

Pickens County

Stormwater Design Manual

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Section 1. Definitions

For the purpose of this manual, definitions contained in South Carolina regulations 61-9.122.2 and 72-301 is incorporated herein by reference. Where the same words are defined in both the aforementioned regulations, but are not the same, the definitions contained in R. 61-9.122.2 shall be used for the purpose of this Manual. Additional terms, phrases and words shall have the meaning given below.

Accelerated Erosion means erosion caused by development activities that exceeds the natural processes by which the surface of the land is worn away by the action of water, wind, or chemical action.

Applicant - a property owner or agent of a property owner who has filed an application for a stormwater management permit.

Arid Areas - areas with an average rainfall of 0 to 10 inches.

Authorized Signature See Appendix B

Best Management Practices (BMP)- schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BMP – - best management practices

Building - any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property, and occupying more than 100 square feet of area.

Channel - a natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

Control measure - refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the United States.

Commencement of Construction Activities - the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material).

Construction - Any building or erection of a structure, or any physical site preparation for the building or erection of a structure.

County Engineer - The Pickens County Engineer or his authorized representative.

Dedication - the deliberate appropriation of property by its owner for general public use.

Detention - the temporary storage of storm runoff in a stormwater management practice with the goals of controlling peak discharge rates and providing gravity settling of pollutants.

Detention Facility - a detention basin or alternative structure designed for the purpose of temporary storage of stream flow or surface runoff and gradual release of stored water at controlled rates.

Developer - Any person acting on his own behalf as a property owner, or as an agent for a property owner, who makes application for plan approval and a grading permit under the provisions of this manual.

Development - Any of the following actions undertaken by a public or private individual or entity:

- (a) any land altering activities associated with the division of a lot, tract or parcel of land into two (2) or more lots, plots, sites, tracts, parcels or other divisions by plan or deed, or
- (b) any man-made change, including: clearing, tree removal, grubbing, stripping, dredging, grading, mining, drilling, excavating, paving, transporting and filling of land.
- (c) **Discharge-related activities** include- activities that cause, contributed to, or result in storm water point source pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; and measures to control storm water including the sighting, construction and operation of best management practices (BMPs) to control, reduce or prevent storm water pollution.

Disturbance - see land disturbing activity.

Drainage - A general term applied to the removal of surface or subsurface water from a given area either by gravity via natural means or by systems constructed to so remove water, commonly applied herein to surface water.

Drainage Channel - Any natural or man-made conveyance for surface water, including open channels, enclosed storm sewers, streams, rivers, lakes, ponds, or marshes.

Drainage Easement - a legal right granted by a landowner to a grantee allowing the use of private land for stormwater management purposes.

Drainage System - The surface and subsurface system for removal of water from the land, including both the natural elements of streams, marshes, swales, and ponds, whether of an intermittent or continuous nature; and the manmade elements such as improved open channels, culverts, retention facilities, and enclosed storm sewers.

Easement - A grant or reservation by the owner of land, for the use of such land by others for a specific purpose or purposes, and which must be included in the conveyance of land.

Embankment or Fill - A deposit of soil, rock, or other material placed by man.

Erosion - The general process by which soil and rock fragments are detached and moved by the action of wind, water, ice, and gravity, either naturally or induced

Erosion and Sediment Control Plan - A plan, which adequately describes necessary land management practices and control measures, including

a timetable or schedule for their installation, which will effectively minimize soil erosion and sedimentation; prepared and approved as provided herein for application to a particular land area.

Final Stabilization means that:

1. All soil disturbing activities at the site have been completed and either of the two following criteria are met:
 - (a) a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
 - (b) equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
2. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent ($0.70 \times 0.50 = 0.35$) would required 35 percent total cover fro final stabilization. On a beach with no natural vegetation, no stabilization is required.
3. For individual lots in residential construction, final stabilization means that either:
 - (a) The homebuilder has completed final stabilization as specified above, or
 - (b) The homebuilder has established temporary stabilization including perimeter controls for an individual to prior to occupation of the home by the homeowner and informing ht homeowner of the nee for, and benefits of, final stabilization.
4. For construction projects on land used from agricultural purposed (e.g., pipelines across crop or range land, staging areas for highway construction, etc.), final stabilization might be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to “water of the United States,” and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization criteria (1) or (2) or (3) above.

Flood - A general and temporary condition of partial or complete inundation of normally dry land areas, caused by the overflow of a watercourse or the unusual and rapid accumulation of surface water runoff from any source. For the purpose of this chapter, a flood shall be construed to be any inundation that has a return frequency of one hundred (100) years or less.

Floods

- *10-Year Flood:* The flood having a ten percent (10%) chance of being equaled or exceeded in any given year.

- *25-Year Flood:* The flood having a four percent (4%) chance of being equaled or exceeded in any given year.
- *50-Year Flood:* The flood having a two percent (2%) chance of being equaled or exceeded in any given year.
- *100-Year Flood/Base Flood:* The flood having a one percent (1%) chance of being equaled or exceeded in any given year.
- *500-Year Flood:* The flood having a two-tenths percent (0.2%) chance of being equaled or exceeded in any given year.

Grading - Any displacement of soil by stripping, excavating, filling, stockpiling, or any combination thereof; and shall include the land in its excavated or filled state.

Grading Permit - A certificate issued to perform work pursuant to approved Erosion and Sediment Control Plan prepared under the provisions of this manual.

Group Development - The development of two (2) or more structures designed or intended for separate occupancy or use on a site that is not subdivided into lots, blocks, and streets, and is subject to the county's land development regulations; such as shopping centers, office buildings, industrial sites, manufactured home parks, apartment complexes, and condominium complexes.

Hotspot - an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Hydrologic Soil Group (HSG) - a Natural Resource Conservation Service classification system in which soils are categorized into four runoff potential groups. The groups range from A soils, with high permeability and little runoff production, to D soils, which have low permeability rates and produce much more runoff.

Illicit Connection - any man-made conveyance connecting an illicit discharge directly to a small municipal separate storm sewer.

Illicit Discharge - is defined at South Carolina Water Pollution Control Permits Regulation 61-9 122.26(b)(2) and refers to any discharges to a small municipal separate storm sewer that is not composed of storm water, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the SMS4) and discharges resulting from fire fighting activities.

Impervious Cover - those surfaces that cannot effectively infiltrate rainfall (e.g., building rooftops, pavement, sidewalks, driveways, etc).

Industrial Stormwater Permit - a National Pollutant Discharge Elimination System permit issued to a commercial industry or group of industries, which regulates the pollutant levels, associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Infiltration - the process of percolating stormwater into the subsoil.

Infiltration Facility- any structure or device designed to infiltrate retained water to the subsurface. These facilities may be above grade or below grade.

Jurisdictional Wetland - an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

Land - Any ground, soil, or earth, including marshes, swamps, drainage-ways, and areas not permanently covered by water.

Land Disturbance Activity - Any activity involving the clearing, grading, transporting, filling, and any other activity, which causes the land to be exposed to the danger of erosion.

Landowner - the legal or beneficial owner of land, including those holding the right to purchase or lease the land, or any other person holding proprietary rights in the land.

Larger Common Plan of Development (LCP) is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. For example, if a developer buys a 20-acre lot and builds roads, installs pipes, and runs electricity with the intention of constructing homes or other structures sometime in the future, this would be considered a larger common plan of development or sale. If the land is parceled off or sold, and construction occurs on plots that are less than one acre by separate, independent builders, this activity still would be subject to stormwater permitting requirements if the smaller plots were included on the original site plan. The larger common plan of development or sale also applies to other types of land development such as industrial parks or well fields. A permit is required if 1 or more acres of land will be disturbed, regardless of the size of any of the individually-owned or developed sites.

Large Construction Activity - defined at 40 CFR § 122.26(b)(14)(x) and incorporated here by reference. A large construction activity includes clearing, grading, and excavation resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres.

Low Impact Development or LID - a stormwater management strategy concerned with maintaining or restoring the natural hydrologic functions of a site to achieve natural resource protection objectives and fulfill

environmental regulatory requirements. LID employs a variety of natural and builds features that reduce the rate of runoff, filter out its pollutants, and facilitate the infiltration of water into the ground. By reducing water pollution and in increasing groundwater recharge, LID helps to improve the quality of receiving surface waters and stabilize the flow rates of nearby streams. Examples of LID include but are not limited to: bioretention, dry wells, filter strips, vegetated buffers grassed swales, infiltration trenches, inlet devices, and rain barrels.

MS4 is an abbreviation for “Municipal Separate Storm Sewer System” and is used to refer to either a Large, Medium, or Small Municipal Separate Storm Sewer System. The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities.

Municipal Separate Storm Sewer - defined at South Carolina Water Pollution Control Permits Regulation 61-9 122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at South Carolina Water Pollution Control Permits Regulation 61-9 122.2.

Maintenance Agreement - a legally recorded document that acts as a property deed restriction, and which provides for long-term maintenance of storm water management practices.

NPDES *National Pollutant Discharge Elimination System* - the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Clean Water Act.

New Construction - Structures for which the first placement of permanent construction commenced on or after the effective date of this chapter.

Nonerosive velocity - a speed of water movement that is not conducive to the development of accelerated soil erosion.

Nonpoint Source Pollution - pollution from any source other than from any discernible, confined, and discrete conveyances, and shall include, but not be limited to, pollutants from agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

Off-Site Facility - a stormwater management measure located outside the subject property boundary described

in the permit application for land development activity.

On-Site Facility - a stormwater management measure located within the subject property boundary described in the permit application for land development activity.

Outfall- a point source as defined by section 122.2 of SC Regulation 61-9 at the point where a municipal separate storm sewer discharges to waters of the State and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the State and are used to convey waters of the State.

Point Source - any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Pickens County Storm Water Office - may include but not limited to: any employee from the Storm Water Management Office, Pickens County Building Codes Office or Pickens County Engineering Office.

Pollutant - defined at 40 CFR § 122.2. A partial listing for this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

Rain Gardens - natural landscape features that require less maintenance and fewer chemicals than lawns. Rain gardens capture runoff from impervious areas such as roofs and driveways and allow it to seep slowly into the ground. Most importantly, rain gardens help preserve nearby streams and lakes by reducing the amount of runoff and filtering pollutants.

Recharge - the replenishment of underground water reserves.

Redevelopment - a land disturbance activity that alters the current use of the land but does not necessarily alter the pre-development runoff characteristics.

Runoff coefficient - the fraction of total rainfall that will appear at the conveyance as runoff.

Semi-Arid Areas - areas with an average annual rainfall of 10 to 20 inches.

Small Construction Activity - defined at 40 CFR § 122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading,

Small Municipal Separate Storm Sewer System (SMS4) - defined at South Carolina Water Pollution Control Permits Regulation 61-9 122.26(b)(16) and refers to all small separate storm sewer systems that are owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the

United States, but is not defined as “large” or “medium” municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

Stop Work Order - an order issued that requires that all construction activity on a site be stopped.

Storm Water - defined at South Carolina Water Pollution Control Permits Regulation 61-9 122.26(b)(13) and means storm water runoff, snowmelt runoff, and surface runoff and drainage.

Stormwater Control Plan - a plan that is designed to minimize the accelerated erosion and sediment runoff at a site during construction activities.

Storm Water Management - the use of structural or non-structural practices that are designed to reduce storm water runoff pollutant loads, discharge volumes, peak flow discharge rates and detrimental changes in stream temperature that affect water quality and habitat.

Storm Water Retrofit - a stormwater management practice designed for an existing development site that previously had either no stormwater management practice in place or a practice inadequate to meet the stormwater management requirements of the site.

Stormwater Runoff - flow on the surface of the ground, resulting from precipitation.

Stormwater Treatment Practices (STPs) - measures, either structural or nonstructural, that are determined to be the most effective, practical means of preventing or reducing point source or nonpoint source pollution inputs to stormwater runoff and water bodies.

Subdivision - unless otherwise defined in a manual adopted by a local government pursuant to Section 6-7-1010, means all divisions of a tract or parcel of land into two or more lots, building sites, or other divisions, or parcels less than five acres, for the purpose, whether immediate or future, of sale, legacy, or building development, or includes all division of land involving a new street or a change in existing streets, and includes resubdivision and, where appropriate, in the context, shall relate to the process of subdividing or to the land or area subdivides.

Water Quality Volume (WQ_v) - the storage needed to capture and treat 90% of the average annual stormwater runoff volume. Numerically (WQ_v) will vary as a function of long-term rainfall statistical data.

Waters of South Carolina, or Waters of the State - lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic Ocean within the territorial limits of the State, and all other bodies of surface or underground water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially within or bordering the State or within its jurisdiction and all waters of the United States within the political boundaries of the State of South Carolina. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the

South Carolina. This exclusion applies only to manmade bodies of water, which neither were originally created in waters of South Carolina (such as disposal areas in wetlands) nor resulted from the impoundment of waters of South Carolina.

Waters of the United States, or Waters of the U.S. means:

- (a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters, which are subject to the ebb and flow of the tide
- (b) All interstate waters, including interstate "wetlands";
- (c) All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, wet meadows, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce
- (d) All impoundments of waters otherwise defined as waters of South Carolina under this definition; Tributaries of waters identified in paragraphs (a) through (d) of this definition;(f) The territorial sea; and Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Watercourse - a permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.

Introduction

This manual has been developed to assist in the design and evaluation of stormwater management facilities within the Pickens County, South Carolina area. It provides engineering design guidance to:

- *local agencies responsible for implementing the Pickens County Stormwater Management Program,*
- *engineers responsible for the design of stormwater management structures,*

- *developers involved in site planning and design,*
- *others involved in stormwater management at various levels who may find the manual useful as a technical reference to define and illustrate engineering design techniques.*

Application of the procedures and criteria presented in this manual should contribute toward the effective and economical mitigation and solution of local drainage and flooding problems. Application of the procedures should also contribute to more uniform design and analysis of stormwater management facilities throughout Pickens County.

Engineering design methods other than those included in this manual can be used if approved by the County Stormwater Department. Complete documentation of these methods may be required for approval.

The manual presents technical and engineering procedures and criteria needed to comply with the Pickens County Stormwater Ordinance.

Section 2. General Provision

A. Findings of Fact

It is hereby determined that:

- a. Land development projects and associated increases in impervious cover alter the hydrologic response of local watersheds and increase storm water runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition. This storm water runoff contributes to increased quantities of water-borne pollutants. Storm water runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of storm water runoff from development sites.
- b. Therefore, Pickens County establishes this set of water quality and water quantity policies applicable to all surface waters to provide reasonable guidance for the regulation of storm water runoff for the purpose of protecting local water resources from degradation. It is determined that the regulation of storm water runoff discharges from land development projects and other construction activities in order to control and minimize increases in storm water runoff rates and volumes, soil erosion, stream channel erosion, and nonpoint source pollution associated with storm water runoff is in the public interest and will prevent threats to public health and safety.
- c. Stormwater runoff is a source of pollution of waters of the State, and may add to existing flooding problems. The implementation of a county storm water management and sediment control program will help prevent additional water quantity and water quality problems and may reduce existing problems.
- d. Stormwater management and sediment control plan approvals are necessary prior to engaging in any land disturbing activity related to residential, commercial, industrial or institutional land use which are

not specifically exempted or waived by this manual.

e. Pickens County is required by federal law to obtain a National Pollutant Discharge Elimination System permit from the South Carolina Department of Health and Environmental Control (DHEC) for storm water discharges from the Pickens County Stormwater System. The NPDES permit requires Pickens County to impose controls to reduce the discharge of pollutants in storm water to maximum extent practicable using management practices, control techniques and system design and engineering methods, and such other provisions, which are determined to be appropriate for control of such pollutants.

f. Additionally, certain facilities that discharge storm water associated with an industrial activity, including land disturbing activities, are required to obtain NPDES permits. Also, the South Carolina Storm Water Management and Sediment Reduction Act [S.C. Code 48-14-10 et seq.] requires a permit for certain land disturbing activities.

B. Purpose

The purpose of this manual is to establish minimum storm water management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within this jurisdiction. This manual seeks to meet that purpose through the following objectives:

- a. Minimize increases in storm water runoff from any development in order to reduce flooding, siltation; increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels
- b. Minimize increases in nonpoint source pollution caused by storm water runoff from development, which would otherwise degrade local water quality
- c. Minimize the total annual volume of surface water runoff, which flows from any specific site during and following development to not exceed the pre-development hydrologic regime to the maximum extent practicable
- d. Reduce storm water runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through storm water management controls and to ensure that these management controls are properly maintained and pose no threat to public safety
- e. It is further the purpose of this manual to comply with the Federal and corresponding state storm water discharge (NPDES) regulations (40 CFR 122.26 and SC Regulation 61-9.122.26) developed pursuant to the Clean Water Act and to assure Pickens County of the authority to take any action required by it to obtain and comply with its NPDES permit for storm water discharges. Among other things, these regulations require Pickens County to establish legal authority, which authorizes or enables Pickens County at a minimum to:

- i. Control the contribution of pollutants to the Pickens County MS4 and receiving waters by stormwater discharges associated with residential, commercial, industrial, and related facilities activity and the quality of storm water discharged from sites of residential, commercial, industrial, and related facilities activity
- ii. Prohibit illicit discharges to the Pickens County MS4 and receiving waters
- iii. Control the discharge to the Pickens County MS4 and receiving waters of spills, dumping or disposal or materials other than stormwater
- iv. Control, through intergovernmental agreements, contribution of pollutants from one municipal storm water system to another
- v. Require compliance with conditions in manuals, permits, contracts or orders
- vi. Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to Pickens County MS4 and receiving waters

The application of this Manual and the provisions expressed herein shall be the minimum stormwater management requirements and shall not be deemed a limitation or repeal of any other powers granted by statute. In addition, if site characteristics indicate that complying with these minimum requirements will not provide adequate designs or protection for local property or residents, it is the owner and operator's responsibility to exceed management practices, control techniques and system, design and engineering methods and such other programs and controls as are required by Pickens County's NPDES permit.

This Manual is to be construed to further its purpose of controlling and reducing pollutant discharges to the Pickens County MS4 and to the Waters of the State to assure the obligations under its NPDES permit issued by the Department of Health and Environmental Control (DHEC) as required by 33 USC 1342 and 40 CFR 122.26.

C. Coordination with Other Agencies

Pickens County may enter into agreements with other governmental and private entities to carry out the purposes of this manual. These agreements may include, but are not limited to enforcement, resolution of disputes, cooperative monitoring, and cooperative management of storm water systems and cooperative implementation of storm water management programs.

Nothing in this Manual or in this Section shall be construed as limitation or repeal of any manuals of these local government or of the powers granted to these local governments by the South Carolina Constitution or South Carolina statues, including, without limitation, the power to require additional or more stringent storm water management requirements within their jurisdictional boundaries.

Section 3. Exemptions

NOTE: While the following Prohibitions and Exemptions exist in this Storm Water Manual, they are NOT exempt from the Clean Water Act and if a violation occurs it will be referred to the proper authority.

- a. No person shall:
 - i. disturb any land,
 - ii. engage in any industry or enterprise requiring construction activities,
 - iii. construct, operate or maintain any landfill, hazardous waste treatment, disposal or recovery facility, or any other industrial or related facility,
 - iv. or dispose of any hazardous or toxic substance or other pollutant without having provided for compliance with this Manual and with any State or Federal Regulations, permit, or regulation of the Pickens County Storm Water Management Program (SWMP) adopted in accordance with this manual.

- b. The following development activities are exempt from the provisions of this Manual however this should not be construed to mean that they are exempt from best management practices (BMP) nor provisions of the Clean Water Act or other State and Federal Regulations.
 - i. Land disturbing activities for the production of plants and animals useful to man, including but not limited to: forages and sod crops, grains and feed crops, tobacco, fruits, vegetables, production of ornamental plants, cotton, and peanuts; dairy animals and dairy products; poultry and poultry products; livestock, including beef cattle, sheep, swine, horses, ponies, mules, or goats, including the breeding and grazing of these animals; bees; fur animals and aquaculture, except that the construction of an agricultural structure of one or more acres, such as broiler houses, machine sheds, repair shops and other major buildings and which require the issuance of a building permit shall require the submittal and approval of a drainage plan prior to the start of the land disturbing activity.
 - ii. Land disturbing activities undertaken on forestland for the production and harvesting of timber and timber products.
 - iii. Activities undertaken by persons who are otherwise regulated by the provisions of Chapter 20 of Title 48, the South Carolina Mining Act.
 - iv. Certain land disturbing activities undertaken by persons who are exempt from the provisions of the Stormwater Management and Sediment Reduction Act as set forth in Section 48-14-40 of the 1976 Code of Laws of South Carolina as amended.

Such as:

- 1) Land disturbing activities that are conducted under another state or federal environmental permitting, licensing, or certification program where the state or federal environmental permit, license, or certification is conditioned on compliance with the minimum standards and criteria developed under this manual.
- 2) Any of the following land disturbing activities undertaken by any person who provides gas, electrification, or communications services, subject to the jurisdiction of the South Carolina Public Service Commission, or corporations organized and operating pursuant to Section 33-49-10 et seq.:
- 3) Land disturbing activities conducted pursuant to a certificate of environmental compatibility and public convenience and necessity issued pursuant to Title 58, Chapter 33 or land disturbing activities conducted pursuant to any other certification or authorization issued by the Public Service Commission;
- 4) Land disturbing activities conducted pursuant to a federal environmental permit, including Section 404 of the Federal Clean Water Act, and including permits issued by the Federal Energy Regulatory Commission;
- 5) Land disturbing activities associated with emergency maintenance or construction of electric, gas, or communications facilities, when necessary to restore service or when the Governor declares the area to have sustained a disaster and the actions are undertaken to protect the public from a threat to health or safety;
- 6) Land disturbing activities associated with routine maintenance and/or repair of electric, gas, or communications lines;
- 7) Land disturbing activities associated with the placement of poles for overhead distribution or transmission of electric energy or of communications services;
- 8) Land disturbing activities associated with placement of underground lines for distribution or transmission of electric energy or of gas or communications services; or
- 9) Land disturbing activities conducted by a person filing environmental reports, assessments, or impact statements with the United States Department of Agriculture, Rural Electrification Administration in regard to a project.
- 10) Activities relating to the routine maintenance and/or repair or rebuilding of the tracks, rights- of-way, bridges, communication facilities and other related structures and facilities of a railroad company.
- 11) Activities undertaken on state-owned or managed lands that are otherwise regulated by the provisions of Chapter 18 of this title, the Erosion and Sediment Reduction Act.
- 12) Activities undertaken by local governments or special purpose or public service districts

relating to the repair and maintenance of existing facilities and structures.

Section 4. Waivers and Variance

(1). General. If the 2- and 10-year, 24- hour post-developed flow rates exceed the pre-developed rates, waiver from detention maybe granted in accordance with State regulation 72-302(B) and Pickens County Stormwater Ordinance 356, on a case-by-case basis. Every applicant shall provide for stormwater management as required by this ordinance, unless justification and a written request are filed to waive this requirement. Pickens County may grant waivers from the stormwater management requirements for individual land disturbing activities provided that a written request is submitted by the applicant containing descriptions, drawings, and any other information that is necessary to evaluate the proposed land disturbing activity. A separate written waiver request shall be required if there are subsequent additions, extensions, or modifications which would alter the approved stormwater runoff characteristics to a land disturbing activity receiving a waiver. Requests to waive the stormwater management plan requirements shall be submitted to Pickens County Stormwater staff for approval.

(2). Conditions for waiver. The minimum requirements for stormwater management may be waived in whole or in part upon written request of the applicant, provided that at least one of the following conditions applies:

a. A project may be eligible for a waiver of stormwater management for both quantitative and qualitative control if the applicant can demonstrate that the proposed project will return the disturbed area to a pre-development runoff condition and the pre-development land use is unchanged at the conclusion of the project.

b. A project may be eligible for a waiver or variance of stormwater management for water quantity control if the applicant can demonstrate that:

(i) The proposed project will have no significant adverse impact on the receiving natural waterway or downstream properties; or

(ii) The imposition of peak control requirements for rates of stormwater runoff would aggravate downstream flooding; or

(iii) It can be demonstrated that the proposed development is not likely to impair attainment of the objectives of this ordinance.

(iv) Alternative minimum requirements for on-site management of stormwater discharges have been established in a stormwater management plan that has been approved by the Pickens County Stormwater Department.

c. Justification and a written request, including the following statement: “the increased flows will not have a significant adverse impact on the downstream/adjacent properties” must be submitted with the

request.

d. The project's Professional Engineer must sign the waiver request and a variance application must be submitted to the Stormwater Office.

- (3). Downstream damage, etc. prohibited. In order to receive a waiver, the applicant must demonstrate to the satisfaction of the Pickens County Stormwater Department that the waiver will not lead to any of the following conditions downstream:
- (a) Deterioration of existing culverts, bridges, dams, and other structures;
 - (b) Degradation of aquatic ecosystem or habitat;
 - (c) Accelerated stream bank or streambed erosion or sedimentation;
 - (d) Increased threat of flood damage to public health, life or property.
- (4). Land disturbance permit not to be issued where waiver requested. No land disturbance permit shall be issued where a waiver has been requested until the waiver is granted or denied. If no waiver is granted, the plans must be resubmitted with a stormwater management plan.
- (5) Variance. Pickens County may grant a written variance from any requirement of this ordinance if there are exceptional circumstances applicable to the site such that strict adherence to the provisions of these regulations will result in unnecessary hardship and not fulfill the intent of this ordinance. A written request for variance shall be provided to Pickens County and shall state the specific variances sought and the reasons with supporting data for their granting. A variance shall not be granted unless and until sufficient specific reasons justifying the variance are provide by the applicant

Section 5. Stormwater Management Plans

A. General Requirements

- a. Stormwater Management Plans for each development of greater than or equal to one acre, unless part of a larger common plan of development or sale that will ultimately disturb one acre, shall be submitted for review to the Pickens County Stormwater Department prior to or in conjunction with submission of the construction plans for the entire development.
- b. All plats of the development shall be consistent with the Stormwater Management Plan required in Paragraph a. above.
- c. Pickens County will review each application for a land disturbance permit to determine its conformance with the provisions of the Pickens County Stormwater Ordinance, the South Carolina NPDES General Permit for Storm Water Discharges From Large and Small Construction Activities and Pickens County's NPDES General Permit for Storm Water Discharges From Regulated Small Municipal Separate Storm Sewer Systems (MS4s). For land disturbing activities of one acre or greater, or less than one acre if it is part of a larger common plan of development or sale that will ultimately disturb one acre, within twenty

(20) calendar days after receiving an application, Pickens County shall provide one of the following responses in writing:

⇒ Approval of the permit application;

⇒ Denial of the permit application, indicating the reason(s) for the denial.

d. No development plans will be released until the land disturbance permit has been approved.

e. Once the plans are approved by Pickens County, documentation will be provided to SCDHEC to request NPDES permit coverage for this project. SCDHEC has 7 business days of the receipt of the submittal, authorizing coverage, denying coverage, requesting additional information or advising you that DHEC has decided to also review the Stormwater Pollution Prevention Plan.

f. The approved stormwater management plan shall contain certification by the applicant that all land clearing, construction, development and drainage will be done according to the drainage plan or previously approved revisions. Any and all land disturbing permits may be revoked at any time if the construction of stormwater management facilities is not in strict accordance with approved plans.

g. In addition to the plans and permits required by Pickens County, applicants shall obtain all state and federal permits required for the proposed development.

h. Should any Stormwater Management plan involve any stormwater management facilities or land to be dedicated to public use, the same information shall also be submitted for review and approval to the department having jurisdiction over the land or other appropriate departments or agencies identified by the Pickens County Planning Department for review and approval. This Stormwater Management plan shall serve as the basis for all subsequent construction.

B. Scope of Stormwater Management Plan

a. In developing plans for residential subdivisions, individual lots in a residential subdivision development shall be required to obtain and comply with a general permit for the residential subdivision development, as a whole, shall be considered to be a single land disturbing activity requiring a permit. Hydrologic parameters that reflect the ultimate subdivision development shall be used in all engineering calculations.

b. If individual lots or sections in a residential subdivision are being developed by different property owners, all land disturbing activities related to the residential subdivision shall be covered by the approved drainage plan for the residential subdivision. Individual lot owners and/or developers should sign a certificate of compliance that all activities on that lot will be carried out in accordance with the approved drainage plan for the residential subdivision. The individual lot owners and/or developers becoming either a co-permittee or co-operators can achieve this. Otherwise, the person financially responsible for the project will be held accountable for all activities.

c. Residential subdivisions, which were approved prior to the effective date of State regulations (in or about 1992), are exempt from these requirements. Development of new phases of existing subdivisions, which were not previously approved, shall comply with the provisions of these regulations.

d. The minimum stormwater management plan requirements shall provide management measures necessary to accomplish the following:

i. Install storm water management facilities to limit the 2-year and 10-year developed peak discharge rates to pre-developed peak discharge rates using duration of 24 hours with a SCS Type II design storm.

ii. For ponds, the emergency spillway will pass the 100-year, 24-hour storm event. The design of these facilities shall be based on procedures contained in this Design Manual or approved by the County.

e. All channels and diversion ditches must be able to handle the 10-year storm event with non-erosive velocities of less than 5 feet per second during construction and post-construction. The appropriate curve number must be used for the disturbed areas. If the velocity exceeds 5 feet per second, then permanent measures to reduce the velocity to a non-erosive rate must be provided.

F. For small construction activities of between one (1) to five (5) acres, the requirements, or portions thereof, of item 5.B.a. may be waived by the County if it can be shown by detailed engineering calculations and analysis, which is acceptable to the County that one of the following, exists:

1. A low rainfall erosivity factor

2. A TMDL analysis

3. An equivalent analysis that determines allocations for small construction sites are not needed.

See Appendix A for a description of the 3 acceptable waivers. If a waiver is requested, a hydrologic-hydraulic study shall be done showing how the drainage system will function with and without the proposed facilities. For such studies the following land use conditions shall be used.

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

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

iii. All stormwater management facilities emergency spillways shall be checked using the 100-year storm and routing flows through the facility and emergency spillways. For this analysis, developed land use conditions shall be used for all areas within the analysis.

iv. The effects of existing upstream detention facilities can be considered in the hydrologic-hydraulic study.

C. Application Requirements

The stormwater management plan shall detail how post-development stormwater runoff will be controlled or managed and how the proposed project will meet the requirements of the Pickens County Stormwater ordinance. Additionally the stormwater management plan shall provide details for Pickens County Stormwater Office to evaluate the environmental characteristics of the project site, the potential impacts of all proposed development of the site, both present and future, on the water resources, and the effectiveness and acceptability

of the measures proposed for managing stormwater generated at the project site. The plan must show the final design specifications for all stormwater management facilities and must be sealed by a qualified individual who is licensed as follows: 1) registered professional engineer licensed to practice in South Carolina, 2) Registered landscape architect, or 3) Tier B land surveyors, as described by South Carolina Code of Laws, Title 40. The plan shall include all of the information required in the Stormwater Management Site Plan checklist found in Appendix ___ of the Stormwater Design Manual. This includes:

1. Notice of Intent (NOI)

The current completed application containing:

- a. the name and legal address of the applicant,
- b. the common address and legal description of the location where the development will take place,
- c. the name and mailing address of the property owner.
- d. The application must contain original signatures as specified in Section 122.22 of S.C. Reg. 61-9. Refer to Appendix B of this Design Manual.

2. Plans and Calculations

One set of plans and calculation should be submitted with the original application. When the project is approved, 5 (five) sets will be requested for processing. In the case of a request for variance, 2 (two) sets of plans and accompanying documents should be submitted to the Pickens County Stormwater Office.

3. USGS topographic map

A USGS topographic map outlining the project boundaries, indicating the route of runoff from the site to the nearest waterbody, and identification of the road named adjacent to the site must be included as part of the submittal package.

4. **Narrative**

A project narrative detailing the scope of the project, and a brief description of the pre- and post-development conditions should be included as part of the Stormwater Management Plan. A summary table of the pre- and post-development flows of at least the 2- and 10-year, 24-hour storm events must be included. Disturbed area calculations included for subdivision projects or larger common plans (LCP) disturbing 1 or more acres must be addressed in this narrative.

For subdivisions if the site is not to be mass-graded, the following formula should be used to determine the amount of disturbance:

Amount of Disturbance = 2[Max Restricted Building Size][Number of Lots] + Right of Way (ROW) areas {ROW areas include clearing for roads, utilities, easements etc.} If this equation is used, include a note on the plans stating: “The site is not to be mass-graded. Only 2 times the footprint is to be cleared as the lots are developed. The assumed disturbance on each lot is ___ sq. ft.”

5. **Soils Map**

The SWPPP must include a general description of existing soil types and characteristics and any anticipated soil erosion and sedimentation problems resulting from existing characteristics. This can be included in the narrative. Refer to Pickens County Soil and Water Conservation District’s website, <http://www.pickensconservation.org/soilsmaps.htm> or the Natural Resource Conservation Service at <http://websoilsurvey.nrcs.usda.gov/app/> for soil types or contact the Pickens County Stormwater Office for additional information. The predominate soil types found at the site must be identified on the plans or on a separate map with the project boundary outlined.

6. **Floodway map/FEMA Flood insurance map**

A floodway map/FEMA Flood insurance map with the project boundary outlined if it is in close proximity to the floodplain/floodway must be included.

7. **Waters of the State (WoS) – including Wetlands**

- a. Delineation of all Waters of the State (WoS), including wetlands, must be shown and labeled on plans if a 100-ft undisturbed buffer can NOT be maintained between the Waters of the State and all land-disturbing activities.
- b. A separate plan sheet that shows all Waters of the State on the site and the impacted areas with a description of the activity(s), whether it is permanent or temporary, and any other relevant information must be included.
- c. If there are any impacts to Waters of the State, the areas of impacts must be outlined and

labeled that no work can begin in this area until all necessary U.S. Army Corp of Engineers (USACOE) permits and SCDHEC 401 certifications have been obtained.

- d. A double row of silt fence must be provided in all areas where a 50 foot undisturbed buffer cannot be maintained between the disturbed area and the Waters of the State.
- e. A minimum of a 10-foot maintenance buffer must be provided between last row of silt fence and the Waters of the State; or, if a buffer is not provided, a statement from P.E. on the plan must indicate how silt fence will be installed and maintained without impacts to Waters of the State.
- f. A minimum of a 20-foot buffer between any sediment trap/basin and the Waters of the State is recommended.

Note: If there are proposed impacts to Waters of the State, contact USACOE (866-329-8187) and S.C. DHEC Water Quality Certification, Standards & Wetlands Programs Section (803-898-4300) to determine additional requirements before submitting this project to Pickens County. If WoS are to be impacted, work cannot be performed in these designated areas until all necessary permits have been acquired. If a USACOE permit is required for construction of or access to a temporary or permanent stormwater management structure, NPDES permit coverage cannot be granted until the USACOE permits and S.C. DHEC 401 Section certifications are obtained.

8. **Hydrologic Analysis**

- a. At a minimum the pre- and post-developed hydrologic analysis calculations for the 2- and 10-year, 24-hour storm events at each outfall point must be included in the submittal.
- b. Drainage area maps that clearly correspond to the calculations (pre- and post-development) must be included.
- c. The analysis points for comparing runoff rates and the total drainage area analyzed must not change from pre- to post-development, although the immediate drainage areas contributing to each analysis point might shift.
- d. Post-development discharges must be less than pre-development discharges for each outfall point (if not, then a Variance Request must be submitted, see Section 4 for details and Appendix J for the application).
- e. Analysis must be performed using SCS 24-hour storm, the Rational method is not acceptable for these calculations. Rainfall data from the most current South Carolina DHEC Storm Water Management BMP Handbook (BMP Handbook) must be used in all calculations, see Appendix R for rainfall data or http://www.scdhec.gov/environment/ocrm/pubs/tech_docs_water.htm#bmp for the BMP Handbook.

9. DETENTION ANALYSIS/DESIGN

Analysis

- a. Analysis Pond routing must use a volume-based hydrograph for the 2- and 10-year, SCS 24-hour storm event (Drain:Edge, ICPR, HEC-1, SedCAD, HYDRAFLOW, etc. perform full pond routings; TR55 does not perform a full pond routing and the rational method cannot be used.
- b. Hydrologic and hydraulic calculations necessary to determine the impact of hydrograph timing modifications of the proposed land-disturbing activity, with and without the detention structure (Results of analysis will determine the need to modify the detention design or eliminate the detention requirement. It is recommended to use the 10% rule in performing the analysis. The hydrologic analysis should be conducted for the larger drainage area, where the site in question encompasses 10% of the total drainage area. For example, if your site is 10 acres, then the hydrologic analysis should be performed at the point downstream where the contributing drainage area, including your 10-acre site, is approximately 100 acres.).
- c. Include in the submittal, inputs and outputs from analysis program and a summary table of the peak inflows, peak outflows, discharge velocities, and maximum water surface elevations (WSE) for the 2- and 10-year, 24-hour storm events for each detention structure.
- d. Additionally, stage-storage-discharge relationship for the outlet structure of each detention structure must be included.
- e. If a rating curve for the outlet structure is generated externally from the analysis program (Drain:Edge, HEC-1, etc.), data and equations used to rate the outlet structure must be included as part of the hydrology.
- f. As-built of existing detention pond if the site drains to an existing detention pond must be included see number 10 for details.

Note # 1: SedCAD users please refer to Appendix M for a SCDHEC memo regarding the input of outlet structures.

Design

- a. Detail of outlet structure and cross-section of the dam/ berm or pond bank, including elevations and dimensions that correspond to the calculations.
- b. Orifice constructability considered (do not specify orifice diameters with increments of less than ¼ inch)
- c. Maximum water surface elevation for the 10-year storm event below the emergency spillway with 0.5-ft of freeboard between maximum water surface elevation for the 10-year storm and the emergency spillway.

- d. Maximum water surface elevation for the 100-year storm event below the embankment with 0.5-ft of freeboard between maximum water surface elevation for the 100-year storm and the embankment.
- e. Dewatering time calculations for the 10-year storm event (dry ponds must drain completely within 72 hours)
- f. Bottom of all detention and retention ponds graded to have a slope of not less than 0.5%
- g. If the pond is to be used for sediment control during construction, temporary horseshoe-shaped riprap berm in front of any low level outlets provided during construction and shown on the pond detail.
- h. Permanent maintenance access to all permanent detention structures (easements may be needed for structures surrounded by lots)
- i. Infiltration systems must be designed in accordance with S.C. Reg. 72-307.C(11) [specify how items a-j have been addressed]
 - (a) Areas draining to these practices must be stabilized and vegetative filters established prior to runoff entering the system. Infiltration practices shall not be used if a suspended solids filter system does not accompany the practice. If vegetation is the intended filter, there shall be, at least a 20 foot length of vegetative filter prior to stormwater runoff entering the infiltration practice;
 - (b) The bottom of the infiltration practice shall be at least 0.5 feet above the seasonal high water table, whether perched or regional, determined by direct piezometer measurements which can be demonstrated to be representative of the maximum height of the water table on an annual basis during years of normal precipitation, or by the depth in the soil at which mottling first occurs;
 - (c) The infiltration practice shall be designed to completely drain of water within 72 hours;
 - (d) Soils must have adequate permeability to allow water to infiltrate. Infiltration practices are limited to soils having an infiltration rate of least 0.30 inches per hour. Initial consideration will be based on a review of the appropriate soil survey, and the survey may serve as a basis for rejection. On-site soil borings and textural classifications must be accomplished to verify the actual site and seasonal high water table conditions when infiltration is to be utilized;
 - (e) Infiltration practices greater than three feet deep shall be located at least 10 feet from basement walls;
 - (f) Infiltration practices designed to handle runoff from impervious parking areas shall be a minimum of 150 feet from any public or private water supply well;
 - (g) The design of an infiltration practice shall provide an overflow system with measures to provide a non-erosive velocity of flow along its length and at the outfall;
 - (h) The slope of the bottom of the infiltration practice shall not exceed five percent. Also, the

practice shall not be installed in fill material as piping along the fill/natural ground interface may cause slope failure;

(i) An infiltration practice shall not be installed on or on top of a slope whose natural angle of incline exceeds 20 percent.

(j) Clean outs will be provided at a minimum, every 100 feet along the infiltration practice to allow for access and maintenance.

Note: Emergency spillways should not be built on fill slopes.

Note: It is recommended to install a trash rack or other debris-screening device on all pond risers, that a maximum slope of 3:1 on pond embankments be used to allow for ease of maintenance and that the installation of sediment forebays at each outfall into the detention/ sediment basin be used.

10. **AS-BUILTS**

- a. Provided for all previously approved detention ponds that will receive flows from new drainage areas
- b. Prepared by a South Carolina Licensed Land Surveyor
- c. Grades/ contours/ depths for pond
- d. Elevations and dimensions of all outlet structures, including:
 - i. Pipe and orifice inverts and diameters
 - ii. Weir elevations and dimensions
 - iii. Riser dimensions and elevations
 - iv. Emergency spillway dimensions and elevations
 - v. Locations and inverts for all pipes discharging into the pond
- e. If the elevations or dimensions of the structures listed above do not match those used in the approved plans, certification statement signed by the project's Registered Engineer indicating that the pond, as built, will function within all applicable standards provided [new analysis of the pond (routing) may be necessary]

Note: As-built survey and /or analysis must be submitted and accepted by Pickens County before Notice of Termination (NOT) is submitted.

11. **Permanent Stormwater Management Structure Maintenance**

- a. Signed agreement from the responsible party accepting ownership and maintenance of the structure
- b. Description of maintenance plan to be used
- c. Schedule of maintenance procedures (e.g., every 6 months)
- d. Detailed or manufacturer-specific maintenance items for proprietary control devices (oil-water separators, etc.), underground detention structures, exfiltration systems and non-traditional

stormwater controls (constructed wetlands, bioretention, etc.)

- e. Typical maintenance items to be addressed
 - i. Grass to be mowed
 - ii. Trees to be removed from within the pond and on the embankment
 - iii. Trash and sediment to be removed from inside of and around the pond outlet structure
 - iv. Orifices to be cleaned and unclogged
 - v. Outlet pipe to be cleaned, inspected, and repaired
 - vi. Sediment accumulation to be removed from pond
 - vii. Pond bottom to be regraded to provide proper drainage towards the outlet discharge point
 - viii. Energy dissipator to be cleaned and repaired
 - ix. Emergency spillway, if applicable, to be inspected and repaired
 - x. Erosion on side slopes, if present, to be addressed
 - xi. Pickens County must be notified in writing of any changes in maintenance responsibility for the stormwater devices at the site (include this statement in agreement). See Appendix N for an example of this document.

Note: If the entity or person with maintenance responsibility changes, then a new maintenance agreement, signed by the new person responsible for maintenance, must be provided to the Department. If a new, signed maintenance agreement is not provided to the Department, then the entity/ person who signed the most recent maintenance agreement on file with the Department will be considered the responsible entity.

12. **DISCHARGE POINTS**

- a. Storm drainage or pond outfalls carried to an existing drainage outfall such as a pipe, ditch, etc.
- b. No new point discharges onto adjacent property where there was not a point discharge previously, unless written permission from the adjacent property owner is provided
- c. Level spreaders, plunge pools, etc. provided when the proposed outlet is near the property line and not directed to an existing outfall, such as a creek or ditch
- d. Twenty (20)-foot minimum buffer must be provided between the property line and the discharge point
- e. Outlets shall not discharge on fill slopes

13. **DETENTION WAIVER**

Note: If the 2- and 10-year, 24-hour post-developed flow rates exceed the pre-developed rates, waivers from detention may be granted in accordance with SC Regulation 72-302(B) and Pickens County Stormwater Ordinance, on a case-by-case basis.

Pickens County may grant waivers from the stormwater management requirements for individual land disturbing activities provided that a written request is submitted by the applicant containing descriptions,

drawings, and any other information that is necessary to evaluate the proposed land disturbing activity. A separate written waiver request shall be required if there are subsequent additions, extensions, or modifications which would alter the approved stormwater runoff characteristics to a land disturbing activity receiving a waiver.

- a. A project may be eligible for a waiver of stormwater management for both quantitative and qualitative control if the applicant can demonstrate that the proposed project will return the disturbed area to a pre-development runoff condition and the pre-development land use is unchanged at the conclusion of the project.
- b. A project may be eligible for a waiver or variance of stormwater management for water quantity control if the applicant can demonstrate that:
 - (i) The proposed project will have no significant adverse impact on the receiving natural waterway or downstream properties; or
 - (ii) The imposition of peak control requirements for rates of stormwater runoff would aggravate downstream flooding; or
- c. Justification and a written request, including the following statement: “the increased flows will not have a significant adverse impact on the downstream/adjacent properties”

The project’s Professional Engineer must sign the waiver request and a variance application must be submitted to the Stormwater Office. See Appendix J for the application and Section 4 for details on applying for a variance or waiver.

Note: It is recommended to use the 10% rule in performing the analysis. The hydrologic analysis should be conducted for the larger drainage area, where the site in question encompasses 10% of the total drainage area. For example, if your site is 10 acres, then the hydrologic analysis should be performed at the point downstream where the contributing drainage area, including your 10-acre site, is approximately 100 acres.

14. **Permanent Water Quality Requirements**

- a. Permanent water quality must be addressed, at a minimum, on all projects or Larger Common Plans that disturb 5 or more acres.
 - i. Wet ponds designed to catch the first ½” of runoff from the entire area draining to the pond and release it over at least a 24-hour period
 - ii. Dry ponds designed to catch the first 1” of runoff from the entire area draining to the pond and release it over at least a 24-hour period
 - iii. For areas not draining to a pond, show how permanent water quality requirements were addressed
- b. Waters of the U.S./State cannot be used for permanent water quality control (alternative means of treatment must be used if an existing pond is to be used for water quantity control).

Note # 1: Other non-traditional stormwater controls such as Bioretention areas, constructed wetlands, etc. may be used. Consult the SCDHEC BMP Handbook or contact the Stormwater Office for information on the design of these devices.

Note # 2: Pre-fabricated or proprietary treatment devices are approved on a case-by-case basis if adequate removal efficiency can be demonstrated. Provide pollutant removal efficiency data, preferably from a third-party testing company. Type of system selected should be based on the ability to remove the pollutants of concern in that area/situation (bacteria, hydrocarbons, etc.).

See Section F of this manual for more information.

15. **Sedimentology**

- a. Trapping efficiency calculations showing that all sediment basins/ traps are capable of achieving a sediment trapping efficiency of at least 80% for the 10-year, 24-hour storm event, if more than 10 disturbed acres drain to a common point (stream, lake, etc.)
- b. Sediment basins provide storage for the 10-year, 24-hour storm event for disturbed conditions or 3600 ft³/ acre draining to the basin, if more than 10 disturbed acres drain to a common point (stream, lake, property line, etc.)
- c. Sediment traps only used for drainage areas of less than 5 acres
- d. Sediment trap storage calculations, showing that 1800 ft³/ total acre draining to each trap is provided below the spillway
- e. If trapping efficiency calculations are required for sediment traps, then provide peak outflow, q_{po}, calculations; the 10-year, 24-hour storm event for construction conditions cannot overtop the trap's spillway
- f. Sediment basins and traps designed for total area draining to them
- g. Drainage area map outlining the area draining to each basin/ trap
- h. Copies of figures used to determine V15 (SV-1) and trapping efficiency (ST-1, SB-1, SB-2), if Design Aids from BMP manual are used to determine trapping efficiencies
- i. Silt fence only used in areas with drainage areas of less than ¼ acre per 100 LF of fence and not used in areas with concentrated flows
- j. Clean-out stake, marked at ½ the designed sediment storage depth, provided in all sediment basins/ sediment traps

Note 1: Consult the SCDHEC BMP Handbook for information on the design of these and other devices at http://www.scdhec.gov/environment/ocrm/pubs/docs/SW/BMP_Handbook/BMP_Handbook.pdf

Note 2: The Design Aids in the BMP Handbook cannot be used to determine trapping efficiencies for structures in series. If the flow for the 10-year, 24-hour storm for construction conditions overtops the structure or the structure's spillway, then the Design Aids cannot be used. If multiple soil types are in the area

draining to the structure, then the soil type with the smallest D15 for the appropriate depth should be used to determine the settling velocity, V15; an average D15 should not be used.

Note: SedCAD users please see Appendix M for a copy of a memo from SCDHEC regarding the input of outlet structures

16. Stable Channel Calculations

- a. All channels and diversion ditches must be able to handle the 10-year storm event with non-erosive velocities of less than 5 feet per second during construction (use appropriate CN for disturbed areas) and post-construction. If velocity exceeds 5 ft/s, then permanent measures to reduce the velocity to a non-erosive rate must be provided.
- b. Rock check dams provided in temporary diversions
- c. Installation detail for erosion control blanket (ECB) or turf reinforcement matting (TRM) if ECBs or TRMs to be used

17. Inlet Protection

- a. Provided at all inlets
- b. Hay bales cannot be used
- c. Steel posts and buried fabric shown for filter fabric inlet protection
- d. Inlet protection details provided for pre-paving and after roadways have been paved

Note: It is recommended that an inlet not have more than one (1) acre draining to it.

18. Energy Dissipators/ Outlet Protection

- a. All outlets stabilized
- b. Riprap aprons sized appropriately
- c. Riprap detail shows apron dimensions and stone sizes for each pad or each pipe diameter
- d. Filter fabric must be installed beneath all riprap

19. Fill Slopes And/ Or Embankments

- a. All slopes stabilized
- b. Slope drains designed in accordance with the SCDHEC BMP Handbook
- c. Slope drains provided where concentrated flows discharge onto a fill slope
- d. For all slopes steeper than 1.5:1, identification of stabilization practice (e.g., ECB, TRM)

Note 1 : Measures, in addition to grassing or hydroseeding, include synthetic or vegetative matting, diversion berms, temporary slope drains, etc.

Note 2: If retaining walls or fill slopes are to be constructed at the downstream property line, a 10' buffer to allow for construction and maintenance is recommended. If a 10' buffer is not provided, then provide permission from the adjacent property owner for possible land-disturbing activities on his property.

20. Utility Lines

- a. Limits of disturbance include areas disturbed for water and sewer line installation
- b. Inlet protection provided at all existing inlets that receive flows from the disturbed areas; also add this as a note on the plans
- c. For all utility lines crossing Waters of the State, narrative and detail showing sediment and erosion control measures provided on plans
- d. Note for construction entrances to be provided at all locations where construction traffic accesses a paved roadway

21. **TMDL/ 303d Impaired Waterbodies**

- a. List the nearest S.C.DHEC Water Quality Monitoring Station (WQMS) that the site's stormwater discharges drains to and the waterbody on which it is located:
- b. For Sites with storm water discharges to a receiving water that is listed as impaired in South Carolina's 303(d) List of Impaired Waters the following requirements apply:

► If a TMDL that is applicable to stormwater construction discharges **HAS BEEN** established and is in effect, the following requirement must be met:

- i. You are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is a total maximum daily load (TMDL) in effect that is applicable stormwater construction discharges unless you incorporate into your SWPPP measures or controls that are consistent with the assumptions and requirements of such TMDL. To be eligible for coverage under this general permit, you must incorporate into your SWPPP any conditions applicable to your discharges necessary for consistency with the assumptions and requirements of such TMDL. If a specific wasteload allocation has been established that would apply to your discharge, you must incorporate that allocation into your SWPPP and implement necessary steps to meet that allocation.
- ii. In a situation where a TMDL has specified a general wasteload allocation applicable to construction storm water discharges, but no specific requirements for construction Sites have been identified in the TMDL, you should consult with the SCDHEC or Pickens County to confirm that adherence to a SWPPP that meets the requirements of the Construction General Permit will be consistent with the TMDL. Where a TMDL has not specified a wasteload allocation applicable to construction storm water discharges, but has not specifically excluded these discharges, adherence to a SWPPP that meets the requirements of the CGP will generally be assumed to be consistent with the approved TMDL. If the TMDL specifically precludes such discharges, the Operator is not eligible for coverage under the CGP.

► If a TMDL **HAS NOT BEEN** established or is not in effect,

You must ensure that your SWPPP does not allow storm water discharges that will contribute

to the violations of the water quality standards. To accomplish this, you must:

- i. First determine whether or not your discharge may contain any pollutant that has caused the impairment.
- ii. If your storm water discharges will not contain the pollutant(s) of concern, no additional requirements are necessary.
- iii. If your discharge will contain the pollutant(s) of concern, you must carefully evaluate your selected BMPs and their performance to ensure that stormwater discharges will not contribute to or cause a violation of water quality standards. For Projects that disturb 25 acres or more, your SWPPP must contain a written quantitative and qualitative assessment that the BMPs selected will control your stormwater discharges so that they will not contribute to or cause a violation of water quality standards. For more information on this subject, please see the SCDHEC publication entitled “Antidegradation for Activities Contributing to NonPoint Source Pollution to Impaired Waters.” This publication can be downloaded at the following DHEC WEB site:

www.scdhec.gov/eqc/water/pubs/antidegnps.pdf

A copy of the most current 303(d) List of Impaired Waters can be obtained from:

Water Quality Division Bureau of Water SC DHEC 2600 Bull Street Columbia, SC 29201

or

it can be downloaded at the following DHEC WEB site:

<http://www.scdhec.gov/water/tmdl/>

- c. Evaluation of selected best management practices (BMPs) if nearest water quality monitoring station (WQMS) listed on the most recent 303(d) List of Impaired Waters and if site’s stormwater construction discharges contain the pollutant of impairment and if site disturbs less than 25 acres
- d. If an approved TMDL has been developed for nearest WQMS and if site’s stormwater construction discharges contain the pollutant of impairment, show that measures and controls on SWPPP met assumptions and requirements of TMDL (may need to contact Watershed Manager for assistance)

22. Navigable Waters

Provide an extra plan sheet showing impacts to navigable water and description of the activity if a S.C. Navigable Waters (SCNW) crossing will take place and a separate SCNW permit has not been obtained for all activities

Note: For applications submitted to Pickens County, if the project has SCNW crossing and if separate SCNW permit has not been obtained for this crossing, then this item must be reviewed by S.C. DHEC before NPDES coverage will be granted.

23. Site Plans Checklist

Revised June 2007

Note: A phased sediment and erosion control plans for large or complicated projects may be required.

- a. Location map with site outlined on first plan sheet (map should have enough detail to identify surface Waters of the State within 1 mile of the site)
- b. North arrow and scale
- c. Property lines and adjacent landowners' names
- d. Legend
- e. Registered engineer's signed and dated seal
- f. Engineering Firm's Certificate of Authorization seal
- g. Existing and proposed contours for entire disturbed area
- h. Limits of disturbed area
- j. Locations of off-site material, waste, borrow, or construction equipment storage areas, excluding roll-off containers (Note: Some off-site disturbed areas may require a separate application for NPDES coverage)
- d. Location and identification of any stormwater discharges associated with industrial activity (not construction)
- e. Delineation of Waters of the State, including wetlands (see checklist item 7)
- f. Easements
- g. Road profiles with existing and proposed ground elevations (if no contours are shown on the plans)
- h. Grassing and stabilization specifications (temporary and permanent)
- i. Construction sequence (implementation of all stormwater and sediment controls in the first phase of construction; ensure that basins, traps, ponds, etc. can be installed before the area draining to them is cleared and grubbed)
- j. Standard notes (see 24 below)
- k. Temporary and permanent control measures (provide details of all sediment and erosion control measures used; make sure the label or legend on the plans matches the name on the detail)

Note: Maintenance requirements for each BMP should be listed on the detail sheet.

Note: If details from the BMP Handbook are used, then the inspection frequency must be changed to be in accordance with the new Construction General Permit (see #24 - Standard note 3).

24. Standard Notes

1. If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
2. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction

activities have temporarily or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as stated below. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable. Where construction activity on a portion of the Site is temporarily ceased, and earth-disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the Site.

3. All sediment and erosion control devices shall be inspected every seven (7) days. If site inspections identify BMPs that are damaged or are not operating effectively, maintenance must be performed as soon as practical or as reasonably possible and before the next storm event whenever practicable.

OR

All sediment and erosion control devices shall be inspected at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. If site inspections identify BMPs that are damaged or are not operating effectively, maintenance must be performed as soon as practical or as reasonably possible and before the next storm event whenever practicable.

4. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized with grassing immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove any sediments before being pumped back into any waters of the State.

5. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.

6. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from construction areas and the generation of dust. The contractor shall daily remove mud/soil from pavement, as may be required.

7. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with S.C Reg. 72-300 et seq. and SCR100000.

8. Temporary diversion berms and/or ditches will be provided as needed during construction to protect work areas from upslope runoff and/or to divert sediment-laden water to appropriate traps or stable outlets.

9. All waters of the State (WoS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WoS. A 10-foot buffer should be maintained between the last row of silt fence and all WoS.

10. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.

25. Landscaping Plan

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

- i. Tree saving or planting plan.
- ii. Types of vegetation that will be used for stream bank stabilization, erosion control, sediment control, aesthetics and water quality improvement.
- iii. Any special requirements related to the landscaping of the drainage system and efforts necessary to preserve the natural aspects of the drainage system.

26. Safe Dams Act

Under the Safe Dams Act, a dam is an artificial barrier that does or may impound water and that is 25 feet or greater in height or has a maximum storage volume of 100 acre-feet or more. A number of exemptions are allowed from the Safe Dams Act and any questions concerning a specific design or application should be addressed to the South Carolina Department of Health and Environmental Control. The applicant shall obtain and provide a copy of a South Carolina Dam Safety Permit or a letter stating that a Dam Safety Permit is not required if the development includes a dam before the applicant requests or obtains a Stormwater Permit.

D. Stormwater Management Facilities

- a. Storm water management facilities may include both structural and non- structural elements. Natural swales and other natural runoff conduits shall be retained where practicable.
- b. Where additional storm water management facilities are required to satisfy the minimum control requirements, the following measures are examples of what may be used in their order of preference:
 - Storm water detention structures (dry basins);
 - Storm water retention structures (wet ponds);
 - Facilities designed to encourage overland flow, slow velocities of flow, and flow through buffer zones;
 - Infiltration practices.

c. The County can reject drainage plans if they incorporate structures and facilities that will demand considerable maintenance and will be difficult to maintain.

E. Sedimentology

a. Land Disturbing Activities with less than one disturbed acre unless otherwise exempt

The person or entity responsible for any land disturbing activity that disturbs less than one acre of land, and is not part of a larger common plan development or sale, is not required to obtain a land disturbing permit but must maintain best management practices and not be in violation of the Clean Water Act.

When applying for a building permit, the property owner or person financially responsible must certify the types of best management practices that will be used during construction. *See Appendix C*

b. Sites With Greater Than One Disturbed Acre

Land disturbing activities that disturb one acre or greater is required to apply for a land disturbing permit. Each application for land disturbing activities of one acre or greater or less than one acre if it is part of a larger common plan for development or sale that would ultimately disturb one acre, shall be accompanied by:

- ⇒ A Stormwater Management Plan (SWMP) providing for stormwater management during the land disturbing activity and after the activity has been completed.
- ⇒ A Sediment and Erosion Control plan.

Professionally certified site plans, erosion and sediment control plans, specification, and supporting calculations and computations shall be submitted and stamped/sealed by a professionally licensed engineer, landscape architects or Tier B land surveyors.

Each application for a land disturbance permit (See Appendix C and D) shall be accompanied by payment of the appropriate fee (See Appendix G), which shall be set by resolution or ordinance.

F. Water Quality Requirements

At a minimum, permanent water quality must be addressed on all projects or larger common plans of development that disturb five (5) or more acres.

(A) Treatment

All stormwater runoff generated from a site shall be adequately treated before discharge. It will be presumed that a stormwater management system complies with this requirement if:

- (1) It is sized to treat the prescribed water quality treatment volume from the site, as defined in this Design Manual;
- (2) Appropriate structural stormwater controls or nonstructural practices are selected, designed, constructed or preserved, and maintained according to the specific criteria in the SCDHEC BMP Handbook ; and,

Runoff from hotspot land uses and activities identified by Pickens County are adequately treated and addressed through the use of appropriate structural stormwater controls, nonstructural practices and pollution prevention practices.

(B) **Stream Channel Protection**

Protection of stream channels from bank and bed erosion and degradation shall be provided by using the following approaches:

- (1) Preservation, restoration and/or reforestation (with native vegetation) of the applicable stream buffer;
- (2) Erosion prevention measures such as energy dissipation and velocity control.
- (3) Waters of the U.S./State are not used for permanent water quality control (alternative means of treatment must be used if an existing pond is to be used for water quantity control.)

(C) **Structural Stormwater Controls**

All structural stormwater management facilities shall be selected and designed using the appropriate criteria from the SCDHEC Stormwater BMP Handbook. This handbook can be downloaded from the SCDHEC web page at http://www.scdhec.gov/environment/ocrm/pubs/docs/SW/BMP_Handbook/BMP_Handbook.pdf or contact the Pickens County Stormwater Office . All structural stormwater controls must be designed appropriately to meet their intended function. For other structural stormwater controls not included in this Manual, or for which pollutant removal rates have not been provided, the effectiveness and pollutant removal of the structural control must be documented through prior studies, literature reviews, or other means and receive approval from Pickens County before being included in the design of a stormwater management system. In addition, if hydrologic or topographic conditions, or land use activities warrant greater control than that provided by the minimum control requirements, Pickens County may impose additional requirements deemed necessary to protect upstream and downstream properties and aquatic resources from damage due to increased volume, frequency, and rate of stormwater runoff or increased nonpoint source pollution loads created on the site in question.

Applicants shall consult the SCDHEC BMP Handbook for guidance on the factors that determine site design feasibility when selecting and locating a structural stormwater control.

(D) **Drainage System Guidelines**

Stormwater conveyance facilities, which may include but are not limited to culverts, stormwater drainage pipes, catch basins, drop inlets, junction boxes, headwalls, gutter, swales, channels, ditches, and energy dissipaters shall be provided when necessary for the protection of public right-of-way and private properties adjoining project sites and/or public right-of-ways. Stormwater conveyance facilities that are designed to carry runoff from more than one parcel, existing or proposed, shall meet the following requirements:

- (1) Methods to calculate stormwater flows shall be in accordance with the Stormwater Design Manual;
- (2) All culverts, pipe systems and open channel flow systems shall be sized in accordance with the

stormwater management plan using the methods included in the SCDHEC Stormwater BMP Handbook; and,

- (3) Design and construction of stormwater conveyance facilities shall be in accordance with the criteria and specifications found in the SCDHEC Stormwater BMP Handbook.

(E) Retention/Detention Basin

When a stormwater retention/detention basin is required on a site, and the total land disturb area of the project is five (5) or more acres, water quality requirements must be incorporated into the basin design. Dry basins must be designed to catch and release the first inch of runoff from the entire area draining to the basin and release it over a 24-hour period. Wet basins must be designed to catch and release the first half-inch of runoff from the entire area draining to the basin and release it over a 24 hour period. If a project disturbs more than 25 acres and the stormwater discharges directly into an impaired waterbody listed on the State's 303(d) List, Pickens County must have assurance that stormwater runoff from the site will not cause or contribute to further degradation of the waterbody.

(F) Dam Design Guidelines

Any land disturbing activity that involves a site, which proposes a dam, shall comply with the South Carolina Safe Dams Act and Rules for Dam Safety as applicable.

Section 6 Ownership and County Participation

Stormwater Drainage Policy

The following policies apply to unpolluted stormwater (clear runoff). Stormwater carrying silt or any other pollutant is the responsibility of the property owner releasing the pollutant.

The county will have the responsibility for stormwater under these conditions:

- Inadequate crossroad piping on a county road or right-of- way.
- Inadequate or poorly maintained storm drains on county right-of-way
- Inadequate or poorly maintained ditches on county right-of-way
- Drainage from county property or right-of-way

The county will not be responsible for these stormwater conditions:

- Water that crosses county property or right-of way
- Privately owned stormwater retention basins or structures
- Stormwater in excess of a 25 year rainfall event
- Drainage problems originating on private road or private property

a. All stormwater management facilities shall be privately owned and maintained unless the County accepts the facility for County ownership and maintenance. The owner of all private facilities shall grant to the County, a perpetual, non-exclusive easement that allows for public inspection and emergency repair.

b. All storm water management measures relying on designated vegetated areas or special site features shall be privately owned and maintained as defined on the drainage plan.

c. When Pickens County determines that additional storage capacity beyond that required by the applicant for on-site storm water management is necessary in order to enhance or provide for the public health, safety and general welfare, to correct unacceptable or undesirable existing conditions or to provide protection in a more desirable fashion for future development, the County may:

(i) Require that the applicant grant any necessary easements over, through or under the applicant's property to provide access to or drainage for such a facility;

(ii) Require that the applicant attempt to obtain from the owners of property over, through or under where the storm water management facility is to be located, any easements necessary for the construction and maintenance of same (and failing the obtaining of such easement the County may, at its option, assist in such matter by purchase, condemnation, dedication or otherwise, and subject to (c) below, with any cost incurred thereby to be paid by the County); and/or

(iii) Participate financially in the construction of such facility to the extent that such facility exceeds the required on-site storm water management as determined by the District for Public Services.

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

Section 7 Maintenance and Inspection

Maintenance

a. All stormwater management facilities shall be maintained by the owner(s) in such a manner as to maintain and enhance the general health, safety and welfare; to reduce and minimize damage to public and private property; to reduce and minimize the impact of such facilities on land and stream channel erosion; to promote the attainment and maintenance of water quality standards; and to maintain, as nearly as possible, the pre-development runoff characteristics of the area. All maintenance of privately owned stormwater management facilities shall be at the sole cost and expense of the owner(s) of such facilities.

b. It shall be unlawful for the owner or occupant of any property upon which a stormwater management facility is located, to fail to maintain the facility in such a manner that the facility creates a danger to the general health, safety and welfare. Should the owner fail to so maintain the stormwater management facility, this failure shall constitute a public nuisance.

c. If the county assists private owners with the design of stormwater management facilities, this does not imply any maintenance responsibilities by the county. The maintenance of all such facilities shall be the sole

responsibility of the property owner(s).

Inspection

- a. Inspection of the construction site shall occur to ensure BMPs are implemented and maintained in a timely manner as required and illustrated in the pre-, during, and post construction drawings or their approved modifications. Modifications, additions, and omission of BMPs required making a plan more effective is permitted. However, when BMPs are not installed as illustrated on the pre-, during, and post construction drawings or their modifications, the inspector must provide written justification in an inspection report as to why omissions and/or changes were allowed to occur.
- b. Inspectors shall make inspections as hereinafter required and either shall approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the Sediment and Erosion Control Plan as approved by Pickens County.
- c. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of Pickens County shall be maintained at the site during the progress of the work.
- d. After construction begins, inspections must be conducted at a minimum in accordance with one of the two schedules listed below. You must specify in your Stormwater Management Plan which schedule you will be following:
 - At least every 7 calendar days
 - At least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.
- e. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized.
- f. On a case-by-case basis any permittee who has coverage under the NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities permit maybe required to conduct inspections on a more frequent basis than prescribed above.
- g. Inspections must be conducted to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity. This person must be either the preparer of the Stormwater management plan or an individual who is under the direct supervision of the preparer of the approved SWPPP and who meets the requirements in this paragraph. Inspections may also be conducted by a person with a registration equivalent to the registration of the preparer of the SWPPP and who meets the qualifications of this paragraph or an individual who is under the direct supervision of the equivalent person and who meets the requirements in this paragraph or by a CEPSCI (Certified Erosion Prevention Control Inspector).

Section 8 Detection and Removal of Illicit Connections and Discharges and Improper Disposal

1. It shall be unlawful to use any stream or watercourse to carry off water from any kitchen sink, bathtub or privy, or to carry off any fluid of an offensive or dangerous nature. No water or refuse from any industrial, commercial or institutional process, including water used for heating or cooling, shall be discharged in any stream or watercourse by any person until such person has obtained the appropriate local, state and federal permits.
2. It shall be unlawful, either willfully or negligently, to injure, deface, mutilate, destroy, tamper or interfere with any county-owned property or any property used in the county's publicly owned storm water management system.
3. Building permits shall be required before the construction of any connection to the county's publicly owned storm water management system.
4. *Improper disposal.* It shall be unlawful for any person to discharge non-storm water to any storm water conveyance with the exception of the following:
 - water line flushing,
 - diverted stream flows,
 - rising ground water,
 - uncontaminated ground water infiltration (as defined at 40 CFR 35.2005 [20]) to separate storm sewers,
 - uncontaminated pumped ground water discharges from potable water sources
 - foundation drain
 - air conditioning condensation,
 - irrigation water,
 - springs,
 - water from crawl space pumps,

- footing drains,
 - lawn watering,
 - car washing at one's residence, not for hire,
 - flows from riparian habitats and wetlands,
 - dechlorinated swimming pool discharges,
 - street wash water, and
 - discharges from fire fighting.
5. *Litter and refuse control.* It shall be unlawful for any person to dump, throw, drop, leave, or in any way deposit any garbage, ashes, rubbish, paper, trash, litter, refuse, building materials, glass bottles, glass or cans: 1) on any property belonging to another; or 2) on or along any street, road, highway, curb, sidewalk or public right-of-way, except as required by the authorized and franchised garbage collector for that district. No person shall throw or deposit any refuse in any stream or other body of water within the boundaries of the county.
6. *Organic waste.*
- It shall be the duty of the property owner to keep grass clippings, leaves, tree and shrub clippings, stumps, organic materials or any other yard trash out of gutters, inlets, catch basins, and side ditches.
 - It shall be unlawful to place grass clippings, leaves, tree and shrub clippings, stumps, organic materials or any other yard trash in any street, storm drain, stream, storm water conveyance, or any other location where concentrated flows could wash such wastes into the storm sewer system.
 - Privies, pigpens and stables of all kinds shall be placed far enough away from any stream, ditch, drain, or other storm water conveyance that human or animal waste(s) will not run into them.
7. Prohibition of illicit connections.
- (a) The construction, use, maintenance or continued existence of illicit connections to the separate storm sewer system is prohibited.
 - (b) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or

prevailing at the time of connection.

8. Reduction of stormwater pollutants by the use of best management practices. Any person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the BMP 's necessary to prevent the further discharge of pollutants to the separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section.

Section 9 Spill response

a. The Director of Emergency Services or designee, or an authorized fire official, shall have the authority to summarily abate, control and contain hazardous materials that are emitted into the environment and endanger the health or safety of the general public or the environment. The Director of Emergency Services or designee, or an authorized fire official, shall have the authority to enter public or private property with or without the owner's consent, to respond to such hazardous materials emergencies. The Director of Emergency Services or designee, or authorized fire official, shall determine the type, amount and quantity of equipment and personnel required to adequately abate, control and contain all hazardous materials emitted into the environment.

b. The property owner and/or person responsible for the hazardous materials spill or release shall be held financially liable for the response, control, containment, equipment and materials costs, including legal fees, incurred by the county and supporting agencies. The property owner and/or person responsible for the hazardous material spill may provide personnel to assist abatement, removal and remedial measures, provided such personnel have been adequately equipped and trained pursuant to the requirements of local, state and federal laws. The county shall not be liable for the use of outside personnel. Assistance shall consist of any or all of the following:

- Informing Emergency Services Department personnel of all matters pertaining to the incident.
- Supplying emergency response plan information for the site.
- Supplying emergency response equipment, personnel and materials.

c. Charges for hazardous materials emergency response shall be based upon the actual costs of response, control, containment, equipment and materials, including legal fees.

- In fire incidents involving hazardous materials or exposure to hazardous materials, no fee will be assessed for resources normally associated with firefighting operations. Fees shall be assessed for those activities and resources associated with abatement, control and containment of the hazardous materials involvement or exposure.

Section 10 ADMINISTRATION AND INSPECTION

a. Inspection during construction

Pickens County shall periodically inspect the work completed under the approved Stormwater Management Plan. Upon completion of such work, he/she shall make a final inspection, and if the work has been carried out in accordance with the plan, he/she shall issue a letter of satisfactory completion upon receipt of the as-built drawings. Also, refer to Section 6 for inspection requirements to be performed by the owner/operator of the land disturbing activity.

b. Right of Entry

- Pickens County shall have the right of entry on or upon the property of any person subject to this article and any permit/document issued hereunder.
- Where a person has security measures in force requiring proper identification and clearance before entry onto the premises, the person shall make necessary arrangements with security guards so that, upon presentation of suitable identification, Pickens County Personnel will be permitted to enter without delay.
- Pickens county shall have the right to set up on the person's property such devices as are necessary to conduct sampling and/or metering of the person's operations as they relate to stormwater management.
- In cases where an imminent threat to the health or safety of the general public or the environment is suspected Pickens County shall inspect existing stormwater management facilities to determine if immediate action is necessary. Such inspection shall be made with or without the consent of the owner, manager, or signatory official. If such consent is refused, Pickens County may seek issuance of an administrative search warrant.

Section 11. Violations and Enforcement

(1). Violations It shall be unlawful for any person to violate any provision or fail to comply with any of

the requirements of this Ordinance. Any person who has violated or continues to violate the provisions of this ordinance, may be subject to the enforcement actions outlined in this section or may be restrained by injunction or otherwise abated in a manner provided by law.

In the event the violation constitutes an immediate danger to public health or public safety, Pickens County Personnel is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore property. Pickens County is then authorized to seek costs of the abatement

(A) Notice of Violation. Whenever Pickens County finds that any permittee or any other person discharging stormwater has violated or is violating the Stormwater ordinance or a permit or order issued hereunder, Pickens County may serve upon such person written notice of the violation. Within seven (7) working days of this notice, an explanation of the violation and a plan for the satisfactory correction and prevention there of, to include specific required actions, shall be submitted to the Stormwater Manager. Submission of this plan in no way relieves the discharger of liability for any violations occurring before or after receipt of the notice of violation.

The notice shall contain:

- i. The name and address of the owner or the applicant or the responsible person;
- ii. The address when available or a description of the building, structure or land upon which the violation is occurring, or has occurred;
- iii. A statement specifying the nature of the violation
- iv. A description of the remedial measures necessary to restore compliance with this ordinance and a time schedule for the completion of such remedial action;
- v. A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed; and,
- vi. A statement that the determination of violation may be appealed to the Pickens County Stormwater Board by filing a written notice of appeal within fifteen (15) days of service of notice of violation.

(B) Penalties

In the event the remedial measures described in the notice of violation have not been completed by the date set forth for such completion in the notice of violation, any one or more of the following actions or penalties may be taken or assessed against the person whom the notice of violation was directed. Before taking any of the following actions or imposing any of the following penalties, the Pickens County Office of Stormwater Management shall first notify the applicant or other responsible person in writing of its intended action, and

shall provide seven (7) working days (except in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient) to cure such violation. In the event the applicant or the responsible person fails to cure such a violation after such notice and cure period, Pickens County may take any one or more of the following actions or impose any one or more of the following penalties.

- (a) **Stop Work Order** –Pickens County may issue a stop work order which shall be served on the applicant or other responsible person. The stop work order shall remain in effect until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violation or violations described therein, provided the stop work order may be withdrawn or modified to enable the applicant or other responsible person to take the necessary remedial measures to cure such violation or violations. Initiation of land disturbing activity without obtaining a stormwater permit, unless otherwise exempt, will be issued a stop work order until such a stormwater permit is obtained.
- (b) **Withhold Certificate of Occupancy** – Pickens County Building Codes may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.
- (c) **Suspension, Revocation or Modification of Permit** – Pickens County may suspend, revoke or modify the permit authorizing the land development project. A suspended, revoked or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein, provided such permit may be reinstated [upon such conditions as the County may deem necessary] to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
- (d) **Civil Penalties** - In the event the applicant or other responsible person fails to take the remedial measures set forth in the notice of violation or otherwise fails to cure the violations described therein within ten days, or such greater period as Pickens County shall deem appropriate (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient) after the county has taken one or more of the actions described above, the Pickens County Stormwater Office may impose a penalty not to exceed \$1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.
- (e) **Criminal Penalties** - For intentional and flagrant violations of this ordinance, the Pickens

County Stormwater Office may issue a citation to the applicant or other responsible person, requiring such person to appear in court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed \$1,000 or imprisonment for 60 days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

Section 12. Appeals

- a. Appeals may be taken to the Pickens Stormwater Board by any person aggrieved by any personnel, department, board, or bureau of the County. The appeal must be filed within 15 days of the grievous action, by filing a complaint with the Pickens County Stormwater Board specifying the grounds of the appeal.
- b. The Board shall within 45 days from the date of the appeal meet for the hearing of the appeal or other matter referred to the board. At the hearing any party may appear in person by agent or by attorney.
- c. In exercising the above power, the Pickens County Stormwater Board may reverse or affirm, wholly or in part, or may modify the order, requirements, decision, or determination, and to that end shall have all the powers of the officer from whom the appeal is taken and may issue or direct the issuance of a permit.
- d. The chairman or, in his or her absence, the acting chairman, may administer oaths and compel the attendance of witnesses by subpoena. The Board shall keep minutes of its proceedings, showing the vote of each member upon each question, or if absent or failing to vote, indicating that fact, and shall keep records of its examinations and other official actions, all of which must be public record.