

EXECUTIVE SUMMARY

As required by its MS4 permit, this Annual Report documents the tasks completed by University of Kentucky (UK) during 2024. These tasks are defined in the Stormwater Quality Management Plan (SWQMP) that was developed at the beginning of the current five-year permit cycle, which encompassed 2018 to 2023. The permit expired on April 30, 2023 but is administratively continued until such time that a new permit is issued by the Kentucky Division of Water.

The SWQMP provides the framework for compliance with the MS4 permit and includes a total of 106 tasks, 225 measurable goals, assigns the responsible parties for oversight, and defines evidence needed to show completion of each task and goal. This SWQMP is set to be updated with the issuance of the new MS4 permit. Until the new permit is issued, the current permit will continue to be active, and UK will continue to operate under that permit and the existing SWQMP.

Throughout 2024, the MS4 program again experienced ongoing progress toward completion of the SWQMP tasks as documented in the Annual Report. Highlights of progress made in 2024 are summarized in the following:

Education, Outreach, and Participation Efforts

- The Storm Drain Marking Program advanced significantly through the efforts of a Stormwater Intern, led by the Water Quality Compliance Specialist, who completed the assessment of over 1159 drains and applied 200 drain markers. This also allowed for the interactive mapping to be updated noting locations where the remaining drain assessments and marking need to be performed.
- UK FIS developed a proof of concept for a Stormwater Tracking Tool that allows users to click on the map and highlighted the stormwater route showing the overall distance traveled before it exits the MS4. Additional improvements and information can be added in the future through collaboration with UK FIS and EQM.
- KWRI continued work on developing tools for MS4 communities around the state including fact sheets, interactive guides, and a Limelight Series intended to train MS4 Coordinators statewide by highlighting successful efforts of other MS4s in the state.
- Significant efforts continued towards staff and campus outreach through a variety of avenues including the Facilities Management Newsletter and Training Newsletter, UKNow Articles, Utilities and Energy Management Weekly Wire, and Sustainability's WholeSum blog, all of which include important information on the protection of stormwater.
- The Campus Sustainability Showcase highlighted the Stormwater Harvesting Project at the Central Utility Plant with the information booth staffed by folks from Utilities.
- The Stormwater Harvesting Project at the Central Utility Plant was also used in the Civil Engineering Senior Design class as their topic for the semester. Student teams were responsible for researching the process, evaluating a design to increase stormwater storage and decrease required maintenance, and developing their own implementation approach for these improvements.
- Projects around campus including the University Drive Restoration Project and the Alumni Drive Stream Restoration Project continue to be valuable resources for professors, students, community outreach, and student recruitment.

Construction and Post-Construction Controls

- EQM completed the transition from MS4Web to Compliance Go for use in tracking construction and post-construction compliance activities around campus. This system is used for monthly construction site inspections, annual BMP inspections, annual GPP inspections, and annual SPCC inspections.

- EQM and Strand completed 59 Post-Construction BMP inspections.
- Utilities completed maintenance on 36 water quality treatment devices.
- During 2024, stormwater reviews were completed on 21 projects to confirm compliance with UK Design Standards and the MS4 permit. Once under construction, monthly inspections were completed on required projects to verify that sufficient protection measures were in place. The responsibility of project reviews related to stormwater has completely transferred to EQM requiring 188 individual project review related tasks and contracting with Strand Associates, Inc. for assistance.

Pollution Prevention and Good Housekeeping

- The Spill Prevention Control and Countermeasure plans that cover the major operational divisions on campus were updated and certified in 2024. This included a restructuring of the manuals into the five areas, assessing each area for stormwater discharge potential related to petroleum products, and includes required monthly and annual inspections.

Stormwater-Related Projects

- The Central Utility Plant Stormwater Harvesting system continues to be used to harvest water from a stormwater culvert for use in cooling at the Central Utility Plant. The system came online initially in July of 2023 and has harvested over 4.04 million gallons of stormwater for reuse, including 1.7 million gallons in 2024.
- Work on two additional LFUCG grants continued. Design of the parking lot retrofit with the installation of tree cells is complete and will allow the trees planted in campus hardscapes to grow to maturity and maximize stormwater interception. The Shawneetown Stream Restoration is on hold, but preliminary design is complete with a goal of preventing the stormwater from running in the roadway and to rehabilitate the grass swale to reduce erosion, improve inlet flow, and improve overall channel flow.
- Two new 2024 LFUCG grants totaling over \$375,000 were awarded to the University. The Athletics Complex Stormwater Improvements project will reintroduce a vegetated swale to the area along Alumni Drive and direct flow back to the underground conveyance system, allowing for the continued operation of the infiltration basin and the reintroduction of tree canopy along the mixed-use trail. The Hope Lodge Stormwater Improvements project will narrow down previously proposed design elements, scope of work, and costs required to reduce localized flooding and improve stormwater conveyance concerns from the adjacent neighborhood.

With the pending renewal of the MS4 permit and development of a new SWQMP, progress continues to be made on many of the ongoing and unfinished tasks. However, the significant influx of project reviews and associated tasks has resulted in a significant expenditure of both time and resources in an effort to keep up with these projects and has impacted the ability to focus on other tasks. That being said, the implementation of both construction and post-construction BMPs is the most urgent need and will have the most lasting impact on stormwater quality.