

# **Stormwater Management Practices and Design Manual**

Clemson University



Clemson University Facilities

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This Stormwater Management Practices and Design Manual (Manual) is issued by Clemson University Facilities pursuant to University Facilities Policy 17 to establish requirements for management of stormwater on the University campus and to meet the requirements of the South Carolina NPDES General Permit for Storm Water Discharges from Regulated Small Municipal Storm Sewer Systems (SMS4).

## 1. Definitions

“Clemson University Facilities” shall mean Clemson University Facilities or any entity to whom Clemson University Facilities delegates authority to implement or enforce any of the University’s requirements under the NPDES General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems (SMS4).

“Larger common plan of development” is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. For example, if a developer buys a 20-acre lot and builds roads, installs pipes, and runs electricity with the intention of constructing homes or other structures sometime in the future, this would be considered a larger common plan of development or sale. If the land is parceled off or sold, and construction occurs on plots that are less than one acre by separate, independent builders, this activity still would be subject to stormwater permitting requirements if the smaller plots were included on the original site plan. A public entity, such as the University, need not consider all construction projects within its jurisdiction to be part of an overall “common plan.” Where discrete construction projects within the University SMS4 are located ¼ mile or more apart, each individual project will be treated as a separate plan of development.

“Development” or “develop land” means any of the following actions undertaken by any person, including, without limitation, any public or private individual or entity:

- (a) the construction, installation, or alteration of a structure, impervious surface or drainage facility;
- (b) clearing, scraping, grubbing or otherwise significantly disturbing the soil, vegetation, mud, sand or rock of a site; or
- (c) adding, removing, exposing, excavating, leveling, grading, digging, burrowing, dumping, piling, dredging, or otherwise disturbing the soil, vegetation, mud, sand or rock of a site.

“Illicit connection” means any man-made conveyance connecting a non-storm water discharge directly to the University SMS4 which results in a discharge that is not composed entirely of storm water runoff except discharges to the University SMS4 pursuant to an NPDES permit (other than the NPDES permit for the University SMS4).

“Illicit discharge” means any discharge to the University SMS4 or receiving waters that is not composed entirely of storm water except (a) discharges pursuant to an NPDES permit (other than the NPDES for the University).

“Land disturbance permit” means written approval issued by the University or an entity delegated to issue written approval pursuant to Section 2.2 of this Policy, authorizing land disturbing activities in accordance with an approved SWPPP.

“Land disturbing activities” means any use of the land by any person 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 storm water runoff. (S.C. Code Ann. § 48-14-20(8)).

“NPDES SMS4 Permit” means the NPDES General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems (SMS4) issued by the South Carolina Department of Health and Environmental Control.

“Low impact development” - a strategy for stormwater management that mimics the natural hydrological system functions of discharge, frequency, recharge and volume.

“Small Municipal Separate Storm Sewer System (SMS4)” – in the context of this policy, an SMS4 is the stormwater system owned and operated by Clemson University

“Storm water” means storm water runoff, snow melt runoff and surface runoff and drainage (S.C. Regulation 61-9.122.26(b)(13)).

“Storm water management” means for: (a) quantitative control, a system of vegetative or structural measures, or both, that control the increased volume and rate of storm water 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 storm water runoff (S.C. Code Ann. § 58-14-30(11)).

“Storm water management facilities” means those natural and man-made channels, swales, ditches, swamps, rivers, streams, creeks, branches, reservoirs, ponds, drainage ways, inlets, catch basins, pipes, head walls, storm sewers, lakes, and other physical works, properties, and improvements which transfer, control, convey or otherwise influence the movement of storm water runoff.

“SWMP” means the storm water management program as required pursuant to the NPDES SMS4 Permit.

“Storm Water Pollution Prevention Plan” or “SWPPP” means a set of drawings and other documents which describe the best management practices and activities to be implemented by a person or business to eliminate or reduce storm water discharges to the maximum extent possible. The SWPPP shall include all of the information and specifications required by S.C. Regulation 72-300 et seq., the Guidelines for Commission Architects and Engineers, the NPDES General Permit for Stormwater Discharges from Construction Activities, and the NPDES SMS4 Permit.

“South Carolina Department of Health and Environmental Control (SCDHEC)” - State Agency that promulgates the Environmental Protection Agencies (EPA) program allowing the discharge of stormwater to Waters of the State (WoS).

## **2. Land Disturbance Permits**

(a) No person shall (1) develop land, (2) engage in any industry or enterprise, (3) construct, operate or maintain any landfill, hazardous waste treatment, disposal or recovery facility, or any other industrial or related facility without a permit as required by this Policy.

(b) All land disturbing activities of one acre or greater or less than one acre if it is part of a larger common plan for development that would ultimately disturb one acre, will be required to obtain a land disturbance permit. Each application for a land disturbance permit shall be accompanied by payment for plan review, permit fee, and a SWPPP.

(c) Exemptions. The following activities are exempt from the requirement to obtain a land disturbance permit:

- (1) Any emergency activity that is immediately necessary for the protection of life, property, or natural resources.
- (2) Existing nursery and agricultural operations conducted as a permitted main or accessory use.
- (3) Logging activities on forestland for the production and harvesting of timber and timber products.
- (4) Agricultural land for the production of plants and animals useful to man.
- (5) Construction or improvement of a single-family residence (single-family residence separately built) or their accessory buildings, or mobile home, that is separately built and not part of multiple construction or a subdivision developments approved under this article. If included in a subdivision plan, all land-disturbing activities must follow the stormwater management and sediment control plan that has been approved for the subdivision.
- (6) Minor land-disturbing activities that do not disturb one acre or greater of land area.
- (7) Any maintenance or renovation of an existing structure or system not materially changing or affecting the rate, concentration or volume of stormwater runoff.

(d) Permitting Authority. Clemson University Facilities may administer the permitting program for land disturbance permits or may delegate authority to an entity outside the University to administer this program. Upon termination of the delegation of permitting authority to an entity outside the University, Clemson University Facilities may

administer the permitting program or delegate authority to administer the program to another entity.

(e) Permit Application Process and Oversight for Sites Disturbing More than One Acre or that are Part of a Larger Common Plan. Regardless of whether Clemson University Facilities has delegated permitting authority to an entity outside the University, all applications for a land disturbance permit within the University SMS4 must be submitted to the University's Associate Utilities Director. If an entity outside of the University has been delegated permitting authority, the Associate Utilities Director will submit the application package to the permitting entity for review and approval. The following requirements apply to permits for activities disturbing more than one acre of that are part of a larger common plan:

- (1) Documents will be submitted to the University's Associate Utilities Director including the items in the Pickens County Design Checklist or to Utilities Designee. ([http://www.co.pickens.sc.us/\\_fileUploads/forms/checklist.pdf](http://www.co.pickens.sc.us/_fileUploads/forms/checklist.pdf))
- (2) Utilities will catalog for tracking and conduct a preliminary check for completeness.
- (3) Associate Utilities Director will then forward packet to Pickens County for review and approval.
- (4) Associate Utilities Director shall be copied on all Correspondence between Pickens County and the Design Professional for situational awareness.
- (5) Once Pickens County has approved the plans an additional set of plans above the three sets required by Pickens County will be sent to the Associate Utilities Director for filing.
- (6) All weekly CEPSCI inspection reports along with the Monthly Pickens County Inspection will be forwarded to Associate Utilities Director for filing. If weekly reports are not forwarded by the contactor a Facilities representative will verify whether the inspections have or have not been performed. If they have not been performed a qualified Utilities employee will perform the inspection and project will be charged a fee of \$200. If the inspection has been performed but not forwarded to Utilities, a copy will be made and the project will be charged \$100.
- (7) During construction, if deficiencies are noted by either the weekly CEPSCI inspections or the monthly regulatory compliance inspections, Utilities reserves the right to make these corrections and charge the project costs of corrections plus a 10% administrative fee if it is deemed that sufficient time has elapsed to allow for remediation.

- (8) Contractor is required to continue weekly inspections until a Notice of Termination (NOT) can be obtained even if land disturbing activities have ceased on site.
- (9) Contractor may request inspections be reduced to once per month once stabilization techniques are developing, but have not reached 70%. It will be at the discretion of the Utilities designee to grant such requests.
- (10) Once a NOT has been obtained the NOT will be forwarded to Utilities designated representative for filing.

(f) Submittal for Sites Distributing Less than One Acre and that are Not Part of a Larger Common Plan. DHEC form 2628 along with all documents as detailed on the form will be submitted to CU Utilities designee. The submittal package will be reviewed from accuracy and completeness. If deemed accurate and complete a letter will be issued to the permittee accordingly.

(g) The Guidelines for Commission Architects and Engineers establishes the BMPs that the University will recognize as LID.

### **3. SWPPP Requirements**

Pursuant to Memorandum of Understanding between Clemson University and Pickens County, Pickens County is administering the permitting program for land disturbance permits required under Section 3. An applicant for a land disturbing permit must submit a SWPPP which conforms to Section 5 of the Pickens County Stormwater Design Manual. A project constructed subject to land disturbance permit issued by Pickens County will be subject to the maintenance and inspection requirement in Sections 7 and 10 of the Pickens County Stormwater Design Manual.

### **4. Maintenance and Repair of Storm Water Facilities**

(a) Clemson University Facilities will inspect and oversee the maintenance and repair of all storm water management facilities on property owned and under the control of the University.

(b) All storm water management facilities must undergo, at the minimum, an inspection once every 5 years to document maintenance and repair needs and ensure compliance with the requirements of this ordinance and accomplishment of its purposes.

(c) For property under the control of an entity other than the University, Clemson University Facilities shall provide the responsible party with written notice of any deficiency or failure to maintain storm water management facility. Such notice shall include a description of the deficiencies, the required remedy, the deadline for

compliance, and legal action which may be taken for non-compliance. If the responsible party fails to perform the required remedy within 15 working days of the deadline in the notice, Clemson University Facilities may undertake the corrective action as the University may deem necessary and seek reimbursement from the responsible party for the cost of such corrective action.

## **5. Prohibition of Illicit Discharges**

(a) No person shall throw, drain, spill, release, run, or otherwise discharge to any component of the University SMS4, including streets, highways, rights-of-way, or cause, permit or suffer to be thrown, drain, spill, release, run, or allow to seep or otherwise discharge into such system, any organic or inorganic matter that shall cause or tend to cause pollution or blockages to such waters, as provided for in this Policy. No person shall introduce or cause to be introduced into the University SMS4 any discharge that is not composed entirely of stormwater. The following non-stormwater discharges are authorized to be discharged provided the South Carolina Department of Health and Environmental Control has not determined these sources to be substantial contributors of pollutants to your SMS4:

- (1) Water line flushing
- (2) Landscape irrigation
- (3) Diverted stream flows
- (4) Rising ground waters
- (5) Uncontaminated ground water infiltration (infiltration is defined as water other than wastewater that enters a sewer system, including foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.)
- (6) Uncontaminated pumped ground water
- (7) Discharges from potable water sources
- (8) Foundation drains
- (9) Air conditioning condensate
- (10) Irrigation water (not consisting of treated, or untreated, waste water)
- (11) Springs
- (12) Water from crawl space pumps
- (13) Footing drains
- (14) Lawn watering

- (15) Individual residential car washing
- (16) Natural flows from riparian habitats and wetlands
- (17) Dechlorinated swimming pool discharges
- (18) Street wash water
- (19) Discharges or flows from fire-fighting activities

(b) In the event of an accidental discharge to the University SMS4 of any material or substance other than stormwater runoff, the person concerned shall inform Clemson University Facilities immediately of the nature, quantity and time of occurrence of the discharge. The person concerned shall take immediate steps to contain treat or take other actions to minimize the effects of the discharge on the University MS4 and receiving streams. The person shall take immediate steps to ensure no recurrence of the discharge.

## **6. Prohibition of illicit connections**

- (a) No person shall connect any pipe, open channel, or any other conveyance system to the University SMS4 that discharges anything except stormwater discharges that are approved by Clemson University Facilities.
- (b) Improper connections in violation of this Policy must be disconnected and redirected to an acceptable outlet as approved by Clemson University Facilities.
- (c) 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.