

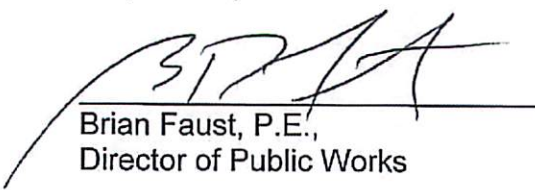
POLICY REPORT PWD NO: 23-08

REVIEW DRAFT 2022 KDHE ANNUAL REPORT
FOR STORMWATER


February 14, 2023

Prepared by:

Submitted by:



Brian Faust, P.E.,
Director of Public Works



Paul Kramer,
City Manager

ISSUE:

Review the draft of the annual KDHE report for 2022 stormwater activities.

BACKGROUND:

The City of Leavenworth is regulated by the Kansas Department of Health and Environment (KDHE) and US Environmental Protection Agency (EPA) as a Phase II City for stormwater purposes. The City has been required to submit an annual report on stormwater activities every year since 2003. The report summarizes the actions the City has taken the previous year to protect and enhance stormwater quality. The guidelines for the activities to be reported on were set by the revised Stormwater Management Program (SMP) that was adopted by the City Commission on October 27, 2020. These guidelines were used in 2021 and again for 2022.

The City has submitted reports in accordance with KDHE requirements in previous years. Interaction with KDHE and EPA suggest that the report be reviewed in a public forum rather than simply submitted by staff. The attached documents are a draft of the key portions of the annual report for 2022. There will be additional supporting information in the appendices when the report is submitted.

Staff is requesting comments and suggestions from the City Commission related to the content of the report. It is appropriate for the City Commission to seek input from the public on this matter as well.

The current KDHE stormwater permit is in force from November 2019 through October 2024.

Key narratives in the report are:

- Executive Summary
- 6 Minimum Control Measures: Discussion on effectiveness and annual performance measures.
 - Public Education and Outreach
 - Public Involvement and Participation
 - Illicit Discharge Detection and Elimination
 - Construction Site Stormwater Runoff and Control
 - Post Construction Stormwater Management in New Development and Post Development Projects
 - Pollution Prevention and Good Housekeeping

RECOMMENDATION:

The information is presented in draft form. We are looking for any comments or questions the Commission may have as well as the public on the efforts that we've taken over the last year.

It is recommended the City Commission adopt a resolution supporting the final report at the February 28, 2023 Commission meeting. The final report will be delivered to KDHE on March 1st.

ATTACHMENTS:

- Draft 2022 Report (partial)
 - Executive Summary
 - Six Minimum Control Requirements
 - Comments on Part V
- Maps
 - Stormwater with Creek Basins
 - Stormwater Management Data Collection
- KDHE Annual Report for 2021 – link here:
https://www.leavenorthks.org/sites/default/files/fileattachments/public_works/page/16671/final_kdhe_2021_annual_stormwater_report_23feb2022.pdf
- Revised Stormwater Management Program - link here:
<https://www.leavenorthks.org/publicworks/page/engineering>

CITY OF LEAVENWORTH

Kansas Stormwater Annual Report Form for Municipal Separate Storm Sewer Systems

January 1, 2022 - December 31, 2022

Kansas Permit No: M-MO12-SN01

SECTION 1: EXECUTIVE SUMMARY

To satisfy the requirements of the NPDES permit, this annual report summarizes the City of Leavenworth's plans and actions to reduce the discharge of pollutants from the municipal separate storm sewer system (MS4) to the maximum extent practicable, to protect water quality, and to meet the appropriate water quality requirements of the Clean Water Act. The information contained within this report was obtained through interviews with City staff, review of permits and projects from 2022, and examining communications and publications made available to the citizens of Leavenworth.

While the impacts from the COVID-19 Pandemic were less in 2022, the City of Leavenworth continued to struggle with filling vacant positions in our Operations and Water Pollution Control Divisions. Significant increases in fuel prices combined with increased construction costs and supply chain issues also impacted our operations.

City staff pursued activities in all of the Six Minimum Control Measures throughout the year. Key observations for the purposes of this report are shown below.

- **Were there any aspects of the program that appeared especially effective at reducing pollutants in your stormwater discharge?**
 - Contractor and public compliance with implementation of the Land Disturbance Permit requirements is improved over the initial years and is generally satisfactory.
 - Street sweeping is an effective tool for removing pollutants.
 - Use of "Stormwater Utility" funds to address long-standing issues has reduced erosion in several locations through the "Orange Fence Repair Projects".

- **Were there any aspects of the program that provided unsatisfactory results?**

While most items identified as BMPs (Best Management Practices) are believed to be effective at some level, the passive education and information sharing such as leaving material at the Library and City Hall along with informational brochures available on the City's website were probably the least effective tools identified.

- **What was the most successful part of the program?**

The visibly effective measures of correctly installed construction site runoff control and post-construction activities were the most successful parts of the program. On numerous public improvement projects, city staff ensured that measures were installed and maintained. These activities are very visible to residents living in the area and to the traveling public.

- **What was the most challenging aspect of the program?**

The most challenging was having developers install and properly maintain construction site runoff control. Development slowed in mid-to-late 2022 with the increase in interest rates so there were less homes under construction which resulted in fewer issues.

- **Describe any City/County area MS4 clean ups and the participation.**
 - After being unable to conduct a City-Wide Clean Up in 2020 due to COVID-19 restrictions, the City of Leavenworth was again able to sponsor a “City-Wide” clean-up day with about 35-50 groups picking up trash. This event was held on April 2, 2022.
 - Leavenworth County provides HHW (Household Hazardous Waste) services throughout the year and a special event to dispose of HHW was held at the Municipal Service Center in April, 2022.
 - The City has a “Three-Mile Creek” monthly clean-up program in which citizens pick up trash. In 2022, there were nine citizen groups that received a \$500 donation per group from transient guest tax dollars.

- **Describe the elected officials' participation in the stormwater pollution elimination.**

The City Commission has supported stormwater pollution elimination by creating a “Stormwater Utility” that is funded by a fee on all properties. This fee is used to address longstanding stormwater issues in the community, including reduction or elimination of erosion caused by failing roadways and culverts along with impacts to streambanks from shifting channel alignments. The Commission has also supported the goal of having public and private projects with some level of permanent water quality improvement included.

The City Commission reviewed and approved the new Stormwater Management Plan (SMP) on October 27, 2020. Staff was also direct to proceed with ordinances related to fees/fines for operation of BMP installations, construction sites, grease traps and general maintenance of permanent water quality structures.

- **Describe the collaboration with other organizations to eliminate stormwater pollution.**
 - The City coordinated a “City-Wide” clean-up day with about 35-50 groups.
 - Leavenworth County provided one HHW (Household Hazardous Waste) collection service in April 2022.
- **If an audit/inspection of your MS4 program was conducted by EPA or KDHE during the year, list the items the audit/inspection report identified as required changes and provide a narrative explanation of how the changes were implemented or explain the plan to implement the changes and identify a target date for final implementation.**

There were no known inspections of the MS4 program by KDHE or EPA in 2022.

Stormwater Management Program (SMP) Requirements (Six Minimum Control Measures) (Continued)

1. Public Education and Outreach (Table) - Please fill out accordingly

List all of the public education and outreach BMPs as identified in the SMP and provide the requested information in the following table.
(List presentations and media)

1. PUBLIC EDUCATION & OUTREACH (ED & O)			<u>2021</u>		<u>2022</u>	
			<u>4 Points Total</u>		<u>4 Points Total</u>	
BMP Program	BRIEF BMP DESCRIPTION	MEASURABLE GOAL(S)	POINTS		POINTS	
			Value	Actual	Value	Actual
ED & 0 - 01	Maintain a stormwater webpage for the permittee.	Stormwater webpage - https://www.leavenworthks.org/citymanager/page/stormwater-projects	3	3	2	2
ED & 0 - 02	Distribute educational materials (either flyers, brochures, catalog mailings, handouts, or e-mails) addressing various pertinent stormwater public education topics.	Flyers and educational materials are available on the City's website and in City Hall.	2		2	2
ED & 0 - 03	Provide either training or educational materials to permittee-identified businesses at high risk of contributing to stormwater pollution.	Stormwater Education Brochures - https://www.leavenworthks.org/publicworks/page/public-education-brochures	2		2	2
ED & 0 - 04	Apply notification, placard, covers/hatches with message, or stencil, on stormwater inlets to provide a message similar to "No Dumping – Drains to River"	All new storm structures have the message, "Drains to Stream". City applies the message to older structures. There are a total of 224 stamps/stencils. Example can be found at: https://www.leavenworthks.org/publicworks/page/2022-kdhe-annual-stormwater-report-supporting-documents	2		2	2
ED & 0 - 05	Post the municipality's MS4 permit and SMP document on either the stormwater webpage or the municipal webpage.	SMP - https://www.leavenworthks.org/publicworks/page/engineering MS4 Permit - https://www.leavenworthks.org/publicworks/page/engineering	1	1	1	1
ED & 0 - 12	Create a stormwater information brochure to provide to the public at public meetings and/or hearings.	Stormwater-related brochures can be found at: https://www.leavenworthks.org/publicworks/page/2022-kdhe-annual-stormwater-report-supporting-documents	1		1	1
ED & 0 - 15	Hold a social media campaign addressing various pertinent stormwater public education topics.	There were nine social media posts related to public education about improving, reducing or listing the dangers of polluting the City's stormwater system.	2		2	2
TOTAL			13	4	12	12

SMP Requirements (Six Minimum Control Measures) (Continued)

2. Public Involvement and Participation (Table) - Please fill out accordingly

List all of the public improvement and participation BMPs as identified in the SMP and provide the requested information in the following table. (List all associated and partnerships)

2. PUBLIC INVOLVEMENT/PARTICIPATION (P I/P)			2021		2022	
			3 Points Total		3 Points Total	
BMP Program	BRIEF BMP DESCRIPTION	MEASURABLE GOAL(S)	POINTS		POINTS	
			Value	Actual	Value	Actual
P I/P - 01	Hold a public hearing or public forum to notify the public about stormwater program activities and to solicit public comments regarding stormwater issues.	City Commission reviewed KDHE annual stormwater report February 14, 2023. The meetings were also broadcast on the City's channel cable TV station and YouTube. City Commission reviewed stormwater projects for CIP in 2022, and approved design and construction of several projects. List and stormwater-related documents are at: https://www.leavenworthks.org/publicworks/page/2022-kdhe-annual-stormwater-report-supporting-documents	2	2	2	2
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.	City-wide Spring Cleanup - April 2, 2022. Services offered to residents include open Brush Site, Recycling Center, large-item drop off and electronics recycling. City coordinated with Leavenworth County and a special event to dispose of HHW was held at the City Municipal Center also in April, 2022.	3	3	3	3
P I/P - 05	Provide at least two events for residents to engage in cleanup activities and improve water quality in the municipality.	The City has a "Three-Mile Creek" monthly clean-up program (March through November) in which citizens pick up trash. In 2022 there were nine citizen groups that participated.	3	3	3	3
TOTAL			8	8	8	8

SMP Requirements (Six Minimum Control Measures) (Continued)

3. Illicit Discharge Detection and Elimination (Table) - Please fill out accordingly

List all of the illicit discharge detection and elimination BMPs as identified in the SMP and provide the requested information in the following table.

3. ILLICIT DISCHARGE DETECTION & ELIMINATION (I D D & E)			2021		2022	
			5 Points Total		5 Points Total	
BMP Summary	BRIEF BMP DESCRIPTION	MEASURABLE GOAL(S)	POINTS		POINTS	
			Value	Actual	Value	Actual
I D D & E - 04	Implement a program to evaluate MS4 outfalls to identify illicit discharges.	The City's stormwater map identifies MS4 outfalls. If residents identify concerns regarding illicit discharges, they are forwarded to Water Pollution Control for evaluation and possible action. The City did not meet the threshold in 2022 to acquire the point.	1		1	
I D 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.	The City visually inspects open channels and televises pipelines, but did not meet the threshold for 2022 to acquire the points.	3		3	
I D D & E - 07	Implement a Household Hazardous Waste Collection Program (HHWCP) or document others who have implemented such a program to provide such service to all property owners or residents located within the permit area.	Leavenworth County provides HHW services throughout the year and a special event to dispose of HHW was held at the Municipal Service Center in April, 2022.	3	3	3	3
I D 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.	Stormwater crew inspected and/or maintained approximately 953 inlets and area drains and other stormwater facilities. Number inlets cleaned - 1,472	3	3	3	3
TOTAL			10	6	10	6

SMP Requirements (Six Minimum Control Measures) (Continued)

4. Construction Site Stormwater Runoff Control (Table) - Please fill out accordingly

List all of the Site Stormwater Runoff Control BMPs as identifies in the SMP and provide the requested information in the following table.

4. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (CSSRC)			2021		2022	
			4 Points Total		4 Points Total	
BMP Program	BRIEF BMP DESCRIPTION	MEASURABLE GOAL(S)	POINTS		POINTS	
			Value	Actual	Value	Actual
CSSRC - 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 one 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.	The City requires a land disturbance permit (LDP) for any project more than one acre. This includes submittal of a plan identifying all needed erosion control measures. Examples of residential and commercial LDPs can be found at: https://www.leavenworthks.org/publicworks/page/2022-kdhe-annual-stormwater-report-supporting-documents	3	3	2	2
CSSRC - 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 one 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.	The City follows MARC erosion control BMPs. Examples can be found at: https://www.leavenworthks.org/publicworks/page/public-education-brochures	3		2	2
CSSRC - 04	Develop a site plan review process which considers potential water quality impacts which may occur during construction as well as post construction impacts.	The City reviews every site plan for both water quantity and water quality. Building permits are not issued until water quality is addressed.	3	3	2	2
CSSRC - 07	Acquire or develop a software tracking system to track inspections and related tasks.	The City uses MUNIS to track and schedule inspections.	1	1	1	1
TOTAL			10	7	7	7

SMP Requirements (Six Minimum Control Measures) (Continued)

5. Post-Construction Site Stormwater Runoff Control (Table) - Please fill out accordingly

List all of the post-construction site stormwater runoff BMPs as identified in the SMPs and provide the requested information in the following table.

5. POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT & REDEVELOPMENT PROJECTS (P-C SM)			2021		2022	
			5 Points Total		5 Points Total	
BMP Program	BRIEF BMP DESCRIPTION	MEASURABLE GOAL(S)	POINTS		POINTS	
			Value	Actual	Value	Actual
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 one 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. (Points shown reflect adopting existing APWA/MARC manuals.)	<p>Link to APWA/MARC manuals posted at City's website: https://www.leavenworthks.org/publicworks/page/public-education-brochures</p> <p>Link to the City of Leavenworth Manual of Infrastructure Standards: https://www.leavenworthks.org/publicworks/page/designs-studies-reports</p>	4	5	3	3
P-C SM - 02	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 project prior to site plan review by the permittee.				3	
P-C SM - 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.	Currently developing a program.	3		2	2
P-C SM - 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.	<p>Due to personnel changes, a Detention Public Meeting was not held.</p> <p>City spent XXX hours conducting inspections of selected sites on random, after rainfall, or with depth-recording equipment.</p>	3	3	2	
P-C SM - 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 which specifies needed maintenance to ensure long-term operation of the BMPs.	City continues outreach to detention basin BMP owners. Currently there are XXX BMP sites.	3	3	2	
TOTAL			13	11	9	5

SMP Requirements (Six Minimum Control Measures) (Continued)

6. Municipal Pollution Prevention / Housekeeping (Table) - Please fill out accordingly

List all of the municipal pollution prevention / housekeeping BMPs as identified in the SMPs and provide the requested information in the following table.

6. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS (PP/GH)			<u>2021</u>		<u>2022</u>	
			<u>4 Points Total</u>		<u>4 Points Total</u>	
BMP Program	BRIEF BMP DESCRIPTION	MEASURABLE GOAL(S)	POINTS		POINTS	
			Value	Actual	Value	Actual
PP/GH - 01	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.	Parking lot across from City Hall screens runoff. Device was previously installed so using two points per permit.	3	2	2	2
PP/GH - 02	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.	Staff is currently participating in a recycle and proper waste disposal program.	3		2	2
PP/GH - 05	Implement a program for street sweeping in which the street sweepings are collected and disposed of properly or recycled/reused if possible.	<ul style="list-style-type: none"> Street sweeping program operations continued throughout the year. <p><u>Sweeper No. 3332 from Jan-Dec:</u> Miles of streets swept - 1,593</p>	3	3	2	2
PP/GH - 07	Implement a program to inspect stormwater inlets to identify illicit discharges and clean drop inlets of accumulated debris.	<p>Stormwater crew inspected and/or maintained approximately 953 inlets and area drains, and other stormwater facilities.</p> <p>Number inlets cleaned - 1,472</p>	1	1	1	1
PP/GH - 08	Develop, implement and keep updated an online storm sewer map accessible to the public.	<p>Map can be viewed at the City's GIS website: http://gis.firstcity.org/</p> <p>Map published previously, so taking two points per permit.</p>	3	2	2	2
PP/GH - 12	Install a stormwater treatment system for capture of either trash, sediment, or debris.	City installed a stormwater treatment system in inlets along Thornton Street. The system was cleaned in 2022.	3		2	2
TOTAL			16	8	11	11

CITY OF LEAVENWORTH

Kansas Stormwater Annual Report Form for Municipal Separate Storm Sewer Systems

January 1, 2022 - December 31, 2022

Kansas Permit No: M-MO12-SN01

Topics in Part V of Permit

The permittee is well advised to accurately report the conditions and status of their stormwater program and give due consideration to improving or enhancing their program where it is weak, or deficient in any of the core aspects (stormwater management program, six minimum control measures and TMDL best management practices - if applicable - also for Phase I permittees monitoring industrial facilities).

TOPICS REQUIRED TO BE ADDRESSED IN THIS REPORT AS IDENTIFIED IN PART V OF THE PERMIT

Within the next one or two pages, or perhaps more if so desired, provide comments addressing the following items:

- 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 (MEP), and the measurable goals with an indication of the progress toward meeting the goals for each of the six minimum control measures.***

City of Leavenworth's opinion is that the information shown in each of the "Six Minimum Control Measures" tables support the conclusion that meaningful reduction in discharge of pollutants has occurred. With the global pandemic starting to subside, the City is able to conduct more public meetings. The previous limits on public meetings did impact the Public Education/Outreach as well as the Public Involvement/Participation 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.***

The City has collected information on a wide variety of municipal activities associated with various BMPs. This includes data on street sweeping, deicing use (salt), grease trap program, land disturbance permit issuance, SSO reporting and others. There has been no overall "trend" noticed in this data, but it is indicative of the effort of our community to be aware of important issues related to water quality. Specific data for many of these reporting items is in the assessment of the various BMP activities for the last year. It is clear that staff, public, contractors and businesses are aware of the various permitting programs associated with the SMP, and water quality is improved and/or maintained as a result.

3. Provide a summary of the stormwater activities that were undertaken during the previous calendar year and the status of these activities.

The following key programs associated with stormwater activities were conducted in 2022. There are many other smaller programs as well.

- ✓ Building Permits, Fills, Excavations are evaluated for needing an NOI, Land Disturbance Permit, Basic Erosion Control, SWPP and other clean water related elements
- ✓ Projects under construction are inspected and deficiencies brought to the attention of the contractor, owner or other appropriate person
- ✓ City-wide civic effort for "Spring Clean-up"
- ✓ Grease Trap Program inspections and reports
- ✓ Street Sweeping Program.
- ✓ Leaf Collection by the Refuse Service and free drop off at the City's brush site.
- ✓ Free Drop-Off Recycling Program
- ✓ Household Hazardous Waste Program (Coordinated with Leavenworth County)
- ✓ Free drop-off refuse disposal once per month
- ✓ Maintain "Clean-up your Dog Poop" effort at selected City parks
- ✓ Adopt-A-Park Program to help maintain/clean City parks
- ✓ Aggressive response to SSO calls 24/7
- ✓ Sewer line cleaning and TV program
- ✓ Stormwater articles in City newsletters and brochures placed at City Hall

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

All activities as noted in #3 are expected to be continued in 2023. City Staff and Commission will continue to evaluate the measures taken and update any associated BMPs in 2023.

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

There were no changes to the City Limits in 2022.

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

There were no significant changes to the BMPs in 2022.

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

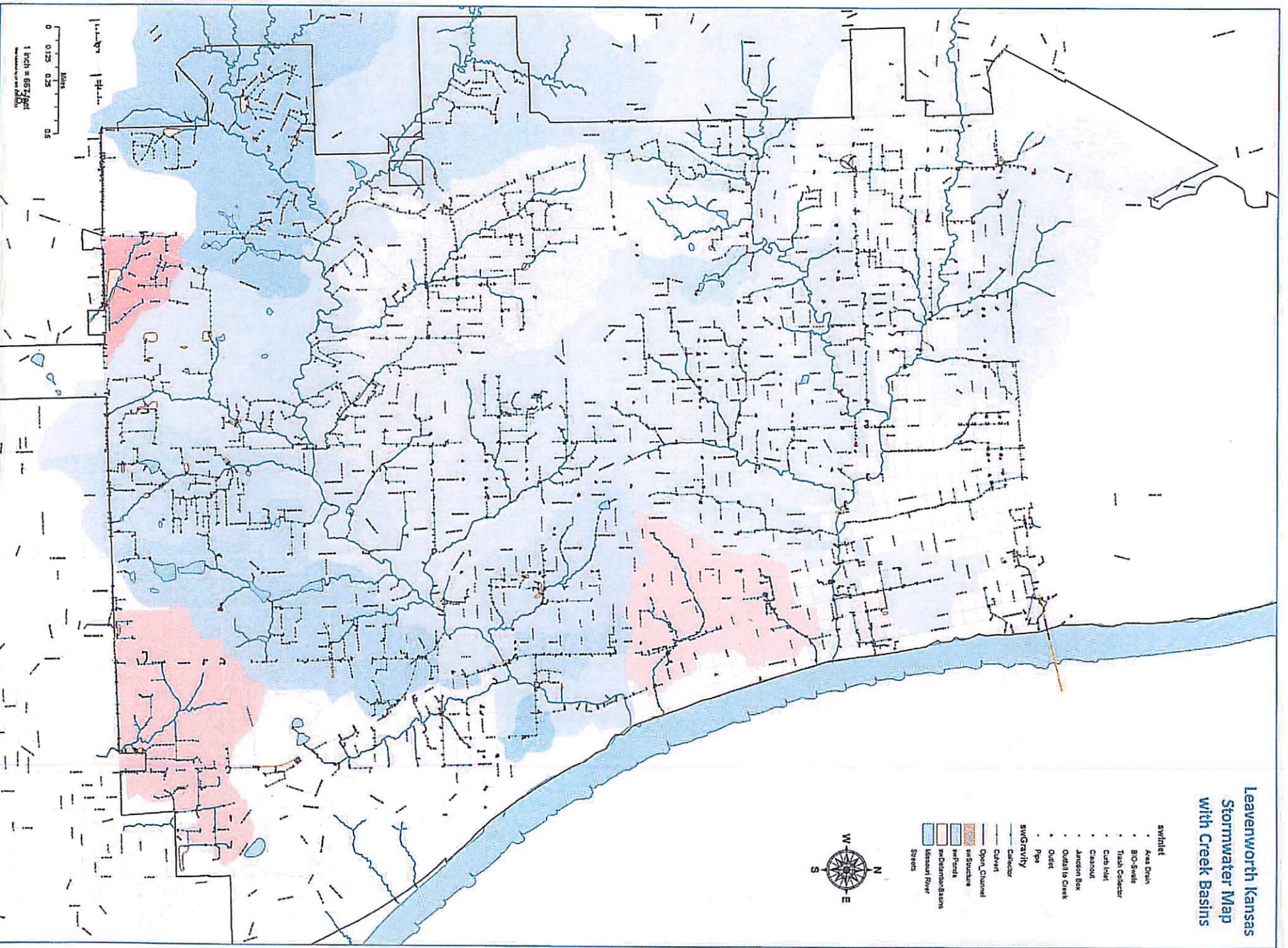
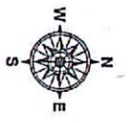
The City updated our Grease Trap/Interceptor Ordinance in 2022.

8. 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.

There were no other municipalities or consultants involved with implementing the SMP.

Leavenworth Kansas Stormwater Map with Creek Basins

- sw/Inlet
- Area Drain
- B/O Swell
- Trash Collector
- Curb Inlet
- Catchout
- Junction Box
- Odell to Creek
- Outlet
- Pipe
- sw/Gravity
- Collector
- Convent
- Open Channel
- sw/Structure
- sw/Inlets
- sw/Manholes
- Missouri River
- Streets












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1 inch = 667 feet
Map Updated by the SWA

City of Leavenworth, KS

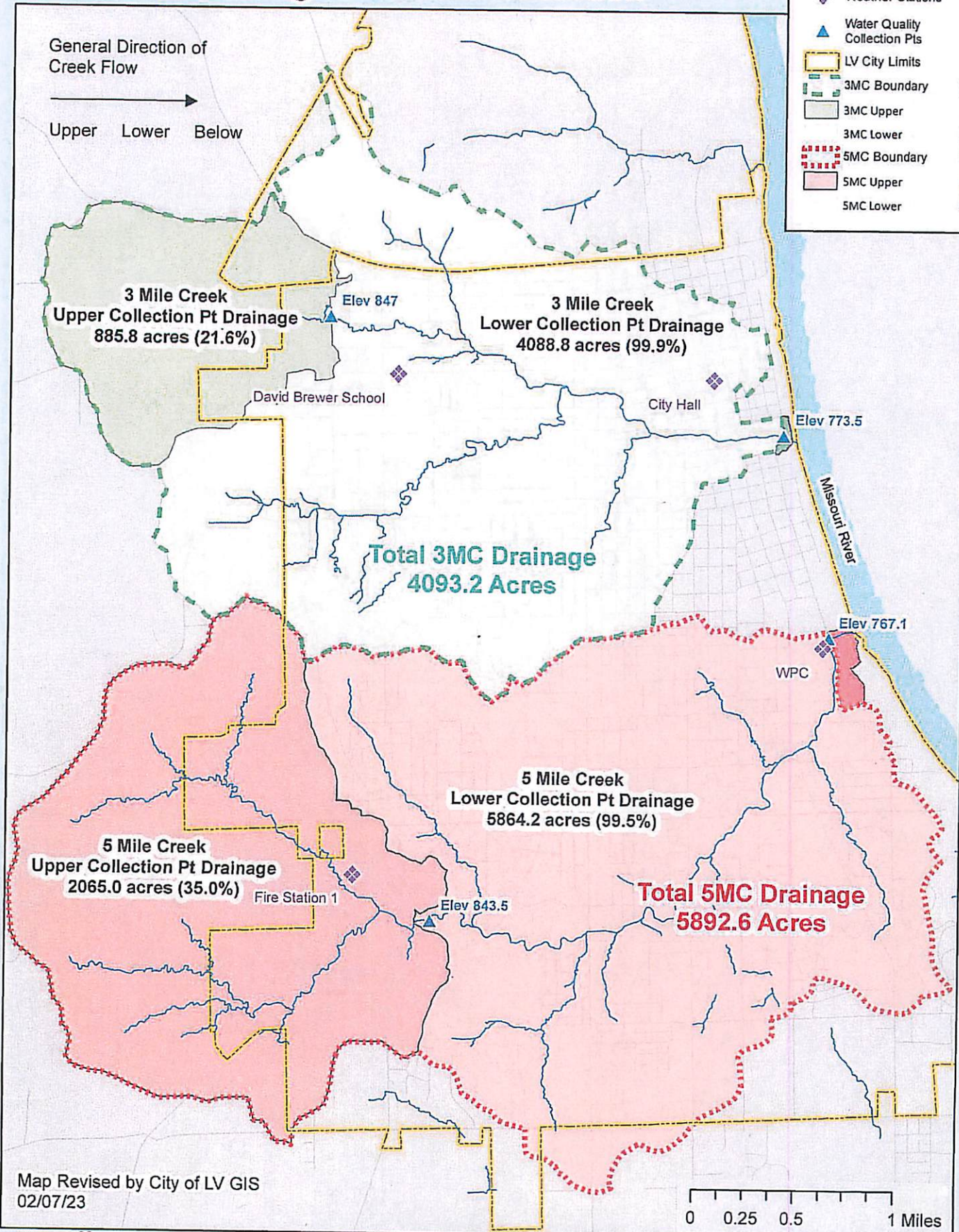
Stormwater Management Data Collection

Legend

-  Weather Stations
-  Water Quality Collection Pts
-  LV City Limits
-  3MC Boundary
-  3MC Upper
-  3MC Lower
-  5MC Boundary
-  5MC Upper
-  5MC Lower



General Direction of
Creek Flow
→
Upper Lower Below



Map Revised by City of LV GIS
02/07/23