City of Lenexa

Stormwater Management Plan

Revised February 2025

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Section 1

PROGRAM OVERVIEW

In March 2001, the City of Lenexa adopted a Storm Water and Watershed Management Master Plan as part of the City's Comprehensive Plan. The stormwater master plan was developed to manage storm water and control flooding while protecting the existing natural systems. It also looked at developing methods of protecting the quality of the water and the perceived quality of life.

The Storm Water and Watershed Management Master Plan discussed the necessity to incorporate future regulatory compliance in building the storm water program. On October 1, 2004, the City was issued the National Pollutant Discharge Elimination System (NPDES) Phase II permit which will regulate discharge to the municipal separate storm sewers (MS4). This permit was last renewed in January of 2025 (Appendix A).

Since its inception, the Rain to Recreation Stormwater program has evolved to meet ever changing needs. At its core, has always been the three goals for promoting water quality, reducing flooding and providing open space and recreational opportunities for residents. The comprehensive program developed to achieve these goals was named The Rain to Recreation Program. With the resources of a 1/8 cent sales tax the initial focus of the program was on large capital projects and studies to prepare for anticipated development and to solve existing flooding problems. During this build up phase, the groundwork was laid for the City to comply with its initial permit requirements.

With the expiration of the tax in 2010, the program refocused on maintenance activities. By then many of the permit compliance items had become codified and written in standard operating procedures which were integrated through all aspects of the City processes.

1.1 CURRENT ORGANIZATION

Currently a group of staff members from various divisions work together to fulfill the responsibilities of the program. The staff members involved include:

- Stormwater Specialist, Community Development, Engineering Division
- Water Quality Technician, Community Development, Engineering Division
- Stormwater Engineer, Community Development, Engineering Division
- Education and outreach – available staff, Communications Department
- Asset Manager, Municipal Services, Stormwater Division
- Maintenance Superintendent, Municipal Services, Stormwater Division
- Maintenance Workers, Municipal Services, Stormwater Division

Current responsibilities of the stormwater group include the following:

- Administer and report on all aspects of the MS4 permit requirements including the six minimum control measures and water quality monitoring.
- Floodplain management including National Flood Insurance Program (NFIP) requirements and Community Rating System (CRS) requirements.
- Inventory, tracking and inspection of all private stormwater BMP's
- Develop and manage the City's Stormwater capital improvement program to include infrastructure replacement and regional stormwater solutions.
- Routine maintenance activities including inspection, tracking and inventory of all public bmp's and hard infrastructure.
- Maintain and update City code related to stormwater goals.

1.2 FUNDING SOURCES AND EDU CALCULATION

The stormwater program is currently funded by three revenue streams: The stormwater utility, a systems development charge, and erosion and sediment permit fees.

The stormwater utility is assessed to each property owner based on an equivalent dwelling unit (EDU) which is a measure of impervious cover. One EDU is equal to 2,750 square feet of impervious area. This is considered the standard impervious cover for a single-family residence. Commercial properties are required to calculate their total impervious cover and divide by 2,750 to obtain the total number of EDU's.

The systems development charge is a one-time fee that is assessed with the building permit application. This fee, like the stormwater utility, is based on the number of EDU's associated with the site. During the engineering assessment of the site, if the downstream storm infrastructure is not able to meet the needs of the additional stormwater from the new development, the site may have a 100-year detention requirement. In these cases, where the property owner is required to install the 100-year detention, the systems development charge is waived. Installing 100-year detention to have the systems development charge waived is not an option and is only allowed in those specific circumstances.

The final source of revenue is the erosion and sediment control fees. These fees are assessed at the time of land disturbance and site development permits.

Once the EDU's per property have been established, scenarios arise which require those values to be updated. Most often these changes are initiated by Johnson County Records and Tax Administration (RTA) in the form of a Transfer Order. Transfer Orders are created to change a property in one way or another, such as a split, combination, tax unit change, or a plat. If a Transfer Order involves a parcel being assessed Lenexa Stormwater special assessments, RTA will send an email to the Deputy Community Development Director, the Asset Systems Coordinator, and the City Clerk including a copy of the transfer order with the impacted properties. Using the Johnson County Land Records

(JCLR) system, the transfer order number can be entered and a "Before and After" mapping view is available, showing the changes to the property. Generally, a quick view of this map can determine if there are no assessment changes necessary.

Splitting a non-residential parcel may change the amount of impervious surface on those parcels, in which case ArcGIS will need to be used to measure the updated impervious surfaces and recalculate the EDU's for those parcels.

Regardless of updates or no updates, the city must respond to RTA regarding every transfer order. A spreadsheet maintains a list of transfer order numbers, with each parcel involved on those orders, and the before and after EDU assessments. Once the spreadsheet is updated, it is sent back to RTA.

1.3 STORMWATER RELATED ORDINANCES

Over the course of Lenexa's stormwater program, several ordinances have been adopted to help promote water quality and flood control. The ordinances and year of initial adoption are as follows:

- Floodplain Development (2002)
- Erosion and Sediment Control (2002)
- Stream Setback Ordinance (2003)
- Illicit Discharge Ordinance (2004)
- Best Management Practice (BMP) Maintenance Ordinance (2005)
- Updated Detention Requirements (2004)
- Post Construction BMP Requirements (2004)

These ordinances serve to satisfy the City's obligations under the NPDES program and the NFIP program. Ordinances are periodically reviewed by stormwater staff to assure that they are still relevant and, when necessary, revised ordinances are taken to the governing body for adoption.

Section 2

MS4 PERMIT REQUIREMENTS

The City of Lenexa, as an operator of a MS4, is required to reduce the discharge of pollutants to waters of the State and the United States to the "maximum extent practicable" to protect water quality. At a minimum, the permit requires a Stormwater Management Plan (SMP) designed to:

- Implement the following minimum control measures:

    1. Public Education and Outreach
    2. Public Involvement and Participation

3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment Projects
6. Pollution Prevention/Good Housekeeping for Municipal Operations.

- Reduce the discharge of pollutants from the MS4 to the Maximum Extent Practicable.
- Implement appropriate Best management Practices (BMP's) within TMDL water body watershed.
- Satisfy the requirement of the permit, The Clean Water Act, and the Kansas Surface water quality statutes and regulations.

Section 2.1 SIX MINIMUM CONTROL MEASURES

The current permit requires the permittee to implement BMP's that will address the six minimum control measures. Acceptable BMP's are identified in the permit. Each BMP is assigned a point value and the permittee is required to attain a specific minimum number of points each for year, for each of the six minimum control measures. The City has developed the following activities and measurable goals to comply with the permit requirements:

2.1a PUBLIC EDUCATION AND OUTREACH

Public education and outreach is important to the success of a Stormwater Management Plan (SMP). Through public education, residents gain an understanding of how their actions directly affect stormwater quality. In addition, education helps residents become more informed about stormwater quality issues in their community. When citizens understand that poor water quality can result from common everyday activities, major sources of pollutants in stormwater can be easily and voluntarily eliminated. Perhaps more importantly, an educated public can be a broad base of support for a stormwater program. The objectives of our public education program are to promote a clear identification and understanding of the problem and solutions available while encouraging community ownership.

Permit Requirements:
Under the MS4 permit the City is required to implement BMP's that result in an accumulation of a minimum of seven points total on an annual basis for the duration of the permit.

Action Plan:
The City is dedicated to educating the Lenexa community on how to prevent stormwater pollution. In this regard, the City will provide sufficient educational information to the Lenexa community to exceed the requirement of the permit. In addition, Lenexa will collaborate with organizations like Mid America Regional Council (MARC) and the Johnson County Stormwater Management Program (JCSMP). These organizations

provide additional public education and outreach opportunities throughout the metropolitan region Lenexa feels that outreach and education to the broader community is important as watersheds in a metropolitan setting usually encompass more than one community.

The following specific activities will be completed each year of the permit:

BMP ID	BMP Summary	2025	2026	2027
Lbmp P Ed** & **0 - 01	Maintain a stormwater webpage for the permittee.	2	2	2
Lbmp P Ed & 0 - 03	Provide either training or educational materials to permittee identified businesses at high risk of contributing to stormwater pollution. Such businesses can include, but are not limited to, food service, auto service, disaster response and janitorial services. The training or educational materials shall address best management practices they can employ to minimize or avoid adverse stormwater impacts due to their operations. Will target: multi-family and commercial dumpster owners, fast food drive-thrus, granite counter companies	2	2	2
Lbmp P Ed & 0 - 05	Post the municipality's MS4 permit and SMP document on either the stormwater web page or the municipal webpage.	1	1	1
Lbmp P Ed** & **0 - 06	Provide either a stormwater telephone hotline or web based or text message method for public reporting of illicit discharges.	2	2	2
Lbmp P Ed & 0 - 08	Provide stormwater education for students at a school campus within K-12 (those grades present at the campus) within the permittee's jurisdiction or within 30 miles from this permit area. The training may be limited to the individual campus (local school buildings associated with a single address). This training does not need to be provided to the entire school system, e.g., USD. Alternately, funding stormwater BMP installations and/or field trips at the school campus will qualify.	3	3	3

Lbmp P Ed* & *0 - 15	Develop or participate in an ongoing social media program on pertinent stormwater public education topics.	2	2	2
Lbmp P Ed* & *0 - 16	Operate an information booth at a public event or hold a public event which is intended to improve public understanding of issues related to water quality. The event may be associated with any environmental related issue including but not limited to an environmental expo, earth day, world wetlands day, international day of action for rivers, world fish migration day, world biodiversity day, world oceans day, world cleanup day, world water monitoring day, world rivers day, and America recycles day.	2	2	2
	Total Points	14	14	14
	Required Points	7	7	7

***P Ed&O-01 Rain to Recreation* Web Page**

The stormwater group has established its own webpage Link that is housed in and linked through the City's website. Through this website, the community can obtain information on current and completed watershed projects as well as information on how to implement best management practices in their home landscaping projects. The site, referred to as *Rain to Recreation*, also provides information on Lenexa's stormwater ordinances and policies. Using Google Analytics, we will tabulate the number of "hits" (visits) to site.

P Ed&O-03 Education to Businesses

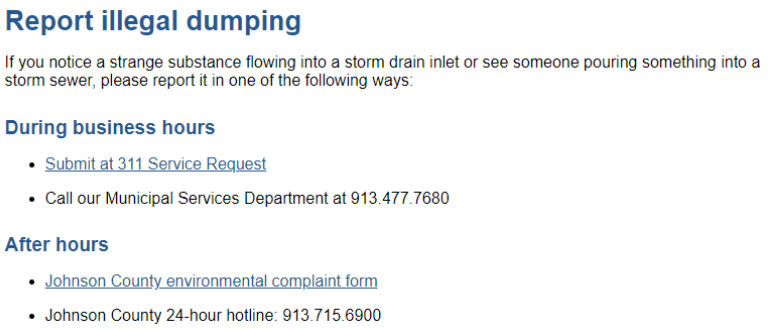
Lenexa has observed that high concentrations of pollutants come from three specific business types. First, large amounts of litter come from dumpsters that are not used properly. This would include both commercial areas and multi-family areas. Second, much of the litter in the City is composed of fast-food packaging. Finally, many of our illicit discharge complaints are related to countertop manufacturers that do not discharge their processing water property. Lenexa will target these three types of business by communicating through our e-newsletter, our print newsletter and social media.

P Ed&O-05 Post MS4 permit on Web

Lenexa Maintains a link on the Rain to Recreation web page that contains the MS4 permit, stormwater management plan and annual report for public review Link This site also has a mechanism for public feedback, if they would like to comment or have questions.

P Ed&O-06 Illicit Discharge Hotline

Lenexa provides three methods for the public to immediately report illicit discharges, see screenshot below. All three methods can be accessed from the City's website and are publicized annually through the City's normal, routine communications. The three methods include: The City's 311 system, Johnson County's pollution hotline, and a City phone number. The following link takes resident directly to the page: Link



Report illegal dumping

If you notice a strange substance flowing into a storm drain inlet or see someone pouring something into a storm sewer, please report it in one of the following ways:

During business hours

- Submit at 311 Service Request
- Call our Municipal Services Department at 913.477.7680

After hours

- Johnson County environmental complaint form
- Johnson County 24-hour hotline: 913.715.6900

P Ed&O-08 Stormwater Education for Students

The City of Lenexa conducts a Learning about Lenexa educational program, which helps students, learn about the City where they live. This program is offered to third grade students at each of the elementary schools in Lenexa. City staff travel to each of the school's multiple times throughout the school year to provide students a hands-on approach to learning about all City functions including stormwater. To date, more than 20,000 Lenexa students have participated in this program.

During the stormwater component, stormwater staff educates students on how precipitation moves through a watershed, how stormwater runoff becomes contaminated by point and non-point source pollutants, and how BMPs improve the water quality and reduce the quantity of stormwater that enters our creeks, streams, and rivers. Staff provide information about current projects underway around the City, and how these projects will help to manage stormwater runoff as well as protect the City in which we live.

P Ed&O-015 Social Media Program

The city of Lenexa is engaged in social media through a city run Facebook page, and X, Twitter and Nextdoor accounts. An electronic newsletter entitled *My Lenexa News* is emailed out weekly to over 5000 subscribers. Past issues are archived on the city's webpage. In addition, Lenexa publishes a print newsletter, *Town Talk*, six times per year. This publication is mailed to approximately 29,000 Lenexa household and businesses. The Rain to Recreation Program provides articles for these social media forums and the two newsletters. Through these outlets, citizens are kept up to date on current stormwater projects and best management practices. In addition, articles that speak to seasonal topics (i.e., lawn care, picking up after your pet, car washing, and tips for good stewardship) are included.

P Ed&O-016 Informational Booth

Lenexa plans to participate in the Kansas Healthy Yards Exposition. Lenexa partners with the Johnson County Extension Office, Johnson County Stormwater Management, and the Cities of Olathe, Overland Park, Shawnee, and the Unified Government of Wyandotte County to present the Expo. The Healthy Yards Expo is a family-friendly event where participants discover simple, easy, earth-friendly practices for achieving a nice yard while still protecting our water, air and healthy soils. The Healthy Yards Expo typically hosts over 1,000 participants annually. By use of exhibits, door prizes, flyers, educational presentations and one-on-one discussions, Lenexa stormwater staff will inform participants on ways to minimize pollution and utilize eco-friendly practices and provide education so that the public can do their part for clean water, air and healthy soils while maintaining an attractive landscape.

2.1b PUBLIC INVOLVEMENT AND PARTICIPATION

Public involvement/participation is important for the development of a successful SMP. Involving the public goes hand in hand with a local government's public education efforts and can help accomplish some of the same goals. By encouraging input from diverse economic and cultural groups, there can be beneficial effects on the evolution of the program.

Permit Requirements:

Under the MS4 permit the city is required to continue to implement a public participation and involvement program to solicit public comments and recommendations regarding the BMP's and measurable goals utilized by the permittee to comply with the permit. Under the MS4 permit the city is required to implement BMP's that result in an accumulation of a minimum of six points total for the duration of the permit

It is believed that early and frequent public input can lead to a shorter implementation schedule and greater support for the program. Public involvement and participation can also create more opportunities to gain expertise from interested individuals and other organizations or governmental entities. These added resources could improve the success of the program, and the public can be used as a free, intellectual resource.

Action Plan:

The city is dedicated to promoting public participation and involvement in the Lenexa community by soliciting public comments and recommendations regarding the BMPs and measurable goals utilized to comply with the permit requirements.

The following specific activities will be completed each year of the permit:

BMP ID	BMP Summary	2025	2026	2027

Lbmp P I/P - 03	Hold park or stream bank clean-up events for public volunteers to aid municipal staff in removing trash, debris, or pollutant sources from the selected clean-up area.	3	3	3
Lbmp P I/P - 05	Provide at least two events for residents to engage in cleanup activities and improve water quality in the municipality.	3	3	3
Lbmp P I/P - 06	Establish a program to encourage residents to install stormwater treatment best management practices on their property.	2	2	2
Lbmp P I/P - 07	Enact either an ordinance, a resolution, or other enforceable requirement that requires pet owners or their keepers to immediately and properly dispose of their pet's solid waste deposited at parks or rest areas owned by the permittee.	1	1	1
Lbmp P I/P - 10	Establish a program to employ (either paid or unpaid) high school or college age environmental interns in an environmental related program including but not limited to either the wastewater utility, stormwater utility, potable water utility or solid waste utility.	2	2	2
	Total Points	11	11	11
	Required Points	6	6	6

P I/P – 03 and 05 Cleanup Activities

Stormwater staff will utilize the City's volunteer program and attendance at festivals to promote volunteer involvement in activities that support Lenexa's Rain to Recreation Program. Staff will work to recruit volunteers from the community to assist with a variety of activities that support community clean-up efforts:

- Streamway Cleanups
- Invasive Species Removal
- Adopt a Spot

These volunteer activities will occur at various times throughout the year and will be coordinated between stormwater staff and staff from other city departments.

P I/P – 06 Stormwater Management Cost Share Program

The City of Lenexa, in a partnership with the JCSMP, provides $22,500 per year for a stormwater management BMP cost-share program. The program is intended to help cover

the cost of materials and/or contractor labor to install stormwater BMP's on private property. Funds from JCSMP provide a 50% match, up to $1,000 for rain gardens or native plantings a 50% match on rain barrels up to $75, and a 50% match for native trees up to $150/tree. Additional funds from the City of Lenexa provide an additional 25% match bringing the total available for individual residents up to $1500 for rain gardens, $110 per rain barrel, and $225/native tree.

P I/P – 07 Pet Waste Ordinance

The City of Lenexa has adopted an ordinance addressing pet waste. Under this ordinance, it is required to pick up pet waste on both public and private properties, other than the property of the owner of the animal. This specific ordinance is located at 3-2-D-3 as a subset of the larger Public Health and Safety section. The City educates trail and park users by maintaining signage at each trail head and in strategic locations throughout City parks. These signs remind pet owners to pick up pet waste and include pet waste bags and a trash receptacle for disposal. A copy of this ordinance is in Appendix E for review.

P I/P – 10 Establish a program to hire an intern

Lenexa routinely hires a summer, stormwater intern. This individual assists with various task associated with our permit compliance such as, assisting the water quality specialist in routine BMP inspections, assisting the stormwater maintenance personal in routine maintenance activities, and performing miscellaneous GIS updates.

2.1c ILLICIT DISCHARGE DETECTION AND ELIMINATION

An illicit discharge is any discharge or release that is not comprised of entirely groundwater or stormwater into the MS4. Illicit discharges into the MS4 may be the result of illegal activity such as the dumping of chemicals or paints into a curb inlet as a means to dispose, or by negligence, such as sweeping lawn clippings into the curb inlet. Illicit discharges are problematic, because unlike wastewater which flows to a wastewater treatment facility, MS4s typically discharge into waterways without any additional treatment. The City of Lenexa is an MS4 community with a complex network of pipes that act as a conveyance system to transport contents in route to local and regional bodies of water.

Permit Requirements:

Under the current NPDES permit issued by KDHE the City of Lenexa is required to continue to implement and enforce a program to detect and eliminate illicit discharges into the MS4. The program must ensure that controls are in place that would minimize water quality impacts from prohibited discharges including illegal dumping to the storm sewer system. The City is required to implement BMP's that result in an accumulation of a minimum of seven points total on an annual basis for the duration of the permit.

A comprehensive approach to IDDE program management not only includes diligence of internal City operations, but also includes partnerships with neighboring agencies and outside organizations. The City of Lenexa has adopted ordinances to establish

expectations, identifying parameters and to foster a climate encouraging the implementation of appropriate strategies to prohibit illicit discharges.

Action Plan:

The IDDE program management requires cooperation between multi-disciplinary Lenexa stormwater personnel. The following is a breakdown of responsibilities:

Stormwater Superintendent

- Establish pollution prevention and good housekeeping standards for Lenexa's internal operations. For more detailed information pertaining to these standards please refer to section 2.1f of this Plan.
- Identify new outfalls and maintain updated inventory maps. For more details pertaining to these maps please refer to Appendix D.
- Address/follow-up with illicit discharge related resident complaints.

Stormwater Crews

- Participate in Dumpster Days / E-Waste Recycle events.
- Conduct routine MS4 inspections.
- Conduct repairs and maintenance of MS4 as necessary.

Stormwater Technician

- Conduct dry weather outfall inspections.
- Address/follow-up with illicit discharge related resident complaints.
- Address/follow-up with illicit discharge related service requests.
- Participate in education and outreach activities.

Partnerships

The City of Lenexa utilizes partnerships with neighboring agencies for the implementation and adherence of adopted ordinances in areas of On-Site Sewage Treatment Systems and proper Restaurant Waste Grease Management. Neighboring agencies also offer a Household Hazardous Waste recycle program for all County residents which encompass the City of Lenexa.

The following specific activities will be completed each year of the permit:

BMP ID	BMP Summary	2025	2026	2027
Lbmp ID D & E - 03	Develop a spill response plan and, if appropriate, coordinate emergency response with other agencies or organizations.	2	2	2
Lbmp ID D & E - 04	Implement a program to evaluate MS4 outfalls to identify illicit discharges. Inspect at least 5% of the known MS4 outfalls during a calendar year and evaluate the ones which have dry weather discharges. Evaluate the water quality of the dry weather discharges to recognize non-stormwater contributions and trace the source of any illicit discharge.	1	1	1
Lbmp ID D & E – 06	Inspect, by televising pipelines or direct visualization of open channel drainage, 2% of the MS4 system within the permit area all conducted within a 12-month period to aid in identifying illicit discharges as well as evaluate the condition of the storm sewer lines/drainage channels-ditches. If in a 12-month period 10% of the MS4 system is inspected a higher point value may be claimed.	5	5	5
Lbmp ID D & E - 07	Implement a Household Hazardous Waste Collection Program (HHWCP) or document others have implemented such a program to provide such service to all property owners or residents located within the permit area.	3	3	3
Lbmp ID D & E - 10	Inspect, 5% of the MS4 system Stormwater inlets and/or outfalls within the permit area all conducted within a 12-month period to aid in identifying illicit discharges. If in a 12-month period 15% of the MS4 system inlets and/or outfalls are inspected a higher point value may be claimed in the year the required percentage of inspections are completed.	3	3	3
	Total Points	14	14	14
	Required Points	7	7	7

ID D & E – 03 **Spill Response Plan**

Lenexa has developed a spill response plan to coordinate with other agencies. See SOP in appendix F.

ID D & E – 04 **Evaluate outfalls for illicit Discharge**

Lenexa routinely inspects outfalls for illicit discharge during dry weather each year. The City has an internal goal of inspecting 33% of the City outfalls each year. Outfalls are identified in GIS and inspections are logged in Lucity. See appendix D for a current outfall map.

ID D & E – 06 **Inspect Pipelines**

Lenexa has a long-established program for conducting video inspection of all public pipes within the MS4. The City routinely televises 20% of the system every year. Pipe condition is evaluated, and each pipe is observed for illicit discharge. All historical videos are saved on the City's server.

ID D & E – 07 **Household Hazardous Waste Collection Program**

Lenexa residents have access to two household hazardous waste sites in Johnson County.

ID D & E – 10 **Inspect inlets for Illicit Discharges**

Lenexa routinely cleans every inlet in Lenexa for leaves and debris at least once a year. During this cleaning, crews inspect for any illicit discharges or connections. In addition, inlets are inspected during the process of the pipeline video inspections.

2.1d Construction Site Stormwater Runoff Control

Erosion is the process by which the surface of the earth is worn away by the action of water and wind. Construction activities, such as clearing and grading remove vegetation and disturb soil, making the area especially vulnerable to erosion. Construction site control measures are designed to minimize erosion and prevent eroded soils from leaving the construction site and making its way into the Lenexa MS4.

Permit Requirements:

Under the current NPDES permit issued by Kansas Department of Health and Environment (KDHE) the City of Lenexa is required to maintain a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance 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. The program must ensure that controls are in place that would prevent or minimize water quality impacts from stormwater runoff. The City is required to implement BMP's that result in an accumulation of a minimum of six points total on an annual basis for the duration of the permit.

A comprehensive approach to construction site stormwater runoff includes the use of structural and non-structural BMPs, as well as a land disturbance ordinance to establish

expectations, identify parameters and to foster a climate encouraging the implementation of appropriate strategies.

Structural BMPs involve building an engineered method for controlling quantity and quality of stormwater runoff from construction sites. These structures treat stormwater runoff at either the point of generation or the point of discharge to either the MS4 or receiving waters. The City of Lenexa has adopted by code the American Public Works Association (APWA) Erosion and Sediment Control Design Criteria, Lenexa Standard Details (Current Edition), and Lenexa Technical Specifications (Current Edition). These documents provide design parameters and guidance for the BMPs used in the City of Lenexa.

Nonstructural BMPs are practices that improve water quality by reducing the accumulation and generation of stormwater runoff from construction sites at or near their source. They do not require the construction of a physical BMPs but instead include method adoption such as leaving buffer strips, phasing construction to minimize disturbed areas, stabilizing disturbed area after fourteen (14) days of inactivity, and limit certain construction activities during windy days to keep dust and blowing sediment to a minimum.

Action Plan:

The City of Lenexa has developed a construction site stormwater runoff control program that includes a detailed ordinance, development standards, inspections, enforcement protocol, and mandatory construction meetings. The land disturbance ordinance requires that a permit be obtained for any land disturbance activity that disturbs more than 100 cubic yards of soil and/or disturbs greater than 5,000 square feet of surface area. It should be noted that agricultural activity, landscaping/home gardening, re-establishment of lawn areas, and emergency activities are exempt from this requirement.

Not only does the City of Lenexa have adopted ordinances but KDHE, Bureau of Water, Industrial Section has established a program to protect waters of the state from construction site storm water runoff. The program requires owners or operators of any project, or combination of projects, who engages in construction activities disturbing one (1) or more acres to have authorization to discharge stormwater runoff under the construction stormwater general permit #S-MCST-2208-1. The primary requirement of KDHE's general permit is for the permittee to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). KDHE requires the SWPPP to be kept on-site during the duration of the construction project and made available during inspections. After final acceptance of the project, the SWPPP is returned to the project owner and they are required to be retained for seven years.

The following specific activities will be completed each year of the permit:

BMP ID	BMP Summary	2025	2026	2027
Lbmp CS SR C - 01	Implement a requirement for a Soil Erosion and Sediment Control (SESC) Plan for any land Disturbance sites which are either equal to or greater than 1 acre or for which there is construction activity disturbing less than one acre which is part of a larger common plan of development or sale that in total disturbs one acre or more.	2	2	2
Lbmp CS SR C - 02	Develop and adopt a design manual for erosion and sediment control BMPs which are required to be used on sites which will be disturbed and are either equal to or greater than 1 acre or for which there is construction activity disturbing less than one acre which is part of a larger common plan of development or sale that in total disturbs one acre or more.	2	2	2
Lbmp CS SR C - 03	Provide access to at least one training class for contractors, developers or others involved with land disturbance projects which provides training on requirements for a Stormwater Pollution Prevention Plan (SWP2 Plan) and implementation of appropriate BMPs.	3	3	3
Lbmp CS SR C - 04	Develop a site plan review process which considers potential water quality impacts which may occur during construction as well as post construction impacts.	2	2	2

Lbmp CS SR C - 05	Establish effective requirements for construction sites to control wastes. Develop through ordinance or other enforceable means requirements for construction site operators or owners to control wastes. At a minimum control shall be imposed to prevent entry into the MS4 for the following wastes: -> discarded building materials -> concrete truck washout -> chemicals -> litter, and -> sanitary waste.	2	2	2
Lbmp C S SR C - 06	Develop written procedures for inspection of construction sites. Develop a Stormwater Construction Site Inspection Guide for use by municipal inspectors.	2	2	2
Lbmp CS SR C - 07	Acquire or develop a software tracking system to track inspections and related tasks.	1	1	1
	Total Points	14	14	14
	Required Points	6	6	6

CS SR C – 01 **Implement a Soil and Erosion Control Plan**

Lenexa has a current erosion and sediment control ordinance that requires an erosion and sediment control plan for all permitted developments, see Appendix E for copy of ordinance.

CS SR C – 02 **Adopt a Design Manual**

Lenexa has adopted APWA, Kansas City (KC) Metro Chapter Specifications - Section 5100 as the design guidance for erosion and sediment control plans. Section 5100 is directed toward the project designer to guide the preparation of construction phase erosion control drawings. This section provides requirements on the application of certain BMPs, as well as considerations and additional BMPs, and background information on erosion and sedimentation.

CS SR C – 03 **Provide Training Class for Contractors**

The City supports Johnson County in providing erosion and sediment control training available for all contractors and design professionals. Johnson County utilizes the Johnson County Contractors Licensing Program to host the ABCs of BMPs, a program that instructs contractors on proper erosion and sediment control on construction sites. Attendees have an option to take an exam at the end of the program to become a Johnson

County Certified Inspector. Each program attendee receives a copy of the Johnson County, Kansas Erosion Prevention and Sediment Control Field Guide. This program is typically offered annually in the fall.

CS SR C – 04 **Develop a Site Plan Review Process**

The City has developed a plan for review of all site plans. Submittals are reviewed prior to submitting preliminary and final plans as well as before the issuance of a land disturbance permit or a building permit. See Appendix F for the standard operating procedures relative to these reviews.

CS SR C – 05 **Establish Affective Requirements for Construction Site Waste**

The City of Lenexa has adopted an ordinance addressing trash and liter on building sites. This ordinance establishes expectations and provides an enforcement mechanism regarding construction site maintenance. This specific ordinance is located at 4-8-D-9 as a subset of the larger International Property Maintenance section. Inspectors perform visual inspections of construction sites while on-site to perform building related inspections. If found to be deficient, the inspector will suspend further building inspections until the site is brought into compliance. A copy of this ordinance is in Appendix E for review.

CS SR C – 06 **Develop Written Procedures for Inspection of Construction Sites**

Lenexa employs a Stormwater Technician who performs routine erosion and sediment control inspections of all active construction sites. The procedures are documented in the SOP's section, appendix F. The Stormwater Technician also maintains a hardcopy binder with procedures for inspection, enforcement, etc.

CS SR C – 07 **Acquire a Software Tracking System for Inspections**

Lenexa has adopted Accela software to log all Erosion and sediment control inspections. This software is a comprehensive tool that allows for comments on review as well.

2.1e POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT PROJECTS

Post-construction stormwater management in new urban development and urban redevelopment focuses on implementation of control measures to maintain good stormwater standards in constructed environments. Development often is synonymous with natural landscapes being replaced with impervious fixtures such as buildings, roads, parking lots, and sidewalks. With increased amounts of impervious surfaces, there are corresponding increases in stormwater runoff volumes, and quantity of pollutants transported by stormwater runoff.

Managing stormwater at the source is a cost-effective and sustainable alternative for augmenting water supply, preventing flooding, mitigating stormwater pollution, creating green space, and enhancing the environment in which we live. A comprehensive approach to stormwater management not only includes both the use of structural and non-structural BMPs, but also land-use and zoning ordinances to establish expectations,

identify parameters and to foster a climate encouraging the implementation of appropriate strategies.

Structural BMPs involve building an engineered facility for controlling the quantity and quality of stormwater runoff. These structures treat stormwater runoff at either the point of generation or the point of discharge from the site.

Nonstructural BMPs are practices that improve water quality by reducing the accumulation and generation of potential pollutants at or near their source. They do not require the construction of a physical facility, but instead provide for the development of stormwater control programs that include zoning ordinances, development standards, buffer zones and other preventative practices (i.e., BMP education).

A careful site-specific assessment of the stormwater management conditions should be made before choosing a plan of comprehensive BMPs. The selected BMP package should take into consideration the source, amount, and characteristic of the stormwater runoff and how this interacts with pre- and post- development site conditions. Not only is this important to fit within the constraints of the development the plan will serve, but also the neighborhood in which the development is located and within City of Lenexa. Through adopted practices and dedication, the City of Lenexa is committed to the long-term success and operation of post-construction best management practices.

Permit Requirements:

Under the current NPDES permit issued by KDHE the City of Lenexa is required to maintain a program to address post-construction stormwater runoff from new urban development and urban redevelopment projects that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts from stormwater runoff. The City is required to implement BMP's that result in an accumulation of a minimum of seven points total on an annual basis for the duration of the permit.

Action Plan:

The City of Lenexa has adopted the MARC Manual of Best management Practices for Stormwater Quality (revised October 2012) and The American Public Works Association Storm Drainage Systems & Facilities Design Criteria, section 5600. These manuals provide design parameters and guidance for the structural BMPs used in the City of Lenexa. Structural controls are site specific and must be designed to fit within the overall layout of a development project and the surrounding infrastructure. Lenexa has also adopted numerous ordinances and works closely with developers throughout the development review/planning process to minimize the developments impact on the natural environment.

Lenexa has a program in place to assure the proper construction and maintenance of post construction stormwater BMP's. The following specific activities will be completed each year of the permit:

BMP ID	BMP Summary	2025	2026	2027
Lbmp P-C SM - 01	Develop and adopt a custom design manual for Post-Construction Stormwater Management which specifies various structural BMPs which are required for new development and re-development construction sites which are greater than 1 acre for which there is construction activity disturbing less than one acre which is part of a larger common plan of development or sale that in total disturbs one acre or more. Alternatively, adopt and implement the APWA 5600 Stormwater Design Criteria and the MARC/APWA BMP Manual.	5	5	5
Lbmp P-C S M - 03	Develop and implement a program to ensure adequate long-term cleaning, operation and maintenance of all municipally owned or operated post construction structural stormwater BMP facilities. The program shall address several different types of these BMP systems. The systems, which are addressed, shall include any type of post-construction structural BMP system, contained in the MS4. These shall include, if so present, at a minimum of the following: -> detention ponds -> retention ponds -> grass swales -> pervious paving systems -> wetlands -> vegetative filter strips -> manufactured stormwater treatment devices (swirl separators, screened, etc.) -> drop inlet-catch basin	2	2	2

Lbmp P-C S M - 05	Develop and implement a program for inspection of permittee owned structural BMPs which includes implementation of needed maintenance to ensure long-term operation of the BMPs	2	2	2
Lbmp P-C S M - 06	Develop and implement a program for inspection of known privately owned structural BMPs which includes providing the owner of the BMPs an inspection report with specifics needed maintenance to ensure long-term operation of the BMPs.	2	2	2
	Total Points	11	11	11
	Required Points	7	7	7

P-C SM – 01 **Adopt a design manual**

The City of Lenexa has adopted the MARC Manual of Best management Practices for Stormwater Quality (revised October 2012) and The American Public Works Association Storm Drainage Systems & Facilities Design Criteria, section 5600. These manuals provide design parameters and guidance for the structural BMPs used in the City of Lenexa. Structural controls are site specific and must be designed to fit within the overall layout of a development project and the surrounding infrastructure.

P-C SM – 03 & 05 Implement **a program for long-term operation and inspection of Municipally owned BMP's.**

The City of Lenexa Municipal Services Department's Stormwater Maintenance Division is responsible for the maintenance of all public Stormwater BMPs. The public Stormwater BMPs are in place to capture pollutants from public roads and right of ways. Maintenance activities include but are not limited to the following:

- Monthly maintenance inspections (to ensure proper operation of BMP)
- Monthly trash and litter removal
- Sediment removal
- Native plant management
    - Planting
    - Invasive weed control
    - Mowing
    - Controlled burning

The labor hours for maintenance of the BMPs are logged along with the amount of trash, debris and sediment removed.

***P-C SM – 06 Implement* a program for inspection of private BMP's**

Lenexa has a Stormwater Specialist who performs inspections of private BMP's to ensure proper maintenance. All BMP's are entered into a database and are tracked with asset management software which provides a computer-generated prompt for necessary inspections. BMP's are inspected during construction, at the end of the first year, and every third year thereafter. While we strive to work closely with property owners and educate them on BMP maintenance, the Stormwater Specialist has enforcement authority for those who do not properly maintain their post construction BMP's.

2.1f POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICAPAL OPERATIONS

Many opportunities for preventing storm-water pollution can be found within a local government's own operations. This minimum control measure emphasizes the operation and maintenance of MS4s and proper training of municipal employees. Altering daily operations that have the potential to contribute pollutants to stormwater and establishing schedules for cleaning and maintaining infrastructure can have positive effects on water quality. When local governments take advantage of pollution prevention opportunities within their own operations, results are often swift because improvements do not have to rely on gradual changes in citizen behavior.

Permit Requirements:

Under the current NPDES permit issued by KDHE the City of Lenexa is required to develop and implement an operation and maintenance program that includes employee training to prevent and reduce Stormwater pollution from municipal operations activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and Stormwater system maintenance.

Action Plan:

The City is dedicated to preventing and reducing pollution in our storm water system from City facilities. The City has reviewed all facilities and identified two that will need a stormwater pollution prevention plan. Please refer to the table below for a summary of findings. A map of facilities has been attached to APPENDIX D. The City will create the Stormwater Pollution Prevention Plans for the two properties and submit them for review and approval during this permit cycle.

Address	Number of Facilites	Facility(s) Name	Facility(s) Justification
11180 LACKMAN RD	2	Thompson Farm House, Thompson House Garage	No exposure
13120 W 103RD ST	2	Flat Rock Creek Pool, Flat rock Creek Trash House	No exposure - Chemical storage & use are inside
12350 W 87TH ST PKWY	4	Old City Hall & Fire Station NO. 6	No exposure - Firefighting activities exemption
9650 LONE ELM RD	1	Buffalo Meadows Restroom	No exposure
8725 LACKMAN RD	4	Legler Depot, Legler barn, Legler Restroom, Fire Station NO. 2	No exposure - All maintenance activities are to be performed inside / Firefighting activities exmption
8808 GREENWAY LN	4	Sakopar nw restroom, sakopar south restoom(2), Rose's Barn	No exposure
8801 GREENWAY LN	2	Sarkopar Parks Restrooms (2), Sarkopar Pool Facilites(4)	No exposure - Chemical storage & use are inside
24000 PRAIRIE STAR PKWY	2	PD Substation, Fire Station NO. 3	No exposure - Firefighting activities exemption
9053 MONTICELLO RD	2	Black Hoof (Stone and Oak Restrooms)	No exposure
0 NS NT	4	Community Center, Senior Center, Building Services, Med Act Building	No exposure
13301 SANTA FE TRAIL DR	1	Burlington Depot	No exposure
13317 WALNUT ST	1	Parks Service Center	No exposure - All maintenance activities are to be performed inside
8265 MAURER RD	3	Ad Astra Pool, Ad Astra Restroom, Ad Astra Chlorine House	No exposure - Chemical storage & use are inside
17371 PRAIRIE STAR PKWY	2	Justice Center, Auxillary Police Training Facility	No exposure - Any and all maintenance activities are to be performed inside
7700 COTTONWOOD ST	26	Municipal Services, Mill Creek Athletic field restroom	Stormwater Pollution Prevention Plan Needed - Municipal Servicies Center outdoor material storage
22651 W 83RD ST	2	Freedom Fields Restroom, Greenhouse	Stormwater Pollution Prevention Plan Needed - Green House outdoor material storage
0 NS NT	3	Freedom Fields (Proposed Fuel Station, West Satelite, Proposed Salt Structure)	No exposure - All material storage are covered
0 NS NT	1	Cedar Station Restroom	No exposure
9620 PFLUMM RD	1	Fire Station NO. 1	No exposure - Firefighting activities exemption
10855 EICHER DR	1	Fire Station NO. 4	No exposure - Firefighting activities exemption
19151 PRARIE STAR PKWY	1	Fire Station NO. 5	No exposure - Firefighting activities exemption

The following specific activities will be completed:

BMP ID	BMP Summary	2025	2026	2027
Lbmp P P/G H - 03	Develop a guidance document for municipal staff or third-party contractors which apply pesticides. The guidance shall require any municipal staff, who apply restricted use pesticides, to have a commercial applicator certification from the Kansas Department of Agriculture if required by that Department.	1	1	1
Lbmp P P/G H - 04	Implement a program, with guidance to municipal staff or third-party contractors, to ensure any municipal vehicle or other mechanical equipment washing is conducted in a manner which ensures the wash water is disposed of in the sanitary sewer or otherwise receives proper treatment prior to discharge to the environment.	1	1	1
Lbmp P P/G H - 05	Implement a program for street sweeping in which the street sweepings are collected and disposed of properly or recycled/reused if possible.	2	2	2
Lbmp P P/G H - 06	Develop an employee training program to ensure permittee's staff understand what actions they can take in the workplace to minimize stormwater pollution.	1	1	1
Lbmp P P/G H - 07	Implement a program to inspect stormwater inlets to identify illicit discharges and clean drop inlets of accumulated debris.	2	2	2
Lbmp P P/G H - 08	Develop, implement and keep updated an online storm sewer map accessible to the public.	2	2	2

Lbmp P P/G H - 11	Install a canopy or other covered area for load-out of salt or other de-icing chemicals where such de-icing materials are stored either within the permit area or a storage facility located within 30 miles of this permit area. The canopy or other covered area for load out of salt or other de-icing materials may be installed at a facility owned by the permittee or at a facility owned by an entity the permittee contracts with as long as the facility is located within 30 miles of this permit.	2	2	2
Lbmp P P/G H - 12	Install a stormwater treatment system for capture of either trash, sediment, or debris. Systems may include any proprietary stormwater treatment system including CDS, Hancor, Enviro 21, etc. or similar custom designed systems. A system can be installed at a single municipal storm sewer outfall or on the storm sewer line immediately upstream of the outfall to reduce the discharge of floatables or other objects to receiving waters. Alternately, a system may be installed on a stormwater line to provide treatment at problem locations.	2	2	2
	Total Points	13	13	13
	Required Points	**6**	**6**	**6**

P P/G H – 03 *Develop Pesticide Application Guidelines*

Lenexa plans to develop guidelines for contractors hired by the City internal staff in 2021 and will implement the guidelines in 2022.

P P/G H – 04 Municipal *Vehicle Washing*

Lenexa currently has an enclosed wash bay for washing City vehicles. Water from this facility is directed to the sanitary sewer system

P P/G H – 05 *Street Sweeping*

The City of Lenexa Municipal Services Department's Stormwater Maintenance Division is responsible for street sweeping operations. It is the goal of the City to sweep all public streets a minimum of four times each year to remove sediment, debris and pollutants. The cubic yards of street sweepings are logged and then disposed of in a landfill.

P P/G H – 06 *Develop an employee training program*

Lenexa offers training to all parks and municipal services field staff. This training is specifically related to municipal operations and good housekeeping guidelines as it relates to water quality. This training is conducted by stormwater staff in the Municipal Services Department.

P P/G H – 07 *Implement a program to inspect inlets.*

The City of Lenexa Municipal Services Department's Stormwater Maintenance Division performs storm system cleaning on an as needed basis. When storm pipes are found to contain debris or sediment during the Storm System Inspection Program those pipes are jetted, and the debris and sediment is vacuumed out and disposed of in a landfill. The amount of debris and sediment removed from storm pipes and structures is logged. In addition to pipe and structure cleaning the City also performs storm inlet leaf removal in the fall and winter months. All public storm inlets are checked and cleared of fallen leaves and other plant debris. The cubic yards of leaves removed are logged. The leaves are then composted and used for native plant propagation. Finally, each inlet is inspected for illicit discharges and connections when the cleaning takes place.

P P/G H – 08 *Develop an online storm sewer map.*

Lenexa currently maintains a GIS layer of the MS4 including the associated storm pipes and boxes. This data is shared and uploaded to the Johnson County Automated Information Mapping System (AIMS) on a nightly basis. The Johnson County AIMS mapping is the localized mapping program for all of Johnson County, and all the Cities in Johnson County share their mapping data with each other and the public. This information is fully interactive and available for public consumption.

P P/G H – 09 *Build a BMP Retrofit on a Municipal Site*

Lenexa plans to evaluate public sites for a BMP retrofit in 2021 and construct it in 2022.

P P/G H – 11 *Covered salt storage*

Lenexa stores its salt in an underground storage facility during the off season. Salt is then transferred to covered storage/loading areas for use during the winter months.

P P/G H – 12 ***Install a treatment system***
Lenexa has numerous proprietary stormwater treatment units throughout the City, especially in the dense, urban development of City Center. Units are cleaned at least twice a year and records are kept of the amount of debris removed.

2.2 ASSESS THE EFFECTIVENESS OF BEST MANAGEMENT PRACTICES

Lenexa's permit does require that the City administer an adaptative management approach to stormwater by reviewing, updating, implementing and developing, when necessary, structural and non-structural BMPs within watersheds which will reduce to the maximum extent practicable discharge of the TMDL regulated pollutants.

Permit Requirements:
The City of Lenexa must evaluate the County's water quality data and perform supplemental data gathering and evaluation to determine the effectiveness of BMP's within the watershed of impaired water bodies. If the data collection and evaluation indicate that the current BMP's are not effective, the City is responsible for revising the stormwater management plan to better address the TMDL pollutants.

Action Plan:
The City of Lenexa has adopted the MARC Manual of Best management Practices for Stormwater Quality (revised October 2012) and The American Public Works Association Storm Drainage Systems & Facilities Design Criteria, section 5600. These manuals provide design parameters and guidance for the structural BMPs used in the City of Lenexa. Structural controls are site specific and must be designed to fit within the overall layout of a development project and the surrounding infrastructure. Lenexa has also adopted numerous ordinances and works closely with developers throughout the development review/planning process to minimize the developments impact on the natural environment. The City of Lenexa adheres to the same development requirements on Capital Improvement Projects. Lenexa has a program in place to assure the proper construction and maintenance of post construction stormwater BMP's on both public and private projects.

The City of Lenexa provides a cost share program to financially encourage Lenexa property owners to install structural BMPs on their property. This cost share program is in partnership with the Johnson County Stormwater Management Program. The County provides $15,000 and the City provides $7,500 for funds which are on a first come first serve basis. Lenexa property owners can receive up to 75% reimbursement for eligible expenses associated with installing BMPs.

The City of Lenexa has retained a consultant and is currently conducting a stormwater program masterplan study. The City will be transitioning towards an adaptative management stormwater approach in which decisions will be based on real-time

conditions and will adapt into the future. An adaptive master plan is never outdated because the inputs are all updated on a frequent basis, ensuring that any decisions made are based on current information. This five (5) phase process was started in early 2024 with Phase 1 being completed at the end of the 2024 calendar year. The anticipated duration of this study is three (3) years with the implementation to follow. One of the many goals of this master plan study is to incorporate water quality data as inputs which will help drive the decision-making. The city is anticipating utilizing the information in this study to justify developing a more robust data set of water quality data for localized surface waters. To create this data set, the city anticipates creating a water quality monitoring program. The City is currently exploring conducting this monitoring program in house or contracting with an outside consultant.

Lenexa encourages public involvement and currently supports information gathered by a volunteer citizen scientist group called the "Stream Team," which is a subset of the Johnson County Extension Master Naturalists program focused on water quality initiatives. They began regularly monitoring the Coon Creek Watershed and Lake Lenexa in 2023. The goals of this volunteer team are to assess the effectiveness of the lake/wetland complex in improving regional water quality and educate the public about local water quality issues. The City desires to grow the citizen scientist approach and in conjunction with the creation of the water quality monitoring program, anticipates hosting a citizen science website where various groups can share their findings and educate the public about surface waters in Lenexa.

2.3 SURFACE WATER TMDL MONITORING AND EVALUATING

The State of Kansas is required to periodically submit a list of impaired waters (303D list) and proposed water quality rules to the Environmental Protection Agency (EPA). These rules are commonly known as Total Maximum Daily Loads or TMDLs and were submitted last in 2024.

The TMDL is a tool for establishing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. In short, the TMDL is the maximum allowable quantity of a pollutant that can be discharged to a watershed while not exceeding water quality criteria in the surface waters. TMDL water bodies in Lenexa include:

- Mill Creek
- Roses Pond
- Lake Lenexa
- The Kansas River
- Cedar Creek

With the NPDES permit issued in 2024 KDHE identified streams within Lenexa that categorized as impaired. These watersheds were selected because they are contained

entirely within the City or drain directly to the impaired bodies on the 303D list. In Lenexa, these watersheds and their impairments include:

- Little Mill Creek – Bacteria, Nutrients, Sediment
- Mill Creek – Bacteria, Nutrients, Sediment
- Clear Creek – Bacteria, Nutrients, Sediment

Permit Requirements / Action Plan:

No Action is required at this time by Lenexa for TMDL Surface Water Monitoring. According to the 2025 permit, the City is not required to do routine water quality monitoring and data assessment on its TMDL waterbodies. Water quality monitoring and data assessment is being conducted by the JSMP on behalf of all the MS4 Cities in Johnson County. This activity is permitted under Permit No. M-KS52-SU01. It is the County's sole responsibility to fund, obtain and report the data to the State. For details of the monitoring plan and locations of testing in the County see attached in Appendix C.

In addition, Lenexa must implement sufficient BMPs to qualify for 6 points per year for the duration of the permit.

The following specific activities will be completed each year of the permit:

BMP ID	**BMP Summary**	**2025**	**2026**	**2027**
TMDL - 1	Install pet waste stations which include a glove/bag dispenser with signage and waste can to encourage pet waste disposal at either parks, trails, rest areas or other public lands owned by the permittee.	1	1	1
TMDL - 2	Establish a program to encourage installation of residential rain gardens.	2	2	2

TMDL - 3	Install and operate a constructed wetland.	2	2	2
TMDL - 4	Enact a stream buffer ordinance, resolution, or other enforceable buffer standards.	2	2	2
TMDL - 7	Inspect 10% of all known MS4 outfalls for dry weather discharges either annually or twice per year to identify potential illicit discharges.	3	3	3
	Total Points	10	10	10
	Required Points	**6**	**6**	**6**

Section 3

ADDITIONAL PROGRAM SERVICES

In addition to the requirements of the NPDES permit, the stormwater group provides several additional services directly related to stormwater management. As with the NPDES requirements, responsibilities for these services are spread among the various members of the group. Additional program services include the following:

3.1 CAPITAL IMPROVEMENT

The stormwater program is responsible for managing the stormwater portion of the city's capital improvement program (CIP). Funding for the stormwater program CIP comes directly from the stormwater utility and systems development charge. The stormwater engineer is responsible for identifying and estimating potential projects to be included in the CIP in a process that typically takes place between March and June each year. The Stormwater Engineer also coordinates with the other engineers and pavement maintenance staff to combine or coordinate projects to achieve economy of scale or minimize inconvenience for the public. The financial impact of potential projects is evaluated by the director of finance and the utility charge is adjusted or projects eliminated as appropriate. In general, CIP projects can be categorized into four broad

categories including: Flood mitigation, regional facilities, stream restoration, and infrastructure rehabilitation.

3.1a REGIONAL SOLUTIONS

Regional solutions are the most efficient way to provide stormwater management and quality recreational opportunities for residents. Since its' inception, the program has studied seven watersheds in Lenexa. The studies look for opportunities to work together with developers and create regional solutions that promote the program goals as well as the development goals. The stormwater program works closely with the planning department and others involved in talks with developers to try and come up with timely solutions. As regional solutions are developed, they are included in the CIP discussion at the appropriate time.

3.1b FLOOD MITIGATION

The City makes it a priority to mitigate known structure flooding problems that are reported by residents. Problems are evaluated to assure that they are related to stormwater runoff that is managed by the City and not a private issue or a problem related to groundwater or sewer backups. When a problem is confirmed, a project is developed and considered in the next CIP. Flooding projects are usually eligible for funding through the Johnson County Stormwater Management Program.

3.1c STREAM RESTORATION

Much of Lenexa was developed long before the current post construction stormwater criteria were adopted. As such, many of the streams in the developed areas are highly impacted. The stormwater program has completed a condition analysis of all streams in Lenexa and geomorphic studies of the most impacted areas. This information is used develop projects that will achieve the program goals and protect existing infrastructure.

It is recognized that in-stream erosion is one of the major causes of sedimentation problems in urban areas. Since Lenexa has to sediment TMDL's, it is important to monitor stream condition and provide sensible stabilization projects when possible.

3.1d INFRASTRUCTURE REHABILITATION

The primary focus of the infrastructure rehabilitation program is to replace or rehabilitate corrugated metal pipe (CMP). The city has approximately sixty (60) miles of CMP, most of which was installed over 25 years ago. This pipe is quickly reaching the end of its useful life.

The stormwater engineer and the stormwater superintendent work together to identify the most critical locations for CMP rehabilitation. Approximately $2,000,000 per year is allocated in the CIP for infrastructure rehabilitation. Projects are developed that address the most critical problems within the budget identified in the CIP.

3.2 FLOODPLAIN MANAGEMENT

Per City code, the floodplain manager for the city is the City Engineer. However, this responsibility has been delegated to the stormwater group. Floodplain management includes managing the City's responsibilities under the National Flood Insurance Program (NFIP) and the Community Rating System (CRS).

3.2a NATIONAL FLOOD INSURANCE PROGRAM

In 1976 Lenexa joined the NFIP. This program offers subsidized flood insurance for residents living within Lenexa as well as disaster relief funds in the event of a major flood. As a requirement of the program, Lenexa must maintain a floodplain development ordinance. Among other things, the ordinance requires a floodplain development permit for any activity within a regulated floodplain. The stormwater group periodically reviews this ordinance and assures that all aspects of the ordinance, including the floodplain development permits, are complied with.

3.2b COMMUNITY RATING SYSTEM

In 2010, Lenexa voluntarily entered the Community Rating System (CRS). This program, sponsored by the Federal Emergency Management Agency (FEMA), provides discounted flood insurance rates for resident if the City satisfies certain requirements of the program. The requirements include various ordinances, record keeping, and public information all in the attempt to reduce the risk of flooding. An annual recertification document must be submitted each February. In addition, each five years an audit is conducted by FEMA's consultant. With each audit, the City can increase its class rating resulting in further flood insurance discounts. Lenexa is currently a class 7 City on a scale of 1-10.

3.3 SYSTEM MAINTENANCE

Lenexa's public storm drainage system consists of traditional infrastructure such as pipes and inlets, water quality BMP's, and stream corridors. Maintenance of this entire system is the responsibility of the stormwater staff that reside in the Municipal Services Department including the Stormwater Superintendent and two maintenance crews. They perform routine maintenance of the entire system as follow:

3.3a BMP MAINTENANCE

One crew specializes in green infrastructure and is responsible for the maintenance of all public Stormwater BMPs. The public Stormwater BMPs are in place to capture pollutants from public roads and right of ways. Maintenance activities include but are not limited to the following:

- Monthly maintenance inspections (to ensure proper operation of BMPs)
- Monthly trash and litter removal
- Sediment removal
- Native plant management
    - Planting
    - Invasive weed control
    - Mowing
    - Controlled burning

3.3b INFRASTRUCTURE MAINTENANCE

An additional crew is responsible for the maintenance of the traditional public storm water drainage system. This crew provides continuous video inspection of the City's pipe system with the goal of inspecting 20% of the system each year to identify pipes and structures in need of repair or cleaning. When deficiencies are identified they are repaired either by City staff or contractor. The City performs cleaning of the system on an as needed basis to ensure proper drainage and reduce the amount of sediment and debris that makes it to our streams.

3.3c CORRIDOR MAINTENANCE

Collectively the crews provide maintenance of all public stream corridors. The stream corridors present a final opportunity to improve water quality and can be an amenity for recreation. The stream corridors require regular maintenance to ensure proper drainage and prevent flooding. Maintenance activities include but are not limited to the following:

- Monthly maintenance inspection
- Invasive vegetation removal
- Debris and blockage removal
- Trash removal
- Bank stabilization and repair

3.3d TECHNICAL ASSISTANCE

The City of Lenexa, in its effort to improve storm water quality, educates and involves the public, offers technical assistance on an as requested basis. As displayed in this management plan, there are multiple ways for the public to reach out and communicate with stormwater staff. Topics are wide ranging, whether it be residential in nature, such as meeting with residents to discuss solutions to address soggy spots in a yard, addressing sump pump issues or to provide expertise on how to install a rain garden; to assisting contractors with guidance on how to install green infrastructure or traditional grey infrastructure; to working with Lenexa businesses helping to solve drainage issues or addressing stormwater related questions. Work is not performed by City Staff, as this service is for advice purposes or educational in nature only. The Rain to Recreation program prides itself on recognizing the importance for stormwater staff to be available and to work in partnership with the community for the greater good of stormwater in Lenexa.

Section 4

PROGRAM CONCLUSION

The City of Lenexa's mission is to provide exceptional service through a team of dedicated professionals working in partnership with the community. The Rain to Recreation Program mission is to implement and maintain water quality and flood control

projects that protect the natural and developed environment, while providing public education, involvement, and recreational opportunities. Together in unison, under the guidance of this Stormwater Management Plan, the City of Lenexa and the public are making a difference to improve stormwater quality, manage stormwater quantity, educating and involving each other to make Lenexa an attractive and safe city rich with history and a strong, hometown sense of community. This impacts not only the City of Lenexa, the surrounding Johnson County communities, and the region by providing a pilar of excellence in leading by example to improve the waters of the great state of Kansas.

Appendix A

CITY OF LENEXA NPDES PERMIT

Appendix B

MAP OF PERMIT AREA

Appendix C

MONITORING LOCATIONS

Appendix D

MAPPING

- **Outfall Map**
- **Private BMP Map**
- **Public BMP Map**
- **Stream Setback Map**
- **City of Lenexa Facilities Location Map**

Appendix E

ORDINANCES

- **BUILDING AND CONSTRUCTION STANDARD**
- **FLOOD HAZARD ZONING**
- **ILLICIT DISCHARGES TO STORM SEWERS AND SURFACE WATERS**
- **LAND DISTRUBANCE PROVISIONS**
- **ANIMAL AND ANIMAL CONTROL**
- **STORMWATER MANAGEMENT REGULATIONS**
- **STREAM SETBACKS**

Appendix F

SOP'S

COMMUNITY DEVELOPMENT DEPARTMENT

STORMWATER TECHNICIAN

- Commercial Site Inspection
- Mud and Silt Leaving the Site
- Outfall Inspection
- Public Improvement Inspection
- Residential Site Inspection
- Illicit Discharge Response

STORMWATER SPECIALIST

- Stormwater BMP Construction Inspection
- Stormwater BMP Maintenance Inspection
- Harmful Algae Bloom Response

STORMWATER ENGINEER

- Stormwater Capital Improvement Process
- Construction Certificate Management Process

PLANNING

- Stormwater BMP Plan Review Process
- Erosion and Sediment Control Plan Review Process

MUNICIPAL SERVICES DEPARTMENT

STORMWATER MAINTENACE WORKERS

- Algae Control
- Algae Control – Central Green
- Algae Control – City Center Pond
- Catch Basin Cleaning – Inside
- Catch Basin Cleaning – Outside
- Headwall Inspection
- Herbicide Application
- Inlet Leaf Removal
- Inlet Snow Removal
- Monthly BMP Litter Pick-up
- Pipe Cleaning
- Pre-emergent Application
- Roadway Ditch Inspection
- Live Stake Harvesting
- Live Stake Installation
- Storm Pipe Inspection
- Storm Structure Inspection
- Stormwater Structure Repair – Wall
- Stormwater Structure Replace – Wall
- Inlet Trash Bar Replacement
- Tree Removal Dead or Fallen
- Tree Removal in Creek

Appendix A

CITY OF LENEXA NPDES PERMIT

Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1368

Kansas
Department of Health
and Environment

Phone: 785-296-1535
Fax: 785-559-4264
www.kdheks.gov

Janet Stanek, Secretary

Laura Kelly, Governor

December 11, 2024

LENEXA, CITY OF
C/O Stormwater Coordinator
17101 W 87th St Parkway
Lenexa, KS 66215

RE: Kansas Water Pollution Control
Permit No. M-KS34-SU01
LENEXA, CITY OF

Dear Permittee:

You have fulfilled all the filing requirements for a Kansas Water Pollution Control Permit and Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES). We are pleased to forward your new permit. While it is permissible to make as many copies as needed for monitoring and reporting purposes, you need to retain the original permit for your files.

We suggest you carefully read the terms and conditions of your permit and understand these terms and conditions are enforceable under both State and Federal law.

The KDHE's Bureau of Water has recently implemented a new online permit processing and data management system, Kansas Environmental Information System (KEIMS).

Any additional reports shall be submitted to the Kansas Department of Health and Environment, Bureau of Water-TSS, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367.

If you have any questions concerning this permit, contact Andrew Bowman at (785) 296-2683.

Sincerely,

Thomas C Stiles

Thomas C Stiles
Director, Bureau of Water

pc: NEDO - District
HZ- Permit File

Kansas
Department of Health and Environment

Kansas Permit No.: M-KS34-SU01

Federal Permit No.: KSR410016

KANSAS WATER POLLUTION CONTROL

Municipal Separate Storm Sewer System (MS4) Permit and Authorization to Discharge Under The National Pollutant Discharge Elimination System

Pursuant to the provisions of Kansas Statutes Annotated 65-164 and 65-165, the Federal Water Pollution Control Act as amended, 33 U.S.C. 1251 et seq., the "Act",

Permittee:	Lenexa, City of
Permittee Address:	17101 West 87th Street Parkway Lenexa, Kansas 66215
Drainage Basin:	Kansas River
County:	Johnson

is hereby authorized to discharge stormwater from the municipal separate storm sewer system (MS4) as described herein in accordance with the limitations, conditions and requirements set forth in this permit.

This permit is effective January 1, 2025, supersedes the previously issued MS4 permit M-KS34SU01 and expires December 31, 2027.

PERMIT AREA AND AUTHORIZED DISCHARGES

This permit covers all areas within the permittee's MS4 jurisdiction which are also located in the Urban Area as defined by the most recent U.S. Census (the Permit Area). The Permit Area may change based upon areas incorporated into or removed from the permittee's jurisdictional area during the term of this permit.

This permit authorizes the discharge of all existing or new stormwater point source discharges from the Municipal Separate Storm Sewer System (MS4) located within the Permit Area. New stormwater discharges are those which are created and/or incorporated into the permittee's MS4 during the term of this permit.

Janet Stanek

Secretary, Kansas Department of Health and Environment

December 10, 2024
Date

PART I: Stormwater Management Program (SMP) Document Requirements

A. Current Stormwater Management Program

The permittee shall continue to implement and enforce their current Stormwater Management Program (SMP), as documented in the SMP document, until an updated SMP is implemented.

Any updated SMP shall be designed to:

1. Reduce the discharge of pollutants from the municipal separate storm sewer system (MS4) to the Maximum Extent Practicable (MEP),

2. Continue to implement the six minimum control measures as listed in PART I Section C,

3. Satisfy the requirements of this permit, the Clean Water Act and Kansas surface water quality statutes and regulations.

Implementation of Best Management Practices (BMPs) consistent with the provisions of the SMP document and this permit constitutes compliance with the standard of reducing pollutants to the Maximum Extent Practicable.

B. Updated Stormwater Management Program document

Modification of the SMP is permitted as the need arises. Modifications can be accomplished with any of the following methods:

1. Typically, the SMP document is updated near the end of the calendar year and submitted to KDHE for review along with the annual report which is due after the first of the calendar year but before the 28th of February. The permittee is required to implement the SMP, which was most recently submitted to KDHE along with the annual report, throughout the entire year and may continue to implement the updated SMP until subsequently modified. The updated SMP as submitted must be accepted by KDHE. If KDHE finds the SMP is not acceptable, requirements for modification and resubmittal will be addressed to the permittee.

2. If it becomes necessary to modify the SMP at some time other than when the annual report is submitted to KDHE, the permittee may make the modifications to the SMP document and submit the SMP document to KDHE for acceptance. The permittee shall not begin implementation of the modified SMP until after KDHE has provided acceptance.

3. KDHE may require the permittee to modify the SMP at any time, requirements for modification and resubmittal will be addressed to the permittee.

C. Six Minimum Control Measures

The Permittee is responsible for implementing a stormwater management program to comply with the requirements of 40 CFR 122.34, including implementation of the six minimum control measures, as described in the body of this permit. In addition to the program requirements, the Permittee is responsible for implementing adequate BMPs, listed in Appendices A through G, to claim at least the required number of points in each calendar year.

Claiming points alone does not satisfy the requirements of this permit if the program does not comply with the requirements of 40 CFR 122.34.

For all six minimum control measures, documentation of compliance with each measure's goal and implementation time schedule must be maintained on file. Permittee is responsible for implementing an adequate program to comply with the requirements of this permit **and** be able to claim the associated required BMP points. Extent of point compliance, i.e., equaling or exceeding the required annual point total or failure to reach the required annual point total, must be reported in the Annual Report.

C. Six Minimum Control Measures (continued)

For any of the six minimum control measures, the permittee is not limited to implementation of the BMPs listed in the tables. Several other BMPs may be implemented, however, only implementation of the BMPs listed in the tables may be documented and counted toward the required annual point total. Additional points may be requested by the permittee for BMPs that are not included in the tables. The request must be submitted to KDHE prior to the annual report submission period in order for points to be included towards the current year. Points cannot be claimed on the annual report if not approved by KDHE.

Guidance useful in implementing the six minimum control measures can be obtained from the Online Water Library (OWL) of the Center for Watershed Protection. A list of links to helpful guidance documents, including OWL, can be found on the KDHE Municipal Stormwater Program website.

Additional helpful guidance and/or resources in implementing the six minimum control measures can be found at the following link: https://www.kdhe.ks.gov/DocumentCenter/View/28893/MS4-NPDES-Permit-Helpful-Guidance-andor-Resources-PDF , **Document titled "MS4 NPDES Permit Helpful Guidance and/or Resources.**

The six minimum control measures and requirements are as follows:

1. Public Education and Outreach

The permittee shall continue to 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.

The implementation of BMPs for this minimum control measure must result in accumulation of a minimum of 7 points for each calendar year. **Appendix A** lists various BMPs, measurable goals, and the required timing-period or implementation-schedule to qualify for the points in the year. The permittee may request that KDHE accept additional BMPs of the permittee's creation that meets the intent of this minimum control measure for a reasonable number of points, as described under Part C.

In cases where the permittee is already implementing a BMP which qualifies for points, they may continue implementation of the BMP and earn the listed points as allowed under this permit.

Multiple BMPs involve holding public hearings or public forums; a single public hearing or forum can be held which addresses multiple topics and points claimed for all of the multiple BMPs implemented.

2. Public Involvement/Participation

The permittee shall continue to implement a public involvement and participation program to solicit public comments and recommendations regarding the BMPs and measurable 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.

The implementation of BMPs for this minimum control measure must result in accumulation of a minimum of 6 points for each calendar year. **Appendix B** lists various BMPs, measurable goals, and the required timing-period or implementation-schedule to qualify for the points in the year. The permittee may request that KDHE accept additional BMPs of the permittee's creation that meets the intent of this minimum control measure for a reasonable number of points, as described under Part C.

In cases where the permittee is already implementing a BMP which qualifies for points, they may continue implementation of the BMP and earn the listed points as allowed for the first year of implementation under this permit as well as subsequent years.
Multiple BMPs involve holding public hearings or public forums; a single public hearing or public forums can be held which addresses multiple topics and points claimed for all of the multiple BMPs implemented.

3. Illicit Discharge Detection and Elimination

The permittee shall:

a. Continue to implement and enforce a program to detect and eliminate illicit discharges into the MS4.

b. Maintain a storm sewer 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 receiving discharges from those outfalls. A copy of the map shall be submitted to KDHE with the annual report if requested by KDHE.

c. Implement and enforce an ordinance or resolution to prohibit non-stormwater discharges into the storm sewer system and implement appropriate enforcement procedures and actions. A copy of the ordinance or resolution shall be submitted to KDHE with the annual report if requested by KDHE.

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

e. Develop and implement a plan to detect/inspect for and address prohibited non-stormwater discharges, including illegal dumping, to the storm sewer system. The plan must include efforts to identify and evaluate dry weather MS4 discharges to detect and eliminate any associated illicit discharge. Unless identified by either the permittee or KDHE as a significant source of pollutants to waters of the state, several types of non-stormwater flow are not normally prohibited from entering the Municipal Separate Storm Sewer System:

Discharges which are not necessarily prohibited include:

Water line flushing	Footing drains
Diverted stream flows	Lawn watering
Rising ground waters	Individual residential car washing
Uncontaminated groundwater infiltration as defined under 40 CFR 35.2005(20) to separate storm sewers	Occasional not-for-profit car wash activities
Uncontaminated pumped groundwater	Flows from riparian habitats and wetlands
Contaminated groundwater if authorized by KDHE and approved by the department	Dechlorinated swimming pool discharges excluding filter backwash
Discharges from potable water sources	Street wash water (excluding street sweepings which have been removed from the street)
Foundation drains	Discharges or flows from firefighting activities
Air condition condensation	Heat pump discharge waters (residential only)
Springs	Treated wastewater meeting requirements of an NPDES permit
Irrigation waters	Sump pump drains
Water from crawl space pumps	Other discharges determined not to be a significant source of pollutants to waters of the state, a public health hazard or nuisance

The implementation of BMPs for this minimum control measure must result in accumulation of a minimum of 7 points for each calendar year. **Appendix C** lists various BMPs, measurable goals, and the required timing-period or implementation-schedule to qualify for the points in the year. The permittee may request that KDHE accept additional BMPs of the permittee's creation that meets the intent of this minimum control measure for a reasonable number of points, as described under Part C.

In cases where the permittee is already implementing a BMP which qualifies for points, they may continue implementation of the BMP and earn the listed points as allowed for the first year of implementation under this permit as well as subsequent years. Multiple BMPs involve holding public hearings or public forums; a single public hearing or public forums can be held which addresses multiple topics and points claimed for all of the multiple BMPs implemented.

4. Construction Site Stormwater Runoff Control

The permittee shall continue to maintain 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 pollutant discharge associated with stormwater 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, at a minimum, all the following:

a. Maintain and enforce an ordinance or resolution, if the permittee has the authority to do so, to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State and local law. A copy of the ordinance or resolution shall be submitted to KDHE with the annual report if requested by KDHE.

b. Maintain requirements for construction site owners or operators to implement appropriate erosion and sediment control best management practices.

c. Maintain requirements for construction site owners or 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.

d. Maintain procedures for site plan review which incorporate consideration of potential water quality impacts.

e. Maintain procedures for receipt and consideration of information submitted by the public.

f. Maintain procedures for site inspection and enforcement of control measures.

The implementation of BMPs for this minimum control measure must result in accumulation of a minimum of 6 points for each calendar year. **Appendix D** lists various BMPs, measurable goals, and the required timing-period or implementation-schedule to qualify for the points in the year. The permittee may request that KDHE accept additional BMPs of the permittee's creation that meets the intent of this minimum control measure for a reasonable number of points, as described under Part C.

In cases where the permittee is already implementing a BMP which qualifies for points, they may continue implementation of the BMP and earn the listed points as allowed for the first year of implementation under this permit as well as subsequent years.

Multiple BMPs involve holding public hearings; a single public hearing can be held which addresses multiple topics and points claimed for all of the multiple BMPs implemented.

5. Post-Construction Stormwater Management in New Development and Redevelopment

The permittee shall continue to maintain 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, at a minimum, all the following:

a. Maintain a requirement for BMPs to prevent or minimize adverse water quality impacts.

b. Maintain strategies which include a combination of structural and/or non-structural BMPs appropriate for the municipality.

c. Maintain and enforce an ordinance or resolution, if the permittee has the authority to do so, to address post-construction runoff from new development and redevelopment projects to the extent allowable under State and local law.

d. Ensure adequate long-term operation and maintenance of structural BMPs.

5. Post-Construction Stormwater Management in New Development and Redevelopment (continued)

The implementation of BMPs for this minimum control measure must result in accumulation of a minimum of 7 points for each calendar year. **Appendix E** lists various BMPs, measurable goals, and the required timing-period or implementation-schedule to qualify for the points in the year. The permittee may request that KDHE accept additional BMPs of the permittee's creation that meets the intent of this minimum control measure for a reasonable number of points, as described under part C.

In cases where the permittee is already implementing a BMP which qualifies for points, they may continue implementation of the BMP and earn the listed points as allowed for the first year of implementation under this permit as well as subsequent years.

Multiple BMPs involve holding public hearings; a single public hearing can be held which addresses multiple topics and points claimed for all of the multiple BMPs implemented.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

The permittee shall continue to implement an operation and maintenance program that includes employee training to prevent and reduce stormwater pollution from municipal operations. The program must include, at a minimum, the following:

a. Training shall be implemented for all necessary municipal staff, such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

b. Maintain a program to ensure proper use and storage of materials at permittee owned facilities that use pesticides, herbicides, and fertilizers.

c. Develop, implement, and maintain site-specific Stormwater Pollution Prevention (SWP2) plan in accordance with Attachment A for permittee owned facilities with significant storage of potential stormwater pollutants. This shall include municipal garages, fleet maintenance areas, salt and sand storage areas, park maintenance shops, fueling stations, sites with material storage that meet the definition of industrial activity, and other permittee owned facilities.

    a. If a SWP2 plan is already required or a facility has qualified for No Exposure Certification (NOEC) under the KDHE Industrial Stormwater General Permit, the applicability of this provision is redundant, and the Industrial Stormwater permit provisions shall be followed in lieu of this requirement.

    ii. If a facility can ensure that a condition of "no exposure" to stormwater exists, a site-specific SWP2 plan is not required. To determine no exposure, see Attachment B. The facility and no exposure determination shall be documented in the annual report and reevaluated yearly by the permittee.

The implementation of BMPs for this minimum control measure must result in accumulation of a minimum of 6 points for each calendar year. **Appendix F** lists various BMPs, measurable goals, and the required timing-period or implementation-schedule to qualify for the points in the year. The permittee may request that KDHE accept additional BMPs of the permittee's creation that meets the intent of this minimum control measure for a reasonable number of points, as described under Part C.

In cases where the permittee is already implementing a BMP which qualifies for points, they may continue implementation of the BMP and earn the listed points as allowed for the first year of implementation under this permit as well as subsequent years. Multiple BMPs involve holding public hearings; a single public hearing can be held which addresses multiple topics and points claimed for all of the multiple BMPs implemented.

D. Total Maximum Daily Load (TMDL) Regulated Pollutants

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

The effort to reduce the discharge of TMDL regulated pollutants is anticipated to be an iterative process with changes in the SMP periodically, generally not more frequently than annually, possibly every two or three years. This "adaptive management" type process is, informed by monitoring data and other information collected during the term of this permit, recommended to attenuate the discharge of TMDL regulated pollutants listed in the TMDL Table of PART II of this permit.
Each updated SMP document shall provide:

1. Best Management Practices (BMPs)

Updates of the SMP document can include structural and/or non-structural BMPs implemented to reduce the discharge of TMDL regulated pollutants from the MS4. This section of the SMP shall identify or include:

a. BMPs which will be implemented, including non-structural and/or structural measures, as selected from EPA's "National Menu of Best Management Practices (BMPs) for Stormwater" or from a local or regionally appropriate storm drainage criteria manual such as the Kansas City Metro Chapter of the American Public Works Association (APWA) Manual of Best Management Practices for Stormwater Quality or such other BMP manuals as are appropriate (links for the National Menu of Best Management Practices (BMPs) for Stormwater and the Kansas City Metro Chapter of the American Public Works Association (APWA) Manual of Best Management Practices for Stormwater Quality can be found on the KDHE document titled "MS4 NPDES Permit Helpful Guidance and/or Resources").

b. Include a description of non-structural practices being implemented, including the six minimum control measures and/or other source control measures.

c. Include the location of the structural BMPs.

d. Identify the design factors associated with the structural BMPs.

e. Include information on the reported effectiveness of the chosen BMPs based on regionally appropriate data or performance analyses in the International Stormwater BMP Database (a link to the Database can be found on the KDHE document titled "MS4 NPDES Permit Helpful Guidance and/or Resources").

f. Include a schedule for constructing and/or implementing additional selected BMPs to reduce the discharge of TMDL regulated pollutants.

g. Include an inspection/maintenance plan and schedule for each BMP, as appropriate.

h. Include a plan and schedule to monitor the effectiveness of the BMPs to reduce the discharge of TMDL regulated pollutants.

2. Measurable goals to assess the effectiveness of the TMDL BMPs

As with the implementation of all stormwater BMPs in the permittee's SMP, BMPs implemented to reduce the discharge of TMDL pollutants listed in the TMDL Table in Part II must include measurable goals.

Overall TMDL measurable goals should be based upon either stormwater sampling in the MS4 or in stream sampling of the stream(s) existing in, or adjacent to the Permit Area (or Permit Areas for co-operative stormwater control efforts as provided in paragraph 4 below) during or immediately following storm events. Stormwater sampling, for the purpose of documenting compliance with goals, within the MS4 will normally compare results upstream of the BMP and downstream of the BMP or perhaps prior to implementation of the BMP and following implementation of the BMP if the BMP is non-structural.

2. Measurable goals to assess the effectiveness of the TMDL BMPs (continued)

The monitoring results of samples obtained to iteratively guide performance evaluation, subsequent selection, and adjustments of BMPs should be maintained on file in compliance with the Standard Conditions records retention requirement. These results do not need to be reported to KDHE via the electronic DMR process at this time. However, these monitoring results and/or a summary of the results are to be reported in the Annual Report as required in PART IV REPORTING. The permittee may use modeling that has been properly calibrated to determine that BMP measurable goals are being met.

Measurable goals for reducing TMDL pollutants contributed by MS4s can be expressed in quantifiable values:

a. to reduce the total mass of pollutants, and

b. be expressed as average and median values (percent reduction of inflow volume, reduction in pollutant mass loading) or for bacteria as a geometric mean.

3. Maps shall be developed and maintained which illustrate:

a. The Permit Area, boundaries of the contributing drainage basins and primary sub-basins, within and outside the Permit Area.

b. The locations of the BMPs, if structural.

c. The location of TMDL stream monitoring locations if such monitoring is required.

d. Storm sewer collection system which includes the outfalls within the Permit Area where the MS4 drains to TMDL listed impaired streams or lakes.

4. Alternative Stormwater Offsite Pollution Reduction Program

As appropriate, when waters of the state are affected by TMDL regulated pollutants from both the Permit Area and surrounding non-jurisdictional lands, the permittees may incorporate and implement plans through their SMP for an offsite pollution reduction program to install Best Management Practices (BMPs) in alternative locations, including outside the Permit Area, within the watershed shared by urban entities or urban and non-urban entities. Any alternative stormwater offsite pollution reduction program should be developed with watershed interests, such as other communities, Watershed Restoration and Protection Strategy (WRAPS) groups and Conservation Districts lying outside the Permit Area for the joint purpose of reducing pollutant loads generated from urban and non-urban lands within the shared watershed. Candidate offsite locations and practices will be consistent with implementing existing watershed plans that identify specific urban and non-urban (such as agricultural) BMP types and locations to achieve TMDLs reductions. The Alternative Stormwater Offsite Pollution Reduction Program shall be subject to KDHE approval and approved by KDHE prior to incorporation into the permittee's SMP.

E. Responsible Parties

The Stormwater Management Program (SMP) Document should list the municipal parties (employees and/or staff and/or departments) responsible for compliance with the SMP document. There is no requirement to name individual employees, rather, organizational units such as positions, divisions or departments may be named as the responsible parties.

F. Monitoring Requirements

The SMP document should address the monitoring requirements for surface water and/or storm water within the MS4 collection system. Surface water monitoring requirements addressed in this permit may be found in PART II.

G. Reporting Requirements

See PART IV.

PART II: Total Maximum Daily Load (TMDL) Best Management Practices and Surface Water Monitoring

Permittees who are required to complete storm event monitoring of surface waters, i.e., streams or rivers, (see TMDL Table and associated text) shall report the results of the storm event monitoring with KEIMS.

A. TMDL BMP Implementation Requirements

The implementation of BMPs for this minimum control measure must result in accumulation of a minimum of 6 points for each calendar year. **Appendix G** lists various BMPs, measurable goals, and the required timing-period or implementation-schedule to qualify for the points in the year.

In cases where the permittee is already implementing a BMP which qualifies for points, they may continue implementation of the BMP and earn the listed points as allowed for the first year of implementation under this permit as well as subsequent years.

Multiple BMPs involve holding public hearings; a single public hearing can be held which addresses multiple topics and points claimed for all of the multiple BMPs implemented.

In addition to implementing a TMDL Pollutant Reduction and Monitoring program as required above, the permittee must implement sufficient listed BMPs in **Appendix G** to qualify for the required number of points.

1. Implementation

The permittee shall implement Best Management Practices (BMPs) to reduce to the Maximum Extent Practicable the discharge of the following TMDL regulated pollutants from the MS4 to the watershed of impaired stream and/or lake.

TMDL TABLE

TMDL Regulated Pollutant	Specific Impaired Stream(s) to Target
Bacteria	Little Mill Creek, Mill Creek, and Clear Creek
Nutrients	Little Mill Creek, Mill Creek, and Clear Creek
Sediment	Little Mill Creek, Mill Creek, and Clear Creek

Total Maximum Daily Loads, TMDLs, are established for waters found on the CWA Section 303d list of impaired waters. The purpose of the TMDL is to define the necessary and allowable pollutant load that may enter those impaired waters, so those waters attain a condition that fully supports all their designated uses. The TMDL then allocates portions of that allowable load among the likely point and non-point sources discharging the pollutant into the water or its watershed. Implementation of the TMDL by the NPDES and 319 programs brings about reductions in current loading from those sources through numeric goals or narrative actions to the allowable level allocated to each source.

2. Monitoring Requirements, Frequency, and Parameters

This Part II, A2. requirement is not applicable to this permit. No action is required at this time, by the permittee, for Total Maximum Daily Load (TMDL) Surface Water Monitoring, as such monitoring under this permit is not necessary or others are conducting the monitoring. The Johnson County MS4 NPDES permit (Permit No. M-KS52-SU01) requires Johnson County to conduct the TMDL Surface Water Monitoring within Johnson County and report the results via the Kansas Environmental Information Management System (KEIMS). The permittee may conduct surface water monitoring to evaluate performance of BMPs or otherwise gather data. The monitoring results of samples obtained to determine the performance of BMPs should be maintained on file in compliance with the Standard Conditions records retention requirement. These results do not need to be reported to KDHE via the electronic DMR process at this time.

PART III: Industrial Stormwater Discharges

This PART III requirement is not applicable to Phase II permittees. No action is required at this time for Monitoring Industrial Stormwater Discharge

PART IV: Reporting

A. The permittee shall submit a calendar year annual report to KDHE by February 28 of each year. The annual report shall be submitted to KDHE in the form specified by KDHE. The completed annual report along with attachments or other documents which need to be submitted in association with the annual report shall all be submitted in PDF file formats to KDHE. As KDHE implements the KEIMS web-based system, all documents submitted will be required to be uploaded through the KEIMS program. KDHE will provide notification to the permittee when annual reporting via the KEIMS system is required. The annual report shall cover the activities during the previous calendar year and must include:

1. Provide the status of compliance with permit conditions, an assessment of the appropriateness of the implemented Best Management Practices, progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable, and the measurable goals (with an indication of the progress toward meeting the goals) for each of the six minimum control measures.

2. Provide results of information collected and analyzed, (for example test results, surveys, or public comments/input) during the annual reporting period. This may include monitoring data used to assess the success of best management practices with respect to reduction in pollutant discharge. Include an interpretation of the information which addresses success or failure of the portion of the program for which the information applies.

3. For Best Management Practices (BMPs), which are directed at reducing the discharge of TMDL regulated pollutants, provide the measurable goals of each BMP with an indication of the progress toward meeting the goals.

4. Provide a summary of the stormwater activities which are scheduled to be undertaken during the next calendar year (including an implementation schedule).

5. Provide a summary of the stormwater activities that were scheduled to be undertaken during the previous calendar year and the status of these activities.

6. Provide a map showing changes in the permittee's Permit Area if the Permit Area has changed within the year.

7. Provide a description of significant changes in any of the BMPs.

8. Provide copies of any ordinances or resolutions which were updated in the last year and are associated with the SMP.

9. Provide a list of other parties (such as other municipalities or consultants), which are responsible for implementing any of the program areas of the Stormwater Management Program.

B. Information and monitoring results gathered in compliance with PART II must be reported in compliance with the reporting requirement as addressed in B. Monitoring Requirements.

C. EPA's National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule ("NPDES eRule") requires regulated entities to report data electronically. KDHE has developed electronic reporting tools to assist permittees in complying with the EPA electronic reporting rule. Unless a waiver has been approved by KDHE, permittees are required to submit information electronically. The electronic reporting system is called the **Kansas Environmental Information Management System (KEIMS)** and can be accessed at https://keims.kdhe.ks.gov.

STANDARD CONDITIONS FOR KANSAS WATER POLLUTION CONTROL AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MS4 PERMITS

1. Representative Sampling and Monitoring Report Submittals:

   A. Samples and measurements taken as required herein shall be representative of the quality and quantity of the monitored discharge. Test results shall be recorded for the day the samples were taken. If sampling for a parameter was conducted across more than one calendar day, the test results may be recorded for the day sampling was started or ended. All samples shall be taken at the locations designated in this permit, and unless specified, at the outfall/monitoring location(s) before the wastewater joins or is diluted by any other water or substance.

   B. EPA's *National Pollutant Discharge Elimination System* (NPDES) *Electronic Reporting Rule* ("NPDES eRule") requires regulated entities to report data electronically. KDHE has developed electronic reporting tools to assist permittees in complying with the EPA electronic reporting rule. Unless a waiver has been approved by KDHE, permittees are required to submit information electronically. The electronic reporting system is called the **Kansas Environmental Information Management System (KEIMS)** and can be accessed at https://keims.kdhe.ks.gov Monitoring results shall be submitted no later than the 28th day of the month following the completed reporting period. If granted a waiver, signed and certified copies of data, information and reports, required herein, prepared in accordance with KAR 28-16-59, may be e-mailed as scanned attachments to kdhe.bowkeims@ks.gov, faxed to 785.559.4257, or sent by U.S. mail to:

      Kansas Department of Health & Environment
      Bureau of Water-Technical Services Unit
      1000 SW Jackson Street, Suite 420
      Topeka, KS 66612-1367

2. Definitions:

   A. A "grab sample" is an individual sample collected in less than 15 minutes. A "composite sample" is a combination of individual samples in which the volume of each individual sample is proportional to the flow, or the sample frequency is proportioned to the flow rate over the sample period, or the sample frequency is proportional to time.

   B. The terms "Director", "Division", and "Department" refer to the Director, Division of Environment, Kansas Department of Health and Environment, respectively.

   C. "Severe property damage" means substantial physical damage to property, damage to the treatment/control facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a diversion.

3. Duty to Mitigate: The permittee shall take all reasonable steps to minimize or prevent any damage to the environment or hazard to human health from any discharge in violation of this permit.

4. Test Procedures: All analyses required by this permit shall conform to the requirements of 40 CFR Part 136, unless otherwise specified, and shall be conducted in a laboratory accredited by the Department. For each measurement or sample, the permittee shall record the exact place, date, and time of measuring/sampling; the date and time of the analyses, the analytical techniques or methods used, minimum detection or reportable level, and the individual(s) who performed the measuring/sampling and analysis and, the results. If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved procedures, the results shall be included in the Monitoring Report form required in 1.B. above. Such increased frequencies shall also be indicated.

5. Change in Discharge: All stormwater discharges shall be in compliance with the conditions of the permit. Modification or expansion of the storm sewer system is allowed. All new storm sewer segments and outfalls constructed after the effective date of the permit, which are located within the permit area, are authorized under the permit and must comply with the permit conditions.

6. Proper Operations and Maintenance: The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the requirements of this permit and Kansas and Federal law.

7. Incident Reporting: The permittee shall report any unanticipated significant incidents which would be expected to result in non-compliance with the permit requirements within 24 hours from the time the permittee became aware of the incident. A written submission shall be provided within 5 days of the time the permittee became aware of the incident. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

   For an anticipated incident or any planned changes or activities in the permitted control/treatment facility that may result in noncompliance with the permit requirements, the permittee shall submit written notice, if possible, at least ten days before the date of the event.

8. Removed Substances: Solids, sludges, debris, or other pollutants removed in the course of control/treatment of stormwater shall be utilized or disposed of in a manner acceptable to the Division.

9. Right of Entry: The permittee shall allow authorized representatives of the Division of Environment or the Environmental Protection Agency upon the presentation of credentials, to enter upon the permittee's premises where a stormwater discharge or source is located, or in which are located any records required by this permit, and at reasonable times, to have access to and copy any records required by this permit, to inspect any facilities, monitoring equipment or monitoring method required in this permit, and to sample any stormwater discharges from or influents into the stormwater control/treatment facilities.

10. Transfer of Ownership: The permittee shall notify the succeeding owner or controlling person of the existence of this permit by certified letter, a copy of which shall be forwarded to the Division. The succeeding owner shall secure a new permit. This permit is not transferable to any person except after notice and approval by the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.

11. Records Retention: Unless otherwise specified, all records and information resulting from the monitoring activities required by this permit, including all records of analyses and calibration and maintenance of instruments and recordings from continuous monitoring instruments, shall be retained for a minimum of 3 years, or longer if requested by the Division.

12. Availability of Records: Except for data determined to be confidential under 33 USC Section 1318, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Treated and raw stormwater data shall not be considered confidential. Knowingly making any false statement on any such report or tampering with equipment to falsify data may result in the imposition of criminal penalties as provided for in 33 USC Section 1319 and KSA 65-170c.

13. Permit Modifications and Terminations: As provided by KAR 28-16-62, after notice and opportunity for a hearing, this permit may be modified, suspended or revoked or terminated in whole or in part during its term for cause as provided, but not limited to those set forth in KAR 28-16-62 and KAR 28-16-28b through g. The permittee shall furnish to the Director, within a reasonable amount of time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request, copies of all records required to be kept by this permit. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

14. Administrative, Civil and Criminal Liability: The permittee shall comply with all requirements of this permit. Nothing in this permit shall be construed to relieve the permittee from administrative, civil or criminal penalties for noncompliance as provided for in KSA 65-161 et seq., and 33 USC Section 1319.

15. Oil and Hazardous Substance Liability: Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under 33 USC Section 1321 or KSA 65-164 et seq. A permittee shall promptly notify the Division by telephone upon discovering crude oil or any petroleum derivative in its storm sewer system or stormwater control/treatment facilities.

16. Property Rights: The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights nor any infringements of or violation of federal, state or local laws or regulations.

17. Severability: The provisions of this permit are severable. If any provision of this permit or any circumstance is held invalid, the application of such provision to other circumstances and the remainder of the permit shall not be affected thereby.

18. Removal from Service: The permittee shall inform the Division at least three months before any control/treatment unit, or any other part of the control/treatment facility permitted by this permit is to be removed from service and shall make arrangements acceptable to the Division to decommission the facility or part of the facility being removed from service such that the public health and waters of the state are protected.

19. Duty to Reapply: A permit holder wishing to continue any activity regulated by this permit after the expiration date, must apply for a new permit at least 180 days prior to expiration of the permit.

APPENDIX A:
Public Education and Outreach (PE&O) BMP Table

APPENDIX A: Public Education and Outreach (PE&O) BMP Table

BMP ID	Summary	Measurable Goal	Points
PE&O - 1	Maintain a stormwater webpage for the permittee.	Maintain the webpage with up-to-date information with all links effective and valid information. Check all links and update website as necessary on a minimum monthly basis. The webpage must be available throughout the year once it is posted. In the initial year posted it must be available for a minimum of 3 months to qualify for the points. In subsequent calendar years the points may be claimed if the webpage has been maintained throughout the twelve months.	3 points may be claimed in the first year implemented, and 2 points may be claimed for each successive year the webpage is maintained available.
PE&O - 2	Distribute educational materials (either flyers, brochures, catalog mailings, handouts, or e-mails) addressing various pertinent stormwater public education topics.	Number of all flyers, brochures, catalog mailings, handouts, or e-mails distributed in a year shall be recorded and reported in each Annual Report. . Copies of the flyers, brochures, or e-mails shall be retained on file. Flyers, brochures, catalog mailings, handouts, and/or e-mails are to be distributed in at least two separate batches, ideally in separate seasons (either winter, spring, summer or fall)	2 points may be claimed in a year in which flyers, brochures, catalog mailings, handouts, or e-mails are distributed.
PE&O - 3	Provide either training or educational materials to permittee identified businesses at high risk of contributing to stormwater pollution. Such businesses can include, but are not limited to, food service, auto service, disaster response and janitorial services. The training or educational materials shall address best management practices they can employ to minimize or avoid adverse stormwater impacts due to their operations.	Training or educational materials must be provided, within the year, to at least five separate businesses if the population of the municipality is greater than 10,000, or three businesses if the population of the municipality is between 3,000 and 9,999, or two separate businesses if the population of the municipality is less than 3,000. There is no requirement to provide training to business in separate business categories, although it is allowed.	2 points may be claimed in any year in which the required amount of training or distribution of educational material occurs.
PE&O - 4	Apply notification, placard, covers/hatches with message, or stencil, on stormwater inlets to provide a message similar to "No Dumping – Drains to River"	Apply this notification on at least 10% of all known stormwater inlets in the MS4.	2 points may be claimed in years when at least 10% of all known inlets receive placards, covers/hatches with message, or stencils or in subsequent years when an additional 5% of all known stormwater inlets in the MS4 bear the message.

APPENDIX A: Public Education and Outreach (PE&O) BMP Table

PE&O - 5	Post the municipality's MS4 permit and SMP document on either the stormwater web page or the municipal webpage.	The two documents must be posted for at least six months of the year to claim one point.	1 point may be claimed for posting both documents each year
PE&O - 6	Provide either a stormwater telephone hotline or web based or text message method for public reporting of illicit discharges.	Respond to all reported complaints within 10 days and, if found valid, resolve, or establish a schedule for resolution within 20 days. Actual resolution may take more than 20 days, but the schedule for resolution must be finalized and the efforts to implement resolution must begin within 20 days following receipt of complaint. Document complaints and response/resolution process for all complaints received in the year. Resolution of an illicit discharge can include, but is not limited to; elimination of the discharge; on-site treatment to allow discharge to the MS4 (normally requires an NPDES permit); redirecting the discharge to a location that the discharge is not considered illicit, i.e., sanitary sewer or to holding tanks to allow the waste to be hauled off for appropriate treatment, reuse/recycle or disposal.	2 points may be claimed for each full year the hotline / reporting system is maintained and available. An additional point may be claimed for each illicit discharge resolved in the year up to a limit of 2 additional points per year. One point allowed per illicit discharge resolved.
PE&O - 7	Provide educational material annually to at least four groups, including each of the following types: Residents, Businesses/Institutions, Commercial entities/Developers, and Industrial facilities. The educational material may be provided as any of the following: ➢ Brochures ➢ Flyers ➢ E-mails ➢ Press release	Identify and educate at least 4 groups/entities from the listed types annually developing topics that are group specific and address activities and or pollutants of concern.	3 points may be claimed each year this BMP is implemented in compliance with the specified requirements.
PE&O - 8	Provide stormwater education for students at a school campus within K-12 (those grades present at the campus) within the permittee's jurisdiction or within 30 miles from this permit area. The training may be limited to the individual campus (local school buildings associated with a single address). This training does not need to be provided to the entire school system, e.g., USD. Alternately, funding stormwater BMP installations and/or field trips at the school campus will qualify.	In a single year, Provide or fund an educator or speaker that will reach at least 5% of the K-12 students as normally attend school in the selected school campus. Alternately, the funding of BMPs at the school campus may provide for any of the following: ➢ Installation of BMPs at the school ➢ stormwater related field trips ➢ water quality stream sampling activities ➢ construction of rain gardens on school property ➢ rain barrel workshops ➢ rain garden workshops	3 points may be claimed each year this BMP is implemented in compliance with the specified requirements (provide education and/or fund stormwater BMP installations at the school campus).

APPENDIX A: Public Education and Outreach (PE&O) BMP Table

PE&O - 9	1. Operate an information booth at a large public event, (such as a sports event, fair, or music festival) where at least an estimated 1,000 or more individuals attend. 2. Alternately, operate an information booth at multiple public events, (such as a sports event, fair, or music festival) where a cumulative estimated total of 3,000 or more individuals attend. 3. And finally, a single point can be claimed for operating an information both at a public event where at least an estimated 200 or more individuals attend.	Provide information about stormwater topics of current interest. All events shall have the booth staffed by the permittee for at least 50% of the days the event occurs.	2 points may be claimed each year this BMP is implemented in compliance with the specified requirements for alternative 1. (1,000 or more attendees) or alternative 2. (3,000 attendees). 1 point may be claimed each year this BMP is implemented in compliance with the specified requirements for alternative 3(200 attendees).
PE&O- 10	Provide either training or educational materials to Lawn/Turf care service entities addressing best management practices they can employ to minimize or avoid adverse stormwater impacts due to their operations.	Training or educational materials must be provided, within the year, to at least five lawn/turf care service entities or at least 20% of the lawn care service entities located in the municipality whichever is least.	2 points may be claimed in any year in which the required amount of training or distribution of educational material occurs.
PE&O-11	Adopt a public education program to reduce littering.	Install and/or maintain signs to discourage littering. Signs are to be located in areas where littering has been a problem.	1 point may be claimed for the year when signs are posted for six months or more, or 1 point may be claimed in subsequent years where the signs remain posted throughout the year.
PE&O -12	Create a stormwater information brochure to provide to the public at public meetings and/or hearings	Have multiple copies of the brochure available during at least 10 meetings or hearings open to the public during the year. Provide the brochures to the public at no charge.	1 point may be claimed in any year the brochures are made available at meetings and/or hearings as required.

APPENDIX A: Public Education and Outreach (PE&O) BMP Table

PE&O-13	Operate an adopt a highway program to utilize public volunteers to clean road right-of-way.	The volunteers shall clean at least a two-mile segment of road either within the permit area or adjacent to the permit area. Alternately multiple spots (roadways, parks, and waterways) which are cleaned and equate to a two-mile road clean-up can qualify for a point.	1 point may be claimed in any year a two-mile road segment is cleaned or alternately multiple spots are cleaned which equate to or exceed a two-mile road clean-up.
PE&O-14	Conduct a media campaign addressing various pertinent stormwater public education topics.	The media campaign shall occur during prime-time broadcasting. The date, time, estimated media exposure, and population value for each spot broadcast shall be documented.	2 points may be claimed in a year in which the media campaign meets the requirements
PE&O-15	Develop or participate in an ongoing social media program to share pertinent stormwater public education topics.	Publish or share social media content on the permittee's social media accounts at least six times per year. Record post topic, the number of impressions and engagement for each post. Include link to permittee's stormwater education website.	2 points can be claimed in a year which the required number of content is shared
PE&O-16	Operate an information booth at a public event or hold a public event which is intended to improve public understanding of issues related to water quality. The event may be associated with any environmental related issue including but not limited to an environmental expo, earth day, world wetlands day, International Day of Action for rivers, world fish migration day, world biodiversity day, world oceans day, world cleanup day, world water monitoring day, world rivers day, and America recycles day.	At least an estimated 800 or more individuals must attend the event. The booth must be staffed at least 50% of the time the event is open to the public.	2 points may be claimed each year this BMP is implemented in compliance with the specified requirements. Municipal staff from multiple permittees may staff the booth and claim points, for their municipality, for this BMP if their staff meet the 50% of the time staffing requirement.
PE&O- 17	Operate an adopt a street program to utilize public volunteers to clean street right-of-way.	The volunteers shall clean at least a two-mile segment of street, either a single street or multiple streets, either within the permit area or adjacent to the permit area.	1 point may be claimed in any year at least two miles of street right-of-way is cleaned by volunteers.

APPENDIX B:
Public Involvement/Participation (P I/P) BMP Table

APPENDIX B: Public Involvement/Participation (P I/P) BMP Table

BMP ID	Summary	Measurable Goal	Points
P I/P- 1	Hold a public hearing or public forum to notify the public about stormwater program activities and to solicit public comments regarding stormwater issues.	Provide public notice of the hearing/forum, invite local news media, either newspaper, radio, or TV, and document the hearing with attendance sign-in sheet and minutes of the hearing which include public comments and responses. Retain copies of the notices to public, invitations to attend, attendance sign-in sheets, and minutes.	2 points may be claimed each year this BMP is implemented in compliance with the specified requirements.
P I/P - 2	Establish a citizens advisory committee.	Host the citizens advisory committee meetings twice yearly and receive comments and guidance from the committee regarding the SMP. Retain on file copies of the attendance list and minutes of the meetings.	3 points may be claimed each year the citizens advisory committee holds at least two meetings within one year
P I/P - 3	Hold a park or stream bank clean-up events for public volunteers to aid municipal staff in removing trash, debris, or pollutant sources from the selected clean-up area.	Clean an area which must be equal to or greater than one acre or alternately at least 200 yards of streambank. Alternately, for municipalities with less than 500 population clean an area which must be equal to or greater than a quarter of an acre or alternately at least 100 feet of streambank.	3 points may be claimed each year this BMP is implemented in compliance with the specified requirements.
P I/P- 4	Train either citizen watch groups, homeowner associations (HOAs), or public service groups to recognize illicit discharge activities and communicate observations to appropriate municipal staff.	Provide training or distribute training materials to the citizen group participants at least once annually.	2 points may be claimed each year this BMP is implemented in compliance with the specified requirements.
P I/P - 5	Provide at least two events for residents to engage in cleanup activities and improve water quality in the municipality.	Provide at least two events in streams, streamside parks, areas adjacent to public waterways, and/or other green infrastructure/water resources. These events must be one of the following: Environmental restoration events, stream cleanups, tree plantings, or stream monitoring.	3 points may be claimed each year this BMP is implemented in compliance with the specified requirements.

APPENDIX B: Public Involvement/Participation (P I/P) BMP Table

P I/P - 6	Establish a program to encourage residents to install stormwater treatment best management practices on their property.	Encouragement can include funding, grants, and other financial incentives, trainings and or giveaways. Stormwater treatment BMPs can include rain barrels, rain gardens, native plantings, native trees, cisterns and vegetated swales. Record participation numbers annually.	2 points may be claimed each year this BMP is implemented in compliance with the specified requirements, with the addition of 1 additional point (for a total of 3 points in the year) each year that participation increases from the previous year.
P I/P- 7	Enact either an ordinance, a resolution, or other enforceable requirement that requires pet owners or their keepers to immediately and properly dispose of their pet's solid waste deposited at parks or rest areas owned by the permittee.	The ordinance or resolution or other enforceable measure shall be enacted, and signs posted informing the public of their obligation at the park. The installation of a pet waste bag dispenser in the public area qualifies as adequate signage.	1 point may be claimed for the initial and subsequent year the Measurable Goal requirements remain in effect.
P I/P - 8	Provide a monetary donation to a scholarship fund for students pursuing a degree in an environmental program which would qualify them to work in a field which can result in water pollution control.	A $500 contribution in a year is the minimum acceptable amount to achieve this goal. The donation must be made in the year the points are claimed.	2 points may be claimed each year this BMP goal is achieved.
P I/P - 9	Distribute stormwater educational materials to the public within this permit area. Alternately, the permittee may provide stormwater educational materials, e.g. brochures, flyers, or pamphlets addressing various stormwater topics. For this alternative these materials may be provided to other nearby municipalities within 30 miles from this permit area for distribution to the public.	The educational materials, for each topic, which are distributed or supplied must have a value of at least $50. Topics may be anything related to stormwater including but not limited to guidance on clean-up following flooding, discouraging littering, explaining and discouraging illicit discharges to the storm sewers, constructed BMPs for homeowners, area household hazardous waste receiving centers, and area recycling programs.	1 point may be claimed per topic addressed in compliance with the requirements, up to a total of 5 points/topics.
P I/P - 10	Establish a program to employ a high school or college age environmental interns in an environmental related program including but not limited to either the wastewater utility, stormwater utility, potable water utility or solid waste utility.	The intern must receive the same environmental related training a new full-time employee would receive, within the first six months of the full-time employee's employment, during their internship. The internship must last at least 8 weeks in the year when points are claimed.	2 points may be claimed each year this BMP goal is achieved per intern.

APPENDIX C:
Illicit Discharge Detection and Elimination (IDD&E) BMP Table

APPENDIX C: Illicit Discharge Detection and Elimination (IDD&E) BMP Table

BMP ID	Summary	Measurable Goal	Points
IDD&E - 1	Hold a public hearing or public forum to educate the public about illicit discharges and alternate acceptable methods of disposal or reuse of substances and/or materials.	Provide public notice of the hearing/forum, invite local news media (either newspaper, radio or TV), and document the hearing with attendance sign-in sheet and minutes of the hearing which include questions/comments from the attendees and answers/comments from the permittee staff. Retain copies of the notices to public, invitations to attend, attendance sign-in sheets, and minutes	2 points may be claimed for any year a hearing/forum is held.
IDD&E - 2	Implement a program to abandon failed or failing residential or commercial on-site wastewater treatment facilities. These on-site wastewater treatment systems such as septic tank – lateral systems or lagoon systems are then connected to the municipal wastewater collection system for treatment of wastewater at the municipal wastewater treatment plant. Alternately, upgrade or replace the failed system to restore performance.	Redirect the wastewater generated by the facility to the municipal wastewater treatment collection system for proper treatment and disposal. Alternately, upgrade or replace the failed system with improvements which meet or exceed the present code or local requirements.	3 points may be claimed for each abandoned system in the year it is abandoned, alternately for systems which are upgraded or replaced as per the requirements. And a total of 2 points may be claimed in the year upgrade or replacement is completed.
IDD&E - 3	Develop a spill response plan and, if appropriate, coordinate emergency response with other agencies or organizations.	The plan shall include, at a minimum, explanation of appropriate spill response activities for spills associated with vehicle accidents, at grade or above ground storage tanks, and vehicle fluids from mechanical equipment such as construction equipment, cars, or trucks. The written plan shall be maintained on file.	3 points may be claimed in the year initially implemented. 2 points may be claimed for each successive year the plan remains effective.
IDD&E - 4	Implement a program to evaluate MS4 outfalls to identify illicit discharges. Inspect at least 5% of the known MS4 outfalls during a calendar year and evaluate the ones which have dry weather discharges. Evaluate the water quality of the dry weather discharges to recognize non-stormwater contributions and trace the source of any illicit discharge.	When at least 5% of the known MS4 outfalls are inspected and for which at least one outfall was identified as discharging (entirely or partially) flow from an illicit discharge, the allotted points may be claimed in the year when the illicit discharge is eliminated. Document the MS4 outfalls inspected, the outfalls with dry weather discharges and the MS4 outfalls associated with illicit discharges.	1 point may be claimed in the year when a 5% of the known MS4 outfalls are finally inspected, and 2 additional points may be claimed in which illicit discharge(s), associated with this group of evaluated outfalls are detected and eliminated.

APPENDIX C: Illicit Discharge Detection and Elimination (IDD&E) BMP Table

IDD&E - 5	Distribute a letter (or flier) and/or e-mail along with a press release from a municipal official with the intent of reaching every resident and business in the MS4 permit area. The distributed documents shall provide information on how to avoid illicit discharges to the MS4, i.e., proper disposal methods for common substances or materials often discharged illicitly. Provide a link to the municipal website where applicable ordinances and disposal guidance are posted.	The letter (or flier) and/or e-mail along with the press release shall highlight the requirements for proper disposal of wastes and disposal methods. Copies of these documents shall be retained on file along with the distribution/mailing lists to document distribution to the target area (minimum MS4 permit area) to avoid illicit discharges to the MS4. Provide a link to the municipal website where applicable ordinances and disposal guidance are posted.	2 points may be claimed within the year these documents are distributed
IDD&E - 6	Inspect, by televising pipelines or direct visualization of open channel drainage, 2% of the MS4 system within the permit area all conducted within a 12-month period to aid in identifying illicit discharges as well as evaluate the condition of the storm sewer lines/drainage channels-ditches. If in a 12-month period 10% of the MS4 system is inspected a higher point value may be claimed.	Generate a summary report of the inspection including the number of linear feet televised, number of linear feet visually inspected, condition comments, illicit discharges identified and the results of efforts to eliminate illicit discharges, e.g., discharge line disconnected and redirected to the sanitary sewer or discharge practice terminated.	3 points may be claimed for inspection of 2% of the MS4 system, alternately if 10% of the MS4 system is inspected 5 points may be claimed.
IDD&E - 7	Implement a Household Hazardous Waste Collection Program (HHWCP) or document others have implemented such a program to provide such service to all property owners or residents located within the permit area.	Document the residents and property owners within the MS4 permit area were able to dispose of such wastes at the HHWCP during a calendar year. Retain this documentation on file.	3 points may be claimed for any year in which this BMP was implemented in compliance with the requirements.

APPENDIX C: Illicit Discharge Detection and Elimination (IDD&E) BMP Table

IDD&E - 8	Implement a program to increase the reliability of sanitary sewer pump stations above the minimum standard design requirements.	An upgraded pump station shall include the following: ➢ A dedicated on-site standby generator shall be installed (with automatic transfer switch) for use when main line power fails. ➢ A dialer system, or telemetry system, or connection to a SCADA system shall be installed to provide real time or nearly real time notification of failures at the pump station which can potentially lead to sanitary sewer overflow. ➢ The permittee shall purchase and maintain for immediate operation a trailer mounted motor driven sewage pump for use when the pump station fails to operate. The motor driven pump shall be sized to pump at a rate at least equal to the firm pumping capacity of any sanitary sewer pump station the permittee claims points for under this BMP. ➢ The pump station shall be modified to facilitate the connection of the trailer mounted pump discharge to the force main and convenient installation of the suction line from the trailer mounted pump into the wet well.	5 points may be claimed (for each pump station upgraded in compliance with this BMP) in the first year the improvements, as listed under measurable goals, are installed and ready for operation, 4 points may be claimed for (for each pump station upgraded in compliance with this BMP) each successive year the improvements, as listed under measurable goals, remain operational.
IDD&E - 9	Provide a contribution to area recycle programs or programs (such as household hazardous waste disposal facilities, e-cycle facilities, paper shred facilities, pharmaceutical disposal facilities etc.) designed to properly dispose of types of waste or materials which have previously been discarded to or adjacent to either the MS4, streams, or lakes within or adjacent to the permittee's permit area. The area program must be within 30 miles from this permit area.	The contributions may be made to programs which take tires, automotive fluids, batteries, or other wastes documented that are mentioned in this BMP summary. The contributions must total a minimum of $500 in the year ($100 for alternative lower population municipalities) which points are claimed. The contributions can be monetary or can be in the form of goods and/or services with an agreed specified value. Contributions may be made to area household hazardous waste programs, private recycle/reuse facilities or civic/volunteer organizations assisting in recycle.	2 points may be claimed each year this BMP goal is achieved.
IDD&E-10	Inspect, 5% of the MS4 system Stormwater inlets and/or outfalls within the permit area all conducted within a 12-month period to aid in identifying illicit discharges. If in a 12-month period 15% of the MS4 system inlets and/or outfalls are inspected a higher point value may be claimed.	Generate a summary report of the inspection including the number of inlets and/or outfalls visually inspected, condition comments, illicit discharges identified and the results of efforts to eliminate illicit discharges, e.g., discharge line disconnected and redirected to the sanitary sewer or discharge practice terminated.	3 points may be claimed for inspection of 2% of the MS4 system in the year the required percentage of inlets and/or outfalls are inspected. If 15% of the MS4 system is inspected 5 points may be claimed.

APPENDIX D:
Construction Site Stormwater Runoff Controls (CSSRC) BMP Table

APPENDIX D: Construction Site Stormwater Runoff Controls (CSSRC) BMP Table

BMP ID	BMP Summary	Measurable Goal	Points
CSSRC - 1	Implement a requirement for a Soil Erosion and Sediment Control(SESC) Plan for any land Disturbance sites which are either equal to or greater than 1 acre or for which there is construction activity disturbing less than one acre which is part of a larger common plan of development or sale that in total disturbs one acre or more.	Enact a regulatory ordinance, or other enforceable measure that requires an SESC Plan for all developments disturbing sites equal to or greater than 1 acre or for construction activity disturbing less than one acre which is part of a larger common plan of development or sale that in total disturbs one acre or more.	3 points may be claimed in the year the ordinance initially becomes effective. 2 points may be claimed for each successive year thereafter for which the ordinance remains effective.
CSSRC - 2	Develop and adopt a design manual for erosion and sediment control BMPs which are required to be used on sites disturbing sites equal to or greater than 1 acre or for construction activity disturbing less than one acre which is part of a larger common plan of development or sale that in total disturbs one acre or more.	Require implementation of BMPs in compliance with the design manual on all sites which meet the disturbed area standard as specified.in the BMP Summary.	3 points may be claimed in the year the manual is initially implemented. 2 points may be claimed for each successive year the manual remains effective.
CSSRC - 3	Provide access to at least one training class for contractors, developers or others involved with land disturbance projects which provides training on requirements for a Stormwater Pollution Prevention Plan (SWPPP) and implementation of appropriate BMPs.	This training class must address all local requirements for a SWPPP, requirements for implementation of BMPs and address the requirements for permits.	3 points may be claimed for the year in which the training class is held
CSSRC - 4	Develop a site plan review process which considers potential water quality impacts which may occur during construction as well as post construction impacts.	Review process must have written guidance for the reviewer. Issuance of a building permit or approval to start construction may not be provided until the site plan has successfully passed the review process either based on the initial site plan submittal or has been modified to comply with requirements identified during the review process. Measures must be included to enforce the installation of water quality BMPs included in the site plan.	3 points may be claimed in the year the review process is initially developed and implemented. 2 points may be claimed for each successive year the review process continues to be implemented.

APPENDIX D: Construction Site Stormwater Runoff Controls (CSSRC) BMP Table

CSSRC - 5	Establish effective requirements for construction sites to control wastes. Develop through ordinance or other enforceable means requirements for construction site Operators or owners. At a minimum control shall be imposed to prevent entry into the MS4 for the following wastes: ➢ discarded building materials ➢ concrete ➢ Truck washout chemicals ➢ litter, and ➢ sanitary waste	Enact ordinance or other effective means to achieve control of wastes at construction sites.	3 points may be claimed in the year of enactment. 2 points may be claimed for each successive year the method of effective control of construction site waste remains in effect.
CSSRC - 6	Develop written procedures for inspection of construction sites. Develop a Stormwater Construction Site Inspection Guide for use by municipal inspectors.	The procedures document must address the administrative aspects associated with required inspections of construction sites, the issuance of inspection reports, notices of violations, and enforcement actions. The Inspection Guide must provide inspectors guidance on how to conduct a construction site stormwater inspection, the required procedures, and guidance on acceptable conditions of various BMPs employed on such sites, enforcement actions and/or reference of cases for enforcement by other municipal staff, guidance on photo log of the inspection and inspection checklists for use by the inspector.	3 points may be claimed in the year of initial development. 2 points may be claimed for each successive year the written procedures and inspection guide continue to be utilized.
CSSRC - 7	Acquire or develop a software tracking system to track inspections and related tasks.	The tracking system must allow for scheduling and follow-up activities such as re-inspections, mailing notices or reports, etc.	1 point may be claimed for each year the software is utilized.

APPENDIX E:
Post-Construction Stormwater Management in New Development and Redevelopment Projects (PCSM) BMP Table

APPENDIX E: Post-Construction Stormwater Management in New Development and Redevelopment Projects (PCSM) BMP Table

BMP ID	BMP Summary	Measurable Goal	Points
PCSM - 1	Develop and adopt a custom design manual for Post-Construction Stormwater Management which specifies various structural BMPs which are required for new development and re-development construction sites which are greater than 1 acre or for which there is construction activity disturbing less than one acre which is part of a larger common plan of development or sale that in total disturbs one acre or more. Alternately, adopt and implement the APWA 5600 Stormwater Design Criteria and the MARC/APWA BMP Manual.	The custom design manual shall impose requirements to achieve at least one of the following standards: ➢ Capture, at least, the first 0.5 inches of precipitation on the development/re-development site and utilize methods to prevent discharge off-site, including but not limited to: • retain on-site • infiltrate • evaporate • transpire or • beneficially reuse ➢ Through implementation of appropriate BMP(s) reduce the peak stormwater flow rate to a value equal to or less than the rate which would be experienced on the site prior to the development/re-development project based upon modeling a standard storm event, e.g. 1.0 inch – 6-hour event assuming saturated soil conditions. ➢ Other sizing or detention standards generally accepted by design engineers as adequate for the permittee's local. As an alternative to a custom design manual the APWA 5600 Stormwater Design Criteria and the MARC/APWA BMP Manual may be adopted and implemented. Measures must be included to enforce the installation of the various structural BMPs required.	4 points may be claimed in the year of initial implementation of a custom design manual. 6 points may be claimed in the year of initial implementation of the APWA 5600 stormwater design criteria and the MARC/APWA BMP Manual, 3 points may be claimed for each successive year compliance with the custom design manual is implemented. 5 points may be claimed in each successive year the implementation of the APWA 5600 stormwater design criteria and the MARC/APWA BMP Manual is implemented.
PCSM - 2	Develop a list of post-construction structural or non-structural BMPs which are required to be incorporated in any development/re-development project. The list must include guidance regarding the BMPs which must be incorporated in various projects as determined appropriate by the permittee. The list is to be provided to entities involved with the design of projects prior to site plan review by the permittee.	Development and implementation of the list and guidance is necessary to claim points in the first year. The list of required BMPs must be enforceable through ordinance or other means.	3 points may be claimed in the year of initial implementation. 2 points may be claimed for each successive year the list is maintained and implemented.

APPENDIX E: Post-Construction Stormwater Management in New Development and Redevelopment Projects (PCSM) BMP Table

PCSM - 3	Develop and implement a program to ensure adequate long-term cleaning, operation and maintenance of all municipally owned or operated post-construction structural stormwater BMP facilities. The program shall address several different types of these BMP systems. The systems, which are addressed, shall include any type of post-construction structural BMP system, contained in the MS4. These shall include, if so present, at a minimum the following: • detention ponds • retention ponds • grass swales • pervious paving systems • wetlands • vegetative filter strips • manufactured stormwater treatment devices (swirl separators, screens, etc.) • drop inlet-catch basin	The program shall be detailed in a written document and made available to all pertinent maintenance staff.	3 points may be claimed in the year of initial implementation. 2 points may be claimed for each successive year the program is maintained and utilized.
PCSM - 4	Develop a master plan or comprehensive development plan which establishes zoning and development standards with establishment of both structural and non-structural BMPs intended to avoid or minimize adverse water quality impacts post-construction.	Runoff problems can be addressed efficiently with sound planning procedures. This master or comprehensive development plan must include, a zoning ordinance, a stream buffer ordinance, site plan development requirements which include minimizing the increase of impervious surfaces and maximization/preservation of open space. The plan must also impose requirements for new development or re-development projects to utilize stormwater retention or detention BMPs and vegetative BMPs (such as grassy swales, filter strips, artificial wetlands, and rain gardens).	5 points may be claimed in the year all aspects are initially implemented. 2 points may be claimed for each successive year all aspects continue to be implemented.
PCSM - 5	Develop and implement a program for inspection of permittee owned structural BMPs which includes implementation of needed maintenance to ensure long-term operation of the BMPs	The program shall require inspection of at least 10% of the structural BMPs on an annual basis. Identified maintenance activities shall be completed: 1. in the same year of inspection or 2. completed as dictated by the permittee's maintenance/O&M plan 3. or a written plan for completion of the necessary maintenance shall be completed in the same year of inspection with the objective for completion of the maintenance activity within 18 months.	3 points may be claimed in the year the program is initially developed and implemented. 2 points may be claimed for each successive year the program continues to be implemented.

APPENDIX E: Post-Construction Stormwater Management in New Development and Redevelopment Projects (PCSM) BMP Table

PCSM - 6	Develop and implement a program for inspection of known privately owned structural BMPs which includes providing the owner of the BMPs an inspection report which specifies needed maintenance to ensure long-term operation of the BMPs.	The program shall require inspection of at least 10% of the known privately owned structural BMPs on an annual basis. Identified maintenance activities shall be completed in the same year of inspection or a written plan for completion of the necessary maintenance shall be completed in the same year of inspection with the objective for completion of the maintenance activity within 18 months.	3 points may be claimed in the year the program is initially developed and implemented. 2 points may be claimed for each successive year the program continues to be implemented.
PCSM - 7	Enact either an ordinance, a resolution, or other enforceable requirement which requires the installation of pervious surfaces on property.	The ordinance or resolution or other enforceable requirement must specify when installation of impervious surfaces is not acceptable and what allowable pervious surfaces can be installed in lieu of impervious surfaces.	3 points may be claimed in the year of initial implementation. 2 points may be claimed for each successive year the ordinance, resolution, or other enforceable requirement is implemented.
PCSM - 8	Implement a program to encourage residential owners to install stormwater BMPs, including but not limited to, native trees, native flower gardens, rain gardens, rain barrels, pervious surfaces, and vegetated swales.	A program which results in installation of such BMPs on 1% of the residential parcels in a year will allow two points to be claimed for that year. In a year when installation of such BMPs on 5% of the residential parcels occurs, a larger number of points may be claimed.	2 points may be claimed in a single year BMPs are installed on 1% of residential parcels. 4 points may be claimed in a single year BMPs are installed on 5% of residential parcels.

APPENDIX F:
Pollution Prevention/Good Housekeeping for Municipal Operations (PP/GH) BMP Table

APPENDIX F: Pollution Prevention/Good Housekeeping for Municipal Operations (PP/GH) BMP Table

BMP ID	BMP Summary	Measurable Goal	Points
PP/GH - 1	Install a screening device or method at a single municipal storm sewer outfall or on the storm sewer line immediately upstream of the outfall to reduce the discharge of floatables or other objects to receiving waters.	The screening device or method is required to remove objects that exceed at least 1½ inches in size. The device or method must be capable of continuous operation during stormwater discharges. An emergency bypass or overflow line can be included to avoid surcharging/flooding in the event the screening device or method fails to operate properly at any time. A log of the material captured and prevented from discharge to the receiving water shall be maintained.	3 points may be claimed in the year the screening device or method is initially implemented. 2 points may be claimed for each successive year the screening device or method continues to be implemented.
PP/GH - 2	Implement a recycle and proper waste disposal program for municipal staff to reduce potential for litter, to recycle waste oil, batteries, glass containers, plastic containers, and paper products.	A log of the materials directed to recycle shall be maintained. Entries in the log shall record either weight or volume of recycle materials removed from the containers and transported to the recycle facility as well as the date of transport.	3 points may be claimed in the initial year the recycle program is implemented. 2 points may be claimed for each year the recycle program continues to be implemented. Recycle containers shall be available for staff use all days of the year in which points are claimed.
PP/GH - 3	Develop a guidance document for municipal staff or third-party contractors which apply pesticides. The guidance shall require municipal staff who apply restricted use pesticides to have a commercial applicator certification from the Kansas Department of Agriculture if required by that Department.	Require staff which apply pesticides to use such pesticides in compliance with the guidance document. The guidance document must require use of pesticides in compliance with the label instructions.	2 points may be claimed in the year the guidance document is initially implemented. 1 point may be claimed for each successive year the guidance document continues to be implemented.

APPENDIX F: Pollution Prevention/Good Housekeeping for Municipal Operations (PP/GH) BMP Table

PP/GH - 4	Implement a program, with guidance to municipal staff or third-party contractors, to ensure any municipal vehicle or other mechanical equipment washing is conducted in a manner which ensures the wash water is disposed of in the sanitary sewer or otherwise receives proper treatment prior to discharge to the environment.	Maintain proper wash facilities for municipal staff to wash vehicles and/or equipment or implement a program which includes guidance to municipal staff to take vehicles and/or equipment to commercial wash facilities, either of which ensures the wash water is conveyed to the sanitary sewer, or otherwise receives proper treatment prior to discharge to the environment, and not discharged untreated to the MS4 or directly to the environment.	2 points may be claimed in the year the guidance document is finalized and implemented. 1 point may be claimed for each successive year the guidance document continues to be implemented.
PP/GH - 5	Implement a program for street sweeping in which the street sweepings are collected and disposed of properly or recycled/reused if possible.	All paved streets which can be swept shall be listed in the schedule for street sweeping. A log shall be maintained listing the street segments which are swept and, dates of sweeping and where the street sweepings are disposed or where the material was sent to be recycled and/or reused. Alternatively, for municipalities with less than 500 population street sweeping can be limited to sweeping the gutters. The log which must be maintained need only indicate the street segments which were swept in the year and confirm the sweepings were properly disposed or recycled and/or reused	3 points may be claimed in the year at least 10% of the listed streets are swept and street sweeping equipment is purchased. 2 points may be claimed for each year at least 10% of the listed streets are swept or alternately for municipalities with less than 500 population if at least 5% of the street gutters are swept. 1 point may be claimed in years when street sweeping equipment is purchased for use by the permittee.
PP/GH - 6	Develop an employee training program to ensure permittee's staff understand what actions they can take in the workplace to minimize stormwater pollution.	Provide guidance documents in the form of either fact sheets, flyers or e-mails to staff to coach them in appropriate actions they can take while working to minimize stormwater pollution. Alternately, provide in-person training or videos with sign-in-sheets for signature documentation of personal or video training. Retain copies of the guidance documents and/or sign-in-sheets. A log of when the guidance was distributed, or training was provided to staff should be maintained. Provide appropriate guidance and/or training to staff a minimum of twice per year.	In years when guidance documents or training (in-person or video) are provided on at least two separate dates 1 point may be claimed.

APPENDIX F: Pollution Prevention/Good Housekeeping for Municipal Operations (PP/GH) BMP Table

PP/GH - 7	Implement a program to inspect stormwater inlets to identify illicit discharges and clean drop inlets of accumulated debris.	Inspect at least 5% of all inlets annually. Additionally, if 10% of all inlets are inspected in a year an additional point may be claimed. For any inlets which have evidence of dumped paint, oil or other substances which are considered illicit discharges follow up with efforts to educate individuals near the impacted inlet about illicit discharges. For inlets which have any accumulation of debris, remove the debris for proper disposal.	1 point may be claimed in years when staff inspect at least 5% of all stormwater inlets and remove accumulated debris. 2 points may be claimed in years when staff inspect at least 10% of all stormwater inlets and remove accumulated debris.
PP/GH - 8	Make updated online storm sewer map accessible to the public.	Map shall cover the entire MS4 within the permit area and include all the MS4 lines both pipe and open drainage (i.e. ditches) and shall also illustrate all impaired waterways (i.e. 303(d) listed and TMDL listed streams/rivers) with an indication of the listed impairment.	3 points may be claimed in the first year if the map was posted for at least 6 months. 2 points may be claimed for each year thereafter for which the map remains posted.
PP/GH - 9	Identify permittee owned facilities, open space and buildings that can be retrofitted for stormwater BMPs.	Retrofit projects can include green infrastructure, catchment improvements, Pollutant of Concern targeted BMPs, and native plant restoration projects.	1 point may be claimed in the first year for each site retrofitted (up to two sites/points maximum. 2 points may be claimed for each year at least two sites continue to operate all of the retrofitted BMPs which were installed.
PP/GH-10	Install and operate a constructed wetland at a municipal facility such as at a parking lot, shop, maintenance facility, rest area or any other industrial/commercial type facility, e.g. recycling facility, transfer station, kennel, or airport.	The wetland shall include a water surface area of at least 1/4 acre or equivalent submerged surface area for submerged wetlands.	2 points may be claimed for the year in which the wetland is constructed. 1 point may be claimed for each subsequent year the wetland remains in operation.

APPENDIX F: Pollution Prevention/Good Housekeeping for Municipal Operations (PP/GH) BMP Table

PP/GH-11	Install a canopy or other covered area for load-out of salt or other de-icing chemicals where such de-icing materials are stored either within the permit area or a storage facility located within 30 miles of this permit area. The canopy or other covered area for load-out of salt or other de-icing materials may be installed at a facility owned by the permittee or at a facility owned by an entity the permittee contracts with as long as the facility is located within 30 miles of this permit area.	The canopy or covered area shall be large enough to allow normal load-out and cleanup of spilled de-icing materials, without mixing with precipitation and resulting in contaminated runoff from the site, during and immediately following load out operations	3 points may be claimed for the year in which the canopy/covered area is constructed. 2 points may be claimed for each subsequent year the canopy/covered area remains in operation.
PP/GH-12	Install a stormwater treatment system for capture of either trash, sediment, or debris. Systems may include any proprietary stormwater treatment system including CDS, Hancor, Enviro 21, etc. or similar custom designed systems. A system can be installed at a single municipal storm sewer outfall or on the storm sewer line immediately upstream of the outfall to reduce the discharge of floatables or other objects to receiving waters. Alternately, a system may be installed on a stormwater line to provide treatment at problem locations.	The treatment system or method must be capable of continuous operation during stormwater discharges. An emergency bypass or overflow line can be included to avoid surcharging/flooding in the event the system is overloaded or fails to operate properly at any time. A log of the material (noting either volume or weight) captured and prevented from discharge to the receiving water shall be maintained.	3 points may be claimed in the year the treatment system is initially implemented. 2 points may be claimed for each successive year the treatment system continues to be implemented.

APPENDIX G:
Total Maximum Daily Load (TMDL) BMP Table

APPENDIX G: Total Maximum Daily Load (TMDL) BMP Table

BMP ID	BMP Summary	Measurable Goal	Points
TMDL - 1	Install pet waste stations which include a glove/bag dispenser with signage and waste can to encourage pet waste disposal at either parks, trails, rest areas or other public lands owned by the permittee.	At least one pet waste station shall be installed at the selected park, trail, rest area or other public land. The station(s) shall include signage which encourages proper pet waste disposal/cleanup and a waste can.	1 point may be claimed for the year in which the Measurable Goal requirements are enacted. 1 point may be claimed for each subsequent year the Measurable Goal requirements remain in effect.
TMDL - 2	Establish a program to encourage installation of residential rain gardens.	Provide public education on rain gardens and design guidance for the installation of residential rain gardens. The rain gardens must have a minimum area of 20 square feet. The installation of rain gardens on five various residential parcels shall qualify the permittee to claim points for this BMP.	3 points may be claimed for the year in which five or more residential parcels install rain gardens and initiate operation. 2 points may be claimed for each subsequent year at least five or more residential parcels have rain gardens remain in operation.
TMDL - 3	Install and operate a constructed wetland.	The wetland shall include a water surface area of at least one acre or equivalent submerged surface area for submerged wetlands.	3 points may be claimed for the year the wetland is constructed. 2 points may be claimed for each subsequent year the wetland remains in operation.
TMDL - 4	Enact a stream buffer ordinance, resolution, or other enforceable requirement to impose stream buffer standards.	The enactment of stream buffer standards must include enforcement capability. Consider use of the EPA stream buffer model ordinance or similar such requirement.	3 points may be claimed for the year in which the ordinance, resolution or other enforceable requirement is enacted. 2 points may be claimed for each subsequent year it remains in effect.

APPENDIX G: Total Maximum Daily Load (TMDL) BMP Table

TMDL - 5	Develop a pet waste brochure or flyer document to educate the public about animal waste contamination of stormwater. The document encourages pet owners to pick up their pet's waste. Alternately, post the document on social media or the municipal website.	The brochures or flyers are to be posted in various public buildings and distributed to the public throughout the year. In the year the number of documents shall equal or exceed the most recent U.S. Census Bureau decennial housing units value for the permit area. The applicable U.S. Census housing units value shall be documented, and the number of documents distributed shall also be documented. This information and copies of the documents shall be retained on file. Documents posted to social media or the website shall have the page copied and printed to retain on file.	1 point may be claimed in a year in which the required number of brochures and/or flyers are distributed, documents posted on website(s) shall be posted for at least six months in the year. Documents posted on social media shall be posted six times within the year points are claimed.
TMDL - 6	Distribute "Only Rain Down the Drain" door hangers or similar document.	Provide in portions of the permit area with suspected illicit discharges. Recipients of the documents and copies of the documents shall be retained on file.	2 points may be claimed in a year in which the required number of hangers or similar documents are distributed or Alternately, the document may be posted to social media (at least three times in the year) or posted on the municipal website for a minimum of three months in the year to qualify for points.
TMDL - 7	Inspect 10% of all known MS4 outfalls for dry weather discharges either annually or twice per year to identify potential illicit discharges.	Complete inspection of all known MS4 outfalls either annually or twice per year during dry weather periods. If dry weather discharge is found follow-up with investigation to determine if a portion or all the discharge is illicit. Document the findings and initiate efforts to eliminate any identified illicit discharges.	3 points may be claimed for annual inspection as required by this BMP. 5 points may be claimed for these inspections completed twice in a year but they must be seasonal (winter, spring, summer, and fall). If an illicit discharge is detected and eliminated. 2 additional points may be claimed either in the year detected or in the year the illicit discharge is eliminated.

TMDL - 8	Implement an Alternative Stormwater Offsite Pollution Reduction Program.	This program will include installation of BMPs in alternative locations, including outside the Permit Area, within the watershed shared by urban entities or urban and non-urban entities. The alternative stormwater offsite pollution reduction program shall be developed with watershed interests, such as other communities, Watershed Restoration and Protection Strategy (WRAPS) groups and Conservation Districts lying outside the Permit Area for the joint purpose of reducing pollutant loads generated from urban and non-urban lands within the shared watershed. Candidate offsite locations and practices will be consistent with implementing existing watershed plans that identify specific urban and non-urban (such as agricultural) BMP types and locations to achieve TMDLs reductions. The Alternative Stormwater Offsite Pollution Reduction Program shall be subject to KDHE approval and approved by KDHE prior to incorporation into the permittee's SMP.	5 points may be claimed in the year KDHE approves the program. 4 points may be claimed for each subsequent year it remains in effect.
TMDL - 9	Implement a program to collect and properly dispose of litter, on four separate occasions per calendar year, within areas where littering has been identified as a problem. Such areas may include municipal parks, trails, rest areas, or other public lands owned by the permittee.	The four litter collection efforts should, but are not required to, occur seasonally, i.e., winter, spring, summer and fall. If it is unreasonable to collect litter in any season the required four collection efforts may occur in either three seasons or in a minimum of two seasons.	2 points may be claimed for any year in which four collection efforts have occurred in compliance with the requirements of this BMP.
TMDL -10	Establish a program to encourage Rainwater Harvesting.	Provide public education on rainwater harvesting and design guidance for the installation of rain barrels, cisterns, raingardens, and other rainwater harvesting devices. When rain barrels are utilized they must be a minimum size of 50 gallons. When raingardens are utilized they must be a minimum of 20 square feet. A rain harvesting system on a commercial setting must have adequate capacity to hold the runoff from the impervious surface for which it is designed to collect on the commercial parcel equal to that generated by a 0.1-inch rainfall event. The installation of rain barrels or rain gardens on five residential lots, or the installation of one rain harvesting system in a commercial setting shall qualify the permittee to claim points for this BMP.	3 points may be claimed for any year in which 5 or more residential barrel systems, or one commercial cistern is constructed and operational. 2 points may be claimed in the year that the program is established. 1 point may be claimed in subsequent years the program is maintained.

APPENDIX G: Total Maximum Daily Load (TMDL) BMP Table

TMDL -11	Construct and maintain a structural BMP to reduce loadings of sediment and nutrients, including bioretention, detention basins, porous pavement, retention ponds, media filters and any composite treatment trains of multiple BMPs	A construction project installing a structural BMP must be completed prior to awarding of points. Any individual project will be awarded points scaled on the basis of the extent of the contributing area that the BMP will control. The permittee will document maintenance of the constructed BMP in subsequent years to continue to be awarded points.	4 points may be claimed for any year in which a structural BMP is completed for an area exceeding one acre. 3 points may be claimed for any year in which a structural BMP is completed for an area under one acre. 1 bonus point may be awarded for a composite BMP project. 2 points may be awarded in subsequent years for ongoing maintenance of the BMPs.
TMDL -12	Construct a stream bank stabilization project.	Install a minimum of 100 feet of bank stabilization at a site(s) with a history of erosion. The sites may be on the same stream or on different streams.	3 points may be claimed for the year in which the required minimum amount of stream bank stabilization is installed. 2 points may be claimed for each subsequent year it remains in effect.

ATTACHMENT A

Stormwater Pollution Prevention Plan Requirements and Guidelines

The Stormwater Pollution Prevention (SWP2) plan shall be specific to the industrial activities and site characteristics occurring at the location described in this permit. The permittee shall fully implement the provisions of the SWP2 plan required under this permit as a condition of this permit.

The purpose of the SWP2 plan is to ensure the design, implementation, management, and maintenance of Best Management Practices (BMPs) in order to reduce the amount of pollutants in stormwater discharges associated with the industrial activities at the facility. The SWP2 plan shall evaluate BMPs from each of three major classes: managerial/administrative; structural controls and non-structural controls.

As guidance, the permittee shall evaluate, select, install, utilize, operate and maintain the BMPs in accordance with best professional judgment, generally accepted and scientifically defensible guidance, and the concepts and methods described in Environmental Protection Agency (EPA) document number EPA 833-B-09-002, entitled ***Developing Your Stormwater Pollution Prevention Plan,*** *a Guide for Industrial Operators*, dated March 2021[a] and the *U.S. EPA National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities (MSGP)*; as modified effective September 29, 2021, and subsequent modifications.

The SWP2 plan and any amendments shall be developed by an individual knowledgeable in stormwater management and control and familiar with the site characteristics of the facility. Due to technical and site-specific requirements in developing a SWP2 plan, KDHE highly encourages and recommends that the SWP2 plan and any amendments be prepared by, or under the supervision of a Kansas licensed professional engineer. The SWP2 plan shall be reviewed and re-certified for compliance with accepted standards for stormwater pollution prevention at least once every five years. If KDHE determines the SWP2 plan to be inadequate KDHE, reserves the right to require the permittee to obtain the services of a qualified consultant to correct any deficiencies in the SWP2 plan. The SWP2 plan shall contain, at a minimum, the following items:

1. Pollution Prevention Team - Specific individuals or positions shall be identified within the facility organization as members of a Stormwater Pollution Prevention Team who are responsible for developing, implementing, maintaining and revising the SWP2 plan. Each member's responsibilities shall be clearly identified in the SWP2 plan. The activities and responsibilities of the team shall address all aspects of the facility's SWP2 plan.

2. Description of Potential Pollutant Sources - pollutant sources which may reasonably be expected to add significant amounts of pollutants to the stormwater discharge shall be described. The description shall include, at a minimum:
   a. Site Map - a site map identifying the following: the outline of drainage area(s) for each stormwater outfall; the location of significant materials exposed to precipitation; storage tanks; scrap yards and general refuse areas; fuel storage and distribution areas; vehicle and equipment maintenance and storage areas; loading/unloading areas; waste treatment, storage or disposal areas; short and long term material storage areas (including but not limited to: supplies, construction materials, plant equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizers, and pesticides); landfills; construction sites; stock piles; major spills or leaks; surface water bodies and existing structural control measures to reduce pollutants in stormwater runoff (such as bermed areas, grassy swales, etc.).
   b. Inventory of Exposed Materials - a narrative description of significant materials handled, treated, stored, leaked, spilled or disposed of in a manner to allow exposure to stormwater within the period starting three years prior to the date of this permit; existing structural and nonstructural control measures to reduce pollutants in stormwater runoff; and any treatment the stormwater receives. A list of significant spills and leaks of toxic/hazardous materials in exposed areas shall be maintained and kept updated.
   c. Sampling Data - a summary of existing sampling data, if available.
   d. Risk Identification and Summary of Potential Pollutant Sources - A narrative description of the potential pollutant sources and pollutant parameter of concern shall be identified.

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[a] The EPA Manual entitled ***Developing Your Stormwater Pollution Prevention Plan,*** *a Guide for Industrial Operators*, dated March 2021; and the *U.S. EPA National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities (MSGP)*; as modified effective September 29, 2021 are available online at: https://www.epa.gov/npdes/industrial-stormwater-guidance or the KDHE website: https://www.kdhe.ks.gov/756/Industrial-Programs-Section-Stormwater-P .

3. Measures and Controls - A description of stormwater management controls appropriate for the facility which addresses the following minimum components, including a schedule for implementing such controls to the extent practical:
   a. Good housekeeping requiring the maintenance of areas in a clean, orderly manner including handling and storage areas (exposed to precipitation) for raw metals, scrap metals, fuels, paints and other process areas.
   b. Preventive Maintenance - Including timely inspection and maintenance of stormwater management devices, like oil water separators, catch basins, etc.
   c. Spill Prevention and Response Procedures - Appropriate material handling procedure, storage requirements, use of equipment such as diversion valves, and procedures for cleaning up spills should be identified. Availability of the necessary equipment to implement a clean-up should be addressed. The following areas should be addressed:
      (1) Metal fabrication and finishing areas - include measures for maintaining clean, dry, orderly conditions and use of dry clean-up techniques;
      (2) Receiving, Unloading and Storage Areas and Raw Material Storage Areas - include measures to prevent spills & leaks; easy access for spill clean-up; quick and correct identification of materials; and train employees on clean-up techniques.
      (3) Storage of Equipment - include procedures for proper clean-up and/or covering of equipment before storing outdoors.
      (4) Storage of Metal Working Fluids - measures to identify proper controls.
      (5) Cleaners and Rinse Water - include measures to control spills, build-up and disbursement of sand from sand blasting, and use of less toxic cleaners.
      (6) Lubricating Oils and Hydraulic Fluids - include procedures for using detecting and control devices to reduce, prevent, and contain leaks and overflows.
      (7) Chemical Storage Areas - include a program to inspect containers and identify proper disposal and spill controls to prevent stormwater contamination.
   d. Inspections: Identification of qualified facility personnel to inspect, at appropriate intervals, designated storage areas for raw metal, finished product, materials and chemicals, recycling, equipment, paint, fueling and maintenance; and loading, unloading, and waste management areas. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained on-site for at least three years after the date of the inspection.
   e. Employee Training: Employee training programs to inform personnel responsible for implementing activities identified in the SWP2 plan or otherwise responsible for stormwater management, at all levels of responsibility, of the components and goals of the SWP2 plan. The SWP2 plan shall provide for training existing and new staff.
   f. Record keeping and Internal Reporting Procedures: A log, along with other information, needs to be developed and maintained to document a description of incidents (i.e., spills or other discharges) that may impact the quality and quantity of stormwater discharges. Reporting procedures, inspections and maintenance activities shall be developed and included in the SWP2 plan.
   g. Non-stormwater Discharges - The SWP2 plan must identify all unauthorized, non-stormwater (dry weather) discharges directed to surface or groundwater. KDHE shall be notified of all unauthorized discharge(s) within 5 days, and identify and ensure the implementation of appropriate pollution prevention measures for the dry weather flow component(s) of the discharge. A list of authorized non-stormwater discharges is contained in the *Kansas Water Pollution Control (KWPC) General Permit for Stormwater Runoff from Industrial Activities*[b].
   h. Sediment and Erosion Control: Measures to minimize erosion in areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion. At a minimum consider structural, vegetative, and/or stabilization measures to limit erosion. Must include measures to minimize erosion related to the high volume of traffic from heavy equipment for delivery to and from the facility and for equipment operating at the facility on a daily basis such as forklifts, cranes etc.
   i. Management of Runoff: Describe existing and/or proposed stormwater management practices (practices other than those which control the generation or source(s) of pollutants) to divert, infiltrate, reuse or otherwise manage stormwater runoff in a manner that reduces pollutants in stormwater discharges from the site. The pollutant sources at the facility identified in Item 2 above, Description of Potential Pollutant Sources, with potential to contribute pollutants to stormwater discharges associated with industrial activity shall be considered when determining reasonable and appropriate measures to implement.

[b] The *KWPC General Permit for Stormwater Runoff from Industrial Activities* issued November 1, 2021 is available online at: https://www.kdhe.ks.gov/DocumentCenter/View/23383/2021-11-01-SW-Ind-GP-Packet-PDF?bidId=

4. Comprehensive Site Compliance Evaluation - Qualified personnel shall conduct site compliance evaluations at least once a year. Such evaluations shall provide for:
   a. Visual inspection of areas contributing to a stormwater discharge associated with industrial activity for evidence of, or the potential for, pollutants entering the drainage system. Evaluation of measures to reduce pollutant loadings to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. A visual evaluation of equipment needed to implement the plan, such as spill response equipment and containment drums, shall be made to determine it is functioning properly and drums are not corroded.
   b. A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the SWP2 plan, and any actions taken shall be made and retained as part of the SWP2 plan.
   c. The report shall include resolution to any incident of non-compliance determined from the comprehensive site evaluation within 90 days.

   If the comprehensive site evaluation does not identify any incidents of non-compliance, the report shall include a statement that the facility is in compliance with the SWP2 plan and the conditions of this permit.

5. Monitoring and Record Keeping Requirements.
   a. Visual Examination of Stormwater Quality: The permittee shall periodically perform and document a visual examination of a stormwater discharge associated with industrial activity from each identified stormwater outfall. Visual examination reports shall be maintained on-site and be made available for KDHE & EPA inspection upon request. Each report shall include the date and time, name of the person performing examination, nature of discharge (runoff or snow melt), visual quality of the discharge (i.e., color, odor, clarity, floating solids, suspended solids, foam, oil sheen, and other indicators of stormwater pollution) and probable sources of any observed contamination.
   b. Records of all stormwater monitoring data[c], unless otherwise indicated in this permit, shall be kept on file for three (3) years.

6. The SWP2 plan shall be re-evaluated and modified in a timely manner, but in no case more than 90 days after:
   a. A change in design, construction, operation or maintenance that has a significant effect on the potential for the discharge of pollutants to the waters of the State, or
   b. the permittee's inspections (including the regular comprehensive site compliance evaluation required herein) indicate deficiencies in the SWP2 plan or any BMP; or
   c. a visual inspection of contributing areas or a visual inspection of the stormwater discharges or monitoring of the stormwater discharges indicate the plan appears to be ineffective in eliminating or significantly minimizing pollutants from sources identified in the plan.
   d. Written notification from KDHE or EPA determining the site best management practices are or will not be effective in eliminating or minimizing pollutants in the stormwater discharges.

[c] For sampling methods and procedures please refer to *Industrial Stormwater Monitoring and Sampling Guide*, EPA 832-B-09-003, April 2021 Final Draft available online at: https://www.epa.gov/sites/production/files/2015-11/documents/msgp_monitoring_guide.pdf

ATTACHMENT B

No Exposure Checklist

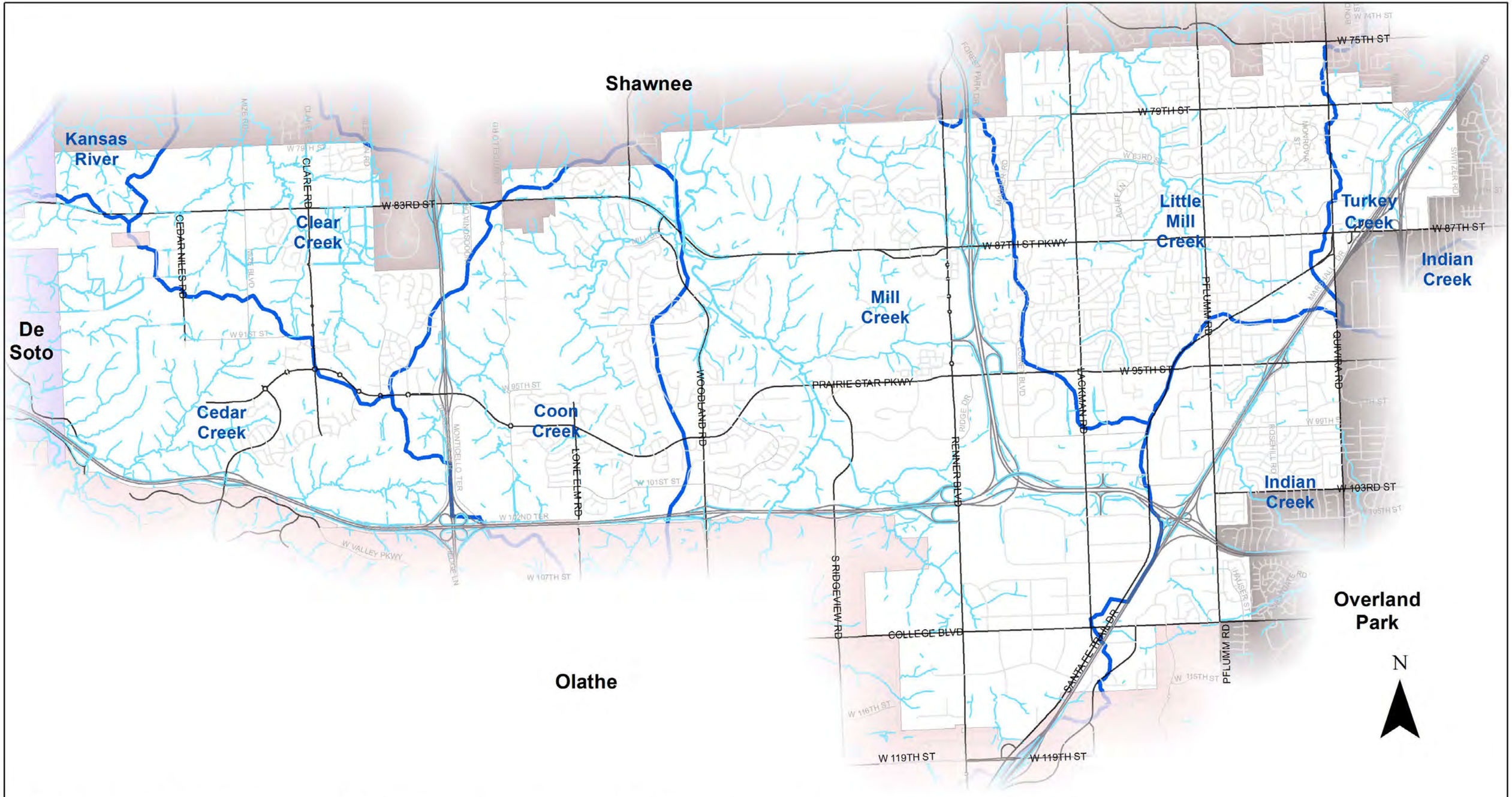
Are any of the following materials or activities exposed to stormwater, now or in the foreseeable future?

1. Using, storing, or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to stormwater
2. Materials or residuals on the ground or in stormwater inlets from spills/leaks
3. Materials or products from past industrial activities
4. Material handling equipment (except adequately maintained vehicles)
5. Materials or products during loading/unloading or transporting activities
6. Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants
7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks and similar containers
8. Materials or products handled/stored on roads owned or maintained by the discharger
9. Waste material (except waste in covered, non-leaking containers [e.g. dumpsters])
10. Application or disposal of process wastewater (unless otherwise permitted)
11. Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater outflow

If you answer "Yes" to any of these questions, you are no longer eligible for a "No Exposure" exclusion and need to prepare a Stormwater Pollution Prevention (SWP2) plan.

Appendix B

MAP OF PERMIT AREA



City of Lenexa, KS Stormwater System Map

Legend

- Rivers And Streams
- Watersheds

0 0.5 1 Miles

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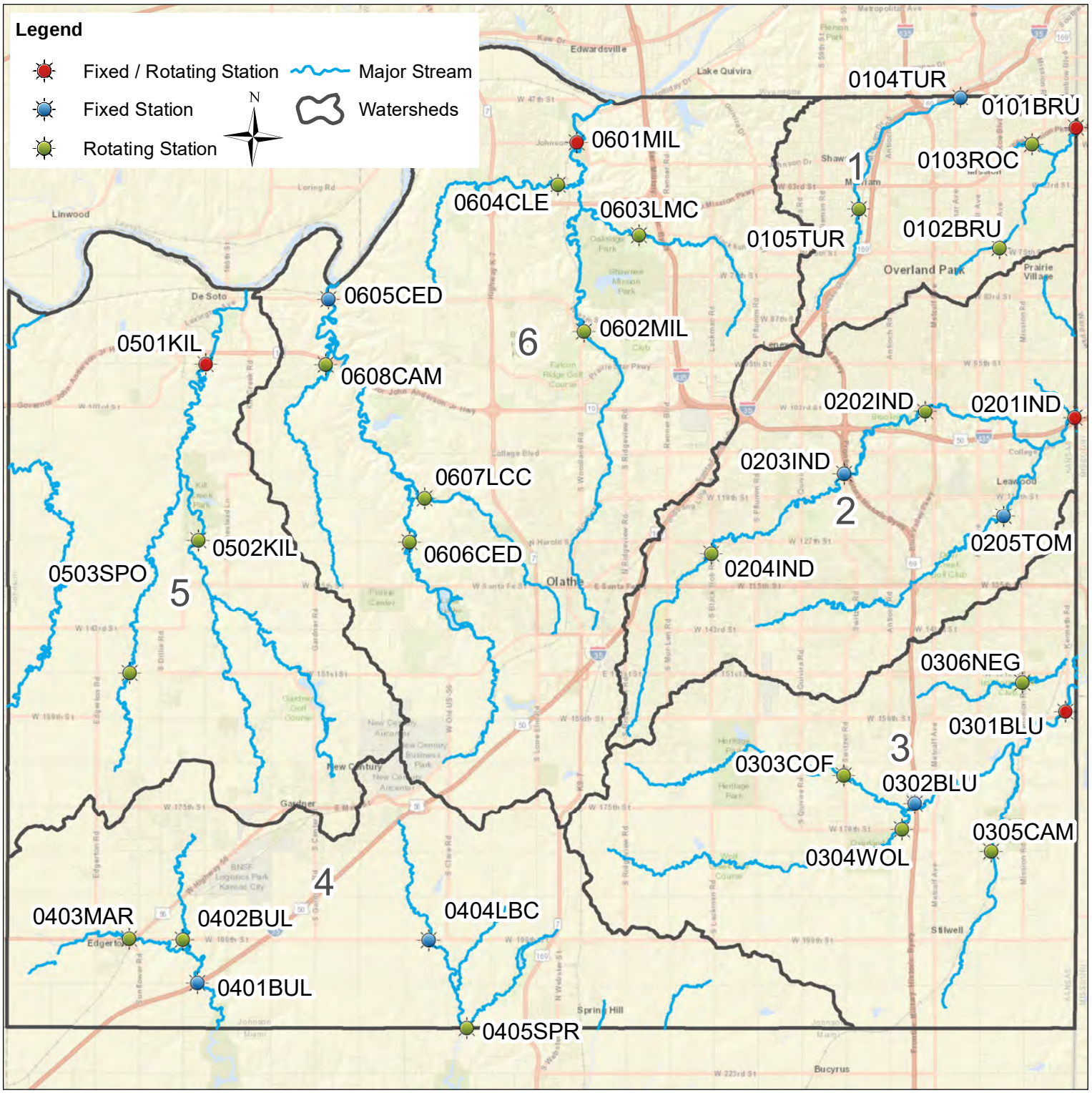
Appendix C

MONITORING LOCATIONS



Kansas Permit Number: M-KS52-SU02

Federal Permit Number: KSR410007

1 inch = 16,417 feet

GBA	PROJECT NUMBER 14256.00 DATE 11/14/2019	LOCATION MAP KDHE MS4 Permit Water Quality Monitoring October 1, 2019 through September 30, 2024 Johnson County, Kansas	FIGURE 1

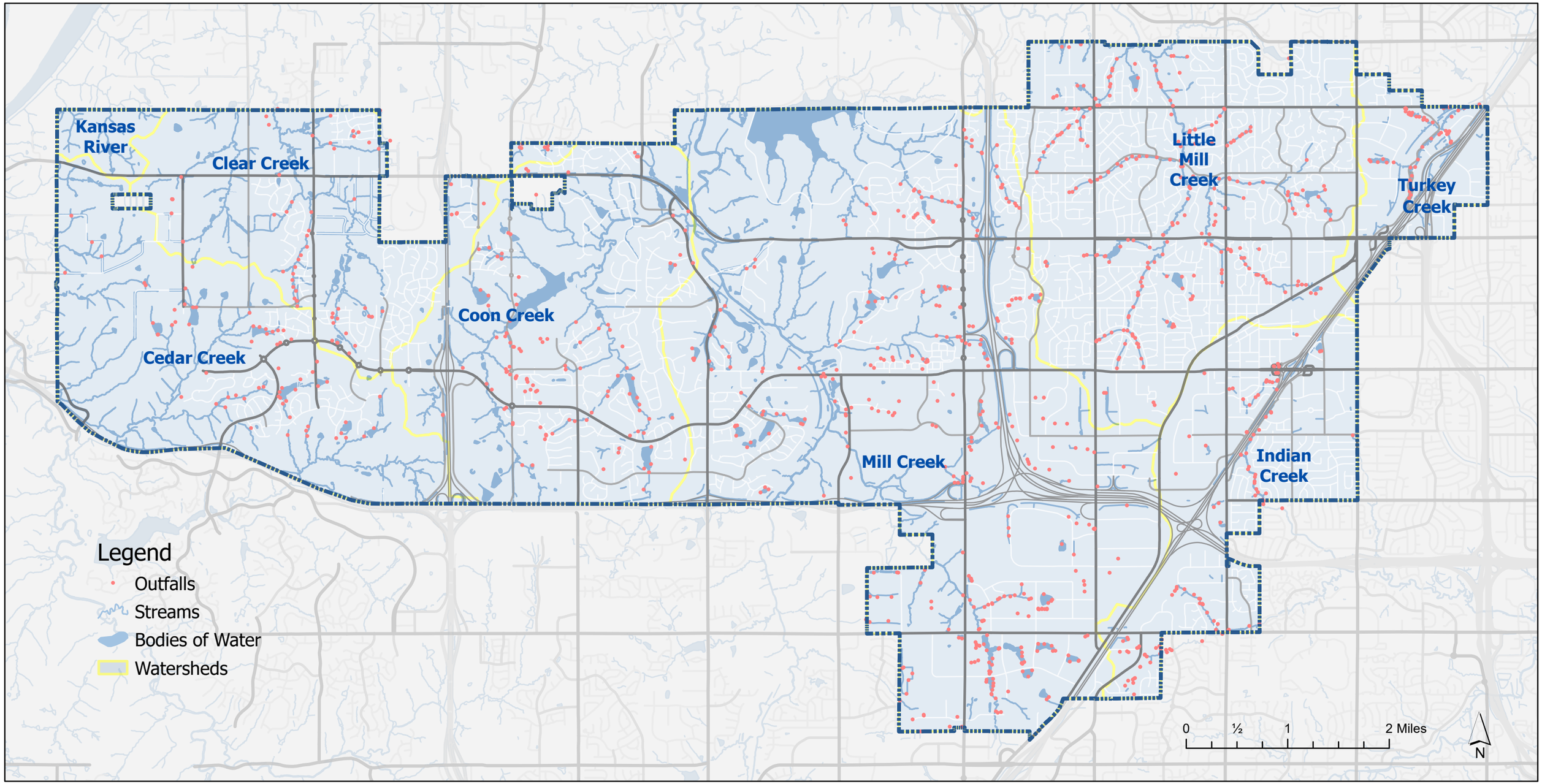
Appendix D

MAPPING

- **Outfall Map**
- **Private BMP Map**
- **Public BMP Map**
- **Stream Setback Map**
- **City of Lenexa Facilities Location Map**

Outfalls

City of Lenexa, KS



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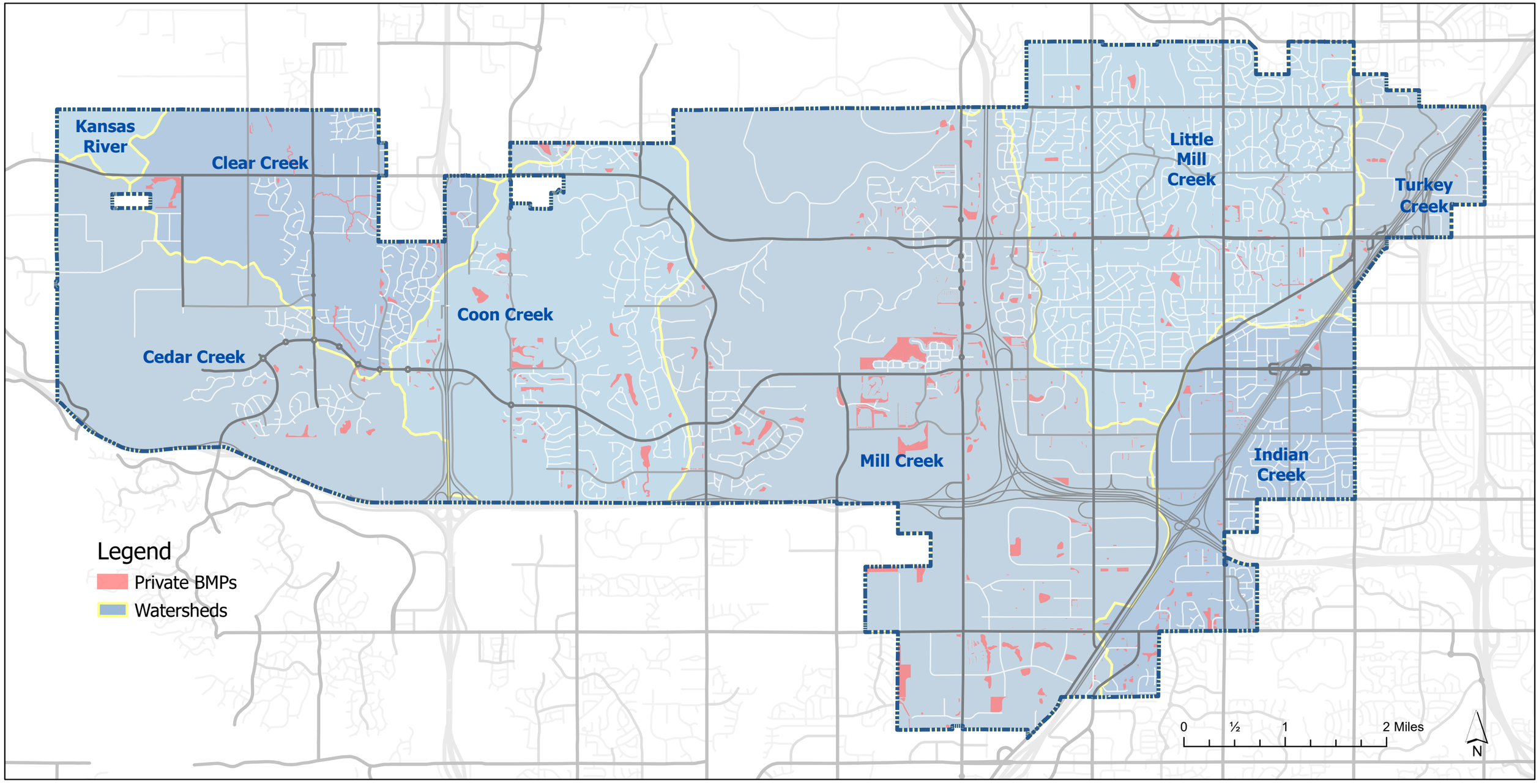
Lenexa KANSAS

Private BMPs

City of Lenexa, KS



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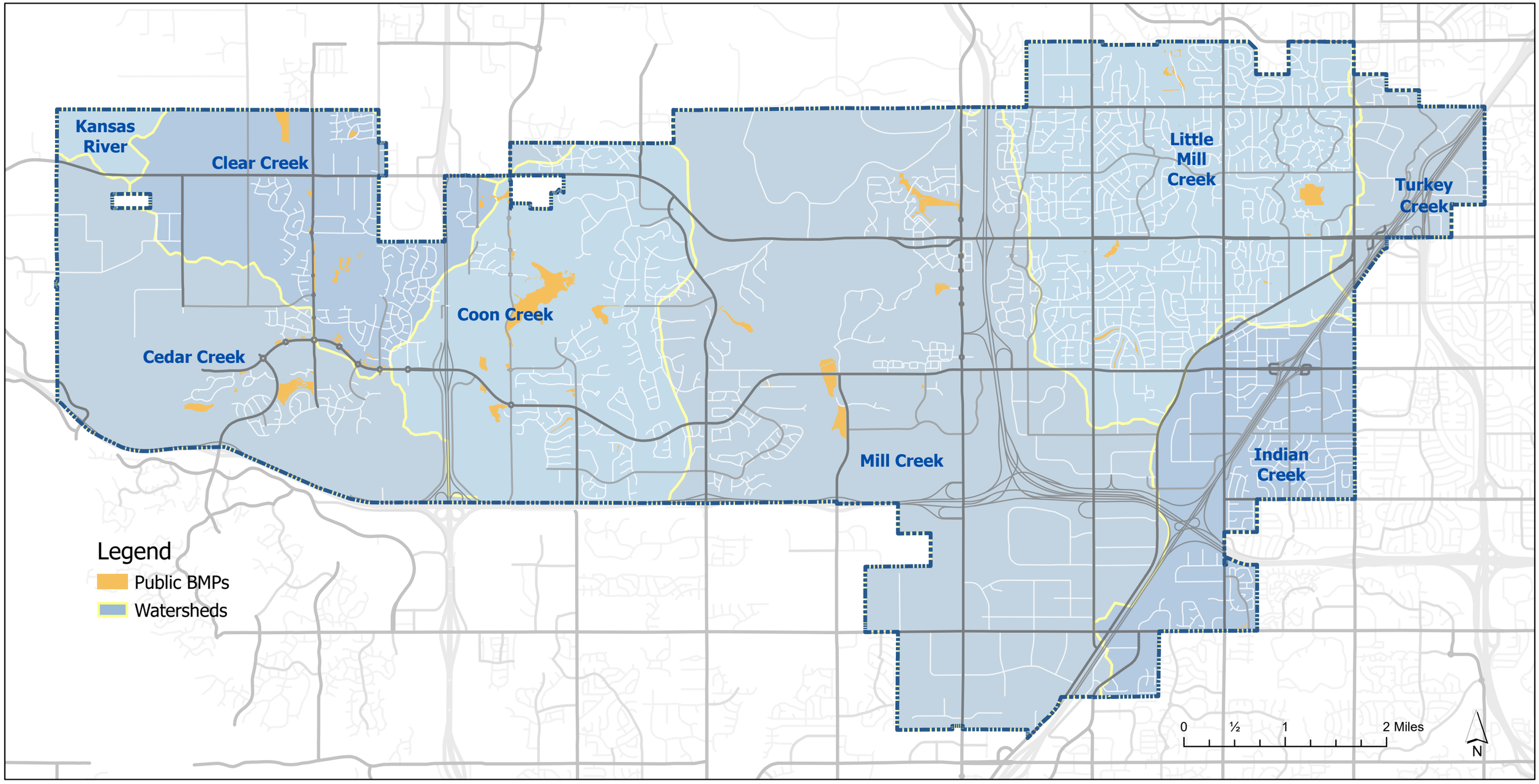
Public BMPs

City of Lenexa, KS



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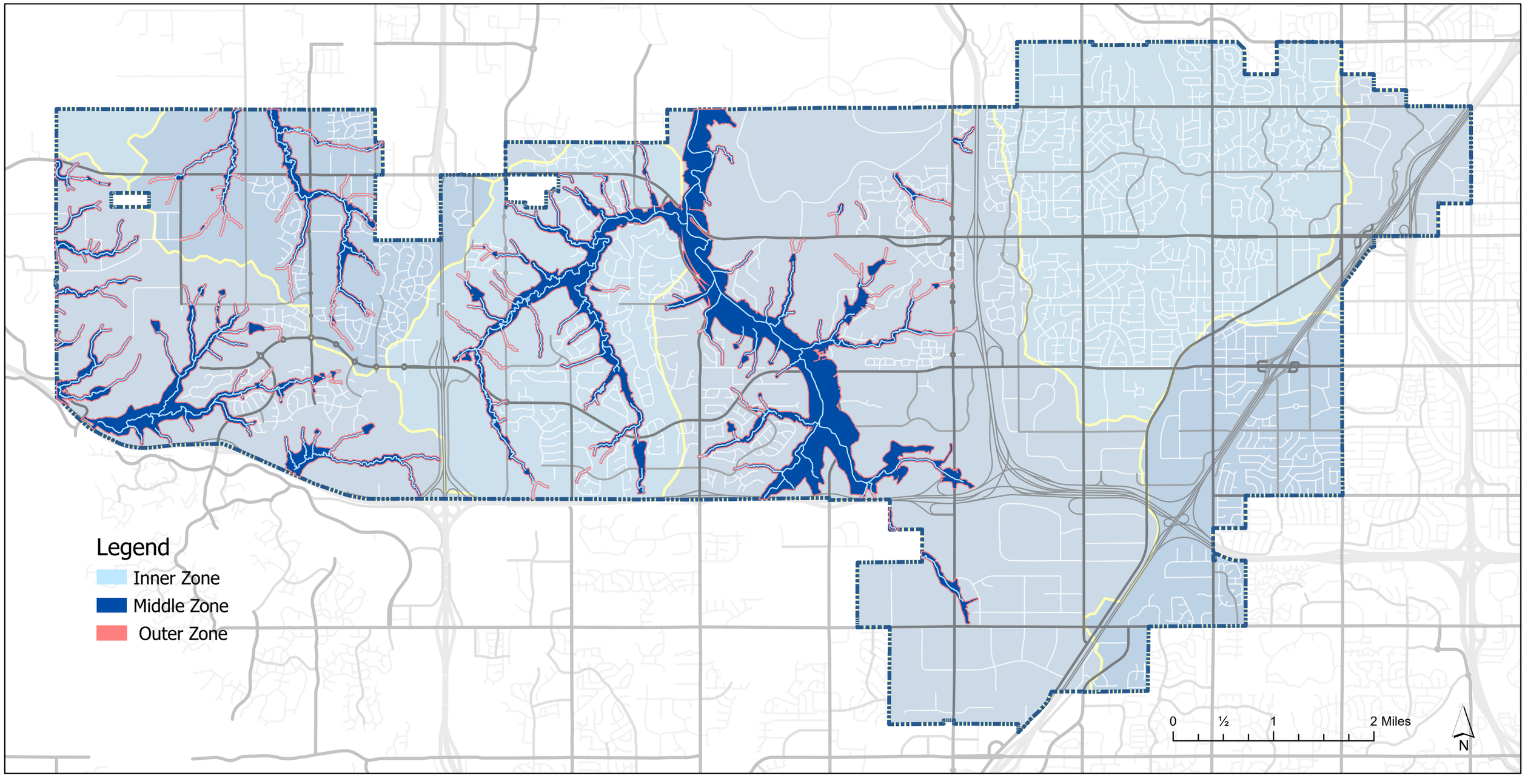
Stream Setbacks

City of Lenexa, KS



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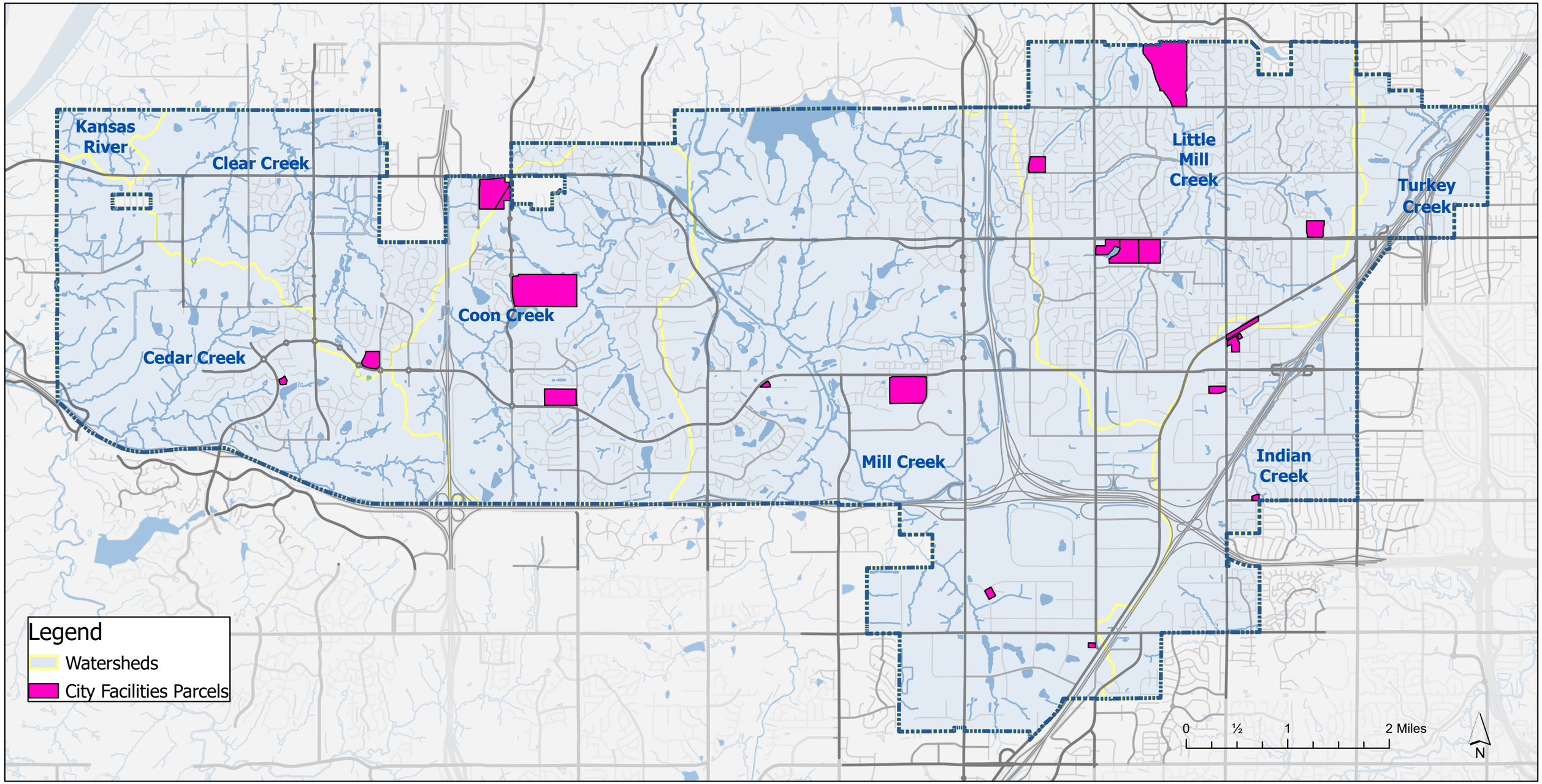
Lenexa KANSAS

City Facilities Parcels

City of Lenexa, KS

Parcels where City owned Buildings are located.



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Lenexa KANSAS

Appendix E

ORDINANCES

- **BUILDING AND CONSTRUCTION STANDARD**
- **FLOOD HAZARD ZONING**
- **ILLICIT DISCHARGES TO STORM SEWERS AND SURFACE WATERS**
- **LAND DISTRUBANCE PROVISIONS**
- **ANIMAL AND ANIMAL CONTROL**
- **STORMWATER MANAGEMENT REGULATIONS**
- **STREAM SETBACKS**

TITLE 4 UNIFIED DEVELOPMENT CODE

CHAPTER 4-8 BUILDING AND CONSTRUCTION STANDARDS

Article 4-8-D INTERNATIONAL PROPERTY MAINTENANCE CODE

Section 4-8-D-9 BUILDINGS UNDER CONSTRUCTION

Section 301.4 of the International Property Maintenance Code is hereby added to read as follows:

301.4 Buildings under construction. The City of Lenexa requires that where permits have been issued for new houses, room additions, decks, detached accessory structures or other work that affects the site or exterior of the structure, the property shall be maintained in compliance with the applicable City regulations. Applicable regulations include: minimum levels of landscaping and yards areas per the Unified Development Ordinance; hard surface driveways; proper trash storage and disposal; and maintaining exterior property areas and structures in compliance with this code. During the construction process, flexibility is afforded the builder and/or owner to complete the construction, and bring the property into compliance with the Code requirements, in a reasonable period of time. A reasonable period of time is: within 30 days after the permit has expired; or after 18 months from the date of the first building permit and where no inspection for newly completed work has been requested from the City within the last 45 days.

301.4.1 Abatement. Abatement of violations relating to buildings under construction shall be in accordance with Article 3-5-H of the Lenexa City Code.

TITLE 4 UNIFIED DEVELOPMENT CODE

CHAPTER 4-1 ZONING

Article 4-1-D SITE DESIGN AND DEVELOPMENT STANDARDS

Section 4-1-D-3 FLOOD PREVENTION.

A. **General:**

1. **Applicability:** These provisions, contained in subsections A through K of this Section, shall apply to all areas of special flood hazards within the jurisdiction of the City.
2. **Flood Insurance Study Incorporated:** The Flood Insurance Study for Johnson County, Kansas and Incorporated Areas, published by the Federal Emergency Management Agency (FEMA), and dated August 3, 2009 is hereby adopted by reference. The Special Flood Hazard Areas (SFHAs) and Zone X (Future Base Flood) identified on the Index Map dated August 3, 2009 of the Flood Insurance Rate Map (FIRM) as amended and any future revisions thereto are hereby adopted by reference.
3. **Compliance:** No development or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of subsections A through K of this Section and other applicable regulations.
4. **Abrogation And Greater Restrictions:** The provisions of this Section are not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where these provisions and another conflict or overlap or where the provisions of any other subsequently adopted floodplain differ from the provisions herein provided, whichever imposes the more stringent restriction shall prevail.
5. **Interpretation:** In the interpretation and application of subsections A through K of this Section, all provisions shall be: a) considered as minimum requirements; b) liberally construed in favor of the City; and c) deemed neither to limit nor repeal any other powers granted under State statutes.
6. **Warning And Disclaimer Of Liability:** The degree of flood protection required by subsections A through K of this Section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes. These provisions do not imply that the land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. These provisions shall not create liability on the part of the City or by any officer or employee thereof for any flood damages that result from reliance on these provisions or any administrative decision lawfully made hereunder.
7. **Purpose:** It is the purpose of this ordinance to promote the public health, safety, and general welfare; to minimize those losses described herein; to establish or maintain the community's eligibility for participation in the National Flood Insurance Program (NFIP) as defined in 44 Code of Federal Regulations (CFR) 59.22(a)(3) and amendments thereto; and to meet the requirements of 44 CFR 60.3(d) and K.A.R. 5-44-4 by applying the provisions of this ordinance to:

a. Restrict or prohibit uses that are dangerous to health, safety, or property in times of flooding or cause undue increases in flood heights or velocities;

b. Require uses vulnerable to floods, including public facilities that serve such uses, be provided with flood protection at the time of initial construction.

B. **Development Permits In Flood Hazard Areas:**

1. **Required:** A development permit shall be obtained before construction or development begins within all SFHA's and Zone X (Future Base Flood) established in these provisions. No person shall initiate any development or substantial improvement or cause the same to be done without first obtaining a separate permit for each development as defined in this Section.
2. **Application:** Application for a development permit shall be made on forms furnished by the Engineering and Construction Services Administrator and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question, existing or proposed structures, fill, storage of materials and drainage facilities and the location of the foregoing. Specifically, the following information is required:
   a. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;
   b. Elevation in relation to mean sea level to which any non-residential structure is to be flood-proofed;
   c. Certification from a registered professional engineer that the non-residential floodproofed structure will meet the floodproofing criteria of subsection D of this Section;
   d. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development;
   e. Describe the land on which the proposed work is to be done by lot, block and tract, house and street address, or similar description that will readily identify and specifically locate the proposed structure or work;
   f. Identify and describe the work to be covered by the development permit;
   g. Indicate the use or occupancy for which the proposed work is intended;
   h. Specify whether development is located in designated flood fringe or floodway;
   i. Identify the existing base flood elevation and the elevation of the proposed development;
   j. Give such other information as reasonably may be required by the floodplain administrator;
   k. Be accompanied by plans and specifications for proposed construction; and
   l. Be signed by the permittee or his authorized agent who may be required to submit evidence to indicate such authority.

C. **Local Administrator:**

1. **Designate:** The Community Development Director is hereby appointed to administer and implement these provisions. In addition, the Engineering and Construction Services Administrator shall assist in the implementation of these provisions by granting or denying development permit applications in accordance therewith.
2. **Duties And Responsibilities Of Community Development Director:** Duties of the Community Development Director with respect to these provisions shall include, but not be limited to:
   a. Notify adjacent communities and the Division of Water Resources, Kansas Department of Agriculture prior to any alteration or relocation of a watercourse and submit evidence of such notification to FEMA; and
   b. Assure that the flood carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse ; and

c. Maintain all records pertaining to these provisions in the office of the City Engineer. Such records shall be open for public inspection.

3. **Duties And Responsibilities Of Engineering and Construction Services Administrator:** Duties of the Engineering and Construction Services Administrator with respect to these provisions shall include, but not be limited to:
   a. Review of all development permits to assure that sites are reasonably safe from flooding and that the permit requirements of these provisions have been satisfied; and
   b. Review permits for proposed development to assure that all necessary permits have been obtained from those Federal, State and local governmental agencies from which prior approval is required; and
   c. Assure that the flood carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse; and
   d. Verify and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved building structures; and
   e. Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved building structures have been floodproofed; and
   f. When floodproofing is utilized for a particular building structure, the Engineering and Construction Services Administrator shall obtain certification from a registered professional engineer or architect; and
   g. Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), the Engineering and Construction Services Administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation; and
   h. When base flood elevation data has not been provided in accordance with these provisions, then the Engineering and Construction Services Administrator shall obtain, review and reasonably utilize any base flood elevation data available from a Federal, State, County, or other source, in order to administer these provisions.

D. **Flood Hazard Reduction:**

1. **General Standards:** In all SFHAs and Zone X (Future Base Flood), the following provisions shall apply:
   a. All new construction, including manufactured homes and substantial improvements, shall be designed or modified and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
   b. All new construction and substantial improvements shall be constructed with material resistant to flood damage.
   c. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
   d. All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
   e. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

f. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.

g. On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

h. The storage or processing of materials that are, in time of flooding, buoyant, flammable, explosive or could be injurious to human, animal or plant life is prohibited.

i. Storage of other material or equipment may be allowed if not subject to major damage by floods and firmly anchored to prevent flotation or if readily removable from the area within the time available after flood warning.

j. That until a floodway has been designated, no development, including landfill, may be permitted within all SFHAs and Zone X (Future Base Flood) on the City's FIRM unless the applicant for the land use has demonstrated that the proposed use, when combined with other existing and reasonably anticipated uses, will not increase the water surface elevation of the base flood more than 1 foot at any point within the community.

k. No permit for floodplain development shall be granted for new construction, substantial improvements, and other improvements, including the placement of manufactured homes, within all SFHAs and Zone X (Future Base Flood), unless the conditions of this section are satisfied.

l. All areas identified as Zone A and Zone X (Future Base Flood) on the FIRM are subject to inundation of the 100-year flood; however, the base flood elevation is not provided. Development within Zone A and Zone X (Future Base Flood) is subject to all provisions of this ordinance. If Flood Insurance Study data is not available, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from Federal, State, or other sources.

2. **Specific Standards:** In all SFHAs and Zone X (Future Base Flood) where base flood elevation data has been provided, the following provisions shall apply:

   a. **Residential Construction:** New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to 1 foot above base flood elevation. The elevation of the lowest floor shall be certified by a licensed land surveyor or professional engineer.

   b. **Nonresidential Construction:** New construction or substantial improvement of any commercial, industrial or other non-residential structure, shall either have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that one (1) foot above the base flood level, the structure is watertight with wall substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction of the dry flood proofing meet or exceed the minimum requirements of the National Flood Insurance Act of 1968, as amended, 42 U.S.C. Section 4001 et seq. and the regulations adopted pursuant to that Act. The elevation of the lowest floor shall be certified by a licensed land surveyor or professional engineer. Such certification shall be provided to the official as set forth in subsection C of this Section.

   c. **New Construction And Substantial Improvements:** Fully enclosed areas below the lowest floor (i.e., parking structures, unimproved storage areas, building access, etc.) that are subject to flooding are hereby prohibited.

   d. **Manufactured Homes:** All manufactured homes to be placed within all SFHAs and Zone X (Future Base Flood), on the community's FIRM shall be required to be installed using methods

and practices that minimize flood damage. All manufactured homes shall be anchored to resist flotation, collapse or lateral movement. Manufactured homes must be anchored in accordance with State and local building codes* and FEMA guidelines. In the event that over-the-top frame ties to ground anchors are used, the following specific requirements, or their equivalent, shall be met.

See Chapter 4 of this Title.

1. Over-the-top ties be provided at each of the four (4) corners of the manufactured home, with two (2) additional ties per side at intermediate locations and manufactured homes less than fifty (50) feet long requiring one (1) additional tie per side.
2. Frame ties be provided at each corner of the home with five (5) additional ties per side at intermediate points and manufactured homes less than fifty (50) feet long requiring four (4) additional ties per side.
3. All components of the anchoring system be capable of carrying a force of 4,800 pounds.
4. Any addition to the manufactured home be similarly anchored.
5. Require that all manufactured homes to be placed within all numbered and unnumbered A zones, AH, and AE on the community's FIRM be elevated on a permanent foundation such that the lowest floor of the manufactured home is one (1) foot above the base flood elevations and be securely anchored to an adequately anchored foundation system in accordance with the provisions above.
6. Require manufactured homes that are placed or substantially improved within all SFHAs and Zone X (Future Base Flood), on the community's FIRM on sites:
   a. Outside of a manufactured home subdivision;
   b. In a new manufactured home subdivision;
   c. In an expansion to and existing manufactured home subdivision; or
   d. In an existing manufactured home subdivision on which a manufactured home has incurred substantial damage as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated a minimum of one (1) foot above the base flood elevation and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. **The elevation of the lowest floor shall be certified by a licensed land surveyor or professional engineer.**
7. Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home subdivision within all unnumbered and numbered A zones, AE and AH zones, on the community's FIRM, that are not subject to the provisions of subsection 6 above, be elevated so that either:
   a. The lowest floor of the manufactured home is a minimum of one (1) foot above the base flood level; or
   b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. **The elevation of the lowest floor shall be certified by a licensed land surveyor.**

e. **Critical Facilities:** All new or substantially improved critical nonresidential facilities including, but not limited to, governmental buildings, police stations, fire stations, hospitals, orphanages,

penal institutions, communication centers, water and sewer pumping stations, water and sewer treatment facilities, transportation maintenance facilities, places of public assembly, emergency aviation facilities, and schools shall be elevated above the .2 percent annual chance flood event, also referred to as the 500-year flood level or together with attendant utility and sanitary facilities, be flood proofed so that below the 500-year flood level the structure is water tight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in Section 4-1-D-3-C-3(d), (e), and (f).

1. All critical facilities shall have access routes that are above the elevation of the 500-year flood.
2. No critical facilities shall be constructed in any designated floodway.

f. **Cumulative Improvement:** A structure may be improved (remodeled or enlarged) without conforming to current requirements for elevation so long as the cumulative value of all work done within the last five calendar years does not exceed fifty (50) percent of the structure's current market value. If the cumulative value of the improvements exceeds fifty (50) percent of the structure's current market value, the structure must be brought into compliance with Section 4-1-D-3-D-2 which requires elevation of residential structures to one (1) foot above the base flood elevation of the elevation/floodproofing of non-residential structures to one (1) foot above the base flood elevation.

E. **Floodways:** Located within areas of special flood hazard established in accordance with these provisions are areas designated as floodways. Since the floodway is in extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

1. **Encroachments:** Encroachments, including fill, new construction, substantial improvements and other developments, are prohibited unless it is demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice and certified by a professional registered engineer that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.
2. **New Construction:** If subsection 1 of this Section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of subsections A through K, inclusive, of this Section.
3. **Zone A:** In Zone A, obtain review and reasonably utilize any floodway data available through Federal, State or other sources or Section 4-1-D-3-D-1-l, in meeting the standards of this Section.
4. **Adoption of Regulatory Floodway:** The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one (1) foot at any point.

F. **Areas Of Shallow Flooding:** Located within the areas of special flood hazard established in subsection A of this Section are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions shall apply:

1. **Within AO Zones:**

a. All new construction and substantial improvements of residential structures have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as two (2) foot above the depth number specified in feet on the community's FIRM, at least two (2) feet if no depth number is specified.

b. All new construction and substantial improvements of non-residential structures shall:

1. Have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as two (2) foot above the depth number specified in feet on the community's FIRM, at least two (2) feet if no depth number is specified; or

2. Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

c. Adequate drainage paths around structures on slopes shall be required in order to guide flood waters around and away from proposed structures.

d. The anchoring requirements for manufactured homes as established herein shall be required.

2. **Within AH Zone:**

a. The specific standards for all areas of special flood hazard where base flood elevation data has been provided shall be required as set forth in these provisions.

b. Adequate drainage paths around structures on slopes shall be required in order to guide flood waters around and away from proposed structures.

G. **Standards For Subdivisions:**

1. **Design And Location:** All subdivision proposals and other proposed new developments, including manufactured home subdivisions, shall be designed and located to minimize flood damage.

2. **Utilities:** All subdivision proposals shall have public utilities and facilities, such as sewer, gas, electrical and water systems, located and constructed to minimize flood damage.

3. **Drainage:** All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

4. **Data Required:** Base flood elevation data shall be provided for all proposals for development, including proposals for manufactured home parks and subdivisions, of greater than five (5) acres of fifty (50) lots, whichever is lesser.

H. **Nonconforming Use:**

1. **General Policy:** A structure or the use of a structure or premises which was lawful before the passage or amendment of the original version of these floodplain provisions but which is not in conformity with the provisions of subsection A through K of this Section may be continued subject to the following conditions:

a. No such use or substantial improvement of that use shall be expanded, changed, enlarged or altered in a way which increases its nonconformity.

b. If such use is discontinued for six (6) consecutive months, any future use of the building premises shall conform to the substantive requirements of subsections A through K of this Section.

c. Uses or adjuncts thereof which are or become nuisances shall not be entitled to continue as nonconforming uses.

d. If any nonconforming use or structure is destroyed by any means, including flood, it shall not be reconstructed if the cost is fifty (50) percent or more of the market value of the structure before

the damage occurred; except, that if it is reconstructed in conformity with the provisions of subsections A through K of this Section. This limitation does not include the cost of any alteration to comply with existing State or local health, sanitary, building or safety codes or regulations or the cost of any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

2. **Effect Of Article J Of This Chapter:** Where the provisions of Article J of this Chapter, regarding nonconforming situations in general, are more restrictive than this Section and otherwise applicable, they shall apply to nonconforming situations regarding the requirements of subsections A through K of this Section.

I. **Flood Hazard Areas, Variances, Appeals:**

1. **Appeals:** The Board of Zoning Appeals shall hear and decide appeals and requests for variances from the requirements of subsections A through K of this Section.
2. **Variances:** The Board of Zoning Appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the Engineering and Construction Services Administrator in the enforcement or administration of subsections A through K of this Section.
3. **General Criteria:** In passing upon applications for variances or appeals, the Board of Zoning Appeals shall consider all technical evaluations, all relevant factors, standards specified subsections A through K of this Section and:
   a. The danger that materials may be swept onto other lands to the injury of others.
   b. The danger of life and property due to flooding or erosion damage.
   c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
   d. The importance of the services provided by the proposed facility to the community.
   e. The necessity to the facility of a waterfront location, where applicable.
   f. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use.
   g. The compatibility of the proposed use with existing and anticipated development.
   h. The relationship of the proposed use to the Comprehensive Plan and FloodPlain Management Program for that area.
   i. The safety of access to the property in times of flood for ordinary and emergency vehicles.
   j. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site.
   k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities, such as sewer, gas, electrical and water systems, and streets and bridges.
4. **Additional Criteria For Variances:**
   a. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing subsections I-4(b) through I-4(f) below have been fully considered. As the lot size increases beyond the 1/2 acre, the technical justification required for issuing variances increases.
   b. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places, the State Inventory of Historic Places, or local inventory of historic places upon determination, without regard to the procedures set forth in

this Section, provided the proposed activity will not preclude the structure's continued historic designation.

c. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

d. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

e. Variances shall only be issued upon: 1) showing of good and sufficient cause, 2) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and 3) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.

f. A community shall notify the applicant in writing over the signature of a community official that: (a) the issuance of a variance to construct a structure below base flood level will result in increased premium rates for flood insurance up to amounts as high as $25.00 for $100.00 of insurance coverage and (b) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with the record of all variance actions as required by this ordinance.

g. Upon consideration of the factors listed above and the purposes of these provisions, the Board of Zoning Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of subsections A through K of this Section, including but not limited to the requirement for compliance with all State and Federal regulations for elevation or floodproofing, whether or not they are contained within this Chapter.

h. The Engineering and Construction Services Administrator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

5. **Appeals From Decision Of Board:** Any person aggrieved by the decision of the Board of Zoning Appeals under this Section may appeal such decision to the District Court as provided in K.S.A. 12-760 and amendments thereto.

J. **Amendments:** The regulations, restrictions, and boundaries set forth in subsections A through K of this Section may, from time to time, be amended, supplemented, changed or appealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973; provided, however, that no such action may be taken until after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. At least 20 days' notice of the time and place of such hearing shall be published in a newspaper of general circulation in the City. These provisions are in compliance with the National Flood Insurance Program Regulations as published in title 44 of the Code of Federal Regulations.

K. **Recreational Vehicles:** All recreational vehicles placed on sites within all SFHAs and Zone X (Future Base Flood) on the community's FIRM either:

1. Be on the site for fewer than 180 consecutive days, *or*
2. Be fully licensed and ready for highway use*; *or*
3. Meet the permitting, elevation, and anchoring requirements for manufactured homes of this ordinance.

*A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions.

TITLE 4 UNIFIED DEVELOPMENT CODE

CHAPTER 4-5 PUBLIC WORKS

Article 4-5-J ILLICIT DISCHARGES TO STORM SEWERS AND SURFACE WATERS

Section 4-5-J-1 PURPOSE AND FINDINGS.

A. Purpose. The purpose of this Article shall be to prevent the discharge of pollutants from land and activities within the City into the municipal separate storm sewer system (MS4) and/or into surface waters.

B. Findings. The City Council of the City hereby finds that:

1. Pollutants are discharged into surface waters, both through inappropriate non-stormwater discharges into the MS4 or the surface waters directly, and through the wash off and transport of pollutants found on the land and built surfaces by stormwater during rainfall events.
2. Such discharge of pollutants may lead to increased risks of disease and harm to individuals, particularly children, who come into contact with the water; may degrade the quality of such water for human uses, such as drinking, irrigation, recreation, and industry; and may damage the natural ecosystems of rivers, streams, lakes and wetlands, leading to a decline in the diversity and abundance of plants and animals.
3. This Article will promote public awareness of the hazards associated with the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment and other pollutants into the storm drainage system.
4. Such discharges are inconsistent with the provisions and goals of the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES), the City of Lenexa Stormwater Management Program and other federal and state requirements for water quality and environmental preservation.
5. A reasonable establishment of restrictions and regulations on activities within the City is necessary to eliminate or minimize such discharges of pollutants, to protect the health and safety of citizens, to preserve economic and ecological value of existing water resources within the City and within downstream communities, and to comply with the provisions of and the City's responsibilities under the Clean Water Act and the NPDES program.

Section 4-5-J-2 ABBREVIATIONS.

The following abbreviations when used in this Article shall have the designated meanings:

BMP: Best Management Practice

CFR: Code of Federal Regulations

EPA: Environmental Protection Agency

HHW: Household Hazardous Waste

KDHE: Kansas Department of Health and Environment

MS4: Municipal Separate Storm Sewer System

NPDES: National Pollutant Discharge Elimination System

PST: Petroleum Storage Tank

Section 4-5-J-3 SPECIAL DEFINITIONS OF TERMS AND USES.

In addition to the words, terms and phrases defined in Article 4-5-F, the following words, terms and phrases, as used in this Article, shall have the following meanings.

BEST MANAGEMENT PRACTICES (BMPs): Schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

CLEAN WATER ACT: The federal Water Pollution Control Act (33 U.S.C. Section 1251 et seq.), and any subsequent amendments thereto.

DISCHARGE: The addition or introduction, directly or indirectly, of any pollutant, water, or any other substance into the MS4 or surface waters.

DOMESTIC SEWAGE: Human excrement, gray water (from home clothes washing, bathing, showers, dishwashing, and food preparation), other wastewater from household drains, and waterborne waste normally discharged from the sanitary conveniences of dwellings (including apartment houses and hotels), office buildings, retail and commercial establishments, factories, and institutions, that is free from industrial waste.

EXTREMELY HAZARDOUS SUBSTANCE: Any substance listed in the appendices to 40 CFR Part 355, Emergency Planning and Notification.

FERTILIZER: A substance or compound that contains a plant nutrient element in a form available to plants and is used primarily for its plant nutrient element content in promoting or stimulating growth of a plant or improving the quality of a crop, or a mixture of two or more fertilizers.

HAZARDOUS HOUSEHOLD WASTE (HHW): Any material generated in a household (including single and multiple residences) by a consumer which, except for the exclusion provided in 40 CFR Section 261.4(b)(1), would be classified as a hazardous waste under 40 CFR Part 261 or K.A.R 28-29-23b.

HAZARDOUS SUBSTANCE: Any substance listed in Table 302.4 of 40 CFR Part 302.

HAZARDOUS WASTE: Any substance identified or listed as a hazardous waste by the EPA pursuant to 40 CFR Part 261.

INDUSTRIAL WASTE: Any waterborne liquid or solid substance that result from any process of industry, manufacturing, mining, production, trade, or business.

MOTOR VEHICLE: Any vehicle meeting the definition for passenger car, passenger van, pickup truck, motorcycle, recreational vehicle, or motor home given in Section 3-8-B-7 -H of the Code.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4): The system of conveyances, (including roads with drainage systems, municipal streets, private streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned and operated by the City and designed or used for collecting or conveying stormwater, and which is not used for collecting or conveying sewage.

NPDES: 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 the federal Clean Water Act.

NPDES PERMIT: A permit issued by United States Environmental Protection Agency (EPA) or the State of Kansas that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

OIL: Any kind of oil in any form, including but not limited to: petroleum, fuel oil, crude oil, synthetic oil, motor oil, bio-fuel, cooking oil, grease, sludge, oil refuse, and oil mixed with waste.

PESTICIDE: A substance or mixture of substances intended to prevent, destroy, repel, or migrate any pest, or substances intended for use as a plant regulator, defoliant, or desiccant.

PETROLEUM PRODUCT: A product that is obtained from distilling and processing crude oil and that is capable of being used as a fuel or lubricant in a motor vehicle, boat or aircraft including motor oil, motor gasoline, gasohol, other alcohol blended fuels, aviation gasoline, kerosene, distillate fuel oil, and #1 and #2 diesel fuel.

POLLUTANT: Any substance or material which contaminates or adversely alters the physical, chemical or biological properties of the waters including changes in temperature, taste, odor, turbidity, or color of the water. Such substance or material may include but is not limited to, dredged spoil, spoil waste, incinerator residue, sewage, pet and livestock waste, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, soil, yard waste, hazardous household wastes, oil and petroleum products, used motor oil, anti-freeze, litter, pesticides, and industrial, municipal, and agricultural waste discharged into water.

PROPERTY OWNER: The named property owner as indicated by the records of the Johnson County Kansas Records and Tax Administration;

RELEASE: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the MS4 and/or surface waters.

SANITARY SEWER: The system of pipes, conduits, and other conveyances which carry industrial waste and domestic sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated, to a sewage treatment plant and to which stormwater, surface water, and groundwater are not intentionally admitted.

SEPTIC TANK WASTE: Any domestic sewage from holding tanks such as vessels, chemical toilets, campers, trailers, and septic tanks.

SEWAGE: The domestic sewage and/or industrial waste that is discharged into the sanitary sewer system and passes through the sanitary sewer system to a sewage treatment plant for treatment.

STORMWATER: Stormwater runoff, snow melt runoff, and surface runoff and drainage.

SURFACE WATERS: Any body of water classified as "surface waters" by the State of Kansas, including streams, rivers, creeks, brooks, sloughs, draws, arroyos, canals, springs, seeps, cavern streams, alluvial aquifers associated with these surface waters, lakes, man-made reservoirs, oxbow lakes, ponds, and wetlands, as well as any other body of water classified by the federal government as a "water of the United States".

WASTE: Any garbage, refuse, sludge or other discarded material which is abandoned or committed to treatment, storage or disposal, including solid, liquid, semisolid or contained gaseous materials resulting from industrial, commercial mining, community and agricultural activities. Waste does not include solid or dissolved materials in domestic sewage or irrigation return flows or solid or dissolved materials or industrial discharges which are point sources subject to permits under the State of Kansas.

Section 4-5-J-4 GENERAL PROHIBTION.

A. No person shall release or cause to be released into the MS4, or into any surface water within the City, any discharge that is not composed entirely of stormwater that is free of pollutants, except as allowed in subsection B.

B. Unless identified by the City or KDHE as a significant source of pollutants to surface water, the following non-stormwater discharges are deemed acceptable and not a violation of this section:

1. Discharges authorized by, and in full compliance with, a NPDES permit;
2. Water line flushing;
3. Diverted stream flow;
4. Rising groundwater;
5. Uncontaminated groundwater infiltration as defined under 40 CFR 35.2005(20) to separate storm sewers;
6. Uncontaminated pumped groundwater;
7. Contaminated groundwater if authorized by KDHE and approved by the City;
8. Discharges from potable water sources;
9. Foundation drains;
10. Air conditioning condensate;
11. Lawn watering, landscape irrigation or other Irrigation waters;
12. Springs;
13. Water from crawl space pumps;
14. Footing drains;
15. Individual residential motor vehicle washing;
16. Flows from riparian habitats and wetlands;
17. Dechlorinated swimming pool discharges excluding filter backwash;
18. Street wash waters (excluding street sweepings which have been removed from the street);
19. Discharges or flows from fire fighting activities;
20. Heat pump discharge waters (residential only);
21. Treated wastewater or other discharges meeting requirements of a NPDES permit; and
22. Other discharges determined by the Federal Government, State of Kansas, or City of Lenexa not to be a significant source of pollutants to waters of the state, a public health hazard or a nuisance.
23. Discharges specified in writing by the Director as being necessary to protect public health and safety.

C. Notwithstanding the provisions of subsection B of this section, any discharge shall be prohibited by this section if the discharge in question has been determined by the Director to be a source of pollutants to the MS4 or to surface waters, written notice of such determination has been provided to the property owner or person responsible for such discharges, and the discharge has occurred more than ten days beyond such notice.

Section 4-5-J-5 SPECIFIC PROHIBITIONS AND DUTIES.

The specific prohibitions and requirements in this section do not include all the discharges prohibited by the general prohibition set forth in Section 4-5-J-4, but are provided to address specific discharges that are frequently found or are known to occur:

A. No person shall release or allow to be released any of the following substances into the MS4:
   1. Any new or used petroleum product or oil;
   2. Any industrial waste;
   3. Any hazardous substance or hazardous waste, including household hazardous waste;
   4. Any domestic sewage or septic tank waste, grease trap or grease interceptor waste, holding tank waste, or grit trap waste;
   5. Any garbage, rubbish or other waste;
   6. Any new or used paints, including latex-based paints, oil-based paints, stains, varnish, and primers, as well as cleaning solvents and other associated products;
   7. Any yard wastes which have been moved or gathered by a person;
   8. Any wastewater that contains soap, detergent, degreaser, solvent, or surfactant based cleaner from a commercial motor vehicle wash facility; from any vehicle washing, cleaning, or maintenance at any new or used motor vehicle dealership, rental agency, body shop, repair shop, or maintenance facility; or from any washing, cleaning, or maintenance of any business or commercial or public service vehicle, including a truck, bus or heavy equipment;
   9. Any wastewater from a commercial mobile power washer or from the washing or other cleaning of a building exterior that contains soap, detergent, degreaser, solvent, or any surfactant based cleaner;
   10. Any wastewater from commercial floor, rug, or carpet cleaning;
   11. Any wastewater from the washdown or other cleaning of pavement that contains any soap, detergent solvent, degreaser, emulsifier, dispersant, or other cleaning substance; or any wastewater from the wash-down or other cleaning of any pavement where any spill, leak, or other release of oil, motor fuel, or other petroleum or hazardous substance has occurred, unless all such materials have been previously removed;
   12. Any effluent from a cooling tower, condenser, compressor, emissions scrubber, emission filter, or the blowdown from a boiler;
   13. Any ready-mixed concrete, mortar, ceramic, or asphalt base material or discharge resulting from the cleaning of vehicles or equipment containing or used in transporting or applying such material;
   14. Any runoff, washdown water or waste from any animal pen, kennel, fowl or livestock containment area or any pet wastes generally;
   15. Any filter backwash from a swimming pool or fountain, except that nothing in this Article shall be construed as to require the alteration of the filter discharge plumbing of an existing swimming pool, fountain or spa if such plumbing was compliant with applicable state, federal, and local regulations at the time of construction;

16. Any swimming pool, fountain or spa water or other water containing a harmful level of chlorine (>0 parts per million), muriatic acid or other chemical (such as salt) used in the treatment or disinfection of the water or during cleaning of the facility;
17. Any discharge from water line disinfection by super chlorination if it contains a harmful level of chlorine (>0 parts per million) at the point of entry into the MS4 or surface waters;
18. Any contaminated runoff from a vehicle wrecking or storage yard;
19. Any substance or material that will damage, block, or clog the MS4;
20. Any release from a petroleum storage tank (PST), or any leachate or runoff from soil contaminated by leaking PST; or any discharge of pumped, confined, or treated wastewater from the remediation of any such PST release, unless the discharge has received an NPDES permit from the state; or
21. Any other discharge that causes or contributes to causing the City to violate a state water quality standard, the City's NPDES stormwater permit, or any state-issued discharge permit for discharges from its MS4.

B. No person shall release or cause to be released into the MS4 any harmful quantity of sediment, silt, earth, soil, or other material associated with clearing, grading, excavation or other construction activities in excess of what could be retained on site or captured by employing sediment and erosion control measures, except as allowed for in conformance with Section 4-5-J-4-B.

C. No person shall release or cause to be release into the MS4 or adjacent private property any harmful quantity of sediment, silt, earth, soil or other material caused by ineffective maintenance of landscaped areas or aggregate areas used for parking or storage.

D. No person shall connect a line conveying sanitary sewage, domestic or industrial, to the MS4. No property owner shall allow such a connection to continue in use on their property.

E. No person shall use pesticides, herbicides and fertilizers except in accordance with manufacturer recommendations. Pesticides, herbicides and fertilizers shall be stored, transported and disposed of in a manner to prevent release to the MS4.

No person shall tamper with, destroy, vandalize, or render inoperable any BMPs which have been installed for the purpose of eliminating or minimizing pollutant discharges, nor shall any person fail to install or fail to properly maintain any BMPs which have been required by the City or by other local, state, or federal jurisdictions.

Section 4-5-J-6 INSPECTION AND DETECTION PROGRAM.

The Director is authorized to develop and implement a plan to actively detect and eliminate prohibited discharges and connections to the MS4 or surface waters within the City. Such plan may include, but is not limited to, periodic and random inspections of facilities and businesses, particularly those most associated with potentially prohibited discharges; visual surveys of exterior practices; inspection, sampling and analyses of discharges from outfalls of the MS4, particularly during dry weather periods; manhole and pipe inspections to trace discharges through the system to point of origin; education on pollution prevention; and receipt of complaints and information from the public regarding known or suspected discharges.

Section 4-5-J-7 RELEASE REPORTING AND CLEANUP.

A. Any person responsible for the release of any prohibited material that may flow, leach, enter, or otherwise be released into the MS4 or surface waters shall take all necessary steps to ensure the containment and cleanup of such release.

B. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services.

C. In the event of a release of non-hazardous materials, said person shall notify the Director in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Director within three business days of the phone notice.

Section 4-5-J-8 ENFORCEMENT; DESIGNATION OF OFFICER; ABATEMENT; RIGHT OF ENTRY; PENALTY.

The Director shall be designated as the public officer charged with the administration and enforcement of this Article and shall authorize the investigation of violations of the Article. Any person convicted of a violation of any provisions of this Article shall be deemed guilty of a public offense and subject to the penalties set forth in Section 1-1-C-3 of this Code. In addition, the City may seek such additional remedies and have such additional enforcement powers as set forth in Section 4-1-L-2 of this Code.

TITLE 4 UNIFIED DEVELOPMENT CODE

CHAPTER 4-1 ZONING

Article 4-1-N LAND DISTURBANCE PROVISIONS

Section 4-1-N-1 PURPOSE OF ARTICLE.

The purpose of this Article is to establish a regulatory scheme to protect and further the public interest by: promoting the coexistence of the natural environment and quality, planned development; assisting in the City's efforts to comply with the National Pollutant Discharge Elimination System (NPDES) Phase 2 regulations issued by the U. S. Environmental Protection Agency and administered by the Kansas Department of Health and Environment (KDHE); providing effective storm water management; protecting property from damage due to flooding and erosion; improving water quality and reducing water pollution; controlling construction site impact on storm water; minimizing non-storm water discharges into the storm sewer system; protecting natural stream assets; and protecting, and, where possible, enhancing valuable natural water resources. These public interests are furthered by regulating land disturbance, filling, stripping and soil storage in connection with the clearing and grading of land for construction related or other purposes. It is also the purpose of this Article to encourage responsible development and minimize the negative environmental impacts that can be associated with development.

This Article establishes substantive and procedural requirements to protect and enhance the water quality of watercourses, water bodies, and wetlands by controlling erosion, sedimentation, and related environmental damage caused by construction related or other soil disturbing activities; and to encourage creative approaches to development that are designed and implemented to be sensitive to the natural environment thereby resulting in high quality development for those who visit, reside, and work in the City.

Section 4-1-N-2 OTHER LAWS.

Neither this Article nor any decision made with respect hereto exempts the applicant or any other person from other requirements of the City Code, or from state and federal laws, or from procuring other required permits, nor do they limit the right of any person to maintain, at any time, any appropriate action, at law or in equity, for relief or damages against the applicant or any person arising from the activity regulated by this Article.

Section 4-1-N-3 DEFINITIONS.

In this Article, these words and phrases have the following meanings:

APPROVED PLAN: A set of representational drawings or other documents that have been approved by the City as complying with the provisions of this Article submitted by an applicant (either as an independent submittal or a part of another development application(s) required by the City Code) as a prerequisite to obtaining a building or land disturbance permit and that contain the information and specifications required by the City to minimize erosion and off-site sedimentation from land disturbance activities.

APPLICANT: Any person who makes application for an approved plan or for a building permit for an activity involving building or development that results in land disturbance or for a land disturbance permit, as required by this Article.

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL: A recognized specialist in soil and erosion control that has met the certification requirements of CPESC, Inc.

CLEARING: Any act by which vegetative cover, structures or surface material are removed, including, but not limited to, surface layer, root mat or topsoil removal.

COMMUNITY DEVELOPMENT DIRECTOR: The individual appointed by the City as the Community Development Director or his/her designee.

DEVELOPMENT APPLICATION: All applications required by the City Code as a prerequisite to initiation of development, including, but not limited to, a building permit application.

EROSION: The process by which the ground surface is worn away by the action of the wind, water, ice, gravity, or artificial means, and/or land disturbance activities.

EROSION AND SEDIMENT CONTROL DESIGN CRITERIA: The erosion and sediment control design criteria adopted in writing, as authorized by Section 4-1-N-12.

EXCAVATING: Any act by which soil is cut into, dug, quarried, uncovered, removed, displaced, relocated, or bulldozed, and includes the conditions that result from that act.

FILLING: Any act by which soil is deposited, placed, pushed, pulled, or transported and includes the conditions that result from that act.

FLOODPLAIN: The floodway and floodway fringe as identified by the Federal Insurance Administration through its report entitled "*The Flood Insurance Study for the City of Lenexa, Kansas,*" dated February 1, 1977 and updated August 3, 2009, or such other designation of the floodplain as is subsequently adopted by the City, and representing the regulated 100-year water surface and corresponding elevations.

GRADING: Any act by which soil is cleared, stripped, moved, leveled, stockpiled, or any combination thereof, and includes the conditions that result from that act.

LAND DISTURBANCE ACTIVITY: Any act by which soil is moved and land changed that may result in erosion or the movement of sediments, and may include tilling, clearing, grading, excavating, stripping, stockpiling, filling and related activities, and the covering of land surfaces with an impermeable material.

LANDSCAPE ARCHITECT: A landscape architect duly licensed by the Kansas State Board of Technical Professions, pursuant to K.S.A. 74-7001 *et seq.* to practice landscape architecture.

LICENSED LAND SURVEYOR: An individual who is duly licensed by the Kansas State Board of Technical Professions, pursuant to K.S.A. 74-7001 *et seq*. to practice surveying.

MAXIMUM EXTENT PRACTICABLE: The use of those best management practices, which, based on sound engineering and hydro-geological principles, will, to the greatest degree possible, given all relevant considerations, including technology, climate and site conditions, minimize erosion and sedimentation from a site during and after development.

OPEN RECREATIONAL SPACE: Any land, under single ownership, which is dedicated to open, outdoor recreational uses such as golf courses or ball fields, and which is submitted for City development approval as a single plan and developed pursuant to one grading plan.

PERMIT: A building permit for activities involving building or development resulting in land disturbance or a land disturbance permit for activities resulting in land disturbance, that does not involve building or development.

PERMITTEE: Any person to whom a building permit is issued with respect to activities involving building or development resulting in land disturbance or for purposes of this Article only, any person to whom a land disturbance permit is issued.

PROFESSIONAL ENGINEER: An engineer duly licensed by the Kansas State Board of Technical Professions, pursuant to K.S.A. 74-7001 *et seq.* to practice engineering.

RESPONSIBLE PERSONNEL: Any foreman, superintendent, or project engineer designated in the permit or in an approved plan, as the person in charge of on-site land disturbance activities or erosion and sediment control associated with land disturbance activities.

SEDIMENT: Soils or other materials transported or deposited by the action of wind, water, ice, gravity, or artificial means.

SITE: Any lot or parcel of land or a series of lots or parcels of land adjoining or contiguous or joined together under one (1) ownership on which land disturbance activity is proposed.

SLOPE: The inclined surface of a fill, excavation, or natural terrain expressed as a ratio of horizontal distance to vertical distance over a measured inclined surface.

SOIL: The unconsolidated mineral and organic material (*i.e.*, earth, sand, gravel, rock or other similar material) on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP): A plan required by and and for which contents are specified in the State of Kansas General Permit for Stormwater Discharges Associated with Industrial Activities, and the General Permit for Stormwater Discharges Associated with Construction Activities. The purpose of the plan is to help identify the sources of pollution that affect the quality of stormwater discharges from a site and to describe and ensure the implementation of practices to reduce pollutants in stormwater discharges.

STRIPPING: Any activity by which the vegetative cover is removed or significantly disturbed, including tree removal, clearing, grubbing and storage, or removal of topsoil.

VEGETATIVE COVER: Any grasses, shrubs, trees and other vegetation that protects and stabilizes soils.

WATERCOURSE OR DRAINAGEWAY: Any natural or artificial watercourse, including but not limited to streams, rivers, creeks, ditches, channels, canals, conduits, culverts, drains, waterways, gullies, ravines, or washes in which water flows in a definite direction or course, either continuously or intermittently; and including any area adjacent to it that is subject to inundation by reason of overflow or floodwater.

WETLANDS: Those areas that have a predominance of hydric soils and that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. This does not include the following surface waters intentionally constructed from sites, including but not limited to: drainage ditches, grass-lined swales, and landscape amenities.

Section 4-1-N-4 PERMITS REQUIRED.

A. No person may engage in any land disturbance activity, including the installation of sanitary sewers, without first obtaining a permit from the City, accordance with Section 4-1-N-5 and Section 4-1-N-6.

B. This Article shall not be construed to be in conflict with any state law intended to control erosion and sedimentation. In those instances where state law imposes a duty or requirement with respect to a matter covered by this Article, the more environmentally stringent duty or requirement shall control.

C. Neither a permit nor an approved erosion and sediment control plan is required under this Article solely for:

1. any land disturbance activity that:
   a. involves less than 100 cubic yards of earth movement; or
   b. disturbs less than 5,000 square feet of surface area;
2. land farming operations, including plowing or tilling of land for the purpose of crop production or the harvesting of crops on land located in the AG District;
3. home landscaping or gardening;
4. reestablishment of lawn areas for residential lots; or
5. any emergency activity that is immediately necessary for the protection of life, property, or natural resources;

   provided that, if one or more of the above activities is undertaken as a part of or in conjunction with an activity involving building or development that otherwise requires issuance of a building permit, pursuant to Title 4, Chapter 1, Article 4-1-I or any other provision of the City Code, this Section does not alter the requirement that a building permit shall be obtained for that activity or activities.

D. The issuance of a permit shall constitute authorization to do only that work described or shown on the approved plan, all in strict compliance with the requirements of this Article, unless each and every modification or waiver is specifically listed and approved as required by Section 4-1-N-15 of this Article. Reasonable field modifications can be made pursuant to Section 4-1-N-15 of this Article.

E. The permittee and/or the permittee's agent, contractors and employees shall carry out the proposed work in accordance with the approved plan, and the permit, and in compliance with all applicable requirements or conditions.

Section 4-1-N-5 AUTHORIZATION TO UNDERTAKE LAND DISTURBANCE ACTIVITIES AS A COMPONENT OF BUILDING PERMITS.

A. A building permit must be obtained before any activity involving building or development resulting in land disturbance is initiated, except as provided in Section 4-1-N-4-C. The authority to undertake any of these activities shall be evidenced only by a valid building permit. Before a building permit is issued for these activities, the engineered plans specified in Section 4-1-N-7 must be submitted to the City and must contain the information and be in the form required therein, subject to the provisions of Section 4-1-N-6-E. In effect, Section 4-1-N-7 sets forth application submission requirements for activities involving building or development resulting in land disturbance that are in addition to the application submission requirements specified in Article 4-8-D and Title 4, Chapter 1, Article 4-1-I of the City Code.

B. If an individual proposes to undertake a land disturbance activity that does not, pursuant to any other section of the Code, require issuance of a building permit (such as, but not limited to, installation of sanitary sewers), the individual shall not, except as provided in Section 4-1-N-4-C, initiate land disturbance activities until a land disturbance permit is obtained.

Section 4-1-N-6 PERMIT OR PLAN; GENERALLY.

A. Where activities involving building or development resulting in land disturbance are to be performed, the owner of a site, or the site owner's authorized representative shall submit a complete building

permit application in writing upon forms furnished by the City, which application shall include the engineered plans specified in Section 4-1-N-7.

B. Where land disturbance activity is to be performed and the City Code does not otherwise require issuance of a building permit, the owner of the site or the site owner's authorized representative shall submit the engineered plans specified in Section 4-1-N-7 to the Community Development Director.

C. A permit must be issued in the name of the current property owner or the property owner's authorized representative.

D. No permit for activities that are not permitted by existing zoning, variances or other valid development approvals applicable to the land, shall be approved.

E. In making an application covered by this Article, the applicant or the landowner performing or allowing the work consents to the City's right to enter the site for the purpose of inspecting compliance with the approved plan or for performing any work necessary to bring the site into compliance with the approved plan.

F. The engineered plans required by Section 4-1-N-7 are not intended to be duplicative of other provisions of this Title or Code. Accordingly, the required engineered plans may be included in or with any other development application(s) or submission(s) otherwise required by this Title or Code; provided that, all the information required therein is in a form that can reasonably be evaluated by the Community Development Director. The decision concerning the form of the information submitted shall be made in the Community Development Director's sole discretion. In addition, the Community Development Director is authorized to waive submission requirements determined not to be necessary to the evaluations that are required by this Article.

Section 4-1-N-7 ENGINEERED PLANS.

A. If not otherwise included in a separate development application or applications that seek approval of the specific activity that will result in land disturbance, as provided by Section 4-1-N-6-F above, the following information shall be submitted to the Community Development Director:

1. a vicinity map and site map in compliance with Section 4-1-N-8;
2. an erosion and sediment control plan in compliance with Section 4-1-N-9;
3. a work schedule in compliance with Section 4-1-N-10;
4. the permit fee as set forth in Section 4-1-N-16;
5. a performance guaranty as required by Section 4-1-N-22;
6. an engineering soils report in compliance with Section 4-1-N-11, when required by the City.

B. The erosion and sediment control plan must be prepared and certified by a Professional Engineer, a Landscape Architect, or a Certified Professional in Erosion and Sediment Control.

C. The City may require any additional information or data deemed appropriate and/or may impose conditions thereto as the Community Development Director may deem necessary to ensure compliance with the provisions of this Article and to preserve public health and safety.

D. The Community Development Director may waive the requirements for maps, plans, reports or drawings, if the Community Development Director finds that the information otherwise submitted or to be submitted will be sufficient to show that the proposed work will conform to the requirements of this Article.

E. The applicant is bound by information submitted under this Section.

F. Failure to comply with these requirements may result in the City requiring submission and approval of a plan and the issuance of a permit.

G. Land disturbance activity may not take place in the City until a permit has been issued, as described in Section 4-1-N-5, and an acceptable performance guaranty, as required by Section 4-1-N-22, has been obtained.

H. In addition to obtaining a City Land Disturbance Permit, permittee and responsible personnel disturbing one acre or greater must comply with State and Federal Construction Stormwater NPDES requirements, including, but not limited to, the development of a Stormwater Pollution Prevention plan (SWPPP), as required by KDHE. The engineered plans and Land Disturbance permit required by the City's Land Disturbance Ordinance should be included in the SWPPP. the SWPPP must be kept on site during the duration of the construction project and made available during an inspection.

Section 4-1-N-8 SITE MAP/EXISTING CONDITIONS.

In accordance with Section 4-1-N-7-A, the applicant shall submit a site map that contains the following information;

A. An attached vicinity map showing the location of the site in relation to the surrounding area's watercourses, water bodies and other significant geographic and natural features, and street and other significant structures.

B. Existing and proposed topography of the entire site with contour lines drawn with one chosen interval in accordance with the following table:

Ground Slope	Contour Interval (in feet)
Flat: 0-2%	0.5 or 1
Rolling: 2-8%	1 or 2
Steep: 8% +	2, 5 or 10

C. Show on/off-site drainage, including the subwatershed as well as the entire drainage basin;

D. Site's property lines shown in true location with respect to the plan's topographic information;

E. Graphic representation of the location of all existing and proposed natural and man-made drainage facilities;

F. Graphic representation of the location of and legend of soil types (including source of information);

G. A clear and definite delineation of any wetlands, natural or artificial water storage detention areas, and drainage ditches on the site, or a statement that there are no wetlands, detention areas or drainage ditches located on the site.

H. A clear and definite delineation of any drainage, sanitary, utility, or other easement(s) on or near the site;

I. A clear and definite delineation of applicant's determination, based on the best available information and sound engineering principles, of the existence of a regulatory 100-year floodplain, as defined in Section 4-1-N-3 and of any fully urbanized floodplain on or near the site as determined by a Johnson County watershed study or a statement that there are no such floodplains located on the property;

J. Graphic representation of the location of proposed excavations and fills, of on-site storage of soil and other earthen material, and of on-site disposal or spoil areas;

K. Location and legend of existing vegetative cover and the location and legend of vegetative cover to be left undisturbed;

L. Location of existing surface runoff and erosion and sediment control measures;

M. Quantity of soil in cubic yards to be excavated, filled, stored, or otherwise utilized on-site;

N. Proposed sequence of excavation, filling and soil or earthen material storage and disposal;

O. Graphic representation of stream setbacks, including inner, middle and outer zones. If no stream corridors subject to Article 4-1-O of this Code are present on the site, then applicant must provide a statement indicating such on site map or cover sheet; and

P. The signature and seal of a Professional Engineer, a Landscape Architect, or a Certified Professional in Erosion and Sediment Control.

Section 4-1-N-9 EROSION AND SEDIMENT CONTROL PLAN.

In accordance with Section 4-1-N-7-A, an applicant shall submit an erosion and sediment control plan that is drawn to an appropriate scale, with a minimum of one (1) inch equals one hundred (100) feet (1:100). This plan must include sufficient information to: evaluate the environmental characteristics of the affected area; assess the potential impacts of the proposed land disturbance on water resources; and, assess proposed methods to minimize on-site soil erosion and prevent off-site sedimentation to the maximum extent practicable, including disturbance of topsoil and limitation of disturbance. The erosion and sediment control plan shall meet all the erosion and sediment control specifications established by the Erosion and Sediment Control Design Criteria required by Section 4-1-N-12 of this Article and contain the following information:

A. A letter of transmittal that includes a project narrative.

B. Copies of NPDES, 404, and other applicable state and federal permit applications for the site or activity.

C. A description of and specifications for the measures undertaken to reduce surface runoff and erosion control including, but not limited to, types and methods of applying soil protection blankets, mulches, designs and specifications for diversions, dikes, drain protection, and a schedule for their maintenance and upkeep;

D. A description of, and specifications for, the measures undertaken to retain sediment, waste materials, and chemicals on the site, including, but not limited to, designs and specifications for silt fences, berms, sediment detention facilities, other best management practices, and a schedule for their maintenance and upkeep.

E. A description of the temporary and permanent vegetative measures to be used, including but not limited to seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, types and rate of lime and fertilizer application, kind and quantity of mulching, the type, location and extent of pre-existing undisturbed vegetation types and vegetation to remain, and a schedule for maintenance and upkeep.

F. Alternative methods of stabilizing the site when either the establishment of vegetative cover is not performed in accordance with the work schedule, or is performed and is not effective in the sole discretion of the Community Development Director.

G. A map depicting the location and description, including design details, of each temporary and permanent erosion, surface runoff and sediment control measure and structure.

H. Estimated duration of the permit as defined in Section 4-1-N-17-A.

I. A statement noting that the contractor, developer, operator, and/or owner shall request the Community Development Director to inspect and approve work completed in accordance with the approved Plan, and in accordance with this Article. The contractor, developer, or owner shall be required to obtain written approval by the Community Development Director at the stages of development as outlined in Section 4-1-N-19-E.

J. A signed statement on the plan by the owner, developer, operator, and/or contractor that any land disturbance activity, construction or development, will be done pursuant to the Plan.

K. Quantity of soil in cubic yards to be excavated, filled, stored, or otherwise utilized on-site.

L. A graphic representation of the storm drainage system, including quantities of flow and site conditions around all points of surface water discharge from the site.

M. Details of temporary and permanent erosion and sediment control measures, including a construction note on the plan stating: "*Prior to initial soil disturbance or redisturbance, permanent or temporary erosion and sediment control devices shall be completed on all perimeter dikes, swales, ditches, perimeter slopes, and all slopes greater than three (3) horizontal to one (1) vertical (3:1); embankments of ponds, basins, and traps. Sediment control shall be completed within fourteen (14) calendar days on all other disturbed or graded areas. The requirements of this Section do not apply to those areas that are shown on the plan and are currently being used for material storage or for those areas which actual construction activities are currently being performed.*"

Section 4-1-N-10 WORK SCHEDULE.

In accordance with Section 4-1-N-7-A, the applicant shall submit a chronological construction schedule and corresponding time-frame for each of the following activities:

A. Identify and mark areas to be protected from disturbance.

B. Clearing and grubbing for those areas necessary for installation of perimeter erosion control devices.

C. Construction of perimeter erosion and sediment control devices.

D. Installation of permanent and temporary stabilization measures.

E. City inspection of erosion and sediment control measures, prior to commencement of excavation.

F. Remaining interior site clearing and grubbing.

G. Street grading.

H. Rough grading for the remainder of the site.

I. Utility installation and statement of whether storm drains will be used or blocked after construction.

J. Building, parking lot, and site construction.

K. City inspection prior to commencement of BMP construction.

L. BMP construction.

M. Final stabilization.

N. Final grading and construction of stormwater BMPs.

O. Removal of temporary erosion control devices.

P. Inspection and maintenance of all erosion and sediment control measures during the course of the project.

Section 4-1-N-11 ENGINEERING SOILS REPORT.

When the Community Development Director determines that additional information is required to protect against erosion or other hazards, an engineering soils report shall, in accordance with Section 4-1-N-7-A, be submitted by applicant. This report shall be based on adequate and necessary test borings, giving an adequate description of the soils of the site with conclusions and recommendations regarding the effect of soils conditions on the proposed development, and giving opinions and recommendations covering the adequacy of site to be developed by the proposed land disturbance activity with respect to soils conditions. Recommendations included in the report and approved by the Community Development Director shall be required in the plan. The engineering soils report shall include:

A. Data regarding the nature, distribution, strength, and erodibility of existing soils;

B. If applicable, data regarding the nature, distribution, strength, and erodibility of soil to be placed on the site;

C. Conclusions and recommendations for grading procedures;

D. Conclusions and recommended designs for interim soil stabilization devices and measures, and for permanent soil stabilization after construction is completed;

E. Design criteria for corrective measures when necessary;

F. Opinions and recommendations covering the stability of the site;

G. Subsurface conditions;

H. Soil boring results; and

I. Overview of geology of site.

Section 4-1-N-12 EROSION AND SEDIMENT CONTROL DESIGN CRITERIA.

A. Unless otherwise provided herein, Section 5100 Erosion and Sediment Control of the Kansas City Metropolitan Chapter of the American Public Works Association, dated September 15, 2010, is hereby incorporated by reference for the purpose of providing uniform erosion and sediment control standards with respect to land disturbance involving temporary erosion and sediment control (hereinafter *"Erosion and Sediment Control Design Criteria"*).

No less than three (3) copies of such document shall be marked or stamped "official copy" as adopted by Ordinance No. 5677 with a copy of the Ordinance codified herein and filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

The current versions of the Lenexa Design Criteria and Plan Requirements for Public Improvement Plans, Lenexa Technical Specifications, and Lenexa Standard Details shall take precedence over the Erosion and Sediment control Design Criteria.

B. Grading, erosion control practices, sediment control practices, and waterway crossings shall comply with the Erosion and Sediment Control Design Criteria, and shall be adequate to minimize erosion and the transportation of sediment from the site to the maximum extent practicable.

C. Cut and fill slopes shall be no greater that 3:1, except as approved by the Community Development Director to meet other community or environmental objectives. All exposed slopes 4:1 or steeper shall be protected with silt fence or wattles per the Lenexa Standard Details.

D. Clearing and grading of natural resources as previously defined by the City, such as designated natural stream assets, forests and wetlands as previously identified by the City, shall not be permitted, except when in compliance with this and all other Chapters of this Code. Such areas shall be protected with a double row of silt fence with the outer row being wire reinforced. Land disturbance activities that retain natural vegetation and drainage patterns, as described in the Erosion and Sediment Control Design Criteria, shall be used to the satisfaction of the Community Development Director.

E. Clearing, except that necessary to establish erosion and sediment control devices, shall not begin until all erosion and sediment control devices have been installed and the soil has been stabilized.

F. Construction phasing is recommended for all sites, but shall be required on all sites disturbing greater than twenty-five (25) acres, with the size of each phase to be established at the time of the consideration of the relevant development application or as approved by the Community Development Director.

G. Erosion control techniques shall include, but not be limited to the following:

1. Soil stabilization of disturbed areas shall be completed after clearing and after periods of inactivity in construction of greater than fourteen (14) calendar days. If the Community Development Director determines that a site has a high potential for erosivity based on previous information submitted, he or she may direct that disturbed soil be stabilized after periods of inactivity in construction of more than forty-eight (48) hours;
2. If seeding or other vegetative erosion control methods are used, it shall have germinated within two (2) weeks; if vegetative measures are not effective within this time frame, the Community Development Director may require the site to be reseeded or require that a non-vegetative option be employed;
3. Special techniques that meet the *Erosion and Sediment Control Design* Criteria on slopes greater than 3:1 or in drainage ways shall be used to ensure stabilization;
4. Stabilization of soil stockpiles.
5. At the close of the construction season, all disturbed site surfaces must be stabilized, using a vegetative cover or a suitable mulch layer with tackifier or another method that does not require germination to control erosion;
6. Techniques shall be employed to minimize the blowing of dust or sediment from the site; and
7. Techniques that divert upland runoff past disturbed slopes shall be employed.

H. Sediment control requirements shall include, but not be limited to the following:

1. Sediment basins, sediment traps, or tanks and perimeter controls:
2. Sediment basins that are designed in a manner which allows adaptation to provide long term storm water management, if required by the Community Development Director; or
3. Protection for adjacent properties and waterways by the use of a vegetated buffer strip in combination with perimeter controls.
4. All sediment basins shall include a skimmer attached to the outlet structure per the Lenexa Standard Details.
5. Perforated standpipes will not be allowed for the primary outlet in sediment basins.
6. Sediment basins shall be used for all drainage areas over 5 acres.
7. Sediment traps shall be used for all areas of concentrated flow for which the drainage area is less than 5 acres.

I. Waterway and watercourse protection requirements shall include, but not be limited to:

1. A temporary stream crossing, approved by the Community Development Director, shall be installed if a wet watercourse will be crossed regularly during construction, but only if the Community Development Director determines that the stream crossing will not cause flooding of adjacent property or damage the riparian corridor in which such a crossing is to be constructed;
2. Stabilization of the watercourse channel before, during, and after any in-channel work;
3. All on-site storm water conveyance channels designed according to the Erosion and Sediment Control design Criteria; or
4. Stabilization to prevent erosion at the outlets of all pipes and paved channels.

J. All existing ponds to be dewatered shall be pumped in accordance with the Lenexa Standard Details. Breeching the dam will not be allowed.

K. Construction site access requirements shall include, but not be limited to:

1. A temporary access road provided at all sites; or
2. Other measures required by the Community Development Director to ensure that sediment is not tracked onto public streets by construction vehicles or washed into storm drains.

Section 4-1-N-13 REVIEW AND APPROVAL.

A. The City will review all submissions required by this Article to determine their conformance with the provisions of this Article and the erosion and sediment control design criteria. Within ten (10) business days after receiving all required submissions, the Community Development Director, in writing, shall:

1. If a building permit is otherwise required;
   a. Approve the plan and notify the Building Official that all requirements of this Article have been met and that the permit may be issued; or
   b. Conditionally approve the plan and notify the Building Official and the Applicant that the requirements of this Article have been met and that the building permit may be issued, subject to conditions as may be necessary to substantially secure the objectives of this Article, prevent the creation of a nuisance or an unreasonable hazard to persons or to a public or private property; or
   c. Reject the plan and notify the Building Official that the requirements of this Article have not been met, indicating those requirement(s) that have not been met and the procedure for submitting revised information and/or submittals.
2. If a building permit is not otherwise required:
   a. Approve the plan and issue a land disturbance permit; or
   b. Conditionally approve the plan and issue a land disturbance permit subject to conditions as may be necessary to substantially secure the objectives of this Article, prevent the creation of a nuisance, or prevent an unreasonable hazard to persons or to a public or a private property; or
   c. Reject the plan and inform the applicant in writing of those requirement(s) that have not been met and the procedure for submitting revised information and/or submittals.

B. If the Community Development Director fails to act on the original or revised complete submission required by this Article within ten (10) business days of receipt, the applicant shall be authorized to request the Community Development Director to expedite its submission. Except as otherwise provided in this Article, an applicant shall not be authorized to proceed with land disturbance activities without a permit.

C. The Community Development Director may approve a plan and authorize the Building Official to issue a building permit or may issue a land disturbance permit if all required submittals comply with all the requirements of Section 4-1-N-2 and Section 4-1-N-4 through Section 4-1-N-12 and the Community Development Director determines that best management practices will be employed to control erosion and sedimentation to the maximum extent practicable.

D. The Community Development Director may require the applicant to attend a preconstruction meeting prior to the issuance of a permit.

Section 4-1-N-14 CONDITIONS OF APPROVAL.

In approving the issuance of any permit, the Community Development Director may impose any conditions as may be reasonably necessary to secure the objectives of this Article, prevent the creation of a nuisance, or prevent an unreasonable hazard to persons or to a public or private property. These conditions may include , but need not be limited to:

A. The granting (or securing from others) and the recording in County land records of easements for drainage facilities, including the acceptance of their discharge on the property of others, and for the maintenance of slopes or erosion control facilities;
B. Adequate control of construction related dust by watering, or other control methods acceptable to the Community Development Director;
C. Improvements of any existing grading, ground surface or drainage condition on the site (not to exceed the area as proposed for work or development in the application) to meet the standards required under this Article for land disturbance, drainage, and erosion control;
D. Installation of sediment traps and basins adjacent to a surface water body or in a densely populated area; and
E. Installation of additional safety related devices in the proximity of an elementary school, playground or other areas where small children may congregate without adult supervision.

Section 4-1-N-15 MODIFICATIONS OF PLANS.

A. Modifications of the approved plan may be authorized by the Community Development Director; provided those modifications are consistent with the Erosion and Sediment Control Design Criteria of this Article, where:
    1. Field inspection or evaluation has revealed the inadequacy of the approved plan to accomplish its erosion and sediment control objectives; or
    2. The person responsible for carrying out the approved plan finds that, because of changed circumstances or for other reasons, the approved plan cannot be effectively carried out.
B. Modifications and proof of approval of the approved plan must be noted on Erosion and Sediment Control Plan kept on the site.

Section 4-1-N-16 FEES.

Before issuance of a permit, the applicant shall pay a fee, which shall be in addition to the building permit fee if otherwise applicable, to cover the cost of administration, plan review, and inspection services associated with evaluation of submittals and permits required by this Article. The amount of the fee shall be established by the City Council by resolution or ordinance.

Section 4-1-N-17 PERMIT AND/OR APPROVED PLAN; EXPIRATION AND RENEWAL.

A. The permit shall be valid from the time that it is issued until a final certificate of occupancy or completion certificate pursuant to Section 4-1-N-24 has been issued.
B. If the permittee sells the property before the expiration of the permit, the permit may be assigned to the new owner of the site if the assignment is approved in writing by the Community Development Director, provided that the permittee shall remain responsible for compliance with the permit until a final certificate of occupancy is issued or a completion certificate is issued pursuant to Section 4-1-N-24. Approval of an assignment shall not be unreasonably withheld.
C. If the permittee sells any portion of the property before the expiration of the permit, the permittee will remain responsible for that portion of the property until one of the following events occur:

1. The new owners of the property, with respect to property covered by a permit, makes all submissions required by this Article, which are not waived, to the Community Development Director and he or she approves the plan and issues the new owner a permit; or
2. The new owner of the property obtains a building permit for that portion of the property sold by the permittee. When a new owner has contiguous lots totaling less than one (1) acre, the new owner may design a plan for the contiguous lots as approved by the Community Development Director.

Section 4-1-N-18 COORDINATION WITH OTHER PERMITS.

When a person is developing a site and a permit is required, in accordance with Section 4-1-N-5 of this Article, no other construction permits shall be issued to make improvements on that site until the person has secured the permit required by this Article for the same site. This includes all permits issued by another City department. If a permit required by this Article is revoked or suspended, no other permits for the site will be issued until all pending permit violations have been resolved to the satisfaction of the Community Development Director.

Section 4-1-N-19 INSPECTIONS.

A. Authorized representatives of the City may enter properties upon which land disturbance activities are occurring for the purpose of inspection and enforcement of the provisions of the Article.

B. Land disturbance activity may not proceed until a permit has been issued by the City in accordance with this Article. All work must be performed in accordance with a sequence shown on the approved plan and/or work schedule or a revised sequence approved by the Community Development Director.

C. The permittee shall notify the City forty-eight (48) hours before commencing any land disturbance activity and, if required by the Community Development Director, hold a pre-construction meeting between the permittee or the representative of the permittee and an authorized representative of the Community Development Director.

D. A copy of the permit must be available on the site for inspection by authorized representatives of the City. Field markings showing limits of disturbance must be on site during all installation of erosion and sediment control measures, construction, or other land disturbance activities.

E. Each site that has an approved plan may be inspected as necessary to ensure that erosion and sediment control measures are installed and effectively maintained in compliance with the approved plan and permit. At the discretion of the Community Development Director, inspections may occur at any or all of the following stages:

   1. Upon completion of installation of perimeter erosion and sediment controls, prior to proceeding with any other land disturbance activity. Other building or grading inspection approvals may not be authorized until initial approval by the Community Development Director occurs;
   2. During the construction of sediment basins or storm water management structures, at the inspection points required by the permit;
   3. During rough grading, including hauling of imported or wasted materials;
   4. Prior to the removal or substantial modification of any erosion and sediment control measure or practice; and
   5. Upon completion of final grading, including establishment of ground covers and planting, installation of all vegetative measures, and all other work in accordance with the approved plan.

Requests for inspection shall be made at least twenty-four (24) hours in advance (exclusive of Saturdays, Sundays, and holidays) of the time the inspection is desired.

F. If an inspection reveals a failure to comply with the requirements of this Article, the Community Development Director may notify the permittee or the representative of the permittee in writing of the violation. The notice issued must, as a minimum, state the nature of the violation, any practice or approved plan deficiencies, required corrective action, and compliance time. Any portion of the work that does not comply must be corrected in the compliance time given to the permittee. The City may make additional inspections as it deems necessary, and has the right to waive inspections, excluding the final inspection as provided in Section 4-1-N-24. The Community Development Director shall maintain a record of each inspection. Included in the record must be the date, the location or project identification, whether or not the approved plan has been implemented and measures maintained, and, if a violation exists, the type of enforcement action taken. The record of each inspection shall be maintained for a minimum of four (4) years.

G. When an approved plan shows the use of temporary basins or permanent stormwater management structures, the Community Development Director may require the submission of supportive documents, such as test results, or material certifications. If necessary, in addition to its own inspections, the City may require that any portion of the construction of said basins or structures be inspected and certified by a licensed Professional Engineer, or Landscape Architect, or Land Surveyor. At the Community Development Director's option, the permittee may secure the services of a Professional Engineer, Landscape Architect, or licensed Land Surveyor to inspect the construction of the facilities and to provide the City with a fully documented certification that all construction is done, to the best of his/her knowledge, in accordance with the provisions of the approved plan, applicable rules, regulations and criteria. If a certification is provided to the City, inspections required under Subsection 4-1-N-19-E-2 for the basin or structure may be waived. In these cases, the Community Development Director must be notified at the required inspection points and may make periodic erosion sediment inspections, or any further inspections as needed.

Section 4-1-N-20 ACTION UPON NONCOMPLIANCE.

A. In the event work does not conform to the permit or conditions of approval or to the approved plan or to any instructions of the City as authorized by this Article, notice to comply shall be given to the permittee in writing. After a notice to comply is given, the permittee or the permittee's contractor(s) shall be required to make the corrections within the time period determined by the City. If the Community Development Director determines that the nonconforming work has caused or created an imminent threat to public health and safety, the City may perform the work necessary to eliminate the threat without notice to the permittee.

B. If the permittee fails to make the required corrections within the time period allotted by the City, as required in subsection A above, the Community Development Director may post a stop work order at the site directing that all land disturbance activity cease immediately. For the purposes of this Section, a stop work order is effective upon posting a copy of the stop work order on the site of the land disturbance activity in reasonable proximity to a location where the land disturbance activity is taking place. A person must not continue or permit the continuance of work in an area covered by a stop work order, except work required to correct deficiencies with respect to an erosion or sediment control measure. No inspections shall be performed and no additional permits will be issued by the City for the site while a stop work order is in effect. Any person who shall continue to work after a stop work order has been posted, except such work as that person is directed by the City to perform to remove a violation or unsafe condition, is guilty of a public offense and may be subject to penalties as prescribed herein.

1. Except as set forth in subsection 2 below, the City must provide written notice to the permittee or a representative of the permittee when a stop work order is issued. A copy of the order, in the case of work for which there is a permit, shall be mailed by first class mail, postage prepaid, to the address listed by the permittee on the permit. In the case of work for which there is no permit, a copy of the order shall be mailed to the person listed as owner of the property by Johnson County land records. That notice must specify the extent to which work is stopped and the conditions under which work may resume. The permittee is responsible for the actions of agents of the permittee and must notify those agents when a stop work order is issued that will affect an area within which the agents are to work. In this regard, "agent" is defined as any person who acts at the instruction, with the permission, or to the benefit of the permittee.
2. A stop work order may be issued without prior written notice where the Community Development Director determines that:
    a. Land disturbance is taking place that requires a permit under this Article and one has not been approved;
    b. Required erosion and sediment control measures are not installed, inspected, and approved before the land disturbance;
    c. The limits of disturbance are being violated; or
    d. An inspection reveals the existence of any condition or any act that:
        1. is creating or will create a nuisance or hazard; or
        2. endangers human life or the property of others.

C. Failure of the permittee to make the necessary corrections within ten (10) days after a stop work order is posted shall constitute a public offense and is punishable as prescribed in this Article. Upon such failure, the City may:
1. issue a Notice to Appear, setting a date and time for appearance in Municipal Court. The Community Development Director shall have authority to issue a Notice to Appear under this Article. The City may seek all criminal and civil penalties allowed by this Chapter, as well as any injunctive relief that may be appropriate; and/or
2. correct or abate the violation.

D. If the City performs work to correct a violation of this Article, the costs incurred by the City to perform this work shall be paid by the owner or permittee out of the performance guaranty required by Section 4-1-N-22 to the extent that the amount is covered thereby, with any remainder being directly due and owing by the owner or permittee, as set forth in Section 4-1-N-22-D hereof. In the event no permit was issued or no performance guaranty was posted, the cost, plus interest at the rate authorized by the City, plus a reasonable administrative fee shall be billed to the owner. If in any event the amount due is not paid, the City Clerk shall certify the amount due to the Clerk of Johnson County, Kansas, and it shall, in accordance with law, become a lien upon all property and all rights to property, real or personal, of any person liable to pay the amount due. This amount shall be listed on the tax bill and be collected in the manner of ordinary taxes as authorized by law.

E. The Community Development Director shall have authority, but not the obligation, to issue additional notices and extend the time given to a permittee to perform any action required under this Article.

F. Any person who violates a provision of this Article, fails to comply with any of the requirements thereof, or fails to comply with a directive of the City as authorized by this Article is guilty of a public offense and shall be subject to penalties as provided in Section 1-1-C-3 of this Code. In addition, the City may seek such additional remedies and have such additional enforcement powers as set forth in Section 4-1-L-2 of this Code.

Section 4-1-N-21 PERMIT SUSPENSION AND REVOCATION; STOP WORK ORDER. (Rep. Ord. 4986, eff. 9/25/2007)

Section 4-1-N-22 PERFORMANCE GUARANTY.

A. Prior to issuance of a permit the applicant must submit a performance guaranty that meets the requirements specified in this Section and in a satisfactory form approved by the City Attorney. That instrument shall be conditioned upon the faithful performance of the terms of the permit, and the soil erosion and sediment control measures specified in the permit and approved plan, within the time specified by the Community Development Director or within any extension granted by the Community Development Director. The amount of the performance guaranty required by this Section shall be as determined by the Community Development Director to secure the costs of improvements required in an approved plan, and this amount shall be in addition to any other amounts necessary to secure the faithful performance of other acts required of permittee by the City that the performance guaranty is intended to cover. The Community Development Director may grant a partial or complete waiver of the performance guaranty, upon application, for governmental or quasi-governmental entities or state regulated utilities or where the Community Development Director finds minimal impairment of existing surface drainage, minimal erosion hazard, minimal sedimentation hazard upon any adjacent land or watercourse, and no hazard to human life or property.

B. Whenever the City finds that a default has occurred in the performance of any term or condition of the permit, approved plan, or performance guaranty, or a violation of Section 4-1-N-26 has occurred, written notice of default must be given to the permittee and to the surety or issuing organization or entity. The notice must state the work to be done, the estimated cost, and the specified period of time deemed by the Community Development Director to be reasonably necessary for completion of the work.

C. If a cash bond has been posted, notice of default as provided by the preceding paragraphs must be given to the permittee; and if compliance is not obtained within the time specified, the City may proceed, without delay and without further notice or proceedings, to use the cash deposited or any portion of the deposit to cause the required work to be done by contract or otherwise in the discretion of the Community Development Director.

D. In the event of any alleged default in the performance of any term or condition of the performance guaranty, the City, the surety, the issuing organization or entity, or any person employed or engaged on its behalf has a right to go upon the site to complete the required work necessary to control erosion and sedimentation or to protect properties, watercourses, and persons. In the event the City undertakes this work with the funds from a forfeited performance guaranty, the funds must be used to pay the cost of contracting, including engineering and administration, for necessary restoration of the site to control erosion and sediment within the requirements of the approved plan, permit, or performance guaranty or this Article. If the cost of the work necessary to control erosion and sediment or to protect properties, watercourses, and persons exceeds the amount of the performance guaranty, the permittee shall continue to be firmly bound under a continuing obligation for payment of all excess costs and expenses incurred by the City. The cost of necessary work in excess of the performance guaranty shall be certified by the City Clerk to the Clerk of Johnson County, Kansas, and shall, to the extent authorized by law, become a lien upon all property and all rights to property, real or personal,

of any person liable to pay that cost. The cost of removal shall be listed on the tax bill and be collected in the manner of ordinary taxes to the extent authorized by law.

E. A person must not interfere with or obstruct the ingress or egress to or from a site or premises by an authorized representative or agent of any surety, issuing organization or entity, or the City engaged in completing the work required to be performed under the permit or in complying with the terms or conditions of the approved plan or the permit.

F. A performance guaranty remains in full force and effect until a completion certificate is issued, pursuant to Section 4-1-N-24 of this Article, and all other permittee's acts covered by the performance guaranty have been determined to be complete in accordance with the applicable City Code provisions. A cash bond must be returned to the depositor or to the successors or assigns of the depositor upon issuance of a completion certificate for the work in accordance with Section 4-1-N-24 of this Article, except any portion that may have been used. Failure to renew the performance guaranty fourteen (14) calendar days prior to expiration shall be deemed default.

G. The Community Development Director shall immediately direct the Building Official to revoke the permit upon failure of any permittee to maintain the performance guaranty.

Section 4-1-N-23 MAINTENANCE OF STRUCTURES, MEASURES AND DEVICES.

A. The permittee or the owner of any property on which work has been done pursuant to a permit, or any other person or agent in control of that property, must inspect and maintain in good and effective condition and promptly repair or restore all grade surfaces, walls, drains, dams and structures, plantings, vegetation, and other erosion and sediment control measures and devices. The permittee or owner, their agent, contractor, and employees shall, each day, maintain and repair all graded surfaces and erosion control facilities, drainage structures, and other protective devices, plantings, and ground cover installed while construction is active. After construction is complete, the owner or their agent shall continue to regularly inspect the vegetation until adequate turf or other suitable vegetative cover is established. Repair or restoration, and maintenance, must be in accordance with the approved plan, and permit as required by this Article until permanent measures are accepted by the City.

B. Any person who performs utility related work under a permit is responsible for the repair or maintenance of all erosion and sediment control measures affected by the utility construction. Repair or maintenance must be in accordance with subsection A of this Section.

Section 4-1-N-24 COMPLETION.

Upon completion of the project and after the site is stabilized, the permittee must notify the Community Development Director and schedule a final inspection. Upon final inspection of the project, the Community Development Director has sole discretion to determine whether all work subject to inspection has been satisfactorily completed in accordance with the requirements of this Article, the permit, and the approved plan, rules and regulations, and that any supporting documents required under Section 4-1-N-19-G are accepted.

Section 4-1-N-25 PROTECTION OF ADJACENT PROPERTY DURING LAND DISTURBANCE ACTIVITIES.

A person must not initiate land disturbance activities sufficiently close to the property line so as to endanger any adjoining property, including a public street, sidewalk, or alley. The adjoining property should be supported and protected from damage that may result from land disturbance activities including, but not limited to, settling, cracking, vegetative damage, erosion, soil deposition, and excessive construction dust. If, in the opinion of the Community Development Director, the land disturbance activity creates a hazard to life or property that is not adequately safeguarded, the permittee must construct walls, fences, guard rails, or other structures to safeguard the adjoining private property or public street, sidewalk, alley, or other public property and persons, as the Community Development Director may require.

Section 4-1-N-26 DEPOSITS OF SOIL OR OTHER MATERIAL PROHIBITED.

A. A person must not engage in any land disturbance activity or by any action cause or permit any soil, earth, sand, gravel, rock, stone, or other material, to be deposited upon or to roll, flow, or wash upon or over the premises of another without the express written consent of the owner of the premises affected. A person must not engage in any land disturbance activity or by any action cause or permit any soil, earth, sand, gravel, rock, stone, or other material to be deposited to roll, flow, or wash upon or over any public street, street improvement, road, sewer, storm drain, watercourse, rights-of-way, or any public property.

B. A person must not, when hauling soil, earth, sand, gravel, rock, stone, or other material over any public street, road, alley, or public property, allow those materials to blow or spill over and upon any street, road, alley, or public property or adjacent private property.

C. If any soil, earth, sand, gravel, rock, stone or other material is caused to be deposited upon or to roll, flow, or wash upon any public or private property in violation of subsections A and B above, the Community Development Director shall notify the person responsible within ten (10) days after becoming aware of the condition. The notice issued must, as a minimum, state the nature of the violation, required corrective action, and compliance time. The person responsible for the violation must cause the material to be removed from that property within the compliance time set forth in the notice. In the event of an immediate danger to the public health or safety, as determined by the Community Development Director, notice must be given by the most expeditious means in the discretion of the Community Development Director and the material must be removed immediately. In the event it is not so removed, the City may cause the removal. The cost of the removal by the City must be paid to the City by the person who failed to remove the material. The cost of removal may be certified by the City Clerk to the Clerk of Johnson County, Kansas, and shall, to the extent authorized by law, become a lien upon all property and all rights to property, real or personal, of any person liable to pay that cost. The cost of removal shall be listed on the tax bill and be collected in the manner of ordinary taxes to the extent authorized by law. In addition, the City may treat the failure to remove as a default on the performance guaranty and remedy the default as authorized by Section 4-1-N-22-B and Section 4-1-N-22-D. If costs are not fully paid by the performance guaranty, the amount unpaid may be collected as taxes as provided above.

Section 4-1-N-27 LIABILITY.

The permittee is responsible for safely and legally completing the project. Neither the issuance of a permit under the provisions of this Article, nor the compliance with the provisions hereto or with any condition imposed by the City, shall relieve any person from responsibility for damage to persons or property resulting therefrom, or as otherwise imposed by law, nor impose any liability upon the City for damages to persons or property.

Section 4-1-N-28 FINES AND PENALTIES.

The City shall have the enforcement and remedial actions set forth in Section 4-1-L-2 of the City Code if any persons allows or performs a land disturbance activity without obtaining a permit, as required by this Article, allows or performs a land disturbance activity in a manner that does not comply with an approved plan or a permit or works with a revoked or suspended permit.

Section 4-1-N-29 REGULATIONS. (Rep. Ord. 4986, eff. 9/25/2007)

TITLE 3 PUBLIC HEALTH AND SAFETY

CHAPTER 3-2 ANIMALS AND ANIMAL CONTROL

Article 3-2-D ANIMAL NUISANCES

Section 3-2-D-3 EXCREMENT.

It shall be unlawful for any person to:

A. Appear with an animal upon the public ways, within public places or upon the property of another, absent that person's consent, without some means for the removal of excrement.

B. Fail to immediately remove any excrement deposited by his animal upon any public or private property other than the property of the owner of the animal.

C. Fail to promptly remove and sanitarily dispose of animal excrement in any pen, run, cage, shelter or yard or other place where the animal is kept.

D. Fail to remove or dispose of animal excrement in such a manner as to prevent the breeding or infestation of flies or other insects.

Subsections A and B of this Section shall not apply to a blind person while walking his service dog.

TITLE 4 UNIFIED DEVELOPMENT CODE

CHAPTER 4-5 PUBLIC WORKS

Article 4-5-E STORMWATER MANAGEMENT REGULATIONS

Section 4-5-E-1 PURPOSE AND INTENT.

In order to promote the public health, safety and general welfare of the citizens of Lenexa, these stormwater management regulations are hereby enacted for the general purpose of assuring the proper balance between man's use of land and the preservation of a safe and beneficial environment. More specifically, the provisions of these regulations, as amended from time to time, are intended to reduce property damage and human suffering and to minimize the hazards of personal injury and loss of life due to flooding, to be accomplished through the approval of stormwater management plans pursuant to the provisions of these regulations, which:

A. Establish the stormwater management systems;
B. Define and establish storm water management practices and use restrictions;
C. Establish guidelines for handling increases in volume and peak discharges of runoff;
D. Protect all habitable structures from flooding; and
E. Establish a technical review committee to review decisions of the City Engineer;
F. Balance and promote the coexistence of the natural environment and quality, planned development;
G. Assist in the City's efforts to comply with the National Pollutant Discharge Elimination System (NPDES) Phase 2 Stormwater Management regulations issued by the Environmental Protection Agency and administered by the Kansas Department of Health and Environment (KDHE);
H. Provide effective stormwater management; manage areas prone to flooding to protect human life and property from damage due to flooding and erosion;
I. Improve water quality and reduce water pollution;
J. Reduce the percentage of imperviousness, peak flows and velocity of stormwater discharged into the Stormwater Management System;
K. Control construction site impacts on stormwater; prevent non-stormwater discharges into the Stormwater Management System; protect natural stream assets;
L. Protect and, where possible, enhance valuable natural water resources; and
M. Incorporate, where possible, multiple uses into stormwater management facilities.
N. Regulate land-disturbance, filling, stripping and soil storage in connection with the clearing and grading of land for construction-related or other purposes.
O. Encourage responsible development and minimize the costs of development.

Section 4-5-E-2 APPLICABILITY.

Any person proposing new development or redevelopment within the City shall apply to the Community Development Director for approval of a stormwater management plan as specified in these regulations. No land shall be developed except upon approval of such plan.

Section 4-5-E-3 STORMWATER RUNOFF MANAGEMENT SYSTEM.

This Article establishes the Stormwater Management System of Lenexa, which is composed of all natural and manmade watercourses and drainage Structures, both public and private, located in the City, as well as management controls and management practices as hereinafter established. The Stormwater Management System includes but is not limited to, pumping stations; enclosed storm sewers; outfall sewers; surface drains; street, curb and alley improvements associated with storm or surface water improvements; natural and manmade wetlands; Channels; ditches; rivers; streams; wet and Dry Bottom Basins; and other flood control facilities and works for the collection, transportation, conveyance, pumping, treatment, controlling, managing, and disposing storm or surface water or pollutants originating from or carried by storm or surface water. The Stormwater Management System includes the Engineered Stormwater System, the Public Stormwater Management System, and the Private Stormwater Management System.

Section 4-5-E-4 PRIMARY SYSTEM. (Rep. Ord. 4624)

Section 4-5-E-5 SECONDARY SYSTEM. (Rep. Ord. 4624)

Section 4-5-E-6 MANAGEMENT CONTROLS. (Rep. Ord. 4624)

Section 4-5-E-7 MANAGEMENT PRACTICES. (Rep. Ord. 4624)

Section 4-5-E-8 PUBLIC AND PRIVATE RESPONSIBILITIES.

A. Public Responsibilities:
   1. Administration: The administration of these regulations shall be the responsibility of the Community Development Director, who shall review and approve stormwater management plans as provided herein.
   2. Operation And Maintenance Of the Public Stormwater Management System: The City shall be responsible, during and after construction, for the Operation and Maintenance of the Public Stormwater Management System.

B. Private Responsibilities:
   1. Each developer of land within the City has the responsibility to provide on the developer's property all approved stormwater runoff management facilities to ensure the adequate drainage and control of stormwater on the developer's property both during and after construction of such facilities.
   2. Each developer or owner has the responsibility and duty before and after construction to properly operate and maintain any on-site stormwater runoff control facility which has not been accepted for maintenance by the City. Such responsibility is to be transmitted to subsequent owners through appropriate covenants or maintenance agreements as detailed in this Article.
   3. The City Council, in its sole discretion, may accept dedication of any existing or future Stormwater Management Facility for maintenance, provided such facility meets all the requirements of this Article and includes adequate and perpetual access and sufficient area, by easement or otherwise, for regular inspection and maintenance. Upon acceptance the Stormwater Management Facility shall become part of the Public Stormwater Management System.

Section 4-5-E-9 PROCEDURES FOR SUBMITTAL.

No development shall increase the quantity and rate of stormwater emanating from said land areas except in accordance with an approved stormwater management plan as provided in these regulations. The storm water management plan shall be prepared by a professional engineer licensed in the State of Kansas. No building permits shall be issued until and unless the stormwater management plan has been approved by the Engineering and Construction Services Administrator.

Section 4-5-E-10 SUBMISSION OF PRELIMINARY STORMWATER MANAGEMENT PLAN.

The purpose of the preliminary stormwater management plan is to determine whether stormwater requirements will be met with the proposed Stormwater Management Facilities. The preliminary storm water management plan for any proposed development shall be submitted with the preliminary development plan and shall meet requirements set forth in Stormwater Management Plan - Criteria and Plan Requirements, compiled by the City of Lenexa Community Development Department, Engineering Division and dated July 2017, which is hereby incorporated by reference. No less than three (3) copies of such document shall be marked or stamped "official copy" as adopted by Ordinance No. 5678 with a copy of the Ordinance codified herein and filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

The submission requirements in this Article are not intended to be duplicative of other provisions of this Title or Code as they correspond to development-related activities. Accordingly, the relevant submission requirements may be included in or with any other development application(s) or submission(s) otherwise required by this Title or Code. Therefore, to the extent that the proposed development activities require compliance with multiple sections and, consequently, require the submission of application components pursuant to different Code sections, these Code sections should allow for the substitution of similar application materials, regardless of presentation format, and should otherwise be interpreted in a light conducive to facilitating the application process; provided, that all the information required therein is in a form that can reasonably be evaluated by the designated decision maker. The decision concerning the form of the information submitted shall be made in the Engineering and Construction Services Administrator's sole discretion. In addition, the Engineering and Construction Services Administrator has authority to waive submission requirements determined not to be necessary to the evaluations that are required by this Article.

Section 4-5-E-11 REVIEW OF PRELIMINARY STORMWATER MANAGEMENT PLAN.

Following receipt of the preliminary stormwater management plan and information to be included with such plan, the general drainage concepts and planning proposals will be reviewed by the Engineering and Construction Services Administrator. A review meeting then may be scheduled by the Engineering and Construction Services Administrator with representatives of the developer, including the developer's engineer, to review the overall concepts included in the preliminary stormwater management plan. The preliminary stormwater management plan shall be submitted with the preliminary plat or plan of development. The Engineering and Construction Services Administrator shall approve the preliminary stormwater management plan if he finds, in his or her sole discretion, that the proposed development will not:

A. Cause flooding outside of the existing flood plain boundary during a 1% frequent flood that would not have occurred without the proposed improvements.

B. Cause or increase flooding of existing Structures.

C. Contribute to unacceptable Channel erosion as predicted using criteria established by the City. Unacceptable erosion will include: erosion outside the 1% flood plain, erosion encroachment close to existing Structures, erosion encroachment into roads and infrastructure, threats to designated stream assets, and rapid progression of the Channel erosion upstream.

D. Contribute sedimentation to the Channels or detention areas. The developer will be responsible for the removal and disposal of all sedimentation that occurs from failure of an approved erosion plan that has been contributed by the proposed development in the joint-use Detention Basins downstream of the proposed improvements.

E. Create or contribute adverse impacts to water quality.

The City shall consider the impacts to existing Structures and other property downstream of the proposed Project. This consideration shall extend to immediate impacts on adjacent properties and to the point where the proposed facility drainage area is 10 percent or less of the basin area. The impacts from the flow rate, the velocity and the quality of the runoff shall be considered. The velocity shall not erode or deposit sediments in designated stream assets. The runoff should not contain excessive sediment concentrations, biological oxygen demand, dissolved oxygen, nutrient, organic, total dissolved solid, heavy metal or pathogen levels that threaten the viability and health of the designated stream assets or the joint-use or regional retention system. The threshold of acceptable limits shall be based on the limits set by KDHE in Article 16. Water Pollution Control, Surface Water Quality Standards, KAR 28-16-28e and amendments thereto.

In addition, the City's review and approval process shall involve the consideration of the applicant's use of alternative design methods to reduce imperviousness, peak flows, and velocities to minimize erosion and sedimentation and to protect the water quality of the stormwater runoff discharged into the Stormwater Management system.

Finally, the City shall consider the applicant's incorporation of multiple uses into the stormwater management plan. To the extent that recreational uses, trails, and/or open spaces are utilized, the level of imperviousness may be increased at the discretion of the City.

Section 4-5-E-12 FINAL STORM WATER RUNOFF MANAGEMENT PLAN.

Following review and general approval of the preliminary stormwater management plan by the Engineering and Construction Services Administrator, a final stormwater management plan shall be prepared for each phase of the proposed Project as each phase is developed and prior to the issuance of any Building Permit. A professional engineer, licensed in the State of Kansas, shall sign and properly seal the plan. The final plan shall constitute a refinement of the concepts approved in the preliminary stormwater management plan and shall include the information required in Stormwater Management Plan - Criteria and Plan Requirements, as adopted in Section 4-5-E-10.

Section 4-5-E-13 REVIEW AND APPROVAL OF FINAL STORMWATER MANAGEMENT PLAN.

A. Final stormwater management plans shall be reviewed by the Engineering and Construction Services Administrator. If the Engineering and Construction Services Administrator determines that the proposed development will provide management of stormwater runoff in accordance with the purposes, design criteria and performance standards of these regulations and the City's watershed management program and will not be detrimental to the public health, safety and general welfare, he or she shall approve the stormwater management plan or conditionally approve the stormwater management plan, setting forth the conditions of approval. If it is determined that the proposed development will not properly manage stormwater runoff in accordance with these regulations the

Engineering and Construction Services Administrator shall reject the final stormwater management plan. If rejected, the application and data shall be returned to the applicant for resubmittal.

B. The Engineering and Construction Services Administrator shall have the authority to waive the requirement of a stormwater management plan meeting all of the requirements in those individual cases that involve the construction of a single Building or an addition to an existing Building or otherwise have no significant effect on the drainage characteristics of the watershed.

Section 4-5-E-14 AS-BUILT PLANS. (Rep. Ord. 3928, 5/18/1995)

Section 4-5-E-15 DESIGN CRITERIA.

The following documents shall jointly govern the design of stormwater management improvements:

A. Except as otherwise provided, Section 5600 Storm Drainage Systems and Facilities of the Standard Specifications and Design Criteria of the Kansas City Metropolitan Chapter of the American Public Works Association, dated February 16, 2011, is hereby incorporated by reference for the purpose of regulating the design of improvements with respect to Stormwater runoff.

No less than three (3) copies of such document shall be marked or stamped "official copy" as adopted by Ordinance No. 5678 with a copy of the Ordinance codified herein and filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

Sections 5601.5, 5606, and 5608.4 of the Storm Drainage Systems and Facilities of the Standard Specifications and Design Criteria of the Kansas City Metropolitan Chapter of the American Public Works Association, dated February 16, 2011, are hereby repealed and new Sections 5601.5, 5606, and 5608.4 are added to read as follows. Additions are denoted with double asterisks (**).

Section 5601.5, System Types and Applications.

In the event of any conflict between these Sections and the provisions of the City's Stream Setback Article (4-1-O), the Stream Setback Article shall control.

A. General Guidelines: Natural Channels are to be preserved to the maximum extent practicable as site conditions permit. Design standards for natural Channels are addressed in Section 5605. Engineered Channels, the next highest priority system component, shall be designated and coordinated with the design of building lots and streets in accordance with the design criteria and performance standards addressed in Section 5607.

To the maximum extent possible, drainage systems, street layout and grades, lot patterns and placement of curbs, inlets and site drainage, and overflow swales shall be concurrently designed in accordance with the design criteria and performance standards set forth in this document. Curb and gutter may be omitted or modified where approved by the City/County Engineer and deemed feasible in conjunction with other stormwater management practices including water quality BMPs.

Engineered stormwater management facilities, which are enclosed conveyance systems consisting of inlets, conduits, and manholes may be used to convey Stormwater Runoff where site conditions and open space requirements will not permit the use of natural or engineered Channels. Where used, such engineered stormwater management facilities must be designed in accordance with design criteria and performance standards addressed in Section 5606.

Generally, a private engineered stormwater management facility is engineered and constructed when the drainage area exceeds 2 acres.

Generally, a public engineered stormwater management facility is constructed when the peak discharge is greater than 8 cfs for the 10% design storm and the drainage is generated by more than one lot or the drainage area is greater than 2 acres.

1. Open Systems: Where feasible, open systems consisting of open or engineered Channels shall be used if all of the following design criteria and the conditions of Section 5601.8 are met:

a. The Channel slope is less than or equal to 5% or where appropriate armoring techniques are used to prevent erosion.

b. The 50% storm velocity is less than or equal to 5 feet per second (fps) or where appropriate armoring techniques are used to prevent erosion.

c. When 60 feet or farther away from top of bank to any existing or proposed habitable building, regardless of system design capacity.

2. Enclosed Systems: Enclosed systems consisting of underground pipes, culverts, and similar underground structures shall be used to convey stormwater at all locations whenever one of the following design criteria and the conditions of 5601.8 are met:

a. Where natural Channels or open systems are not feasible per the requirements set forth in Section 5605 and Section 5601.5-A1.

b. Within the right-of-way of streets with curbs, regardless of system design capacity.

3. Overflow Systems: Each conveyance element of the stormwater drainage system (whether open, enclosed or detention) shall include an overflow element. Overflow systems shall:

a. Be designed to route downstream any amount of the 1% storm exceeding the in-system design capacity specified in Section 5601.8.

b. Include streets, engineered Channels, redundant piping, spillways, parking lots, drives or combinations thereof.

c. Limit the maximum water surface elevation generated by the 1% storm as specified in Section 5601.8.

d. Conform to local standards regarding dedicated easements and/or restricted uses for overflow systems; consult with the local authority for requirements.

e. Be limited to the natural drainage basins, unless overflows transferred out of a natural drainage basin (e.g. a thoroughfare straight-graded through a drainage basin with a sump in another drainage basin) are added to the overflows in the receiving drainage basin and the combined overflow still meets the criteria at 5601.5 A 3C.

4. Stormwater Management: New development or redevelopment as defined in Section 5601.2 shall incorporate stormwater management measures to control runoff from the site. Allowable runoff from a site may be limited by the need to minimize downstream flood damage, prevent erosion, and/or minimize impacts to the ecology and water quality of the downstream drainage system. It is recognized for site-level runoff controls to be effective, consistent application across a watershed is necessary to realize measurable benefits along the downstream system. This section presents four site runoff control strategies that can be applied to sites within a watershed based on watershed protection goals and identified problems. The City/County or local authority shall pre-determine which strategy is to be applied within its watersheds or subsheds. If watershed control strategies are not defined by the local authority, the default strategy for new development shall be the Comprehensive Protection strategy.

The City of Lenexa detention strategy is as follows: Peak runoff control is provided for the 10% and 100% storms with volumetric and/or extended detention control of the 90% mean annual event storm for protection of the receiving system from Channel erosion. Detention of the 1% storm is required only if there is a downstream flooding problem. A downstream flooding problem is defined as existing flooding of an existing habitable Structure, roadway, or public facility or modeled flooding of the same as a result of the proposed development. The potential for flooding should be checked downstream from the development to the point that the development is less than 10% of the entire watershed.

If flooding problems do not occur, as described above, detention of the 1% storm will not be allowed.

a. Default Strategy: Comprehensive Protection:
Under this tragedy, peak runoff control is provided for the 1%, 10% and 50% chance storms and volumetric and/or extended detention control of the 90% mean annual event storm for broad protection of the receiving system, including Channel erosion protection and flood peak reductions over a range of return periods. This strategy shall be the default strategy unless otherwise designated or approved by the local authority. Performance standards and sizing criteria are provided in Section 5608.

b. Reduced Control Strategies:
1) Frequent Event Control for Stream Erosion Protection: This strategy provides runoff control for the 10% and 50% chance storms and volumetric and/or extended detention control of the 90% mean annual event storm in order to protect downstream Channels from erosion. This strategy is appropriate for largely undeveloped watersheds containing natural streams where downstream flooding of existing Structures is not present and would not occur under future upstream full-development conditions.

2) Extreme Flood Event Control Only: Under this strategy, detention is provided solely to reduce peak runoff rates for the 10% and 1% storm events. Over-detention of the peak release rates at the discharge point (i.e. requiring the post-development rate to be less than the pre-development rate) is used to ensure a cumulative benefit for a reasonable distance downstream. If known flooding occurs

downstream in flood events more frequent than the 10% event, the local authority may require control of these events. This strategy is not effective at protecting stream Channels and banks from erosion. It is most applicable in certain redevelopment and in-fill situations where flooding problems are known, existing downstream stream conditions are already poor, and economic barriers to redevelopment preclude more extensive control.

3) Special Locally-Defined Strategies: The City/County may develop alternative strategies that are tailored to the unique circumstances of their watersheds. Such strategies may apply globally to the City/County or only to certain designated areas. The City/County will identify each alternative strategy with a unique descriptor and publish the requirements for each.

Such alternative strategies may involve increased or decreased allowable release rates, relaxed or more stringent controls for certain storm return intervals, reliance on infiltration or low-impact development practices for added volume control, planning and open space controls, and/or special requirements to participate in regional control facilities instead of development-scale facilities.

Stormwater management for site development may include structural facilities and/or non-structural solutions. Where runoff controls are required, low-impact development practices or, off-site control of runoff in addition to or instead of the standard wet or Dry Bottom Basins may be used.

5606 Enclosed Pipe Systems

Section 5606 is adopted as written in the Kansas City Metropolitan Chapter of the American Public Works Association, dated February 16, 2011 with the following addition:

Acceptable pipe materials for pipe systems to be publicly or privately owned and maintained included reinforced concrete pipe (RCP) and high density polyethylene (HDPE). However, HDPE may not be used under public roadways.

5608.4 Performance Criteria:

A. General Provisions:

1. Detention/retention facilities shall have 1,000 acres or less area tributary to the facility.

2. Dams which are greater than 10 feet in height but do not fall into State or Federal requirement categories shall be designed in accordance with the latest edition of SCS Technical Release No. 60, "Earth Dams and Reservoirs", as Class "C" structures.

3. All lake and pond development must conform to local, state, and federal regulations. Legal definitions and regulations for dams and reservoirs can be found in the Missouri Code of State Regulations, Division 22, and the State of Kansas Rules and Regulations, KSA 82a-301 through 305a.

B. Computational Methods:

1. Time of Concentration and Travel Time: Refer to Section 5602 for acceptable hydrology methods.

2. Temporary Storage Volume: A preliminary value of the storage requirement may be obtained through methods outlined in (SCS, 1986, Chapter 6) or other acceptable methods. The storage shall be checked during routing of design hydrographs through the basin and adjusted appropriately.

3. Hydrograph Routing: The storage indication method (Modified Puls) of routing a hydrograph through a Detention Basin may be utilized. Reference: (Chow, 1964). Under the Comprehensive and Frequent Event Strategies, the water quality orifice is designed to store the water quality storm and drain it within 40 hours. Routing of the other larger storms is then done independently, assuming the water

quality storm is not present, but using the water quality orifice as part of the rating curve.

C. Release Rates: The maximum release rate from any development under the runoff control strategies outlined in Section 5601.5.A-4 shall be as follows:

For basin designs within the City of Lenexa, the designer shall match existing release rates for all applicable storms and provide 40-hour extended detention of runoff from the local 90% mean annual event (1.37"). See Chapter 6 of the MARC/APWA BMP Manual for calculating volume.

1. Comprehensive Control

a. Post-development peak discharge rates from the site shall not exceed those indicated below:

- 50% storm peak rate less than or equal to 0.5 cfs per site acre
- 10% storm peak rate less than or equal to 2.0 cfs per site acre
- 1% storm peak rate less than or equal to 3.0 cfs per site acre

b. 40-hour extended detention of runoff from the local 90% mean annual event (1.37"/24-hour rainfall). See Chapter 6 of the MARC/APWA BMP Manual for calculating this volume.

2. Frequent Event Control

a. Post-development peak discharge rates from the site shall not exceed those indicated below:

- 50% storm peak rate less than or equal to 0.5 cfs per site acre
- 10% storm peak rate less than or equal to 2.0 cfs per site acre

b. 40-hour extended detention of runoff from the local 90% mean annual event (1.37"/24-hour rainfall). See Chapter 6 of the MARC/APWA BMP Manual for calculating this volume.

3. Extreme Flood Event Control

a. Post-development peak discharge rates from the site shall not exceed those indicated below:

- 10% storm peak rate less than or equal to 2.0 cfs per site acre
- 1% storm peak rate less than or equal to 3.0 cfs per site acre

Note: If known flooding occurs downstream in flood events more frequent than the 1% event, the local authority may require control of these events.

D. Detention Basin Size:
1. Owners/engineers may utilize methodology outlined in (SCS, 1986). A 24-hour Type II rainfall distribution shall be required storm hyetograph. Hydrologic simulation models shall be based on not less than Antecedent Moisture Condition II (see Section 5602.2). Maximum detention storage shall be based upon the allowable release rate and on the developed condition for the site. Cities and Counties may establish additional standards for other storm sizes in order to provide stream Channel and water quality protection.

2. Detention Storage Reduction with Upstream BMPs: When volumetric control BMPs are implemented on a site, the volume captured by these BMPs may be deducted from the site detention volume required for the 90% mean annual event under the "Frequent Event" and "Comprehensive" control designs. Volumetric BMPs are defined as those BMPs in the MARC/APWA BMP Manual that infiltrate or provide 40-hour extended detention of the 90% mean annual event runoff (or water quality volume, WQv). Volumetric BMPs (per Chapter 4 of the MARC/APWA BMP Manual) include:

- Bioretention
- Rain gardens
- Infiltration basins and trenches

• Bio-swales and wetland swales
• Extended detention facilities (including wetlands)
• Permeable pavement

E. Primary Outlet Works: The primary outlet shall be designed to meet the following requirements:

1. The outlet shall be designed to function without requiring attendance or operation of any kind or requiring use of equipment or tools, or any mechanical devices.

2. All discharge from the detention facility when inflow is equal or less than the maximum design storm under the required Strategy shall be via the Primary outlet system.

3. The design discharge rate via the outlet shall continuously increase with increasing head and shall have hydraulic characteristics similar to weirs, orifices or pipes.

4. For dry Detention Basins not providing extended detention, the design shall allow for discharge of at least 80 percent of the detention storage volume within 24 hours after the peak or center of mass of the inflow has entered the Detention Basin.

5. Ponds shall be designed with a non-clogging outlet such as a reverse-slope pipe, or a weir outlet with a trash rack. A reverse-slope pipe draws from below the permanent pool extending in a reverse angle up to the riser and establishes the water elevation of the permanent pool. Because these outlets draw water from below the level of the permanent pool, they are less likely to be clogged by floating debris.

6. All openings shall be protected by trash racks, grates, stone filters, or other approved devices to insure that the outlet works will remain functional. Minimum orifice size shall be per the current version MARC/APWA BMP Manual. See MARC/APWA BMP Manual Sections 8.6, 8.10 and 8.12 for design guidance and typical details for low-flow outlets and trash rack designs. Note that multiple design options are available for non-clogging low flow outlets and debris collection and designers are encouraged to select the best design for their site.

F. Emergency Spillways: The emergency spillway may either be combined with the outlet works or be a separate Structure or Channel meeting the following criteria:

1. Elevation: Emergency spillways shall be designed so that their crest elevation is 0.5 feet or more above the maximum water surface elevation in the detention facility attained by the maximum design storm under the required Strategy for the facility.

2. Capacity: In cases where the impoundment/emergency spillway is not regulated by either State or Federal agencies, the emergency spillway shall be designed to pass the 1% storm with 1 foot of freeboard from the design stage to the top of the dam, assuming zero available storage in the basin and zero flow through the primary outlet. This design provides an added level of protection in the event of a clogged primary outlet or a subsequent 1% storm event that occurs before the flood pool from the initial storm event recedes to the principal outlet elevation.

G. Draw Down Provision: Drain works consisting of valves, gates, pipes, and other devices as necessary to completely drain the facility in 72 hours or less when required for maintenance or inspection shall be provided.

H. Erosion Control: Primary outlet works, emergency spillways, and drain works, as well as conveyance system entrances to detention basins, shall be equipped with energy dissipating devices as necessary to limit shear stresses on receiving Channels. See Tables 5605-2 and 5606-2 for shear stress criteria.

Detention basins designed to accommodate the 1% storm event shall not be combined with bioretention.

B. Except as otherwise provided, the Manual of Best Management Practices for Stormwater Quality, dated October 2012 and any subsequent addendums published by the Mid-America Regional Council and the American Public Works Association is hereby incorporated by reference for the purpose of providing guidance for planning and implementing best management practices that will control volumes and quality of stormwater discharges and thereby provide crucial assistance in protecting human life and property, maintaining overall water quality and for creating more environmentally sensitive site design.

No less than three (3) copies of such document shall be marked or stamped "official copy" as adopted by Ordinance No. 5678 with a copy of the Ordinance codified herein and filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

The selected BMP(s) must be properly integrated into the overall landscape design, providing aesthetic value in addition to the desired function. Required planting areas may need to be increased to accommodate stormwater management practices as well as maintain compliance with the performance objectives of landscape and buffer requirements outlined in Section 4-1-D-2 (Landscape, Buffer, and Site Design) and Section 4-2-E-4 (Residential Fence/Buffers).

The maintenance activities described in the Manual of Best Management Practices for Stormwater Quality, dated October 2012, should be used as a guideline only. To satisfy the City's requirement for an establishment and maintenance plan, the designer should refer to the current edition of the Design Criteria and Plan Requirements for Public Improvement Plans, as established by the City Engineer.

The following sections of the Manual of Best Management Practices for Stormwater Quality, dated October 2012, shall be revised as follows:

1. Section 8.8 of the Manual of Best Management Practices for Stormwater Quality, dated October 2012, shall be amended such that, in all references, the minimum recommended depth of the permanent pool of an extended detention wetland is six (6) feet instead of four (4) feet.
2. Figure 8.18 of the Manual of Best Management Practices for Stormwater Quality, dated, October 2012, shall be deleted as it contains features that are inconsistent with the text.
3. The Plant List in Appendix A of the Manual of Best Management Practices for Stormwater Quality, dated October 2012, shall be amended to include any plants shown to be native to Kansas on the United States Department of Agriculture Natural Resources Conservation Service Plants Database website, http://plants.usda.gov/java/.

C. Applicability of These Standards. These standards shall apply to all development and redevelopment occurring in the City after the effective date of this Section; provided, however, that the standards shall not apply to:

1. Land which is covered by an approved Final Plan or Final Plat where such approval was given on or before April 20, 2004; or

2. Land which is covered by an approved Preliminary Plan or Preliminary Plat, where such approval was given on or before April 20, 2004, and where construction of any approved detention facility was not yet begun on such date, shall only be required to comply with such standards by modifying said Detention Basin to provide fifty percent (50%), ten percent (10%) and one percent (1%) storm protection and appropriate water quality BMP's , but only to the extent that such modification does not change the lot count or significantly alter the character of any lots shown on the approved Preliminary Plan or Plat.

   Notwithstanding the foregoing, if any Preliminary or Final Plan or Plat covering land exempted pursuant to Subsections 1 and 2 above is amended to a substantial or material degree, compliance with these standards shall be required.

D. Deviations:

1. The Stormwater Technical Review Committee, as defined by the Community Development Director, may approve deviations from the specific terms of Section 4-5-E-15 which would not be contrary to the public interest and where, owing to special conditions, a literal enforcement of the provisions of this Ordinance would result in unnecessary hardship for the applicant, and provided that the spirit of this Ordinance shall be observed, the public safety and welfare secured and substantial justice done for the applicants.
2. An application for a deviation may only be granted upon a finding that all of the following conditions have been met:
   a. That the granting of the deviation will not adversely affect the rights of adjacent landowners.
   b. That the strict application of the provisions of this Ordinance would constitute unnecessary hardship upon the landowner represented in the application.
   c. That the deviation desired will not adversely affect the public health, safety, morals, order, convenience, prosperity or general welfare.
   d. That granting the deviation will comply with the general spirit and intent of this Ordinance.
   e. That it has been determined the granting of a deviation will not result in extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local, federal, or state laws.

   Upon consideration of the factors listed above and the purposes of this Ordinance, the City may attach such conditions to the granting of deviations as it deems necessary to further the purpose of this Chapter.
3. In considering deviation applications, the City has the discretion of using any or all of the following Project evaluations when, in the judgment of the Stormwater Technical Review Committee, these evaluations are relevant and appropriate.

   No individual or combination of evaluations are necessarily required for an application to be approved and the Stormwater Technical Review Committee may weigh these evaluations in light of all relevant considerations in determining whether or not to approve an application.
   a. That alternative standards for stormwater management, water quality protection, and ecological preservation have been established, and/or that mitigation measures are undertaken.
   b. That existing physical or natural characteristics of the site make strict application of the Ordinance infeasible.
   c. That concerns for flooding, stream back erosion, stream instability, and maintenance of culverts, bridges or other structures are addressed.
   d. That the deviation is the minimum necessary to afford relief.
4. Application for Deviation**:** A person seeking a deviation shall apply for the deviation, in writing, on a form provided by the Engineering and Construction Services Administrator. A stormwater analysis with justification for the deviation shall accompany the application form. When the Engineering and Construction Services Administrator has received a complete application for a deviation, the Engineering and Construction Services Administrator shall place the proposed deviation on the agenda of the Stormwater Technical Review Committee for the next meeting of the committee.

E. Appeals:

1. The decision of the Stormwater Technical Review Committee on the deviation may be appealed to the Community Development Director by the applicant. The notice of appeal shall be in writing, filed with the Community Development Department, within two (2) business days of that decision, and state with particularity the decision being appealed, the grounds for the appeal and the specific relief sought. The Community Development Director shall render a decision on the appeal within three (3) business days of the date the notice of appeal is filed with the Department.
2. The decision of the Community Development Director on the deviation may be appealed to the City Administrator by the applicant. The notice of appeal shall be in writing, filed with the City Clerk within two (2) business days of that decision, and state with particularity the decision being appealed, the grounds for the appeal, and the specific relief sought. The City Administrator shall render a decision on the appeal within five (5) business days of the date the notice of appeal is filed with the City Clerk. The decision of the City Administrator on the appeal shall be final.

Section 4-5-E-16 PERFORMANCE STANDARDS. (Rep. Ord. 3928, 5/18/1995)

Section 4-5-E-17 ASSURANCES FOR COMPLETION OF STORMWATER MANAGEMENT IMPROVEMENTS.

A. Prior to substantial completion of the Project the Engineering and Construction Services Administrator shall require the applicant to post an irrevocable letter of credit or other acceptable form of performance bond to ensure construction of any Stormwater Management Facilities, or components thereof. If a letter of credit is provided, it shall be on the form as prescribed by the City Attorney. The amount of the performance bond shall be 1.25 times the total construction cost of the Stormwater Management Facility, as estimated by the project designer and approved by the Engineering and Construction Services Administrator.

B. Release of performance bond: The performance bond will be released only when all of the following conditions have been met:

   1. At least ninety percent (90%) of the land area served by the Stormwater Management Facility has permanent stabilization in place.
   2. All of the Stormwater Management Facilities covered by the construction guaranty have been constructed in accordance with this Article.

Section 4-5-E-18 MAINTENANCE BOND.

A 2-year maintenance bond against defects in material and workmanship shall be required by the City for any portion of the stormwater management improvements dedicated to the public.

Section 4-5-E-19 DRAINAGE PERMITS. (Rep. Ord. 3928, 5/18/1995)

Section 4-5-E-20 DRAINAGE FEES. (Rep. Ord. 3928, 5/18/1995)

Section 4-5-E-21 INSPECTION AND MAINTENANCE.

The Engineering and Construction Services Administrator shall be responsible for determining whether the Stormwater Management Plan is in conformance with requirements specified in Section 4-5-E-15 of this Article and whether development is proceeding in accordance with the approved Stormwater Management Plan.

A. Inspection

1. Inspection During Construction
   The Engineering and Construction Services Administrator, or third party inspector hired by the developer shall inspect the Stormwater Management Facilities during all critical phases of construction, as determined by the Engineering and Construction Services Administrator. These phases may include grading, installation of pipes and Structures, and planting/landscaping. The decision regarding who should conduct the inspection shall be within the sole discretion of the Engineering and Construction Services Administrator.Stormwater management facility components and/or grading are part of public improvements and shall be inspected as such, even if the facilities will be owned and maintained by private entities. All facilities shall substantially complete prior to issuing any Building Permits, unless otherwise provided in a development agreement approved by the City or approved plans.

2. Periodic Inspection by City

   a. The Community Development Director shall be authorized to inspect all stormwater management facilities at least once each year during the first two years of operation and at least once every three (3) years thereafter. The Community Development Director shall notify in writing any property owner of any violations that are found during the inspections pursuant to the criteria set forth in this Article. The failure of the Community Development Director to inspect a stormwater management facility within the time period set out in this Article shall not act as a waiver of the City's right to enforce any requirements under this Article or to perform future inspections.

   b. Whenever necessary to make an inspection to enforce any of the provisions of this Article, or whenever the Community Development Director has reasonable cause to believe that there exists upon any land any condition in violation of this Article, the Community Development Director and any independent contractor(s) employed by the City are hereby expressly authorized to enter upon such private property at all reasonable hours to inspect the same or to perform any action allowed under this Article, including abatement of violations; provided, that if such private property be occupied, he shall first present proper credentials and demand entry, and if such private property be unoccupied, he shall first make a reasonable effort to locate the owner or other persons having charge or control of the private property and demand entry. If such entry is refused, the Community Development Director shall have recourse to every remedy provided by law to secure entry.

   c. It shall be unlawful for any person to interfere with or to attempt to prevent the Community Development Director or any independent contractor(s) employed by the City from entering upon any private property or from proceeding with such actions allowed under this Article, including enforcement or abatement of violations of this Article.

B. Maintenance

1. Responsibility for Maintenance

   The owners of property containing private stormwater management facilities shall be responsible for maintenance of those facilities. In the cases where there is joint maintenance provided by the City and the property owner, the City shall be responsible for structural maintenance only as specified on the plans and in the development or maintenance agreement approved by the City for the specific facilities.

2. Maintenance Agreement

Whenever a stormwater management plan is required for property pursuant to this Article, no Building Permit shall be issued until the owner of the private stormwater management facility executes a maintenance agreement to be recorded in the land records and binding upon all subsequent owners of the property, providing that:

a. The property owner shall maintain all stormwater management facilities in accordance with this Article.

b. The property owner shall permit the City to inspect the stormwater management facilities at any time.

c. The property owner shall correct any violations in the Private Stormwater Management System under the owner's control.

d. If the City intends to make corrections as a result of violations at the property owner's expense, as allowed under this Article, the property owner will provide access to the stormwater management facilities for such purpose.

Section 4-5-E-22 ACTION UPON NONCOMPLIANCE.

A. Enforcement During Construction

1. If it is determined through inspection that development is not proceeding in accordance with the approved stormwater management plan, the Engineering and Construction Services Administrator or Community Development Director shall issue written notice to the permittee and the surety of the nature and location of the alleged noncompliance, specifying what remedial work is necessary to bring the Project into compliance, and setting forth the time period allowed to correct the noncompliance. The written notice shall be accompanied by documentary evidence demonstrating noncompliance. The permittee so notified shall, unless weather conditions or other factors beyond the control of the permittee prevent immediate remedial action, commence the required remedial action and shall complete the remedial work within the time allotted by the City.
2. If the required corrections are not completed within the time period allotted by the City, the Community Development Director may post a stop work order at the site directing that all construction activity cease immediately. For the purposes of this Section, a stop work order shall be effective upon posting a copy of the stop work order on the site. A person must not continue or permit the continuance of work in an area covered by a stop work order, except work required to correct violations under this Article. No inspections, other than those required to determine compliance with this section, shall be performed and no additional permits will be issued by the City for the site while a stop work order is in effect. Any person who shall continue to work after a stop work order has been posted, except such work as that person is directed by the City to perform to remove a violation or unsafe condition, is guilty of a public offense and may be subject to penalties as prescribed herein.
3. The City must provide written notice to the permittee or a representative of the permittee when a stop work order is issued. A copy of the order, in the case of work for which there is a permit, shall be mailed by first class mail, postage prepaid, to the address listed by the permittee on the permit. In the case of work for which there is no permit, a copy of the order shall be mailed to the person listed as owner of the property by Johnson County land records. The notice must specify the extent to which work is stopped and the conditions under which work may resume. The permittee is responsible for the actions of his agents and must notify those agents when a stop work order is issued that will affect an area within which the agents are to work. In this regard, "agent" is defined as any person who acts at the instruction, with the permission, or to the benefit of the permittee. The failure to receive notice by mail shall not be a defense to a violation of a stop work order.

4. Failure of the permittee to make the necessary corrections within ten (10) days after a stop work order is posted shall constitute a public offense and is punishable as prescribed in this Article. Upon such failure, the City may:
    a. issue a Notice to Appear, setting a date and time for appearance in Municipal Court. The Community Development Director and the Engineering and Construction Services Administrator, and their designees, shall have authority to issue a Notice to Appear under this Article. The City may seek all criminal and civil penalties allowed by this Article, as well as any injunctive relief that may be appropriate; and/or
    b. correct or abate the violation.
5. If the City performs work to correct a violation of this Article, the costs incurred by the City to perform this work shall be paid by the owner or permittee out of the construction guaranty required by Section 4-5-E-17. If the cost of the work necessary to correct the violation exceeds the amount of the construction guaranty, the permittee shall continue to be firmly bound under a continuing obligation for payment of all excess costs and expenses incurred by the City. In the event no construction guaranty was posted, or the construction guaranty is insufficient to pay for the cost of the work performed by the City, then within thirty (30) days after performing the work necessary to correct the violation, the City shall issue a written notice containing the nature of the work performed, the date the work was performed, the cost of such work, and a statement that the property owner must pay for the cost of the work within thirty (30) days to avoid having a lien filed against the property. The cost to correct the violation, plus interest at the rate authorized by the City, plus a reasonable administrative fee shall be billed to the property owner. If in any event the amount due is not paid, the City Clerk shall certify the amount due to the Clerk of Johnson County, Kansas, and it shall, to the extent permitted by law, become a lien upon all property and all rights to property, real or personal, of any person liable to pay the amount due. This amount shall be listed on the tax bill and be collected in the manner of ordinary taxes as authorized by law.
6. The Community Development Director and the Engineering and Construction Services Administrator and their designees shall have authority, but not the obligation, to issue additional notices and extend the time given to a permittee to perform any action required under this Section.

B. Enforcement of Maintenance Requirements
1. When a property owner violates the maintenance requirements of this Article, the Community Development Director or his or her designee shall notify the property owner in writing of the nature and location of the violation, describe the required corrective action, and the time period for correction. Failure of the property owner to make the necessary corrections within the specified timeframe shall constitute a public offense and is punishable as prescribed in this Article.
2. If, after receiving notice of a violation of maintenance requirements, a property owner fails to perform the required corrective action within the time prescribed in the notice of violation, the City may:
    a. issue a Notice to Appear, setting a date and time for appearance in Municipal Court. The Community Development Director and the Engineering and Construction Services Administrator, and their designees, shall have authority to issue a Notice to Appear under this Article. The City may seek all criminal and civil penalties allowed by this Chapter, as well as any injunctive relief that may be appropriate; and/or
    b. correct or abate the violation.
3. If the City performs work to correct a violation of this Article, the property owner shall be liable for the costs incurred by the City to perform this work. Within thirty (30) days after performing the work necessary to correct the violation, the City shall issue a written notice containing the nature of the work performed, the date the work was performed, the cost of such work, and a statement

that the property owner must pay for the cost of the work within thirty (30) days to avoid having a lien filed against the property. The cost to correct the violation, plus interest at the rate authorized by the City, plus a reasonable administrative fee shall be billed to the property owner. If in any event the amount due is not paid, the City Clerk shall certify the amount due to the Clerk of Johnson County, Kansas, and it shall, to the extent permitted by law, become a lien upon all property and all rights to property, real or personal, of any person liable to pay the amount due. This amount shall be listed on the tax bill and be collected in the manner of ordinary taxes as authorized by law.

a. Enforcement against Homes Associations.

1. For purposes of this article, the term "Homes Association" shall mean an organization representing property owners within a development that is responsible for the ownership and maintenance of a stormwater management facility.
2. If a Homes Association fails to correct a violation within the time period identified in this Section, then the City may pursue any of the remedies provided in this Article. If the City performs work to correct a violation of this Article, the Homes Association shall be responsible for the costs incurred by the City to perform this work. Within thirty (30) days after performing the work necessary to correct the violation, the City shall issue a written notice containing the nature of the work performed, the date the work was performed, the cost of such work, and a statement that the Association must pay for the cost of the work within thirty (30) days to avoid having a lien filed against the properties within the development. If the Homes Association fails to pay for the cost of the work within 30 days after receiving the notice, the City shall hold a public hearing for the purpose of determining how the cost of the work shall be assessed against the properties within the development. All property owners represented by the Homes Association shall be given notice of such hearing. After determining how the cost of work shall be assessed, the City Clerk shall certify the amount due by each assessed property owner within the development to the Clerk of Johnson County, Kansas, and it shall, in accordance with law, become a lien upon all property and all rights to property, real or personal, of any person liable to pay the amount due. This amount shall be listed on the tax bill and be collected in the manner of ordinary taxes as authorized by law.

C. Any person who violates a provision of this Article, fails to comply with any of the requirements thereof, or fails to comply with a directive of the City as authorized by this Article is guilty of a public offense and shall be subject to penalties as provided in Section 1-1-C-3 of this Code. In addition, the City may seek such additional remedies and have such additional enforcement powers as set forth in Section 4-1-L-2 of this Code.

Section 4-5-E-23 REVOCATION OF APPROVAL; STOP ORDERS. (Rep. Ord. 4987, 9/25/2007)

Section 4-5-E-24 APPEALS.

Any person aggrieved by a decision of the Engineering and Construction Services Administrator may appeal any order, requirement, decision or determination as set forth below:

A. A written request shall be submitted within ten (10) working days after the issuance of the order, requirement, decision, or determination to the Community Development Director. The Community Development Director shall notify the person, in writing, of his decision within a reasonable time after receiving the appeal.

B. Upon denial of the appeal by the Community Development Director, the appealing party may request a hearing before the Governing Body or its designated representative by filing such request with the City Clerk within 10 days after issuance of the Community Development Director's denial of the appeal.

Section 4-5-E-25 TECHNICAL REVIEW COMMITTEE. (Rep. Ord. 3928, 5/18/1995)

Section 4-5-E-26 DISCLAIMER OF LIABILITY.

The performance standards and design criteria set forth herein establish minimum requirements which must be implemented with good engineering practice and workmanship. Depending upon the individual circumstances, additional design criteria and performance standards may be necessary. Use of the requirements contained herein shall not constitute a representation, guarantee or warranty of any kind by the City or its officers and employees of the adequacy or safety or any storm water management structure or use of land. The degree of protection required by this Article is considered reasonable for regulatory purposes and is based on historical records, engineering and scientific methods of study. Larger storms may occur or stormwater runoff heights may be increased by man-made or natural causes. This Article, therefore, shall not create liability on the part of the City or any officer with respect to any legislative or administrative decision lawfully made hereunder.

Inspections performed by the City under this Article are designed to determine conformance with the requirements of this Article and shall not act as a waiver of any immunities provided to the City by law. Additionally, the failure to perform any inspection required under this Article shall not act as a waiver of the City's right to perform future inspections and shall not create any liability on the part of the City or any officer thereof.

Section 4-5-E-27 ENFORCEMENT. (Rep. Ord. 3928, 5/18/1995)

Section 4-5-E-28 VIOLATION AND PENALTIES.

Unless otherwise provided, penalties for violations of this Chapter shall be assessed as provided in Section 1-1-C-3 of the City Code.

TITLE 4 UNIFIED DEVELOPMENT CODE

CHAPTER 4-1 ZONING

Article 4-1-O STREAM SETBACKS

Section 4-1-O-1 PURPOSE OF CHAPTER.

It is the intent of this Article to reasonably regulate Development, uses and activities within identified Steam Corridors and to thereby preserve, conserve, manage disturbance, and attempt to restore the City's natural stream corridors, pursuant to the City's Home Rule authority, Article 12, § 5 of the Kansas Constitution, and in accordance with state and federal statutes and the goals of the City's Comprehensive Plan, so that the following objectives may be achieved:

A. regulate the land use, location, and engineering of all development within the Stream Corridor to ensure consistency with the intent and objectives of the City's Stormwater Management Plan, its Stream and Natural Resource Inventory and accepted conservation and Best Management Practices, and to work within the carrying capacity of existing natural resources;

B. assist in the implementation of pertinent federal, state, and local laws concerning clean water, pollutant discharges, storm and surface water management, erosion and sediment control and flood control;

C. improve surface and ground water quality by reducing the amount of nutrients, sediment, organic matter, pesticides, and other harmful substances that reach watercourses, wetlands and subsurface and surface water bodies by using scientifically-proven processes including filtration, deposition, absorption, adsorption, plant uptake, and denitrification, and by improving infiltration, encouraging sheet flow and stabilizing concentrated flows;

D. improve and maintain the safety, reliability, and adequacy of the water supply for domestic, agricultural, and other uses, in addition to supporting recreational uses and sustaining diverse populations of aquatic flora and fauna;

E. preserve and protect areas that intercept storm and surface water runoff, wastewater, subsurface flow and/or deep groundwater flows from upland sources and reduce, to the maximum extent practicable, the effects of the entry of associated nutrients, sediment, organic matter, pesticides, or other pollutants into surface waters, as well as provide wildlife habitat, moderate water temperature in surface waters, attenuate flood flow, and, where appropriate and feasible, provide opportunities for recreational activities;

F. manage Development within floodplains, on land adjacent to stream segments with greater than 15% slopes, and other environmentally sensitive areas to minimize hazards to life, property, and stream features;

G. recognize that natural features contribute to the welfare and quality of life of the City's residents;

H. provide natural, scenic, and recreation areas within and adjacent to Stream Corridors for the community's benefit;

I. and create added value to lands adjacent to Stream Corridors.

Section 4-1-O-2 DEFINITIONS.

In this Article, these words and phrases have the following meaning:

BEST MANAGEMENT PRACTICES or BMPs: The utilization of methods, techniques or products that have been demonstrated to be the most effective and reliable in minimizing adverse impacts on water bodies and their adjacent Stream Corridors.

CLEARING: Any act by which vegetative cover, structures or surface material is removed, including, but not limited to, surface layer, root mat or topsoil removal.

COMMUNITY DEVELOPMENT DIRECTOR: The individual appointed by the City as the Community Development Director or his/her duly authorized designee.

DEVELOPMENT: Any human-made change to improved or unimproved real estate including, but not limited to buildings or other structures, mining, dredging, filling, grading, site clearance, paving, excavation, drilling operations and storage of equipment and materials.

DEVELOPMENT APPLICATION or APPLICATION: All applications required by the City Code as a prerequisite to initiation of development, including, but not limited to, a building permit application.

EDGE OF THE STREAM: A line formed by the outer boundary of the stream as delineated by the bank-full or channel-forming flow caused by approximately the two-year rainfall event.

EPHEMERAL STREAM: A stream that has flows only in direct response to effective precipitation, i.e. during and immediately following a major storm. Ephemeral streams do not intercept groundwater flow and therefore have no base flow. Instead, ephemeral streams usually contribute to groundwater seepage through their porous channel beds.

ENHANCEMENT: In the context of this Article, a process undertaken to rehabilitate or improve an existing degraded Stream Segment by increasing native plant diversity or removing exotic plant species and increasing water quality, wildlife habitat or erosion controls.

EROSION: The process by which the ground surface is worn away by the action of the wind, water, ice, gravity, or artificial means, and/or land disturbance.

FILLING: Any act by which soil, rock, organic material or any other material is deposited, placed, pushed, pulled or transported and includes the conditions that result from that act.

FLOODPLAIN: The floodway and floodway fringe as identified by the Federal Insurance Administration through its report entitled "The Flood Insurance Study of the City of Lenexa, Kansas," dated February 1, 1997, or such other designation of the floodplain as is subsequently adopted by the City, and representing the regulated 100-year water surface and corresponding elevations.

INTERMITTENT STREAM: A stream of mixed character, behaving as a perennial stream at certain times of the year and an ephemeral stream at other times. Depending on seasonal conditions these streams may feed to and from the groundwater.

GRADING: Any act by which soil is cleared, stripped, moved, leveled, stockpiled, or any combination thereof, and includes the conditions that result from that act.

MITIGATION: A negotiated action involving the avoidance, minimization or compensation for possible adverse impacts.

NATIVE VEGETATION: Vegetation comprised of plant species that are indigenous to the area in question.

RESTORATION: The act of improving, enhancing, and reestablishing a once viable and now degraded Stream Segment to a state in which its stability, functions, and values approach its unaltered state.

ROUTINE REPAIR AND MAINTENANCE: Any activities directed at preserving an existing allowed use or facility, without expanding the development footprint or site use.

SLOPES: The inclined surface of a fill, excavation or natural terrain expressed as a ratio of horizontal distance to vertical distance over a measured inclined surface.

STREAM: A body of running water moving over the earth's surface in a channel or bed, such as a creek, rivulet or river that flows at least part of the year, including perennial and intermittent streams. Streams are dynamic in nature and their structure is maintained through build-up and loss of sediment.

STREAM CORRIDOR or CORRIDOR: An area established by this Article surrounding an identified Stream Segment, including adjacent floodplains and lands with slope greater than 15%. The Stream Corridor is a protective zone for the adjacent Stream Segment. Three zones, the streamside, middle and outer zones, are located on each side of the Stream Segment. Together, these zones and the Stream Segment compose the Stream Corridor.

STREAM ORDER or ORDER: Connotes a streams position within a watershed. First Order streams have no tributaries, typically have small drainage areas and include intermittent and ephemeral streams. Second Order streams are formed by the confluence of two first Order streams. Third Order streams are formed by the confluence of second Order streams. All Order streams referenced in this document are indicated as streams lines on the Johnson County AIMS plainimetric data.

STREAM SEGMENT or SEGMENT: Any stream segment identified in the Lenexa Stream and Natural Resource Inventory.

STREAM TYPES:

A. **Type 1:** High-quality naturally occurring channels with little negative conspicuous impact. Erosion and sedimentation is low, water quality indicators are positive and the surrounding riparian zone includes healthy, mature successional woodland or other high-quality environment (e.g. prairie buffer, lightly grazed, grassed, pasture).
B. **Type 2:** Channel with some down or side cutting though constrained by bank and bed composition. Water quality generally is good. The riparian zone is largely intact although typical native plant associations may exhibit some degree of perturbation.
C. **Type 3:** Riparian zone degradation is more noticeable though some remnant plant associations may remain. Overall plant cover tends to be comprised of an immature tree canopy. Restoration potential exists although erosion and sedimentation may be greater than desirable.
D. **Type 4:** Stream corridor exhibits greater impacts, including significant bank erosion and sedimentation indicators. Surrounding riparian zone may be intact but is not representative of a recognized native plant association typically found in a high quality, healthy stream environment.
E. **Type 5:** Stream channel is highly degraded and surrounding riparian zone has become impacted to the point of providing little protection or benefit to stabilization of channel and banks, or to water quality. Erosion and sedimentation indicators are significant and water quality is questionable with noticeable nutrient loading often associated with urban runoff, row-cropped agricultural landscapes, and point source discharges from septic, and sanitary water treatment sites.

STRUCTURE: Anything constructed or erected that requires location on the ground or attachment to something having a location on the ground, including, but not limited to signs, conventional television or satellite antennas and excepting customary utility poles, retaining walls and boundary fences.

UTILITY: Buildings, structures or any constructed portion of a system that provides for the production, transmission, conveyance, delivery or furnishing of services including, but not limited to, heat, light, water, power, natural gas, sanitary sewer, storm water, telephone and cable television.

VARIANCE: A variation from a specific requirement in this Title, as applied to a specific piece of property pursuant to Article 4-1-K of this Title.

Section 4-1-O-3 APPLICABILITY.

A. This Stream Setback Ordinance shall apply to all land or new development within the Stream Corridor, as defined by this Article and applied to designated Stream Segments identified on the most current map adopted by the City Council by resolution and as Exhibit A* (copy of Exhibits A and B are available at City Hall) and incorporated herein by reference. No development shall occur on a parcel of land that is within or partially within the defined Stream Corridor, except in accordance with this Article; provided, however, that this Article shall not apply to land or to development, which:

   1. is on land covered by an approved, unexpired preliminary plat or preliminary plan, where such approval was given prior to the effective date of this Article;

B. No Development Application shall be approved that proposes development on any parcel of land wholly or partially within the defined Stream Corridor unless the proposed development is in compliance with the applicable provisions of this Article.

Section 4-1-O-4 STREAM CORRIDOR.

Stream Corridor widths have been determined by Stream Order, 1 through 3 and by Type, 1 through 5, as shown in Table 1 below. Type 1 and 2 Stream Segments are categorized as Sensitive Stream Segments, Type 3 Stream Segments are categorized as Restorable Streams and Types 4 and 5 are categorized as Impacted Streams. The location of designated Stream Segments shall be as delineated on Exhibit A**. At all designated Stream Segment locations, the Stream Corridor shall consist of three zones, the Streamside Zone, Middle Zone and Outer Zone. The width of each zone within the Stream Corridor is defined below. See Exhibit B** (copy of Exhibits A and B available at City Hall) for an illustration of the Stream Corridor, as defined.

Table 1: Minimum Total Stream Corridor Width*

Stream Order	Types 1-2 (Sensitive Streams)	Type 3 (Restorable Streams)	Types 4-5 (Impacted Streams)
1	150 feet	125 feet	100 feet
2	250 feet	200 feet	150 feet
3 +	300 feet	250 feet	200 feet

*Note: Width of the Middle Zone will be expanded, if necessary, to include Floodplains and lands with slope greater than 15%.

**As revised on September 2, 2003.

The general guidelines used to determine the width of the three zones for each of the categories of Stream Segments are as follows:

A. Streamside Zone = 25' from the Edge of the Stream, and measured horizontally from the edge.

B. Middle Zone = A variable width zone determined by Stream Segment type, Order, and ancillary conditions noted below that is measured horizontally from the outer boundary of the Streamside Zone to the inner boundary of the Outer Zone. Where the middle zone is not zero (Stream Order 1, Types 4-5), the minimum base width of the Middle Zone on each side of the stream shall be half of the resultant

distance after subtracting 100' from the Minimum Total Stream Corridor Width as set forth in Table 1. Ancillary conditions that cause the required Middle Zone width to expand greater than the minimum / base width, include the width added by all lands with slope greater than 15% and Floodplains; *provided that,* these features occur, in part, within the Streamside or Middle Zone.

C. Outer Zone = 25' from the outer boundary of the Middle Zone, measured horizontally from that boundary.

Note: Where manmade ponds interrupt streams, the Stream Corridor as herein defined shall stop at the pond and resume on the other side thereof. Where ponds are removed or filled in as part of development, the stream shall be restored through that area and the Stream Corridor buffer shall be created using the typology for adjacent stream sections.

Section 4-1-O-5 PROHIBITIONS.

Any use or activity not identified as permitted by this Article within any Stream Corridor zone is prohibited in all identified Stream Corridors. Mowing or clearing of the Streamside and Middle zones shall be specifically prohibited.

Section 4-1-O-6 REGULATED USES, STRUCTURES AND ACTIVITIES.

A. **General Applicability to Stream Corridor.** No development shall be undertaken on land in a Stream Corridor unless a Development Application has been approved authorizing the applicant to perform the development proposed therein; *provided that*, no Development Application shall be approved unless the development proposed therein is, in all respects, in conformity with the requirements of this Article.

B. **Uses and activities permitted in the Streamside Zone.**

1. Conservation uses, wildlife sanctuaries, nature preserves, forest preserves, fishing areas, and passive areas of parklands.
2. Unpaved recreational trails and greenways.
3. Education/scientific research.
4. Stream bank stabilization and other storm water BMPs approved by the Community Development Director.
5. Activities associated with the Restoration and Enhancement of Stream Corridors.
6. Excavation and fill required to plant any new trees or vegetation.
7. Installation of water and wastewater facilities, *provided that,* the owner of the facilities provides information to the City that is sufficient to allow the Community Development Director to determine that the installation of the facilities in Middle Zone is unfeasible. Feasibility will be determined through consideration of factors, such as geology, topography and the presence of unique habitat in the Stream Corridor. When installation of such facilities does occur in the Streamside Zone as herein provided, such installation and construction activities must comply with the recommendations contained in the section titled "Resource Protection and Mitigation Measures" for utility construction contained with the Lenexa Streams Inventory, dated December 10, 2001. Water and wastewater facilities will be permitted to cross the Streamside Zone and Stream as necessary, provided that, the number of crossings is minimized to the greatest extent possible.
8. Public infrastructure.

C. **Uses and Activities Permitted in the Middle Zone.**

1. All uses and activities permitted in the Streamside Zone.

2. Paved recreational trails.
3. Installation of utilities, including water and wastewater facilities. Such installation shall comply with the recommendations contained in the section titled "Resource Protection and Mitigation Measures" for utility construction contained in the Lenexa Streams Inventory, dated December 10, 2001.

D. **Uses and Activities Permitted in the Outer Zone.**
1. All uses and activities permitted in the Middle Zone.
2. Passive uses, such as camps, campgrounds, picnic areas and golf courses.
3. Minor recreational structures and surfaces that are ancillary to passive recreational uses as set forth in subparagraph 2 above; *provided that*, the total impervious area created by such structure(s) in residential areas shall not exceed two hundred (200) square feet per single family residential lot. Examples of such permitted structures include, but are not limited to, decks, gazebos, picnic tables, playground equipment and small concrete slabs built to accommodate such permitted structures.
4. Existing agricultural uses that incorporate recognized conservation BMPs.
5. Fences; provided however, that such fences must be constructed so as not to impede floodwaters.

E. **Single Family Residential – Rear Yard Allowance**
The rear yard of a single-family residential use may extend into the Middle Zone and the Outer Zone; provided, however, that the rear of the actual residential structure may not be located nearer than 20' from the outer edge of the Outer Zone and no ancillary structure may be located in the Middle Zone (only those ancillary structures otherwise permitted by this Title may be located in the Outer zone), and further that any development satisfies the open space and setback requirements of this Article.

F. **Uses Subject to Federal and/or State Approval.**
The following in-stream activities are regulated and require approval from United States Corp of Engineers or Environmental Protection Agency, the Kansas Department of Heath and Environment or other appropriate federal and state agencies:
1. dredging,
2. filling,
3. excavation,
4. draining, and
5. clearing;

provided that, the requisite state and/or federal approvals are provided to the City.

Section 4-1-O-7 ACTIVITIES PERMITTED IN ALL STREAM CORRIDOR ZONES.

The following activities are allowed within all zones of the Stream Corridor:

A. **Existing and ongoing agricultural activities.** The activities cease to be existing when the area on which they were conducted has been converted to a nonagricultural use or has lain idle for more than five years or so long that modifications to the hydrological regime are necessary to resume agricultural activities, unless the idle land is registered in a federal or state soils conservation program.

B. **Maintenance/repair of public right-of-way, streets, public structures.**

C. Site investigation work necessary for initial land use applications, such as surveys, soil logs and percolation tests, and special studies as required by this Title; provided, however, that the land must be restored to its pre-investigation condition.

D. Reconstruction, remodeling or maintenance of existing structures, *provided that* the activity does not expand the existing use beyond the previously approved use so as to physically extend into or adversely affect the Stream Corridor. If the use or activity involves a legal non-conforming use, the provisions of Title 4, Chapter 1, Article 4-1-J of the City's Unified Development Code shall apply.

E. Routine maintenance of existing landscaping within a lot's boundaries, including pruning, removal of diseased trees or other diseased vegetation and replacement of individual plants when necessary to maintain a unified landscape theme.

F. Control of vegetation defined as state noxious weeds by K.S.A. 2-1314 et seq., by the recommended methods or alternative methods established by the State Board of Agriculture, Noxious Weed Division.

G. Emergency action necessary to prevent imminent threat or danger to public health or safety, or to public or private property, or serious environmental degradation may be taken at any time without advance notice to the Community Development Director; *provided that*, the notice, as herein above required, shall be given at the earliest opportunity thereafter.

Section 4-1-O-8 NONCONFORMING USES AND STRUCTURES.

Nonconforming situations within the Stream Corridor shall be regulated in conformance with Title 4, Chapter 1, Article 4-1-J of the City's Unified Development Code; provided, however, that the six month time frame for discontinuance contained in Section 4-1-J-2-B shall not apply to agricultural uses that are following prescribed BMPs for crop management; *provided, further*, that these nonconforming use provisions also shall not apply to the replacement or reconstruction of a structure that is proposed within the Stream Corridor because of environmental problems including, but not limited to, slope failure, erosion or flooding.

Section 4-1-O-9 STREAM CORRIDOR DEVELOPMENT APPLICATION REQUIREMENTS.

A. All persons required to submit a Development Application, pursuant to any section of the City's Unified Development Code, shall, on the otherwise required submittals for that particular type of Development Application, show the exact location of the Stream Corridor and its three zones. Stream Corridor and zone location information must be accurately delineated on a legal property survey. If the proposed use within a Stream Corridor is agriculture-related, an Agriculture Resource Management Plan, including BMPs for erosion, nutrient, fertilizer, herbicide and pesticide control, consistent with the requirements of Kansas Department of Agriculture, also shall be submitted for review.

B. The City will review the location of the Stream Corridor, as shown in the Development Application, to determine whether it is consistent with the defined Stream Corridor for the designated Segment. If a discrepancy arises, the applicant may request that a City representative perform a site visit to view conditions on site with applicant to assist in making this determination. This determination shall be reported to the relevant decision maker as a part of the City staff's comments on the subject Development Application and shall also be reported to the applicant.

C. If the City determines that the locations shown in the Development Application are not consistent with the defined Stream Corridor for the designated segment, as defined and incorporated by this Article, the applicant shall be provided written notice of the inconsistency. The Community Development Director will be responsible for the final determination in cases of disagreement.

D. Any applicant who believes that the Community Development Director has incorrectly determined that the Development Application is inconsistent with the defined Stream Corridor for the designated segment, as defined by this Article, may appeal the decision of the Community Development Director using the procedure set forth in Section 4-1-O-14-B.

Section 4-1-O-10 APPROVAL PROCESS.

All Development Applications covering land partially or wholly included within the Stream Corridor shall be processed, considered and acted upon in accordance with the procedures established in this Title for the type of Development Application submitted.

Section 4-1-O-11 CONDITIONS OF APPROVAL.

The City shall have the authority to attach conditions to the approval of any Development Application as deemed necessary to alleviate adverse impacts on Stream Corridors and to carry out the provisions of this Article.

Section 4-1-O-12 DEVIATIONS FROM REQUIREMENT APPLICABLE TO LANDS WITHIN STREAM CORRIDORS.

A. When considering any Development Application, the City may:
   1. approve a reduction in the yard and setback requirements established by the underlying zoning district, of up to 25%, to maintain the width of Stream Corridor; and
   2. alter the outer boundary of the Outer Zone of the mapped Stream Corridor allowing the width of the Outer Zone to become narrower than as mapped at some points within the property, that is included in the subject Development Application, to allow for the presence of an existing structure, as long as the Streamside Zone is not altered by the narrowing, and no new structures are built within the Floodplain.

B. The decision to approve or deny a request for a deviation from requirements applicable to lands within Stream Corridor shall be based on the following considerations:
   1. sensitivity of the Stream Segment and affected critical habitats;
   2. intensity of land use adjacent to the Stream Segment proposed for reduced Stream Corridor width; and
   3. impact on Floodplain and stream functions.

C. A Stream Corridor deviation shall not be approved when the reduction would result in the Stream Corridor being narrower than the Floodplain or a width that does not include adjacent land with a slope of greater than 15%.

Section 4-1-O-13 VARIANCE.

If an applicant believes that the requirements of this Article will result in an unnecessary hardship, the applicant may seek a variance through the procedures provided in Section 4-1-K-4-A of this Title.

Section 4-1-O-14 APPEALS.

A. **Procedure for Appeals From the Effect of the Requirements in this Article.**
   1. An appeal to the City Council may be taken by any applicant aggrieved by any decision of the City requiring the applicant to conform to a Development Application covering land included within a Stream Corridor to the requirements of this Article and who alleges that the final decision of the City constitutes a "taking" without just compensation under the 5th Amendment to the United States Constitution or under the Kansas Constitution. On appeal, the burden will be on the appellant to establish, by the preponderance of the evidence:
      a. with respect to a requirement, which is imposed as a condition of approval of the Development Application, that the applicant convey to the City an interest in land:

1. that there is not an essential nexus between the challenged requirement and the public purposes sought to be achieved by the challenged requirement, or
2. that, through an individualized determination, the challenged condition is not roughly proportionate both in nature and extent to the impact of the Development proposed in the Development Application; and

b. with respect to other requirements imposed by this Article, that:
   1. the requirements result in a denial of all beneficial economic or productive use of the property; or
   2. the requirements constitute a permanent physical occupation or invasion of the applicant's property; or
   3. the requirement does not substantially advance a legitimate state interest; or
   4. the burden that the requirement places on the applicant is greater than the benefit that the requirement confers on the general public, considering all of the following and any other relevant factor:
      a. the temporal relationship between the effective date of the ordinance and the date the applicant (or if the applicant is not the landowner, the date the landowner) acquired the property that is the subject of the Development Application;
      b. the degree of interference created by the challenged requirements with the applicant's reasonable investment-backed expectations that the property could be developed free of the impacts of the challenged requirements;
      c. whether, and if so the extent to which, the development proposed by the applicant is prejudicial to the health, safety or general welfare of others or constitutes a nuisance or nuisance-like activity;
      d. the extent to which the challenged requirements achieve important public purposes;
      e. the economic impact of the challenged requirements on the applicant's (or if the applicant is not the landowner, the landowner's) entire parcel and contiguous parcels commonly owned, as determined through a comparison of the value of this ownership without application of the challenged requirements with its value with application of the challenged requirements; and
      f. that applicant is not necessarily entitled to the most profitable use of the property.

2. With respect to all appeals made pursuant to this subsection, the person seeking the appeal shall file a written notice of appeal with the City Clerk within 15 days of the date of the final decision from which the appeal is being taken. The notice shall specifically identify the grounds for the appeal and include all other information required by this Section to be submitted with the notice of appeal. If notice in compliance with all requirements of this Section is not timely filed, all rights to appeal the decision are waived.
3. The City Clerk, immediately upon receipt of the notice, shall transmit to the City Council all the papers constituting the record concerning the action from which the appeal is taken.
4. A properly effectuated appeal shall stay all proceedings in furtherance of the action from which the appeal is taken.
5. The City Council shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as written notice to all interested parties.
6. The City Council, after considering all evidence presented by the applicant in support of the appeal and any evidence presented by the City in rebuttal or otherwise presented in relation to the appeal, shall render a written decision in the form of findings of fact and conclusions of law. If the City

Council determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision from which the appeal was taken. If the City Council determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision from which the appeal was taken and make a decision respecting Development Application as it determines is appropriate and in conformity with all applicable laws. In making this new decision, the City Council may attach any condition it deems necessary to further the purposes of this Article.

B. **Procedures for Appeals of the Stream Corridor Location.**

1. An applicant who believes that the Community Development Director has incorrectly determined that the Development Application is inconsistent with the defined Stream Corridor for a designated Stream Segment as provided for by Section 4-1-O-9 of this Article, may appeal the Community Development Director's determination to the Board of Zoning Appeals in conformity with Article 4-1-K of this Chapter.
2. The appeal shall be in writing and a copy shall be simultaneously provided to the Community Development Director. The written appeal shall identify the specific grounds for the appeal, including the exact locations of the Stream Corridor that the applicant disputes. The notice shall also be accompanied by a Stream Corridor Delineation Report. The Report shall include:
   a. a surveyed site plan covering all property that is the subject of the Development Application, which shows the property's topography;
   b. drainage flow on the property;
   c. the location of streams, identified by the Order of tributary and their type (based on flow, width, quality, critical habitat, value and function);
   d. the ordinary high-water mark of the streams;
   e. the three zones of the Stream Corridor as defined in Section 4-1-O-3 of this Article;
   f. a tree and native vegetation inventory;
   g. a delineation of areas with slope greater that 15% (with the percentage slope shown);
   h. critical habitat contiguous to the streams;
   i. drinking water sources on the property;
   j. related water right information for each stream;
   k. designation of the Floodplain; and
   l. all other information required by the Board of Zoning Appeals to be submitted for its consideration.
3. On appeal, the burden will be on the appellant to establish, by clear and convincing evidence, that the Development Application is consistent with the defined Stream Corridor for that designated Stream Segment, as defined by this Article.
4. The Board of Zoning Appeals, after considering all evidence presented by the applicant in support of the appeal and any evidence presented by the City in rebuttal or otherwise presented in relation to the appeal, shall render a written decision. If the Board of Zoning Appeals determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision of the Community Development Director. If the Board of Zoning Appeals determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision of the Community Development Director and make a decision respecting Development Application as it determines is appropriate. In making this new decision, the Board of Zoning Appeals may attach any condition it deems necessary to further the purposes of this Article.

Section 4-1-O-15 APPEAL TO DISTRICT COURT.

Any person or persons jointly or severally aggrieved by any final decision on appeal may present to the District Court of Johnson County, Kansas, a petition duly verified appealing the decision. The petition shall set forth that the decision is illegal, in whole or in part, and specify the ground of its illegality. The petition shall be presented to the court within thirty (30) days after the decision is issued or it shall be barred.

Section 4-1-O-16 PURPOSE OF CHAPTER.

The following title and plat notification requirements concerning stream corridors and associated development and use restrictions shall be required.

A. **Notice on Title.** The owner of any property within a Stream Corridor, upon the approval of a Development Application covering property containing a Stream Corridor (which does not involve the approval of a final plat) shall record a notice of presence for each Stream Corridor with the Johnson County Register of Deeds. This recording shall contain notice of the Stream Corridor, the application of this Article to the property, and the limitations on actions in or affecting such Stream Corridor. The applicant must submit proof that the notice has been legally recorded before the final approval for development is issued. The notice shall run with the land and failure to provide this notice to any purchaser prior to transferring any interest in the property shall be in violation of this Article. The notice shall be substantially as set forth below:

STREAM CORRIDOR NOTICE

Legal Description:

Present Owner:

Notice: This property is located within or contains the following Stream Corridor, as defined and regulated in the City of Lenexa, Kansas' Code Article 4-1-O:

Restrictions on the use or alteration of land within the Stream Corridor may apply.

Application #___ filed on (Date).

Signature of owner(s).

Notarization:
State of Kansas }
Johnson County }

On this day personally appeared before me to me known to be the individual(s) described in and who executed the within and foregoing instrument and acknowledged that they freely and voluntarily signed the same for the uses and purposes therein stated.

Given under my hand and official seal this day of ___.

Notary Public in and for the state of Kansas, residing at ___.

B. **Notice on Plat.** For all subdivision proposals within the Stream Corridor, the applicant shall include a notice on the face of the plat. The notice shall be substantially as set forth below:

Notice: This site lies within a protected Stream Corridor, as defined and regulated in City of Lenexa, Kansas Code, Article 4-1-O.

Restrictions on the use or alteration of the Stream Corridor may apply.

Section 4-1-O-17 ENFORCEMENT.

The Community Development Director is authorized and empowered to enforce the requirements of this Article in accordance with the procedures set forth in Section 4-1-L-3 of this Chapter. In doing so, the Community Development Director shall have all the enforcement powers and may employ all or any of the remedies set forth in Section 4-1-L-2 and Section 4-1-L-4 of this Chapter.

Section 4-1-O-18 ABROGATION AND GREATER RESTRICTIONS.

It is not intended that this Article repeal, abrogate, or impair any existing regulations, easements, covenants of deed restrictions. However, where this Article imposes greater restrictions, the provisions of this Article shall prevail.

Appendix F

SOP'S

COMMUNITY DEVELOPMENT DEPARTMENT

STORMWATER TECHNICIAN

- Commercial Site Inspection
- Mud and Silt Leaving the Site
- Outfall Inspection
- Public Improvement Inspection
- Residential Site Inspection
- Illicit Discharge Response

STORMWATER SPECIALIST

- Stormwater BMP Construction Inspection
- Stormwater BMP Maintenance Inspection
- Harmful Algae Bloom Response

STORMWATER ENGINEER

- Stormwater Capital Improvement Process
- Construction Certificate Management Process

PLANNING

- Stormwater BMP Plan Review Process
- Erosion and Sediment Control Plan Review Process

MUNICIPAL SERVICES DEPARTMENT

STORMWATER MAINTENACE WORKERS

- Algae Control
- Algae Control – Central Green
- Algae Control – City Center Pond
- Catch Basin Cleaning – Inside
- Catch Basin Cleaning – Outside
- Headwall Inspection
- Herbicide Application
- Inlet Leaf Removal
- Inlet Snow Removal
- Monthly BMP Litter Pick-up
- Pipe Cleaning
- Pre-emergent Application
- Roadway Ditch Inspection
- Live Stake Harvesting
- Live Stake Installation
- Storm Pipe Inspection
- Storm Structure Inspection
- Stormwater Structure Repair – Wall
- Stormwater Structure Replace – Wall
- Inlet Trash Bar Replacement
- Tree Removal Dead or Fallen
- Tree Removal in Creek

Lenexa KANSAS	**City of Lenexa** **Community Development**
Subject:	Standard Operating Procedures
CIP and Public Improvement E&SC	Pages: 2
Inspections	Revision: 1/13/2025

Purpose:

The purpose of this S.O.P. is to provide guidance for a consistent and appropriate Erosion and Sediment Control inspection process for CIP and Public Improvement project sites.

Background:

The Stormwater Technician is responsible for routine Erosion and Sediment control inspections. CIP and Public Improvement project sites differ from private development sites in that the city provides full time construction inspection. The assigned inspector is responsible for assuring that the contractor is adhering to all required erosion and sediment control procedures monthly. The responsibility of the Stormwater Technician is two-fold. First, to be available as a resource for the CIP inspector if the inspector has any questions related to erosion and sediment control procedures. Second, the Stormwater Technician will administer routine inspections throughout the duration of the project. These inspections will occur approximately every six weeks and will include inspection of BMP's installed, review of the site for any deficiencies and inspection of the SWPPP if applicable.

Process:

1.	The stormwater technician will have access to the CIP project list through plan grid, on I-Pad/Desktop in ESC – Private LDP Plans. for all active and upcoming CIP projects.
2.	Tracking of the workflow including notification of upcoming inspections and input and storage of inspections shall be facilitated through the ACELLA inspection module. Notes can be kept on plan grid for the stormwater technician.
3.	The stormwater technician will schedule an inspection time with the Engineering construction inspector. Inspections are to occur approximately every six weeks.
4.	The stormwater technician inspector will walk the site and conduct the inspection. Report any deficiencies to the construction inspector.
5.	The stormwater technician will document the inspection in ACCELA.
6.	The Stormwater Technician and the construction inspector will meet with the contractor's representative upon completion of the inspection to review the results. At this time, if there is a project SWPPP, it should be present on site and reviewed by the stormwater technician to assure that all records are being properly documented in the SWPPP.

7.	If an inspection reveals that erosions and sediment control is inadequate, then the following enforcement actions will be taken: • Correspond with the contactor in writing and convey all deficiencies that were noted. The contractor shall be given a deadline of three to five days to take corrective action. • Then What? If after a second inspection and is still inadequate, then in writing and a phone call are given. The contactor will be given three to five days. (the phone call generally is effective).
8.	Upon substantial completion of the project a pre TCO walk-through is scheduled. The stormwater technician should attend the walkthrough and assure that permanent stabilization is in place and that any unnecessary erosion and sediment control items have been removed. For CIP projects with a SWPPP, the SWPPP should be turned in to the city at this time for a retention period of seven years.
9.	

Staff Involved with Process:

Stormwater Technician
Engineering Construction Inspection
Engineering Project Manager

STORMWATER TECHNICIAN:

Primary contact for procedure. Coordinate with all divisions and departments to initiate and conduct inspections, follow up on issues, maintain records.

ENGINEERING CONSTRUCTION INSPECTOR:

Monitors sites between formal inspections. Requires contractor to adhere to erosion and sediment control plans and common practices. Request advice and opinion of stormwater technician when needed.

ENGINEERING PROJECT MANAGER

Assure that the SWPPP is prepared correctly and delivered to the contractor at the start of the project. Assure that the erosion and sediment control plans are prepared correctly.

Lenexa KANSAS	**City of Lenexa** Community Development *Planning Division*
Subject:	Standard Operating Procedures
Commercial Site Inspection	Pages: 3
	Revision: 1/13/2025

Purpose:

- The purpose of this SOP is to provide guidance for a consistent and appropriate inspection of Commercial sites.
- Commercial sites are defined as business construction sites that are under development by private developers or contractors.
- The building and private infrastructures are inspected by the city building inspectors and 3rd party inspections.
- Public infrastructure and ESC measures are inspected by city staff (Engineering Inspectors and Stormwater Tech.)
- These sheets can be found in Plan Grid.
- The inspection is done in Accela.

Procedure:

Commercial sites are routinely inspected at least once a month or as often as needed. The inspection process is the same as residential permits with the following additional requirements:

There is an approved plan for the site and structures including an Erosion Control Plan. There are three plan phases:

1.	Land Disturbance permit- Only clearing and grubbing along with sanitary sewer.
2.	Site Development permit- Storm Water infrastructure can be installed.
3.	Building permit- the building structure can be built.

Sometimes a Public Improvement permit is issued when one or all the following occurs:

1.	The storm or sanitary line ties into a public structure.

2.	A turn lane or access is added from a public street.

A pre-con is held before the work begins to introduce all parties and discuss the approved plan including an ESC plan.
The contractor sets up a onetime inspection once they install all ESC measures required before starting project
Communicate and educate the contractor on SWPPP requirements. Communication with the contractor is very important to the project's success
These plans are in Plan Grid. The permit number can be found on the sheets in Plan Grid. This inspection is done in Accela.
Staff Involved with Process:
Stormwater Technician Building Inspection Engineering Inspection
STORMWATER TECHNICIAN:
Primary contact for procedure. Coordinate with all divisions and departments to report & follow up on ESC issues, track and monitor all deficiencies thru Accela and spreadsheet.
BUILDING INSPECTION
Notify Stormwater Technician of any ESC deficiencies and cooperate on any open permits to leverage compliance, where applicable.
ENGINEERING INSPECTION
Direct compliance with all contractors, subcontractors and on-site personnel related to public projects. Notify Stormwater Technician of any ESC deficiencies.

	City of Lenexa Community Development *Planning Division*
• Subject: Mud & silt leaving site	Standard Operating Procedures
	Pages:
	Revision: 1/19/2024

Purpose:

The main purpose is to ensure that mud is not tracked out onto streets/roadways.
Good idea could be talking with builders/contractors.
When mud/ silt is leaving a construction site is reported to the city, the point of contact is the Stormwater Technician.

Procedure:

- When receiving a complaint, the Stormwater Technician will do a site inspection.
- First contact Contractor/Builder.
- Get cleaned up by the end of day or within 4 days depending on location and severity of complaint.
- If the Contractor/Builder can't be reached either by phone/email the Stormwater Technician will proceed with written enforcement action as outlined in the Erosion & Sediment ordinance.

Lenexa KANSAS	**City of Lenexa** **Community Development**
Subject: Outfall Inspection	Standard Operating Procedures
From I-Pad	Pages:
	Revision: 1-9-2025

Purpose:

The purpose of this S.O.P. is to provide guidance for a consistent and appropriate construction inspection process to check for any odors, discolor or stains that might lead to creeks or channels or (BMPs).

Background:

The Stormwater Specialist's role for stormwater BMP construction inspections varies depending on the type of project. The Stormwater Specialist will be the primary inspector for all stormwater BMPs constructed with Land Disturbance, Site Development, and Building Permits. The assigned Engineering Inspector will be the primary inspector for all stormwater BMPs constructed with Special Benefit Districts, and Capital Improvement projects. The assigned Engineering Inspector will initially inspect stormwater BMPs associated with Public Improvement projects, but since these stormwater BMPs are often started with the public improvements and not finished until a later date, the Stormwater Specialist will take over the stormwater BMP inspection process after the Public Improvements are finished. At any point the Engineering Inspector may choose to get the Stormwater Specialist involved with stormwater BMP-related inspections on their projects, but all communication/feedback associated with those projects must only go back to the Engineering Inspector. In these instances, the Stormwater Specialist's role is only providing technical assistance to the Engineering Inspector.

Process:

1.	Log into Lucity. (by using your Username and Password)
2.	
3.	
4.	
5.	
6.	

7.	

Public Improvement Permits
Standard Operating Procedures (SOP)
March 2011

Public improvement permits are issued by the city to private developers and contractors who install public infrastructure as part of their projects.

The Storm Water Technician (SWT) will be notified by email from the Community Development Project Manager to attend a pre-construction meeting. All parties involved will review the approved plan. At this meeting the SWT finds out which Engineering Inspector has been assigned to this project.

The first permit issued to the contractor is a Land Disturbance (LD) permit. This permit allows the contractor to do mass grading along with installing sanitary lines.

While the LD permit is in effect the SWT is the primary inspector. SWT coordinates with the contractor on all erosion sediment control (ESC) issues. The assigned Engineering Inspector inspects all sanitary line connections.

The SWT is the primary inspector while the LD permit is in effect. It is a good practice to coordinate with the assigned Engineering Inspector on all matters concerning the project as he will be the primary inspector when the Public Improvement permit is issued.

After the sanitary sewer lines are installed a Public Improvement permit is issued.

At this time an Engineering Inspector is assigned full time to the project and will take the lead on all issues that arise during the construction of the project. The SWT will continue to inspect for erosion/sediment issues and provide technical assistance for the Engineering Inspector

An inspection is set up in the Accela inspector app every 1-2 months and is performed along with the onsite engineering inspector. The report will then be discussed with the on site inspector who will provide a hardcopy of the “ESC inspection report” to the contractor to fix any deficiencies identified. Once the contractor has fixed the deficiencies they will fill out the “compliance action” and “date” fields located on the form. The contractor will return the updated “ESC inspection report” to the inspector who gives the report to the SWT. The SWT will update the information in the Accela app. The contractor will be informed the they need to update their SWPPP.

All issues found during inspections will be documented on an Erosion Sediment Control inspection form that is located @ L/Engineering/Stormwater/ESC inspections/ erosion notice blank form

If the inspection form is ignored or can not be resolved by the contractor and the on site inspector the SWT will need to escalate the issue to the project manager.

Lenexa KANSAS	**City of Lenexa** **Community Development**
Subject:	Standard Operating Procedures
Residential Building Sites	Pages: 2
Inspections	Revision: 1/13/2025

Purpose:

- To perform the Residential Building Site Inspection.
- Visit each site every six weeks.
- To ensure each site meets the permit requirements.
- The main purpose is to make sure no silt/sediment leaves the site.
- The Stormwater Technician will perform a complete walk around of the sit.

Background:

- The Stormwater Technician is responsible for routine Erosion and Sediment Control Inspections. The assigned inspector is responsible for assuring that the contractor is adhering to all required erosion and sediment control procedures monthly. The Stormwater Technician will administer routine inspections throughout the duration of the project.
- To perform a residential building site inspection, the stormwater technician will acquire the subdivision maps from the community development tech III, which will show the permit numbers for each site.
- There are three inspections performed: 286-Initial, which is the first inspection for that site, 287- Periodic, which is every six weeks until site is complete, 288- Final, this is when sod and all erosion & sediment devices are removed.
- To obtain your total number of inspections for 286's,287's,288's for the year, go into Accela click on Inspections, click on search, on inspection date (from) January 1st, (to) December 31st of previous year, click current department, select engineering, click current user your name, click inspection, this is where you will put 286,287, and 288 this will separate for each one. Then click submit this will give you a sheet of the totals of each type of inspection. To print click on Menu and select print page.

Process:

- From the I-Pad, log onto Accela's mobile app.
- Click on records in the gray bar.
- Insert permit number.
- Click search this will bring up the permit number and address for the site. Make sure they match. (You should see no Assignee).
- You will see no assignee, click this for record.
- You will see three little ooo along top of screen.
- Click the three ooo's for add inspection.
- Click the record that you are performing, 286,287,288. Click that number and next.
- Click your name, then next.

- Calendar will appear click submit. Ready for inspection!!!
- Perform a walk/visual around the entire site. If there are any deficiencies (silt fence, straw wattles etc..) or any erosion or sediment issues. Make sure they are in compliance with the permit requirements.
- Go back to the I-Pad.
- Click back to job.
- Click inspection, in the gray bar Put in permit number click search.
- Your inspection will appear.
- Click result. This will be approved, failed or corrections required. Click next
- You will see comment (optional) click next.
- Finally click submit.

- If you get a FAILED or CORRECTIONS REQUIRED inspection. Take a picture of the deficiencies, add to report to send to Builder or Contractor. To get photo from I-Pad go to photo's and select the photo to add to the report.
- Click the three ooo's at top of screen.
- Click Run Report.
- Click the 3 dots on the right.
- Click View Report.
- At top of screen click the box with arrow. Select Copy Then Done.
- Click on contacts and select Superintendent, this is where I put the deficiencies and photos. and send.
- Add inspection.
- Click on 287 periodic- erosion & sediment click next.
- Click your name.
- The calendar appears, click the date for the day you have given them. I give them 1 week to fix or repair Deficiencies.
- Click submit.

Staff Involved with Process:

Stormwater Technician
Engineering Construction Inspector
Engineering Project Manager

STORMWATER TECHNICIAN:

Primary contact for procedure. Coordinate with all divisions and departments to initiate and conduct inspections, follow up on issues, maintain records.

ENGINEERING CONSTRUCTION INSPECTOR:

Monitors sites between formal inspections. Requires contractors to adhere to erosion and sediment control plans and common practices. Request advice and opinion of stormwater technician when needed.

ENGINEERING PROJECT MANAGER

Assure that the SWPPP is prepared correctly and delivered to the contractor at the start of the project. Assure that the erosion and sediment control plans are prepared correctly.

	City of Lenexa **Community Development** *Engineering Division*
Subject:	Standard Operating Procedures
Illicit Discharge Investigation	Pages: 3
	Revision: 3-2-2012

Purpose:

The purpose of this SOP is to provide guidance for a consistent and appropriate investigation and enforcement of municipal code section 4-5-J in adherence with Clean Water Act, National Pollution Discharge Elimination System (NPDES) and guidance from KDHE.

Procedure:

This process begins when a discharge is reported to the City. Discharges may be reported via online service request, phone call or in person. Discharges may also be reported by city staff during routine maintenance and active outfall inspections. An "illicit discharge" includes any release into the municipal separate sewer storm system (MS4) that is not composed entirely of unpolluted stormwater. A "release" is constituted by discharge to waters directly or through the wash off and transport of pollutants found on the land and built surfaces during rain events.

Investigations will be tracked in an Excel spreadsheet until such time that a database can be constructed in Accela to centralize enforcement information with other divisions. A Service Request may be created in Accela to allow administrative and public tracking of the complaint online.

Residential sites

1.	Immediately report ***hazardous materials*** to Lenexa Fire Dept for containment or call Johnson County Hotline 913-715-6969 (6900 after business hours)
2.	Any reported discharge will be investigated within 24 hours of notice to the City.
3.	Enter complainant info into Service Request module of Accela (or Dale's tracking spreadsheet) Verify site address or approximate location and assign a responsible staff person (Stormwater Technician).
4.	Conduct a site visit and take photos of area whether discharge is visible or not. If discharge is visible, downstream photos will be taken (ex: paint dumped into inlet AND the pipe discharge into the stream)
5.	Contact occupant and advise clean up. If unable to reach anyone, apply a door hanger for residential sites. Several homes may be targeted and addresses are recorded in spreadsheet.
6.	Revisit site within 2 days to verify cleanup or removal of material. Photograph affected area and downstream even if conditions are unchanged. Enter date and conditions into spreadsheet or service request.

7.	Send a courtesy letter to implicated homeowner or group of homes. Template is available.
8.	Conduct follow up inspection within 7 days or following next rain. Photograph conditions on site and downstream. Document any contact from property owner/occupant.
9.	Issue ticket for violation. Contact Angel Whitaker with relevant information and mail ticket to property owner with carbon copy to site address, if applicable. Make copies of all correspondence and photos for the prosecutor.
10.	When court date is scheduled, conduct site visit and photograph both site and downstream to show most recent conditions. Bring all documentation to court.
Commercial Sites	
1.	Immediately report ***hazardous materials*** to Lenexa Fire Dept for containment or call Johnson County Hotline 913-715-6969 (6900 after business hours)
2.	Any reported discharge will be investigated within 24 hours of notice to the City.
3.	Enter complainant info into Service Request module of Accela (or Dale's tracking spreadsheet) Verify site address or approximate location and assign a responsible staff person (Stormwater Technician).
4.	Conduct a site visit and take photos of area whether discharge is visible or not. If discharge is visible, downstream photos will be taken (ex: paint dumped into inlet AND the pipe discharge into the stream)
5.	When discharge occurs off-site of the business (street, stream, job site), record any vehicle information (license plate, make and model of vehicle) and instruct employees to cease discharge. Collect employee name, driver's license number and job title. **CHOICE:** Contact PD to meet on site and issue ticket OR follow up with Community Standards by mailing a ticket to business.
6.	Contact site manager and advise clean up. Notify of code violation and next inspection date.
7.	Revisit site within 2 days to verify cleanup or removal of material. Photograph affected area and downstream even if conditions are unchanged. Enter date and conditions into spreadsheet or Service Request. **CHOICE:** Contact PD to meet on site and issue ticket OR follow up with Community Standards by mailing a ticket to the business.
8.	Conduct follow up inspection within 7 days or following next rain. Photograph conditions on site and downstream. Document any contact from property owner/occupant.
9.	If court date is scheduled, conduct site visit and photograph both the site and downstream to show most recent conditions.
Staff Involved with Process:	
Customer Service Representative (CSR) Stormwater Technician Stormwater Superintendent Building Inspection Engineering Inspection	

CUSTOMER SERVICE REPRESENTATIVE
Notify Stormwater Technician of resident inquiries and pass along Johnson County Pollution Reporting Hotline number (913-715-6969) for pollution reporting.
STORMWATER TECHNICIAN:
Primary contact for procedure. Coordinate with all divisions and departments to internally respond to illicit discharge, follow up on issues, track and monitor discharges and document conditions with photos. Secondary contact will be Stormwater Specialist for any aspect of procedure.
STORMWATER SUPERINTENDENT:
Initial contact on any illicit discharges reported by maintenance crews. Direct staff to distribute door hangers, conduct follow up site visits and pass along any acute issues to Stormwater Technician, including any discharge not remediated within 2 days of contact (in person or doorhanger)
BUILDING INSPECTION
Notify Stormwater Technician of any suspicious activity or evident discharge. Cooperate on any open permits to leverage compliance, where applicable.
ENGINEERING INSPECTION
Direct compliance with all contractors, subcontractors and on-site personnel related to public projects. Notify Stormwater Technician of any suspicious activity off-site and take photos if possible.

Lenexa KANSAS	**City of Lenexa** **Community Development** *Engineering Division*
Subject:	Standard Operating Procedures
Private Stormwater Line Connection to Public Infrastructure	Pages: 2
	Revision: 1-10-2025

Purpose:

The purpose of this S.O.P. is to provide guidance for a consistent and an appropriate routine for Lenexa private property owners to connect their private storm line to public stormwater infrastructure.

Background:

The City allows private drain lines to be connected to the public stormwater system with the appropriate permit and method for connection. The Stormwater Specialist is responsible for permit review, permit approval, inspection and permit closure for all private drain line connections permits to the public stormwater infrastructure. The permitting process in through an online system called "ROWAY" (Right-of-way Permitting System).

Process:

1.	An applicant will apply for apply for a permit for a private drain line connection to the public stormwater infrastructure through the ROWAY permitting system. If there are questions or discussion prior, the Stormwater Specialist will provide step by step directions document: "Steps to apply for a ROWAY permit" located in the following file: L:\Staff Folders\Current Staff\Justin Stuedemann\Misc Design and Documents\Stormwater Specialist Job Templates\Stormwater Specialist SOP\2025 Revisions . Once this is completed, the system will send an e-mail notification to the Stormwater Specialist. Please note, the ROWAY system has its own protocol for the application process. The applicant will need to be approved as a "registrant" first and once approved, then the permit will need to be applied to for the specific address of the connection. If an applicant has problems with the ROWAY system, they will need to contact the help number provided which will forward calls to either the Right-of-Way Manager or the Right-of-Way Coordinator.
2.	Once notified of an application, the Stormwater Specialist will log into the ROWAY system and select the pending application and review the information. If all the information is correct, the Stormwater Specialist may approve of the application. This will send an e-mail notification back to the applicant. If there is missing information, or more information needed, the Stormwater Specialist will deny it and make notes in the comment section outlining the needed information. The ROWAY system will send an e-mail notification back to the applicant. It is best practice to call and talk to the applicant in person.
3.	Once the application is approved, the drain line may be connected to the public stormwater system at that time. They must make the connection as directed in the most recently approved Lenexa Standard Details Page D-302. Once this connection is made, the private party will notify the Stormwater Specialist, and a field inspection must be conducted.

4.	If the inspection is conducted and approved, no further field action is needed. If there are issues with the connection, this must be communicated to the permit applicant so modifications can be made towards approval. It should be noted that for the purposes of this permit, the Stormwater Specialist is only looking and the portion of pipe in the City Right-Of-Way and the actual connection itself. As a courtesy the Stormwater Specialist may provide feedback or recommendations regarding the private drain line on private property, but it is important to note that this part of the work is not covered by the permit, therefore is not regulated by this permit.
5.	Once the work has been completed satisfactorily, the Stormwater Specialist will then go back into the ROWAY permitting system and approve and close out the permit. This action will trigger an automated e-mail indicated the permit has been closed to the applicant.

Lenexa KANSAS	**City of Lenexa** **Community Development** *Engineering Division*
Subject:	Standard Operating Procedures
Stormwater BMP	Pages: 4
Construction Inspections	Revision: 1-10-2025

Purpose:

The purpose of this S.O.P. is to provide guidance for a consistent and appropriate construction inspection process for structural stormwater best management practices (BMPs).

Background:

The Stormwater Specialist's role for stormwater BMP construction inspections varies depending on the type of project. The Stormwater Specialist will be the primary inspector for all private stormwater BMPs constructed with a Land Disturbance, Site Development, and Building Permits. The assigned Engineering Inspector will be the primary inspector for all stormwater BMPs constructed with Special Benefit Districts, and Capital Improvement projects. The assigned Engineering Inspector will initially inspect stormwater BMPs associated with Public Improvement projects, but since these stormwater BMPs are often started with the public improvements and not finished until a later date, the Stormwater Specialist will take over the stormwater BMP inspection process after the Public Improvements are finished. At any point the Engineering Inspector may choose to get the Stormwater Specialist involved with stormwater BMP related inspections on their projects, but all communication/feedback associated with those projects must only go back to the Engineering Inspector. In these instances, the Stormwater Specialist's role is only providing technical assistance to the Engineering Inspector.

Process:

1.	The Stormwater Specialist will be notified of scheduled pre-construction meetings for upcoming development projects. The Community Development Technician will schedule pre-construction meetings for Land Disturbance, Site Development, Building, and Public Improvement projects. The Project Manager will schedule pre-construction meetings for Special Benefit Districts and Capital Improvement projects.
2.	Once notification is received, the Stormwater Specialist will create a folder for the project in the following location: L:\Staff Folders\Current Staff\Justin Stuedemann . All pertinent information for the designated project will be saved in this folder. This includes (but not limited to) approved plans, correspondence with contractors, all inspection pictures (categorized by date) and any other relevant documentation/information. At this point, leading up to the pre-construction meeting, the Stormwater Specialist will start reviewing the plans to become familiar with the project.
3.	The pre-construction meeting is held at which time the Stormwater Specialist will exchange business cards with attending contractors. During this meeting, the Stormwater Specialist will have a dedicated time spot to discuss all pertinent stormwater requirements for the project. At a minimum the following will be addressed: 1. A TCO will not be issued until the BMP Establishment and Maintenance Plan is approved by the City for the project. 2. A TCO will not be issued until a signed and Notarized BMP Maintenance Agreement has been recorded with the county and approved by the City for the project. 3. All BMP related questions and inspections must be coordinated through the Stormwater Specialist.

	4. A rough timeline/construction schedule for the project. 5. Clearly indicate that any testing information or BMP related informational requirements must be submitted and approved by the Stormwater Specialist prior to the installation or construction of said BMPs. 6. Discuss the importance of having the contributing drainage area stabilized prior to completing specific BMPs. Often time construction staging is recommended. 7. Any other project specific BMP related discussions will be had at this time with the contractors. It should be noted that for any Public Improvement, Capital Improvement, Special Benefit District pre-construction meeting, the assigned Engineering Inspector is taking the lead; the Stormwater Specialist will not attend the pre-construction meeting unless requested by that Inspector. It should also be noted that the City of Lenexa requires a 3rd Party Inspection for private developments. As part of this requirement, the 3rd party should verify many (but not all) of the same items as the Stormwater Specialist is concerned about regarding the stormwater BMPs. The Stormwater Specialist should not rely solely on 3rd party inspections and must conduct business as if the 3rd party inspections are not happening. Throughout the construction project, all 3rd party inspections, reports and forms are handled by the Community Development Technician.
4.	Typically, the necessary permits to be issued at the time of pre-construction meeting. Occasionally the permits are issued a few days later. Regardless of when the permit is issued for Land Disturbance, Site Development, Building permits or Public Improvements once the record is created in Accela, the following conditions must be put on the permit in Accela: 1. A TCO/CO will not be issued until the BMP Establishment and Maintenance Plan is approved by the City for the project. 2. A TCO/CO will not be issued until a signed and Notarized BMP Maintenance Agreement has been recorded with the county and approved by the City for the project. 3. The stormwater BMPs must be inspected and approved by the Stormwater Specialist (then provide the best phone number to reach the Stormwater Specialist). It should be noted that for projects that also have a corresponding Building Permit, the conditions must also be placed on those permits. In these cases, the Building Inspectors will be notified of the overall site conditions.
5.	Depending on the actual permitted construction activities, the construction schedule varies greatly. Some projects may take a year or longer, some may only take a couple of months. The Stormwater Specialist must track all on-going projects with stormwater BMPs. A good practice is to periodically stop in and meet with the site Superintendent. This will provide up to date information on the construction schedule and will provide an opportunity to meet new Superintendents that come on the job. It is common for contractors to come and go over the course of a project. It is also common for Building Inspectors and the Stormwater Technician to also provide schedule information and updates as they are on site throughout the entire project.
6.	It is the Stormwater Specialist job to ensure the on-site construction activities are not only completed in an appropriate manner that will lead to successful BMPs but to also ensure the BMPs are constructed per the approved plan. If field conditions dictate deviations from the approved plan, often the construction activity must hold up and the design Engineer or

	Landscape Architect must be brought into the loop and give final approval for deviations. Minor deviations can be made in the field with documentation kept in the project folder.
	Typically, it is suggested that another smaller pre-construction meeting be scheduled in the job trailer for all the pertinent stormwater BMP related contractors for everyone to get on the same page for the construction of the BMPs. During this meeting, the Stormwater Specialist will meet all the sub-contractors and establish an expectation for the project.
7.	The site Superintendent should contact the Stormwater Specialist, as directed in the pre-construction meeting, to verify all aspects of stormwater facility construction meet approved permit plans. Typically, storm pipes, stormwater proprietary units and structures are installed towards the beginning of the construction during mass grading. Typically, engineered soil media, amendments, mulch, live plants, seed, and sod will take place towards the later stages of the construction. The Stormwater Specialist will need to be involved for all inspections pertaining to the site specific BMPs.
8.	The Stormwater Specialist must visually verify all structural components of the site specific BMPs and notify the superintendent of any apparent discrepancies with approved plan and documented correspondence. Any pertinent conversations and agreements must be documented in the project folder. The Stormwater Specialist must provide quality assurance and plan compliance for all vegetative components including but not limited to engineered soils, amendments, mulch, live plants, seed, and sod. All components of the stormwater BMP facilities must be approved by the Stormwater Specialist.
9.	All required documentation (lab results, testing results, etc.) should be submitted and approved prior to construction of the BMPs. Copies of all approved documentation should reside in the project folder. If necessary, the Stormwater Specialist can meet with the nursery supplying the plants to assess condition and to clarify any species substitutions. The Stormwater Specialist must be proactive in their approach to achieve their inspections while not slowing down the construction project.
10.	For residential developments: The assigned Engineering Inspector will inspect the site specific BMPs while conducting the inspections on the public improvements. At which time the public improvements are completed, the Stormwater Specialist will take over the inspection requirements for the stormwater BMPs. Residential subdivision projects will not finish constructing stormwater BMP facilities until 90% of the development is built out. The Stormwater Specialist will be notified of any developments reaching that threshold by the Community Development Technician so BMP construction can be inspected. At the 90% threshold, no further building permits will be issued until the BMPs have been completed and approved by the Stormwater Specialist. It is recommended that as a development gets close to the 90% the Stormwater Specialist initiate communication with the developer to establish the expectation moving forward.
11.	At any point during this process, if any of the original conditions have been met they may be cleared by the Stormwater Specialist in Accela. Every project is unique but the TCO can be held until these requirements have been met. If the project dictates, these conditions can be moved to a CO requirement. This is solely the decision of the Stormwater Specialist. The project is considered not completed until all 3 original conditions have been cleared. 1. A BMP Establishment and Maintenance Plan must be drafted by the designer. This can be the design Engineer or Landscape Architect. It must provide details in common terms that would provide site facility staff to understand where the BMPs are and how to maintain them. This document typically has initial stage care and long-term care items. It is common for a checklist to be present to assist the site staff with inspections. Once approved by the Stormwater Specialist, a pdf of the plan must be saved with the permit number in: K:\Community Development\Engineering\Approved Plans\BMP's - E&M Plans on the City of Lenexa server. Please refer to the

	Stormwater Specialist binder for more information pertaining to these Plans. 2. A BMP Maintenance Agreement must be signed by the property owner, signed by City staff and recorded with the Johnson County RTA office. The legal description must be confirmed at the time City staff signs the document by the Community Development Technician. The original document must be passed around as the RTA office will only record a document with original signatures. Once recorded the entire document must be scanned and saved with the permit number in: K:\Community Development\Engineering\Approved Plans\BMP's - Maint. Agreements on the City of Lenexa server. The template of this document also resides in this location to begin the process. 3. All the site-specific stormwater BMPs have been inspected and the Stormwater Specialist can assure the original permitted plan has been met.
12.	A Letter of Credit (LOC) or Certified Check may be obtained to avoid delays in TCO or CO issuance. An estimate for the necessary remaining work, including labor and materials, will be submitted directly to the Stormwater Specialist for review. The LOC should stipulate a deadline for completion of work and will include the specific amount detailed in the estimate. Once the LOC is approved the Letters of Credit spreadsheet should be filled out for tracking purposes. This can be found in: G:\DATA\EVERYONE\Letters of Credit on the City of Lenexa server. Please refer to the Stormwater Specialist binder for more information pertaining to the general practices regarding LOC.
13.	Over the duration of the construction project, as the conditions have been satisfied, the Stormwater Specialist will go into Accela and clear the pertinent condition. Once all conditions have been met the project can be considered closed. Once the project is closed it is the responsibility of the Stormwater Specialist to update Central Square EAM and the appropriate GIS layers with the new Site and BMP assets, structures and conduits. All stormwater related items must be tracked for future maintenance inspections and mapped. For GIS related step by step instructions please refer to the “Adding Stormwater Assets Instructions” document located in: L:\Staff Folders\Current Staff\Justin Stuedemann\Misc Design and Documents\Stormwater Specialist Job Templates\Stormwater Specialist SOP\2025 Revisions *Please Note* All pertinent construction information, plans, letters, agreements must be uploaded to Central Square EAM at the Site level. This allows the access of such documents in the field via an iPad.

Lenexa KANSAS	**City of Lenexa** **Community Development** *Engineering Division*
Subject:	Standard Operating Procedures
Stormwater BMP Maintenance	Pages: 3
Inspections	Revision: 1-10-2025

Purpose:

The purpose of this S.O.P. is to provide guidance for a consistent and appropriate routine maintenance inspection process for structural stormwater best management practices (BMPs).

Background:

The Stormwater Specialist is responsible for all routine stormwater BMP maintenance inspections. As per the City Ordinance, there are two kinds of routine maintenance inspections. The first type of inspection is a first annual inspection, which takes place 1 year after a stormwater BMP was constructed and approved. These inspections will include 100% of the approved stormwater BMPs that were constructed the prior year. The second type of inspection is a routine maintenance inspection. Once the first annual inspection is completed the stormwater BMP will go into a grouping with all the other stormwater BMPs. Per the ordinance, 100% of this grouping must be inspected at least once every 3 years. The actual inspection process is the same for both the first annual and the routine maintenance inspection. The goal is to complete 1/3 of the routine maintenance inspections every year. In cases where this goal is not met, the new goal should be to get 100% of this grouping inspected by the end of the third year (Example: no inspections completed years 1 and 2 but conduct 100% of inspections in year 3).

Process:

1.	It is the Stormwater Specialist's role to keep the private stormwater BMP asset database up to date. Central Square EAM provides the ability to track stormwater BMPs that need to be inspected and document the outcomes of past inspections. All maintenance inspections that are completed in Central Square EAM will remain searchable forever. Central Square EAM has the ability to search through created filters and search for different parameters. Central Square EAM is accessible via a web based program or via the iPad using an application.
2.	Inspections should be conducted in the late spring, summer months, or early fall when the vegetation is not dormant and can appropriately be inspected. Wet weather inspections are helpful for observing drainage patterns and functional capacity.
3.	After reviewing the inspection history in Central Square EAM, and an inspection schedule is created, perform site visits for desired inspections. Central Square EAM coupled with Arc GIS offers mapping abilities to provide directions to the desired locations. This mapping also allows for different layers to be switched on or off to view the private stormwater BMPs, street map, and the stormwater pipe network throughout the City.
4.	During the site visit it is important to, when feasible and possible, meet with property owners and managers to introduce yourself, explain the reason for the visit and answer any questions they may have. Many sites are secure and special access will need to be granted to get to specific stormwater BMPs. Always wear a safety vest during inspection activities. Some locations will require the use of other personal protective gear while on site. Locations such as schools will require notification before walking around school grounds. Some

	locations will need to be scheduled ahead of time to meet security protocol (Example: EPA Office). Looking at the most recent past inspection form for that stormwater BMP in Central Square EAM will provide helpful contact information and notes for specifics to that site.
5.	Conduct the actual visual inspection of the stormwater BMP. A checklist has been created for each type of stormwater BMP within Central Square EAM. The inspection checklist must be followed, answering each question and providing notes as directed. For the specific procedures to conduct an inspection using the iPad and Lucity Application please refer to the "Stormwater Intern Training Manual" document. A stormwater BMP Condition Guide is also provided to help assist with determining how to assign a final grade for the inspection within the above referenced document.
6.	Once all the stormwater inspections have been completed for the Site (be careful to make sure all your inspection items have been properly saved), go back to the initial person you met with and discuss findings. This is a good time to educate the property owner as to the required care and maintenance needs based on your findings. Look in Central Square EAM for attached documents that you might be able to provide the property owner to assist them (Example: BMP Establishment and Maintenance Plan, copy of originally approved civil engineering plan or landscape plans). **Please note that these stormwater specific documents may prove useful during actual inspections.
7.	Once desired inspections are completed a follow up courtesy letter must be drafted for each site that had stormwater BMPs graded as ***poor condition***. Deficiencies or opportunities for improving performance are summarized in a letter addressed to the owner of the Site. Approved examples of the Courtesy letter, Notice of Violation letter, and Extension Letter are provided in the Stormwater Specialist binder or are found templated in: L:\Staff Folders\Current Staff\Justin Stuedemann\Misc Design and Documents\Stormwater Specialist Job Templates\Stormwater Specialist SOP\2025 Revisions Important things to remember: 1. Lenexa's mission and vision is to be helpful to Lenexa businesses and Home Owner Associations. 2. Keep in mind the time of year, planting seasons, and cost to performed required repairs. Often times it is acceptable to give long timeframes to become compliant. It's okay to work towards compliance over an agreed upon period of time. Use professional judgement, if unsure consult with City Engineer or Engineering/Construction Services Administrator. 3. Depending on Site specifics, it may be helpful to include photos or an aerial map to depict locations and findings. 4. Get approval/notify managers of Community Development Department before sending out any enforcement letters. Once approval has been granted, then proceed.
8.	Once letters have been issued it is the Stormwater Specialist duty to track the open cases and follow up with all communication, site visits and any necessary involvement to streamline the process to become complaint. Ideally the Site owner or owner's representative will contact the Stormwater Specialist for technical assistance and inspection of repair work in assigned timeframe. If compliance is not met, further leverage will be moving on to the Notice of Violation letter. All correspondence and e-mails pertaining to specific sites must be saved and tracked within an enforcement spreadsheet by year. These folders can be found at the following link: L:\Staff Folders\Current Staff\Justin Stuedemann
9.	If after multiple attempts to work with the Site to become compliant fail, the next step is to issue a citation for non-compliance. At this point it is extremely important to work with the appropriate City Attorney and follow the directions provided to navigate through the legal process.

	Please note this may include an appearance in Municipal Court.

Lenexa KANSAS	**City of Lenexa** Community Development *Engineering Department*
Subject:	Standard Operating Procedures
Harmful Algae Bloom (HAB)	Pages: 3
Response Plan	Revision: 12 - 11 - 2020

Purpose:

The purpose of this SOP is to provide guidance for a consistent and appropriate investigation and response to reported Harmful Algae Blooms (HAB) or cyanobacteria in public and private water bodies in Lenexa; in accordance with Kansas Department of Health and Environment (KDHE) requirements and public health and safety concerns. This process begins when a HAB is reported to the City or noted by City staff. Designated staff will initiate the appropriate procedure for KDHE compliance.

Procedure:

HABs can be unpredictable. They can develop rapidly, disappear, and/ or may move across a waterbody, so best judgment must be exercised. The public is encouraged to stay informed and aware of algal blooms. Exposure to HABs, whether through contact or ingestion, can cause serious illness and even death in animals as well as humans. Do not allow livestock, pets, or working animals to drink from HAB-affected waters, eat dried algae on shorelines, or lick their fur after exposure. If a person or animal becomes ill after suspected exposure to an HAB, consult a medical or veterinary care provider immediately, and report the event to the Epidemiology Hotline (1-877-427-7317 / http://www.KDHE.EpiHotline@ks.gov).

KDHE provides recommendations on public water bodies regarding health advisories based on analytical results. KDHE does not have the authority to close a waterbody. KDHE conducts monitoring for HABs concurrent with the water recreation season, April 1 – October 31. For advisories that are outside that window, KDHE relies on lake managers to monitor changing conditions. KDHE has developed three levels of advisories based on analytical analysis:

WATCH – Harmful algae is possible and may be present.
WARNING – Harmful algae is expected or present.
HAZARD – Harmful algae is present and extreme condition exist.

Public water bodies

1.	Any reported HAB must be investigated within one business day of notice to the City. The Stormwater Superintendent or staff representative is responsible for the public water bodies that are under the Municipal Services Department responsibility for maintenance and operation. The Park Superintendent or staff representative is responsible for the public water bodies that are under the Parks Department responsibility for maintenance and operation.
2.	Conduct a site investigation to confirm presence of HAB. Take photos, document date, time and location, and all other pertinent information for reporting purposes. If needed collect sample for Jar test confirmation. Multiple site investigations may be required to confirm the presence of HAB.

3.	Once a HAB has been identified or suspected, notify KDHE by calling the HAB General Inquiries Hotline at 1-785-296-1664 or notify KDHE by completing the online Algae Bloom Reporting Form (http://www.kdheks.gov/algae-illness/index.htm).
4.	Initiate the HAB response including pertinent advisory or warning materials and deploy signs, press releases and follow up inspection or other collateral as directed by KDHE in accordance with their current response plan.
5.	Send an e-mail out to the Stormwater Specialist, Stormwater Superintendent and Parks Superintendent alerting all applicable departments to the situation.

Private water bodies	
1.	As defined in the KDHE Agency Response Plan; a private water body is any freshwater reservoir or pond that is both located on and completely bordered by land under common private ownership or is not accessible to the general public. Algae on private impoundments are not subject to KDHE water quality criteria for public surface waters. KDHE does not sample or provide laboratory analysis for private ponds. A jar test may be performed to help identify the presence of HAB. Water samples for blue-green algae identification can be submitted to a private laboratory or the Kansas State Veterinary Diagnostic Laboratory (1-866-512-5650 / http://www.ksvdl.org/) at the owner's expense.
2.	Any reported HAB concerns from the general public on private impoundments will be directed to the Stormwater Specialist. The Stormwater Specialist may provide technical assistance, guidance, or conduct a site investigation as deemed necessary to the situation as a courtesy only. The Stormwater Specialist shall direct the concerned individuals to the KDHE HAB website (http://www.kdheks.gov/algae-illness.index.htm) or K-State's website (https://www.sbeap.org/water/harmful-algal-blooms) to assist owners and managers of private water bodies with HAB information.
3.	Send an e-mail out to the Stormwater Specialist, Stormwater Superintendent and Parks Superintendent alerting all applicable departments to the situation.

Staff Involved with Process:

Customer Service Representative (CSR)
Stormwater Specialist
Stormwater Superintendent
Parks Superintendent

CUSTOMER SERVICE REPRESENTATIVE

Notify Stormwater Specialist of resident inquiries and pass along Johnson County Pollution Reporting Hotline number (913-715-6969) for pollution reporting on private facilities.

STORMWATER SPECIALIST:

Primary contact for all call in inquiries pertaining to HABs. For Public Water Bodies, coordinate with appropriate department superintendent to initiate response plan for that water body. For private water bodies, initiate response plan. Send e-mail out to the Stormwater Superintendent and Parks Superintendent making them aware of the situation.

STORMWATER SUPERINTENDENT:
Primary contact for HAB concerns on public water bodies that are under the Municipal Services Department responsibility for maintenance and operation. This also involves HAB concerns reported by maintenance crews. Initiate response plan, send out e-mail to the Stormwater Specialist and Parks Superintendent making them aware of the situation.
PARKS SUPERINTENDENT:
Primary contact for HAB concerns on public water bodies that are under the Parks Department responsibility for maintenance and operation. This also involves HAB concerns reported by maintenance crews. Initiate response plan, send out e-mail to the Stormwater Specialist and Stormwater Superintendent making them aware of the situation.

Construction Certificate Management Procedures
Draft

The Stormwater Engineer is responsible for the administration of all development issues within the City of Lenexa, KS including permitting, inspection, and review of all construction along with the creation of and maintenance of all building permit files and administrative documents (ordinances, permit brochure, building guides, applications, forms, outreach materials, etc.) related to building and development. All inspections and permit/plan reviews are conducted by the Stormwater Engineer as well as all permit approvals.

The purpose of this document is to explain our management procedures for review of Elevation Certificates (ECs) and all other floodplain-related construction certificates required including, but not limited to, Floodproofing Certificates and Engineered Opening Certificates. These procedures outline the types of certificates required, the collection and review of all certificates, how corrections should be made, where the certificates are stored/archived and how we make these certificates available to the general public.

(a) TYPES OF CERTIFICATES REQUIRED
When any new construction, substantial improvement or repair for a substantially damaged building is conducted in the Special Flood Hazard Area (SFHA) (Zones AE and Future Conditions Zone X), the Stormwater Engineer shall require an EC, and any other floodplain-related certificate that is appropriate for the development.

(a) & (b) WHEN CERTIFICATES ARE REQUIRED
When a property owner requests a permit for building a new structure, remodeling an existing structure, or rebuilding a damaged structure, the City staff will review the flood map to determine if new development will occur in the floodplain. Digital flood maps can also be reviewed on the Division of Water Resources, the Map Service Center websites and the Johnson County AIMS site. Should it be determined that there will be a new or substantially improved building in the special flood hazard area then certification of compliance will be required.

Once construction on the building is finished and all adjacent grading is finalized, a complete and correct "Finished Construction" EC must be submitted by the applicant to show the as-built characteristics of the building is in compliance with the City of Lenexa Unified Development Code Chapter 4-1, Article 4-1-D Site Design and Development Standards, Section 4-1-D-3 Flood Prevention. A "Finished Construction" EC must be received, reviewed, and corrected (if necessary) before a Certificate of Occupancy is issued. At this point, all other required certificates must also be submitted and reviewed. Elevation certificates based on GPS surveys must include a copy of the Online Position User Service (OPUS) report attached to the elevation certificate.

If a Floodproofing Certificate for Non-Residential Structures is required for a floodproofed non-residential building, an EC is not required (however we will require one anyway to help verify compliance with the City of Lenexa Unified Development Code Chapter 4-1, Article 4-1-D Site Design and Development Standards, Section 4-1-D-3 Flood Prevention (cite the ordinance that includes NFIP development standards, usually in Article 4. B for many communities) ordinance. A complete and correct Floodproofing Certificate is required to be submitted to the Stormwater Engineer once construction is finished on the building and prior to issuing a Certificate of Occupancy Non-Residential Floodproofing certificates will be rejected if they are submitted without a comprehensive maintenance plan, photos of shields, gates and barriers and also written certification by the architect or engineer in

accordance with 44 CFR 60.3 (c)(3). This additional documentation is described in more detail in the Non-Residential Floodproofing Certificate instructions.

When engineered flood openings are installed in the foundation of a building, and the EC indicates that they were installed (Sections A8d and A9d on the EC), an Engineered Opening Certificate is required to be submitted with the EC to help verify compliance and the insurance rate. Be sure the developer submits either the International Code Council® Evaluation Service (ICC-ES) form for the engineered opening or an individual certification. Individual certifications must cover the following at minimum:

a. it must identify the building (address) with the installed engineered openings;
b. the design professional's name, title, address, type of license, the state issuing the license, signature and seal;
c. a statement certifying the design of the openings will automatically equalize hydrostatic flood loads on exterior walls by allowing for the automatic entry and exit of floodwaters; and
d. a description of the range of flood characteristics tested or computed for which the certification is valid, such as rates of rise and fall of floodwaters.

(c) & (d) WHAT DEPARTMENT OR OFFICE COLLECTS/REVIEWS

All Finished Construction ECs shall be submitted initially to the Stormwater Engineer or tracking and initial review. The Building Permit Technician logs the EC in our tracking system, Accela Permitting software as well as on the City Server. it is then forwarded to the Stormwater Engineer and Chief Building Inspector, who review the EC and all supporting documentation for initial compliance. It is then forwarded to the Engineering Department for their review and approval. Both Departments review the EC and supporting documentation, along with all other required certificates, to ensure all applicable building and development ordinances and standards are met. Upon receipt of the EC the Floodplain Manager then reviews all permit application information to determine approval for the EC. It is then forwarded to the Chief Building Inspector for final approval for all parts of the building permit. The Certificate of Occupancy (or final permit approval) will not be issued until all problems with an EC and supporting documentation are resolved. Questions may arise about elevation certificates. Those questions will be directed to the Floodplain Team at Division of Water Resources.

(e) HOW CERTIFICATES ARE CORRECTED

The Floodplain Manager should consult the CRS EC Checklist when reviewing an EC to ensure all required fields are completed correctly. When an error is noticed on an EC, there are three ways to correct it:

1. For any inaccurate or incomplete information in Section C2, the Floodplain Manager should request a new certificate from the applicant or their representative (surveyor/engineer/architect) who certified the form.
2. If incomplete or inaccurate information is found in the other sections, the Floodplain Manager can do the following. As a general rule, and as law in some states, the local official SHOULD NOT mark up a signed and sealed form.
    a. The forms may be returned to the applicant (or their representative) with instructions on what needs to be changed or corrected;
    b. The Floodplain Manager can prepare a separate memo with the correct information and attach the Memo of Correction. When the certificate is provided to an inquirer, the memo must be included with it; or
    c. The Floodplain Manager can note the changes or corrections in Section G.

All "Finished Construction" ECs which had errors on them should be returned to the applicant within (10 business days) for immediate correction. In no case shall we accept a "Finished Construction" EC until all

corrections deemed appropriate by the Floodplain Manager are addressed. In no cases shall a Certificate of Occupancy for a permit be granted until the Floodplain Manager, the Chief Building Inspector and the Engineering Department have all approved the permit.

If corrections are completed after the Certificate of Occupancy (final approval), the Floodplain Manager must ensure the homeowner receives a copy of the corrected EC in case the correction(s) would affect their insurance rating.

(f) & (h) HOW AND WHERE THE CERTIFICATES ARE MAINTAINED

All ECs and all required construction certificates, as well as all other permit application documentation shall be stored in the address file in the Building Department. It shall also be scanned, at the usual time building files are scanned for storage/archival. Copies of the "Finished Construction" ECs along with the other required construction certificates (if applicable), shall also be placed in a separate folder containing all EC information for CRS purposes, labeled "Activity 310", organized by CRS recertification date.

(g) HOW CERTIFICATES ARE MADE AVAILABLE TO INQUIRERS

When a member of the general public requests a copy of an EC, the request shall be initiated with the Stormwater Engineer. The Stormwater Engineer shall act on the request immediately, if time allows, but at worst, shall have 3 business days to make a copy of the requested information and make the documentation available to the inquirer. There is no financial charge for this service. Completed ECs are available for review upon request and are referenced and located in the EC list maintained in the office filing system with a parcel search. (or scanned into GIS data base. Briefly explain your system for finding the records.)

All newly completed elevation certificates will be scanned and emailed to the Floodplain Management Team at Division of Water Resources and added to digital community files.

	City of Lenexa Community Development *Engineering Division*
Subject:	Standard Operating Procedures
Stormwater CIP Process	Pages: 2
Permit Review Procedures	Revision: 2-22-21

Purpose:

The purpose of this SOP is to provide guidance for the consistent and appropriate development of the Stormwater CIP.

Review Process:

The CIP process is initiated by the Finance department in late March. Each division is given about six weeks to present their proposed projects for the following five years. The Stormwater Engineer prepares the five-year CIP request for stormwater projects. The Stormwater Engineer reviews the pipe condition assessments, flooding issues and any potential regional stormwater opportunities. Projects that may be eligible for SMAC funding and Projects that are not specifically for infrastructure replacement (such as flooding or regional projects) are identified, estimates are prepared, and a preferred year of construction is chosen. This information is sent back to Finance. Finance reviews the available funding. Any additional, available funding, beyond what is needed for the projects submitted is put into a project called Traditional Stormwater Infrastructure Replacement. The CIP is approved in October and becomes affective the first of the year.

Throughout the year, the Stormwater Engineer looks for opportunities to develop and proceed with infrastructure replacement projects using the funding in the traditional infrastructure replacement project. This money also funds emergency projects that result from occasional pipe failures.

1.	Finance Director initiates CIP Process with department heads. Deputy Community Development director coordinates with division heads to develop CIP.
2.	The Stormwater Engineer reviews the pipe condition assessments, flooding issues and any potential regional stormwater opportunities. Projects that may be eligible for SMAC funding and Projects that are not specifically for infrastructure replacement (such as flooding or regional projects) are identified, estimates are prepared, and a preferred year of construction is chosen.
3.	Information is reviewed by deputy director and submitted back to finance.
4.	Finance reviews available funding and approves requested projects as well as funding for a project called Traditional Stormwater Infrastructure Replacement.
5.	The Stormwater Engineer works throughout the year to identify infrastructure replacement projects to use the funds in the traditional infrastructure replacement project.

Staff Involved with Process:
Finance Department Deputy Committee Development Director Stormwater Engineer
STORMWATER ENGINEER:
Review available data and funding sources to develop projects to include in the five-year CIP and to utilize the Traditional Infrastructure Replacement funding.

Lenexa KANSAS	**City of Lenexa** Community Development *Planning Division*
Subject: **ESC Plan Review**	Standard Operating Procedures
	Pages:
Permit Review Procedures	Revision: 1/16/2024

Purpose:

The purpose of this SOP is to provide guidance for a consistent and appropriate permit review process for Erosion & Sediment Control practices.

Review Process:

This process begins when an application is submitted for a permit that contains an Erosion & Sediment Control Plan as required for a proposed site improvement, mass grading, or other site disturbance activity. Review of the proposed plan considers the site's drainage patterns, proposed work, and looks for both appropriate device selection and implementation. This process may include the E&SC Inspector as necessary when the project contains unique circumstances. The Review Engineer incorporates any such comments or concerns into a comment letter that is issued to the applicant. Upon receipt of plan revisions, the Review Engineer reviews the revised Erosion & Sediment Control Plan to ensure that all issued comments and concerns have been addressed. This review and comment issuance process continues until the plan is found to be approvable.

Land Disturbance (LD), Site Development (SD), Public Improvement (PI), and Building Permits

1.	The Review Engineer evaluates the project's submitted Erosion & Sediment Control Plan and incorporates the ESC Inspector as required.
2.	The Review Engineer provides comments and concerns with the plan to the applicant in the form of a comment letter.
3.	The Review Engineer receives a revision to the plan and evaluates it with respect to the issued comment letter.
4.	Steps 1-3 above are repeated until all comments and concerns have been appropriately addressed, at which time, the plan is found to be approvable.

Staff Involved with Process:

ESC Inspector Review Engineer
ESC INSPECTOR:
Provide technical expertise and updated field knowledge to the review of proposed Erosion & Sediment Control Plan. This expertise and knowledge will be in the form of comments and concerns regarding such items as: adherence to appropriate design standards, known field limitations and field problems on previous / similar projects, coordination with nearby or adjacent stormwater facilities.
REVIEW ENGINEER
Provide the communication avenue to the applicant (in the form of relaying comments and concerns) in order to realize appropriate and effective Erosion & Sediment Control throughout the duration of construction.

Lenexa KANSAS	**City of Lenexa** **Community Development** *Engineering Division*
Subject:	Standard Operating Procedures
Stormwater Permit Review Process	Pages: 1
	Revision: 1-10-2025

Purpose:

The purpose of this S.O.P. is to provide guidance for a consistent and appropriate permit review process for stormwater best management practices.

Background:

This process begins when an application is submitted for a permit that contains a facility related to stormwater management practices. As part of their engineering review, the project manager will e-mail the stormwater specialist making them aware of the new plan submittal. Once notified, the Stormwater Specialist will review the submitted plans and provide the project manager with a return e-mail with any comments or concerns regarding the plans. The engineer will then incorporate any pertinent comments or concerns into the review letter. Upon receipt of the revisions, the project manager will again e-mail the stormwater specialist making them aware of the new plan submittal. Once notified, the Stormwater Specialist will need to verify that all comments and concerns have been addressed. If addressed, this ends the review process, if not addressed the review letter procedure repeats until all items have been addressed.

Process:

1.	Engineer/Project Manager will e-mail a notification to the Stormwater Specialist about the new plan submittal for Land Disturbance, Site Development, Public Improvement and/or Building permit application.
2.	Stormwater Specialist will go into Accela and review the necessary plans. The Stormwater Specialist will reply to the e-mail with a list of all the comments and questions.
3.	The Engineer/Project Manager will incorporate the Stormwater Specialist comments and concerns into review letters, to be returned to the applicant for corrections.
4.	Upon receipt of revisions, Engineer/Project Manager will again e-mail the Stormwater Specialist who will go in Accela and verify all comments and concerns are addressed.
5.	If addressed, this ends the best management practice review, if not addressed, steps 1 – 4 will repeat until all items have been addressed.

Activity:	**Algae Management**
Purpose:	To maintain filamentous algae at an acceptable level for aesthetics and water quality.
Trigger:	Work will be performed when algae coverage exceeds 35% of the surface area of water body
Standard Crew:	4
Standard Equipment:	1. 1-ton truck 2. Boat with Algae removal plow 3. Algae rake-2 4. Pitchfork-2 5. Leaf rake-2 6. Wheel barrow 7. Excavator 8. Compact track loader
Optional Equipment:	1. Mesh bags for Barley hay 2. Back pack sprayer 3. "Veed" Cutter
Material Required:	1. Barley hay 2. Cutrine Plus 3. Aquathol super k
Procedure:	1. Remove all filamentous algae from surface of water body using boat and rakes, pushing them to a central area. 2. Remove algae from central area with excavator and load into a dump truck with the compact track loader, dump in composting area. 3. Perform proper cleaning and maintenance to equipment. 4. Complete work order Congruently 1. Mesh bags filled with barley hay will be placed in the forebay 2. Every other Monday check the amount of barley hay remaining in the bag and refill if needed. Chemical Control 1. If algae cannot be controlled through manual removal. 2. Apply Cutrine Plus in liquid form to filamentous algae only, use lowest rate recommended by label, following all safe spraying guidelines. 3. Complete Chemical Application Record. 4. Apply Aquathol super k to Curly leaf pond weed, use lowest rate recommended by label, following all safe application guidelines

Activity:	**Algae Management(Central Green)**
Purpose:	To maintain filamentous algae at an acceptable level for aesthetics and water quality.
Trigger:	Work will be performed when algae coverage exceeds 10% coverage of surface are in the step pools and 20% in the lower pond.
Standard Crew:	4
Standard Equipment:	1. 1-ton truck 2. Algae rake-2 3. Pitchfork-2 4. Leaf rake-2 5. Wheel barrow
Optional Equipment:	1. Mesh bags for Barley hay 2. Back pack sprayer 3. “Veed” Cutter
Material Required:	1. Barley hay 2. Cutrine Plus-only as a last resort
Procedure:	1. Every Monday and Thursday during the summer. 2. Remove all filamentous algae from surface of step pools using rakes. 3. When pondweeds get overgrown, thin them with the “Veed” Cutter. 4. Load algae and other weeds into truck and haul to composting area. 5. Perform proper cleaning and maintenance to equipment. 6. Complete work order. Congruently 1. Mesh bags filled with barley hay will be placed in each of the step pools and the lower pond. 2. Every Monday check the amount of barley hay remaining in the bag and refill if needed. Chemical Control 1. If algae cannot be controlled through manual removal. 2. Apply Cutrine Plus in liquid form to filamentous algae only, use lowest rate recommended by label, following all safe spraying guidelines. 3. Notify Parks Department when chemical control has been used so they can stop irrigation for 1 week to prevent grass kill. 4. Complete Chemical Application Record.

Activity:	**Algae Management(City Center Pond)**
Purpose:	To maintain filamentous algae at an acceptable level for aesthetics and water quality.
Trigger:	Work will be performed when algae coverage exceeds 20% of the surface area of the pond
Standard Crew:	4
Standard Equipment:	1. 1-ton truck 2. Boat with Algae removal plow 3. Algae rake-2 4. Pitchfork-2 5. Leaf rake-2 6. Wheel barrow 7. Excavator 8. Compact track loader
Optional Equipment:	1. Mesh bags for Barley hay 2. Back pack sprayer 3. "Veed" Cutter
Material Required:	1. Barley hay 2. Cutrine Plus
Procedure:	1. Remove all filamentous algae from surface of pond using boat and rakes, pushing them to a central area. 2. Remove algae from central area with excavator and load into a dump truck with the compact track loader, dump in composting area. 3. Perform proper cleaning and maintenance to equipment. 4. Complete work order Congruently 1. Mesh bags filled with barley hay will be placed in the forebay 2. Every other Monday check the amount of barley hay remaining in the bag and refill if needed. Chemical Control 1. If algae cannot be controlled through manual removal. 2. Apply Cutrine Plus in liquid form to filamentous algae only, use lowest rate recommended by label, following all safe spraying guidelines. 3. Complete Chemical Application Record.

Activity:	**Catch Basin Cleaning- inside**
Purpose:	To remove debris that could obstruct flow and cause flooding
Trigger:	Sediment or other debris inside catch basin
Standard Crew:	2-3
Standard Equipment:	1. One ton truck 2. Jet-vac unit 3. Shovels
Optional Equipment:	1. 5 gallon buckets
Material Required:	1. none
Procedure:	1. Obtain work order from supervisor or Lucity 2. Set up a proper work zone 3. Use water gun from the vac unit to loosen debris while vacuuming. 4. Use shovels to break up accumulated sediment and large debris if needed and load into 5 gallon buckets if structure is unreachable with the vac-unit. 5. Remove work zone 6. Perform proper cleaning and maintenance to equipment 7. Complete work order

Activity:	**Catch Basin Cleaning- outside**
Purpose:	To remove debris that could obstruct flow and cause flooding
Trigger:	Excess debris or leaves in front of inlet
Standard Crew:	2
Standard Equipment:	1. One ton truck 2. Debris Handler (leaf sucker) 3. Rakes 4. Shovel
Optional Equipment:	1.
Material Required:	1. none
Procedure:	1. Obtain work order from supervisor or Lucity 2. Set up a proper work zone 3. Use the debris handler to remove loose leaves and debris from in front of storm inlet. 4. Use shovels to remove accumulated sediment and large debris 5. Remove work zone 6. Perform proper cleaning and maintenance to equipment 7. Complete work order

Activity:	**Headwall Inspection**
Purpose:	To ensure flow of water in streams and prevent flooding. Following a heavy rainfall debris can become lodged in and around a headwall in a stream.
Standard Crew:	2 Maintenance workers
Standard Equipment:	1. 1-ton truck
Optional Equipment:	1. Shovels 2. Pitchforks 3. Rakes
Material Required:	1. None
Procedure:	1. Headwall Inspections are done following a heavy rainfall of 2” or more. 2. Obtain a headwall inspection map. 3. Travel to each headwall on the assigned map and clear small amounts of debris or make note of headwalls that require a larger crew and equipment to clear debris. 4. Create a work order for debris removal where needed including the headwall asset on the work order. 5. Complete work order for headwall inspection.

Activity:	**Herbicide Application w/Backpack Sprayers**
Purpose:	Weed control
Trigger:	Invasive weeds found during regular inspection
Standard Crew:	2-6 crew members
Standard Equipment:	1. Truck 2. Water tank 3. Backpack sprayer for each crew member 4. Personal Protective Equipment(rubber gloves, safety glasses, long pants, rubber boots, Tyvek suits, long sleeves) 5. Measuring equipment(scale, correct measuring cups for chemical)
Optional Equipment:	1. Hand held spray bottles
Material Required:	1. Prescribed Herbicide 2. Correct adjuvant or surfactant 3. Water
Procedure:	1. Obtain spray plan from supervisor 2. Load the prescribed chemicals, adjuvant, surfactants and water. 3. Take a measurement of the wind speed at the location that will be sprayed when you arrive, speed must be below 15 M.P.H. 4. Make notes of what chemicals and how much chemical is being used, and the wind speeds and direction at that location so it can be entered in the work order in Lucity. 5. Mix chemical according to label. 6. Spray according to label, applying chemical to only undesirable vegetation as specified in the spray plan making every effort not to spray desirable vegetation. 7. When completed spraying for the day all spray equipment and measuring equipment is to be triple rinsed and a tank neutralizer used when required. 8. Secure all chemicals and spray equipment in Chemical Locker.

This chart explains best means of control for our most prominent invasive species of vegetation. When other species are encountered research may be needed to determine the best means of management.

Herbicide Application
Weed Control Reference Chart

Sericia Lespedeza:
- Spring/seedling stage: Overdrive with MSO
- Summer/pre-bloom: Overdrive with MSO
- Summer/in Bloom: Overdrive with MSO
- Fall/post-bloom: Overdrive with MSO

Johnson grass:
- Spring/seedling stage: Outrider w/MSO
- Summer/pre-bloom: Outrider w/MSO
- Summer/in-bloom: Outrider w/MSO
- Fall/post bloom: Outrider w/MSO

Ragweed (Giant and Lesser):
- Spring/seedling stage: Outrider w/MSO
- Summer/pre-bloom: Outrider w/MSO
- Summer/in-bloom: Outrider w/MSO
- Fall/post bloom: Outrider w/MSO

Thistle(any):
- Spring/seedling stage: Overdrive with MSO
- Summer/pre-bloom: Overdrive with MSO
- Summer/in Bloom: Overdrive with MSO
- Fall/post-bloom: Overdrive with MSO

Foxtail:
- Spring/seedling stage: Quinclorac with MSO
- Summer/pre-bloom: Quinclorac with MSO
- Summer/in-bloom: Quinclorac with MSO
- Fall/post bloom: Quinclorac with MSO

Cattails:
- Spring: Habitat
- Summer: Habitat
- Fall: Habitat

Filamentous Algae:
- Spring/pre-emergence: Cutrine Granules
- Summer/in-bloom: Cutrine liquid
- Fall/in-bloom: Cutrine liquid

Activity:	**Inlet leaf and debris removal.**
Purpose:	To allow proper drainage of storm water from roadway and to reduce the amount of debris in the storm water system.
Standard Crew:	2-4 crew members
Standard Equipment:	1. Pitch forks 2. Shovels 3. Debris handler(leaf vacuum), 1 ton with leaf enclosure and or single axel swap-loader with chipper bed 4. Rakes 5. Tarp
Optional Equipment:	1. Leaf blower 2. Jet-Vac unit w/ Swap loader Tandem 3. Street sweeper
Procedure:	Inlet leaf and debris removal is normally performed in the fall. Work should begin when inlets are becoming blocked with fallen leaves and continue through the season until leaves have stopped falling. It may require multiple passes throughout the city. 1. Obtain inlet location maps from Supervisor or the 620 file under curd inlet cleaning maps. 2. Inspect inlets for leaves and debris. 3. Remove all leaves and debris from inlet and curb line up stream of inlet as far as needed to prevent future blockage to ensure flow of storm water from roadway. a. When using debris handler, vacuum all leaves and debris from the entire throat of the inlet. b. When using hand tools, remove all leaves and debris from the entire throat of the inlet, place them in the back of a truck and cover them with a tarp to keep them from blowing out and back into inlets. 4. If the interior of the inlet is packed full of leaves and debris make a note of the location and structure number so the Jet-vac or street sweeper can return at a later time to remove the blockage. 5. Record structures on snow zone maps of each cleaned inlet. 6. Track how many loads of leaves are removed and inter it into the work order in lucity. 7. Clean and empty equipment. Clean air filter daily on debris handlers.

Activity:	**Inlet Snow Removal**
Purpose:	To allow proper drainage of storm water from roadway.
Standard Crew:	3 crew members per group
Standard Equipment:	1. Shovels 2. Snow blower, 2-stage 3. Skid steer w/smooth bucket, 1-ton and trailer
Optional Equipment:	1. Weed burner (to melt ice)
Procedure:	1. Obtain inlet location map book from supervisor or from 620 folder labeled inlet cleaning maps. 2. Assess need for inlet to be cleared of snow and ice, not all inlets need to be cleared mainly those in low lying areas and cul-de-sacs where flooding can occur and cause damage to property or dangerous road conditions. 3. Remove snow and ice from front of inlet to allow water to drain from roadway into inlet. a. When using snow blower clear a path from clear roadway to inlet and clear remaining snow and ice with a shovel ensuring unobstructed flow of water to drain from roadway. b. When using a skid steer clear a path from clear roadway to inlet and clear remaining snow and ice with a shovel ensuring unobstructed flow of water to drain from roadway. c. When using only shovels clear a path from clear roadway to inlet ensuring unobstructed flow of water to drain from roadway. If clearance cannot be achieved with only shovel make note of inlet number and return with either a skid steer or a snow blower. d. If needed use propane weed burner to melt ice blockages. 4. Record structures on snow zone map of each inlet that is cleared. 5. Clean and return equipment.

Activity:	**Monthly B.M.P. Trash Pick-up**
Purpose:	To ensure that trash and debris is kept out of the storm water system.
Standard Crew:	2-4 crew members
Standard Equipment:	1. Truck 2. Trash grabbers 3. Hip Waders 4. Map book
Optional Equipment:	1. Chest Waders
Material Required:	1. Trash Bags
Procedure:	Trash pick-up is done on a monthly basis, to ensure that trash and debris is kept out of the Storm Water systems, thus improving water quality and aesthetics in the City of Lenexa. 1. Obtain trash log and map books from supervisor. 2. Load equipment and Materials into truck. 3. Go to first scheduled B.M.P. 4. Collect trash from within B.M.P. site boundaries using trash grabbers and bags separate recyclable items such as plastics, aluminum and cardboard to be recycled. 5. If any large debris (won't fit into bags) is encountered relocate it to B.M.P. site boundary to be collected on way out. 6. If any obstructions are located (i.e., log jams, fallen trees), note location and notify supervisor so that a work order can be created for debris removal. 7. Record the number of bags of trash and recyclables, in ¼ bag increments, collected from site. 8. Record amount of time spent at each B.M.P. site in 15 minute increments. 9. Place trash bags securely in truck for transport to Service Center, dispose of trash in dumpster and recyclables in recycle bin. 10. Repeat previous steps until full B.M.P. list has been exhausted. Or time permits. 11. Return to Service Center clean and return equipment and tools to their proper location.

Activity:	**Pipe Cleaning**
Purpose:	To remove debris, sediment and blockages from storm water sewer pipes
Trigger:	Excess debris found during inspection process
Standard Crew:	3-4 Maintenance Workers
Standard Equipment:	1. One ton truck 2. Jet-vac unit
Optional Equipment:	1. Arrow board 2. Warthog Nozzle 3. Jetting Sled
Material Required:	1.
Procedure:	1. Obtain work order from supervisor or Lucity 2. Set up a proper work zone 3. Fill water tanks on Jet-vac near work site 4. Send jet line up pipe with small jet head 5. If excessive debris is present switch jet heads at upstream structure 6. Retrieve jet line with nozzle running 7. Vacuum to remove debris from structure 8. Repeat until pipe is cleared 9. Remove work zone 10. Drain water from center tank 11. Dump solid debris in sweepings bin 12. Perform proper cleaning and maintenance to equipment 13. Complete work order

Activity:	**Pre-emergent Herbicide Application**
Purpose:	To prevent invasive and unwanted vegetation.
Standard Crew:	2-4 crew members
Standard Equipment:	1. Walk behind broadcast spreader 2. Hand-held gravity fed spreader 3. Personal Protective Equipment(rubber gloves, safety glasses, dust mask, long pants, work boots)
Optional Equipment:	1. Kubota tractor with orbital spreader
Material Required:	1. Snap-shot Pre-emergent herbicide
Procedure:	Pre-emergent herbicide application is normally performed at locations that require a manicured look, i.e. mulched edges, mulched beds or rain gardens. Pre-emergent herbicides are generally applied in early to mid spring, before seeds begin to germinate. However they can be applied at any time if needed to prevent weeds from occurring in newly constructed projects or problematic areas. Pre-emergent is not normally broadcast over large areas since it is generally a non-selective herbicide. It may be used during establishment or at the beginning of construction of a native vegetated area. 1. Obtain Pre-emergent Herbicide Application Plan from supervisor; the plan identifies areas that need to be treated. 2. Complete chemical application record upon arriving at site. 3. Load herbicide into type of spreader being used, wearing personal protective equipment. a. When using walk-behind broadcast spreader or orbital spreader do not fill hopper with more than will be used, set spread rate according to label. b. When filling hand held spreader use a funnel to prevent spilling. 4. Treat only the areas that are identified in the plan. a. When using broadcast spreaders be aware of the throw distance and pattern, do not spread pre-emergent outside of intended area and limit amount of overlap on passes. b. When using hand held spreader, be sure to attach fan tip on end of tube. Pour granules out of spreader trying not to shake granules out, keep spreader at a height that maintains a uniform spread pattern, do not spread

	chemical outside of intended area. 5. When finished spreading granules return any unused granules to the original package. 6. Rinse all spreaders and dry them thoroughly with blower or pressurized air. 7. Return all chemicals to chemical locker and all other equipment to proper location.

Activity:	**Roadway Ditch Inspection**
Purpose:	To determine maintenance needs for ditches that drain water from a road.
Standard Crew:	1 Superintendent, Foreman or Maintenance Worker
Standard Equipment:	1. Vehicle with beacon
Optional Equipment:	1. None
Material Required:	1. None
Procedure:	1. Ditch Inspections should be done during or within 24 hours following a heavy rain, this allows person inspecting to find areas that do not drain properly. 2. Get Ditch Maps. 3. Drive along roads with ditches to be inspected and note areas that need maintenance on the maps. 4. Create work orders for ditches that need maintenance. 5. Complete a work order for ditches that were inspected include asset on work order.

Activity:	**Live Stake Harvesting**
Purpose:	To have live stakes on hand for installation.
Standard Crew:	2-4 Crew Members
Standard Equipment:	1. Truck 2. Loppers 3. Hand saw 4. Circular saw w/ batteries 5. Miter saw 6. Tape Measure 7. Storage Tubs
Optional Equipment:	1. 5-gallon Buckets 2. Machetes
Material Required:	1. Water 2. Willow trees/limbs 1”-2” diameter 3. Sycamore trees/limbs 1”-2” diameter
Procedure:	Live stakes are to be harvested when trees are dormant, winter through early spring, early spring is the optimal time. A large quantity of live stakes is required to ensure an adequate supply for stream bank and impoundment stabilization projects. 1. Obtain location of harvesting sites from supervisor. 2. Identify correct trees to harvest. 3. Use loppers or hand saw to cut trees that are less than 2” in diameter parallel to the ground and as close to the ground as possible. 4. Load cut trees into truck as 8’-10’ lengths then return to Service Center. 5. Use circular saw to cut trees into 18” pieces. 6. Use miter saw to cut one end of each 18” piece at a 45 degree angle. 7. Place stakes into storage tubs or bucket with 45 degree angle pointing down, completely fill tub so stakes are tightly packed. 8. Place full storage tubs and buckets in the plant holding area. 9. Fill Storage tubs and buckets with water. 10. Clean all tools and return them to their proper location. 11. On a daily basis check water levels in storage tubs and buckets, fill them when necessary and remove excess scum if it accumulates.

Activity:	**Live Stake Installation**
Purpose:	To stabilize stream banks and water impoundment areas.
Standard Crew:	2-4 Crew Members
Standard Equipment:	1. Truck 2. 5-gallon Buckets 3. Rubber mallets 4. Waders 5. Water tank 6. Storage tanks 7. Metal stake (for making pilot holes) 8. 2-pound Sledge (for making pilot holes)
Optional Equipment:	1. Polaris (for transporting materials and tools in hard to reach areas) 2. Garden cart (for transporting materials and tools in hard to reach areas)
Material Required:	1. Willow stakes 2. Sycamore stakes 3. Water
Procedure:	Live stakes are used to aid in bank and shoreline stabilization. They should be installed in the spring as soon as they begin to sprout and the roots establish. Live stakes perform best when installed in moist soils. Live stakes should be planted at 18”-36” centers, a denser stand of live stakes will perform best. 1. Obtain location of installation sites from supervisor. 2. Drain water from storage tubs for easier loading. 3. Load Storage tubs of stakes into truck, refill with fresh water. 4. Load Water tank and 5-gallon buckets into truck and fill with fresh water. 5. Go to installation site. 6. Load stakes into 5-gallon buckets, add enough water to keep root buds moist. 7. Upon arrival at installation site, determine upstream stabilization point. 8. Determine approximate number of stakes needed to ensure proper bank stabilization (on 18-36inch centers). 9. Begin installation of stakes, using rubber mallets, into moist soil in designated areas. (From stabilized bank through stabilization zone.) 10. Return unused stakes to storage tubs for transport back to Service Center

	11. Upon return to Service Center place storage tubs and buckets in the plant holding area. 12. Fill Storage tubs and buckets with water. . 13. Clean all tools and return them to their proper location.

Activity:	**Storm Pipe Inspection**
Purpose:	To obtain video record of storm pipe condition to determine maintenance needs.
Standard Crew:	2 Maintenance Workers
Standard Equipment:	1. Video Inspection Van 2. Aries Crawler with Pan & Tilt Camera Head
Optional Equipment:	1. Tools for manhole cover removal 2. Flashlight 3. Hand tools for making minor repairs, changing tires.
Material Required:	1. none
Procedure:	1. Determine area to inspect 2. Create Maps 3. Create Assessment Work orders 4. Verify GIS Data 5. Assess Cleaning Needs 6. Update GIS Data 7. Create new Maps 8. Create IT Pipes Project 9. Copy New IT Pipes project to USB Drive 10. Create Inspection WO 11. Create Pipe Cleaning WO 12. Clean Pipes 13. Copy New IT Pipes project to Inspection Van Computer 14. Perform Inspection 15. Copy completed IT Pipes project to USB Drive 16. Copy completed IT Pipes project to Office Computer C:IT Projects 17. Correct Access DB in C:drive if needed 18. Q.A. IT Pipes Project 19. Copy Completed IT Pipes Project to I: drive through IT Pipes 20. Perform GIS Receive 21. Import Inspection into Lucity 22. Update conduit and structure inspection records

Activity:	**Storm Water Structure Inspection**
Purpose:	To obtain a video record of storm water structure condition to determine maintenance needs.
Standard Crew:	2 maintenance workers
Standard Equipment:	1. Video Inspection Van 2. Aries Pan & Tilt Camera Head
Optional Equipment:	1. Tools for removing manhole cover 2. Small tools for camera
Material Required:	1. none
Procedure:	1. Determine area to inspect 2. Create Maps 3. Create Assessment Work orders 4. Verify GIS Data 5. Assess Cleaning Needs 6. Update GIS Data 7. Create new Maps 8. Create IT Pipes Project 9. Copy New IT Pipes project to USB Drive 10. Create Inspection WO 11. Create Pipe Cleaning WO 12. Clean Pipes 13. Copy New IT Pipes project to Inspection Van Computer 14. Perform Inspection, take video of structures rated 3 or 4 15. Copy completed IT Pipes project to USB Drive 16. Copy completed IT Pipes project to Office Computer C:IT Projects 17. Correct Access DB in C:drive if needed 18. Q.A. IT Pipes Project 19. Copy Completed IT Pipes Project to I: drive through IT Pipes 20. Perform GIS Receive 21. Import Inspection into Lucity 22. Update conduit and structure inspection records

Activity:	**Storm Water Structure Repair- repair wall**
Purpose:	To return assets to optimal condition.
Standard Crew:	2 crew members
Standard Equipment:	1. 1-ton truck 2. Hand Tools a. Lid-puller b. 5-gallon buckets and rope c. Short shovels-for inside structure d. Shovels e. Wisk broom 3. Concrete tools a. Hand trowels b. Mortar Pallet c. Mixing Tub d. Water tank
Optional Equipment:	1. Polaris (for transporting tools and materials to field structures) 2. Garden cart (for transporting tools and materials to field structures) 3. Gas Powered Mixer
Material Required:	1. Mortar or s SPEC PATCH 2. Water
Procedure:	1. Obtain Service request or work order from Supervisor 2. Set up work zone 3. Remove all Debris 4. Mix Mortar (SPEC PATCH) to right consistency 5. Apply Mortar to Defective areas using Trowel 6. Clean up work area 7. Remove work zone 8. Clean up equipment and return to its proper location.

Activity:	**Storm Water Structure Repair- Replace wall**
Purpose:	To return assets to optimal condition.
Standard Crew:	4 crew members
Standard Equipment:	1. 1-ton truck 2. Pull behind Air-compressor 3. Pneumatic Chipping hammer 4. Pneumatic Jack-hammer 5. Gas powered cut-off saw w/ concrete and metal blades 6. Generator w/extension cords 7. Hand Tools a. Lid-puller b. Pry-bar c. 2-pound sledge hammer d. 5-gallon buckets and rope e. Short shovels-for inside structure f. Shovels: square, round point, scoop and sharp shooter g. Rebar cutter h. Wisk broom 8. Carpentry tools a. Miter saw b. Hammers c. Circular saw w/ batteries d. Power drill and bits w/ batteries e. Reciprocating saw and blades w/ batteries f. Hammer drill and ½" masonry bit g. Tape Measure h. Chalk line i. Carpenters pencils j. Single Axle trailer for materials k. Wire tie tool 9. Concrete tools a. Concrete Trailer b. Hand floats c. Vibrator d. Come along e. Finish broom f. Edger g. Jointer h. Water tank 10. Concrete cart
Optional	1. Single Axle Swap- loader dump truck. 2. Smooth Bucket Skid steer loader with trailer

Equipment:	3. Polaris (for transporting tools and materials to field structures) 4. Garden cart (for transporting tools and materials to field structures) 5. Concrete Blanket 6. Plastic Sheeting
Material Required:	1. 2x4s 2. ¾ inch plywood 3. Nails 4. Screws 5. Expansion Joint 6. Rebar 1/2inch 7. Rebar wire ties 8. Concrete (to city Specification 4000 Lbs. Granite) 9. Great Stuff foam 2-6 cans 10. Grass seed
Procedure:	Storm structure walls are replaced when they are overly deteriorated and can not be repaired with mortar or PATCHCRETE. If part of a wall is beyond repair the entire wall shall be removed and replaced to deter further deterioration of the same wall. **Front wall replacement:** 1. Obtain Service request or work order from Supervisor 2. Set up a work zone in accordance with the MUTCD 3. Breakup damaged wall using pneumatic chipping hammer, ensuring all deterioration is removed. 4. Remove debris from structure by loading it into a 5-gallon bucket using the short shovel, hoist bucket out of structure with a rope if needed. 5. Cut access holes in throat with cut-off saw, break concrete apart with jack-hammer then remove debris. 6. Drill holes for rebar in structurally sound portions of storm structure at a spacing of 1’ centers, horizontally and vertically. 7. Cut Rebar to length and install horizontally and vertically in predrilled holes, tie together with wire ties where rebar intersects. 8. Measure and cut plywood for forms and install, plywood form may need to be in multiple pieces to fit into structure through available opening. 9. Measure and cut 2x4s for bracing and install so it fits tightly between form and opposite wall, bracing must be placed at 2’ centers horizontally and vertically, this will prevent forms from moving when pressure from concrete is applied. 10. Check for any gaps or voids and fill any found with expanding

	foam. 11. Pour concrete from cart using shovels and vibrate, plunge vibrator end in and out of wet concrete until even with throat, do not over vibrate as it can cause aggregate in the concrete to settle at the bottom of wall. 12. Finish with floats and broom to achieve final finish. 13. Protect the newly poured concrete a. If temperatures will be below freezing within 24 hours of pouring, a concrete insulating blanket shall be placed over the newly poured concrete and secured. b. If rain or precipitation is forecast, the newly poured concrete shall be covered with plastic sheeting and secured. 14. Clean up work area 15. Remove work zone, leave cones at repaired structure. 16. After a minimum of 24 hours remove protection, bracing and forms. If any concrete over pour is present, remove with a 2-pound sledge hammer. 17. At the end of each day clean up equipment and return to its proper location. **Back or Side wall replacement:** 1. Obtain Service request or work order from Supervisor 2. Set up a work zone in accordance with the MUTCD 3. Breakup damaged wall using pneumatic chipping hammer, ensuring all deterioration is removed. 4. Remove debris from structure by loading it into a 5-gallon bucket using the short shovel, hoist bucket out of structure with a rope if needed. 5. Remove dirt from in front of wall to be replaced, remove only enough dirt to access top of wall to be replaced(approx. 1' deep and 1'away from the wall, remaining dirt will make the outside form for the wall. 6. Drill holes for rebar in structurally sound portions of storm structure at a spacing of 1' centers, horizontally and vertically. 7. Cut Rebar to length and install horizontally and vertically in predrilled holes, tie together with wire ties where rebar intersects. 8. Measure and cut plywood for forms and install, plywood form may need to be in multiple pieces to fit into structure through available opening. 9. Measure and cut 2x4s for bracing and install so it fits tightly between form and opposite wall, bracing must be placed at 2'

	centers horizontally and vertically, this will prevent forms from moving when pressure from concrete is applied. 10. Check for any gaps or voids and fill any found with expanding foam. 11. Pour concrete from cart using shovels and vibrate, plunge vibrator end in and out of wet concrete until even with top of wall or bottom of lid, do not over vibrate as it can cause aggregate in the concrete to settle at the bottom of wall. 12. Protect the newly poured concrete a. If temperatures will be below freezing within 24 hours of pouring, a concrete insulating blanket shall be placed over the newly poured concrete and secured. b. If rain or precipitation is forecast, the newly poured concrete shall be covered with plastic sheeting and secured. 13. Clean up work area 14. Remove work zone, leave cones at repaired structure. 15. After a minimum of 24 hours remove protection, bracing and forms. If any concrete over pour is present, remove with a 2-pound sledge hammer. 16. Backfill excavated areas and reseed with correct type of seed. 17. At the end of each day clean up equipment and return to its proper location.

Activity:	**Replace inlet trash bar**
Purpose:	To ensure that trash and debris is kept out of the storm water system.
Standard Crew:	2-4 crew members
Standard Equipment:	1. Generator 2. Hammer drill with 9/16 masonry bit 3. Reciprocating Saw 4. Grinder w/ cutoff wheels
Optional Equipment:	1. Cutting torch 2. Gas powered cut-off saw
Material Required:	1. 5/8” Galvanized rod 2. Adhesive (liquid nails, epoxy or concrete adhesive)
Procedure:	1. Obtain service request or work order from Supervisor. 2. Set up a work zone. 3. Remove the damaged trash bar. 4. Cut or drill new holes for trash bar, making one side deeper than the other to allow one side to be inserted deeper then slid into the other side. 5. Cut new trash bar at least 6” longer than opening of inlet so that it anchors into the drilled holes. 6. Fill the drilled holes with an adhesive. 7. Insert one end of new trash bar into the deeper hole then slide it into the opposing side, try to ensure that they are inserted to an even depth on both sides. 8. Clean up work area. 9. Remove the work zone. 10. Clean and return equipment and tools to their proper location.

Activity:	**Tree removal dead or fallen**
Purpose:	To remove trees in a safe and timely manner
Trigger:	A service request to remove a dead or fallen tree or After a work order has been made
Standard Crew:	2 to 5 crew members
Standard Equipment:	1. One ton 2. Chain Saws, pole saws and PPE 3. Single axel swap loader dump truck 4. Rakes, leaf blower, wheel barrel and tarps
Optional Equipment:	1. Single axel Swap-loader for chipper bed 2. Wood chipper form (Parks) 3. Skid loader with grapple bucket 4. Polaris and or work horse (golf cart) 5. Backhoe, excavator
Procedure:	1. Obtain work order from supervisor or Lucity 2. Access the tree and make sure it can be removed safely 3. Set up a proper work zone if needed 4. Cut up tree and remove it 5. When tree is in a citizens yard or on turf grass that is mowed clean up area by raking and or leaf blower 6. Remove work zone 7. Perform proper cleaning and maintenance to equipment 8. Complete work order

Activity:	**Tree removal in creek**
Purpose:	To remove trees in a safe and timely manner that have fallen in a creek and is disrupting the flow of water
Trigger:	By service request and after a big rain events crew members walk edge of creeks to check for fallen trees or during annual trash clean up. Trees will been noted and a work order will been made to remove trees
Standard Crew:	2 to 5 crew members
Standard Equipment:	1. One ton 2. Chain Saws, pole saws and PPE 3. Single axel swap loader dump truck 4. Rakes, leaf blower, wheel barrel and tarps 5. Backhoe 6. Hip waders
Optional Equipment:	1. Swap-loader for chipper bed 2. Single axel dump truck 3. Wood chipper 4. Skid loader with grapple bucket 5. Polaris and or work horse (golf cart) 6. Backhoe, excavator
Procedure:	1. Obtain work order from supervisor or Lucity 2. Access the tree and make sure it can be removed safely 3. Set up a proper work zone if needed 4. Cut up tree and remove it by either chipping it or loading in trucks 5. When tree or equipment is in a citizens yard or on turf grass be careful not to tear it up and clean up area by raking and or leaf blower after all big limbs are removed 6. Remove work zone 7. Perform proper cleaning and maintenance to equipment 8. Complete work order