, identify whether this C-SWPPP may be used by Secondary Permittees to obtain coverage or if Secondary Permittees are required to develop their own C-SWPPP for permit coverage.*

Identify if the subdivision is to be mass-graded or not. If the subdivision is not to be mass graded include the disturbed area calculations and the subsequent note identified in Item 4 of the [Stormwater Management and Sediment and Erosion Control Plan Checklist for Design Professionals](#).

1.2 Stormwater Management and Sediment Control (CGP Section 3.2.2)

Instructions: *This section may be used to address all applicable requirements identified in Section 3.2.2 of the Construction General Permit. This includes identification of stormwater discharges from industrial activities regulated by the NPDES Industrial Stormwater Program (batch concrete plants, asphalt plants, etc), various types of BMPs, stockpile management, construction entrances, dust control, and pollutant identification. These sections should contain very general information and might be able to be used for most sites.*

*Sample Language has been provided for the majority of the items identified in the CGP. **Bolded text** is language that will differ from site to site.*

- Sample Language -

Erosion Prevention BMPs

As the existing site is cleared, grubbed and graded to the proposed contours shown on the construction site plans, erosion prevention BMPs shall be placed throughout the construction site to aid in the prevention of sediment-laden stormwater runoff. These BMPs shall be focused in areas with high potential of erosion, areas preceding infiltration practices, and shall be applied to all steep slopes. That is slopes equal to or greater than 3H:1V.

Each erosion prevention measure shall be selected on a site-specific basis and details have been provided on the construction site plans. The plans identify all proposed Erosion Prevention BMPs and the recommended installation, maintenance, and inspection procedures.

Examples of Erosion Prevention BMPs are, but are not limited to, surface roughening, temporary seeding, erosion control blankets, turf reinforcement mats, sodding, riprap, outlet protection, dust control, and polyacrylamide (PAM). Information on the design and proper use of Erosion Prevention BMPs can be located in the [SC DHEC's BMP Handbook](#).

Sediment Control BMPs

Sediment Control BMPs are designed to remove some of the sediment accumulated within stormwater runoff, to the best extent practicable. These BMPs help prevent sediment impacts to adjacent properties and water bodies from stormwater discharges originating from construction sites.

Typically these BMPs are placed near each of the site's outfalls and are installed prior to clearing and grubbing of the site (before large areas of soil are exposed). However, these BMPs can also be located throughout the construction site and, in these circumstances, are installed after mass grading has occurred. Placement, sizing and modifications of Sediment Control BMPs should be left to the SWPPP preparer and/or the Site Engineer. **Contractors must consult the SWPPP Preparer as listed at the front of this SWPPP before making any significant changes to these BMPs.**

Each sediment control BMP shall be selected on a site-specific basis. Examples of Sediment Control BMPs are, but are not limited to sediment traps, sediment basins, silt fence, rock check dams, rock sediment dikes, sediment tubes, and inlet protection. Please consult [SC DHEC's BMP Handbook](#) for more information on Sediment Control BMPs.

Structural Control BMPs and Floodplain Placement

This site-specific SWPPP utilizes the following structural control BMPs: **retention pond, detention pond, Bioretention areas, perimeter earthen berms, permanent vegetated swales, and storm sewer systems**. These practices have been designed to either divert flows from exposed soils, to retain/detain flows, and to otherwise limit the runoff and the discharge of pollutants from disturbed areas of the construction site.

Throughout the lifespan of the construction project these BMPs will be installed and maintained, as required by the SWPPP and the construction site plans, until final stabilization has been achieved for the areas draining to each BMP. Upon final stabilization, each structural control BMP must be modified to the post-construction conditions shown within the approved construction site plans or removed, if the structural BMP was a temporary structure.

Any Structural Control BMPs that are being proposed within the 100-yr floodplains will require approval from the local regulating agency, since SC DHEC does not have the authority to regulate within the associated flood plains. Approvals from the local agency will be located in **Appendix C, Additional Approvals/Certifications** of this SWPPP. If the required approval is not located in this SWPPP, please contact the Primary Permittee listed on the title sheet of this SWPPP before performing work within the floodplain.

Construction Entrances and Dust Control

All access areas into and out of the limits of disturbance, as shown on the construction site plans, are required to be equipped with a construction entrance. The use of this BMP will limit the amount of sediment being transported by construction vehicles onto existing roadways or other impervious areas. Any tracked sediment, along with any attached pollutants, deposited on impervious areas could be washed downstream during the next rain event. Each construction entrance must be installed as shown in the details section of the construction site plans.

If a new entrance or exit is required, that is not shown on the plans, install the construction entrance as noted by the construction entrance detail, mark the location on the plans and make a record of this minor modification in the SWPPP's modification log, which is located within one of the appendices of the On-site SWPPP.

Each stabilized construction entrance should be used in conjunction with Street Sweeping measures if it becomes apparent that sediment is still being tracked onto adjacent impervious areas, even with the use of the construction entrance.

During extremely dry conditions, drought, and/or excessive winds, the construction site

should be treated for dust control to prevent the suspension of fine sediment particles into the air, being carried offsite, and deposited on adjacent properties or surface waters. This practice may not be directly called out for on the construction site plans. A water tanker used to spray the soil down may be an effective way to prevent excessive dust at a construction site.

Water Quality BMPs During Construction

Site-specific water quality BMPs (e.g., sediment basins, sediment traps, rock check dams, and rock sediment dikes) must be installed prior to the mass clearing, grubbing and grading of the site, and must be kept in functioning order throughout the lifespan of all construction activities. Each of these BMPs must be maintained and inspected until all areas draining to these BMPs have reached final stabilization, approved by the construction site inspector or the SWPPP Preparer, and recorded within the stabilization log located as an appendix of the On-site SWPPP.

The location, installation procedures, and maintenance procedures for each water quality BMP can be found within the approved construction site plans.

Post-Construction Water Quality

All construction sites disturbing 5 acres or more, including construction activities associated with Larger Common Plans disturbing 5 acres or more (for sites located within an MS4 this may be 1 acre or more), must be designed to treat water quality post-construction. These water quality controls must be installed and stabilized prior to terminating coverage under the CGP. These controls will require routine maintenance to remain functional; this is to be conducted by the Primary Permittee or the entity that accepts responsibility for these structures once construction has been completed. Additional information, including permanent maintenance and inspection procedures, can be found in **Appendix C** of the OS-SWPPP or within the construction site plans.

Upon final stabilization, each construction site will have to make the transition from temporary BMPs to permanent BMPs. This transition may include the conversion of a sediment basin to a detention basin, a sediment trap to a bioretention area, or diversion swales to permanently vegetated swales. All post-construction (permanent) water quality and water quantity BMPs are identified in the final phase of the Erosion and Sediment Control located within the construction site plans.

Other Stormwater Management Procedures

Based on the nature, conditions, and/or procedures associated with this construction site, the following items must be followed and adopted by all those conducting land disturbing activities at this site:

- All construction debris must be stockpiled in designated areas, which have been provided with the proper BMPs to prevent the discharge of pollutants through stormwater runoff from building or other similar materials off-site or into surface waters.

- Any additional waste material or stockpile material (i.e., soil and mulch) must also be stored in the designated areas as shown on the Construction Site Plans or as the contractor, responsible for day-day activities at this site, deems appropriate. Silt fence or an approved equal shall surround all stockpiled materials.
- All parties conducting work at this construction site must be informed of and make note of pollutant sources, both industrial and construction, at this site, and be informed of all controls and measures that will be implemented to prevent the discharge of these pollutants in stormwater runoff.
- Any additional non-stormwater discharges, as referenced in the CGP, should be eliminated or reduced to the maximum extent feasible. All unpreventable non-stormwater discharges shall be treated through the approved stormwater management system before release off-site. Following is a list of allowable non-stormwater discharges:
 - Fire hydrant flushing
 - Wash water without detergents
 - Water used for dust control
 - Potable water
 - Building wash down water without detergents
 - Uncontaminated pavement wash water
 - Uncontaminated condensation from mechanical equipment
 - Uncontaminated ground or spring water
 - Water from foundation of footing drains
 - Uncontaminated excavation dewatering
 - Landscape irrigation.
- **(Additional notes specific to your construction site may be inserted here and below in list format or however you see fit. The regulatory agency may request additional notes here after initial review of the submitted SWPPP.)**

1.3 Sequence of Construction

Instructions: *This section is provided to ensure that a construction sequence has been provided for the proposed activities. For most sites, this section can simply reference the construction sequence located within the construction site plans. In certain situations more detail on each step identified within the construction sequence may be desired or may be necessary to be provided.*

Additional tables or lists may be provided in addition to the sample language provided below. Any additional information will be beneficial to those implementing the proposed construction activities and associated BMPs.

- Sample Language -

The construction sequence for this project has been provided on **sheet EPSC-1** of the construction site plans. Each item/step of that construction sequence has been listed in the sequence that they should be implemented.

For additional information or questions on the sequencing please contact the SWPPP Preparer or the Permittee referenced on the cover of this SWPPP.

1.4 Non-Numeric Effluent Limits

Instructions: *This section may be used to address applicable Non-Numeric Effluent Limits identified in Section 3.2.10 of the Construction General Permit. Some of these requirements can be addressed solely on the Construction Site Plans, but some may be better addressed within the SWPPP document.*

Sample Language has been provided for the Non-Numeric Effluent Limits that are required to be addressed within the SWPPP Document. Portions of the sample language may need to be revised to meet site-specific conditions.

- Sample Language -

Stormwater Volume and Velocity Control

During the implementation of construction activities, all parties performing work at this construction site whose work may affect the implementation of the SWPPP must be informed of and directed on how to comply with this Non-Numeric Effluent Limit, which requires the management of stormwater runoff **within** the construction site and at **each outfall**. The purpose of this requirement is to control the stormwater volume and velocity at these locations to minimize erosion.

Specifically, each responsible party should be made aware of the practices that have been or should be implemented at the construction site to accomplish these particular stormwater management practices. Below is a list of practices that may be utilized within the disturbed area and at each outfall at construction sites to control stormwater volume and velocity:

Volume Control

- Limiting the amount of disturbed area and exposed soils
- Staging and/or Phasing of the Construction Sequence;
- Sediment Basins and Sediment Traps
- Diverting off-site flow around the construction site;
- Controlling the Drainage Patterns within the Construction Site;
- Temporary Stabilization of Disturbed Areas.

Velocity Control

- Surface Roughening and/or other Slope Stabilization Practices;
- Level Spreaders, Riprap Plunge Pools and/or other Velocity Dissipation BMPS located at the Construction Site's and Sediment Basin Outfalls.
- Use of Rock Checks, Sediment Tubes, Etc. in Temporary Diversions Swales and Ditches.
- Use of Erosion Control Blankets, Turf Reinforcement Mats, and other Non-Vegetative BMPs that can be used to Quickly Stabilize Disturbed Areas.

The SWPPP Preparer/Engineer should approve any modifications (Additional BMPs or Changes to Existing BMPs) to address the management of stormwater volume and velocity prior to implementation. All approved SWPPPs that were issued coverage under the CGP should include ample BMPs and other control measures to address this specific Non-Numeric Effluent Limit.

Soil Exposure, Compaction and Preservation

Throughout construction activities, **the amount of soil exposed during construction should be kept to a minimum**. This may be accomplished by minimizing the amount the disturbed area within the permitted Limits of Disturbance (shown on the approved construction site plans) to only that which is necessary to complete the proposed work. For areas that have already been disturbed and where construction activities will not begin for a period of 14 days or more, temporary stabilization techniques must be implemented.

Prior to implementation of any major grading activities, **topsoil is to be preserved** by placing it in areas designated for stockpiling until final grades are reached. Each stockpile must be equipped with proper sediment and erosion controls to preserve the topsoil and protect adjacent areas from impacts. Once final grades have been reached, the preserved topsoil should be utilized to apply to areas identified for stabilization. Topsoil contains nutrients and organisms that aid in the growth of vegetation.

The **Compaction of Soil** should also be minimized to the degree practicable during grading activities. This is especially important during the replacement of topsoil to aid in a quick establishment of vegetative cover. Compaction of soil may also reduce rainfall's ability to infiltrate into the soil, increasing the amount of stormwater runoff.

Soil Stabilization

Throughout construction activities, soil stabilization techniques are to be initiated as soon as practicable whenever any clearing, grading, excavating, or other land-disturbing activities have permanently or temporarily ceased on any portion of the construction site and will not resume for a period exceeding 14 calendar days. For areas where initiating stabilization measures is infeasible, (e.g., where snow cover, frozen ground, or drought conditions preclude stabilization), initiate vegetative or non-vegetative stabilization measures as soon as practicable.

Steep Slopes (Slopes of 30% grade or greater)

All disturbed steep slopes (30% grade, ~3H:1V, or greater), and steep slopes to be created through grading activities must be managed in a fashion that limits the potential of erosion along the slopes. All parties whose work is/was responsible for the creation/disturbance of steep slopes must comply with the following items:

- **Minimize the Disturbance** of all steep slopes, when possible.
- **Divert Concentrated or Channelized Flows** of stormwater away from and

around steep slope disturbances.

- **Use Specialized BMP Controls** including temporary and permanent seeding with soil binders, erosion control blankets, surface roughening, reducing continuous slope length with terracing or diversions, gradient terraces, interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, level spreaders, check dams, seep berms, and triangular silt dikes to minimize erosion.
- **Initiate Stabilization Measures** as soon as practicable on any disturbed steep slope areas where construction activities have permanently or temporarily ceased, and will not resume for a period exceeding 7 calendar days.
- **A Vegetative and/or Non-Vegetative Cover** must be established within 3 working days from the time that stabilization measures were initiated.

Stabilization of steep slopes should be a priority for those performing work at the construction site. At the very least, runoff control BMPs should be implemented to transport stormwater runoff from the top of the slope to the toe of the slope. An example of this is to install diversion swales along the top of slope and direct the runoff towards pipe slopes drains to transports the runoff to the toe of the slope. All pipe slope drain outlets are to be equipped proper outlet protection.

Sediment Discharge Minimization

Permittees, Contractors, and all other parties responsible for conducting land-disturbing activities are required to install and maintain all erosion and sediment BMPs that are identified on the approved construction site plans. These BMPs have been designed and approved to address such factors as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soils particle sizes expected to be present on the construction site. **Proper installation, inspection, and maintenance will allow these BMPs to operate at maximum efficiencies in order to minimize sediment discharges to the maximum extent practical.**

Pollutant Discharge Minimization

Permittees, Contractors, and all other parties responsible for conducting land-disturbing activities are required to install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, the following items must be implemented:

- **Minimize the discharge of pollutants from dewatering trenches and excavations** by managing runoff with the appropriate controls. Otherwise these discharges are prohibited;
- **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;
- **Minimize the exposure of building materials, building products, construction wastes, trash,** landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to

precipitation and to stormwater; and

- **Minimize the discharge of pollutants from spills and leaks** and implement chemical spill and leak prevention and response procedures.

Prohibited Discharges

Permittees, Contractors, and all other responsible parties for conducting land-disturbing activities are prohibited to discharges, from the construction site, the following items:

- **Wastewater from washout of concrete**, unless managed by an appropriate control;
- **Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials**;
- **Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance**; and
- **Soaps or solvents used in vehicle and equipment washing**.

1.5 Buffer Zone Management

Instructions: *This section may be used to address applicable Buffer Zone Management Requirements identified in Section 3.2.4.C of the Construction General Permit. A Buffer Zone Narrative is required to be provided within the SWPPP Document.*

Sample Language has been provided below for the Buffer Zone Narrative for each Compliance Option listed in the CGP. Additional language has been provided as a "General Information" section on the Buffer Zone Management Requirements. Portions of the sample language may need to be revised to meet site-specific conditions.

- Sample Language -

Buffer Zone Narrative (Compliance Option A)

Per Section 3.2.4.C of the CGP, a buffer zone has been proposed along the **unnamed tributary of the Catawba River** as shown on **sheet EC-1** of the construction site plans. A buffer zone width of **30-ft** will be maintained along this surface water, as directed by **Compliance Option A** from the CGP.

This **30-ft** buffer zone is to be identified on the site by flagging, installation of tree protection fence or other practices to make it readily identifiable prior to the implementation of other perimeter BMPs and commencement of construction activities. All perimeter BMPs and sediment control BMPs, as shown on **sheet EC-1** of the construction site plans, are to be installed prior to the discharge of stormwater runoff into the buffer zone from disturbed areas.

Inspection and maintenance of the buffer zone is to be conducted until final stabilization is reached, or as otherwise approved. All maintenance procedures and inspection requirements for the provided buffer zones can be found on plan **sheet EC-1**.

Buffer Zone Narrative (Compliance Option B)

Per Section 3.2.4.C of the CGP, a buffer zone has been proposed along an **unnamed tributary of the Catawba River** as shown on **sheet EC-1** of the construction site plans. A buffer zone width of **20-ft** will be maintained along this surface water, as directed by **Compliance Option B** from the CGP.

Compliance Option B was selected due to **existing clearing within 30-ft of the unnamed tributary of the Catawba River**. **The current state of the project area was an agricultural field reaching to within 20-ft of the surface water**. For this reason, a buffer zone width less than the required minimum width as listed in Section 3.2.4.C of the CGP will be provided. **Pre-Existing Development** is one of the Exceptions listed in Section 3.2.4.C of the CGP that allows for the selection of Compliance Option B.

This **20-ft** buffer zone is to be identified on the site by flagging, installation of tree protection fence or other practices to make it readily identifiable prior to the implementation of other perimeter BMPs and commencement of construction activities. All perimeter BMPs and sediment control BMPs, as shown on **sheet EC-1** of the construction site plans, are to be installed prior to the discharge of stormwater runoff into the buffer zone from disturbed areas.

Inspection and maintenance of the buffer zone is to be conducted until final stabilization is reached, or as otherwise approved. All maintenance procedures and inspection requirements for the provided buffer zones can be found on plan **sheet EC-1**.

Additionally, a **Surface Water Protection Plan**, which outlines a list of procedures to protect the **Tributary of the Catawba River** has been provided on plan sheet **EC-1**.

Buffer Zone Narrative (Compliance Option C)

Per Section 3.2.4.C of the CGP, a buffer zone is required to be provided along the **unnamed tributary of the Catawba River**; however, an undisturbed buffer zone is not capable of being provided due to **pre-existing development that has disturbed** the majority of the required buffer zone area. For this reason, **Compliance Option C** was selected for this project.

Compliance Option C was selected since **the pre-existing development** has stripped the buffer zone area from natural strands of vegetation. **The pre-existing state of the project area was a parking area and grassed area that extended to within a few feet of the surface waters**. For this reason, a buffer zone will not be provided as allowed through Compliance Option C listed in Section 3.2.4.C of the CGP.

In lieu of a buffer zone, all sediment control BMPs discharging to **this tributary** have been designed to meet an 80% trapping efficiency to prevent impacts to this

surface water. Supporting Calculations demonstrating these trapping efficiencies can be found in **Appendix D** of this SWPPP.

All perimeter BMPs and sediment control BMPs, as shown on **sheet EC-1** of the construction site plans, are to be installed prior to the discharge of stormwater runoff into the adjacent surface water from disturbed areas. Inspection and maintenance of these BMPs are to be conducted until final stabilization is reached. All maintenance procedures and inspection requirements for these BMPs can be found on plan **sheet EC-1**.

Additionally, a **Surface Water Protection Plan**, which outlines a list of procedures to protect the **Tributary of the Catawba River** has been provided on plan sheet **EC-1**.

Additional Buffer Zone Information

All construction sites that contain or are adjacent to surface waters must provide a vegetated buffer of at least 30 linear feet, or 45 linear feet when the surface water is classified as a Sensitive Waters (Section 3.2.4.C of South Carolina's CGP). This requirement is only applicable during construction. Work may be conducted within the buffer area once all disturbed areas discharging towards the buffer zone have had final stabilization measures implemented. This work must have been included within the SWPPP at the time of coverage approval.

Buffer Zones Requirements should be explained in detail during the Pre-Construction Conference. These details should include the outlining of the exact location of where the buffer starts and ends, the sediment and erosion controls precluding the buffer and all other general information pertinent to maintaining the buffer zone area during construction.

All contractors and sub-contractors shall be made aware of the buffer zones and establish a work procedure that preserves and protects these areas. The buffer zones should be flagged prior to any perimeter control placement and, most importantly, before mass clearing and grubbing. These areas must also be inspected during construction for areas of excessive sediment impacts, which may need to be removed if sediment impacts are evident within the buffer zone.

In the event that a portion of a buffer is accidentally disturbed, the contractor shall temporarily stabilize the area as soon as possible and consult with the construction site's inspector, permittee, and/or engineer on the installation of any additional sediment control or erosion prevention measure to protect the portion of the buffer still undisturbed.

1.6 Certification Statement

Instructions: *This section is used by the SWPPP Preparer to certify that all sections of the SWPPP have been prepared or approved by the SWPPP Preparer. This statement should also be included on the site plans.*

Sample Language has been provided as the recommended certification statements for this section. Portions of the sample language may need to be revised to meet site-specific conditions.

- Sample Language -

"I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SCR100000."

Name _____

Title _____

Date _____

(Signature and Seal)

Section 2

SITE FEATURES AND SENSITIVE AREAS

2.1 Sources of Pollution

Instructions: *This section can be used to address section 3.2.5 of the CGP. Identify any potential sources of pollution, including sediment and fertilizers, which are likely to affect the quality of stormwater discharges from the construction site.*

Sample Language has been provided below. Portions of the sample language may need to be revised to meet site-specific conditions. Additionally, a sample table has been provided to list these potential sources of pollution.

- Sample Language -

Throughout construction activities, each permittee, contractor, and person responsible for conducting work will need to ensure that sources of pollution are managed to prevent their discharge from the construction site. Expected pollution sources during construction have been identified in **Table 2.1-A**, but due to the nature of construction activities, it is often tough to predict all pollution sources that may appear throughout the life of a construction project. For that reason, the following table has also been provided to help all those performing work at this construction site identify possible sources of pollution

Stormwater runoff subjected to the identified pollution sources must be treated by the appropriate BMPs as directed by this SWPPP.

In the event that any additional sources of pollution are identified during construction, the person(s) with day-to-day operational control at the site is to add the new source(s) to **Table 2.1-A** and consult with the SWPPP Preparer to properly address this source and to prevent the discharge of it's pollutant through stormwater runoff.

Table 2.1-A: Potential Sources of Pollution

Source	Material or Chemical	Location*	Appropriate Control Measures
Loose soil exposed/disturbed during clearing, grubbing and grading activities	Sediment	All areas within the Limits of Disturbance	As directed by the construction Plans. This includes Silt Fence, sediment tubes, sediment basins, and sediment traps.
Areas where construction equipment are cleaned, a.k.a. concrete washout	Heavy Metals & pH	Located adjacent to each construction entrance	Concrete Washout Basin as shown on sheet C-8 of the plans.
Water encountered during trenching	Nutrients & Sediment	In and around any trenching activities.	Direct water into impoundments such as basins or traps to allow for the sedimentation of the listed pollutants.
Paving Operations	Sediment & Trash	All areas to be paved.	Inlet protection.

Material Delivery and Storage Areas	Nutrients, pH, Sediment, Heavy Metals, oils & grease	All areas used as storage areas	Silt fence and/or sediment dikes
Equipment fueling and maintenance areas	Metals, hydrocarbons, oils and greases	Areas surrounding fuel tanks	Provide secondary containments, locate in upland areas. Repair leaking and broken hoses.
Paints	Metal oxides, stoddard solvent, talc, calcium-carbonate, arsenic	Throughout site, primarily in areas of building construction	Washwater should be contained and is prohibited from being discharged

***Area where material/chemical is used on site.**

2.2 Surface Waters

Instructions: *This section can be used to address requirements found in Section 3.2.4.A of the CGP. This includes the identification of all Waters of the State (WoS) located on the project site in which the construction site has been proposed, any receiving waters accepting stormwater discharges from construction activities, and any impacts to Waters of the State/ Waters of the United States. For each impact to Waters of the State explain applicable permits and certifications that have been obtained, or are in the process of being obtained, from the U.S. Army Corps of Engineers and DHEC 401 Water Quality Section. When a construction site includes proposed impacts to Water of the U.S. or a Critical Area Permit is required in the Coastal Zone, the ability of DHEC to grant coverage under the CGP is governed based on criteria outlined in Section 2.6.2 and 2.6.3 of the CGP.*

Sample Language has been provided below. Sample language should be revised to address site-specific conditions. Reference construction site plan sheets and the Notice of Intent that may contain additional information pertinent to this section. Maps and other visual aids are often helpful.

- Sample Language -

Stormwater runoff from the proposed construction sites discharges from **2** locations as outlined in **Figure 2.2** to an **unnamed tributary of Stony Fork Creek**, which lies along the northwest boundary of the site. One outfall is located in the northwest corner. The

second outfall is located in the northeast corner of the site where it discharges through a proposed detention pond into an existing ditch located in SCDOT Right-of-Way along State Road. From the unnamed tributary, the stormwater runoff from this site will enter Stony Fork Creek. Stony Fork Creek discharges into Fishing Creek.

96 LF of the unnamed tributary of Stony Fork Creek, outlined on the construction plans has been identified as a jurisdictional stream. This area is proposed for grading for the construction of a building and proposed detention pond. A 404 permit has been obtained from the USACOE and a DHEC 401 Water Quality Certification has been issued and are included in **Appendix L**.

Figure 2.2: Stormwater Runoff Route



2.3 Impairments and TMDLs

Instructions: *This section can be used to address section 3.2.12 of the CGP. Identify any impairments or TMDLs cited for any of the receiving waters listed in Section 2.2 of this SWPPP template.*

Sample Language has been provided below. This language gives a detailed overview of impaired waters and TMDLs, common pollutants that may be found in construction stormwater discharges. The SWPPP for any site discharging to one of these waterbodies must include appropriate BMPs to ensure that the site's construction stormwater discharges will not contribute to the impairment identified. Sample language should be revised to address site-specific conditions.

- Sample Language -

Some Waters of the State (WoS) have been identified as not meeting the State's water quality standards for recreational swimming, fish consumption, aquatic life use, and/or shellfish harvesting for one or more pollutants even after controls for point and nonpoint source pollution have been put in place. These waterbodies have been classified as "impaired." Once these waterbodies have been identified they are listed on the State's 303(d) List of Impaired Waterbodies. South Carolina lists impairments as "stations" where samples were taken along a waterbody.

The most recently-approved 303(d) list can be found at the following link:

<http://www.scdhec.gov/environment/water/tmdl/index.htm#4>

After a pre-determined period of time, DHEC is obliged to develop a Total Maximum Daily Load (TMDL) for the pollutant of concern for each impaired station listed on the 303(d) List. A TMDL is the amount of a single pollutant (such as bacteria, nutrients, metals) that can enter a waterbody on daily basis and that waterbody still meet water quality standards. "TMDL" refers to both a calculation of a pollutant entering a waterbody as well as the document containing this calculation along with source assessments, watershed and land use information, reductions and allocations information, implementation and other relevant information, maps, figures, and pictures.

Once a TMDL has been developed and approved by the EPA, the impaired WoS is removed from the 303(d) list. A separate list is maintained for WoS with approved TMDLs.

Any construction site whose discharges are released into a WoS listed on the 303(d) List or for which an EPA-approved TMDL has been developed must address the specific pollutant set forth in the TMDL and/or potential pollutants for the impairment. The SWPPP must include a description of BMPs to address these pollutants.

The primary permittee and/or contractor must ensure that the construction site discharges remain in compliance with the State's water quality standards. To do so, these parties will have to ensure the function of all approved BMPs to handle the specific pollutant.

Construction Stormwater Discharges are expected to contain pollutants that contribute and/or can cause the following impairments to receiving water bodies: BIO (Macroinvertebrate Community), Turbidity, TP (Total Phosphorus), TN (Total Nitrogen), CHLA (Chlorophyll-a), and Fecal Coliform in waters classified for Shellfish Harvesting in the coastal zone. The presence of any of these impairments in receiving waters will require approval control of the site's construction stormwater discharges. Information on each of these impairments and how to treat stormwater runoff for these impairments has been provided below.

Impairments Effected by Construction Site Discharges and Methods to Control Potential Pollutants Causing or Contributing to the Impairments

- 1. BIO (Macroinvertebrate Community):** A balanced and varied group of Macroinvertebrate organisms is an indicator of a healthy stream that supports aquatic life. A balanced community can be defined as a natural, diverse group of organisms (including Macroinvertebrate) characterized by the ability to sustain itself through season changes, presence of food chain species and a lack of domination by pollutant tolerant or invasive species. If these conditions do not exist, then the site may be considered impaired due to the presence of an undesirable or non-existent Macroinvertebrate community. Sediment from construction sites may further threaten the propagation of these organisms.

Address by: Examples include limiting the amount of disturbed area, designing sediment control BMPs to remove the maximum amount of sediment possible, immediate stabilization of disturbed areas, and other practices may be utilized to control the discharge of sediment from construction sites.

- 2. Turbidity:** Turbidity can be generally defined as the “cloudiness” of a waterbody and may be caused by the growth of aquatic phytoplankton and the presence of suspended solids in the water column. In SC, a water quality standard for turbidity is applicable to all waters of the State (see R. 61-68 D. 11. for numeric targets by waterbody classification). Turbidity levels that exceed the water quality standard may reduce light penetration, thereby inhibiting aquatic flora growth, and may reduce the ability of fauna, such as fish, to absorb oxygen across their gills.

Address by: Examples include limiting the amount of disturbed area, designing sediment control BMPs to remove the maximum amount of sediment possible, immediate stabilization of disturbed areas, and other practices may be utilized to control the discharge of sediment from construction sites.

- 3. TP (Total Phosphorus):** Similar to total nitrogen, TP is an essential nutrient for the propagation of aquatic life. In SC, a water quality standard for TP is applicable to lakes greater than 40 acres (see R. 61-68 D. 11. for numeric and narrative targets). At acceptable levels, TP is assimilated by aquatic flora ensures the propagation of an overall balanced, indigenous aquatic community. TP levels that exceed the water quality standard are considered impaired and may cause negative impacts to the overall health of the aquatic community by promoting excessive algal growth in lakes. Phosphorous may enter a site’s stormwater when excess amounts of the nutrient are applied to the site during temporary or final stabilization.

Address by: To prevent this soil should be tested to determine the quantity of the nutrient present in the soil and the correct amount that needs to be added so that it is absorbed by the vegetation.

- 4. TN (Total Nitrogen):** Similar to total phosphorus, TN is an essential nutrient for the propagation of aquatic life. In SC, a water quality standard for TN is applicable to lakes greater than 40 acres (see R. 61-68 D. 11. for numeric and narrative targets). At acceptable levels, TN is assimilated by aquatic flora and ensures the propagation of an overall balanced, indigenous aquatic community. TN levels that exceed the water quality standard are considered impaired and may cause negative impacts to the overall health of the aquatic community by promoting excessive algal growth in lakes. Nitrogen may enter a site's stormwater when excess amounts of the nutrient are applied to the site during temporary or final stabilization

Address by: Examples include that the soil should be tested to determine the quantity of the nutrient present in the soil and the correct amount that needs to be added so that it is absorbed by the vegetation.

- 5. Chlorophyll-a (CHLA):** CHLA is a pigment present in the cells of photosynthetic flora and some algal species. The presence of CHLA in an aquatic environment is a water quality indicator of the overall productivity in the aquatic system. CHLA is linked to the levels of TP, TN and light penetration in the water column. In SC, a water quality standard for CHLA is applicable to lakes greater than 40 acres (see R. 61-68 D. 11. for numeric and narrative targets). CHLA levels that exceed the water quality standard may suggest that other undesirable water quality impacts are present as the aquatic system may be too productive to support the propagation of an overall balanced, indigenous aquatic community. Excess nutrients may discharge from a construction site during temporary and final stabilization. Limiting the amount of phosphorus and nitrogen applied while establishing vegetation will prevent excessive levels of CHLA in receiving waters.

Address by: Examples include that the soil should be tested to determine the quantity of the nutrients present in the soil and the correct amount that needs to be added so that it is absorbed by the vegetation.

- 6. Fecal Coliform (FC) in Shellfish Harvesting waters:** Fecal Coliform is an indicator bacteria for other pathogens which may be present in a waterbody. Shellfish Harvesting Waters are tidal salt waters protected for shellfish harvesting and must be protected to a higher standard than other waters because of the risk to human health posed by ingesting shellfish from areas with high levels of bacteria. Bacteria levels increase following rain events. Potential sources of bacteria on construction sites include improperly located porta-johns and litter that may attract rodents and other animals.

Address by: Porta-johns should be placed away from WoS and not placed on catch basins and other drainage structures. Litter and construction debris should be placed in identified areas and emptied on a routine basis.

Impairment Sources and Prevention

Construction sites can contribute to these impairments directly through the release of excess soil and/or nutrients within stormwater runoff. For this reason, proper sediment and erosion control BMPs should be implemented and the design of the stormwater management systems, during both construction and post-construction, should address the control of stormwater runoff. A reduction in the volume released or the rate at which this volume is released can significantly improve the quality of stormwater runoff and limit the amount of the pollutants that contribute to the above listed impairments.

As an example, sediment basins and/or traps should be used during construction to allow for sedimentation of soils/nutrients, and to control the release of stormwater into the impaired water body. Vegetated Detention and Infiltration structures should be implemented as post-construction BMPs to control stormwater volumes. Caution is advised when using fertilizers to reach Final Stabilization; excess fertilizer can contribute to each of the above listed impairments.

Site-Specific Requirements

This construction site's discharges drain into WoS that is either Impaired or has an established TMDL for the following impairment(s): **BIO (macroinvertebrate), turbidity, Total Phosphorus, Total Nitrogen, Chlorophyll-a, and Fecal Coliform**. Due to the possibility of pollutants in construction stormwater discharges from this site that may contribute to any of these impairments, the following must be conducted throughout the lifespan of all land-disturbing activities at this site:

- **Monthly monitoring of the construction site's outfalls;**
- **Biweekly inspections of all the primary sediment control BMPs;**
- **Employee training/acknowledgement during the Pre-Construction Meeting;**
- **Installation of additional BMPs to meet the water quality standards (as directed by the SWPPP preparer and as approved by the regulating agency); and**
- **All sediment control BMPs have been designed to meet or exceed an 80% trapping efficiency.**

Additionally post-construction BMPs may be required to be installed, once final stabilization is reached, to address any established TMDL or Impairment once construction operations have been completed.

2.4 Critical Areas (CZC only)

Instructions: *This section can be used to address section 3.2.4.B of the CGP. Identify all Critical Areas located within and/or directly adjacent to the proposed disturbed areas. Identify all impacts to any Critical Areas, which includes coastal waters, tidelands, beaches, and beach/dune systems.*

Section 3

Compliance Requirements

3.1 SWPPP Availability

Instructions: *This section can be used to address section 3.1.6 of the CGP. Identify where the copy of the On-Site SWPPP (OS-SWPPP) is being retained, either on-site or off-site, as allowed by the CGP. List any other applicable requirements from the CGP that will be beneficial to determine where to retain the OS-SWPPP and when and to whom it will need to be made available.*

3.2 Pre-Construction Conferences

Instructions: *This section can be used to address section 4.1 of the CGP. Include information on when a Pre-Construction Conference is required and who is responsible to relay the requirements of the approved OS-SWPPP to all those responsible for performing construction activities at the site. Identify where the Pre-Construction Conference is to be held and site the documentation that was used to record the attendance of this meeting (See Appendix G).*

3.3 Inspection Requirements

Instructions: *This section can be used to address section 4.2 of the CGP. Identify the scope and frequency of all site inspections. List the inspector qualifications for the proposed construction site and identify where the inspection reports are to be stored (See Appendix E). Reference the use of rain gauges and a rainfall log (See appendix F).*

3.4 Maintenance Requirements

Instructions: *This section can be used to address section 4.3 of the CGP. Include references of the maintenance of all proposed BMPs, whether this information is provided within the SWPPP document or within the Construction Site Plans.*

Include Information on any required maintenance for permanent BMPs and reference the submitted maintenance agreement and permanent maintenance plans.

3.5 Record Keeping

Instructions: *This section can be used to address section 3.1.1.H.V.(h). Identify all required logs used to track the progress, the compliance, the modifications, and those associated for performing work at the construction site. Reference the location of these logs within the OS-SWPPP Appendices.*

3.6 Final Stabilization

Instructions: *This section can be used to address how the site is to reach final stabilization, through the use of permanent seeding, impervious areas, and other permanent BMPs. It should also note that once final stabilization has been reached on all disturbed areas, the Notice of Termination is to be submitted.*

Appendix A

Site Maps

To develop a site-specific SWPPP for a construction map, an assortment of site maps must be used in addition to an on-site assessment to develop an effective stormwater sediment and erosion control plan. The maps located in this appendix have been obtained from various sources, or have been developed by the SWPPP Preparer. Listed below is standard information on a few of the type of maps that may be found within this Appendix.

Locations Maps

A general location map is helpful to identify nearby water bodies in proximity to other properties, and can be a useful tool used to locate the site when on the road. This map should include the outlined project locations, labeled roadways, a North arrow and a scale. SWPPP Preparers may opt to locate this map on the first sheet of the construction site plans in lieu of including it in this appendix.

Site Maps

Site maps tend to go a step beyond a typically location map by adding zooming in on the limits of disturbance and identifying a number of features at the construction site related to land-disturbing activities and stormwater management practices. Each site map should include the following: Stormwater flow directions and discharge locations, Areas and features to be protected, Outline of disturbed areas, Locations of all major BMPs, Areas to remain stabilized, and Adjacent features (e.g., road and water bodies).

Topographic Maps

Topographic Maps can be very useful when determining the existing contours at a construction site, not to mention the existing drainage patterns. These maps must include the project boundary outline, route of runoff from site to nearest waterbody shown, and adjacent road names. These maps are readily available on the Internet (e.g., www.terraserver.com) or by contacting the US Geological Survey Store (<http://store.usgs.gov>).

Soils Maps

Soils Maps are helpful tools used to determine the soil types and other soil characteristics that are located at a construction site. Each soils map must contain the project boundary outline and the predominate soil types found at the site. Soils Maps can be readily obtain online from the NRCS (<http://soils.usda.gov>).

Floodway Maps

Floodway Maps are used to determine the location of the 100-yr Flood Plain and other related flooding issues at or adjacent to the construction site. Each Floodway Map must contain the project boundary outline and a legend. These maps can be readily obtain online from FEMA (www.fema.gov).

Appendix B

Drainage Maps

Drainage maps become an essential tool when both developing and reviewing hydrology models of a construction site during the various phases of developing such a site (i.e. pre-development conditions, construction conditions, and post-development conditions). Typically these maps are enhanced site maps that add the features of drainage basins outlines and their respective outfall markers. Each SWPPP must contain, at a minimum, a pre-development and a post-development drainage map for the entire on-site area and adjacent off-site areas that contribute runoff to any of the marked outfall locations.

Additional drainage maps should also be included for any sediment control BMP in which sediment trapping efficiency calculations are required to be submitted. A drainage map for “During Construction” conditions should also be included if the basin and subbasin drainage patterns differ from both the pre-development and post-development patterns.

All provided drainage maps must clearly correspond to any calculations submitted for review, the outfall locations chosen for comparing runoff rates and the total drainage area analyzed (from pre- to post-development conditions) may not change. However, the immediate drainage areas contributing to each outfall location may shift.

Each Drainage Map should be provide on an 11x17 sheet and must show the contours for the specific stage of construction each map represents.

Appendix C

Additional Approvals/Certifications

This appendix has been provided as a catchall to store any additional correspondences that may be required to either obtain coverage under the current CGP or to implement land-disturbing activities at a construction.

Examples and descriptions of such correspondences have been listed below. All associated correspondences and approval for this site-specific SWPPP can be located on the following pages.

Coastal Zone Consistency Certification

A **Coastal Zone Consistency** (CZC) Certification needs to be obtained for all land disturbing activities located within any of the eight coastal counties (**Beaufort, Berkeley, Charleston, Colleton, Dorchester, Georgetown, Horry and Jasper**) before applying coverage under the NPDES Permit Program. These certifications establish that all land and water uses within these critical areas are consistent with both the State's Coastal Zone Management Plan (SCCZMP) and the Federal Coastal Zone Management Act.

CZC Certifications ensures that any land disturbance activities will be conducted in a manner in which they preserve, protect, develop, and where possible, restore and enhance the resources located within South Carolina's coastal zone.

Please contact the DHEC-OCRM office nearest you for all information on the types of permits or certifications needed for your particular project. More information on 401 Certifications can be found on DHEC's website via the following link:

<http://www.scdhec.gov/environment/water/401.htm>

USACE's Jurisdictional Determinations

The procedure of identifying and locating jurisdictional waters of the US regulated by the Corps under Section 404 of the Clean Water Act and Section 10 of the Rivers & Harbors Act of 1899 is commonly referred to as the "**Jurisdictional Determination Process**", a "wetland determination" or a "delineation". In general, these determinations are good for five years from the date the Corps notifies you in writing that you have accurately delineated the jurisdictional features on your property.

This survey procedure establishes a line that identifies and separates the Corps regulated areas from non-regulated areas. Regulated (i.e., jurisdictional) areas can include wetlands, stream channels, rivers, lakes, ponds and coastal and offshore waters.

The JD process is essential when investigating, planning, designing, or submitting an application for a permit from the Corps to determine if the proposed work will occur in wetlands or waters of the US. More information on Jurisdictional Determinations can be found on USACE's website via the following link, <http://www.sac.usace.army.mil/>.

USACE's Section 404 Permits

Section 404 of the Clean Water Act regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters. The U.S. Army Corps of Engineers is the federal agency authorized to issue Section 404 Permits for certain activities conducted in wetlands or other U.S. waters.

Depending on the scope of the project and method of construction, certain farming activities may require this permit. Examples include ponds, embankments, and stream

channelization. More information on Section 404 Permits can be found on USACE's website via the following link, <http://www.sac.usace.army.mil/>.

SC DHEC 401 Water Quality Certification

All activities requiring a Federal 404 permit (a U.S. Army Corps of Engineers permit for the discharge of dredged or fill material) result in a discharge to waters or wetlands, so SCDHEC must take certification action on all 404 permit applications. U.S. Coast Guard Permits and Federal Energy Regulatory Commission Permits also require states to take Water Quality Certification action.

During review of applications for Water Quality Certification, the Department looks at whether or not there are feasible alternatives to the activity, if the activity is water dependent, and the intended purpose of the activity. Certification is denied if the activity will adversely affect existing or designated uses. The Federal permit cannot be issued if certification is denied. Regulation 61-101 entitled Water Quality Certification directs the Department in processing applications for certification.

More information on 401 Certifications can be found on DHEC's website via the following link, <http://www.scdhec.gov/environment/water/401.htm>.

Jurisdictional Floodplain Management Certifications

South Carolina's Department of Health and Environmental Control does not regulate the placement of fill and/or fill materials within a floodplain. This approval needs to be granted by local authorities, either county or city engineers.

Contact your local regulating authorities to obtain information on how to obtain the proper approvals for the placement of fill in floodplains.

Other Local Ordinance Certifications and Approvals

Any additional documentation certifying that you meet any local, state, or federal ordinances should be included in this appendix. If you have any questions on what should be kept in this appendix, please contact SC DHEC's Bureau of Water, 803-898-4300, and ask to speak to someone in the Stormwater Permitting Section.

Appendix D

Engineering Reports

Hydrologic Analysis

Each hydrologic analysis was performed in a manner consistent with SC Regulations 72-300 and the SC DHEC Stormwater Management BMP Handbook. Each analysis, at a minimum, meets the following requirements or guidelines:

- Analysis Points (Outfalls) for comparing runoff rates and the total drainage area analyzed do not change from pre- to post-development conditions (although the immediate drainage areas contributing to each analysis point may shift);
- Post-development and Construction runoff peak discharges for the 2-yr and 10-yr storm events are less than Pre-Development peak discharges at **each** outfall; and
- Each analysis was performed using a SCS 24-hour storm event.

Detention Analysis

Each detention structure analysis was performed using a volume-based hydrograph for the 2-, 10-, 25-, and 100-yr SCS 24-hour storm event. (TR-55 does not perform a full pond routing, and the rational method cannot be used to provide a full pond routing.) Also, for each detention structure a Stage-Storage-Discharge Relationship for the outlet structure has been provided/generate by the modeling software.

If a rating curve for the outlet structure had to be generated externally from the modeling software, the data and equations used to rate the outlet structure must also be included in this appendix.

Each of the detention ponds/basins have been modeled/designed to meet the following requirements:

- Maximum Water Surface Elevation (WSE) within the detention pond/basin for the 10-year storm event is below the emergency spillway with 0.5-ft of freeboard between maximum WSE for the 10-year storm and the emergency spillway;
- Maximum Water Surface Elevation (WSE) within the detention pond/basin for the 100-year storm event is below the emergency spillway with 0.5-ft of freeboard between maximum WSE for the 100-year storm and the embankment; and
- The detention structure completely dewater within 72 hours.

Appendix E

Inspection Log and Reports

SWPPP Inspection Log			
Name of Construction Site	Location of Construction Site		
Date of Inspection	Inspector Name	Does Inspection Report require maintenance of installed BMPs?	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

SWPPP Inspection Log (Continued)			
Date of Inspection	Inspector Name	Does Inspection Report require maintenance of installed BMPs?	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

Appendix F

Rainfall Log and Reports

SWPPP Rainfall Records (January - June)										Year:	
January	Rainfall	February	Rainfall	March	Rainfall	April	Rainfall	May	Rainfall	June	Rainfall
1		1		1		1		1		1	
2		2		2		2		2		2	
3		3		3		3		3		3	
4		4		4		4		4		4	
5		5		5		5		5		5	
6		6		6		6		6		6	
7		7		7		7		7		7	
8		8		8		8		8		8	
9		9		9		9		9		9	
10		10		10		10		10		10	
11		11		11		11		11		11	
12		12		12		12		12		12	
13		13		13		13		13		13	
14		14		14		14		14		14	
15		15		15		15		15		15	
16		16		16		16		16		16	
17		17		17		17		17		17	
18		18		18		18		18		18	
19		19		19		19		19		19	
20		20		20		20		20		20	
21		21		21		21		21		21	
22		22		22		22		22		22	
23		23		23		23		23		23	
24		24		24		24		24		24	
25		25		25		25		25		25	
26		26		26		26		26		26	
27		27		27		27		27		27	
28		28		28		28		28		28	
29		29		29		29		29		29	
30				30		30		30		30	
31				31				31			

SWPPP Rainfall Records (July - December)							Year:				
July	Rainfall	August	Rainfall	September	Rainfall	October	Rainfall	November	Rainfall	December	Rainfall
1		1		1		1		1		1	
2		2		2		2		2		2	
3		3		3		3		3		3	
4		4		4		4		4		4	
5		5		5		5		5		5	
6		6		6		6		6		6	
7		7		7		7		7		7	
8		8		8		8		8		8	
9		9		9		9		9		9	
10		10		10		10		10		10	
11		11		11		11		11		11	
12		12		12		12		12		12	
13		13		13		13		13		13	
14		14		14		14		14		14	
15		15		15		15		15		15	
16		16		16		16		16		16	
17		17		17		17		17		17	
18		18		18		18		18		18	
19		19		19		19		19		19	
20		20		20		20		20		20	
21		21		21		21		21		21	
22		22		22		22		22		22	
23		23		23		23		23		23	
24		24		24		24		24		24	
25		25		25		25		25		25	
26		26		26		26		26		26	
27		27		27		27		27		27	
28		28		28		28		28		28	
29		29		29		29		29		29	
30		30		30		30		30		30	
31		31				31				31	

Appendix G

Additional Site Logs and Records

SWPPP Contractor & Sub-Contractor Log		
Name of Construction Site	Location of Construction Site	
Company/Individual Name	Work Responsibilities	
1.)		
Start Date:		
Completion Date:		
2.)		
Start Date:		
Completion Date:		
3.)		
Start Date:		
Completion Date:		
4.)		
Start Date:		
Completion Date:		
5.)		
Start Date:		
Completion Date:		
6.)		
Start Date:		
Completion Date:		
7.)		
Start Date:		
Completion Date:		
8.)		
Start Date:		
Completion Date:		
9.)		
Start Date:		
Completion Date:		
10.)		
Start Date:		
Completion Date:		

SWPPP Contractor & Sub-Contractor Log (Continued)	
11.)	
Start Date:	
Completion Date:	
12.)	
Start Date:	
Completion Date:	
13.)	
Start Date:	
Completion Date:	
14.)	
Start Date:	
Completion Date:	
15.)	
Start Date:	
Completion Date:	
16.)	
Start Date:	
Completion Date:	
17.)	
Start Date:	
Completion Date:	
18.)	
Start Date:	
Completion Date:	
19.)	
Start Date:	
Completion Date:	
20.)	
Start Date:	
Completion Date:	
21.)	
Start Date:	
Completion Date:	

SWPPP Modification Log		
Name of Construction Site	Location of Construction Site	
Type of Modification	Description of Modification	Location of Modification
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:	Approved/Implemented By:	
Type of Modification	Description of Modification	Location of Modification
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:	Approved/Implemented By:	
Type of Modification	Description of Modification	Location of Modification
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:	Approved/Implemented By:	
Type of Modification	Description of Modification	Location of Modification
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:	Approved/Implemented By:	
Type of Modification	Description of Modification	Location of Modification
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:	Approved/Implemented By:	

SWPPP Modification Log (Continued)		
Name of Construction Site		Location of Construction Site
Type of Modification	Description of Modification	
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:		Approved/Implemented By:
Type of Modification	Description of Modification	
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:		Approved/Implemented By:
Type of Modification	Description of Modification	
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:		Approved/Implemented By:
Type of Modification	Description of Modification	
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:		Approved/Implemented By:
Type of Modification	Description of Modification	
<input type="checkbox"/> Major <input type="checkbox"/> Minor		
Start Date:		
Completion Date:		
Reason for Modifications:		Approved/Implemented By:

SWPPP Soil Stabilization Log		
Name of Construction Site	Location of Construction Site	
Type of Stabilization	Description of Stabilization	Location of Stabilization
<input type="checkbox"/> Final <input type="checkbox"/> Temporary		
Initiate Date: _____		
Completion Date: _____		
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:	
Type of Stabilization	Description of Stabilization	Location of Stabilization
<input type="checkbox"/> Final <input type="checkbox"/> Temporary		
Initiate Date: _____		
Completion Date: _____		
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:	
Type of Stabilization	Description of Stabilization	Location of Stabilization
<input type="checkbox"/> Final <input type="checkbox"/> Temporary		
Initiate Date: _____		
Completion Date: _____		
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:	
Type of Stabilization	Description of Stabilization	Location of Stabilization
<input type="checkbox"/> Final <input type="checkbox"/> Temporary		
Initiate Date: _____		
Completion Date: _____		
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:	
Type of Stabilization	Description of Stabilization	Location of Stabilization
<input type="checkbox"/> Final <input type="checkbox"/> Temporary		
Initiate Date: _____		
Completion Date: _____		
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:	

SWPPP Modification Log (Continued)

Name of Construction Site		Location of Construction Site	
Type of Stabilization	Description of Stabilization	Location of Stabilization	
<input type="checkbox"/> Final <input type="checkbox"/> Temporary			
Initiate Date:			
Completion Date:			
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:		
Type of Stabilization	Description of Stabilization	Location of Stabilization	
<input type="checkbox"/> Final <input type="checkbox"/> Temporary			
Initiate Date:			
Completion Date:			
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:		
Type of Stabilization	Description of Stabilization	Location of Stabilization	
<input type="checkbox"/> Final <input type="checkbox"/> Temporary			
Initiate Date:			
Completion Date:			
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:		
Type of Stabilization	Description of Stabilization	Location of Stabilization	
<input type="checkbox"/> Final <input type="checkbox"/> Temporary			
Initiate Date:			
Completion Date:			
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:		
Type of Stabilization	Description of Stabilization	Location of Stabilization	
<input type="checkbox"/> Final <input type="checkbox"/> Temporary			
Initiate Date:			
Completion Date:			
Additional work proposed for this area:	Inspection Frequency for Stabilized Area:		

Appendix H

Construction General Permit SCR100000

A copy of the NPDES General Permit for Stormwater Discharges from Construction Activities (SCR100000) can be found at the following address:

<http://www.scdhec.gov/environment/water/swater/docs/CGP-permit.pdf>