

# **Municipal Separate Storm Sewer System (MS4) Program Update**

## **UPDATE TO THE STORMWATER MANUAL**

*Environmental Quality and Public Works Committee*

*September 1, 2020*



**LEXINGTON**



## Overview

- Background
- Stakeholder Process
- Reasons for Updating the Manual
- Comparing the Updated Stormwater Manual to the 2016 Version
- Next Steps



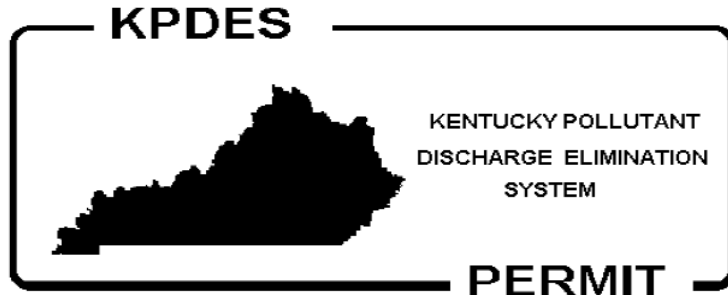
### **Stormwater Manual**

**Lexington-Fayette Urban County Government  
Lexington, Kentucky**

**October 1, 2016**



# Municipal Separate Storm Sewer (MS4) Permit



Permit No.: KYS000002  
AI No.: 74551

## AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Lexington-Fayette Urban County Government (LFUCG)  
200 East Main Street  
Lexington, Kentucky 40507

is authorized to discharge stormwater runoff from a large municipal separate storm sewer system (MS4) to receiving waters of the Commonwealth in accordance with the monitoring requirements and other conditions set forth in PARTS I, II, III, and IV hereof. The permit consists of this cover sheet, a table of contents, and PART I 4 pages, PART II 29 pages, PART III 4 pages, PART IV 1 page.

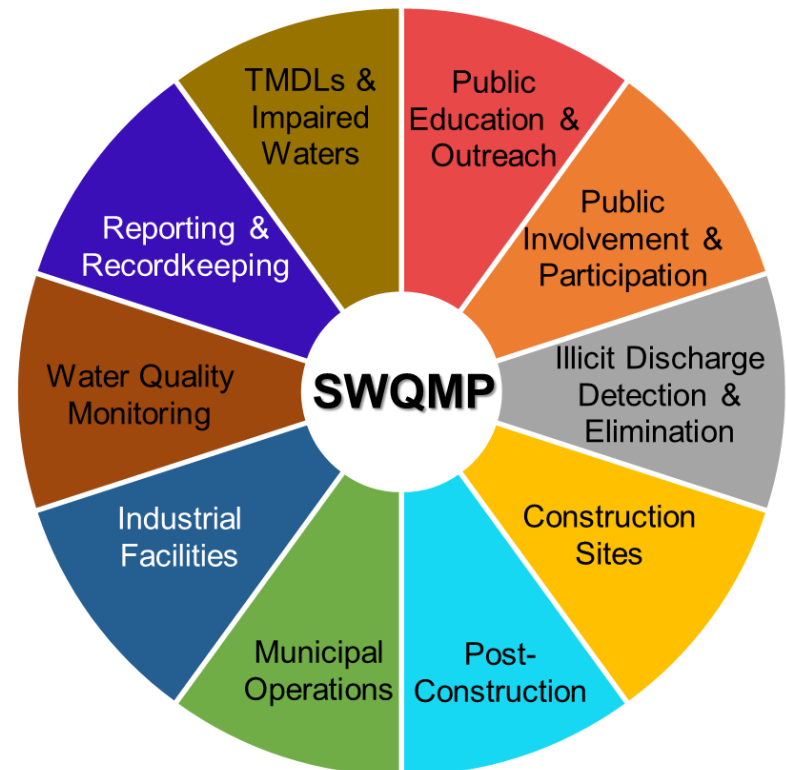
This permit shall become effective on June 1, 2015.

This permit and the authorization to discharge shall expire at midnight, May 31, 2020.

May 1, 2015

Date signed

Peter T. Goodman, Director  
Division of Water



## Background on the Stormwater Manual

- First edition in 2001, along with 6 other Manuals.
- Updates in 2002, 2004, 2005, 2009, 2011, and 2016.
- Contains the design and construction standards for stormwater infrastructure in new development and redevelopment.



## Purpose of the Stormwater Manual

- Prevent new or worsened flooding problems as a result of new development / redevelopment
- Reduce pollution in stormwater runoff
- Establish uniform design standards for stormwater controls (basins, ponds, BMPs)
- Establish uniform construction standards regarding Erosion and Sediment Control (ESC)





## Stakeholder Involvement

- Stakeholders comprised of:
  - Staff from Planning, DOE, DWQ, & DES
  - Stormwater Stakeholder Advisory Committee
    - Building Industry Association of Central Kentucky
    - Commerce Lexington
    - Engineering Firms
    - Environmental Groups
- Stakeholders and subsets of the stakeholders met nine times in 2019-2020
- Stakeholder input was essential to understanding all aspects of the various proposed changes



## **Reasons for Updating the Manual**

- Clarify various definitions and design / construction requirements
- Revise design requirements to reflect current, standard engineering practice
- Ensure consistency among the sections of the manual



## Section 1.4.2: Stream

2016 Requirement	2020 Requirement
Defines stream as determined by the U.S. Army Corps of Engineers.	<p>Changes the definition of a stream to the U.S. EPA definition that went into effect in 2020.</p> <p>Stipulates that the U.S. Army Corps of Engineers or consultants who are prequalified by the Kentucky Transportation Cabinet for stream and wetland mitigation, are the only people who can make the determination of what is and isn't a stream.</p>





## Section 1.4.4: Vegetative Buffer Zone

2016 Requirement	2020 Requirement
Prohibits construction in the buffer zone, which is 50 feet on each side of the stream.	<p>No change in width.</p> <p>Allows removal of invasive species within the buffer zone.</p> <p>Acknowledges that 50 feet may not be attainable in all redevelopment projects because of the presence of existing parking lots, streets, and structures. In these situations, the existing buffer zone (if present) must be preserved.</p>



## Section 1.4.5: 100-Year Floodplain

2016 Requirement	2020 Requirement
<p>Defines the 100-year floodplain as follows:</p> <ul style="list-style-type: none"><li>• FEMA-mapped floodplains</li><li>• Floodplain on unmapped streams with a drainage area of <u>50 acres</u> or more – floodplain to be determined by the Developer’s Engineer</li></ul> <p>Note: Typically, the Planning Commission has been requiring a floodplain analysis on all streams.</p>	<p>Defines the 100-year floodplain as follows:</p> <ul style="list-style-type: none"><li>• FEMA-mapped floodplains</li><li>• Floodplain on unmapped streams with a drainage area of <u>any size</u> – floodplain to be determined by the Developer’s Engineer and reviewed / accepted by DOE and DWQ</li></ul>



## Section 1.5.4: Construction in the 100-Year Floodplain

2016 Requirement	2020 Requirement
<p>Requires the Developer to obtain a Special Permit in accordance with Article 19 of the Zoning Ordinance.</p> <p>Note: DOE currently requires the Engineer to demonstrate the project will not increase flooding on contiguous property.</p>	<p>Same requirement regarding Article 19 of the Zoning Ordinance.</p> <p>The Engineer would also have to demonstrate (by modeling) that placing fill in the floodplain will have no adverse impact on contiguous property.</p>



## Section 1.5.5: Mitigation of Stream Construction Impacts

2016 Requirement	2020 Requirement
<p>There are no mitigation requirements in the Stormwater Manual for stream and wetland impacts because federal and state agencies regulate those activities.</p> <p>The mitigation plans approved by the USACE / KDOW satisfies LFUCG requirements if the project is done in Fayette County.</p>	<p>There are no mitigation requirements in the Stormwater Manual for stream and wetland impacts because federal and state agencies regulate those activities.</p> <p>The restriction to Fayette County has been removed because LFUCG has no leverage over USACE / KDOW to require a project be located in Fayette County. Instead language has been added to indicate that LFUCG prefers that mitigation take place in Fayette County.</p>



## Table 1-5: Options for Stormwater Management for Townhouse Developments

2016 Requirement	2020 Requirement
Permeable Pavement, Underground Detention, and Manufactured Treatment Devices (MTDs) are not allowed in Townhouse Developments.	<p>Permeable Pavement and Underground Detention will be allowed in Townhouse Developments but must be placed in a private street / access easement.</p> <p>MTDs will continue to be prohibited in Townhouse Developments.</p>



## Table 1-9: Allowable Uses and Activities in the Floodplain During Construction

2016 Requirement	2020 Requirement
Shared Use Paths are not allowed in the Vegetative Buffer Zone	Shared Use Paths would be allowed in the Vegetative Buffer Zone



## Section 10.4: Manufactured Treatment Devices (MTDs)

2016 Requirement	2020 Requirement
Allows MTDs only for redevelopment commercial projects; infill commercial projects; or new development commercial projects if Green Infrastructure is not technically feasible.	<p>No changes proposed.</p> <p>MTDs will continue to be allowed only for commercial projects.</p> <p>Clarifies that MTDs can be used for addressing water quality requirements for the baseline (before demolition) impervious area in redevelopment projects, but Green Infrastructure must be used for <u>new impervious areas</u> (in excess of the baseline condition) added in redevelopment projects where technically feasible.</p>



## Section 10.4.2: Access Lid Weight Requirements

2016 Requirement	2020 Requirement
None	Maximum weight of lids: <ul style="list-style-type: none"><li>• Traffic Areas – 130 pounds</li><li>• Non-Traffic Areas – 75 pounds</li></ul>





## Section 11.2.2 / 11.3.3: Reduced Exposure Time

2016 Requirement	2020 Requirement
Phased ESC plans are required for residential subdivision projects.	Phased ESC Plans will be required for residential subdivision <u>and</u> commercial projects.



## Next Steps

- Presentation to the SSAC on Friday, September 4
- Presentation to the Planning Commission on Thursday, September 17
- Publish the updated Stormwater Manual on the DOE New Development webpage on October 1

*The 2016 Stormwater Manual will continue to be applicable for Improvement Plans initiated prior to October 1, 2020*

# Questions?



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