

# **Kansas Department of Health and Environment Designation Criteria and Procedure for Small Municipal Separate Storm Sewer Systems**

## **Introduction**

EPA published the NPDES Stormwater "Phase II" Final Rule on December 8, 1999 (64 FR68722). The Federal regulation, 40 CFR 123.35, requires the NPDES permitting authority develop a process, as well as criteria, to designate small Municipal Separate Storm Sewer Systems (MS4s) as regulated under the NPDES stormwater discharge control program. The Kansas Department of Health and Environment is the NPDES permitting authority for Kansas with the exception of Indian lands. EPA administers the program on Indian lands.

There are four methods by which a small MS4 may be designated as a "regulated small MS4." Such designation requires NPDES stormwater permit coverage. The designation methods are listed below:

### **METHODS OF DESIGNATION**

<b>METHOD</b>	<b>REGULATION</b>	<b>EXPLANATION</b>
1.	40 CFR 122.32(a)(1)	Small MS4s located within the boundaries of a Census Bureau defined Urbanized Area (UA), based on the latest decennial census, are automatically designated and required to apply for a MS4 stormwater permit unless they qualify for a waiver under 40 CFR 122.32(d) or (e).
2.	40 CFR 123.35(b)(2)	Small MS4s that are located outside of UAs serving jurisdictions with a population of at least 10,000 and a population density of at least 1,000 people per square mile and which meet certain designation criteria, are to be designated by the permitting authority.
3.	40 CFR 123.35(b)(4)	Small MS4s that contribute substantially to pollutant loadings of a physically interconnected MS4 regulated by the NPDES stormwater program are to be designated by the permitting authority.
4.	40 CFR 122.26(f)(4)	Any person may petition the permitting authority for the designation of a large, medium, or small municipal separate storm sewer system. Subsequent to the petition the permitting authority must make a determination regarding designation within 180 days.

This document outlines the designation criteria and designation process the Kansas Department of Health and Environment will use in determining whether specific small MS4s will be designated as a "regulated small MS4." This criteria and process shall be utilized to make designations per the second, third, and fourth methods as listed above.

## Designation Criteria and Designation Process

### 1. DESIGNATION METHOD NO. 1 [40 CFR 123.32(a)(1)]

#### A. CRITERIA

The Environmental Protection agency designation criteria is based on location. All municipalities located wholly or partially within an urbanized area, as determined by the latest decennial census by the United States Bureau of the Census, are designated.

#### B. DESIGNATION PROCESS

The designation Method 1 results in automatic designation of small MS4s located in urbanized areas per the federal regulation 40 CFR 122.32(a)(1). The permitting authority (KDHE) does not make these designations however KDHE may issue waivers to municipalities with less than 1000 population in compliance with 40 CFR 122.32(d). The federal regulation which invokes automatic designation applies to all small MS4s that are located within the boundaries of a Bureau of the Census defined urbanized area based on the latest decennial census. The five urbanized areas in Kansas are Wichita, Topeka, Lawrence, Kansas City Missouri/Kansas and St. Joseph Missouri/Kansas.

The preamble to the Phase II Stormwater Regulations as published in the December 8, 1999 Federal Register included Appendix 6 which listed several municipalities including cities, counties and townships located within urbanized areas (based on the 1990 census) which may be designated MS4s. This list was not intended to be a comprehensive list of designated MS4s which are required to apply for a stormwater permit. Entities such as military bases, governmental hospitals, prison complexes, universities, sewer districts, and highway departments that operate a small MS4 within an urbanized area are also subject to the permitting regulations but were not individually listed in Appendix 6 of the preamble.

The U.S. Census Bureau published an updated list of urbanized areas, based on the 2000 census, on May 1, 2002 in the Federal Register (67 FR 21962). KDHE has evaluated the recent year 2000 urbanized areas and updated the Appendix 6 listing of cities, counties and townships in the five urbanized areas. This updated list is included in Appendix A. This list is only a partial list of the automatically designated municipalities as other entities, e.g., military bases, governmental hospitals, etc. are not listed. Some of the municipalities listed in Appendix A presently qualify for waiver from the requirement to apply for a MS4 stormwater permit. The municipalities which have been identified as qualifying for the waiver are noted in Appendix A.

## **2. DESIGNATION METHOD NO. 2 [40 CFR 123.35(a)(2)]**

### **A. CRITERIA**

KDHE designation criteria considers the four following factors:

1. Population
2. Location
3. Population density
3. The TMDL listing of adjacent stream segments or lakes

#### **POPULATION**

All cities with population greater than 10,000 located outside an urbanized area must be considered. Any city which has a population greater than 25,000 located outside of an urbanized area shall be designated regardless of whether any of the four other criteria are satisfied. The population shall be based on the most recent decennial census.

#### **LOCATION**

Municipal separate storm sewer systems must be located outside of an urbanized area to be designated per this method. (All municipalities with a MS4 located in an urbanized area are automatically designated as a regulated MS4 under Method 1 and are required to apply for a NPDES stormwater permit unless they qualify for a waiver.)

#### **POPULATION DENSITY**

Population density is related to the level of human activity, and has been shown to be directly linked to total impervious land surfaces. Impervious surfaces are directly related to pollutant loadings from stormwater runoff. Municipal separate storm sewer systems shall be designated if the municipality has a population density of at least 1,000 people per square mile and the municipality meets the location, and Total Maximum Daily Load (TMDL) criteria.

#### **TMDL**

Municipal separate storm sewer systems shall be designated if they are adjacent to streams or lakes identified in a TMDL as impaired and the municipality meets the location and population density criteria.

### **B. DESIGNATION PROCESS**

The designation Method 2 requires the permitting authority (KDHE) designate all small MS4s which meet the criteria. Upon designation the municipality is required to apply for NPDES stormwater permit coverage by March 10, 2003.

Appendix B illustrates the implementation of the criteria and briefly addresses permitting requirements. Appendix C lists municipalities which are presently designated by this method.

### **3. DESIGNATION METHOD NO. 3 [40 CFR 123.35(b)(4)]**

#### **A. CRITERIA**

KDHE designation criteria considers the two following factors:

1. Interconnection to a downstream MS4
2. Substantial pollutant contribution to the downstream MS4

#### **INTERCONNECTION**

The municipal separate storm sewer system must be physically interconnected to a downstream MS4. To be “physically interconnected,” the storm sewer system, including drainage ditches or storm sewer pipes of the upstream MS4, must discharge directly into the storm sewer system of the downstream MS4.

#### **SUBSTANTIAL POLLUTANT CONTRIBUTION**

Substantial pollutant contribution will be determined with consideration of the estimated pollutant loading from the upstream MS4 compared to the estimated pollutant loading of the downstream MS4. The pollutant of concern must be one which has either been listed in the 303 (d) list or a TMDL has been enacted for the pollutant. The term “substantial” will normally be defined based on the upstream MS4 contributing more than half of the pollutant of concern in the combined flow from the two MS4s at the point of discharge to the impaired stream or lake .

#### **B. DESIGNATION PROCESS**

The designation Method 3 allows KDHE designation of small MS4s which are physically interconnected to another regulated small MS4. This designation can occur at any time, as no deadline is specifically referenced in the federal regulations.

#### **4. DESIGNATION METHOD NO. 4 [40 CFR 122.22(f)(4)]**

##### **A. CRITERIA**

When a petition is received for the designation of a MS4, KDHE designation criteria considers one factor, the TMDL listing of adjacent stream segments or lakes.

##### **TMDL**

Municipal separate storm sewer systems, regardless of population, shall be designated if a valid petition is submitted to KDHE, and the municipality is adjacent to streams or lakes identified in a TMDL as impaired.

##### **B. DESIGNATION PROCESS**

The designation Method 4 allows KDHE to designate small MS4s following receipt of a petition from any individual. The petition must be submitted to KDHE in compliance with 40 CFR 122.26(f)(4). Any person may petition KDHE to request a municipality be designated. The petition should be written, outlining the justification for designation and signed by the individual who is petitioning for such designation. KDHE must make a final determination on any petition within 180 days from the receipt of the petition.

In March 2003, KDHE first published this designation document. In June 2004 this document was updated to identify additional municipalities which qualify for waivers and briefly outline anticipated permit requirements in Appendix B. Appendix A lists the cities, counties and townships which are automatically designated as they are located within an urbanized area. Please note, the list in Appendix A is not a complete list of all designated MS4s in urbanized areas as the federal regulations (designation method No. 1) automatically designate all municipalities with a separate sanitary sewer system which are located wholly or partially in an urbanized area. Appendix B illustrates the decision tree for designations made per designation method No. 2. Appendix C list the municipalities which have been designated per method No. 2. KDHE may revise the designation criteria, designation procedure, and appendices A, B and C as factors change, e.g. population or TMDLs. Such revisions will occur at least ever 10 years subsequent to each decennial census.

KDHE has the authority to designate a small MS4 which had been previously waived under 40 CFR 123.35(d)(1) or (2) if circumstances change. EPA also may make designations under 40 CFR 123.35 if KDHE fails to designate MS4s.

## Glossary

*303 (d) list* means a report which is a biennial assessment of the state's surface waters that are not attaining water quality standards as required by 33 USC 466 *et seq*, the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act. Under United States Environmental Protection Agency (EPA) guidance each state prepares a list of impaired surface water segments within its boundaries. Waters placed on this list require the preparation of Total Maximum Daily Loads (TMDLs) for those pollutants causing the non-attainment of the state's water quality standards.

*305 (b) report* means a report required by section 305 (b) of the Clean Water Act. The Federal Water Pollution Control Act (PL92-500, commonly referred to as the Clean Water Act), establishes a process for States to use for development of information on the quality of the Nation's water resources. The requirements for this process are found in Sections 106 (e), 204 (a), 303 (d), 305 (b), and 314 (a) of the Clean Water Act. Each state is required to develop a program to monitor the quality of its surface and ground waters and prepare a report describing the status of its water quality. EPA is to compile the data from the State reports, summarize them, and transmit the summaries to Congress along with an analysis of the status of water quality nationwide. This 305 (b) process is the principal means by which EPA, Congress, and the public evaluate whether U.S. waters meet water quality standards, the progress made in maintaining and restoring water quality, and the extent of remaining problems.

*Best management practices* ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Hydrologic Unit Code (HUC).** The United States Geological Survey of the United States Department of the Interior and the Natural Resources Conservation Service of the United States Department of Agriculture have developed maps of drainage basins for the United States. The drainage basins are subdivided into successively smaller hydrologic units which are classified into six levels: region, subregion, accounting unit, cataloging unit, watershed, and subwatershed. The 8-digit subbasins are greater than 448,000 acres in size, the 11-digit watersheds range in size from 40,000 to 250,000 acres.

Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to 14 digits based on the six levels of classification in the hydrologic unit system. The 8-digit subbasins, also referred to as HUC 8 (example = HUC 10300101) are greater than 448,000 acres in size. The 11-digit watersheds, also referred to as HUC 11 (example = HUC 10300101010) range in size from 40,000 to 250,000 acres. The HUC 11 watershed identified as HUC 10300101010 is generally located in eastern Johnson County. The eleven digit HUC indicates the region with the first two digits (10 = Missouri River Region), the subregion with the third and fourth digits (30 = Lower Missouri), the accounting unit with the fifth and sixth digits (01 = Lower Missouri-Blackwater), the sub-basin with the seventh and eight digits (01 = Lower Missouri-Crooked), and the watershed with the last three digits (010 - which is unnamed).

*Municipal separate storm sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district, drainage district, or a similar entity, or a designated and approved management agency under section 208 of the Clean Water Act that discharges to waters of the United States;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR Section 122.2.

*National Pollutant Discharge Elimination System (NPDES)* means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA.

*Physically interconnected* means that one MS4 is connected to a second MS4 in such a way that it allows for direct discharges to the second system.

*Regulated small MS4* means an MS4 which is automatically designated for inclusion in the Phase II stormwater permitting program by its location within an urbanized area, or by designation by the NPDES permitting authority.

*Small municipal separate storm sewer system* means all separate storm sewers that are:

- (i) Owned or operated by the United States, a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the Clean Water Act that discharges to waters of the United States.
- (ii) Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to 40 CFR Sections 122.26 (b)(4) and (b)(7).

- (iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. [40 CFR 122.26(b)(16)]

*Stormwater* means stormwater runoff, snow melt runoff, and surface runoff and drainage.

Total Maximum Daily Loads (TMDLs) are quantitative objectives and strategies needed to achieve water quality standards. The water quality standards constitute the goals of water quality adequate to fully support designated uses of streams, lakes, and wetlands. TMDLs have been developed by the Kansas Department of Health and Environment for several streams and lakes in Kansas. The process of developing TMDLs determines:

- (i) The pollutants causing water quality impairments
- (ii) The degree of deviation away from applicable water quality standards
- (iii) The levels of pollution reduction or pollutant loading needed to attain achievement of water quality standards
- (iv) Corrective actions, including load allocations, to be implemented among point and nonpoint sources in the watershed affecting the water quality limited water body
- (v) The monitoring and evaluation strategies needed to assess the impact of corrective actions in achieving TMDLs and water quality standards
- (vi) Provisions for future revision of TMDLs based on those evaluations

*Urbanized Area*: For Census 2000, the Census Bureau classifies "urban" as all territory, population, and housing units located within an urbanized area (UA). It delineates UA boundaries to encompass densely settled territory, which consists of: core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. In addition, under certain conditions, less densely settled territory may be part of each UA.

Note: This glossary is provided for informational purposes only; legal definitions of these terms can be found in the Code of Federal Regulations at 40 CFR Section 122.26(b) or in the Phase II Final Rule, published December 8, 1999 (64 FR68722).



# APPENDIX A

## CITIES, COUNTIES AND TOWNSHIPS DESIGNATED AS REGULATED MUNICIPAL SEPARATE STORM SEWER SYSTEMS \*

### FIVE URBANIZED AREAS

#### I TOPEKA

1. Soldier township
2. Tecumseh township
3. Williamsport township
4. Mission township
5. Shawnee County

Topeka township qualifies for waiver.

#### II KANSAS CITY

1. Olathe
2. Edwardsville
3. Bonner Springs
4. Overland Park
5. Roeland Park
6. Prairie Village
7. Leawood
8. Westwood
9. Lenexa
10. Merriam
11. Fairway
12. Mission
13. Mission Hills
14. Shawnee
15. Johnson County

Westwood Hills, Countryside, Lake Quivira, Mission Woods, Monticello township, Shawnee township, Olathe township and Oxford township qualify for waiver.

#### III LAWRENCE

1. Lawrence

Douglas county and Wakarusa township qualify for waiver.

#### IV ST JOSEPH

Elwood, Doniphan county and Washington township qualify for waiver.

#### V WICHITA

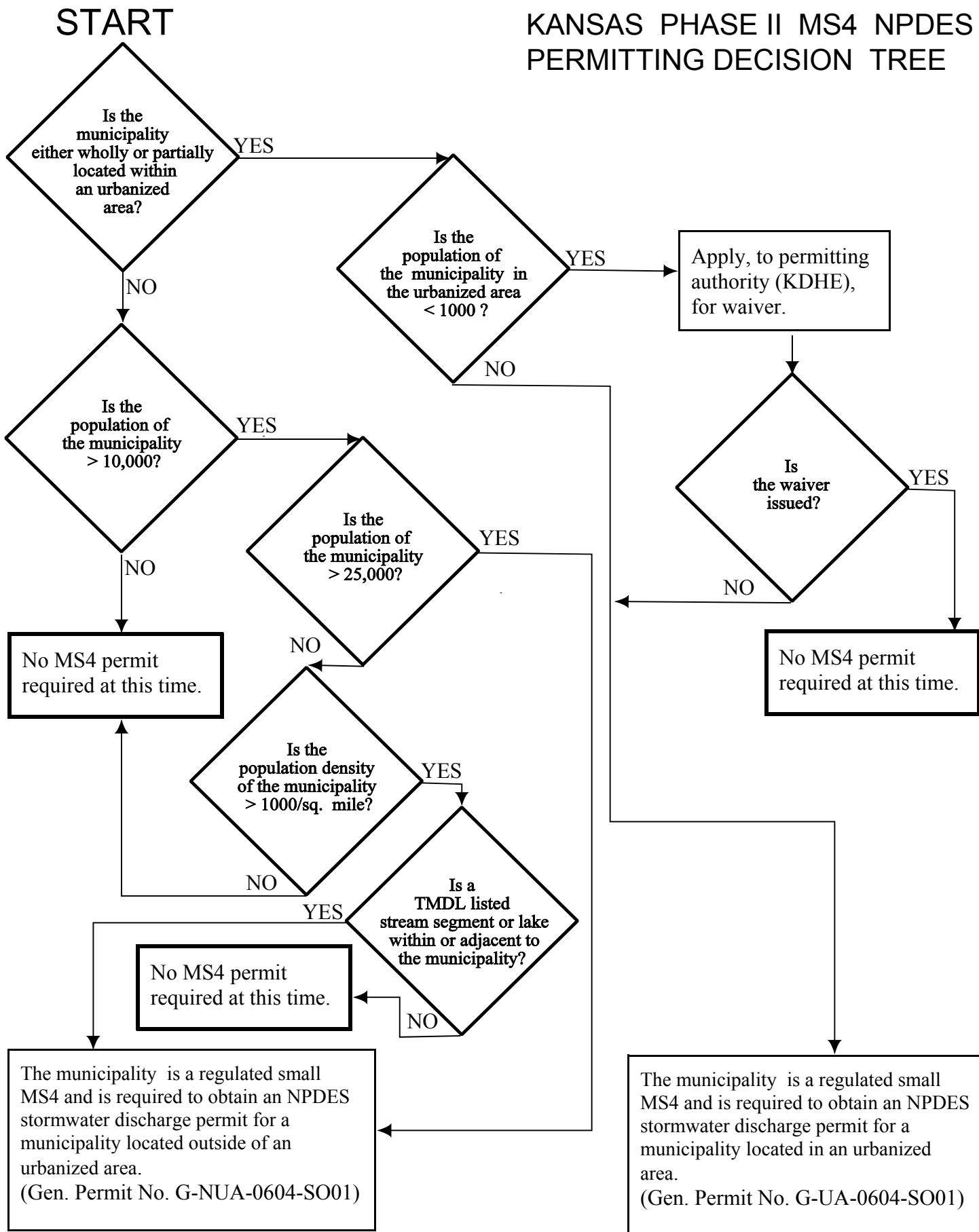
1. Andover
2. Bel Aire
3. Derby
4. Park City
5. Haysville
6. Kechi
7. Maize
8. Mulvane
9. Valley Center
10. Minneha township
11. Riverside township
12. Salem township
13. Sedgwick County

Eastborough, Attica township, Bruno township, Waco township, Delano township, Kechi township, Rockford township, Ohio township, Park township, Gore township, Gypsum township, Sumner county and Butler county qualify for waiver.

\* These municipalities are automatically designated per 40 CFR 122.32(a)(1) as they are located in an urbanized area and operate separate storm sewer systems. This list is not a complete list of all designated MS4s within urbanized areas as the federal regulations automatically designate all municipalities with a separate storm sewer system which are located wholly or partially in an urbanized area. Storm sewer districts, flood control districts, drainage districts, military bases, governmental hospitals, prison complexes, universities, and highway departments which are located in an urbanized area and operate storm sewer systems are also automatically designated and required to apply for a MS4 stormwater permit unless they qualify for a waiver

# APPENDIX B

## KANSAS PHASE II MS4 NPDES PERMITTING DECISION TREE



The municipality is a regulated small MS4 and is required to obtain an NPDES stormwater discharge permit for a municipality located outside of an urbanized area.  
(Gen. Permit No. G-NUA-0604-SO01)

The municipality is a regulated small MS4 and is required to obtain an NPDES stormwater discharge permit for a municipality located in an urbanized area.  
(Gen. Permit No. G-UA-0604-SO01)

Can stormwater, discharged from the municipality, drain to a high priority TMDL stream segment located within the same HUC 11 as the municipality.

Can stormwater, discharged from the urbanized area of the municipality, drain to a high priority TMDL stream segment located within the same HUC 11 as the municipality.

Can stormwater discharged from the municipality drain to a high priority TMDL lake located within the same HUC 8 as the municipality.

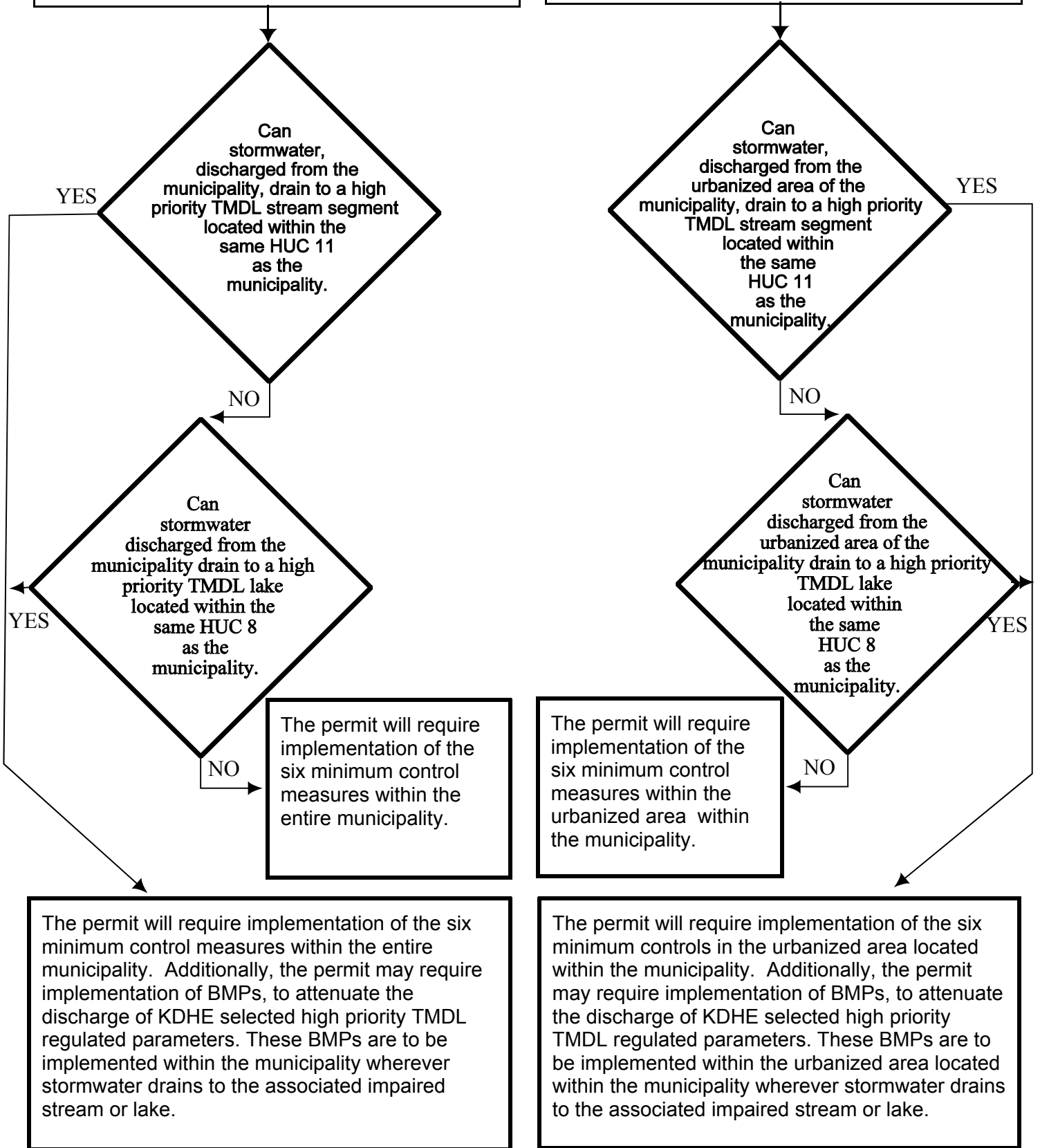
Can stormwater discharged from the urbanized area of the municipality drain to a high priority TMDL lake located within the same HUC 8 as the municipality.

The permit will require implementation of the six minimum control measures within the entire municipality.

The permit will require implementation of the six minimum control measures within the urbanized area within the municipality.

The permit will require implementation of the six minimum control measures within the entire municipality. Additionally, the permit may require implementation of BMPs, to attenuate the discharge of KDHE selected high priority TMDL regulated parameters. These BMPs are to be implemented within the municipality wherever stormwater drains to the associated impaired stream or lake.

The permit will require implementation of the six minimum controls in the urbanized area located within the municipality. Additionally, the permit may require implementation of BMPs, to attenuate the discharge of KDHE selected high priority TMDL regulated parameters. These BMPs are to be implemented within the urbanized area located within the municipality wherever stormwater drains to the associated impaired stream or lake.



## APPENDIX C

### MUNICIPALITIES LOCATED OUTSIDE OF URBANIZED AREAS DESIGNATED AS REGULATED MUNICIPAL SEPARATE STORM SEWER SYSTEMS \*

- |                   |                 |
|-------------------|-----------------|
| 1. Arkansas City  | 11. Leavenworth |
| 2. Coffeyville    | 12. Manhattan   |
| 3. Dodge City     | 13. McPherson   |
| 4. El Dorado      | 14. Newton      |
| 5. Emporia        | 15. Ottawa      |
| 6. Garden City    | 16. Parsons     |
| 7. Great Bend     | 17. Pittsburg   |
| 8. Hays           | 18. Salina      |
| 9. Hutchinson     | 19. Winfield    |
| 10. Junction City |                 |

\* These municipalities have been designated by the permitting authority per 40 CFR 123.35(b)(2).