

City of Wichita, Kansas

Stormwater Management Program 2014-2019



**Kansas Permit No. M-AR94-S001
Federal Permit No. KS0091049**

**February 2015
Revised June 2016**

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The City of Wichita (City or Permittee), Kansas has prepared this Stormwater Management Program (SWMP, SMP or Program) to outline the measures it will take to reduce the discharge of pollutants from the Municipal Separate Storm Sewer System (MS4) to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements and goals of the Clean Water Act, and the City's National Pollutant Discharge Elimination System (NPDES) Permit (Permit).

It is intended that this SMP, and all measures implemented herein, will reduce Total Maximum Daily Load (TMDL) pollutants, and all pollutants specified in the Permit, in both targeted (303d) and non-targeted streams to the MEP, within the entire MS4 service area. Therefore, all efforts undertaken in the 7 control measures listed in this SMP will apply toward reducing TMDL pollutants as well as non-TMDL pollutants.

This Program has been submitted in compliance with the requirements of both the Kansas Water Pollution Control MS4 Permit No. M-AR94-S001 and Federal Permit No. KS0091049 that is required for the term beginning August 1, 2014, and expiring July 31, 2019. This Program also operates using the legal authority as set forth in City Ordinance Chapter 16.32, and subsequent revisions.

Changes to this plan may be made as allowed by the Permit and approved by the Kansas Department of Health and Environment (KDHE). This Program is implemented within areas of the City's legal jurisdiction, boundaries and on its properties.

This Program provides a list of stormwater Best Management Practices (BMPs) that the

City of Wichita agrees to implement as required by the KDHE NPDES Permit. Each BMP will have goals and measurements to demonstrate compliance with the goals.

Other agencies and organizations may contribute to the implementation of these measures. Each of the contributions made by others as well as additional City actions will be documented in the Annual Report and will be counted towards goal attainment.

Management Plan for Six Minimum Control Measures (MCM)

Minimum Control Measure #1: Public Education and Outreach

The permittee shall implement a public education program which includes distribution of educational materials to the community or conducting equivalent outreach activities which address the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.

A: Video messages and graphics will be placed on the City's Cable Channel 7, or other video outlets, for viewing by the community. This activity will take the form of periodic repeating video presentations or graphics informing citizens of the importance of preventing stormwater pollution and individual actions citizens can take to reduce their impact on stormwater.

Measurable Goal: A repeating video or graphic designed to inform the public on stormwater pollution prevention will be run at least twice per year on the City's Cable Channel 7, and continue for the Permit duration.

B: An informational brochure on stormwater quality designed for residents will be developed by the City.

Measurable Goal: Brochures have been developed and will be distributed by a variety of means, including brochure racks in City buildings, educational events, mailings, etc.

C: The City will continue to place stormwater education materials on the City of Wichita website ("www.wichita.gov").

Measurable Goal: Website is operational, currently includes educational material, and additional material will be added as it is developed.

D: Stormwater pollution prevention, water conservation and water quality education programs will continue to be developed and provided to schools and other interested organizations.

Measurable Goal: The City will continue contact with interested school officials and organization leaders. Programs and assistance will continue to be provided through ongoing programs at the W.A.T.E.R center and other locations, and will reach a minimum of 500 persons annually.

E: Annually, each BMP and corresponding measurable goal provided in this SMP will be evaluated and progress or actions will be reported in the Annual Report as required by the KDHE NPDES permit.

Measurable Goal: As required by the KDHE NPDES permit, an Annual Report will be submitted to KDHE by February 28, of each year for the previous calendar year. The

Annual Report will be posted on the City's stormwater website.

Minimum Control Measure #2: Public Involvement and Participation

The permittee shall implement a public involvement and participation program to solicit public comment and recommendations regarding the BMPs and measureable goals utilized by the Permittee to comply with the Permit. The Permittee shall comply with State and local public notice requirements when implementing a public involvement and participation program.

A: Public comments, recommendations and requested changes for this management plan will be solicited through the City's webpage. Citizens will be able to submit comments, questions, and recommendations directly to the office of Stormwater Management. Additionally, the webpage will have telephone and mail contact information.

Measureable Goal: Citizen input will be addressed when submitted, and results will be included in the Annual Report.

B: The City will conduct at least one volunteer cleanup day with citizen and group volunteers.

Measureable Goal: An Arkansas River (and/or tributaries) cleanup will be held at least once each year. Results will be documented in the Annual Report.

C: The City will sponsor meetings of a Stormwater Management Advisory Board (SWAB). This advisory board will contain appointed representatives from the community, and is open to the public for comments as well.

Measurable Goal: SWAB information, including agendas and attendance information will be included in the Annual Report and on the City of Wichita website.

Minimum Control Measure #3: Illicit Discharge Detection and Elimination

The Permittee shall:

A: Develop, implement, and enforce a program to detect and eliminate illicit discharges into the MS4.

Measurable Goal: Each permit year the City will televise 45,000 linear feet of stormwater conduit in an effort to find illicit connections or discharges. Any illicit discharges found will be investigated with actions documented, and included in the Annual Report.

B: Develop a stormwater system map of the permittee's MS4, showing the location of all outfalls, either pipes or open channel drainage, showing the names and location of all streams or lakes that receive discharges from those outfalls. A copy of the map shall be submitted to KDHE. This map may be submitted as a PDF file(s) on a computer disk.

Measurable Goal: A complete GIS stormwater system map has been completed, and will be maintained, and updated throughout the year. A GIS map layer of the stormwater system will be made available for public use in 2015, and will be available on the City of Wichita website.

C: Enact ordinances or resolutions to prohibit non-stormwater discharges into the stormwater system and implement appropriate enforcement procedures and actions. A copy of the ordinances or resolutions shall be submitted to KDHE.

Measurable Goal: An ordinance prohibiting non-stormwater discharges is currently in place, Chapter 16.32, and will be maintained and updated as necessary throughout the effective dates of this permit. A copy of the ordinance will be provided in the Annual Report.

D: Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

Measureable Goals: A free, regional Household Hazardous Waste disposal site will be maintained for all residents to use. The number of citizens and quantity of materials disposed of, will be included in the Annual Report. Additionally, an informational HHW video will be aired at least 6 times on the City's Cable Channel 7.

E: Develop and implement a plan to detect and address prohibited non-stormwater discharges, including illegal dumping, as required by the current KDHE NPDES permit.

Measurable Goals: Permittee will perform at least 30,000 storm structure inspections and cleanings each year. Additionally, a minimum of 400,000 linear feet of sanitary sewer pipe will be televised in each year of the permit's duration. Results will be included in the Annual Report.

F: Inspect restaurants to verify that grease is not being discharged to the municipal storm drains. These inspections are incorporated into the regular restaurant inspection system and are accomplished by City inspectors.

Measurable Goals: Inspections of restaurant grease handling are an existing program within the Water & Sewer Department. There will be a minimum of 160 inspections performed each year of the Permit. Results will be reported in our Annual Report. If changes are necessary with this program, KDHE will be informed.

G: Regulate septic system installation and usage, via our existing Ordinance, and respond to complaints regarding improper discharges related to septic systems. The City will seek City Council approval to 'order in' municipal services as a result of failed septic systems.

Measurable Goals: Regulation of septic systems in accordance with Code of Ordinances Title 16 during the entire Permit term. Records will be maintained to document the number of complaints received and disposition of problems found will be reported in the Annual Report. The number of 'order in' requests is demand driven.

Minimum Control Measure #4: Construction Site Stormwater Runoff Control

The permittee shall develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must include the development and implementation, at a minimum, of the following:

A: Permittees which have the authority to enact ordinances or resolutions shall enact such ordinances or resolutions to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State and local law.

Measurable Goal: Ordinance is currently in place, Chapter 16.32, and will be maintained and updated as necessary throughout the effective dates of this permit.

B: Requirements for construction site owners or operators to implement appropriate erosion and sediment control best management practices.

Measurable Goal: The governing ordinance, Chapter 16.32, contains the requirements specified, and will be submitted with the Annual Report.

C: Requirements for construction site owners and operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that are likely to cause adverse impacts to water quality.

Measurable Goal: The governing ordinance, Chapter 16.32, contains the requirements specified, and will be submitted with the Annual Report.

D: Procedures for site plan review which incorporate consideration of potential water quality impacts.

Measurable Goal: The procedure for plan approval includes review by City staff, and certification by the design engineer as to adherence to Chapter 16.32. The number of plans approved each year will be submitted in the Annual Report.

E: Procedure for receipt and consideration of information submitted by the public.

Measurable Goal: The City will sponsor meetings of a Stormwater Advisory Board (SWAB). This advisory board will contain appointed representatives from the community, and is open to the public for comments as well. SWAB information, including public comments, meeting agendas and attendance information will be posted to the City of Wichita website, and will be included in the Annual Report.

F: Procedure for construction site inspection and enforcement of control measures.

Measurable Goals: An inspection procedures document will be included in the Annual Report. Additionally, the City will perform at least 600 inspections each year of the permit, and violations/citations will be written as necessary. Results will be included in the Annual Report.

Minimum Control Measure #5: Post-Construction Stormwater Management in New Development and Redevelopment

The permittee shall develop, implement, and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4. The program must include the development and implementation, at a minimum, of the following:

- a:** Strategies which include a combination of structural and/or non-structural BMPs,
- b:** Measures to ensure adequate long-term operation and maintenance of BMPs,
- c:** Site owner or operator name and telephone responsible to ensure adequate long-term operation maintenance of BMP's,
- d:** BMPs to prevent or minimize adverse water impacts.

Measurable Goal: The governing ordinance, Chapter 16.32 contains these requirements as reflected in the City of Wichita/Sedgwick County Stormwater Manual, which is available in hard copy and on the City website. Occasional revisions are made to the Manual, and the Manual is updated. Revisions and updates will be included in the Annual Report. The

number of BMPs implemented in a reporting year, and the number of completed bi-annual BMP inspections will be reported in the Annual Report.

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations

The permittee shall develop and implement an operation and maintenance program that includes employee training to prevent and reduce stormwater pollution from municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

A: The City will continue a training program for employees on pollution prevention at all Municipal Industrial Facilities, and inspect those facilities annually.

Measurable Goals: In accordance with the Stormwater Pollution Prevention Plan for each City Municipal Industrial Facility, employee training and facility inspections will be documented and reported in the Annual Report.

B: City will continue the existing street sweeping program to reduce pollutant loadings to the storm sewer.

Measurable Goals: One round of residential street sweeping, four rounds of arterial street sweeping, and two rounds per week of downtown street sweeping will be completed annually by the City. This effort is currently underway, and will continue throughout the permit term.

C: Drainage control of Municipal snow piles.

Measurable Goals: In the event that large Municipal snow piles become necessary, the City will evaluate BMPs to control and mitigate effects of runoff pollution to the maximum extent practicable.

D. The City has a program to ensure proper application of pesticides and herbicides are applied at municipal parks and properties.

Measurable Goals: The City will continue the existing program that requires all City employed applicators of pesticides and/or herbicides to be licensed or directly supervised by licensed personnel. Records shall be maintained as required by local, state and federal laws for application events and licensed personnel shall be trained periodically to ensure proper management and application of the pesticides and/or herbicides.

Control Measure #7: Additional Control Measures: Monitoring Industrial and High Risk Run-off, TMDLs, and Monitoring Requirements

Monitoring Industrial and High Risk Run-off

A program for monitoring industrial and high risk run-off to control pollutants from industrial facilities shall be developed and detailed within the SMP. This program for monitoring and controlling such run-off shall include the following:

A: Develop and maintain a list of industrial facilities that may be contributing a substantial pollutant loading to the MS4. The list shall include municipal industrial facilities and municipal landfills; hazardous waste treatment, disposal, or recovery facilities; and facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

Measurable Goal: List will be updated as available from KDHE and included in the Annual Report.

B: Annually at least two facilities listed above shall be identified as high priority facilities and an inspection shall be conducted and sampling of stormwater run-off.

Measurable Goal: Inspections and wet weather sampling will be completed at two facilities.

TMDLs

The Permittee shall continue to review, update, implement and develop, when necessary, structural and non-structural BMPs which reduce to the Maximum Extent Practicable the discharge of the TMDL regulated pollutants from the MS4 as listed in Part II.

C: The permittee shall provide an updated SMP document which discusses the structural and non-structural BMPs that have been or will be implemented to reduce discharge of TMDL pollutants from the MS4 significantly contributing to or causing an exceedance of the water quality standard.

Measurable Goals: The governing ordinance, Chapter 16.32 contains the requirements listed in the Permit as reflected in the City of Wichita/Sedgwick County Stormwater Manual, which is available in hard copy and on the City website. Occasional revisions are made to the Manual, and the Manual is updated. Revisions and updates will be included in the Annual Report. The number of BMPs implemented in a reporting year, and the number of completed bi-annual BMP inspections will be reported in the Annual Report. The most current SMP will be included in the Annual Report.

D: Measurable goals for reducing pollutants contributed by MS4s shall be expressed in quantifiable values to: reduce the concentration of pollutants, reduce the total mass of pollutants, a combination of the above methods and expressed as average and median

values (percent reduction of inflow volume, reduction in pollutant concentration or mass loading) or for bacteria as a geometric mean.

Measurable Goals: WINSLAMM or other appropriate modeling software will be used to calculate the required values.

E: Maps illustrating: Permit area, boundaries of drainage basins and primary sub-basins, locations of structural BMPs, stormwater BMP influent/effluent, lake and stream monitoring locations, storm sewer collection system which includes the outfalls within the Permit area where the MS4 drains to TMDL listed impaired streams or lakes.

Measurable Goals: Updated GIS-based maps can be accessed at the City's FTP site upon request, and maps in PDF format will be included in the Annual Report.

Monitoring Requirements

F: Storm event monitoring shall be implemented in accordance with Part III of the Permit.

Measurable Goals: Instream monitoring of the 6 main streams entering and leaving the jurisdictional Permit area will occur as detailed in Part III of the Permit.

Control Measure #8: Establishment of Alternative Offsite Pollution Reduction Program

In accordance with Part I Section E Subsection 4 of the MS4 Permit, the City will establish such a program under the following guidelines:

- The option for participation in the offsite program will be incorporated into the existing Stormwater permitting process, which includes review by City staff and engineers. Participation will be documented in the plan submittal and stamped and sealed by the design engineer. All Stormwater Permits must be reviewed, approved, and issued before construction begins.
- At the time of Stormwater Permit application, included on the cover sheet of the submitted plans will be a stamped and sealed statement of project area. This will determine the amount of offsite area needed for each project.
- Candidate offsite locations and practices will be consistent with implementing existing watershed plans that identify specific urban and non-urban (such as agricultural) Best Management Practices (BMP) types in critical locations to achieve TMDLs reductions.
- Qualifying candidates may select from a suite of sediment reducing BMPs to complement their operation.

- Offsite sediment credits will be implemented and maintained at a 2:1 credit ratio to onsite sediment generation.
- The program will secure offsite sediment credits equivalent to 800 tons of sediment from onsite acres in the first year. Given assumed sediment production rates of 0.4 tons/acre/year from new and redevelopment sites the 1,600 tons of sediment credits secured offsite in Year 1 will cover 2,000 onsite acres participating in the program. If 200 acres participate per year, this initial infusion represents a 10-year sediment credit supply. Offsite acreage will be adjusted to correspond with annual growth.
- The program will replace 100% of sediment credits (for example no-till farm field acreage) that exit the program upon expiration of binding agreements between the City and/or its contract administrator and producers to maintain approved sediment reduction BMP.
- The program will apply to any development or redevelopment within the City limits that elect to participate in alternative BMP site location.
- Status of offsite BMP implementation and resulting sediment credits will be reported by the City annually as part of the MS4 Annual Permit Report.
- Should the program end for any reason, or is revised in the future, it is understood that existing sites participating in the program, and the City of Wichita, would not be required to retroactively install water quality requirements and would not result in the City or any such sites being in violation of the MS4 Permit with subsequent penalties or other punitive actions from KDHE.