

334000S01 STORM DRAINAGE UTILITIES - Information for Consultants & Contractors

The University of Kentucky is mandated to comply with a state-issued general permit to discharge stormwater. Formally entitled a Municipal Separate Storm Sewer System (MS4) Permit and issued by authority from the US EPA through the Kentucky Division of Water, it establishes conditions whereby the University can discharge stormwater runoff into the waters of the Commonwealth.

The University's stormwater system is comprised of detention basins, open drainage ditches and miles of underground piping. In addition, this system is also comprised of outfalls that discharge stormwater from the campus' property boundary and into streams or directly into the city of Lexington's stormwater system.

In order to meet the MS4 requirements, all construction on campus must have Best Management Practices (BMP's) designed and in place on all projects to prevent any soil, liquid, or debris from leaving the site and entering the storm system. To accomplish this there are requirements placed on the Architect/Engineering professional and also on the Construction Manager/Contractor in charge of the project.

Architect/Engineer (AE) Responsibilities

For all Capital Projects, with Limits of Disturbance greater than 1 acre, or projects that are part of a larger common plan of development less than 1 acre, the Designer of Record (AE) as part of Phase 3 design documents shall provide the Capital Projects Management, Project Manager an Erosion Prevention and Sediment Control Plan (EPSC). This plan will then be submitted to the Capital Projects Management Water Quality Manager and the Environmental Management Environmental Affairs Compliance Manager for review and approval. The EPSC must be prepared by a licensed professional engineer or landscape architect.

For Linear Utility Projects, an EPSC is needed if the project disturbs 500 linear feet or more of unpaved land surface but is less than one acre. An EPSC is not required for utility projects that disturb 500 linear feet or more of paved land surface and that immediately places all excavated material into a truck.

Utility work that is part of a new development or redevelopment project that disturbs one or more acres of land will be covered by the contractors KYR10 Permit.

AE's Tasks:

The following steps and documents are required if the Limits of Disturbance are greater than 1 acre or if the project is part of a larger planned development, i.e. Greek Park. If the consultant is unsure of the requirement, the UK Project Manager and Water Quality Manager can help.

1. Site Evaluation
 - Collect site information (soils, slopes, drainage)
 - Produce map or drawing of existing site

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- Create final project design map or drawing
 - Survey the site area and delineate drainage area(s)
2. Selection of Controls and EPSC Design
- Implement state and LFUCG current edition “Stormwater Manual” requirements in design for temporary BMP’s during construction and for post construction storm water quality treatment. Refer to the LFUCG most recent addition of Stormwater Manual and associated addenda at: <https://www.lexingtonky.gov/new-development>
 - Select erosion and sediment controls most appropriate for the drainage area, topography, and flow type (sheet flow versus concentrated flow). Refer to The University of Kentucky Campus Landscape Guidelines for recommendations on green Best Management Practices at: <http://www.uky.edu/sustainability/policy-and-plans>
 - Select controls to manage stormwater around waste areas, concrete washout areas, vehicle maintenance activities, etc.
 - Indicate location of controls on map/drawing. Include standard drawings for each structural control measure. Note length, width, depth and materials specifications on the drawings so the contractor can correctly install designed measures.
 - Identify the sequence of major activities, with emphasis on the installation of initial control measures prior to beginning land disturbing activities.
 - Develop a written “Project Narrative” discussing how water and water quality will be handled for the site and it should contain:
 - A description of the work that will be performed on the site.
 - A general site description with direction of flow/drainage, number of outfalls, and receiving waters
 - A discussion of whether impervious area is increasing, decreasing, or remaining the same and whether or not detention is being used.
 - A discussion of whether baseline impervious area is being reduced and how water quality requirements are being addressed.
 - Develop an “Executive Summary”
 - The UK MS4 follows the requirements of the Lexington Fayette Urban County Government (LFUCG) Stormwater Manual (2016). The “Executive Summary” is a form used to compute water quantity and water quality values for the project.
 - Determine if the Project is “Re-development” or “New Development”

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- Re-development Executive Summary
 - Refer to <https://www.lexingtonky.gov/stormwater> , “Stormwater Manual” and download the “[Executive Summary Stormwater Management Plan](#) (Redevelopment projects) (to accompany the Stormwater Manual 2016)”
- New development Executive Summary
 - Refer to <https://www.lexingtonky.gov/stormwater> , “Stormwater Manual” and download the “[Executive Summary Stormwater Management Plan](#) (New development projects) (to accompany the Stormwater Manual 2016)”
- **Submit the Project Narrative and Executive Summary no later than Phase 3 for owner’s review. The EPSC Plan, Executive Summary and Narrative must be approved by the UK Water Quality Manager, Project Manager, and the Environmental Affairs Compliance Manager prior to project being bid. All contractors bidding on the project shall be aware of the University of Kentucky MS4 Storm Water Requirements of the project and bid accordingly.**

Site Contractor’s Responsibilities:

The CPM Water Quality Manager will discuss the University of Kentucky MS4 Storm Water Requirement at the Pre-Construction Meeting.

1. NOI, Permit, SWPPP and Inspections
 - Submit Notice of Intent for coverage of Storm Water Discharges Associated with Construction Activities under the KPDES Storm Water General Permit KYR10 (KPDES permit). KYR10- Stormwater Construction Fact Sheet can be found at <http://eec.ky.gov/Environmental-Protection/Water/Permitcert/KPDES/Documents/KYR10PermitPage.pdf> . This is a PDF with links to the sites to fill out eFORMS.
 - The online NOI can be completed by using the online eNOI (application) electronic format.
 - The Kentucky DOW will send the permit and a Notice of Coverage (NOC) to the Contractor usually within 7 days.
 - Send copy of KPDES Permit and NOC to CPM Project Manager and Water Quality Manager.

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- The permittee (contractor) shall develop a Stormwater Pollution Prevention Plan (SWPPP) based on the Erosion Prevention and Sediment Control Plan (EPSC) as a minimum design standard. Ensure all requirements of KYR10 are fully addressed in the SWPPP.
- The SWPPP plan must include directions on waste container use and the requirement to provide covers to control waste such as discarded building materials, concrete truck washout, chemicals, litter, sanitary waste and any other contaminants at construction sites that may cause impact to water quality.
- Provide site signage as required. A sample template of an acceptable site sign is included in appendix A of this document.
- To obtain information on developing a SWPPP, go to: <http://eec.ky.gov/Environmental-Protection/Water/Permitcert/KPDES/Documents/SWPPPPermitPage.pdf>.
Once the SWPPP is written, forward a copy to the Capital Projects Project Manager and to the Water Quality Manager for approval. Work cannot begin until SWPPP, is approved and permit coverage are obtained.
- After approval, implement the SWPPP prior to the commencement of any construction disturbance. **All permit requirements shall be met under “Section 2” of the permit.**
- All operators working on the project are required to comply with the EPSC Plan and SWPPP. The SWPPP shall include erosion prevention measures, sediment controls measures, and other site management practices necessary to prevent the discharge of sediment and other pollutants into waters of the Commonwealth that are adequately protective to minimize receiving waters from being degraded and failing to support their designated uses. These sediment control measures including retention basins, erosion control measures, and other site management practices are required to be properly selected based on site-specific conditions, and installed and maintained to effectively minimize such discharges for storm events up to an including a 2-year, 24-hour event. Permittees are encouraged to design the site, the erosion prevention measures, sediment controls measures, and other site management practices with an eye toward minimizing post-construction stormwater runoff, including facilitating the use of low-impact technologies. Permittees are to minimize soil compaction and, unless infeasible, preserve topsoil except in specific site areas where the intended function dictates compaction or removal/disturbance of topsoil.

2. SWPPP Implementation

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- SWPPP shall be an agenda item at the preconstruction meeting.
- Install BMP's such as, basins, traps, drainage, and sediment barriers before beginning land disturbing activities, including the construction entrance/exit. Once prevention measures have been installed, grading can commence. In the event a new construction entrance is added to the site, this new entrance must be built according to the EPSC design details with a wheel wash, a water supply and a sediment catch basin for washed wheel sediment.
- Maintain all measures in working condition. Perform maintenance activities identified during inspections prior to the next rain event. Remove sediment from behind BMPs when 1/3 the storage volume has been filled.
- Stabilize disturbed areas within 14 days of inactivity or reaching final grade on any portion of the site.
- Keep Permit, SWPPP, weekly/rain event inspections sheets in binder in trailer. **Any BMP change/alteration from SWPPP and EPSC plan must be noted on the EPSC and SWPPP.**
- **No soil and sediment shall leave the construction site. BMPs shall be repaired immediately if failure has occurred. No Mud shall be permitted on any street. All entrances/exits shall have a means by which to wash wheels. If an entrance/exit does not have a wheel wash, that exit shall not be used in muddy conditions. If for any reason mud is tracked offsite, the area must be cleaned in such a way as to prevent sediment from entering the storm sewer system. The use of tractor brooms will not be permitted.**
- UK (the MS4) routinely inspects sites for compliance with the EPSC/SWPPP. Any deficiencies noted, requested corrections/repairs, or additional bmp's requested shall be installed as soon as site conditions are favorable but no more than 7 days from the inspection date. **Failure to remedy violations and for repeat violations, the Owner shall instruct the contractor/CM to contract to a third party the remediation to all violations at a cost to the holder of the KYR10 Permit. Site Contractor shall list Erosion and Sediment Control cost separately in schedule of values. Pay applications shall be based on the following schedule:**
 - 25% Initial BMP installation
 - 50% Periodic maintenance during construction
 - 25% Final Stabilization and NOT

3. BMP Maintenance and Inspections

- Inspect the site every 7 calendar days and after each rainfall of ½" or more. Document site conditions, rainfall, maintenance activities needed and performed, stabilization needed and performed, and where new measures are needed. Discuss deficiencies

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Author: Environmental Health & Safety

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Applies to: All Projects

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with UK Project Manager and Water Quality Manager and note on the SWPPP Inspection Sheets.

- **Per the KPDES Permit, Section 2.1.7. "Inspections – Permittee Conducted".**
"Inspections shall be performed by personnel knowledgeable and skilled in assessing conditions at the construction site that could impact storm water quality and assessing the effectiveness of erosion prevention measures, sediment control measures, and other site management practices chosen to control the quality of the storm water discharges. Inspectors shall have training in storm water construction management such as Kentucky Erosion Prevention & Sediment Control (KEPSC), Certified Professional in Stormwater Quality (CPSWQ), Certified Erosion, Sediment and Stormwater Inspector (CESSWI), or other similar training."
- Any inspection Report Template and a sample can be obtained from the Water Quality Manager. All site inspection reports must contain the following certification to be signed by the inspector:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title: _____

Signature: _____ Date: _____

4. NOT and Closeout

- At the conclusion of the project and all bare areas, slopes and ditches are 70% vegetated with the permanent ground cover, the contract shall notify the UK Project Manager and Water Quality Manager and request a final site inspection prior to filing a "Notice of Termination (NOT) with the state.
- Once the site has been permanently stabilized, complete and submit the Notice of Termination of Coverage under the KPDES General Permit for Storm Water Discharges Associated with Construction Activity. Inspections can cease once the NOT has been submitted to the KDOW. The NOT can be found here: <http://eec.ky.gov/Environmental-Protection/Water/Permitcert/KPDES/Documents/KYR10PermitPage.pdf>

Appendix A

S W P P P

STORM WATER POLLUTION PREVENTION PLAN

CONTRACTOR NAME: _____

KPDES PERMIT NO. (IF APPLICABLE): _____

PROJECT NAME: _____

Facility OPERATOR: _____

CONTACT PERSON: _____

CONTACT PHONE NUMBER: _____

SWPPP LOCATION: Jobsite Trailer

**IF STORMWATER POLLUTION IS OBSERVED, CONTACT
THE KENTUCKY DIVISION OF WATER AT 502.564.7250.**