

City of Leavenworth Stormwater Management Program

DATE 2020

PROGRAM HISTORY

The City of Leavenworth was established in the 1850s along Three-Mile Creek and on the banks of the Missouri River. Since that time, the City has grown to include most of the Three-Mile Creek and Five-Mile Creek watersheds.

INSERT MAP SHOWING THE ABOVE

There has been a history of flooding since the founding of the City, with notable examples and additional information in the attached Appendix. The most recent dramatic example was in October 2005 where an estimated 11 inches of rain fell in a four-hour period, causing significant property damage throughout the community. On July 6, 2015 over three inches fell in a one-hour period also causing significant damage.

- It is understandable that the City focused efforts since at least the 1980s to improve stream capacity to reduce flooding. Key improvements include fifteen replaced major bridges.¹
- Channel improvements on Three-Mile Creek between Missouri River and Broadway including removal of railroad trestle west of 7th Street
- Stormwater Master Plan (1997)
- FEMA Floodplain Revisions on Three-Mile Creek, especially in the downtown area (2014 and 2015)
- Approved sales tax with dedicated stormwater funding (1995, 2005, 2015)
- Approved Stormwater Fee in 2018 (Implemented in 2019)

During the late 1980s, the Environmental Protection Agency (EPA) determined that stormwater discharges from urban areas were having a negative impact on the nation's waterways. In the 1990s, Congress expanded the Clean Water Act authority to regulate municipal stormwater discharges under the National Pollutant Discharge Elimination System (NPDES). Phase I regulations were implemented in 1990 for large municipalities and Phase II regulations were implemented in 1999 for smaller municipalities such as Leavenworth.

¹ Listing of replaced bridges since 1980 is attached to this report.

The City of Leavenworth received its first NPDES stormwater permit from the Kansas Department of Health and Environment (KDHE) in 2004, along with 58 other regulated entities. All regulated Phase II entities have the same six minimum requirements:

1. Public outreach and education
2. Public involvement
3. Municipal pollution prevention
4. Construction site stormwater control
5. Illicit discharge detection and elimination
6. Post construction stormwater control

A new Five-Year NPDES permit was issued to City of Leavenworth in 2019 which includes the six minimum control measures. The intent of the permit is that the City will conduct programs and enact/enforce regulations that are generally expected to improve water quality entering the streams from the City.

A variety of activities have been identified by KDHE as being appropriate for the purpose of reducing pollution. These activities are often known by the term “Best Management Practice” (BMP). The City is required to participate in at least a sufficient number of these activities to meet the participation guidelines of the State between 2020 and 2024. This is accomplished by creation of this document – known as the “**Stormwater Management Program**” (SMP) in calendar year 2020, and carrying out the BMP items 2021 through 2024.

Staff has identified specific activities that will provide the required number of points for the duration of the permit. A table showing these activities and the associated point value is included in this document.

The City is required to submit an annual report to KDHE related to stormwater activities. This annual report is typically submitted in February of each year after a review by the City Commission of the Stormwater Management Program and of the Annual Report.

STORMWATER PROGRAM GOALS

The stormwater program of the City has two goals:

- Protect people and property from flood events
- Protect and enhance water quality

The City works to meet these goals by having a qualified staff and appropriate standards for design and construction of improvements.

STAFF

The Public Works Department staff includes engineers, inspectors, technicians, GIS mappers and project managers who review plans for all projects. The Community Development Department also reviews plans for compliance with zoning ordinances.

The Street Division has significant staffing and equipment resources to assist in addressing stormwater matters that may occur. There are two full-time stormwater employees who inspect, evaluate, clean and perform small repairs on existing stormwater infrastructure. The Community Development Department has two full-time inspectors to evaluate zoning matters within the City including stormwater concerns. Employees of Water Pollution Control (wastewater) are actively engaged in maintaining the wastewater collection system to prevent sanitary sewer overflows of all types. They perform any water quality or water quantity measuring and testing work required.

Use of the GIS system to assist in managing stormwater has greatly increased in the last five years. The detailed system information is available online to the public. Additional GIS tools include internal development of data loggers to enter field information on stormwater structures and locations.

PROGRAM TOOLS

The City uses a variety of tools to assist in the evaluation and management of stormwater issues. The primary entry point for information is the City of Leavenworth Web page. Three key locations are:

1. Stormwater Fee focused pages managed by the City Manager's Office at: www.leavenworthks.org/ctymanager/page/stormwater-projects
2. Stormwater Management Program pages on Public Works pages at: www.leavenworthks.org/publicworks
3. GIS Site: www.gis.firstcity.org

The following documents and activities are a key part of the current program and are available or linked to online through the City website. **(TRUE?? – sort of).**

1. Stormwater Master Plan (1997 by Black & Veatch)
2. Stormwater Design Guidelines (March 2015)
3. American Public Works Association Section 5600 as a guideline (2011)
4. MARC/APWA BMP Manual as a guideline (2012)
5. Floodplain Management (20103CV000B, July 2015)
6. Requiring a "Land Disturbance Permit" for most construction activity (March 2015)
7. Various City Ordinances
8. Submit Annual Report to KDHE after review by City Commission

STORMWATER MANAGEMENT PROGRAM IMPLEMENTATION

City Staff has reviewed the KDHE list of activities related to the six minimum control measures. Several activities associated with each of the six minimum control measures have been identified as being appropriate for Leavenworth. The intent is that the City and residents participate in the identified activities to ensure the needs of the community are addressed and the City complies with the KDHE/NPDES requirements.

The new permit requirements focus obtaining point totals through measurable activities. *The majority of these identified activities are currently in place and do not require further action beyond* more detailed descriptions and expectations for each activity. It is expected that this effort will reviewed with the Commission as needed and at least annually during preparation of the annual report.

Additional actions by the City will be necessary to achieve all of the necessary points, primarily through adoption of more formal design guidelines and creating better enforcement mechanisms:

- Review and Adopt APWA 5600 in a greater capacity than simply a reference.
- Review and Adopt MARC BMP Manual in a greater capacity than simply a reference.
- Adopting additional resolutions or ordinances to enable better enforcement of the regulations.

Please do not hesitate to contact the Office of the City Engineer should you have any questions regarding this program.

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Attachments

- FEMA Narrative on Flood events from FIS 20103CV000B
- Stormwater Management Program Goals
- Listing of replacement bridges since 1980