

Chapter 9.5

DRAINAGE AND STORMWATER MANAGEMENT*

* **Editors Note:** Ord. No. 37-2006/07, § 1, adopted August 16, 2007, superceded provisions set out as Appendix C. Per the city's request, these provisions have been redesignated as Ch. 9.5. Formerly, appendix C pertained to similar provisions. See Code Comparative Table for history of App. C.

Cross References: Building regulations, Ch. 7; mobile homes, Ch. 19; planning, Ch. 25; public buildings and property, Ch. 26; public roads and ways, Ch. 27; public utilities, Ch. 28; subdivisions ordinance, Ch. 28.6; flood damage prevention, Ch. 30.

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ARTICLE I.

GENERAL

DIVISION 1.

DEFINITIONS AND ABBREVIATIONS

Sec. 9.5-1. Definitions.

As used in this chapter, the following terms shall have the respective meanings ascribed to them:

Act or "the Act":

- (1) The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. 1251, et seq.

- (2) The South Carolina Stormwater Management and Sediment Reduction Act, as set forth in S.C. Code 1976, § 48-14-10, et seq., as amended.

Adverse impact: Significant negative impact to land, water and associated resources resulting from a land disturbing activity. The negative impact includes increased risk of flooding; degradation of water quality; increased sedimentation; reduced groundwater recharge; negative impacts on aquatic organisms; negative impacts on wildlife and other resources; and threatened public health.

Aesthetic water use: Water use for ornamental or decorative purposes such as fountains, reflecting pools, and waterfalls.

Alley: A minor way used for service access to the back or side of properties abutting on a street.

Applicant: A person, firm, governmental agency, partnership, or any other entity who seeks to obtain approval or a permit under the requirements of this chapter and who will be responsible for the land disturbing activity and related maintenance thereof.

Approval authority: South Carolina Department of Health and Environmental Control.

Approved: Accepted by the department director or his designated as meeting an applicable specification stated or cited in this regulation, or as suitable for the proposed use.

As-built plans or record documents: Set of engineering or site drawings that delineate the specific permitted stormwater management facility as actually constructed

Auxiliary water supply: Any water supply, on or available, to the premises other than the county's approved public potable water supply.

Backflow: The flow of water or other liquids, mixtures or substances, under positive or reduced pressure in the distribution pipes of a potable water supply from any source other than its intended source.

Backflow preventer: A device or means designed to prevent backflow or back-siphonage. Most commonly categorized as air gap, reduced pressure principle device, double check valve assembly, pressure vacuum breaker, atmospheric vacuum breaker, residential dual check, double check with intermediate atmospheric vent and barometric loop. (See Appendix I for an approved list).

Back-siphonage: The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

Best management practices (BMPs): A wide range of management procedures, schedules of activities, prohibitions of practices, maintenance procedures, and other management practices which have been demonstrated to effectively control or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Biochemical oxygen demand (BOD): The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures for five days at twenty degrees centigrade expressed as a concentration (mg/l).

Building: Any structure built for the support, shelter, or enclosure of persons, animals, chattels, or property of any kind. The term "building" shall be construed as if followed by the words "or parts thereof."

Clean Water Act: The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

COD (chemical oxygen demand): Used to measure the content of organic matter that is susceptible to oxidation by a strong chemical oxidant.

Combined sewer: A sewer receiving both surface runoff and sewage.

Commercial business: Any occupant's use of a building or structure for any retail trade, service, professional, office, amusement, entertainment, or similar purpose as defined by the county zoning ordinance or county code of laws and as specifically permitted within any business or commercial district under the zoning ordinance.

Conservation: A reduction in water use to prevent depletion or waste of the resource.

Construction activity: Activities subject to NPDES Construction Permits. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Contaminant: A substance that will impair the quality of the water to a degree that it creates a serious health hazard to the public leading to poisoning or the spread of disease.

Containment: A method of backflow prevention which requires a backflow preventer at the water service entrance.

County: Florence County or any duly authorized official acting on its behalf.

Credit: A conditional reduction in the amount of a stormwater service charge or other fees, rates, rentals, charges, fines, and penalties to an individual property based on: the provision and continuing presence of an effectively maintained and operational on-site stormwater system or facility; and/or continuing provision of a service or activity that reduces the stormwater utility's cost of providing stormwater management services and stormwater management systems and facilities; and/or on the direct discharge of runoff to a receiving water that is not operated, maintained, improved, and regulated, now or in the future, by the county.

Cross-connection: Any physical link or route that makes it possible for contamination to flow into the potable water system.

Designated watershed: A watershed designated by the county or other appropriate governmental jurisdiction and identified as having an existing or potential stormwater, sediment control, or nonpoint source

pollution problem.

Detached single-family dwelling unit: A developed land containing one structure which is not attached to another dwelling and which contains one or more bedrooms, with a bathroom and kitchen facilities, designed for occupancy by one family. Detached single-family dwelling units may include houses, manufactured homes, and mobile homes located on one or more individual lots or parcels of land. Developed land may be classified as a detached single-family dwelling unit despite the presence of incidental structures associated with residential uses such as garages, carports, or small storage buildings, or the presence of a commercial use within the dwelling unit so long as such use does not result in additional areas of impervious surfaces such as parking spaces, playgrounds, or structures or additions to the building which are used as offices, storage facilities, meeting rooms, classrooms, houses of worship, or similar nonresidential uses. Detached single-family dwelling units shall not include developed land containing: structures used primarily for nonresidential purposes, manufactured homes and mobile homes located within manufactured home or mobile home parks where the land is owned by others than the owners of the manufactured homes or mobile homes, or multiple dwelling unit residential properties.

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

Develop land: To change the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial, or institutional construction or alteration.

Developed land: Property altered from its natural state by construction or installation of more than 200 contiguous square feet of impervious surfaces as defined in this division.

Developer: A person undertaking, or for whose benefit, activities covered by these regulations are commenced and/or carried out.

Development: Any physical improvement of real estate under the guidelines and requirements of the Codes or Ordinances of Florence County; any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials.

- (1) A *minor development* is any development involving five or fewer lots and involving a land area of less than five acres and not requiring the construction or extension of any streets or other municipal/public utilities.
- (2) A *major development* is any development larger than a minor development.

DHEC: The South Carolina Department of Health and Environmental Control.

Domestic sewage: Liquid waste from bathrooms, toilet rooms, kitchens and home laundries.

Domestic water use: Water use for personal needs or for household purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Drainage: Surface water runoff; the removal of surface water or groundwater from lands by drains, grading, or other means which include runoff controls to minimize erosion and sedimentation during and after construction or development, the means for preserving water supply and the prevention or alleviation of flooding.

Drainage area: Area contributing runoff to a single point; that area in which all of the surface water runoff resulting from precipitation is concentrated into a particular stream.

Drainage system: Any previously existing or newly constructed drainage facility that conveys stormwater or surface runoff such as drainage ways, watercourses, storm drainage pipe, culverts, catch basins, sewers, specifically designed for stormwater, open ditches, swales with or without inverts, and all appurtenances thereto.

Drought alert phases are as follows:

- (1) *Moderate drought* occurs when the Palmer Index reaches the --1.50 to --2.99 range and moderate drought conditions have been verified by the best available information, and conditions indicate this situation is expected to persist.
- (2) *Severe drought* occurs when the Palmer Index reaches the --3.00 to --3.99 range and severe drought conditions have been verified by the best available information.
- (3) *Extreme drought* occurs when the Palmer Index reaches or falls below --4.00 and extreme drought conditions are verified by the best available information.

Drought response committee: A committee composed of state and local representatives, created for the purpose of coordinating responses to water shortages within drought management areas and making recommendations for action to the South Carolina Water Resources Commission and/or the governor.

Duplexes and triplexes: Developed land containing two (duplex) or three (triplex) attached residential dwelling units located on one or more parcels of land.

Easement: 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 affected by such easement.

Environmental protection agency, or EPA: The U.S. Environmental Protection Agency, or where appropriate, the term duly authorized official of said agency.

EPA pretreatment regulation: EPA regulation 40 CFR Part 403 titled, "General Pretreatment Regulations for Existing and New Sources of Pollution".

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

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

Essential water use: Water used specifically for firefighting and to satisfy federal, state, or local public health and safety requirements.

Even-numbered address: Street addresses, box numbers or rural route numbers ending in 0, 2, 4, 6, 8 or letters A through M; and locations without addresses.

Exemption: Land-disturbing activities that are not subject to the sediment and stormwater requirements contained in these regulations.

Federal Categorical Pretreatment Standard: Any regulation containing pollutant discharge limits promulgated by the environmental protection agency in accordance with section 307(b) and (c) of the Federal Clean Water Act which applies to a specific category of industry.

Flood: The temporary overflowing of water onto land which is usually devoid of surface water.

Garbage: Solid wastes from the preparation, cooking and dispensing of food and from the handling, storage, and sale of produce.

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

Group dwelling unit: A building or portion of a building occupied or intended for occupancy by several unrelated persons or families, but in which separate cooking facilities and sewer connections are not provided for such residents, persons or families. The term "group dwelling" includes the terms rooming house, institutional house, fraternity house, or sorority house. A hotel, motel, or tourist home shall not be deemed to be a group dwelling as herein defined. For computation of charges, three beds shall be computed as one unit.

Hazardous materials: Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Holding tank waste: Any waste from holding tanks such as vessels, chemical toilets, campers, trailers, septic tanks, and vacuum-pump tank trucks.

Hotel (including motel, tourist home, motor lodge, and tourist lodging): A building or buildings containing ten or more rooms intended or designed to be used or which are used, rented, or hired out to be occupied for sleeping purposes by transient and/or permanent guests, and where only a general kitchen and dining room are provided within the principal building or in an accessory building. ("Efficiencies" are considered to be dwelling units). For determination of rates, each room or series of rooms made available to the general public as a separate entity for overnight accommodation shall be classified as a rental unit.

Hydrologic response: The hydrologic response of a property is the manner and means whereby stormwater collects, remains, infiltrates, and is conveyed from a property. It is dependent on several factors including, but not limited to, the presence of impervious area, the size, shape, topographic, vegetative, and

geologic conditions of a property, antecedent moisture conditions, and groundwater conditions on a property.

Illegal or illicit discharge: An illicit discharge is defined as any discharge to a municipal/public separate storm sewer system (stormwater drainage system) that is not composed entirely of stormwater runoff (except for non-polluting discharges that may be allowed under a permit or by exemption).

Illicit connections: An illicit connection is defined as either of the following:

- (1) Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system, including but not limited to, any conveyances which allow any non-stormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system. This also includes any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or,
- (2) Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

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

Indirect discharge or discharge: The discharge or the introduction of pollutants from any nondomestic source into the POTW (including holding tank waste discharged into the system).

Industrial: Any occupant's use of a building or structure for any industrial or manufacturing purpose as defined and permitted in any industrial district within the county zoning ordinance or code of laws.

Industrial waste: The liquid waste from commercial and industrial processes and operations as distinct from domestic sewage.

Infiltration: The passage or movement of water through the soil profile.

Institutional water use: Water used by government, public and private educational institutions, public medians and rights-of-way, churches and places of worship, water utilities, and other lands, buildings, and organizations within the public domain.

Interference: The inhibition, or disruption of the POTW treatment processes, operations, or its sludge process, use, or disposal, which causes or contributes to a violation of any requirement of the POTW's NPDES or non-discharge permit or prevents sewage sludge use or disposal in compliance with applicable state and federal statutes, regulations, or permits.

Land disturbing activity: Any use of the land by any person such as clearing, grading, transporting,

filling or any other activity that results in a change in the natural cover or topography that may cause erosion and contribute to sediment and alter the quality and quantity of stormwater runoff.

Landscape water use: Water used to maintain gardens, trees, lawns, shrubs, flowers, athletic fields, rights-of-way and medians.

Land subdivision regulations: The land subdivision regulations of the county, however adopted/enacted.

Lot: A piece, parcel, tract, or plot of land intended as a unit for transfer of ownership or for development, the size of which shall be regulated by the county zoning ordinance and county code of laws, as amended.

Major drainage channels: All channels which drain an accumulation of primary and/or secondary drainage channels. These channels shall be the natural drainage channels of the watershed or man-made channels draining an area of one square mile or more.

Medical waste: Isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.

Mobile home dwelling unit: Any mobile home unit as defined in the county's mobile home regulations set out in the county's code of laws, as amended, and for the purposes of this chapter shall be considered as a one-family dwelling unit.

Mobile home park: A premises where one or more mobile homes are parked for living or sleeping purposes of [or] where spaces are set aside or offered for sale or rent for use by mobile homes for living or sleeping purposes, including any land, building, structure or facility used by occupants of mobile homes on such premises.

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

Multiunit structures: All structures having more than one living unit, rented, leased or purchased, and not specifically covered in the other definitions in this section. For computation of charges, five hospital beds shall be computed as one unit and three nursing home beds shall be computed as one unit.

Natural outlet: Any outlet in a water course, pond, ditch, lake or other body of surface water or groundwater.

Natural waterways: Waterways that are part of the natural topography. They usually maintain a continuous or seasonal flow during the year and are characterized as being irregular in cross-section with a meandering course. Construction channels such as drainage ditches shall not be considered natural waterways.

New source:

- (1) Any building, structure, facility, or installation from which there may be a discharge of pollutants, the construction of which commenced after the publication of proposed categorical pretreatment standards which will be applicable to such source if such standards are thereafter promulgated provided that:
 - a. The building, structure, facility, or installation is constructed at a site at which no other source is located; or
 - b. The building, structure, facility, or installation replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
 - c. The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an existing source at the same site.
- (2) Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility, or installation meeting the criteria of subsection (1)b. or c. above but otherwise alters, replaces, or adds to existing process or production equipment.
- (3) For purposes of this definition, construction of a new source has commenced if their owner or operator has:
 - a. Begun, or caused to begin as part of a continuous on-site construction program.
 1. Any placement, assembly, or installation of facilities or equipment; or
 2. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - b. Entered into a binding contractual obligation for the purchase of facilities or equipment intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this definition.

Noncontact cooling water: Water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

Nondomestic user: Any person who discharges, causes, or permits the discharge of wastewater from any facility other than a residential unit.

Nonerodible: A material, e.g., natural rock, riprap, concrete, plastic, etc., that will not experience surface

wear due to natural forces of wind, water, ice, gravity or a combination of those forces.

Nonpoint source pollution: Pollution contained in stormwater runoff from ill-defined, diffuse sources.

Non-stormwater discharge: Any discharge to the storm drain system that is not composed entirely of stormwater.

NPDES permit: National pollution discharge elimination system permit issued to the county pursuant to Section 402 of the Federal Clean Water Act.

One-family dwelling unit: A detached dwelling designated for or occupied exclusively by one family and owned or leased by the occupants on a continuing basis for 30 days or more per year.

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

Operator: For the purpose of this chapter and in the context of stormwater associated with construction activity, means any party associated with a construction project that meets either of the following two criteria:

- (1) The party has operational control over construction plans and specifications. Note: A party has "operational control over construction plans and specifications" if they have the authority to prepare or modify stormwater management and sediment control plans; or
- (2) The party has "operational control over day-to-day activities" at a project that are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions). This definition is provided to inform permittees of EPA's interpretation of how the regulatory definitions of "owner or operator" and "facility or activity" are applied to discharges of stormwater associated with construction activity.

Other developed lands: Shall mean, but not be limited to, multiple-dwelling residential unit properties, manufactured home and mobile home parks, commercial and office buildings, public buildings and structures, industrial and manufacturing buildings, storage buildings and storage areas covered with impervious surfaces, parking lots, parks, recreation properties, public and private schools and universities, research facilities and stations, churches, hospitals and convalescent centers, airports, agricultural uses covered by impervious surfaces, and water and wastewater treatment plants.

Outdoor uses: Aesthetic water use and water-based recreational uses such as swimming pools, water slides and other water related activities. Irrigation restricted to Wednesday and Saturday for odd-numbered addresses, Thursday and Sunday for even-numbered addresses.

Owner: Any person who has legal title to, or license to operate or occupies, a property upon which a cross-connection inspection is to be made or upon which a cross-connection is present.

Palmer Index: A measure of the severity of a drought or a wet spell, in an area. Dry conditions are

associated with negative values, wet conditions with positive values, and normal conditions have a value of zero.

Pass through: A discharge which exits the POTW into water of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's, NPDES permit (including an increase in the magnitude or duration of a violation).

Person: Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, joint venture, institution, commission, board, utility, cooperative, trust, estate, governmental entity or other legal entity, or their legal representatives, agents or assigns. This definition includes all federal, state, and local government entities.

Person responsible for the land disturbing activity:

- (1) The person who has or represents having financial or operational control over the land disturbing activity; and/or
- (2) The landowner or person in possession or control of the land who directly or indirectly allowed the land disturbing activity or has benefited from it or who has failed to comply with any provision of the act, these regulations, or any order or local ordinance adopted pursuant to this act as imposes a duty upon him.

pH: The logarithm (base 10) of the reciprocal of the weight of hydrogen ions in grams per liter of solution and indicates the strength of acidity or alkalinity of a substance. A pH value of 7.0 is considered neutral. A stabilized pH will be considered as a pH which does not change beyond the specified limits when the wastes are subjected to aeration. pH below 7.0 is acid, above 7.0 is alkaline.

Pollutant: Dredged spoil; solid waste; incinerator residue; sewage; garbage; sewage sludge; munitions; medical waste; chemical wastes; biological materials; radioactive materials; heat; wrecked or discarded equipment; rock; sand; cellar dirt; municipal, agricultural and industrial waste; and certain characteristics of wastewater (e.g. pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor). A foreign substance, that if permitted to get into the public water system, will degrade its quality so as to constitute a moderate hazard, or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such water for domestic use.

Post-development: The conditions that exist following the completion of the land disturbing activity in terms of topography, vegetation, land use and rate, volume or direction of stormwater runoff.

POTW director: Appropriate jurisdiction wastewater plant manager.

PPM: Parts per million by weight expressed in pounds. One million pounds of water and sewage equals approximately 120,000 gallons.

Pretreatment: The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or

otherwise introducing such pollutants into a POTW. The reduction or alteration can be obtained by physical, chemical or biological processes, or process changes or other means, except by diluting the concentration of the pollutants unless allowed by an applicable pretreatment standard.

Pre-development: The conditions that existed prior to the initiation of the land disturbing activity in terms of topography, vegetation, land use and rate, volume or direction of stormwater runoff.

Pretreatment program: The program for the control of pollutants introduced into the POTW from nondomestic sources which was developed by the county or appropriate authority in compliance with EPA pretreatment regulation and approved by the approval authority.

Pretreatment requirements: Any substantive or procedural requirement related to pretreatment other than a pretreatment standard.

Pretreatment standard: Prohibited discharge standards, categorical standards, and local limits.

Primary drainage channels: All drainage channels which drain an area of 200 acres or more.

Process wastewater: Any water which, during manufacturing or processing, comes into direct contact with or results from the production of or use of any raw material, intermediate product, finished product, byproduct, or waste product. Excluded are sanitary noncontact cooling water, and boiler blow down wastewaters.

Publicly owned treatment works (POTW): Treatment works which are owned by Florence County or other governmental jurisdiction. This includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal/public sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant.

Public sewer: A sewer in which all owners of abutting properties shall have equal rights and which is controlled by public authority.

Receiving stream: That body of water, stream or watercourse receiving the discharge waters from the sewage treatment plant or formed by the discharge of the sewage treatment plant.

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

Registered landscape architect: A landscape architect properly registered and licensed in South Carolina or permitted by the licensing board.

Registered professional engineer (engineer): A person who is registered by the State of South Carolina pursuant to S.C. Code 1976, Tit. 40, Ch. 22, as amended.

Registered tier B land surveyor: A person who is registered by the State of South Carolina pursuant to S.C. Code 1976, Tit. 40, Ch. 22, as amended.

Responsible personnel: Any foreman, superintendent, or similar individual who is the on-site person in charge of land disturbing activities.

Retention structure: A permanent structure whose primary purpose is to permanently store a given volume of stormwater runoff. Release of the given volume is by infiltration and/or evaporation.

Runoff: Portion of the precipitation on the land which reaches the drainage system.

Sanitary sewer: A sewer which carries sewage or polluted industrial waste and to which stormwater, surface water and groundwater or unpolluted industrial wastes are not intentionally admitted.

Secondary drainage channels: All drainage channels which drain an area of less than 200 acres and the primary benefit is to the development.

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

Septic tank: A private domestic sewage treatment system consisting of an underground tank, distribution box and drain field designed and constructed in accordance with any or all existing local and state requirements.

Sewage: A combination of the water-carried wastes from residences, business buildings, institutions and industrial establishments, together with such groundwater, surface water and stormwater as may be present.

Sewage system: All facilities for collecting, conveying, pumping, treating and disposing of sewage.

Sewage treatment plant: Any arrangement or device and structure for treating sewage.

Sewer: A pipe or conduit for carrying sewage.

Significant industrial user:

- (1) Any user subject to categorical pretreatment standards; or
- (2) A user that:
 - a. Discharges an average 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blowdown wastewater);
 - b. Contributes a process waste stream which makes up five percent or more of the average dry weather hydraulic or organic capacity on the POTW treatment plant; or
 - c. Is designated as such by the county on the basis that it has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.
- (3) Upon a finding that a user meeting the criteria above has no reasonable potential for adversely

affecting the POTW's operation or for violating any pretreatment standard or requirement, the county may at any time on its own initiative or in response to a petition received from a user, and in accordance with the procedures in 40 CFR 403, determine that such user shall not be considered a significant industrial user.

Single family residence-separately built: A noncommercial dwelling that is occupied exclusively by one family and not part of a residential and subdivision development; also referred to as detached single family.

Slug load: Any discharge to the POTW at a flow rate or concentration which would cause a violation of the prohibited discharge standards of this chapter.

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

Stop work order: An order directing the person responsible for the land disturbing activity to cease and desist all or any portion of the work that violates the provisions of this chapter.

Storm drain: A sewer which carries storm and surface waters and drainage, but excludes sewage and polluted wastes.

Storm drainage system: Publicly-owned facilities by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal/public streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

Storm drainage plan/site plan: The development plan for one or more lots which shows the existing and proposed conditions of the lot including: topography, vegetation, drainage, flood-plains, waterways, easements, streets and any other information pertaining to the proposed development of the storm drainage system. This site plan can be a part of the site plan required by the county zoning ordinance or county code of laws, as amended, for a zoning certificate and building permit.

Stormwater: Any surface flow, runoff, and drainage resulting from any form of natural precipitation.

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

Stormwater management and sediment control plan: A set of drawings, other documents, and supporting calculations submitted by a person as a prerequisite to obtaining a permit to undertake a land disturbing activity, which contains all of the information and specification required by the county.

Stormwater management services: Activities and functions conducted by the county that together result in the collection, conveyance, and disposal of stormwater runoff, including support activities and functions necessary to accomplish the mission of the stormwater management program, and shall include but not be limited to the administration, engineering, operation and maintenance, regulation and enforcement, and

improvement of systems and facilities, review of development proposals and of the installation and maintenance of stormwater systems on private properties, provision of stormwater quality management programs to eliminate or mitigate the impact of pollutants contained in stormwater runoff, and flood emergency response and recovery measures.

Stormwater management systems and facilities: Include, but are not limited to, rivers, streams, creeks, lakes, ponds, channels, ditches, swales, other drainage ways, storm sewers, culverts, inlets, catch basins, headwalls, dams, reservoirs and other impoundments, flumes, stormwater detention and retention storage areas, filters, riparian areas, plants, works, instrumentalities, properties, and other structural and nonstructural components that control, capture, collect, convey, route, restrict, store, detain, retain, infiltrate, cleanse, or otherwise affect or influence the flow of stormwater within the county and the quality of stormwater discharged from the county.

Stormwater pollution prevention plan: A document which describes the best management practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters to the maximum extent practicable. A stormwater pollution prevention plan means the same as a stormwater management and sediment control plan.

Stormwater utility: Administrative organization that has been created for the purposes of planning, designing, construct and maintaining stormwater management, sediment control and flood control programs and projects.

Stormwater service charges: The periodic service charge imposed pursuant to this division by the county for the purpose of funding costs related to stormwater management services and stormwater management systems and facilities. The use of the area of impervious surface on each property as a stormwater service charge rate parameter shall not preclude the use of other parameters, or of grouping of properties having similar characteristics into classes or categories, grouping of properties having similar characteristics through the use of ranges or rounding up or down to a consistent numerical interval, or the use of flat-rate charges for one or more classes of similarly-situated properties whose impact on county's cost of providing stormwater management services and stormwater management systems and facilities is relatively consistent. Stormwater service charges may also include special charges to individual properties or persons for services, systems, or facilities related to stormwater management, including but not limited to charges for development plan review, inspection of development projects and on-site stormwater control systems, and enhanced levels of stormwater service above and beyond the levels normally provided by the county.

Subdivider: Any person who divides or develops any land deemed to be a subdivision as herein defined.

Subdivision: Any division of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose, whether immediate or future, of sale, legacy, or building development, and includes any division of land involving a new street or a change in existing streets, and includes re-subdivision and, where appropriate, related to the process of subdividing, or to the land or area subdivided.

Suspended solids: Solids that either float on the surface of or are in suspension in water, sewage, or other liquids, and which are removable by laboratory filtering.

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

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

Townhouse: One or more buildings containing three or more single-family units with common walls and having one sewer connection for each unit.

25-year frequency storm: A storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in 25 years. It also may be expressed as an exceedence probability with a four percent chance of being equaled or exceeded in any given year.

Two-family dwelling unit: A detached or semidetached dwelling designed for or occupied exclusively by two families living independently of each other and owned or leased by the occupant on a continuing basis for 30 days or more per year.

Two-year frequency storm: A storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in two years. It may also be expressed as an exceedence probability with a 50 percent chance of being equaled or exceeded in any given year.

Undeveloped land: Land in an unaltered natural state or which has been modified to such minimal degree as to have a hydrologic response comparable to land in an unaltered natural state shall be deemed undeveloped. Undeveloped land shall have no pavement, asphalt, or compacted gravel surfaces or structures which create an impervious surface that would prevent infiltration of stormwater or cause stormwater to collect, concentrate, or flow in a manner materially different than that which would occur if the land was in an unaltered natural state.

Upset: An exceptional incident in which there is unintentional and temporary noncompliance with pretreatment standards because of factors beyond the reasonable control of the user. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, maintenance, or careless or improper operation.

User: Any person who contributes, causes or permits the contribution of wastewater into the county's POTW including persons who contribute such wastes from mobile sources.

Variance: The modification of the minimum sediment and stormwater management requirements for specific circumstances where strict adherence of the requirements would result in unnecessary hardship and not fulfill the intent of these regulations.

Waiver: The relinquishment from sediment and stormwater management requirements by the appropriate plan approval authority for a specific land disturbing activity on a case-by-case review basis.

Water quality: Characteristics of stormwater runoff from a land disturbing activity that relate to the physical, chemical, biological, or radiological integrity of water.

Water quantity: Characteristics of stormwater runoff that relate to the rate and volume of the stormwater runoff to downstream areas resulting from land disturbing activities.

Water service entrance: That point in the owner's system beyond the sanitary control of the district, generally considered to be the outlet end of the water meter and always before any unprotected branch.

Watershed: The drainage area contributing stormwater runoff to a single point.

Water shortage: Lack of adequate available water to meet normal demands due to lower than normal precipitation, reduced stream flows or soil moisture, and/or lowering of the potentiometric surface in wells which causes water supplies to be less than usual.

Wastewater:

- (1) The liquid and water-carried industrial or domestic wastewater from dwellings, commercial buildings, industrial facilities, mobile sources, treatment facilities and institutions, together with any groundwater, surface water and stormwater that may be present, whether treated or untreated, which are contributed or permitted to enter the POTW.
- (2) Any water or other liquid, other than uncontaminated stormwater, discharged from a facility.

Wastewater contribution permit: A permit issued to significant industrial users specifying term and conditions for discharge of industrial wastewater to the POTW.

Zoning ordinance: The officially adopted zoning ordinance of the county or county code of laws, as amended.
(Ord. No. 37-2006/07, § 1.1.1, 8-16-07)

Sec. 9.5-2. Abbreviations.

The following abbreviations when used in this chapter shall have the designated meanings:

BOD--Biochemical oxygen demand.

CFR--Code of Federal Regulations.

COD--Chemical oxygen demand.

EPA-- Environmental protection agency.

gpd--Gallons per day.

l--liter

mg--Milligrams

mg/l--Milligrams per liter.

NPDES--National pollution discharge elimination system.

O & M-- Operation and maintenance.

POTW--Publicly owned treatment works.

ppm--Parts per million.

RCRA--Resource Conservation and Recovery Act.

SIC--Standard industrial classification.

SWDA--Solid Waste Disposal Act, 42 U.S.C. 6901, et. seq.

TKN--Total Kjeldahl Nitrogen.

TSS--Total suspended solids.

USC--United States Code.

(Ord. No. 37-2006/07, § 1.1.2, 8-16-07)

Secs. 9.5-3--9.5-15. Reserved.

DIVISION 2.

GENERAL

Sec. 9.5-16. Finding of fact.

The county council finds and declares that the matters set forth in the recitals hereof are in all respects correct.

(Ord. No. 37-2006/07, § 1.2.1, 8-16-07)

Sec. 9.5-17. Emergencies not covered.

The county through its duly qualified officers reserves the right to take such immediate action for emergencies not specifically covered herein, as it may deem necessary in the interest of the public health and safety and further reserves the right to amend this chapter in part or whole, whenever it may deem necessary, but such right will be exercised only in the manner established or prescribed for such matters, including but not limited to public notice 90 days prior to final action.

(Ord. No. 37-2006/07, § 1.2.2, 8-16-07)

Secs. 9.5-18--9.5-25. Reserved.

ARTICLE II.

DRAINAGE AND STORMWATER MANAGEMENT

DIVISION 1.

GENERALLY

Sec. 9.5-26. Drainage.

(a) *Requirement for drainage system:* Every proposed development must have a drainage system which shall be designed by a registered engineer and constructed by the developer to provide for the proper drainage of surface water of the development and the drainage area of which it is a part; to permit the unimpeded flow of natural watercourses, and to provide positive drainage away from on-site sewage disposal facilities. The subdivider/developer's responsibility shall include those drainage facilities to discharge such developer's storm runoff to an existing facility outside the secondary area capable of receiving said runoff with no adverse effects.

(b) *Drainage study required for major developments:* A drainage study and report shall be prepared by a registered engineer engaged by the developer. This report shall include both existing and proposed drainage conditions and shall include an evaluation of the ability of the proposed drainage facilities and other improvements pertaining to drainage or flood control within the development to handle the runoff which would be generated by the development. The report will also contain a section devoted to the analysis of the downstream drainage facilities and its ability to handle the existing flow and the increased flow from the development. The report shall also contain the following items:

- (1) Calculated estimates of the quantity of stormwater entering the development naturally; also, estimates of such water when the upper watershed area shall have been developed for the maximum land use permitted under the official land use plan.
- (2) Existing conditions of the watershed that may affect the proposed development, such as subsoil type, positive drainage channels, obstructions and the like.
- (3) Quantities of flow at each pickup point.
- (4) Estimates of temporary erosion and pollution controls necessary while the development is under construction.
- (5) Description of major, primary and secondary systems. The report shall include an evaluation of proposed facilities under both frequent and infrequent storms. (ten-year, 25-year, 50-year, 100-year). The Flood Insurance Study, Florence County, S.C., Federal Emergency Management Agency, June 1, 1981, and Flood Plain Information, Florence, S.C., U.S. Army Corps of Engineers, October, 1967, shall be considered as information and utilized where applicable.
- (6) Drainage analysis for minor developments. Minor development projects as defined in article I of

this chapter shall also be studied in order to determine the adequacy of any existing storm drainage systems or the effect of proposed improvements. The county engineer may require as much or as little of the above information as needed to conduct an appropriate drainage analysis of the site plan, grading plan, or storm drainage analysis of the site plan, grading plan, or storm drainage plans submitted to the county as part of the requirements of the site plan needed for a zoning certificate and building permit. The county engineer may waive the requirement that a registered professional engineer conduct the drainage study for minor developments.

(c) *Avoiding runoff problems:* In designing storm drainage facilities, special consideration shall be given to the avoidance of problems which may arise from concentration of stormwater runoff onto adjacent developed or undeveloped properties.

(d) *Handling anticipated peak discharges:* Storm drainage facilities shall be designed not only to handle the anticipated peak discharge from the property being developed, but also the anticipated increase in runoff that will occur when all property at a higher elevation in the same drainage area is fully developed.

(e) *Connection to underground facilities:* In those instances when underground piped storm drainage facilities are reasonably accessible to the proposed development, the developer shall connect such developer's on-site drainage system to the county's system based on standard storm drainage design practices or other special design standards deemed necessary by the county engineer.

(f) *Drainage easement criteria:* Drainage easements shall be provided in accordance with the following criteria:

(1) Where development is traversed by a drainage facility, adequate areas for storm drainage, including ponding, shall be allocated, conforming substantially with the lines of such drainage facility, and of sufficient width to carry off storm drainage and provide for maintenance and improvement of the drainage facility. Adequate access for maintenance and equipment will be required. Generally, for underground storm drain pipe, the minimum width of the easement shall be not less than 20 feet or the outside diameters of the pipes in feet plus eight feet each side of the pipe whichever is greater. Where open improved drainage channels, paved or unpaved, are permitted, the width of the easement shall be a minimum of three feet on one side measured at the intersection of the existing ground and channel cut plus the width of the channel at the top or ground level, plus 15 feet on the opposite side to allow equipment to enter for maintenance operations. Depending on the design of the paved channel, this requirement may be reduced to not less than ten feet on one side.

(2) The location of any surface or underground drainage facilities shall not be changed without the approval of the county engineer.

(Ord. No. 37-2006/07, § 2.1.1, 8-16-07)

Sec. 9.5-27. Drainage system standards.

(a) *Street drainage may serve as a basic drainage system.* All streets may be provided with an adequate storm drainage system consisting of curbs, gutters, and storm sewers.

- (1) All streets shall be designed so as to carry the stormwater drainage of at least the street itself and adjacent property.
- (2) Curb drainage inlets shall be provided at appropriate intervals along streets with curb and gutter drainage facilities. These inlets shall connect to storm sewers and a drainage inlet structure with a protective grating shall be installed in accordance with standard specifications of the state department of highways and public transportation.
- (3) Inlet spacing and capacity shall be adequate to limit the spread of water into the street and to maintain pedestrian walks and street crosswalks free of standing water.
- (4) Where driveways connect to existing streets with side ditch drainage facilities, a culvert shall be provided under such driveway as required by the county engineer. The minimum pipe size is 15 inches and shall conform to standard specifications of the state department of highways and public transportation.
- (5) All streets having curb and gutter on which stormwater flows across intersections and/or driveways shall be provided with suitable cross-gutters at such intersections and driveways.

(b) *Off-street drainage:* The design of the off-street drainage system shall include the watershed affecting the subdivision and shall be extended to a watercourse or ditch adequate to receive the storm drainage and shall be designed in accordance with the following requirements:

- (1) When the drainage system is outside of the street right-of-way, the subdivider shall provide all required easements in accordance with section 9.5-27(f).
- (2) Open ditch drainage may be used, provided that such ditches are "V" ditches with side slopes not exceeding one to three (1:3) ratio, (one vertical to three horizontal) and a maximum depth of two feet. Where open ditches meeting these requirements are not adequate to provide satisfactory storm drainage, an underground piped system shall be installed as required by the county engineer. These open ditches shall be protected from erosion by either sodding or seeding as approved by the county engineer.
- (3) No open natural major storm drainage course shall be permitted within 75 feet of the rear or side of a building as measured from the building to the top of the edge of the drainage facility or vice versa, unless exceptional site planning opportunity is afforded and the improvement will not be jeopardized by flooding or erosion.
- (4) Off-street drainage from private parking lots or other buildings/uses shall be channeled to and collected at one or more catch basins located on the private property of the development and piped underground to any reasonably accessible existing storm drainage facility. Such surface storm runoff shall not be allowed to flow over public sidewalks.

(Ord. No. 37-2006/07, § 2.1.2, 8-16-07)

Sec. 9.5-28. Areas subject to flooding; floodplain management administrator.

The planning and development director shall be the floodplain management administrator for the county. (Ord. No. 37-2006/07, § 2.1.3, 8-16-07)

Sec. 9.5-29. Methods of calculating stream flow and runoff.

(a) Minimum design frequencies for calculating rainfall runoff shall be as outlined below:

Residential	25 years
Light industrial and commercial	25 years
Heavy industrial and high-value commercial	50 years
Flood protection works	100 years

(b) Variance in design frequency shall depend upon the density of development, existing and expected; value of development; and cost effectiveness of design. Minimum design frequency may be used if approved by the county engineer. The following formula and values may be used for calculating all stream flow and runoff for the policies and regulations established herein:

(1) Runoff from drainage areas of 20 acres or less may be determined by the "Rational Formula":

$$Q=C*I*A$$

Q	=	Stormwater runoff in cubic feet per second (cfs) at a specified point and time.
C	=	Coefficient representing the ratio of stormwater runoff to rainfall over the tributary area based on imperviousness of area, ground slope, and ground storage. Coefficients may vary from 0.15 to 0.95. Coefficients of less than 0.5 may be used if individual calculations are submitted with plans to the county engineer.
I	=	Average rainfall intensity in inches per hour over the tributary drainage area for the period of time equal to the time of concentration and given frequency of occurrence.
A	=	Equals area to be drained in acres, determined by field surveys for areas less than 100 acres, and by latest government quadrangle maps for larger areas.

B	=	Runoff from drainage areas greater than 20 acres will be determined by use of hydrograph or other engineering methods as approved by the county engineer.
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- (2) The size of closed storm sewers, open channels, culverts, and bridges may be determined by using the "Manning Formula" which may be modified for use with runoff determined by the "Rational Formula" to:

$$Q=(1.486/n)*R^{2/3}*S^{1/2}*A$$

Q	=	Discharge in cubic feet per second.
A	=	Cross-sectional area of water in conduit in square feet.
R	=	Hydraulic radius of water in conduit.
S	=	Mean slope of hydraulic gradient in feet of vertical rise per foot of horizontal distance.
N =		Roughness coefficient.

- (3) The rational method may not be used for calculating flows for sizing stormwater detention/retention facilities or for any drainage areas greater than 20 acres. In these cases all hydrologic computations shall be accomplished using a volume based hydrograph method acceptable to the county.

(Ord. No. 37-2006/07, § 2.1.4, 8-16-07)

Sec. 9.5-30. Natural primary and/or major drainage channel requirements.

(a) All natural primary and/or major drainage channels which are located within or along the property line of an improvement, development or subdivision shall be protected and improved by the developer as follows:

- (1) The existing channel lying within or along the property line of the subdivision or parcel of land proposed for development or redevelopment shall be cleaned to provide for the free flow of water, and the channel shall be aligned, widened, and improved to the extent to prevent overflow resulting from a 50-year frequency rainfall, beyond the limits of the dedicated drainage easement provided for in section 9.5-26(f).
- (2) Site improvement shall provide for the grading of all building pads to an elevation where all building pads will not be subject to overflow from 100-year frequency flood and in a manner that will provide for a rapid runoff of stormwater.

- (3) Whenever channel improvements are carried out, sodding, back-sloping, cribbing, and other bank protection shall be designed and constructed to control erosion for the anticipated conditions and flow resulting from a 50-year frequency rainfall.
- (4) An existing natural drainage channel shall not be located in a street easement unless it is placed in an enclosed storm sewer except under the following conditions:
 - i. Where a paved street surface at least two lanes wide is provided on both sides of a paved channel so as to provide access to abutting properties.
 - ii. When a condition exists as outlined above, adequate space shall be dedicated as right-of-way to provide for maintenance of the paved drainage channel.
- (5) Culverts, bridges and other drainage structures shall be constructed in accordance with the specifications and design criteria of the county when the county shall have present or future maintenance responsibility.
- (6) No open natural storm drainage course shall be permitted within 75 feet of the rear or side of a building as measured from the building to the top of the edge of the drainage facility or vice versa, unless exceptional site planning opportunity is afforded and the improvement will not be jeopardized by flooding or erosion.

(Ord. No. 37-2006/07, § 2.1.5, 8-16-07)

Sec. 9.5-31. Secondary drainage channels and surface drainage requirements.

- (a) All secondary drainage channels which are within, or immediately adjacent to, an improvement, development or subdivision shall be protected and improved by the developer as follows:
 - (1) Secondary drainage channels which have a primary function of collecting surface water from adjacent properties or intercepting and diverting side hill drainage shall be underground and piped.
 - (2) Developments:
 - i. In single-family residential, duplex or apartment/townhouse/condominium development, site grading shall be carried out in such a manner that surface water from each dwelling lot will flow directly to a storm sewer, sodded swale, or paved street with storm drainage without crossing more than four adjacent lots in overland flow and with no adverse effects to adjacent property.
 - ii. In commercial, industrial and institutional development, roofs, paved area, yards, courts and courtyards shall be drained into a storm sewer system.
 - (3) Surface water collected on streets shall be diverted to storm drains at satisfactory intervals to prevent overflow of six-inch high curbs during a 25-year frequency rain for the area and grades involved. Design frequency may vary with the classification of street, highway, or land use in the

area. Drainage area allowed for surface flow on streets at point of diversion shall not exceed 20 acres, regardless of flow.

- (4) Drainage easement of satisfactory width to provide working room for construction and maintenance shall be provided for all storm sewers as detailed in section 9.5-26(f).

(Ord. No. 37-2006/07, § 2.1.6, 8-16-07)

Sec. 9.5-32. Major channel requirements.

(a) All major channels which are located outside the floodplain area as defined by the federal emergency management agency's flood insurance study and maps, or the U.S. Army Corps of Engineers, whichever is most appropriate to the situation, and which are located within or immediately adjacent to an improvement or subdivision shall be protected and improved by the developer as follows:

- (1) The existing channel shall be cleaned to provide free flow of water, straightened, widened, levied or diked, or otherwise improved to the extent required to prevent overflow from a 50-year frequency flood.
- (2) Site improvements shall be in accordance with the provisions of the county's adopted zoning ordinance.

(Ord. No. 37-2006/07, § 2.1.7, 8-16-07)

Sec. 9.5-33. Bridge and culvert requirements.

All flow of water across continuous streets or alleys shall be through culverts or bridges. Bridges and culverts shall be sized to accommodate a 50-year frequency rain. Design of bridges and culverts shall conform to county and construction specifications of the state department of highways and public transportation, and approved by the county engineer.

(Ord. No. 37-2006/07, § 2.1.8, 8-16-07)

Sec. 9.5-34. Closed storm sewer.

Closed storm sewers shall be constructed of pre-cast, prefabricated pipe, or built in place of closed box design to conform to county and construction specifications of the state department of highways and public transportation. Sizing shall be calculated by the "Manning Formula." However, storm sewers carrying runoff from streets may be designed to serve the design frequency rainfall for the drainage area involved, provided that overflow from a 100-year frequency rainfall can reach a suitable outlet without inundating any building pad.

(Ord. No. 37-2006/07, § 2.1.9, 8-16-07)

Sec. 9.5-35. Open paved storm drainage.

Open paved storm drainage channels shall be constructed in accordance with county specifications. Side slopes above the paved section shall be shaped and sodded on a slope of three horizontal to one vertical or flatter. Fences shall not be located any more than one foot (measured horizontally) from the right-of-way/easement line as provided for in section 9.5-26(f).

(Ord. No. 37-2006/07, § 2.1.10, 8-16-07)

Sec. 9.5-36. Areas outside subdivision or development.

County reserves the right to require improvements to preclude any backup of tail water inundating any areas outside of the dedicated drainage easements in the subdivision or development as a result of a 50-year frequency flood.

(Ord. No. 37-2006/07, § 2.1.11, 8-16-07)

Sec. 9.5-37. Existing open ditches.

At the time of development, any existing man-made waterway shall be included in the stormwater management plan. Modifications, including piping, may be required by the county.

(Ord. No. 37-2006/07, § 2.1.12, 8-16-07)

Sec. 9.5-38. Review by county engineer.

Prior to authorization of any building permit by the codes enforcement division, the county engineer shall review and approve all such stream flow, runoff calculations, and drainage plans as such engineer may require of a developer under the terms of this article, and the county engineer shall have final authority of engineer interpretations of all required fifty (50)-year and one-hundred (100)-year flood elevations necessary to this article and shall report the findings to the county's floodplain management administrator for appropriate action.

(Ord. No. 37-2006/07, § 2.1.13, 8-16-07)

Sec. 9.5-39. Application and enforcement of this article.

(a) *Inspections:* Sufficient inspections shall be made to insure compliance with the specifications set forth in this article. A registered engineer, employed by the developer and approved by the county engineer, may certify in writing to the county engineer that such engineer has inspected each phase of the construction of the storm drainage improvements required in this article and said inspection certification shall meet the terms of this article. The county engineer, however, shall make a final inspection of said improvements before accepting said improvements for dedication to the county for permanent maintenance.

(b) *Variations and exceptions to this article:*

(1) Whenever strict compliance with these regulations would result in extraordinary hardship or injustice to the subdivider because of unusual topography, unusual size or shape of the property, or unusual conditions in surrounding property or development, the planning commission, acting only upon the written concurrence of the county engineer, may modify, vary or waive such regulations in order that the subdivider or developer may subdivide or develop the property in a reasonable manner, provided that such modification, variation or waiver will not nullify the intent or purpose of this article and that the public welfare, interest of the county and the surrounding area shall be protected. Any such variance, together with reasons therefore, shall be entered upon the minutes of the planning commission.

(2) In granting modifications, variations or waivers, the planning commission may impose such

other reasonable conditions as well, in its judgment, in order to justify such modification, variation or waiver and still maintain the objectives of these regulations.

- (3) Each modification, variation or waiver of these regulations sought by a subdivider or developer shall be applied for specifically on forms supplied by the planning and development division, copies of which shall be forwarded to the county engineer for such engineer's review and comments and an evaluation of such submitted to the planning and development division and the county planning commission.

(c) *Amendments to this article:* The county council may amend the regulations or provisions of this article after study and a written report by the planning commission and the holding of a public hearing as required by law.

(d) *Enforcement:* No zoning certificate or building permit shall be issued for any new building or development by the zoning secretary or codes enforcement division without a written statement from the county engineering division stating that the storm drainage facilities for said property and building meet all of the requirements of this article.

(e) *Penalty:* Any violation of these regulations will be a misdemeanor and upon conviction is punishable as provided by law.
(Ord. No. 37-2006/07, § 2.1.14, 8-16-07)

Sec. 9.5-40. Interpretation and conflict.

In interpreting and applying the provisions of this article, the provisions shall be held to be minimum requirements necessary to uphold the purpose of this article. It is not intended by this article to interfere with or abrogate or annul any easements, covenants, or other agreements between parties; provided, however, where this article imposes greater restriction on the subdivision and/or use of buildings or land, or requires more open spaces or more stringent development standards than required by other resolutions, ordinances, rules or regulations, or by easements, covenants, or agreements, the provisions of this article shall govern. When the provisions of any other statute require more restrictive standards than are required by the regulations of this article, the provisions of such statute shall govern.
(Ord. No. 37-2006/07, § 2.1.15, 8-16-07)

Secs. 9.5-41--9.5-50. Reserved.

DIVISION 2.

SEDIMENT AND EROSION CONTROL

Sec. 9.5-51. Purpose.

The purpose of this chapter is to encourage the promotion, protection, and improvement of the general health, safety, and welfare of the people and to encourage the conservation of natural resources within Florence County, these regulations are enacted to minimize the erosion of soils, reduce the sedimentation of streams, regulate stormwater runoff from developing areas, reduce the damage potential of flood water, protect

properties near land disturbing activities, minimize the clogging of ditches, reduce the silting of water bodies, strive to provide unobstructed and sanitary channels for stormwater runoff, reduce flooding caused by the encroachment of buildings or other structures on natural waterways and drainage channels, minimize pollution of surface water and groundwater, and promote groundwater recharge.
(Ord. No. 37-2006/07, § 2.2.1, 8-16-07)

Sec. 9.5-52. Authority.

These regulations are adopted under the authority and powers granted by the General Assembly of South Carolina in Chapter 14, Title 48, Code of Laws of South Carolina, 1976, and by other powers granted to local governments by the General Assembly of South Carolina.
(Ord. No. 37-2006/07, § 2.2.2, 8-16-07)

Sec. 9.5-53. Jurisdiction.

The sediment and erosion control regulations contained herein shall apply to all lands within the unincorporated areas of Florence County, South Carolina, and those municipalities and areas within the jurisdiction of Florence County which, by approval of department of health and environmental control and by written agreement executed with the county, contract to have these provisions administered within their corporate limits.
(Ord. No. 37-2006/07, § 2.2.3, 8-16-07)

Sec. 9.5-54. Rules of language and interpretation.

- (a) The word "shall" is mandatory; the word "may" is permissive.
- (b) The particular shall control the general.
- (c) Words used in present tense shall include the future, and words used in the singular include the plural, and plural the singular, unless the context clearly indicates the contrary.
- (d) All public officials, bodies and agencies to which reference is made are those of Florence County, South Carolina, unless otherwise indicated. Florence County is referenced as Florence County or the county.
(Ord. No. 37-2006/07, § 2.2.4, 8-16-07)

Sec. 9.5-55. Permit requirement.

The surface of land in the unincorporated areas of Florence County shall not be disturbed or altered for any purpose whatsoever, except in accordance with these regulations. The developer shall be required to obtain a land disturbance permit indicating such approval issued by the county manager or his designated representative prior to any construction, grading or land disturbance of any nature. The developer shall also be required to obtain coverage under the NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities (Appendix A) prior to land disturbance. Permit coverage will be contingent on compliance with Sections R.72-305 and 307 - Standards for Stormwater Management and Sediment Reduction (Appendix B). [Latest versions typically available at www.scdhec.gov/environment/water/stormwater or

SCDHEC's current website.]
(Ord. No. 37-2006/07, § 2.2.5, 8-16-07)

Sec. 9.5-56. Exemptions.

(a) The provisions of the regulations that require the preparation and approval of erosion and sediment control and stormwater management plans shall not apply to the activities or conditions listed below.

- (1) Land disturbing activities on agricultural land for production of plants and animals useful to man, including but not limited to: Forages and sod crops, grains and feed crops, 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 or structures which, singularly or collectively total 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 stormwater management and sediment control plan prior to the start of the land disturbing activity.
- (2) Land disturbing activities undertaken on forestland for the production and harvesting of timber and timber products.
- (3) Construction or improvement of a single family residence or a separately-built accessory building, which is not part of multiple construction in a subdivision development and which disturbs less than one acre.

(b) Where the exemptions listed above may apply, the county encourages those persons engaged in the land disturbing activities to carry out such activities in a manner to achieve the objectives of erosion and sediment reduction and stormwater management through the use of applicable best management practices (BMP's).

(Ord. No. 37-2006/07, § 2.2.6, 8-16-07)

Sec. 9.5-57. Waivers.

(a) Waivers may be granted from the stormwater management requirements of these regulations 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.

- (1) A project may be eligible for a waiver of stormwater management, for both quantitative and qualitative control, if the applicant can demonstrate that there will be no adverse impact and 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.
- (2) A project may be eligible for a waiver of stormwater management for water quantity control if

the applicant can demonstrate that: (1) The proposed project will have no significant adverse impact on the receiving natural waterway or downstream properties; or (2) the imposition of peak control requirements for rates of stormwater runoff would aggravate downstream flooding.

- (3) The county will conduct its review of the request for waiver within ten working days, after which time it will be approved or disapproved by the county.

(Ord. No. 37-2006/07, § 2.2.7, 8-16-07)

Sec. 9.5-58. Variances.

(a) The county may grant a written variance from any requirement of these regulations if there are exceptional circumstances applicable to the site, such that strict adherence to the provisions of these regulations will not fulfill the intent of these regulations.

(b) A written request for variance shall be provided to the county with the plan approval submission, and it shall state the specific variance sought. The reasons and supporting data for their granting shall be included. The county will not consider a variance unless sufficient specific reasons justifying the variance are provided by the applicant.

(c) The county will conduct its review of the request for variance within ten working days from the receipt of the request, after which time it will be approved or disapproved by the county.

(Ord. No. 37-2006/07, § 2.2.8, 8-16-07)

Sec. 9.5-59. Application for permit.

The person responsible for the land disturbing activity shall apply in writing, on forms provided by the county, to the engineering division for a land disturbance permit as well as a National Pollution Discharge Elimination System (NPDES) Permit for Large and Small Construction Activities, if required. Such application shall be accompanied by five copies of the stormwater management and sediment control plan prepared in accordance with the provisions of sections 9.5-68 through 9.5-70 of this article.

(Ord. No. 37-2006/07, § 2.2.9, 8-16-07)

Sec. 9.5-60. Permit fee schedule.

(a) The application for a permit to disturb or change land in the incorporated areas of the county shall be accompanied by a non-refundable fee according to the following schedule:

- (1) The fee for any application for any permit or plan approval required by these regulations shall be \$250.00 (\$125.00 sent to DHEC with NOI for NPDES Permit for Large and Small Construction Activities coverage) plus \$100.00 per disturbed acre. Provided, however, in no event shall any application fee charged hereunder exceed \$2,000.00. No fee will be charged for land disturbing activities that disturb less than one acre which are not part of a larger common plan for development or sale. No fee will be charged for extensions or renewal of plan approval unless there are significant changes to the plans.

- (2) The fee for any determination or documentation of any waiver or exemption from any

requirements of these regulations shall be \$100.00.
(Ord. No. 37-2006/07, § 2.2.10, 8-16-07)

Sec. 9.5-61. Types of stormwater management and sediment control plans.

(a) For the purpose of this article, stormwater management and sediment control plans shall be divided into two land disturbance levels: Level I and Level II. The designs, presentations and submittals shall be the responsibility of the person responsible for the land disturbing activity.

- (1) *Level I stormwater management and sediment control plans* shall be submitted for all land disturbing activities with disturbed area less than one acre which are not part of a larger common plan of development or sale. A level I plan shall be prepared in accordance with the requirements of section 9.5-68 of this article.
- (2) *Level II stormwater management and sediment control plans* shall be submitted for all land disturbing activities with disturbed areas of one acre or greater. However, the use of measures other than ponds to achieve water quality improvements is recommended on sites containing less than ten disturbed acres. A level II plan shall be prepared in accordance with the requirements of section 9.5-69 of these regulations.

(Ord. No. 37-2006/07, § 2.2.11, 8-16-07)

Sec. 9.5-62. Approval or disapproval of application.

(a) Specific requirements of the permit application and approval process are generally based on the extent of the land disturbing activity. The permit application and approval procedure is as follows:

- (1) For land disturbing activities involving less than one acre of actual land disturbance which are not part of a larger common plan of development or sale, the person responsible for the land disturbing activity shall submit a level I stormwater management and sediment control plan. This plan does not require preparation or certification by the designers specified in sections 9.5-62(g) and (h). The plan shall be considered approved if action is not taken by the county within ten working days.
- (2) For land disturbing activities of one acre or greater, a level II stormwater management and sediment control plan is required. However, the use of measures other than ponds to achieve water quality improvement is recommended on sites containing less than ten disturbed acres. Plans and specifications for these activities will be prepared by the designers specified in section 9.5-62(g) and (h). Upon receipt of a completed application for sediment and stormwater management, the county shall accomplish its review and have either the approval or review comments transmitted to the applicant within 20 working days from receipt of the complete application.
- (3) When the land disturbing activity is adjacent or near receiving waters with an approved total maximum daily load (TMDL), the stormwater management and sediment control plan must incorporate measures or controls that are consistent with the assumptions and requirements of such TMDL.

(4) When the land disturbing activity consists of the construction of a pond, lake or reservoir which is singly built and not part of a permitted land disturbing activity, the following procedures will apply:

- i. A stormwater management and sediment control plan will not be required if the pond, lake or reservoir is permitted under the S.C. Dams and Reservoirs Safety Act or has received a certificate of exemption from the S.C. Dams and Reservoirs Safety Act. Best management practices should be used to minimize the impact of erosion and sediment.
- ii. A stormwater management and sediment control plan will be required for the construction of all ponds, lakes or reservoirs not meeting the conditions in section 9.5-62(a)(4)i. that otherwise meet the size requirements for stormwater management and sediment control plan approval.

(b) A stormwater management and sediment control plan or an application for a waiver shall be submitted to the county by the person responsible for the land disturbing activity for review and approval for a land disturbing activity, unless otherwise exempted. The stormwater management and sediment control plan shall contain supporting computations, drawings, and sufficient information describing the manner, location, and type of measures in which stormwater runoff will be managed from the entire land disturbing activity. The county shall review the plan to determine compliance with the requirements of these regulations prior to approval. The approved stormwater management and sediment control plan shall serve as the basis for water quantity and water quality control on all subsequent construction.

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

(d) All stormwater management and sediment control plans shall contain certification by the person responsible for the land disturbing activity of the right of the county or DHEC to conduct on-site inspections.

(e) The stormwater management and sediment control plan, as submitted by the person responsible for the land disturbing activity, shall not be considered approved without the inclusion of an approval stamp with a signature and date on the plans by the county. The stamp of approval on the plans is an acknowledgment of conformance with the requirements of these regulations.

This approval does not constitute a representation or warranty to the applicant, or any other person, concerning the safety, appropriateness or effectiveness of any provision, or omission from the stormwater management and sediment control plan.

(f) Since the local conservation district is not the plan approval agency, the conservation district may request to review and comment on stormwater management and sediment control plans. Failure of the conservation district to provide comments by the date specified by the county will not delay the approval of the stormwater management and sediment control plans by the county.

(g) All level II stormwater management and sediment control plans submitted to the county for

approval shall be certified by the designer. The following disciplines may certify and stamp/seal plans as allowed by their respective licensing act and regulations:

- (1) Registered professional engineers as described in S.C. Code 1976, Tit. 40, Ch. 22.
- (2) Registered landscape architects as described in S.C. Code 1976, Tit. 40, Ch. 28, § 10, item (b).
- (3) Tier B land surveyors as described in S.C. Code 1976, Tit. 40, Ch. 22.

(h) Stormwater management and sediment control plans may be prepared by employees of the federal government and submitted by the person responsible for the land disturbing activity to the county for approval.

(i) These regulations do not prohibit other disciplines or certified professionals, including, but not limited to, certified professional in erosion and sediment control or certified professional in stormwater quality, which have appropriate background and experience from taking active roles in the preparation of the plan and design process. However, all plans and specifications submitted to the county for approval shall be stamped/sealed by those listed in section 9.5-62(g). or prepared by employees of the federal government under section 9.5-62(h).

(j) Approved plans remain valid for two years from the date of an approval. At its discretion and upon receipt of a written request, the county may grant extensions or renewals of the plan approvals, in accordance with section 9.5-65.

(k) Approvals of land disturbing activities, which were approved by department of health and environmental control prior to the effective date of this article, shall remain in effect for the original term of the approval. For land disturbing activities which were not initiated during the original term of the approval, the person responsible for the land disturbing activity shall resubmit the stormwater management and sediment control plan to the county for review and approval subject to the requirements of these regulations. (Ord. No. 37-2006/07, § 2.2.12, 8-16-07)

Sec. 9.5-63. Requirements for different type of operators.

(a) Section 3.2 in NPDES Permit for Large and Small Construction Activities (included in Appendix A) [Latest version typically available at www.scdhec.gov/environment/water/stormwater or SCDHEC's current website.] outlines the requirements for different types of operators. These requirements must be included in the stormwater management and sediment control plan.

(b) For non-linear projects that disturb ten acres or more, the permittee must conduct a pre-construction conference with each co-permittee and contractor who is not a co-permittee in person at the site prior to that co-permittee or contractor performing construction related work intended to disturb soils at the site that may affect the implementation of the SWPPP unless it is justified in the SWPPP and approved by the county to conduct the conference off-site. This pre-construction conference can be with all contractors or the pre-conference may be conducted separately with one or more contractors present so that all contractors who perform land disturbing activity are aware of the requirements of the SWPPP before they start construction.

(c) For linear construction of roads or utilities (such as roads built by SC DOT, utility construction including electrical power lines, gas lines, sewer line, and water lines that are not part of a subdivision) neither of which is part of a subdivision or other types of development may be conducted off-site unless specifically required by the county to be conducted on site. The propose of this conference is to explain the whole SWPPP to the co-permittees and contractors and to specifically go over areas of the SWPPP that are related to the work to be preformed by the co-permittees and the contractors
(Ord. No. 37-2006/07, § 2.2.13, 8-16-07)

Sec. 9.5-64. Other authorization or requirement.

Where any authorization, bonds, permits or other securities are required by applicable federal, state or local laws, regulations or ordinances for any part of the proposed work to be done under the plan, the applicant shall, upon request, furnish the county with satisfactory evidence that such requirements have been met before the commencement of work under an approved application.
(Ord. No. 37-2006/07, § 2.2.14, 8-16-07)

Sec. 9.5-65. Request for extension of time.

Prior to the expiration of the time period specified on the approved permit, the person responsible for the land disturbing activity may present in writing a request for an extension of time, setting forth the reasons for the requested extension. The county shall respond to this request within ten working days from receipt of submission.
(Ord. No. 37-2006/07, § 2.2.15, 8-16-07)

Sec. 9.5-66. Responsibility of applicant.

The applicant shall be responsible for carrying out the proposed work in accordance with the approved stormwater management and sediment control plan and land disturbance permit, and in compliance with the requirements of the regulations contained in this division.
(Ord. No. 37-2006/07, § 2.2.16, 8-16-07)

Sec. 9.5-67. Appeals and administrative hearings.

(a) Any person aggrieved by this chapter or by the decision of the planning engineer may appeal to the board of zoning appeals (BZA) which acts as the local hearing board by written notice to its secretary. Such appeal shall be filed within 30 days after the decision.

- (1) A hearing by the BZA is available following a request to determine the propriety of:
 - i. The denial of revocation of a land disturbance permit;
 - ii. A citizen complaint concerning program operation;
 - iii. The issuance of a notice of violation or non-compliance with the plan;
 - iv. The issuance of fines as a result of these regulations; and/or

v. The issuance of a stopwork order as a result of this chapter.

A hearing may be initiated by any applicant, provided that a written request is received within 30 days after notice is given to the applicant/citizen of the adverse action.

- (2) All hearings shall be initiated by the BZA which shall give notice to all parties of the hearing.
 - i. All parties must receive the notice of hearing not less than 30 days;
 - ii. The notice will be sent by the secretary of the BZA;
 - iii. The notice shall include:
 - (a) A statement of time, place, and nature of the hearing;
 - (b) A statement of legal authority and jurisdiction under which the hearing is to be held;
 - (c) A reference to the particular sections of the statutes and rules involved;
 - (d) A short and plain statement of matters asserted.
- (3) All requests for hearings must be received two weeks prior to the scheduled monthly meetings of the BZA by its secretary in order to be heard at its next meeting.
- (4) After hearing all parties, a decision will be issued by the BZA based on the majority of the members voting on the appeal.

(b) Any person who shall feel aggrieved by any decision on an appeal to the board of zoning appeals may appeal to SCDHEC in accordance with S.C. Code 1976, § 48-18-70 and Regulation 72-314. (Ord. No. 37-2006/07, § 2.2.17, 8-16-07)

Sec. 9.5-68. Level I stormwater management and sediment control plan requirements.

The stormwater management and sediment control plan required for land disturbing activities less than one acre which are not part of a larger common plan of development or sale shall contain the following information, as applicable:

- (1) An anticipated starting and completion date of the various stages of land disturbing activities and the expected date the final stabilization will be completed;
- (2) A narrative description of the stormwater management and sediment control plan to be used during land disturbing activities;
- (3) General description of topographic and soil conditions of the tract;

- (4) A general description of adjacent property and a description of existing structures, buildings, and other fixed improvements located on surrounding properties;
- (5) A sketch plan (engineer's, tier B surveyor's, or landscape architect's seal not required) to accompany the narrative which shall contain:
 - i. A site location drawing of the proposed project, indicating the location of the proposed project in relation to roadways, jurisdictional boundaries, streams and rivers;
 - ii. The boundary lines of the site on which the work is to be performed;
 - iii. A topographic map of the site if required by the county;
 - iv. The location of temporary and permanent vegetative and structural stormwater management and sediment control measures; and
 - v. Riparian buffers and setbacks requirements to protect receiving water bodies shall be maintained as required by the Florence County Zoning Ordinance.
- (6) Stormwater management and sediment control plans shall contain certification by the person responsible for the land disturbing activity that the land disturbing activity will be accomplished pursuant to the plan.
- (7) All stormwater management and sediment control plans shall contain certification by the person responsible for the land disturbing activity of the right of the county or DHEC to conduct on-site inspections.

The requirements contained above may be indicated on one plan sheet. More detailed hydrologic or soils information may be required on a case by case basis by the implementing agency. Stormwater detention/retention may be required if excessive water problems are known to exist in the area. (Ord. No. 37-2006/07, § 2.2.18, 8-16-07)

Sec. 9.5-69. Level II stormwater management and sediment control plan requirements.

The stormwater management and sediment control plan required for land disturbing activities one acre or more shall contain the following information, as applicable:

- (a) General submission requirements for all projects requiring stormwater management and sediment control plan approval will include the following information as applicable:
 - (1) A standard application form,
 - (2) A vicinity map indicating north arrow, scale, and other information necessary to locate the property or tax parcel,

- (3) A plan at an appropriate scale accompanied by a design report and indicating at least:
 - i. The location of the land disturbing activity shown on a USGS 7.5 minute topographic map or copy.
 - ii. The existing and proposed topography, overlaid on a current plat showing existing and proposed contours as required by the county.
 - iii. The proposed grading and earth disturbance including:
 - (a) Surface area involved; and
 - (b) Limits of grading including limitation of mass clearing and grading whenever possible.
 - iv. Stormwater management and stormwater drainage computations, including:
 - (a) Pre- and post-development velocities, peak rates of discharge, and inflow and outflow hydrographs of stormwater runoff at all existing and proposed points of discharge from the site,
 - (b) Site conditions around points of all surface water discharge including vegetation and method of flow conveyance from the land disturbing activity, and
 - (c) Design details for structural controls.
 - v. Erosion and sediment control provisions, including:
 - (a) Provisions to preserve top soil and limit disturbance;
 - (b) Details of site grading; and
 - (c) Design details for structural controls which includes diversions and swales.
- (4) Federal Emergency Management Agency flood maps and federal and state wetland maps, where appropriate.
- (5) Plans and design reports shall be sealed by a qualified design professional. The design professional shall certify that the plans have been designed in accordance with approved stormwater-related ordinances, programs, regulations, standards and criteria.
- (6) Additional information necessary for a complete project review may be required by the county, as deemed appropriate. This additional information may include items such as public sewers, water lines, septic fields, wells etc.

- (7) All stormwater management and sediment control plans submitted for approval shall contain certification by the person responsible for the land disturbing activity that the land disturbing activity will be accomplished pursuant to the approved plan.
 - (8) All stormwater management and sediment control plans shall contain certification by the person responsible for the land disturbing activity of the right of the county or DHEC to conduct on-site inspections.
 - (9) All stormwater management and sediment control plans submitted to the appropriate plan approval agency for approval shall be certified by the designer as stated in section 9.5-62(g).
- (b) Specific requirements for the erosion and sediment control portion of the stormwater management and sediment control plan approval process include, but are not limited to, the following items. The county may modify the following items for a specific project or type of project.
- (1) All plans shall include details and descriptions of temporary and permanent erosion and sediment control measures and other protective measures shown on the stormwater management and sediment control plan. Procedures in a stormwater management and sediment control plan shall provide that all sediment and erosion controls are inspected at least once every seven calendar days and after any storm event of greater than 0.5 inches of precipitation during any 24-hour period.
 - (2) Specifications for a sequence of construction operations shall be contained on all plans describing the relationship between the implementation and maintenance of sediment controls, including permanent and temporary stabilization and the various stages or phases of earth disturbance and construction. The specifications for the sequence of construction shall, at a minimum, include the following activities:
 - i. Clearing and grubbing for those areas necessary for installation of perimeter controls;
 - ii. Installation of sediment basins and traps;
 - iii. Construction of perimeter controls;
 - iv. Remaining clearing and grubbing;
 - v. Road grading;
 - vi. Grading for the remainder of the site;
 - vii. Utility installation and whether storm drains will be used or blocked until after completion of construction;

viii. Final grading, landscaping, or stabilization; and

ix. Removal of sediment controls.

The sequence of construction operations may be modified with prior approval by the county.

- (3) The plans shall contain a description of the predominant soil types on the site, as described in the USDA comprehensive soils classification system.
 - (4) When work in a live waterway is performed such as utility or road crossing, the appropriate BMPs shall be utilized to minimize encroachment, protect the riparian buffer, control sediment transport and stabilize the work area to the greatest extent possible during construction.
 - (5) Vehicle tracking of sediments from land disturbing activities onto paved public roads shall be minimized by utilizing the appropriate BMPs.
 - (6) Locations of all waters of the U.S. and state (including wetlands) shall be shown on the plan.
 - (7) Locations of all preconstruction stormwater discharge points and post construction stormwater discharge points shall be shown on the plan.
- (c) Specific requirements for the permanent stormwater management portion of the stormwater management and sediment control plan approval process include, but are not limited to, the following items. The county may modify the following items for a specific project or type of project.
- (1) Stormwater management shall be addressed on a watershed basis to provide a cost-effective water quantity and water quality solution to the specific watershed problems. This chapter provides general design requirements that must be adhered to in the absence of designated watershed specific criteria.
 - (2) All hydrologic computations shall be accomplished using a volume based hydrograph method acceptable to the county. The storm duration for computational purposes for this method shall be the 24-hour rainfall event, applicable NRCS distribution with a 0.1 hour burst duration time increment. The rational and/or modified rational methods are acceptable for sizing individual culverts or storm drains that are not part of a pipe network or system and do not have a contributing drainage area greater than 20 acres. The storm duration for computational purposes for this method shall be equal to the time of concentration of the contributing drainage area or a minimum of 0.1 hours, whichever is less.
 - (3) Stormwater management requirements for a specific project shall be based on the entire

area to be developed, or if phased, the initial submittal shall control that area proposed in the initial phase and establish a procedure for total site control, as shown the approved set of development plans.

- (4) Water quantity control is an integral component of overall stormwater management. The following design criteria for flow control are established for water quantity control purposes:
 - i. Post-development peak discharge rates shall not exceed pre-development discharge rates for the 2-, 10-, and 25-year frequency 24-hour duration storm event. The county may utilize a less frequent storm event (e.g. 50- or 100-year, 24-hour) to address existing or future stormwater quantity or quality problems.
 - ii. Discharge velocities shall be reduced to provide a non-erosive velocity flow from a structure, channel, or other control measure or the velocity of the 10-year, 24-hour storm runoff in the receiving waterway prior to the land disturbing activity, whichever is greater.
 - iii. Watersheds, including designated watersheds, which have well documented water quantity problems, may have more stringent or modified design criteria as determined by the county.

- (5) Water quality control is also an integral component of stormwater management. The following design criteria are established for water quality protection unless a waiver or variance is granted on a case-by-case basis.
 - i. When ponds are used for water quality protection, the ponds shall be designed as both quantity and quality control structures. Sediment storage volume shall be calculated considering the clean out and maintenance schedules specified by the designer during the land disturbing activity. Sediment storage volumes may be predicted by the Universal Soil Loss Equation or methods acceptable to the county.
 - ii. Stormwater runoff that drains to a single outlet from land disturbing activities which disturb ten acres or more shall be controlled during the land disturbing activity by a sediment basin where sufficient space and other factors allow these controls to be used until the final inspection. The sediment basin shall be designed and constructed to accommodate the anticipated activity and meet a removal efficiency of 80 percent suspended solids or 0.5 ML/L peak settleable solids concentration, whichever is less. The outfall device or system design shall take into account the total drainage area flowing through the disturbed area to be served by the basin.
 - iii. Other practices may be acceptable to the county if they achieve an equivalent removal efficiency of 80 percent for suspended solids or 0.5 ML/L peak settleable solids concentration, which ever is less. The efficiency shall be calculated for

disturbed conditions for the 10-year 24-hour design event.

- iv. Permanent water quality ponds having permanent pool shall be designed to store and release the first one-half inch of runoff from the entire site or the first one inch of runoff from the impervious area, whichever is greater over a 24-hour period.
 - v. Permanent water quality ponds, not having permanent pool, shall be designed to release the first inch of runoff from the site over a 24-hour period.
 - vi. Permanent infiltration practices, when used, shall be designed to accept, at a minimum, the first inch of runoff from all impervious areas.
 - vii. Riparian buffers and setbacks requirements to protect receiving water bodies shall be maintained as required by the Florence County Zoning Ordinance.
 - viii. Watersheds, including designated watersheds, which have documented water quality problems or established total maximum daily loads (TMDLs) will have more stringent or modified design criteria as determined by the county.
 - ix. For sites with stormwater discharges to receiving water that is listed as impaired in South Carolina's 303(d) List of Impaired Waters the following requirements apply:
 - (a) If a TMDL that is applicable to stormwater construction discharges has been established and is in effect, the requirements of section 9.5-62(a) must be met.
 - (b) If a TMDL has not been established or is not in effect, the requirements outlined in Section 3.4 in NPDES Permit for Large and Small Construction Activities (Appendix A) must be met. [Latest version typically available at www.scdhec.gov/environment/water/stormwater or SCDHEC's current website.]
- (6) Where ponds are the proposed method of control, the person responsible for the land disturbing activity shall submit to the county, when required, an analysis of the impacts of stormwater flows downstream in the watershed for the 10- and 100-year frequency storm event. The analysis shall include hydrologic and hydraulic calculations necessary to determine the impact of hydrograph timing modifications of the proposed land disturbing activity, with and without the pond. The results of the analysis will determine the need to modify the pond design or to eliminate the pond requirement. Lacking a clearly defined downstream point of constriction, the downstream impacts shall be established, with the concurrence of the county.
- (7) Where existing wetlands are intended as a component of an overall stormwater management system, the approved stormwater management and sediment control plan

shall not be implemented until all necessary federal and state permits have been obtained. Copies of the federal and state permits shall be furnished to the county.

- (8) Designs shall be in accordance with standards developed or approved by the county.
- (9) Ease of maintenance must be considered as a site design component. Access to the stormwater management structure must be provided.
- (10) A clear statement of defined maintenance responsibility shall be established during the plan review and approval process.
- (11) Infiltration practices have certain limitations on their use on certain sites. These limitations include the following items:
 - i. 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;
 - ii. 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;
 - iii. The infiltration practice shall be designed to completely drain of water within 72 hours;
 - iv. Soils must have adequate permeability to allow water to infiltrate. Infiltration practices are limited to soils having an infiltration rate of at 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;
 - v. Infiltration practices greater than three feet deep shall be located at least ten feet from basement walls;
 - vi. 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;
 - vii. 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;

- viii. 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;
 - ix. An infiltration practice shall not be installed on or atop a slope whose natural angle of incline exceeds 20 percent.
 - x. Clean outs will be provided at a minimum, every 100 feet along the infiltration practice to allow for access and maintenance.
- (12) A regional approach to stormwater management is an acceptable alternative to site-specific requirements and is encouraged.
- (d) All stormwater management and sediment control practices shall be designed, constructed and maintained with consideration for the proper control of mosquitoes and other vectors. Practices may include, but are not limited to:
- (1) The bottom of retention and detention ponds should be graded and have a slope not less than 0.5 percent.
 - (2) There should be no depressions in a normally dry detention facility where water might pocket when the water level is receding.
 - (3) Normally dry detention systems and swales should be designed to drain within three days.
 - (4) An aquatic weed control program should be utilized in permanently wet structures to prevent an overgrowth of vegetation in the pond. Manual harvesting is preferred.
 - (5) Fish may be stocked in permanently wet retention and detention ponds.
 - (6) Normally dry swales and detention pond bottoms should be constructed with a gravel blanket or other measure to minimize the creation of tire ruts during maintenance activities.
- (e) A stormwater management and sediment control plan shall be filed for a residential development and the buildings constructed within, regardless of the phasing of construction.
- (1) In applying the stormwater management and sediment control criteria, individual lots in a residential subdivision development shall not be considered to be separate land disturbing activities and shall not require individual permits. Instead, the residential subdivision development, as a whole, shall be considered to be a single land disturbing activity. Hydrologic parameters that reflect the ultimate subdivision development shall be used in all engineering calculations.
 - (2) If individual lots or sections in a residential subdivision are being developed by different

property owners, all land-disturbing activities related to the residential subdivision shall be covered by the approved stormwater management and sediment control plan for the residential subdivision. Individual lot owners or developers must sign a certification of compliance that all activities on that lot will be carried out in accordance with the approved stormwater management and sediment control plan for the residential subdivision. Failure to provide this certification will result in owners or developers of individual lots developing a stormwater management and sediment control plan meeting the requirements of section 9.5-59.

- (3) Residential subdivisions which were approved prior to the effective date of these regulations 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.
- (f) Risk analysis may be used to justify a design storm event other than prescribed or to show that rate and volume control is detrimental to the hydrologic response of the basin and therefore, should not be required for a particular site.
- (1) A complete watershed hydrologic/hydraulic analysis must be done using a complete model/procedure acceptable to the county. The level of detail of data required is as follows:
 - i. Watershed designation on the 7.5 minute topographic map exploded to a minimum of 1" = 400'.
 - (a) Include design and performance data to evaluate the effects of any structures which affect discharge. Examples may be ponds or lakes, road crossings acting as attenuation structures, and others which must be taken into account.
 - (b) Land use data shall be taken from the most recent aerial photograph and field checked and updated.
 - (c) The water surface profile shall be plotted for the conditions of pre and post-development for the 10-, 25- and 100-year 24-hour storm.
 - (d) Elevations of any structure potentially damaged by resultant flow shall also be shown.
 - (2) Based on the results of this type of evaluation, the county shall review and evaluate the proposed regulation waiver or change.
- (g) Inspections. After construction begins, inspections must be conducted at a minimum in accordance with Section 3.10 in NPDES Permit for Large and Small Construction Activities (included in Appendix A). [Latest version typically available at www.scdhec.gov/environment/water/stormwater or SCDHEC's current website.] These

requirements must be included in the stormwater management and sediment control plan.
(Ord. No. 37-2006/07, § 2.2.19, 8-16-07)

Sec. 9.5-70. Maintenance requirements.

(a) After construction begins, inspections must be conducted at a minimum in accordance with one of the two schedules listed below and you must specify in your SWPPP which schedule you will be following:

- (1) At least once every seven calendar days, or
- (2) At least once every 14 days and within 24 hours of the end of a storm event of 0.5 inches or greater.

(b) Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized.

(c) Maintenance during construction. The applicant is responsible for maintenance and the preventive maintenance of all completed stormwater management practices to ensure proper functioning. The responsible inspection agency shall ensure preventive maintenance through inspection of all stormwater management practices.

(d) Maintenance responsibilities after development. Temporary and permanent erosion, sedimentation and stormwater management facilities, once installed and after a final inspection has been completed, shall be maintained in one of the following manners:

- (1) *Facilities maintained by owner.* The owner of the property on which work has been done pursuant to this chapter, or any other person or agent in control of such property, shall maintain in good condition and shall promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sediment control measures, and other protective devices. Such repairs or restorations and maintenance shall be in accordance with the approved plan. These generally include private detention and retention facilities.

The facilities to be maintained by the owner shall provide adequate access to permit county authorities to inspect and, if necessary, to take corrective action. If the owner or any other person or agent in control of such property fails to maintain properly the facilities for which he is responsible under the provisions of this chapter, the county shall give such owner, person or agent in control written notice describing specifically the deficiency. If the owner, person or agent in control fails, within ten days from the date of receipt of such notice, to take or commence corrective action, such owner, person or agent shall be subject to the penalties found in this chapter.

- (2) *Facilities maintained by Florence County.* All facilities to be maintained by the county must be designed and constructed in accordance with the requirements of this chapter and all such facilities shall be dedicated to the county by deed with attached record drawings, after the county has accepted the conveyance of such facilities by appropriate action of the governing body. Such deed shall include sufficient ingress-egress easements to permit the county to properly maintain

such facilities. These generally include public detention and retention facilities.
(Ord. No. 37-2006/07, § 2.2.20, 8-16-07)

Sec. 9.5-71. Off-site damage correction.

(a) The following criteria shall be used by the county in evaluating and for correcting off-site damages resulting from the land disturbing activity:

- (1) Determine the extent of damage by sediment resulting from non-compliance with the approved stormwater management and sediment control plan;
- (2) Determine the classification of the impaired water body, if any;
- (3) For the purposes of administering this chapter, off-site damages shall include any restrictions to flow or reduced flow/capacity of stormwater management devices that serve more than a single residential/commercial/industrial lot.
- (4) Determine the impact and severity of the damage resulting from non-compliance with the approved stormwater management and sediment control plan;
- (5) Develop an agreement with landowners for cleanup and corrections, including a schedule of implementation;
- (6) Evaluate the alternatives for correction of the damage and prevention of future damage; and
- (7) Failure to implement the agreement in the required schedule will constitute a violation of these regulations.

(Ord. No. 37-2006/07, § 2.2.21, 8-16-07)

Sec. 9.5-72. Inspection and enforcement.

(a) After construction begins, inspections must be conducted as a minimum in accordance with one of the two schedules listed below and you must specify in your SWPPP which you will be following:

- (1) At least once every seven calendar days, or
- (2) At least once every 14 days and within 24 hours of the end of a storm event of 0.5 inches or greater.

(b) Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized.

(c) The person responsible for the land disturbing activity shall notify the county before initiation of construction. The county shall also be notified upon project completion, when a final inspection will be conducted to ensure compliance with the approved stormwater management and sediment control plan.

(d) The person responsible for the land disturbing activity shall, if required by the county during the plan approval process, submit "As Built or Record Document" plans. In addition, the person responsible for level II and III land disturbing activities shall be required to submit written certification from the professional engineer, landscape architect, or tier B land surveyor responsible for the filed supervision of the land disturbing activity that the land disturbing activity was accomplished according to the approved stormwater management and sediment control plan or approved changes.

(e) During inspection, the county will ensure the following:

- (1) Availability of the approved stormwater management and sediment control plans on the project site.
- (2) Compliance with the approved stormwater management and sediment control plans;
- (3) Documentation that every active site is inspected for compliance with the approved plan by the responsible parties on a regular basis;
- (4) Provision of a written report to the person responsible for the land disturbing activity, if necessary, that describes:
 - i. The date and location of the site inspection;
 - ii. Whether the approved plan has been properly implemented and maintained;
 - iii. Approved plan or practice deficiencies; and
 - iv. The action taken.
- (5) Notification of the person responsible for the land disturbing activity in writing when violations are observed, describing the:
 - i. Nature of the violation;
 - ii. Required corrective action; and
 - iii. Time period for violation correction.

(f) Florence County may require a revision to the approved plans as necessary due to differing site conditions. Where changes to the approved plan are necessary those changes shall be in accordance with the following:

- (1) Major changes to approved stormwater management and sediment control plans, such as the addition or deletion of a sediment basin, shall be submitted by the applicant to the county for review.
- (2) Minor changes to stormwater management and sediment control plans may be allowed if

approved by the county and documented in the county's inspection report.

(g) The county shall inspect stormwater management construction as it may deem necessary.

(h) The county may, in addition to its enforcement options, refer a site violation to the department of health and environmental control for review.

(i) Referral of a site violation to the department of health and environmental control may initiate a department of health and environmental control construction inspection of the site to verify site conditions. That construction inspection may result in the following actions:

(1) Notification through appropriate means to the person engaged in a land disturbing activity to comply with the approved plan within a specified time frame; and

(2) Notification of plan inadequacy, with a time frame for the person engaged in a land disturbing activity to submit a revised stormwater management and sediment control plan to the county and to receive its approval with respect thereto.

(j) Failure of the person engaged in the land disturbing activity to comply with department of health and environmental control requirements may result in the following actions in addition to other penalties as provided in S.C. Code 1976, Tit. 48, Ch. 14, as amended.

(1) The department of health and environmental control may direct the county to order any person violating any provision of chapter 14 and/or these regulations to cease and desist from any site work activity other than those actions necessary to achieve compliance with any administrative order.

(2) The department of health and environmental control may direct the county to refrain from issuing any further building or land disturbance permits to the person having outstanding violations until those violations have been remedied.

(3) The department of health and environmental control may recommend fines to be levied by the county.

(k) The county may utilize "stop work orders" as a part of its inspection and enforcement program in accordance with the following procedures:

(1) The county may issue a stop work order if it is found that a land disturbing activity is being conducted in violation of this chapter or of any regulation adopted or order issued pursuant to, in connection with or otherwise related to this chapter and that either:

i. Off-site sedimentation resulting from non-compliance with the approved stormwater management and sediment control plan has eliminated or severely degraded a use in a lake or natural waterway or that such degradation is imminent.

ii. Off-site sedimentation resulting from non-compliance with the approved stormwater

management and sediment control plan has caused severe damage to adjacent land.

- iii. The land disturbing activity is being conducted without the required approved plan.
- iv. Sediment leaving a site is entering a "common" stormwater control/conveyance device(s) and is restricting design capacity flow.

- (2) The stop work order shall be in writing and shall state what work is to be stopped and/or what measures are required to abate the violation. The order shall include a statement of the findings made by the county pursuant to paragraph (1) of this section and shall list the conditions under which work may be resumed. The delivery of equipment and material which does not contribute to the violation may continue while the stop work order is in effect. A copy of this section shall be attached to the order.
- (3) The stop work order shall be served by a the county person duly authorized by law to serve process, and shall be served on the person at the site of the land disturbing activity who is in operational control of the land disturbing activity. The person serving process shall post a copy of the stop work order in a conspicuous place at the site of the land disturbing activity. The county shall also deliver a copy of the stop work order to any person that the county has reason to believe may be responsible for the violation.
- (4) The directives of a stop work order become effective upon service of the order. Thereafter, any person notified of the stop work order who violated any of the directives set out in the order may be assessed a civil penalty as provided in section 9.5-74.
- (5) The county shall designate an employee to monitor compliance with the stop work order. The name of the employee so designated shall be included in the stop work order. The employee so designated shall rescind the stop work order if all the violations for which the stop work order are issued are corrected, no other violations have occurred, and all measures necessary to abate the violations have been taken.
- (6) The issuance of a stop work order shall be a final decision subject to judicial review in the same manner as an order in a contested case pursuant to S.C. Code 1976, § 1-23-380 The petition for judicial review shall be filed in the circuit court of the county in which the land disturbing activity is being conducted.

(Ord. No. 37-2006/07, § 2.2.22, 8-16-07)

Sec. 9.5-73. Penalties.

(a) Any person who violates any provisions of these regulations or who initiates or continues a land disturbing activity for which a stormwater management and sediment control plan is required except in accordance with the terms, conditions, and provisions of an approved plan, is subject to a civil penalty of not more than \$500.00 for each violation thereof. No penalty may be assessed until the person alleged to be in violation has been notified of the violation. Each day of a violation constitutes a separate violation.

- (b) The county shall determine the amount of the civil penalty to be assessed under this section for

violations under its jurisdiction. It shall make written demand for payment upon the person responsible for the violation and set forth in detail the violation for which the penalty has been invoked. If payment is not received or equitable settlement reached within 30 days after demand for payment is made, a civil action may be filed in the circuit court in the county in which the violation is alleged to have occurred to recover the amount of the penalty.

(Ord. No. 37-2006/07, § 2.2.23, 8-16-07)

Sec. 9.5-74. Relationship with other laws, regulations, and ordinances.

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

(Ord. No. 37-2006/07, § 2.2.24, 8-16-07)

Sec. 9.5-75. Repeal of conflicting regulations.

All ordinances and resolutions regulating erosion and sediment control and stormwater management adopted prior to these regulations, which conflict with these regulations, are hereby repealed.

(Ord. No. 37-2006/07, § 2.2.25, 8-16-07)

Sec. 9.5-76. Severability.

If any section, clause, or portion of this chapter shall be held by a court of competent jurisdiction to be invalid or unconstitutional or otherwise unenforceable, such finding shall not affect any other section, clause, or portion of this chapter, and the remaining portions of this chapter shall be valid and shall be enforced to the fullest extent provided by law.

(Ord. No. 37-2006/07, § 2.2.26, 8-16-07)

Sec. 9.5-77. Amendments.

This chapter may be amended in the same manner as prescribed by law for its original adoption. Provided, however, before the governing body of Florence County amends this chapter, it shall seek the review and advice of Florence County, which shall have not less than 30 days to make its recommendation concerning any proposed amendment.

(Ord. No. 37-2006/07, § 2.2.27, 8-16-07)

Sec. 9.5-78. Civil liability.

Neither the approval of a plan under the provisions of this chapter, nor compliance with the provisions herein shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law or equity, nor shall such approval and/or compliance operate to impose any liability upon Florence County for damage to any person or property.

(Ord. No. 37-2006/07, § 2.2.27, 8-16-07)

Secs. 9.5-79--9.5-85. Reserved.

DIVISION 3.

ILLCIT DISCHARGES

Sec. 9.5-86. Purpose/intent.

(a) The purpose of this division is to regulate non-stormwater discharges to the storm drainage system as required by federal and state law. This division establishes methods for controlling the introduction of pollutants into the municipal/public separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this division are:

- (1) To regulate the contribution of pollutants to the municipal/public separate storm sewer system (MS4) by stormwater discharges by any user.
- (2) To prohibit illicit connections and discharges to the municipal/public separate storm sewer system (MS4).
- (3) To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with these regulations.

(Ord. No. 37-2006/07, § 2.3.1, 8-16-07)

Sec. 9.5-87. Applicability.

The regulations contained in this division shall apply to all water entering the county's storm drain system, generated on any developed and undeveloped lands, unless explicitly exempted by Florence County or an authorized enforcement agency.

(Ord. No. 37-2006/07, § 2.3.2, 8-16-07)

Sec. 9.5-88. Responsibility for administration.

Florence County shall administer, implement, and enforce the provisions of these regulations. Any powers granted or duties imposed upon any authorized enforcement agency may be delegated in writing by Florence County to persons or entities acting in the beneficial interest of or in the employ of the county.

(Ord. No. 37-2006/07, § 2.3.3, 8-16-07)

Sec. 9.5-89. Severability.

The provisions of this division are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this division or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this division.

(Ord. No. 37-2006/07, § 2.3.4, 8-16-07)

Sec. 9.5-90. Limitations.

The standards set forth herein are minimum standards; therefore these regulations do not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

(Ord. No. 37-2006/07, § 2.3.5, 8-16-07)

Sec. 9.5-91. Permission required to connect to the public/municipal separate storm sewer system.

It shall be unlawful for any person to connect a private drain with a public drain without first obtaining the consent of the county engineer. This consent shall be in the form of a written encroachment permit. connection fees may be required or established by the county. Pre-existing connections that contribute only stormwater discharges are grandfathered and do not require a permit.

(Ord. No. 37-2006/07, § 2.3.6, 8-16-07)

Sec. 9.5-92. Prohibition of illegal discharges and illicit connections.

(a) The county prohibits illegal/illicit discharges and illicit connections, as defined in article I of this chapter.

(b) The commencement, conduct, or continuance of any non-stormwater discharge to the storm drain system is prohibited, except as follows:

- (1) The following discharges are exempt from discharge prohibitions established by this division: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wetland flows, swimming pools (if dechlorinated - typically less than one mg/L chlorine), fire fighting activities, and any other water source not containing pollutants.
- (2) Discharges specified in writing by the county as being necessary to protect public health and safety.
- (3) Dye testing may be allowable, but requires prior approval by the county.
- (4) The prohibition shall not apply to any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

(c) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited. 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.

(d) A person is considered to be in violation of these regulations if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.
(Ord. No. 37-2006/07, § 2.3.7, 8-16-07)

Sec. 9.5-93. Suspension of public/municipal separate storm sewer (MS4) access.

(a) The county may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the county may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the United States, or to minimize danger to persons.

(b) All persons discharging to the MS4 in violation of these regulations may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The county will notify a violator of the proposed termination of its MS4 access. The violator may petition the county for a reconsideration and hearing.

(c) A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this section, without the prior approval of the county.
(Ord. No. 37-2006/07, § 2.3.8, 8-16-07)

Sec. 9.5-94. Industrial or construction activity discharges.

All persons subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit shall be required in a form acceptable to the county prior to the allowing of discharges to the MS4.
(Ord. No. 37-2006/07, § 2.3.9, 8-16-07)

Sec. 9.5-95. Monitoring of discharges.

(a) This section applies to all facilities that have stormwater discharges associated with industrial activity, including construction activity.

(b) The county shall be permitted to enter and inspect facilities subject to these regulations as often as may be necessary to determine compliance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access by county representatives.

(c) Facility operators shall allow the county ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.

(d) The county shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the county to conduct monitoring and/or sampling of the facility's stormwater discharge.

(e) The county has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

(f) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the county and shall not be replaced. The costs of clearing such access shall be borne by the operator.

(g) Unreasonable delays in allowing the county access to a permitted facility is a violation of a stormwater discharge permit and of these regulations. A person who is the operator of a facility with a NPDES permit to discharge stormwater associated with industrial activity commits an offense if the person denies reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this chapter.

(h) If the county has been refused access to any part of the premises from which stormwater is discharged, and it is able to demonstrate probable cause to believe that there may be a violation of these regulations, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with these regulations or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the county may seek issuance of a search warrant from any court of competent jurisdiction.

(Ord. No. 37-2006/07, § 2.3.10, 8-16-07)

Sec. 9.5-96. Requirement to prevent, control, and reduce stormwater pollutants by the use of best management practices.

(a) The county reserves the right to require best management practices (BMPs) for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the U.S.

(b) The owner or operator of a commercial or industrial establishment shall provide, at his expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal/public storm drain system or watercourses through the use of structural and non-structural BMPs.

(c) Any person responsible for a property or premise which has been determined to contribute to an illicit discharge, shall be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal/public separate storm sewer system.

(d) 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 in compliance with the provisions of this section. The associated bmps shall be part of a stormwater pollution prevention plan (SWP3), as necessary for compliance with requirements of the NPDES permit.

(Ord. No. 37-2006/07, § 2.3.11, 8-16-07)

Sec. 9.5-97. Protection of open stormwater conveyances and designated waterways.

Every person owning property through which an open stormwater conveyance or designated waterway passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water. In addition, the owner or lessee shall maintain existing privately owned structures within these areas, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

(Ord. No. 37-2006/07, § 2.3.12, 8-16-07)

Sec. 9.5-98. Notification of spills.

(a) Notwithstanding other requirements of law, as soon as any person responsible for the operation or emergency response of a facility has information pertaining to any known or suspected release of materials which may result in an illegal discharge, the responsible person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release.

- (1) In the event of a release of hazardous materials, said person shall immediately notify the appropriate emergency response agencies of the occurrence via emergency dispatch services.
- (2) In the event of a release of non-hazardous materials, said person shall notify the county in person or by phone, fax, or email no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the county within three business days of the phone notice.

(b) If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

(Ord. No. 37-2006/07, § 2.3.13, 8-16-07)

Sec. 9.5-97. Enforcement.

- (a) *Administrative remedies.*
- (1) *Notification of violation.* Whenever the county finds that any user has violated or is violating the requirements of this division, the county may serve upon such a person a written notice stating the nature of the violation.
 - i. Within 30 days from the date of this notice, an explanation for the violation and a plan for the satisfactory correction thereof shall be submitted to the county by the user. Submission of this plan does not relieve the discharger of liability for any violations occurring before or after receipt of notice of violation.
- (2) *Consent orders.* The county is hereby empowered to enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with the person responsible for the non-compliance.

- i. Such orders will include specific action to be taken by the discharger to correct the noncompliance within a time period also specified by the order.
 - ii. Consent orders shall have the same force and effect as an administrative order, issued pursuant to section 9.5-99(a)(3) below.
- (3) *Show cause hearing.* The county may order any user who has violated the requirements of this division to show cause why a proposed enforcement action should not be taken.
 - i. In the event the county determines that a show cause order should be issued, a notice shall be served on the user specifying the time and place for the hearing, the proposed enforcement action, the reasons for such action, and a request that the user show cause why this proposed enforcement action should not be taken.
 - ii. The notice of the hearing shall be served personally or by registered or certified mail (return receipt requested) at least ten days before the hearing. Service may be made on any agent or officer of a corporation.
 - iii. The county shall review the evidence presented at the hearing and determine whether the proposed enforcement action is appropriate.
 - iv. A show cause hearing under this section is not a prerequisite to the assessment of a civil penalty nor is any action or inaction taken by the county under this section subject to an administrative appeal.
- (4) *Administrative orders.* When the county finds that a user has violated or continues to violate the requirements of this division, the county may issue an order to cease and desist all such violations and direct those persons in noncompliance to do any of the following:
 - i. Immediately comply with all requirements;
 - ii. Comply in accordance with a compliance time schedule set forth in the order;
 - iii. Take appropriate remedial or preventive action in the event of a continuing or threatened violation;
 - iv. Disconnect or suspend access.
- (5) *Suspension of public/municipal separate storm sewer (MS4) access.* The county may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the United States.
 - i. All persons discharging to the MS4 in violation of these regulations may have their MS4

access terminated if such termination would abate or reduce an illicit discharge.

- ii. The county will notify a violator of the proposed termination of its MS4 access. The violator may petition the county for a reconsideration and hearing.
 - iii. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this section, without the prior approval of the county.
 - iv. If the violator fails to comply with a suspension order, the county may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the United States, or to minimize danger to persons.
- (6) *Termination of permit.* Any permitted user who violates the following conditions of this division, or applicable state and federal regulations, is subject to having its MS4 encroachment permit terminated:
- i. Failure to report a pollutant discharge;
 - ii. Refusal of reasonable access to the user's premises for the purpose of inspection or monitoring; or
 - iii. Violation of any conditions of the permit.

(b) *Civil penalties.* Any user who is found to have failed to comply with any provisions of this article, or the orders, rules, regulations and permits issued hereunder, may be fined up to \$2,000.00 per day per violation. In addition to the penalties provided herein, the county may recover reasonable attorney's fees, court costs, court reporters' fees, and other expenses of litigation by appropriate suit at law against the person found to have violated this article or the orders, rules, regulations, and permits issued hereunder.

(c) *Other available remedies.* Remedies, in addition to those previously identified in this article, are available to the county which may use any single one or combination against a noncompliant user. Additional available remedies include, but are not limited to:

- (1) *Criminal violation.* The solicitor for the judicial district may, at the request of the county, prosecute noncompliant users who violate the provisions of this division.
- (2) *Injunctive relief.* Whenever a user is in violation of the provisions of this division or an order or permit issued hereunder, the county may petition the superior court of justice for the issuance of a restraining order or a preliminary and permanent injunction, which restrains or compels the activities in question.
- (3) *Severance of county services.* Whenever a user is in violation of the provisions of this article or an order or permit issued hereunder, then water, sewer, solid waste, or other county services may be severed and service will only recommence, at the user's expense, after it has satisfactorily demonstrated ability to comply.

(4) *Public nuisance.* Any violation of the provisions of this division or of a permit or order issued hereunder, is hereby declared a public nuisance and shall be corrected or abated as directed by the county. Any person(s) creating a public nuisance shall be subject to the provisions of the Florence County Code of Laws governing such nuisances, including reimbursing the county for any costs incurred in removing, abating or remedying said nuisance.

(d) *Reconnection.* It shall be unlawful for any person to reconnect to the MS4 when access to the same has been cut off for noncompliance with provisions of this division, or any other reason, until specifically approved in writing by the county. Said approval shall be contingent upon satisfaction of all provisions of this division including, but not limited to, payment of all penalties, charges, claims, damages, judgments, and costs incident thereto.

(e) *Hearings.*

(1) *Initial adjudicatory hearing.* An applicant whose MS4 encroachment permit is denied, or is granted subject to conditions the applicant deems unacceptable, a user assessed a civil penalty, or a user issued an administrative order shall have the right to an adjudicatory hearing before a hearing officer designated by the county upon making such written demand, identifying the specific issues to be contested within 30 days following receipt of the MS4 encroachment permit, civil penalty assessment, or administrative order. Unless such written demand is made within the time specified herein, the action shall be final and binding. The hearing officer shall make a final decision of the contested action within 60 days of the receipt of the demand for a hearing.

- i. *New permits.* Upon appeal, including judicial review in the general courts of justice, of the terms or conditions of a newly issued permit, the terms and conditions of the entire permit are stayed and the permit is not in effect until either the conclusion of the judicial review or until the parties reach a mutual resolution.
- ii. *Renewed permits.* Upon appeal, including judicial review in the general courts of justice, of the terms or conditions of a renewed permit, the terms and conditions of the existing permit remain in effect until either the conclusion of judicial review or until the parties reach mutual resolution.

(2) *Final appeal hearings.* Any decision of a hearing officer made as a result of an adjudicatory hearing may be appealed, to the county council upon filing a written demand within ten days of receipt of notice of the decision. Hearings held under this subsection shall be conducted in accordance with County Code. Failure to make written demand within the time specified herein shall bar further appeal. The county council shall make a final decision on the appeal within 90 days of the date the appeal was filed.

(3) *Official record.* When a final decision is issued, the county council shall prepare an official record of the case that shall include all notices, motions, and other like pleadings; a copy of all documentary evidence introduced; a certified transcript or narrative summary of any testimony taken; and a copy of the final decision of the county council.

(4) *Judicial review.* Any person against whom a final order or decision of the county council is

entered, may seek judicial review of the order or decision by filing a written petition within 30 days after receipt of notice, but not thereafter, with the superior court of Florence County along with a copy to the county. Within 30 days after receipt of the copy of the petition of judicial review, the county council shall transmit the official record to the reviewing court.

(f) *Annual publication of significant noncompliance.* The county reserves the right to publish in the Morning News or other public media a list of those MS4 users which were found to be in significant noncompliance with the provisions of this division during the previous 12 months.
(Ord. No. 37-2006/07, § 2.3.14, 8-16-07)