

York County

# **STORMWATER LUNCH & LEARN**

# TOPICS

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- ✘ Points of Exposure
- ✘ SWPPP's
- ✘ NOT's
- ✘ Construction Sequence
- ✘ Permanent BMP's
- ✘ Basin Details
- ✘ Major and Minor Modifications
- ✘ Construction Buffers
- ✘ Stabilization
- ✘ Questions

**ROCK OUTLET**



**INLET**



**POINTS OF EXPOSURE**

**ROCK OUTLET**

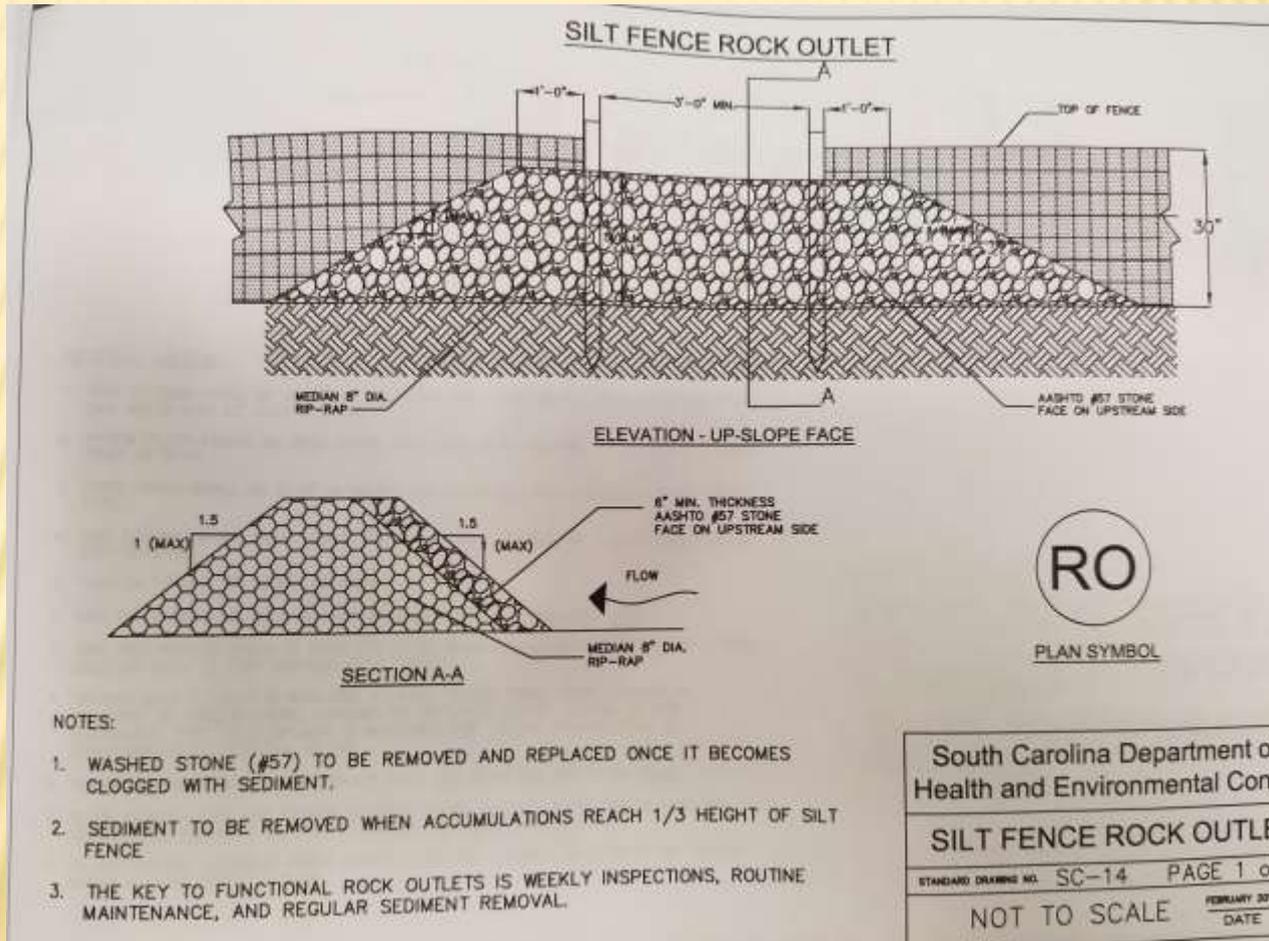


**INLET**



**POINTS OF EXPOSURE**

# ROCK OUTLET CONSTRUCTION



# TYPES OF INLET PROTECTION

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- ✘ Type A - Low Flow
- ✘ Type B - Medium Flow, Low Velocity
- ✘ Type C - Medium Flow, Medium Velocity
- ✘ Type D - High Flow, High Velocity
- ✘ Type E - Surface Course Curb Inlet
- ✘ Type F - Inlet Tubes

## FILTER FABRIC



## SEDIMENT TUBE



**TYPE – LOW FLOW**

## TYPE B - MEDIUM FLOW, LOW VELOCITY



# TYPE C - MEDIUM FLOW, MEDIUM VELOCITY



# TYPE D - HIGH FLOW, HIGH VELOCITY



# TYPE E - SURFACE COURSE CURB INLET

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# TYPE F - INLET TUBES

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# NPDES PERMIT SECTION OVERVIEW

- ✘ When are NPDES permits required
- ✘ N.O.I. (notice of Intent)
  - + Includes the SWPPP
- ✘ N.O.T. (notice of Termination)

# NPDES PERMITS

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- ✘ Why are NPDES Permits needed
- ✘ Who Administers the permit
- ✘ What are construction site owners and operators required to do concerning the NPDES permit.

# NPDES PERMITS

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What are the requirements of Construction site owners and operators concerning the NPDES permit?

- ✘ Implement erosion and sediment controls
- ✘ Stabilize soils
- ✘ Manage dewatering activities- terms used to describe the action of removing groundwater or surface water from a construction site.
- ✘ Implement pollution prevention measures
- ✘ Provide and maintain buffers around surface waters
- ✘ Prohibit certain discharges, such as motor fuel and concrete washout
- ✘ Utilize surface outlets for discharges from basins and impoundments

# NOTICE OF INTENT

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- ✘ Reason for the N.O.I. (Notice of Intent)
- ✘ Permit application
- ✘ Notification to the regulatory authority of a planned discharge
- ✘ Operator is certifying that the discharge meets all of the eligibility conditions specified in the general permit (That's why an engineer must prepare the SWPPP)

# STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

## 10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites

Stormwater management on small residential construction sites need not be complicated.

### 1 Protect Any Areas Reserved for Vegetation or Infiltration and Preserve Existing Trees

If you will be installing infiltration-based features such as rain gardens or bioswales, make sure these areas are designated as off limits to avoid compaction.

Save time and money by preserving existing mature trees during construction. Preserving mature trees minimizes the amount of soil that needs to be stabilized once construction is complete, and minimizes the amount of runoff during and after construction activity.

### 2 Stockpile Your Soil

EPA's CGP requires operators to preserve native topsoil on site unless infeasible and protect all soil storage piles from run-on and runoff. For smaller stockpiles, covering the entire pile with a tarp may be sufficient.

### 3 Protect Construction Materials from Run-On and Runoff

At the end of every workday and during precipitation events, provide cover for materials that could leach pollutants.

### 4 Designate Waste Disposal Areas

Clearly identify separate waste disposal areas on site for hazardous waste, construction waste, and domestic waste by designating with signage, and protect from run-on and runoff.

### 5 Install Perimeter Controls on Downhill Lot Line

Install perimeter controls such as sediment filter logs or silt fences around the downhill boundaries of your site.

### 6 Install Inlet Controls

Sediment control logs, gravel barriers, and sand or rock bags are options for effective inlet controls. Make sure to remove accumulated sediment whenever it has reached halfway up the control.

### 7 Install a Concrete/Stucco Washout Basin

Designate a leak-proof basin lined with plastic for washing out used concrete and stucco containers. Never wash excess stucco or concrete residue down a storm drain or into a stream!

### 8 Maintain a Stabilized Exit Pad

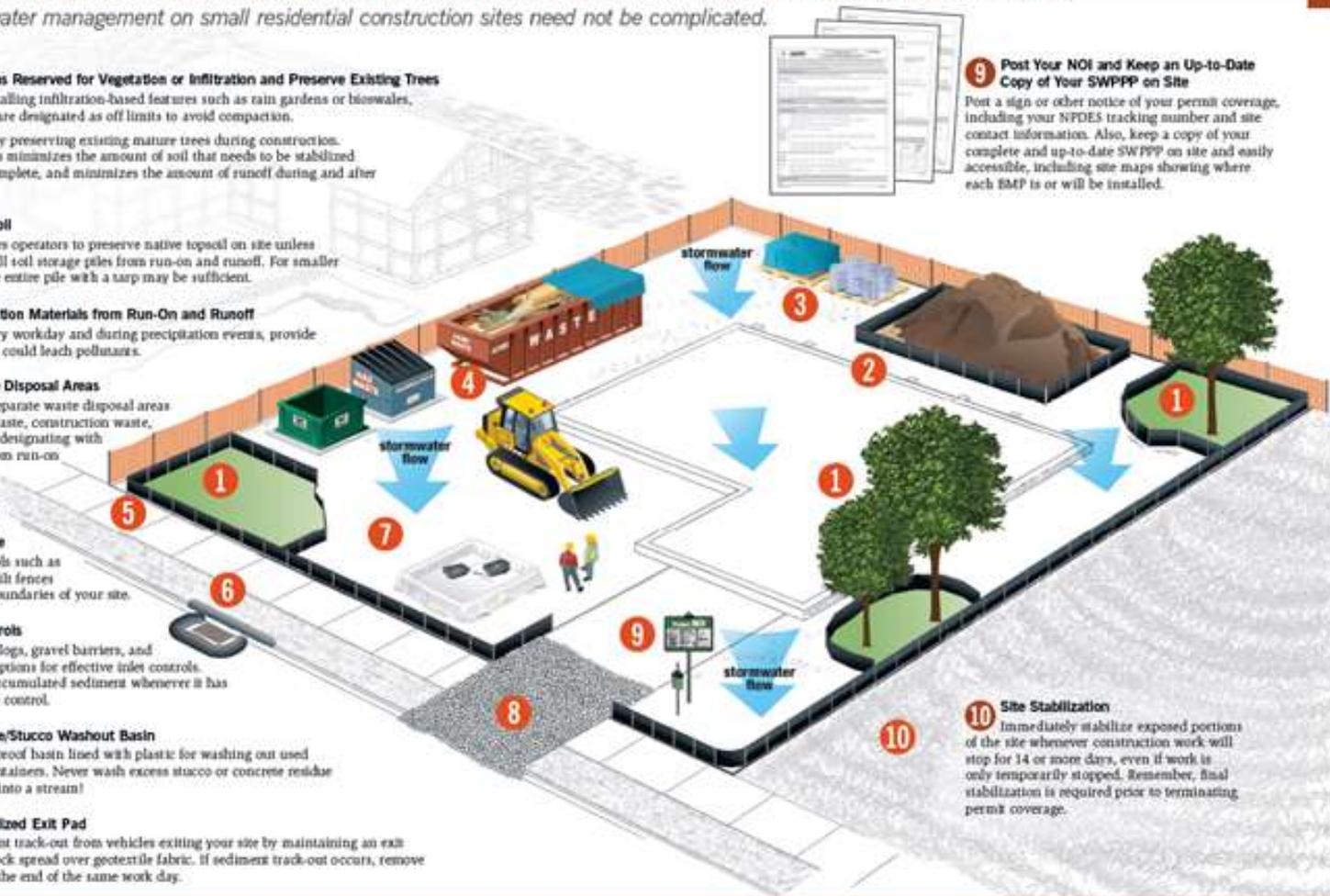
Minimize sediment track-out from vehicles exiting your site by maintaining an exit pad made of crushed rock spread over geotextile fabric. If sediment track-out occurs, remove deposited sediment by the end of the same work day.

### 9 Post Your NOI and Keep an Up-to-Date Copy of Your SWPPP on Site

Post a sign or other notice of your permit coverage, including your NPDES tracking number and site contact information. Also, keep a copy of your complete and up-to-date SWPPP on site and easily accessible, including site maps showing where each BMP is or will be installed.

### 10 Site Stabilization

Immediately stabilize exposed portions of the site whenever construction work will stop for 14 or more days, even if work is only temporarily stopped. Remember, final stabilization is required prior to terminating permit coverage.





# SWPPP CONTRACTOR FORMS

Stormwater Pollution Prevention Plan  
For the Construction General Permit (SCR100000)

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

# NOTICE OF TERMINATION

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- ✘ Reason for the Notice of Termination?
  - + Close out the NPDES permit
- ✘ How long can an NPDES permit be open?
  - + Up to 5 years
- ✘ How can I apply for the N.O.T. ?
  - + Form d-2610

# NOTICE OF TERMINATION FORM "D-2610"



## Notice of Termination (NOT) of Coverage Under an NPDES General Permit for Stormwater Discharges Associated with Construction Activity

(Authorization to discharge terminates at midnight of the day the NOT is signed)

If an NOT has been submitted and the construction site does not meet the criteria for termination, then the construction site remains subject to the provisions of the 2012 Construction General Permit.

### I. Permit Information

- A. Project/ Site Name: \_\_\_\_\_
- B. NPDES Coverage Number: SCR10 \_\_\_\_\_ State File Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_
- C. MS4 Operator (N/A if none): \_\_\_\_\_
- D. Is MS4 certification statement attached?  Yes  No  N/A
- E. **Reason for Termination (select only one):**
- Final stabilization has been achieved on all portions of the site.
- Another operator has assumed control according to §122.41(l)(3) of SC Regulation 61-9, over all areas of the construction site that have not reached final stabilization.
- New Owner/ Operator (Company or person): \_\_\_\_\_
- Mailing Address: \_\_\_\_\_
- Coverage under an individual or alternative general NPDES permit has been obtained:
- New NPDES: SCR10 \_\_\_\_\_ State File Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_
- For residential developments only, final stabilization has been achieved on all portions of the site, except for areas where a Secondary Permittee has obtained permit coverage for the individual lot(s) in accordance with Section 2.2.2 of the Construction General Permit
- For residential lots only, either (1) final stabilization has been achieved on all portions of a residential lot(s), or (2) temporary stabilization including perimeter controls for a residential lot(s) have been achieved prior to occupation of the home by the homeowner and that the homeowner has been informed, by the Primary/Secondary Permittee, about the need for, and benefits of, final stabilization.
- For construction activities on land used for agricultural purposes (e.g., pipelines across crop or range land, staging areas for highway construction, etc.), either (1) final stabilization has been accomplished by returning

# N.O.T. LETTER

## N.O.T. Information letter from Primary Permittee (Builder) to Homeowner

Property Address: \_\_\_\_\_

Permit # \_\_\_\_\_

Primary Permittee (Name & Contact information):  
\_\_\_\_\_

I, \_\_\_\_\_ (Homeowner) certify that the NPDES primary permittee(builder) or one of his representatives has thoroughly explained the requirements that are necessary to stabilize my property. I am aware that the builder is providing this documentation to me in order to close out his/her NPDES permit. If the Landscape materials used on my property meet the SCDHEC's standard of stabilization during the growing season, I agree to complete any remaining tasks in order insure my property reaches that standard. Also, I certify that I have received a copy of the following documents for my records.

- Copy of The Notice of Intent (signed by the original primary permittee aka the homebuilder)
- Copy of The Notice of termination (completed by the primary permittee)
- OS-SWPPP (on site – Stormwater Pollution Prevention Plan)
- Information detailing what is considered stabilized.
- Details of Landscape materials used to stabilize the property
- Written overview of activities relating to stabilization of the property.

### **Definitions of Stormwater - Final Stabilization**

<http://www.scdhec.gov/Environment/WaterQuality/Stormwater/FinalStabilization/>

The NPDES General Permit for Storm Water Discharges From Large and Small Construction Activities requires that areas disturbed by construction reach "final stabilization" before permit coverage can be terminated.

# CONSTRUCTION SEQUENCE

CSPR

## Item 9 – Construction Sequence

- Must be provided on Construction Plans
  - May also be provided in SWPPP Document
- Construction Sequence must:
  - Accurately reflect the nature and time of construction activities.
  - Begin with the Installation of perimeter controls and primary sediment controls.
  - Address conversion of sediment controls to permanent water quantity/quality controls.
  - End with the submittal of an NOT after Final Stabilization is reached.
- What about for Phased Plans?
  - Construction Sequence should be broken into phases and use to reflect transitions between phases.

*\*The Construction Sequence can be used to address site-specific issues and should be utilized as a BMP to guide land-disturbing activities from initial disturbance through final stabilization.*

# CONSTRUCTION SEQUENCE

## Item 10 – Phased Plans



- Applicable to the Construction Plans
- Phased Plans
  - 2 Phased Plan – More Than 5 Acres of Disturbance
  - 3 Phased Plan - 10 Acres or more of Disturbance
  - Not Required for Linear Projects
- 2 Phased Plans
  - Initial Land Disturbance Phase
  - Stabilization/Final Phase
- 3 Phased Plans
  - Initial Land Disturbance Phase
  - Construction Phase
  - Stabilization Phase

# CONSTRUCTION SEQUENCE

Initial Phase

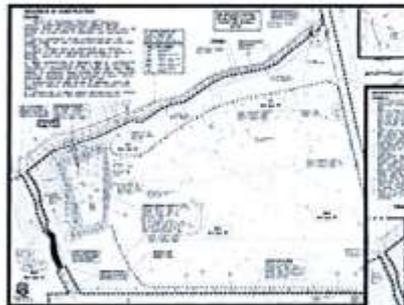
Construction Phase

Final/Stabilization Phase

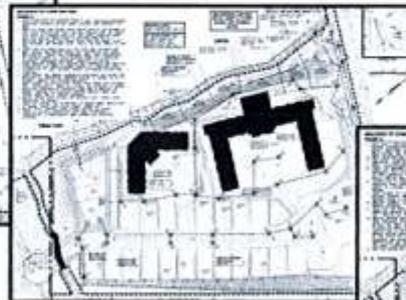
## Phased Plans



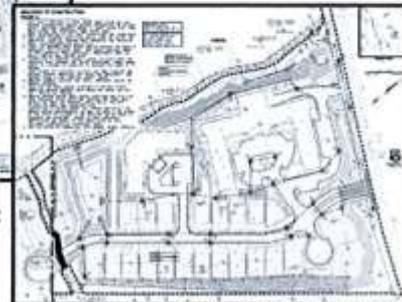
“Phased Construction Plans must be provided for all non-linear construction sites that disturb more than 5 acres. A two or three phased plan would need to be provided depending on disturbed acreage.”



Initial Phase



Construction Phase



Final/Stabilization Phase

# INITIAL PHASE

## Construction Sequence – Phase 1 S&EC Plans

- 1 Receive NPDES coverage from DHEC
- 2 Pre-construction conference - onsite
- 3 Notify DHEC EQC Regional office 48 hours prior to beginning land-disturbing activities
- 4 Installation of construction entrance(s)
- 5 Installation of tree-protection fence to mark stream buffer
- 6 Clearing & grubbing only as necessary for installation of perimeter controls
- 7 Installation of perimeter controls (e.g., silt fence)
- 8 Installation of 24" storm sewer to by-pass culvert under Highway
- 9 Clearing & grubbing only in areas of basins/traps/ ponds
- 10 Installation of basins/ traps/ ponds and installation of diversions to those structures (outlet structures must be completely installed as shown on the details before proceeding to next step; areas draining to these structures cannot be disturbed until the structures and diversions to the structures are completely installed)



# CONSTRUCTION PHASE

## Construction Sequence – Phase 2 S&EC Plans

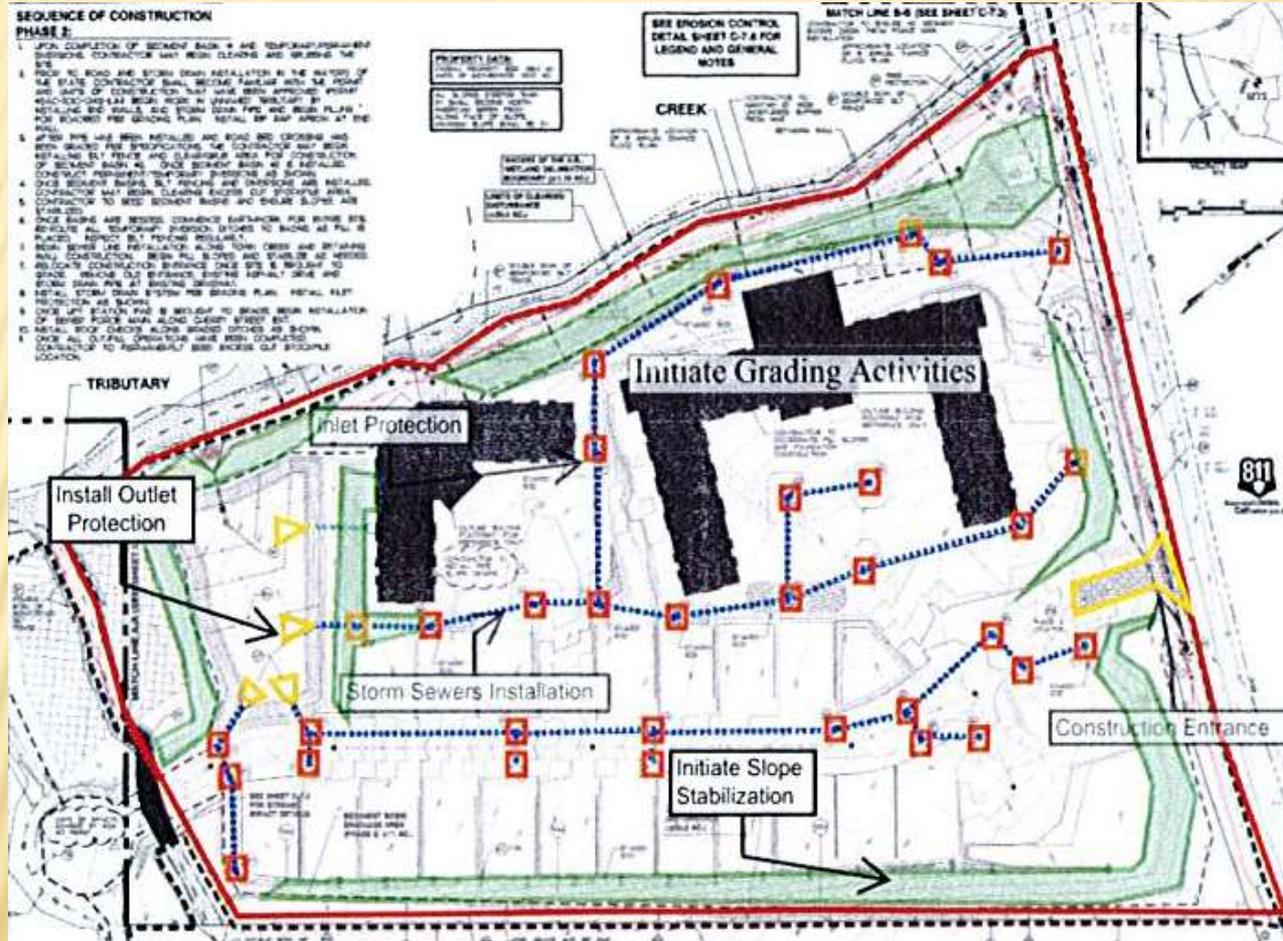
- 11 Clearing & grubbing of site or demolition (sediment & erosion control measures for these areas must already be installed)
- 12 Rough grading
- 13 Installation of storm drain system and placement of inlet protection as each inlet is installed
- 14 Fine grading, paving, etc.



Each step of the construction sequence should be documented in the SWPPP!



# CONSTRUCTION PHASE PLAN



# FINAL/STABILIZATION PHASE

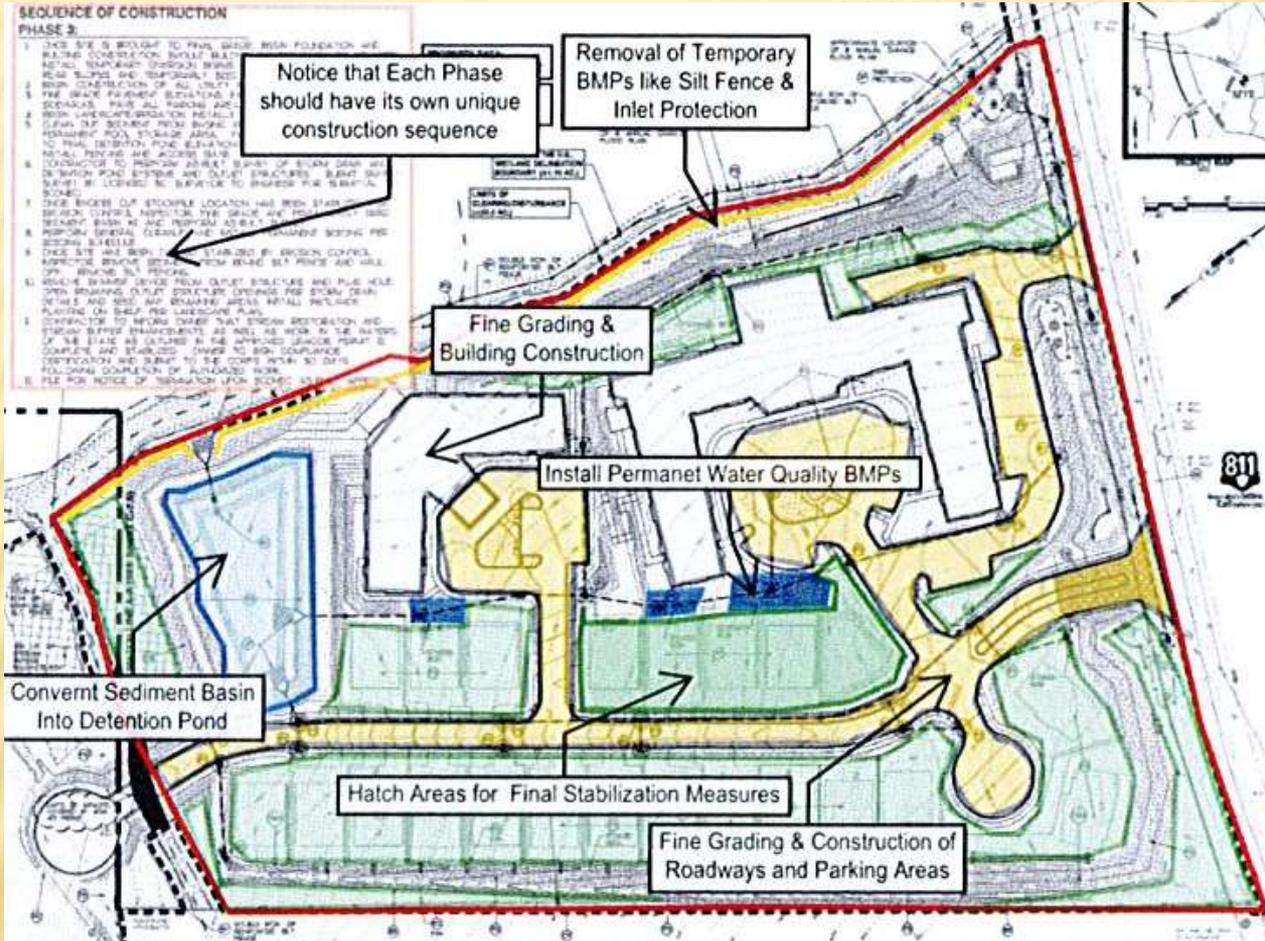
## Construction Sequence – Phase 3 S&EC Plans



- 15 Permanent/ final stabilization
- 16 Clean-out of detention basins used as sediment control structures and re-grading of detention pond bottoms
- 17 Remove skimmer and install permanent detention basin outlet structure as indicated on Sheet C500
- 18 Removal of temporary sediment & erosion control measures after entire area draining to the structure is finally stabilized
- 19 Stabilize any areas disturbed by the removal of temporary BMPs
- 20 Perform as-built surveys of all detention structures and submit to DHEC
- 21 Submit Notice of Termination (NOT) to DHEC



# FINAL/STABILIZATION PHASE PLAN



# PERMANENT BMPS



# PERMANENT BMPS



# PERMANENT BMPS



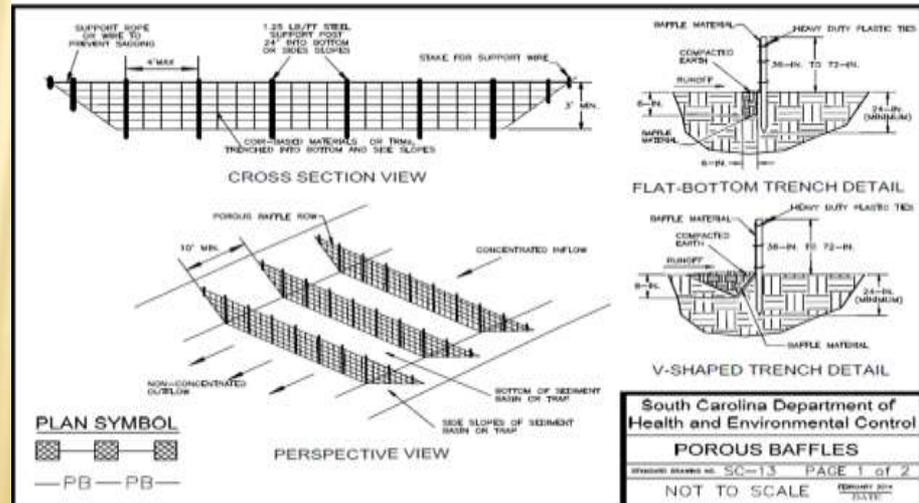
# PERMANENT BMPS





# BAFFLES

- ✘ **Height:** The recommended height of each baffle is 3 feet. When possible, the height of each baffle should be equal to or above the 10-yr, 24-hour NRCS Storm's design water surface elevation within the sediment basin.
- ✘ **Width:** The width of each baffle shall be equal to the entire width of the sediment basin, including the side slopes up to where the height of the baffle intersects the slope.
- ✘ **Spacing:** The minimum spacing between baffles should be 10 feet. Baffles should ultimately be placed to maximize the space between each of the rows of baffles and the basin's sediment forebay/spillways and the adjacent baffle row.



# BAFFLES

- ✘ **Materials:** All porous baffles not composed of turf reinforcement matting (TRM) material should consist of materials derived from coir (coconut fibers) products. An example is coir woven matting. TRMs should consist of materials that do not have loose Straw fibers. The selected material should have a light penetration (open space) between 10-30%. **Silt Fence may not be used.**
- ✘ **Posts:** The posts used to install porous baffles should be steel posts with a minimum weight of 1.25 lb. per liner foot. Install steel posts at a maximum of 4-feet on center.
- ✘ **Rows:** A minimum of three (3) porous baffle rows should be installed across the width of the entire basin (including side slopes) where the basin length is greater than 50 feet. For basins with a length of 50 ft or less, only two rows of (2) porous baffles are necessary to be installed.
- ✘ **Installation:** All baffles are to be trenched or anchored into the basin's bottom and tied into side slopes to prevent bypass. A rope or wire can be used along the top of the baffle to prevent excessive sagging between the posts.



# ROCK BERM (RING)

- ✘ **Installation:** The rock berm is to be installed outside the scopes of the skimmer and associated mechanisms required for proper skimmer performance, such as skimmer pits and/or skimmer rock pads. The berm should completely surround the principle spillway and should be installed upon the sediment basin's embankment slopes up to the elevation where the height of the berm intersects the slope.
- ✘ **Width:** The width along the crest of the rock berm should be at a minimum of 2 feet. Wider rock berms may be necessary in larger basins.
- ✘ **Height:** The height of a rock berm should range between 2-4 feet, dependent upon the height of the basin.



# FOREBAY

- ✘ **Construction:** A riprap berm, gabion, or an earthen berm with a rock filled outlet should be constructed across the bottom of the sediment basin to create a cell within the basin for use as the sediment forebay. The location and height of this berm should be designed to meet the appropriate sediment forebay volume and depth criteria. Alternatively, plunge pools or rock berms may be constructed around each inlet to create a combined volume behind the berms equal to the minimum sediment forebay volume recommendation.
- ✘ **Volume:** The minimum volume provided within the forebay(s) should be twenty percent (20%) of the provided sediment storage volume of the basin.
- ✘ **Depth:** The depth of the forebay will be dependent upon the required volume. It is recommended to keep the depth between 2 and 4 feet.
- ✘ **Accessibility:** Direct access to the forebay will be necessary to allow for routine cleanout of the accumulated sediment. Side slopes adjacent to the forebay may be graded to create a safe path for equipment to access the forebay, or a maintenance ramp or shelf can be incorporated into the basin's design to allow for direct and easy access to all areas of the sediment basin.
- ✘ **Clean Out:** A fixed cleanout stake, solely for use within the sediment forebay is recommended near the forebay berm. This cleanout stake is beneficial since the forebay may become inundated with sediment faster than the rest of the basin. The recommended cleanout height for sediment forebays is  $1/2$  the height of the forebay's berm.



# MAJOR AND MINOR MODIFICATIONS

## × 3.1.7 Modifications

- ★ Each SWPPP must be modified if during inspections or investigations by local, state, tribal or federal officials, it is determined that any SWPPP is ineffective in either eliminating, when reasonably possible, or significantly minimizing pollutants in stormwater discharges from the construction site.
- ★ Each SWPPP must be modified as necessary to include additional or modified BMPs, which are designed to correct problems identified during the construction site inspection by any qualified inspector, as identified in Section 4.2.E, or by local, state, tribal or federal officials. Revisions to each SWPPP must be completed within seven (7) calendar days following the inspection. Implementation of these additional or modified BMPs must be accomplished as described in Section 3.2.6.



# MAJOR MODIFICATIONS:

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**WARNING**

**Major Modifications.** Each SWPPP must be modified and submitted for review and approval by DHEC, a regulated MS4, or an entity delegated under Regulation 72-300 if any of the following conditions are met (*Regulated MS4s, tribal or local agencies with Permitting Authority, may require to be notified of additional conditions not listed below*):

Whenever there is a significant change in design, construction, operation, or maintenance at the construction site resulting in discharges that will cause, have the reasonable potential to cause, or contribute to violations to SC's Water Quality Standards.

# MAJOR MODIFICATIONS:



- ✘ Whenever a change in the design, construction, operation, or maintenance calls for a revision of any approved SWPPP based on the following list of modifications:
  - ✘ (a). Modifications that will affect the hydrology or trapping efficiency calculations including:
    - + (i). Resizing Sediment or Detention Basins that either reduces the stormwater volume capacity and/or is resized to handle increase/decrease incoming peak flows or runoff volumes due to revised site development plans.
    - + (ii). Deletion of Sediment or Detention Basin or Sediment Trap.
    - + (iii). Relocation of Sediment or Detention Basins resulting in increases/decreases in receiving drainage area and/or resulting in a new/relocated basin outlet location, which is directed towards an outfall that was not approved within the C-SWPPP.
    - + (iv). Addition/Removal of Sediment or Detention Basin
    - + (v). Modification of Sediment or Detention Basin Outlet Structure.
    - + (vi). Changes in grading that alter drainage patterns that may result in increased or decreased flow to a sediment or detention basin
    - + (vii). Amending Construction Sequence in a fashion that the Detention Basin is not installed before Grubbing Operations begin.

# MAJOR MODIFICATIONS:

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- ✘ (b). Point Discharge or Outfall location changes.
- ✘ (c). Any modification to regulated water quality structural control measures.
- ✘ (d). Adding a new point discharge.
- ✘ (e). Addition of Impervious Area due to revised site development plans.
- ✘ (f). Addition of Disturbed Area.
- ✘ (g). Changes to Navigable Water Crossing.
- ✘ (h). Addition of Sediment Trap(s) when required to obtain 80% Trapping Efficiencies for disturbed areas not previously permitted or redirected away from an approved water quality BMP.
- ✘ (i). Site layout changes that require redesigning the stormwater management system.
- ✘ (j). Any additional modifications as determined by DHEC, a regulated MS4, a tribal or an entity delegated under Regulation 72-300.

# MINOR MODIFICATIONS:



- ✘ **Minor Modifications.** The Permittee must modify the On-site SWPPP and keep a record of each modification within the On-Site SWPPP if any of the following conditions are met (*Regulated MS4s, State, tribal or local agencies with Permitting Authority, may require additional conditions not listed below*):
  - + I. Addition of BMPs. Addition of Silt Fence, Slope Drains, Inlet Protection, Outlet Protection that does not involve additional wetland impacts, or Check Dams to improve the overall stormwater management and sediment control at the construction site.
  - + II. BMP Relocations. **\*Relocation of Construction Entrance (York County consider this a major modification)**, pond inlet pipes (within a pond), and any other proposed BMP to improve the overall stormwater management and sediment control at the construction site.
  - + III. Removal of Disturbed Areas. As long as the removal of the disturbed area does not also remove any BMPs (ponds, traps, etc.) that are required to meet SC's Water Quality or Quantity Standards. Removal of disturbed area only qualifies for disturbed area that was included in the initial coverage approval and that was never disturbed (i.e., cleared, grubbed or graded).
  - + IV. Modifying Individual Lot Drainage. Unless the changes affect the inflow to a Detention Structure or Analysis Point, to which the lot drains, that was not previously approved.

# CONSTRUCTION BUFFERS

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- ✦ **Buffer Zone Management.** In order to minimize sediment discharges, **during construction**, if surface waters are located on or immediately adjacent to the construction site, the C-SWPPP must address any stormwater discharges from the construction site to such waters so that these discharges are treated by an undisturbed buffer zone that is capable of achieving maximum pollutant removal.

# CONSTRUCTION BUFFERS

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- ✘ **Requirements.** The C-SWPPP must identify an undisturbed buffer zone that meets the following criteria when surface waters are located on or immediately adjacent to the construction site:
  - + (a). **30-Foot, Natural Buffer.** Provide and maintain, at a minimum, a 30-foot undisturbed buffer zone **during construction**. This Natural Buffer should be located between the surface waters and the outermost sediment and erosion controls at the construction site;
  - + (b). **45-Foot, Extended Natural Buffer around Sensitive Waters.** Provide and maintain, at a minimum, a 45-foot undisturbed buffer **during construction** where the surface waters are classified as **Sensitive Waters** as defined by this permit. This Extended Natural Buffer should be located between the surface waters and the outermost sediment and erosion controls at the construction site;

# CONSTRUCTION BUFFERS

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## × Requirements continued:

- + (c). **Velocity Dissipation Requirements.** All discharges into a buffer zone should be non-channelized and non-concentrated to prevent erosion, and must first be treated by the construction site's sediment and erosion controls. Velocity dissipation measures may be implemented within a buffer zone via Section 3.2.4.C.III.(d) of this permit; and
- + (d). **Additional Local Requirements, where applicable.** The provided buffer zone should meet any local requirements, if more restrictive. Local Requirements may allow for mechanisms that would affect the width or other parameters of a buffer zone given that, in the event that the buffer zone width is less than the required 30 ft or 45 ft widths, the requirements in Compliance Option 8 or C, Section 3.2.4.C.II.(b) or 3.2.4.C.II.(c) respectively, are met.

# CONSTRUCTION BUFFERS

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- ✘ **Compliance Options.** The C-SWPPP must identify and address each applicable Buffer Zone Management requirements through one of the following Compliance Options.
  
- ✘ (a). **Option A - Provide the Entire Buffer Width.** Provide and maintain, at a minimum, the required buffer zone in addition to the required erosion prevention and sediment control BMPs for the construction site. C-SWPPPs pursuing this option must also include the following:
  - + (i). **Narrative.** A narrative detailing that a buffer zone is to be maintained at a length of the required buffer width; and
  - + (ii). **Maintenance Notes.** A list of standard notes addressing the maintenance of the buffer zone and supporting BMPs. These notes may be located within the construction site plans.

# CONSTRUCTION BUFFERS

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- ✘ **Option B - Reduction of the Buffer Width.** Provide and maintain an undisturbed buffer that is less than the required buffer width in addition to the required erosion prevention and sediment control BMPs for the construction site. **Situations qualifying for this option are listed in Section 3.2.4.C.III - Exceptions. Other situations may be approved for this option on a site-to-site basis.** C-SWPPPs pursuing this option must also include the following:
  - + (i). **Narrative.** A narrative detailing that a buffer zone is to be maintained at a length less than the required buffer width;
  - + (ii). **Surface Water Protection Plan.** A detailed sequence of the procedures and/or controls (including the installation of BMPs, maintenance of BMPs, and removal of BMPs) to be implemented to protect the immediately adjacent or on-site surface waters;
  - + (iii). **Maintenance Notes.** A list of standard notes addressing the maintenance of the buffer zone and supporting BMPs. These notes may be located within the construction site plans.

# CONSTRUCTION BUFFER

- ✘ **Option C - Elimination of the Buffer Zone.** Provide and maintain the required erosion prevention and sediment control BMPs for the construction site when circumstances restrict the capability of providing a buffer zone. **Situations qualifying for this option are listed in Section 3.2.4.C.III - Exceptions. Other situations may be approved for this option on a site-to-site basis.** C-SWPPPs pursuing this option must also include the following:
  - + (i). **Narrative/Justification.** A narrative **justifying** why an undisturbed buffer, of any length, will not be provided due to site specific conditions;
  - + (ii). **Surface Water Protection Plan.** A detailed sequence of the procedures and/or controls (including the installation of BMPs, maintenance of BMPs, and removal of BMPs) to be implemented to protect the immediately adjacent or on-site surface waters;
  - + (i i i). **Supporting Calculations.** Calculations which support that the proposed sediment control BMPs are capable of meeting the design criteria identified in State Regulation 72-307.C.(5).(a)-(c), Sedimentology, regardless of the disturbed area discharging to the surface water; and
  - + (iv). **Maintenance Notes.** A list of standard notes addressing the maintenance of all BMPs discharging into surface waters. These notes may be located within the construction site plans.

# CONSTRUCTION BUFFERS

- ✘ **III. Exceptions . . All or portions of the construction site may not be required to meet the entire 30-foot (45-foot if discharging to Sensitive Waters) buffer widths, if at all, when any of the following circumstances is applicable at the construction site prior to implementation of land-disturbing activities and all items in either Compliance Option B or C are provided.**
  - + (a). Discharges Away from Surface Waters. Circumstance where construction stormwater runoff will not be discharged into on-site or immediately adjacent surface waters.
  - + (b). Pre-Existing Development. Areas within the required buffer zone that have been developed prior to the issuance of this permit.
  - + (c). Non-jurisdictional Waters. This includes, but is not limited to, surface waters to be impacted and treatment works.
  - + (d). Special Circumstances. Under special circumstances, work may be allowed within the designated buffer zones, but only when any of the following apply:
    - + (i). Final stabilization measures have been implemented on all disturbed areas discharging to the buffer zone;
    - + (ii). Implementation of velocity dissipation measures within the buffer zone; and
    - + (iii). Work in the buffer zone will not allow stormwater discharges to cause or contribute to violations of water quality standards.

# CONSTRUCTION BUFFERS

- ✘ IV. Exemptions. Disturbances at the construction site are not required to meet the Buffer Zone Management requirements when the C-SWPPP limits the area of disturbance to the minimum needed to complete the construction and to access the site, that a II appropriate CWA 404 permits and/or authorizations are obtained, that the C-SWPPP retains the vegetation outside of the cited disturbed areas, and where the construction activity consists solely of any of the following circumstances:
  - + (a). **Linear Projects.** This includes any linear construction projects, that consists solely of either roadways and/or utilities (such as roads that are not part of a development and utility construction including electrical power lines, gas lines, main sewer trunk lines, and water distribution lines that are not part of a development);
  - + (b). **Construction of Water Dependent Structures and Water Access Areas.** This includes, but is not limited to, piers, boat ramps, and trails
  - + (c). **Habitat Restoration Projects.** This includes, but is not limited to, mitigation requirements;
  - + (d). **Routine Maintenance.** This includes, but is not limited to, the maintenance of existing structures located within the required buffer width; and
  - + (e). **2006 Permit Coverage.** Construction sites covered under the 2006 CGP, per section 3.1.1.F of this permit.

# CONSTRUCTION BUFFER

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- ✘ **Buffer Maintenance.** The selected compliance option, from Section 3.2.4.C.II, must be maintained throughout the duration of all land-disturbing activities until final stabilization has been reached on all areas discharging to the provided buffer zone.
- ✘ Each erosion prevention, sediment control, and velocity dissipating BMP discharging to a buffer zone must be maintained to ensure that each BMP is capable of achieving maximum pollutant removal.

# QUESTIONS

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