STORMWATER MANAGEMENT PLAN

MOR04C063

OCTOBER 2026- SEPTEMBER 2031
PERMITTING PERIOD

PREPARED BY:
ALLGEIER, MARTIN AND ASSOCIATES, INC.

REVISED JANUARY 2026

Stormwater Management Plan

Joplin, Missouri

October 2026-September 2031 Reporting Period

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Part 1 - Facility Information

1.A. GENERAL INFORMATION:

NPDES #:	**MOR04C063**
Facility Name:	Joplin Phase II MS4
Facility Mailing Address:	602 S. Main Street Joplin MO 64801
Owner's Name:	**City of Joplin, Missouri**
Owner's Physical Address:	602 S. Main Street Joplin MO 64801
Owner's Mailing Address:	602 S. Main Street Joplin MO 64801
Responsible Party:	Dan Johnson, Director of Public Works
Phone Number:	(417) 624-0820 Ext. 1500
Email:	DJohnso1@joplinmo.org
Primary Contact:	**Steven Martinez, Engineer I***
Phone Number:	(417) 624-0820 Ext. 1520
Email:	smartine@joplinmo.org
Secondary Contact:	Jeremy Hagerman, Assistant Director of Public Works
Phone Number:	(417) 624-0820 Ext. 1538
Email:	jhagerma@joplinmo.org
Facility Region:	Southwest Region (Main Office in Springfield, Satellite Office in Neosho)
Facility County:	Jasper County, MO
Facility Type:	Small MS4
Facility SIC Code:	9511
Facility NAICS Code:	924110
Facility Description:	Discharges from Regulated Small MS4
Total MS4 Area (acres):	38.3 sq. miles (24512 acres)

* If name of Primary Contact changes, that may be updated on the next Stormwater Management Program Report and/or via email to the Department at MS4@dnr.mo.gov.

1.B. ADJACENT WATERWAYS:

The permittee discharges to three permanently flowing streams (Class P) within the City, Center Creek, Shoal Creek, Silver Creek, and Turkey Creek. The permittee also discharges to Rock Creek (Class P) and tributaries, but Rock Creek is not rated Class P within the City.

The permittee is not within 100 feet of waters classified as public drinking water supply lakes (L1) or major reservoirs (L2).

The permittee does not discharge to any Wild and Scenic Riverways, Outstanding State Resource Waters, or streams designated for cold-water habitat. Therefore, the permittee is implementing no additional specific provisions for their continued integrity.

The permittee does not discharge within two stream miles upstream of any biocriteria reference locations as defined in 10 CSR 20-7.031.

Some of the Permittee's areas are defined as wetlands in the National Wetlands Inventory.
Stormwater from Joplin discharges to 10 sinkholes.
The permittee is within 100 feet of eight stream segments that are listed as Impaired on the 303(d) List. See Table 1.B for details. The ARAP requirements have been waived for the 2022 Center Creek TMDL. See Section 6 of this SWMP for details.

Table 1.B. 303(d) Listed Waterbodies (2020) into which the City of Joplin Discharges

WBID	Waterbody	Year Listed	WB Class	Pollutant	Pollutant Source	TMDL Approved/ WLA Assigned	County
3203	Center Cr.	2006	P	Cadmium (S)	Tri-State Mining District	2022. WLA shared by all MS4s in Watershed.	J
3203	Center Cr.	2006	P	Lead (S)	Tri-State Mining District		J
5006	Joplin Cr.	2016	C	Cadmium (W)	Mill Tailings	No/No	J
5006	Joplin Cr.	2018	C	Zinc (W)	Mill Tailings	No/No	J
3222	Shoal Cr.	2014	P	Zinc (S)	Mill Tailings	No/No	N
3981	Shoal Cr. Trib.	2014	C	Cadmium (W)	Tanyard Hollow Pits	No/No	J/N
3981	Shoal Cr. Trib.	2014	C	Zinc (W)	Tanyard Hollow Pits	No/No	J/N
3982	Shoal Cr. Trib.	2014	C	Zinc (W)	Mill Tailings	No/No	J
3982	Shoal Cr. Trib.	2020	C	Cadmium (W)	Mill Tailings	No/No	J
3244	Silver Cr.	2018	P	Zinc (S)	Mill Tailings	No/No	N
3216	Turkey Cr.	2006	P	Cadmium (S)	Tri-State Mining District	TMDL for Zinc, 2006. No WLA.	J
3216	Turkey Cr.	2006	P	Cadmium (W)	Tri-State Mining District		J
3216	Turkey Cr.	2006	P	Escherichia coli (W)	Urban Runoff/Storm Sewers		J
3216	Turkey Cr.	2008	P	Lead (S)	Tri-State Mining District		J
3216	Turkey Cr.	2006	P	Zinc (S)	Tri-State Mining District		J
3217	Turkey Cr.	2006	P	Cadmium (S)	Tri-State Mining District	TMDL for Zinc, 2006. No WLA.	J
3217	Turkey Cr.	2006	P	Escherichia coli (W)	Urban Runoff/Storm Sewers		J
3217	Turkey Cr.	2006	P	Lead (S)	Tri-State Mining District		J
3217	Turkey Cr.	2006	P	Zinc (S)	Tri-State Mining District		J

Waterbody Classification: P = Perennial Stream; C = Intermittently Flowing Stream
Pollutant: (W) = Pollutant is in water; (S) = Pollutant is in sediment
County: J = Jasper County; N = Newton County

1.C. CRITICAL AREAS:

There are threatened or endangered species in the area. (See Table 1.C below.) The Permittee has met eligibility criteria for protection of threatened or endangered species.
There are critical habitats in the area. (See Table 1.C below.) The Permittee has met eligibility criteria for protection of critical habitats.
There are historic properties in the area.

Table 1.C Endangered Species/Critical Habitats

County	Species	Status	Habitat
Mammals			
Jasper	Gray Bat *Myotis grisescens*	Endangered	Caves
Jasper	Indiana Bat *Myotis sodalist*	Endangered	Caves
Jasper	Northern Long-Eared Bat *Myotis septentrionalis*	Threatened	Caves
Jasper	Tricolored Bat *Perimyotis subflavus*	Proposed Threatened	
Fish			
Jasper	Neosho Madtom *Noturus placidus*	Threatened	Rivers
Clams			
Jasper	Neosho Mucket Clam *Lampsilis rafinesquena*	Endangered	*Critical Habitat found near or in the City.*
Jasper	Rabbitsfoot Clam *Quadrula cylindrica clindrica*	Threatened	
Insects			
Jasper	Monarch Butterfly *Danaus plexippus*	Candidate	

Part 2 – Outfalls

A map of Stormwater Outfalls is required under Minimum Control Measure 3. The City's outfalls are mapped in GIS. The mapping is available on the City's GIS website, https://www.joplingis.org/portal/apps/webappviewer/index.html?id=6963ff630dc74f209a3d956e68a4b236. Outfalls are on the layer titled, "Joplin_Outfalls."

Part 3 – Stormwater Management Program and Plan

Background

The Municipal Separate Storm Sewer System (MS4) Permit requires each permittee to develop and implement a Stormwater Management Program. Each permittee creates and maintains a written Stormwater Management Plan (SWMP) for the permit cycle. The SWMP is a document describing the Program and is created to ensure consistency and continuity in the implementation of the Program.

The City of Joplin has chosen to participate in the "Comprehensive" version of the MS4 permit (MO-RO4C000) for the October 2026-September 2031 permit cycle. Joplin is a traditional MS4 with a population of more than 40,000. According to the table below, Joplin fits Group C. All BMPs in this SWMP have been chosen to correspond with the requirements for Group C.

NOTE: Throughout this SWMP document, permit language is denoted in *italics*.

Categories of Regulated Small MS4s under this comprehensive permit.

This comprehensive permit categorizes MS4s by the following categories, or Groups, based on the population served as determined by the most the recent Decennial Census at the time of permit issuance, the type of Regulated MS4, and the co-permittee situation.

Group A	***Group B***	***Group C***
Traditional Small MS4s (cities) that serve a population of less than 10,000 within a UA;	*Traditional Small MS4s that serve a population of at least 10,000 but less than 40,000; OR*	*Traditional Small MS4s that serve a population of 40,001 or more; OR* **Joplin fits this category.**
Class 2 counties; Non-traditional such as Universities, Federal facilities.	*Class 1 counties*	*Co-permit Small MS4s*

The MS4 Operator may add supplemental items to the SWMP. These items include but are not limited to:

- *Maps;*
- *Standard operating procedures (SOPs);*
- *Inspection forms;*
- *Sample data;*
- *Operations and Maintenance Manual;*
- *Website or social media account tracking;*
- *Stream Team Activity Reports;*
- *Tracking and evaluation documents; and*
- *Documentation of agreements for co-permittees and/or cooperative agreements.*

The MS4 Operator may replace or modify ineffective BMPs with effective BMPs

Part 4 – Minimum Control Measures

4.0 Entities under coverage of the MOR04C general permit shall develop and implement a Stormwater Program that includes the following six (6) Minimum Control Measures (MCMs).

4.1 MCM#1: Public Education and Outreach on Stormwater Impacts

4.2 MCM#2: Public Participation

4.3 MCM#3: Illicit Discharge Detection and Elimination

4.4 MCM#4: Construction Site Stormwater Runoff Control

4.5 MCM#5: Post-Construction Stormwater Management in New Development & Redevelopment

4.6 MCM#6: Pollution Prevention/Good Housekeeping for Municipal Operations

NOTE: BMP = Best Management Practice

4.1 MCM 1. Public Education and Outreach (PEO) on Stormwater Impacts

Joplin has implemented a public education and outreach program to distribute educational materials to the community and conduct outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

The public education and outreach program shall, at a minimum include the following:

4.1.A Target Audiences

The MS4 Operator shall target specific audiences who are likely to have significant stormwater impacts.

As a Group C MS4, the City of Joplin is required to target three audience for the City's Public Education program. The primary audience will be residents, with businesses and construction site operators/builders as additional target audiences.

4.1.B Target Pollutants

The MS4 Operator shall target specific pollutant(s) in the permittee's education program. Each MS4 shall have a minimum of one target pollutant for each target audience from Section 4.1.A of this permit.

Joplin has chosen target pollutants for each target audience.

Target Audience	Target Pollutant(s)
Residents	Solid waste (trash/litter), household hazardous waste, grass clippings & leaf litter.
Businesses	Solid waste (trash/litter), hazardous waste, FOGs (fats, oils, and grease)
Construction Site Operators/Builders	Erosion/sediment from construction activities, solid waste (trash/litter)

4.1.C Best Management Practices (BMPs) for Outreach and Education

The MS4 Operator must utilize appropriate educational resources to be used as BMPs (materials, events, activities, etc.) in conjunction with the selected pollutants for the selected target audiences.

The MS4 Operator may change BMPs during the permit cycle if determined appropriate through tracking and adaptive management reviews show a different BMP may be more effective for the MS4. Any changes shall be reflected in the SWMP and explained in the MS4 Stormwater Management Program Report.

The City of Joplin, as part of Group C, must choose a minimum of five Outreach and Education BMPs from Table III of the MS4 General.

Joplin has chosen the following Outreach and Education BMPs:

- **Stormwater Information on the City Website**
  - Continue the Stormwater Information page on the City website to provide educational material and links to further stormwater information.
  - Measurable Goals: Maintain the webpage with up-to-date information and working links. All links will be checked, and the page will be updated as necessary at minimum annually. Website will be maintained for the entire permit cycle.
  - Tracking and Adaptive Management: The number of hits will be tracked. The City will use this to see which messages get reactions, and if certain messages may need more education.
  - Target Audience: Residents, businesses, construction site operators/builders
  - Target Pollutants: Include, but are not limited to, solid waste, recycling, and grass clippings & leaf litter.
  - Website Addresses: https://www.joplinmo.org/900/Storm-Water-Section and https://www.joplinmo.org/293/Recycling-Solid-Waste-Management
  - Responsible Party: Stormwater Engineer

- **Annual Mailing of Recycling & Waste Disposal Guide**
  - Mail Recycling & Waste Disposal Guide to residents and businesses annually.
  - Measurable Goals: Mail 23,0000 Guides each year.
  - Tracking and Adaptive Management: The number of Guides mailed each year will be tracked. The City will see if mailing of the guide results in greater use of the City Recycling Center.
  - Target Audience: Residents and businesses.
  - Target Pollutants: Include, but are not limited to, solid waste, recycling, and household hazardous waste.
  - Website Address: Digital copy available under the "Graphics, Flyers, Maps" category at https://www.joplinmo.org/293/Recycling-Solid-Waste-Management
  - Responsible Party: Recycling Coordinator

- **Stormwater Articles in the "Citizen Newsletter"**
  - Publish stormwater-related information in the City's "Citizen Newsletter."
  - Measurable Goals: Distribute 23,000 newsletters at minimum annually, each with stormwater information. May be distributed electronically.
  - Tracking and Adaptive Management: The number of newsletters sent each year will be tracked. To the extent possible, the City will evaluate the pollutant (or other applicable reaction) before the article and again after to see if there has been a change. (Other applicable reactions vary with the stormwater information discussed in the newsletter. Reactions may include increased message-related social media activity, increased use of the Recycling Center, increased reporting of illicit discharges, etc.)
  - Target Audience: Residents and businesses.
  - Target Pollutants: May vary seasonally and include, but are not limited to, solid waste (trash/litter), recycling, and grass clippings & leaf litter.
  - Website Address: Digital copies of the newsletter are available at http://www.joplinmo.org/Archive.aspx?AMID=56
  - Responsible Party: Recycling Coordinator

❖ **Stormwater Brochure to New Business Licensees**
- Targeted education campaign. Each new business licensee will receive a brochure about good stormwater practices. Brochure content may be tailored to business type.
- Measurable Goals: Each new licensee is to receive a brochure. The number of brochures sent will be tracked.
- Tracking and Adaptive Management: Number of brochures sent will be tracked. City will use compliance with applicable stormwater rules to determine effectiveness of this BMP.
- Target Audience: Joplin businesses
- Target Pollutants: Include, but are not limited to, solid waste, hazardous waste, FOGs (fats, oils, and grease)
- Responsible Party: Finance Department

❖ **Disseminate Stormwater Guidelines with Land Disturbance Permit**
- Targeted education campaign. The City's Erosion & Sediment Control Guidelines (and the Stormwater Management Criteria manual, when applicable) will be disseminated with each Joplin Land Disturbance Permit. This will happen during the Pre-Development meeting for each project seeking a permit. This may be done electronically.
- Measurable Goals: A copy of the City's Erosion & Sediment Control Guidelines will be distributed with each new Land Disturbance permit. This may be done electronically.
- Tracking and Adaptive Management: Number of permits/copies sent will be tracked. The city will use compliance with construction site stormwater control requirements to determine effectiveness of this BMP.
- Target Audience: Construction site operators/builders.
- Target Pollutants: Include, but are not limited to, erosion/sediment from construction activities, and solid waste (trash/litter).
- Website Address: The Erosion & Sediment Control Guidelines (and the Stormwater Management Criteria manual) can be found on the City's Stormwater website: https://www.joplinmo.org/900/Storm-Water-Section.
- Responsible Party: Stormwater Engineer

4.1.D Best Management Practices (BMPs) for Involvement

The MS4 Operator must create opportunities, or support activities that are coordinated by citizen groups, for residents and others to become involved with the Stormwater Management Program. The activities, (BMPs) must have an effort to impact stormwater runoff by improving water quality.

The City of Joplin, as part of Group C, must choose a minimum of three Involvement BMP from Table IV of the MS4 General Permit.

Joplin has chosen the following Involvement BMP:

❖ **Educational Display/Booth**
- The City will provide at least one information and/or display booth each year at a public event. Booths will work to improve public understanding of issues related to stormwater quality. Public events might include Third Thursday events, and/or the Shoal Creek Watershed Festival.

- Measurable Goals: The City will provide one booth or display at minimum annually. The booth must be staffed by City staff at minimum 50% of the time the event is open to the public.
- Tracking and Adaptive Management: The number of hours the booth was staffed and the number of hours of the event will be recorded. The topic(s) covered and the amount of educational materials distributed will also be recorded.
- Target Audience: Residents
- Target Pollutants: Include, but are not limited to, solid waste, grass clippings & leaf litter.
- Responsible Party: Recycling Coordinator

❖ **Recycling and Household Hazardous Waste Collection**

- The City provides year-round drop-off services for recycling and some household hazardous waste at the Joplin Recycling Center. Services are open to the public during operating days and hours.
- Measurable Goals: Year-round drop-off service will be provided at the Joplin Recycling Center during operating days and hours.
- Tracking and Adaptive Management: Track the amount collected.
- Target Audience: Residents
- Target Pollutants: Solid waste and Household Hazardous Waste.
- Responsible Party: Recycling Coordinator

❖ **Yard Waste Collection/Disposal**

- The City provides curbside collection each fall for grass clippings and leaves. The City also maintains the Joplin Compost Facility (at Turkey Creek Wastewater Facility), where public can drop off grass clippings and leaves year-round, 24 hours per day.
- Measurable Goals: Curbside pickup service will be provided annually. Drop-off service will be provided year-round at the Joplin Compost Facility.
- Tracking and Adaptive Management: Track the amount collected.
- Target Audience: Residents and businesses.
- Target Pollutants: Grass clippings & leaf litter.
- Responsible Party: Recycling Coordinator

4.1.E *The MS4 Operator shall create or support the involvement BMP(s) in Section 4.1.D.*

The City of Joplin is the sole provider of the Yard Waste disposal and Recycling/Household Hazardous Waste collection BMPs in Section 4.1.D. For the Educational Display/Booth BMP, the City provides the display or booth at a public event. The public event will vary and might or might not have been organized by the City, depending on the event.

4.1.F Adaptive Management

Using adaptive management as required in parts 4.1.A.3.d and 4.1.B.1.c, all MS4 Operators shall review their Public Education and Outreach on Stormwater Impacts Program, at minimum, annually and update implementation procedures and/or BMPs as necessary within the requirements of this permit.

This may be conducted when preparing the annual MS4 Stormwater Management Program Report for submittal to the Department.

Annual Review of MCM 1			
Year reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2026			
2027			
2028			
2029			
2030			

4.2 MCM 2. Public Participation

Joplin has implemented a comprehensive public participation program that provides opportunities for public participation in the development and oversight of the City's Stormwater Program. This program provides opportunities for public participation in the permittee renewal process and complies with state and local public notice requirements. Additionally, the program provides opportunities for public participation in activities related to developing and implementing the Stormwater Management Program.

The public participation program shall, at a minimum include the following:

4.2.A Public Notice Period

The MS4 Operator shall hold a public notice period for a minimum of thirty (30) days to allow the public to review the draft permit, and description of the MS4s Stormwater Management Program (this may be the SWMP) prior to the submission of the renewal application to the Department.

4.2.B Items to be Posted on Website

As part of the public notice, if the MS4 Operator has a public website, the required items shall be posted on their website with a way to submit comments, along with the standard public notice methods for the MS4.

1. *The permittee shall respond to comments received during the comment period.*
2. *The MS4 Operator shall retain copies of any public comments and records of information submitted by the public received as part of the public notice process. These comments and responses shall be made available to the public or the Department upon request.*

The permit renewal information was posted on the City's Stormwater website at https://www.joplinmo.org/900/Storm-Water-Section.

4.2.C Public Meeting

The MS4 Operator shall hold a public information meeting to provide information on, or describe the contents of, the proposed Stormwater Management Program. This meeting shall be advertised at least thirty (30) days prior to the public meeting.

1. *As part of the notice of public meeting, if the MS4 Operator has a public website, the MS4 Operator shall post on that site, along with the standard public notice methods for the MS4. The notice of the public informational meeting, including the date, time and location.*
2. *The meeting must be held within the service area of the MS4. Co-permittees shall hold the meeting within the boundaries of each co-permittee.*

Dates of public notice:	Feb 7, 2026 – March 26, 2026
Dates of notice of meeting:	Feb 7, 2026 – March 11, 2026
Date of meeting:	March 11, 2026 4:00 PM – 6:00 PM
Location (or virtual):	City Hall, 5th floor Council chambers

Public Notice, for the permit renewal and public meeting, was given through an online news release on Feb. 4, 2026 and in the local newspaper, the Joplin Globe, on Feb. 7, 2026.

The documentation will be posted on the City's website. Dates of posting shall be recorded in the 2026-2031 SWMP, along with relevant receipts (from the newspaper, etc.) and screenshots of the website.

4.2.D Public Comments

The MS4 Operator shall have a publicly available method to accept public inquiries, or concerns, and to take information provided by the public about stormwater and stormwater related topics.

Written comments can be submitted by mail or email to Steven Martinez, Engineer I, at City Hall (smartinez@joplinmo.org). Comments are to be tracked electronically or on paper by Mr. Martinez. This contact information can also be found on the City's Stormwater website: https://www.joplinmo.org/900/Storm-Water-Section.

4.2.E Stormwater Management Panel or Committee

If the MS4 Operator utilizes a stormwater management panel or committee, the MS4 Operator shall provide opportunities for citizen representatives on the panel or committee. The attendance of the meeting shall be recorded.

The City of Joplin does not utilize a stormwater management panel or committee.

4.2.F Annual Updates to Governing Board

If the permittee has a governing board such as; County Council, City Council, or Board of Curators, a representative of the MS4 Operator, who is familiar with the MS4 Stormwater Program, shall provide an update to the governing board. This shall be conducted at minimum, annually with the status of, or updates on, the Stormwater Management Program, and compliance with the Stormwater Management Program.

An update will be given annually to the City Council, after the completion of the annual Stormwater Report. Dates of the update will be recorded in the following table.

Annual Updates to City Council			
Year to be Reported Upon	Date of update	Method used to update the City Council	Name of MS4 representative(s)
2026:			
2027:			
2028:			
2029:			
2030:			

4.2.I Adaptive Management

Using adaptive management, all MS4 Operators shall review their Public Participation Program, at minimum, annually and update implementation procedures as necessary within the requirements of this permit. This shall be used to review how to best reach the public, the effectiveness of the mechanisms, the effectiveness of reaching the public and the MS4 Governing board and if the community and MS4 government are working together for water quality.

Any additional events and/or BMPs shall be acknowledged in the Stormwater Management Program.

Annual Review of MCM 2			
Year reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2026			
2027			
2028			
2029			
2030			

4.3 MCM 3. Illicit Discharge Detection and Elimination (IDDE)

The City of Joplin has implemented, and enforces, a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200 at 40 CFR 122.26(b)(2)) into the regulated MS4.

The illicit discharge detection and elimination program shall at minimum, include the following:

4.3.A Stormwater & Outfall Mapping

IDDE program will include a current storm sewer system map that shall be updated as needed to include features which are added, removed, or changed. This map may be paper or electronic.

Joplin maintains a storm sewer map that contains:

- the location of All MS4 Outfalls,
- the names and locations of all Waters of the State receiving discharges from the City's MS4 Outfalls, and
- the boundary of the regulated MS4 area (City Limits).

The mapping is available on the City's GIS website at: https://www.joplingis.org/portal/apps/webappviewer/index.html?id=6963ff630dc74f209a3d956e68a4b236. Outfalls are on the layer titled, "Joplin_Outfalls."

4.3.B Outfall Information Tracking

The MS4 Operator must record the sources of information used for the map and track, at minimum:

- *A numbering or naming system of all outfalls;*
- *Dates that the outfall locations were verified/ or last field survey;*
- *For newly added outfalls, the date that it was added to the storm sewer system.*

The City's Stormwater & Outfall Mapping utilizes a numbering system for all Outfalls. If additional Outfalls are added during this permit period, the dates will be noted on the mapping. Outfall locations will be verified during IDDE inspections, and the dates will be recorded on the inspection forms.

4.3.C Regulatory Mechanism for Illicit Discharge Prevention

The MS4 shall effectively prohibit non-stormwater discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions.

The City of Joplin uses Chapter 118 Article III Division 9 (§118-301 through 118-325) of City Code to effectively prohibit illicit discharges to the MS4. This "Illicit Discharge Ordinance" gives the City authority to inspect for illicit discharges and includes enforcement measures. This City Code can be found online at: https://library.municode.com/mo/joplin/codes/code_of_ordinances?nodeId=PTIICOOR_CH118UT_ARTIISESEDI_DIV9ILDIDEELID.

4.3.D Dry Weather Field Screening

IDDE program will include a dry weather field screening strategy.

1. *The MS4 Operator shall conduct (or have conducted on their behalf) outfall field assessments. The screening shall be conducted during dry weather conditions (a minimum of 72 hours after the last precipitation event) to check for the presence of a discharge.*
   a. *A minimum of 60% of all outfalls shall be screened during the permit cycle.*
   b. *Priority areas, such as those listed in 4.3.H, shall be screened each year.*
2. *Dry weather screening shall include a checklist or other tracking device to; ensure a complete inspection of each outfall, enhance consistency, and to track the field screening. When discharge is present, the checklist or tracking device shall note the following general observations and physical characteristics at a minimum:*
   a. *Date and time;*
   b. *Weather conditions and temperature (air & water);*
   c. *Color of discharge;*
   d. *Estimate of flow rate (this may be noted qualitatively);*
   e. *Odor;*
   f. *Surface scum, algal bloom, floatables or oil sheen present;*
   g. *Deposits or stains (note the color);*
   h. *Turbidity (may be noted qualitatively);*
   i. *Stream impact including vegetation, fish, wildlife;*
   j. *Length of impacted stream; and*
   k. *Notes of an obvious source of flow (such as lawn irrigation, etc.)*

Joplin has implemented an IDDE Inspection program that utilizes dry-weather field screening to detect and address non-stormwater discharges, including discharges from illegal dumping and spills.

IDDE Inspections are performed by staff from the Engineering Department. Procedures for inspection are contained within the City's "Illicit Discharge Detection & Elimination Field Investigation Guide," dated 2023. During field inspections, the City uses an inspection checklist, called the "Illicit Discharge Inspection Field Sheet," that includes the above-listed minimum observations and physical characteristics.

Digital copies of the IDDE Field Guide and Inspection Field Sheet are available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. Physical copies of the IDDE Field Guide and Inspection Field Sheet are used in the field by inspection staff.

A minimum of 60% of all outfalls shall be screened during the permit cycle. Additional inspections may occur if there is a complaint or if a priority area is designated.

Number of IDDE inspections for each year are recorded in the table below.

IDDE Inspections for the Year		
	Amount (% or #) per year of permit cycle	Any specific priority areas included: (See also 4.3.H)
2026:		
2027:		
2028:		
2029:		
2030:		

NOTE: Industrial Pre-treatment Inspection Program

The City of Joplin also utilizes an industrial pre-treatment inspection program to help prevent illicit discharges from permitted significant industrial users. This inspection program, implemented by the City of Joplin Wastewater Treatment personnel, includes an overview of the storm water discharge at permitted significant industrial users. These sites are inspected on an annual and as needed basis. Inspectors have a checklist for use during inspection, which pertains to non-contact cooling water discharge sources, discharge frequency, and contaminants. During an inspection, visual attention is paid to possible storm water contamination sources and existing BMPs, such as berms, containments areas, emergency procedures, etc., are examined. The inspector also presents worst-case scenarios to the user concerning runoff. If needed, the inspector recommends that stormwater protection is included in the solution. Stormwater discharge permits are reviewed by the City and expiration dates are noted.

A list has been created showing every industry inside the city limits with a business permit. This list is included in Appendix MCM3, along with the Industrial Facility Inspection Report (checklist mentioned in previous paragraph) use during inspections. Each one of these industries will be inventoried and inspected by city staff on an annual or as needed basis.

4.3.E Diagnostic Monitoring Procedures

The MS4 Operator shall maintain diagnostic monitoring procedures to detect and investigate unknown non-stormwater flows as part of the dry weather screening program.

Procedures for Illicit Discharge Inspection are contained within the City's "Illicit Discharge Detection & Elimination Field Investigation Guide," dated 2023. During field inspections, the City uses an inspection checklist, called the "Illicit Discharge Inspection Field Sheet."

Digital copies of the IDDE Field Guide and Inspection Field Sheet are available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. Physical copies of the IDDE Field Guide and Inspection Field Sheet are used in the field by inspection staff.

4.3.F Tracing the Source

The MS4 Operator shall maintain procedures for tracing the source of an illicit discharge. If initial screening indicates that a dry weather discharge contains pollutants, or if an illicit discharge is suspected from another reporting method, the source shall be traced.

Procedures for tracing the source of an Illicit Discharge are contained within the City's "Illicit Discharge Detection & Elimination Field Investigation Guide," dated 2023. A digital copy of the IDDE Field is available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. A physical copy of the IDDE Field Guide is used in the field by inspection staff.

4.3.G Removing the Source

The MS4 Operator shall maintain procedures for removing the source of the discharge. After locating the source, the pollutant and source must be removed. The exact procedure will depend on the source and the circumstances.

Procedures for removing the source may vary widely, depending on the source and circumstances. Removal procedures may be as simple as a friendly conversation with a property owner. Or a public education campaign may be indicated, if the source is determined to be more widespread. Chapter 118 Article III Division 9 (§118-301 through 118-325) of City Code authorizes additional, specific enforcement measures for illicit discharge issues. Enforcement procedures in the ordinance include: Notice of Violation, fines, abatement of the problem by the City (or its agent), cost of abatement to be paid by violator, and possible civil action and/or criminal charges, as the situation requires. Appeal procedures are also included in the ordinance. (This City Code can be found online at: https://library.municode.com/mo/joplin/codes/code_of_ordinances?nodeId=PTIICOOR_CH118UT_ARTIISESEDI_DIV9ILDIDEELID.)

4.3.H Priority Areas

In order to prevent further illicit discharge, the MS4 Operator shall identify priority areas such as, but not limited to:

- *Areas with evidence of ongoing illicit discharges;*
- *Areas with a past history of illicit discharges;*
- *Certain land use influencing stormsewer/ proximity of potential pollutant sources;*
- *Areas of higher population density;*
- *Neighborhoods with onsite sewage systems;*
- *Areas with known litter or dumping issues;*
- *Areas with large or increased number of citizen complaints; and*
- *Industrial areas.*

Annually, the MS4 Operators shall evaluate this priority area list and/or map and update as necessary to reflect changing priorities.

	IDDE Inspection Priority Area(s)
2026:	
2027:	
2028:	
2029:	
2030:	

4.3.I Written Procedures for IDDE Program Implementation

The MS4 Operator shall maintain written procedures for implementing the IDDE Program, including those components described within this section, to ensure program continuity and consistency.

Procedures for implementation of the IDDE Program are contained within the City's "Illicit Discharge Detection & Elimination Field Investigation Guide," dated 2023. A digital copy of the IDDE Field Guide is available on the City's Stormwater website, which is available on the City's Stormwater website at: https://www.joplinmo.org/900/Storm-Water-Section.

A standard operating procedure (SOP) has also been developed specifically for field response when a possible spill or illicit discharge has been reported. A digital copy of this SOP is available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. A copy has also been included in Appendix MCM3.

4.3.J Investigation Timeline

The MS4 Operator must conduct investigations in response to field screening discoveries, spills, or in response to complaints from the public, municipal staff, or adjacent MS4s.

1. *Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment.*
2. *Investigate within five (5) business days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge which does not constitute a threat to human health, welfare or the environment.*
3. *If illicit connections or illicit discharges are observed related to, discharging to, or discharging from, an adjacent MS4 Operator's municipal storm sewer system, the MS4 Operator must notify the other MS4's Operator within 24 hours of discovery or as soon as practicable.*

The City of Joplin will:

1. Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment.
2. Investigate within five (5) business days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge which does not constitute a threat to human health, welfare, or the environment.
3. Notify adjacent MS4 Operators if illicit connections or illicit discharges are observed related to, discharging to, or discharging from, that Operator's municipal storm sewer system. Notification will take place within 24 hours of discovery or as soon as practicable.

Adjacent MS4	Contact person(s)	Phone number/ email
Carl Junction	Steve Lawver, City Administrator	417.649.7237 cjcityadm@carljunction.org
Duquesne	Bill Sherman, Mayor	417.673.4651 b.sherman@duquesnemo.org
Jasper County	Debbie Darby, Health Department	417.358.0480 Debbie.Darby@lpha.mo.gov
MoDOT	Melissa Scheperle	melissa.scheperle@modot.mo.gov
Newton County	Clerk	417.451.8221
Webb City	Public Works Dept.	417.673.6297

4.3.K Enforcement Procedures

The MS4 Operator shall have procedures for appropriate enforcement, this may include fines, the ability to collect cleanup and abatement costs, and actions to ensure that the permittee's illicit discharge ordinance (or other regulatory mechanism) is being implemented.

Enforcement procedures for illicit discharge issues are laid out in Chapter 118 Article III Division 9 (§118-301 through 118-325) of City Code. Procedures in the ordinance include: Notice of Violation, fines, abatement of the problem by the City (or its agent), cost of abatement to be paid by violator, and possible civil action and/or criminal charges, as the situation requires. Appeal procedures are also included in the ordinance. (This City Code can be found online at: https://library.municode.com/mo/joplin/codes/code_of_ordinances?nodeId=PTIICOOR_CH118UT_ARTIISESEDI_DIV9ILDIDEELID.)

4.3.L Database for Tracking IDDE Actions

The MS4 Operator shall maintain a database, or other centralized system, to track dry weather field screenings, spills, incidents, and investigations.

The City of Joplin tracks all field screenings, spill, incidents, and investigations. Records are kept electronically by the Stormwater Engineer on the City's sharefile network. The Operations division of Public Works also keeps records of any illicit discharge investigations, spills, and incidents in which they are involved. Records are to be kept for the entire MS4 permit cycle but may be kept longer if deemed necessary.

4.3.M IDDE Education

The MS4 Operator shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste, this may work with part 4.1 and part 4.6 of this permit (MCM #1 and MCM #6).

Public education, for residents, businesses and contractors, is covered under part 4.1 of this SWMP. For education of City staff, see section 4.3.Q and 4.6 of this SWMP.

4.3.N Review/Update of IDDE Program

All MS4 Operators shall review their IDDE Program, at minimum, annually and update implementation procedures as necessary.

4.3.O Review/Update of IDDE Program for Existing Permittees

Existing permittees shall evaluate their current program to ensure that it is in compliance with this permit.

1. Any revisions to the ordinance or regulatory mechanism shall be complete in the first year of the permit cycle.

2. Maintain an updated map with the items listed above. Items not included in the current map must be added within the first 2 years of the permit cycle.

4.3.P The City of Joplin is not a new permittee, so 4.3P is not applicable.

4.3.Q IDDE Training Program for Field Staff

The MS4 Operator must develop and implement or maintain a training program for all municipal field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system.

Reviews of the training effectiveness shall be considered after municipal site inspections or after an illicit discharge incident occurs. If a certain department or facility did not perform the way they were trained, or if an issue arises that was not handled properly, the MS4 Operator should consider if the training is enough or is ineffective. The MS4 Operator shall consider ways to survey or test staff to see if the training is effective

The City of Joplin will provide Illicit Discharge training to all inspection staff and staff who may handle materials which may become an illicit discharge. Training may be conducted in person or using online resources.

1. Each applicable staff member will be trained at minimum within one year of being hired.
2. Applicable staff include:
    a. IDDE inspection staff;
    b. Building inspection staff;
    c. Fleet maintenance staff;
    d. Staff at facilities with fuel, chemicals, washing of vehicles or equipment;
    e. Road maintenance staff;
    f. Road salt/de-icing staff; and
    g. Parks, swimming pool, or golf course staff who encounter spills, equipment or vehicle washing, fueling, chemicals, etc.

Reviews of the training effectiveness will be considered after municipal site inspections or after an incident occurs. If a certain department or facility did not perform the way they were trained, or if an issue arises that was not handled properly, the City will consider if the training is enough or is ineffective.

Records of IDDE Training will be kept with other staff training records under section 4.6 of this SWMP. Reviews of training effectiveness will also be kept under section 4.6.

4.3.R Adaptive Management

Using adaptive management, the MS4 Operator shall review their IDDE Program, at minimum, annually and update implementation procedures as necessary. This data shall be used to continuously evaluate the effectiveness of each BMP and the implementation of each BMP. Any additional BMPs shall be acknowledged in the Stormwater Management Program report.

List any additional programmatic BMPs and when they were added to the Stormwater Management Program. (Examples of programmatic BMPs include: mapping of entire stormsewer system, adopting a standard operating procedure for dry weather screening, etc.)

Annual Review of MCM 3			
Year reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2026			
2027			
2028			
2029			
2030			

4.4 MCM 4. Construction Site Stormwater Runoff Control

Joplin has implemented and enforces a program to reduce pollutants in stormwater runoff to the MS4 from construction activities. The program regulates any site disturbing more than 5,000 square feet. Special attention is given to sites regulated under this MS4 Permit (those disturbing one or more acres of land, and sites that disturb less than one acre if the disturbance is part of a larger common plan of development or sale that would disturb one acre or more).

4.4.A Regulatory Mechanism

The MS4 Operator shall have a law, ordinance and/or other regulatory mechanism to require construction site runoff control BMPs at construction/land disturbance sites greater than or equal to one (1) acre or less than one acre if the construction activity is part of a larger common plan or development or sale that would disturb one acre or more. The mechanism shall include sanctions which are designed to ensure compliance, to the extent allowable under State, or local law.

The City of Joplin uses the combination of three items as the regulatory mechanism requiring appropriate erosion and sediment controls on construction sites. These items are the Erosion and Sediment Control ordinance, the Erosion and Sediment Control Guidelines (referenced in the ordinance), and the Stormwater Management Criteria Manual (Chapter 14). Under the ordinance, the City regulates sites that disturb 5,000 square feet or more, as well as those sites that disturb less than 5,000 square feet if the disturbance is part of a larger common plan of development or sale that would disturb one acre or more.

Each regulated site must apply for a Land Disturbance Permit from the City of Joplin. Sites covered under the MS4 regulatory requirement (those disturbing one or more acres of land, and sites that disturb less than one acre if the disturbance is part of a larger common plan of development or sale that would disturb one acre or more) must meet more stringent submittal and self-inspection requirements.

These three regulatory items accomplish the following:

- Lay out procedures for acquiring a Land Disturbance Permit;
- Establish legal authority for the City to inspect permitted construction sites;
- Establish legal authority for the City to enforce the regulations through denial of permit, stop-work orders, revocation of permit, and criminal charges, with associated fines and other penalties.

The ordinance can be found online at: https://www.joplinmo.org/documentcenter/view/70. Digital copies of the ESC Guidelines and the Stormwater Management Criteria manual are available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section.

4.4.B Pre-Construction Plan Review

The MS4 Operator shall review pre-construction plans.

The City of Joplin performs pre-construction plan review for developments covered under the Erosion and Sediment Control ordinance. Each of these projects must apply for a Land Disturbance Permit from the City. (A digital copy of the Permit application is available on the

City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. A copy is also included in Appendix MCM4.)

During pre-construction review process, the City, or its agent:

1. Evaluates threats to water quality, taking into account:
   a. Soil erosion potential;
   b. Site slope;
   c. Project size and type;
   d. Sensitivity of receiving waterbodies;
   e. Discharge flow type (pipe or sheet flow);
   f. Location of discharge point in relation to receiving water;
   g. Proximity of the site to receiving waterbodies; and
   h. Other factors relevant to the MS4 service area.
2. Utilizes a checklist to ensure consistency and completeness. This checklist is only required for sites regulated under the MS4 Permit. (A digital copy of the checklist is available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. A copy is also included in Appendix MCM4.)
3. Requires construction site operators to select, install, implement, and maintain appropriate stormwater control measures. This includes temporary BMPs throughout the life of the land disturbance, and permanent BMPs which remain on site as required by local codes and ordinances.
4. Considers ways to minimize disturbed areas through actions such as, phased construction requirements, temporary seeding or sodding, or erosion mats to exposed areas.
5. Requires construction site operators to control construction-site waste that may cause adverse impacts to water quality. (Trash, concrete wash-out, etc.)

The following City staff positions must sign off on all site plans before a permit can be issued:
Plans Reviewer,
Fire Marshal,
Public Works Plan Reviewer,
Planner from Planning and Community Development, and
Assistant Director from Health Department.

4.4.C Authority to Inspect and Enforce

The MS4 Operator shall establish authority for site inspections and enforcement of control measures. To the extent allowable by state, federal, and local law, all MS4 Operators shall implement procedures for inspecting construction/land disturbance projects.

The Erosion and Sediment Control ordinance establishes authority for site inspection and enforcement of control measures. The City has implemented procedures for inspecting construction/land disturbance projects.

The construction site runoff control program includes the following for all sites regulated under the MS4 permit.

1. Identification of priority sites for inspection based on nature of the construction activity, topography, disturbed area, and the characteristics of soils and sensitivity of, or proximity to, receiving water.
2. Construction site inspections include assessment of compliance with the City's Stormwater Regulations and other applicable ordinances.

3. The inspections evaluate any structure that functions to prevent pollution of, or remove pollutants from, stormwater. Inspectors use enforcement polices to require BMPs to be implemented and effective.
4. Final inspections (upon completion of the land disturbance and prior to final approval of construction project) ensure all disturbed areas have been stabilized and all temporary erosion and sediment control measures are removed.
5. The inspections conducted by the City's inspector are documented with a checklist. The checklist includes structural BMPs. A copy of the current inspection sheet is included in Appendix MCM 4.

4.4.D Enforcement Procedures

The construction site runoff control program shall include an established, escalating enforcement policy that clearly describes the action to be taken for violations. The program shall have written procedures to ensure compliance with the MS4 Operator's construction site runoff control regulatory mechanism. The MS4 Operator must have a minimum of two (2) enforcement actions.

Enforcement procedures for construction site runoff problems are laid out in the Erosion and Sediment Control ordinance. Procedures in the ordinance include: Stop-Work Orders, revocation of permit, fines, abatement of the problem by the City (or its agent), cost of abatement to be paid by violator, and possible criminal charges, as the situation requires. Appeal procedures are also included in the ordinance. (The full ordinance can be found online at: https://www.joplinmo.org/documentcenter/view/70. A short summary of enforcement procedures can be found in Appendix MCM 4.)

4.4.E Construction Site Self-Inspection Procedures

The MS4 Operator shall require the construction site operator to conduct inspections at minimum:

1. *Every fourteen (14) days, when construction is active.*
2. *Within 72 hours of any storm event, and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased.*

Checklists used for these inspections conducted by construction site operators shall either be submitted to the MS4 Operator, or the MS4 Operator shall verify that these inspections are being conducted by the construction site operator checklists during MS4 Operator inspections.

Construction sites covered under Joplin's Erosion and Sediment Control ordinance are divided into two different categories: those that are regulated under the MS4 Permit and those that are not. Sites in both categories are expected to perform self-inspections and maintenance to ensure no sediment leaves the site.

Each construction site regulated under the MS4 permit is also covered under the Missouri Land Disturbance Permit MO-RA00000. The state permit requires construction site operators to conduct inspections as listed above. When the City performs an inspection on a construction site, the City's inspectors check these self-inspection records. Construction site operator shall keep self-inspection records onsite for City review.

Note: The 2-year, 24-hour storm event for Joplin has a rainfall depth of 3.89 inches, according to NOAA's Atlas 14, Volume 8, Version 2.

4.4.F Inventory of Active Construction Sites

The MS4 Operator shall maintain an inventory of active public and private land disturbance sites, as defined in Section 4.4 of this permit. This may be supplemented with records such as a plan review checklist and email correspondence.

The City of Joplin maintains an inventory of active public and private land disturbance sites covered under the Joplin Land Disturbance Permit. The inventory is in the process of transitioning to electronic records kept on the City's sharefile network. Paper copies are often still kept at City Hall, when applicable, during the transition process.

Inventory information for each active site contains the following:
1. Relevant contact information for each project (e.g., tracking number, name, address, phone, etc.);
2. Size of the project/ area of disturbance;
3. If the site is a priority site/ how high of priority;

4.4.G Tracking of Oversight Inspections

The MS4 Operator shall track their oversight inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence. The MS4 Operator must make these inventories available to the Department upon request.

The City of Joplin tracks oversight inspections (from 4.4.E) by retaining copies of records of inspection checklists. These inventories are available to the Department upon request. Tracking contains:
1. Inspection dates and time;
2. Inspector name
3. Inspection findings; and,
4. Follow-up actions and dates, including corrective actions and enforcement actions.

4.4.H Review/Update of Construction Site Runoff Control Program for Existing Permittees

Review the Stormwater Management Program including ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements. Any changes necessary to be in compliance with this permit shall be completed within the first year of this permit issuance.

The inventory of active sites must be updated as new projects are reviewed and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within one (1) year of this permit issuance

4.4.I The City of Joplin is not a new permittee, so 4.4.I is not applicable.

4.4.J Public Comment About Land Disturbance Sites

The Stormwater Management Program must include procedures for the MS4 Operator to receive and consider information submitted by the public about land disturbance sites. This may be in combination with 4.2.D of this permit.

Construction plans are available for review by the public. Plans are kept, either in paper or electronic format, at the Public Works - Engineering Department, in City Hall. Any citizen of Joplin may view the plans by submitting an open records request with the City Clerk. Plans are also sometimes available by making an informal request at the Public Works – Engineering Department. Written comments can be submitted by mail or email to the Public Works Department. The Public Works Director is ultimately responsible for tracking and addressing comments, though this duty is often delegated to the Stormwater Engineer. Comments are tracked electronically or on paper by and are to be addressed by the City within 30 days of receipt.

4.4.K Training for Inspection Staff

The MS4 Operator shall provide, or support access to, construction site runoff control training for MS4 inspectors and plan reviewers at minimum once during this permit cycle. This education shall be tracked or documented.

The City of Joplin will provide construction site runoff control (including erosion and sediment control) training to all construction inspection staff and plan reviewers at least once during the permit cycle. Records of this training will be kept with other staff training records under section 4.6 of this SWMP. Reviews of training effectiveness will also be kept under section 4.6.

4.4.L Inspection Procedures

The MS4 Operator must provide written procedures outlining the local inspection and enforcement procedures to their inspectors to ensure consistency among the inspections.

For construction sites regulated under the MS4 permit, an oversight/erosion control inspection is performed by the City at minimum monthly. A checklist is used for these stormwater inspections, a copy of which is included in Appendix MCM 4. Completed inspection checklists are kept at City Hall.

The City has developed standard operating procedures for oversight/erosion control inspections. A copy of these procedures is included in Appendix MCM 4.

Enforcement procedures for construction site runoff problems are laid out in the Erosion and Sediment Control ordinance. Procedures in the ordinance include: Stop-Work Orders, revocation of permit, fines, abatement of the problem by the City (or its agent), cost of abatement to be paid by violator, and possible criminal charges, as the situation requires. Appeal procedures are also included in the ordinance. (The ordinance can be found online at: https://www.joplinmo.org/documentcenter/view/70.)

4.4.M Adaptive Management

Using adaptive management, all MS4 Operators shall review, at minimum annually, their Construction Site Stormwater Runoff Control Program and evaluate the ordinances, review procedures, inspection procedures, enforcement procedures, receipt of public information procedures, and effectiveness of training procedures to ensure compliance with these requirements and determine if changes are needed.

This annual review may include but is not limited to the follow.

1. *Evaluating the most common violations, how the violations are handled, how many are escalated;*
2. *If the education program can assist in reducing violations;*
3. *Determining if the site plans match the sites when violations arise or if additional items need to be evaluated at plan review;*
4. *Assessing public complaints being addressed in a timely manner; and*
5. *Evaluating if the inspections are thorough and consistent across different sites.*

Annual Review of MCM 4			
Year reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2026			
2027			
2028			
2029			
2030			

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

Joplin is in the process of updating its stormwater program to better address the water quality of long-term stormwater runoff from new development and redevelopment projects. Projects covered under this program are projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan or sale. The City currently uses its Stormwater Management Criteria Manual to require any such development project to obtain a Land Disturbance Permit, discussed below, before construction may begin. The City plans to ensure long term maintenance of water quality BMPs through adoption of an appropriate ordinance.

Once the updated regulatory mechanism is in place, the City's stormwater program will ensure that permanent controls have been designed and implemented to prevent or minimize water quality impacts.

4.5.A Regulatory Mechanism

The MS4 Operator shall maintain and utilize an ordinance(s) or other regulatory mechanism(s) to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law for sites equal to or greater than one acre including projects less than one acre that are part of a larger common plan of development or sale.

The City of Joplin uses a Stormwater Management Criteria manual as the regulatory mechanism requiring appropriate permanent controls to prevent or minimize long-term water quality impacts. The City regulates sites that disturb one or more acres of land, as well as those sites that disturb less than one acre if the disturbance is part of a larger common plan of development or sale that would disturb one acre or more. The Stormwater Management Criteria accomplishes the following:

- Lays out procedures for acquiring a Land Disturbance Permit, including guidance and requirements for permanent water quality BMPs; and
- Requires long-term maintenance of permanent BMPs.

Current City Code does not provide full authority for regular inspections or enforcement of maintenance. It only provides limited authority under the Environment portion of the Health Code (Chapter 54). In order to better ensure long term maintenance of water quality BMPs, the City plans to adopt an ordinance for Maintenance of Permanent Stormwater Controls. This ordinance will accomplish the following:

- Strengthen requirements for long-term maintenance of permanent BMPs, including a requirement for owner-performed annual inspections;
- Establish clear legal authority for the City to inspect permitted construction sites and long-term, permanent BMPs;
- Establish clear legal authority for the City to enforce the regulations through denial of permit, stop-work orders, revocation of permit, and criminal charges, with associated fines and other penalties.

A digital copy of the Stormwater Management Criteria manual is available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. The Environment portion of the City's Health Code (Chapter 54) can be found at

https://library.municode.com/mo/joplin/codes/code_of_ordinances?nodeId=PTIICOOR_CH54EN. A digital copy of the proposed ordinance for Maintenance of Permanent Stormwater Controls, once passed, will be made available online at a location to be determined.

4.5.B Minimization of Water Quality Impacts

The MS4 Operator shall continue or develop a strategy to minimize water quality impacts. This shall include a combination of structural and/or non-structural controls (BMPs) appropriate for the permittee's community.

1. Structural Controls:

   The Stormwater Management Criteria Manual contains provisions for structural stormwater controls. These structural controls include extended detention basins, grass swales, permeable surfaces, sand filter basins, and other structural BMPs. The Manual includes design standards and guidance for designing, installing, implementing, and maintaining stormwater control measures that are designed to infiltrate, evapotranspire, harvest, detain, retain, and/or reuse stormwater. Design standards in the Manual include regulation of site discharge volumes, rates, durations, and frequency for new development and redevelopment sites, with the intent to minimize the impact of stormwater runoff on water quality.

2. Non-Structural Controls:

   The Stormwater Management Criteria Manual, Zoning Regulations, and Comprehensive Plan contain guidelines and rules for non-structural stormwater controls. Through these mechanisms, the City has adopted preventative actions that involve management and source controls. Specific measures/policies/ include:
   - Policies and ordinances that provide requirements and standards to direct development to identified areas;
   - Protection of sensitive areas such as wetlands and riparian areas;
   - Maintain and/or increase open space (which may include a dedicated funding source for open space acquisition);
   - Encourage buffer zones along water bodies;
   - Minimization of disturbance of soils and vegetation;
   - Use of green infrastructure; and
   - Minimization of directly connected impervious areas.

4.5.C Pre-Construction Plan Review

Pre-construction plan review shall be conducted by the MS4 Operator to assess site characteristics at the beginning of the construction site design phase to ensure adequate planning for stormwater program compliance. The structural or non-structural controls chosen shall; protect sensitive areas, minimize the creation of stormwater pollution, and effectively reduce stormwater pollution. This can be achieved by reasonably mimicking pre-construction runoff conditions on all affected new development projects, or the permittee may achieve this goal through a method more appropriate for its community.

The City of Joplin performs pre-construction plan review for developments requiring a Land Disturbance Permit. This review is performed in conjunction with the review required under

MCM 4. During review, the City, or its agent, utilizes a checklist to ensure consistency and completeness. Non-structural BMPs (such as comprehensive plans, zoning ordinances, buffer strips, and/or maximization/preservation of open space) are evaluated first. (Copy of checklist included Appendix MCM 4.)

4.5.D Long-Term Maintenance of Permanent Stormwater BMPs

The MS4 Operator shall have ordinances or similar enforcement mechanisms to ensure adequate long-term operation and maintenance (O&M) of the selected BMPs, including, as appropriate, agreements between the MS4 Operator and other parties such as post-development landowners or regional authorities.

The City of Joplin currently uses its Stormwater Management Criteria manual as the regulatory mechanism requiring appropriate permanent controls to prevent or minimize long-term water quality impacts. The Manual lays out procedures for acquiring a Land Disturbance Permit, includes guidance and requirements for permanent water quality BMPs, and requires long-term maintenance of permanent BMPs.

Current City Code does not provide full authority for the City to perform regular inspections or enforcement of maintenance. It only provides limited authority for certain violations under the Environment portion of the Health Code (Chapter 54). In order to better ensure long term maintenance of water quality BMPs, the City plans to adopt an ordinance for Maintenance of Permanent Stormwater Controls. This ordinance will strengthen requirements long-term maintenance of permanent BMPs, require annual owner-performed inspections, establish full legal authority for the City to inspect permitted construction sites and long-term, permanent BMPs, and establish legal authority for the City to enforce the regulations. Enforcement procedures will include denial of permit, stop-work orders, revocation of permit, and criminal charges, with associated fines and other penalties.

Long-term O&M is addressed during the plan review and approval process. Copies of O&M information are to be retained by the party responsible for the post-construction BMP and by the City. Once the new ordinance for Maintenance of Permanent Stormwater Controls is in place, applicants for a Land Disturbance Permit will be required to submit a detailed Operation and Maintenance Plan for approval. The Plan must include the annual inspection and reporting requirements, as well as any routine and non-routine BMP maintenance procedures.

A digital copy of the Stormwater Management Criteria manual is available on the City's Stormwater website, https://www.joplinmo.org/900/Storm-Water-Section. The Environment portion of the City's Health Code (Chapter 54) can be found at https://library.municode.com/mo/joplin/codes/code_of_ordinances?nodeId=PTIICOOR_CH54EN. A digital copy of the proposed Ordinance, once passed, will be made available online at a location to be determined.

4.5.E Long-Term BMP Inspections

The MS4 Operator shall inspect, or require inspection of, each water quality structural and non-structural water post-construction BMP according to the following at minimum:

1. *A minimum of one (1) inspection shall be conducted during construction, and one (1) inspection before the site is finalized, to verify water quality facilities are built as designed*

and any applicable boundaries or practices for non-structural BMPs are being observed. This may be conducted in combination with MCM 4 inspections. (The MS4 inspector shall have access to the approved plans to ensure proper installation.)

2. *A minimum of once in the first three years after the installation, by the MS4 Operator.*
3. *Annually by the owner or operator of the post-construction BMP, or by the MS4 Operator. If completed by the BMP owner or operator, this inspection report shall be submitted to the MS4 Operator for evaluation and review.*
4. *The MS4 Operator shall inspect a minimum of 60% of all water quality post-construction BMPs within the five year permit cycle. This must include installations with ongoing or open enforcement issues.*

The City of Joplin has already implemented items 1 and 2 above and will be implementing items 3 and 4 throughout this permit cycle.

For item 3 above, annual inspections will primarily be completed by the owner of the BMP. The City is currently developing a reporting process that will include submission of an Annual Inspection & Maintenance Report, accompanied by any pertinent inspection checklists, maintenance logs, and photographs. Completed reports will be kept as records of inspection by both the owner and the City.

For item 4 above, the City will perform oversight inspections for a minimum of 60% of the permanent BMPs within the permit cycle, with the first inspection of a new project occurring within 3 years of completion of construction. Inspection checklists for each type of BMP have been developed. Completed checklists will be kept as records of the oversight inspections. If an inspection results in any warnings given or other corrective actions, records of those actions will also be kept by the City. Copies of the BMP inspection checklists are included in Appendix MCM 5.

4.5.F Enforcement Procedures

The MS4 Operator must maintain a plan designed to ensure compliance with the MS4's post-construction water quality regulatory mechanism. This plan shall include escalating enforcement mechanisms the MS4 Operator will use to ensure compliance.

The MS4 Operator must have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.

Current City Code does not currently provide full authority for regular inspections, enforcement of maintenance. It also does not require annual owner-performed inspections for permanent BMPs. Current City Code only provides limited authority for certain violations under the Environment portion of the Health Code (Chapter 54). In order to better ensure long term maintenance of water quality BMPs, the City plans to adopt an ordinance for Maintenance of Permanent Stormwater Controls. This ordinance will require annual, owner-performed inspections and establish legal authority for the City to enforce the regulations through notices of violation and criminal charges, with associated fines and other penalties. The ordinance will allow the City to perform maintenance work at the owner's expense, if necessary. Appeal procedures will also be included in the ordinance. (The Environment portion of the City's Health Code (Chapter 54) can be found at: https://library.municode.com/mo/joplin/codes/code_of_ordinances?nodeId=PTIICOOR_CH54EN.)

Specific procedures for enforcement will be laid out in the proposed Ordinance. The range of enforcement actions available to the City will allow it to address the variability and severity of the noncompliance. Any enforcement response by the City takes into account the:

1. Degree and duration of the violation;
2. Effect the violation has on the receiving water;
3. Compliance history of the post-construction BMP owner or operator; and
4. Cooperation of the owner or operator with compliance efforts.

The enforcement procedures may start with verbal notice, and education regarding the BMP, before continuing to the Notice of Violation. Enforcement actions will begin within 30 days of discovery of the violation.

4.5.G Enforcement Timeline

Enforcement actions shall be timely in order to ensure the actions are effective. The MS4 Operator shall begin enforcement actions within thirty (30) days of discovering a violation.

Specific procedures for enforcement, including timelines, will be laid out in the proposed ordinance for Maintenance of Permanent Stormwater Controls. The enforcement procedures may start with verbal notice, and education regarding the BMP, before continuing to the Notice of Violation stage, but the actions will begin within 30 days of discovery of the violation.

4.5.H Inventory of BMPs

The MS4 Operator shall maintain an inventory tracking the water quality post-construction BMPs. This inventory must contain, at a minimum:

1. Relevant contact information for the responsible person(s) or entity (e.g., tracking number, name, address, phone, etc.);
2. The type of post-construction BMP;
3. Applicable operations and maintenance documents;
4. Date the MS4 Operator approved the construction site plan; and,
5. If the water quality facility is owned or operated by the MS4, the tracking shall also include any maintenance, such as sediment clean-out or replanting.

The City of Joplin has an inventory of permanent stormwater BMPs, which are mapped in GIS. The mapping is available on the City's GIS website, https://joplingis.org/joplincity/. The inventory is updated as new facilities are added and projects are completed.

4.5.I Tracking Post-Construction BMP Inspections

The MS4 Operator shall also track the post-construction BMP inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence. The MS4 Operator must make these inventories available to the Department upon request. The tracking must contain at a minimum:

1. *Inspection dates and time;*
2. *Inspector name;*
3. *Inspection findings; and*
4. *Follow up actions and dates, including corrective actions and enforcement actions.*

The City of Joplin currently tracks oversight inspections by keeping completed inspection checklists on file at City Hall. This will continue as the City updates the Post-Construction BMP Inspection Program as discussed in 4.5.E (item4).

The proposed ordinance for Maintenance of Permanent Stormwater Controls will require owners to submit an Annual Inspection & Maintenance Report, accompanied by any pertinent inspection checklists, maintenance logs, and photographs. These items will be kept on file by the City to track the required annual BMP inspections (4.5.E item 3).

4.5.J Review/Update of Post-Construction BMP Program for Existing Permittees

Evaluate the ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements and determine if changes are needed. Any changes necessary to be in compliance with this permit shall be completed within the first two (2) years of permit issuance.
The inventory of water quality facilities must be updated as new facilities are added and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within two (2) years of this permit issuance.

The City of Joplin will develop and begin implementation of the missing items from 4.5.A, 4.5.D, 4.5.E, 4.5.F, 4.5.G, and 4.5.I above, by September 2027.

4.5.K The City of Joplin is not a new permittee, so 4.5.K is not applicable.

4.5.L Training for Inspection Staff

The MS4 Operator shall provide appropriate training for MS4 inspectors at minimum once every permit cycle. This may include Green Infrastructure training, or specific operation of proprietary post-construction BMPs. The MS4 shall provide overall training to explain the function of both structural and non-structural post-construction water quality BMPs.

The City of Joplin provides post-construction BMP inspection training to all relevant inspection staff at least once during the permit cycle. Records of this training will be kept with other staff training records under section 4.6 of this SWMP. Reviews of training effectiveness will also be kept under section 4.6.

4.5.M Adaptive Management

Using adaptive management, all MS4 Operators shall review, at minimum annually, their Post-Construction Site Stormwater Management in New Development and Redevelopment Program and evaluate effectiveness of the overall program and determine if changes are needed.

This annual review may include but is not limited to the following.
1. *Reviewing the number and types of developments;*
2. *How many BMPs were installed/inspected;*
3. *The amount of watershed area being treated;*
4. *The types of violations found and how frequently; and*
5. *Evaluating how education could improve the effectiveness of the program.*

Any additional programmatic BMPs shall be acknowledged in the Stormwater Management Program Report. (Examples of programmatic BMPs include; educational meetings with HOAs, onsite educational visits, adopting a standard operating procedure for enforcement measures.)

Annual Review of MCM 5			
Year reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2026			
2027			
2028			
2029			
2030			

4.6. MCM 6. Pollution Prevention/Good Housekeeping for Municipal Operations

The City of Joplin has developed a municipal Operation and Maintenance (O&M) Program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

4.6.A Employee Training Program

The MS4 Operator shall maintain and utilize an employee training program for MS4 municipal operations staff. The training shall be given at minimum annually to all MS4 staff who work with material handling, at MS4-owned or -operated vehicle/equipment maintenance areas, storage yards, and material storage facilities. This may be broken up into staff units, or by applicable topics.

The City of Joplin will modify its current training program and schedule to meet the requirements of the new MS4 permit. See updated Training Program Schedule below.

Training Program Record			
Staff & Department	Date	Topic(s)	Training Provider/Method

Training Program Record (cont.)			
Staff & Department	Date	Topic(s)	Training Provider/Method

Stormwater Program Training Schedule

1. In-Depth Training for Pollution Prevention/Good Housekeeping (PPGH) – MCM6
    a. Frequency: ANNUAL
    b. Topics: See table in section 4.6.B.
    c. Applicable Staff :
        i. Building maintenance/custodial staff
        ii. Fleet maintenance staff;
        iii. Staff at facilities with fuel, chemicals, washing of vehicles or equipment;
        iv. Road maintenance staff;
        v. Road salt/de-icing staff; and
        vi. Parks, swimming pool, or golf course staff who encounter spills, equipment or vehicle washing, fueling, chemicals, etc.

2. General Training for Pollution Prevention/Good Housekeeping – MCM6
    a. Frequency:
        i. Existing Employees: Initial training
        ii. New Employees: Within one year of being hired
        iii. Additional training as needed.
    b. Applicable Staff: All employees not listed in number 1 above.

3. Illicit Discharge Detention and Elimination (IDDE) Training – MCM3
    a. Frequency:
        i. Existing Employees: Initial training
        ii. New Employees: Within one year of being hired
    b. Applicable staff include:
        i. IDDE inspection staff;
        ii. Building inspection staff;
        iii. Construction inspection staff;
        iv. Fleet maintenance staff;
        v. Staff at facilities with fuel, chemicals, washing of vehicles or equipment;
        vi. Road maintenance staff;
        vii. Road salt/de-icing staff; and
        viii. Parks, swimming pool, or golf course staff who encounter spills, equipment or vehicle washing, fueling, chemicals, etc.
        ix. Police

4. Training for Construction Site Runoff Control & Post-Construction Stormwater Management – MCM4 & MCM5
    a. Frequency: Once per permit cycle (Sept 2026-August 2031)
    b. Applicable staff include:
        i. Construction Inspection staff;
        ii. Inspection staff for Long-Term BMP inspections

4.6.B Minimum Topics Covered

The training shall be used to prevent and reduce stormwater pollution.
The training shall cover a minimum of the following topics/ activities (if applicable to the MS4):

The table below provides a breakdown of topics to be covered in the In-Depth Training for PPGH and the IDDE Training (#1 & #3 of the updated Training Program Schedule). As training is provided, records will be kept in the table.

Training Program – Minimum Topic Breakdown			
Topic	Years covered in training	Departments or Teams trained	Number of staff trained
1. Vehicle and equipment washing			
2. Fluid disposal and spills			
3. Fleet, equipment, and building maintenance			
4. Park and open space maintenance procedures (including fertilizer, herbicide, pesticide application)			
5. New construction, road maintenance, and land disturbances			
6. Stormwater system maintenance			
7. MS4 operated salt and de-icing operations			
8. Fueling			
9. Solid waste disposal			
10. Street sweeper operations			
11. Illicit Discharges			

4.6.C Training Materials & Procedures

The MS4 Operator shall:

1. *Maintain material to use in the training program, such as those available from the EPA, the state, or other organizations.*
2. *Maintain written procedures for the training program. Include a description of how this training will coordinate with all other minimum control measures (such as Illicit Discharge), monitoring and TMDL implementations where applicable.*
3. *Maintain a written schedule to offer topic specific training when it is appropriate. Such as, swimming pool discharges in the summer, leaf disposal in the fall, proper salt clean-up and usage in the winter.*

The City of Joplin is in the process of updating its current training program and schedule to meet the requirements of the new MS4 permit. Training will be provided either in-person or by electronic methods. Training materials will be identified and then recorded for use again in the future. Coordination with other MCMs is shown in the updated Training Program Schedule above. Seasonally appropriate topics for employees may be covered through email, electronic, or in-person training, as deemed necessary.

4.6.D List of Municipal Operations/Facilities

The MS4 Operator shall maintain a list of all municipal operations/facilities that are impacted by this operation and maintenance program.

A list of municipal operations and facilities that are impacted by the O&M program is included in Appendix MCM 6.

4.6.E List of Industrial Facilities Owned and/or Operated by the City

The MS4 Operator shall maintain a list of industrial facilities the MS4 Operator owns or operates which are subject to NPDES permits for discharges of stormwater associated with industrial activity. The list shall include the permit number or a copy of the No Exposure Exemption Certification (if applicable) for each facility.
This includes Municipal projects with a land disturbance permit, wastewater facilities, airports, etc.
NPDES permitted facilities not owned or operated by the permittee are not required to be part of the list, however the MS4 Operator should be familiar with all such facilities in their MS4 service area as they may signify a priority area for the IDDE program.

The following are industrial facilities owned and/or operated by City of Joplin.

- Joplin Public Drinking Water system – MDNR MO-5010138
- Turkey Creek Wastewater Treatment Facility – MDNR MO-0103349
- Shoal Creek Wastewater Treatment Facility – MDNR MO-0023256
- Joplin Regional Airport – MDNR MO-R80F046
- Joplin Municipal Landfill (closed 1990) – MDNR MO-108731
- Public Works Facility (fleet maintenance) – No Exposure Certificate
- Composting site –No Exposure Certificate

4.6.F Controls for Reducing or Eliminating Floatables and Pollutant Discharge

The MS4 Operator shall develop or maintain controls for reducing or eliminating the discharge of floatables and pollutants from municipal facilities listed in Section 4.6.D and 4.6.E.

The City of Joplin is continuing to develop individual SWPPPs for each municipal facility (or type of facility) that is likely to be a source of stormwater pollution. Some are complete and others are still in the development process. A copy of the relevant SWPPP will be kept onsite at each applicable facility when possible. Otherwise, it will be kept at the department in charge of said facility.

Each of these SWPPPs will include the following:

1. A list of potential pollutant sources at each facility, such as materials used and stored on site.
2. Minimum of annual inspections of all municipally owned or operated facilities for stormwater issues are to begin once checklists are developed for each facility.
    a. Records will be kept for inspections and follow-up. This will mostly be checklists, once they are developed.
3. Use of structural controls/BMPs to reduce or prevent pollutants from entering waters of the state or into another MS4 where needed.
    a. A map with descriptions of these BMPs will be maintained for each facility, once it is developed.
4. All paints, solvents, petroleum products, and petroleum waste products (except fuels) under the control of the City are stored so these materials are not exposed to stormwater.
5. Sufficient practices of spill prevention, control, and/or management are provided to prevent any spill of these pollutants from entering waters of the state;
    a. This includes spill kits when liquid product is stored at a facility; and
    b. Any containment system used to implement this requirement is constructed of materials compatible with the substances contained and also prevents the contamination of groundwater.
6. Tracking of rock salt/brine or other deicer usage.
7. Maintaining municipal salt storage area(s) after use of rock salt, at minimum:
    a. Sweep and/or shovel spillage in loading area and storage area, and
    b. Unload salt hoppers or keep under cover when salt is in the hopper.

By the end of the first year of this permit cycle, September 2027, the City of Joplin will finish developing the following items:

- SWPPP or each municipal facility (or type of facility) listed under section 4.6.D;
- Inspection Checklists for each municipal facility listed under section 4.6.D; and
- Maps of BMPs at each municipal facility listed under section 4.6.D.

4.6.G Procedures for Proper Disposal of Waste

The MS4 Operator shall have procedures for proper disposal of waste removed from the MS4 structures and areas of jurisdiction. This waste, shall include at minimum, if applicable to the permittee:

1. Street sweeper spoils and washout;
2. Accumulated sediment;

3. *Dredged materials;*
4. *Floatables, trash and litter;*
5. *Leaves, other organic matter; and*
6. *Other debris.*

The above topics will be included in the SWPPPs that are discussed under 4.6.F above. A copy of the relevant SWPPP will be kept onsite at each facility when possible. Otherwise, it will be kept at the department in charge of said facility.

4.6.H Washing of Municipal Vehicles and Equipment

The MS4 Operator shall maintain and utilize the following procedures, at minimum, for the washing of all municipal vehicles and equipment (if applicable to the MS4):

1. *Use of any soap or detergent shall only be where there is connection to sanitary sewer or equivalent treatment; and*
2. *Any wash or rinse water that contains pollutants such as salt, oils, grease, sediment, grass clippings, lawn chemicals, or pesticides shall not be discharged to waters of the state or the MS4 system without appropriate treatment.*
3. *Any washing or rinsing activities shall be conducted in an appropriate area so the water is treated. This area(s) shall be marked on the map of the facility.*

Vehicle washing will be addressed in the SWPPPs that are discussed under 4.6.F above. A copy of the relevant SWPPP will be kept onsite at each facility when possible. Otherwise, it will be kept at the department in charge of said facility.

4.6.I Written Controls, Procedures, Inspection Schedules, Tracking, Annual Review

The MS4 Operator shall maintain written explanation of the controls, procedures, inspection schedules, and explanation of tracking of these controls. Tracking may be done by retaining inspection reports or checklists. Individual Stormwater Pollution Prevention Plans (SWPPP) or one overarching Operations and Maintenance Manual (O&M Manual) for all applicable MS4 facilities may be used to comply with this requirement.

Annually, the MS4 Operator shall evaluate the results, controls, and inspection procedures to ensure compliance with these requirements and determine if changes are needed. This evaluation may also aid in finding priority areas or pollutants in relation to MCM 3, or adding more education in relation to MCM 1.

The City of Joplin is continuing to develop individual SWPPPs for each municipal facility (or type of facility) that is likely to be a source of stormwater pollution. Some are complete and others are still in the development process. A copy of the relevant SWPPP will be kept onsite at each facility when possible. Otherwise, it will be kept at the department in charge of said facility.

The SWPPPs contain, or will contain, written explanations of controls and procedures, as well as inspection checklists. These items will be completed by end of the first year of this permit cycle, September 2027. Initial inspections of all facilities will be conducted as that facility's SWPPP is completed. After that, inspections will continue at minimum annually throughout the permit period. Tracking will be accomplished by retaining inspection checklists.

The City will perform an annual review of the Pollution Prevention/Good Housekeeping Program to ensure MS4 compliance and determine if changes are needed. This review will take place during the preparation of the annual MS4 Stormwater Report.

Annual reviews will be recorded in the following table.

Annual Reviews of Facility Inspections				
Date(s) of review	Location(s) inspected	Were issues found?	Were changes made?	Is follow-up needed?

4.6.J Flood Management Projects

The MS4 Operator shall maintain procedures to determine if there are impacts to water quality for new flood management projects, if applicable. Any flood management projects shall require the protection of water quality in the standards that are used to plan, design, build, and maintain stormwater infrastructure. Flood management projects are those projects developed or designed to reduce flooding.

The City of Joplin assesses stormwater management projects for water quality impacts, both for development and re-development. Impacts are assessed according to the City's Stormwater Management Criteria manual, which addresses the water quality requirements under MCM 5. Flood management projects involving channel modification may also be assessed for aquatic and water quality impacts through the Corps of Engineers 404 permit and MDNR 401 water quality certification process, where applicable.

Flood management projects in the Plan Area can include: regional stormwater control (retention basins, detention basins); flood control levees and associated pump stations; storm water drainage conveyance capacity improvements; projects involving land buyouts; and designated uses of floodplain land.

Have there been any such flood management projects to review?		
Year	Yes/no	If yes, the location(s)
2026		
2027		
2028		
2029		
2030		

4.6.K Review/Update of Pollution Prevention/Good Housekeeping Program for Existing Permittees

Existing permittees: Shall evaluate the current Stormwater Management Program including training, inspection procedures, and other municipal operation procedures to ensure compliance with these requirements. Any changes necessary to be in compliance with this permit shall be completed within one (1) year of this permit issuance.

The City of Joplin is in the process of updating the items from 4.6.A and 4.6.C and will have them developed and implemented by the end of 2026. The missing items from 4.6.F, G, H, and I will be developed and begin implementation by end of the first year of this permit cycle, September 2027.

4.6.L The City of Joplin is not a new permittee, so 4.6.L is not applicable.

4.6.M Adaptive Management

Using adaptive management, all MS4 Operators shall review their Municipal Operations Program, at minimum, annually and update implementation procedures as necessary within the permit requirement.

Any additional programmatic BMPs shall be acknowledged in the Stormwater Management Program Report. (Examples of programmatic BMPs include: new training program, adopting a standard operating procedure for equipment cleaning, etc.)

Additional programmatic BMPs for the PPGH Program	
Date Added	Programmatic BMP Added – with Brief Description

Annual Review of MCM 6			
Year reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2026			
2027			
2028			
2029			
2030			

Part 5 – Monitoring, Recordkeeping, and Reporting

5.2 Recordkeeping

All records required by this permit may be maintained electronically, as long as they are accessible upon request by the Department. If a non-electronic version is kept, the permittee shall retain the most recent versions of the records and shall be accessible to the Department upon request.

5.3 MS4 Stormwater Management Program Report

A. *A report to the Department on the status of the MS4's program is **due annually on** or before **February 28th**. This report shall cover the previous year from **January 1st to December 31st**. The report shall be submitted on the Department approved, MS4 Stormwater Management Program Report form. If approved by the Department, permittees may submit the MS4 Stormwater Management Program Report using an alternative report format.*

B. *The annual reports must be submitted through the eDMR system. This is accessible through the Missouri Gateway for Environmental Management (MoGEM): https://dnr.mo.gov/mogem/*

Which City Staff have access to the eDMR system?	
NAME	Role in the eDMR system
Dan Johnson	Organization Official
Jeremy Hagerman	Organization Official
Sarah Simon (Allgeier Martin)	Preparer
Tucker Haynes	Preparer
Sared Cifuentes	Certifier
Steven Martinez	Certifier

Part 6 – Special Conditions for Total Maximum Daily Loads

6.1 MS4s Subject to Total Maximum Daily Loads (TMDL)

6.1.A MS4s Subject to Wasteload Allocation (WLA)

Any regulated MS4 identified in an EPA approved or established TMDL with an applicable Wasteload Allocation (WLA) shall implement steps toward the attainment of applicable WLAs in accordance with 40 CFR 122.44(k)(2) and (3).

6.2.B TMDL Assumptions and Requirement Attainment Plan (ARAP)

The MS4 Operator shall develop a TMDL ARAP to address the TMDL's assumptions and requirements where applicable.

The City of Joplin is subject to the 2022 TMDL for Center Creek, with a single, aggregated Wasteload Allocation number assigned collectively to all MS4s in the watershed. However, the Missouri Department of Natural Resources has determined that this TMDL **does not** trigger the MS4 ARAP requirement. In an email sent on February 6, 2025, Aaron Nickolotsky (Stormwater Coordinator for the Water Protection Program/Water Pollution Control Branch) stated:

> *"… the Center Creek, Bens Branch, and Center Creek Tributary TMDL does not trigger the ARAP requirement found in MS4 permits due to the following language that is included in the Approved TMDL: "The permit conditions of the MS4 contain BMPs that are designed to reduce pollutant loads to the maximum extent practicable. The WLA for the MS4 is therefore set at current conditions plus inclusion of the BMPs."*

So, the City of Joplin does not need to prepare an ARAP or submit annual ARAP reports.

APPENDIX **MCM 1**

PUBLIC EDUCATION & OUTREACH

SUPPORTING DOCUMENTS

This space reserved, as needed, for documentation of Public Education activities listed in Table MCM 1.

APPENDIX **MCM 2**

PUBLIC PARTICIPATION

SUPPORTING DOCUMENTS

This space reserved, as needed, for documentation of Public Participation activities.

This documentation includes, but is not limited to:

- Proof of public notice period dates.
    - Receipts for newspaper postings,
    - Dated screenshots of website postings,
    - etc.
- Proof of annual update to City Council.
    - Copy of agenda, etc.

APPENDIX **MCM 3**

ILLICIT DISCHARGE DETECTION & ELIMINATION

CHECKLISTS AND SUPPORTING DOCUMENTS

Illicit Discharge Inspection Field Sheet

Section 1: Background Data

Outfall ID:		
Today's date:		Time:
Investigator(s):		Form completed by:
Temperature (°F):	Rainfall (in.): Last 24 hours:	Last 48 hours:
Camera:		Photo #s:
Notes (e.g., origin of outfall, if known):		

Section 2: Outfall Description

LOCATION	MATERIAL	CROSS-SECTION (SHAPE)		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ Concrete ☐ Corrugated Metal ☐ Plastic ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open channel**	☐ Concrete ☐ Earthen ☐ Rip-Rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
Flow Present?	☐ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	Stop watch
☐Flow #2	Flow depth		In	Tape measure
	Flow width	_____' (Top) _____" (Bottom)	Ft	Tape measure
	Measured length	_____' _____"	Ft	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Illicit Discharge Inspection Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables - Does Not include trash	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☐ No
2.	If yes, collected from:	☐ Flow	☐ Pool

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

SIGNIFICANT INDUSTRIAL USER (SIU) INSPECTIONS
2026

INDUSTRY NAME	COMPLETED INSPECTION DATE	FUTURE INSPECTION DATE
JASPER PRODUCTS	Thursday, April 10, 2025	Wednesday, April 8, 2026
AJINOMOTO WINDSOR	Thursday, May 22, 2025	Wednesday, May 20, 2026
MERCY HOSPITAL	Wednesday, June 4, 2025	Thursday, June 4, 2026
MAPP #1	Tuesday, June 10, 2025	Wednesday, June 10, 2026
LOZIER	Wednesday, June 11, 2025	Thursday, June 11, 2026
PROTEIN SOLUTIONS	Wednesday, June 18, 2025	Thursday, June 18, 2026
AUTOTRONICS	Tuesday, August 19, 2025	Wednesday, August 19, 2026
EAGLE-PICHER C STREET	Wednesday, August 27, 2025	Thursday, August 27, 2026
DUCOMMON	Wednesday, September 3, 2025	Thursday, September 3, 2026
MODINE	Wednesday, September 17, 2025	Thursday, September 17, 2026
GILSTER MARY-LEE	Friday, October 24, 2025	Thursday, October 22, 2026
REFRESCO/CLIFFSTAR	Thursday, November 13, 2025	Wednesday, November 11, 2026
INTERNATIONAL PAPER	Wednesday, November 19, 2025	Thursday, November 19, 2026
GENERAL MILLS	Friday, November 21, 2025	Wednesday, November 18, 2026
TAMKO HIGH STREET	Monday, December 8, 2025	Wednesday, December 2, 2026
TAMKO RANGELINE	Wednesday, December 10, 2025	Thursday, December 10, 2026
HEARTLAND PET FOOD MFG.	Wednesday, December 10, 2025	Thursday, December 10, 2026

ALL PERMITTED INDUSTRIAL USERS (IU)
2026

INDUSTRY NAME
ABLE BODY CORP
AJINOMOTO WINDSOR, INC.
AMCOR
ARROW BOX CO.
AUTOTRONICS
CLEAN THE UNIFORM
DARLINGTON SNACKS
DUCOMMUN
EAGLEPICHER - COUPLES
FOODLINER
FREEMAN HOSPITAL - EAST
FREEMAN HOSPITAL - WEST
GENERAL MILLS
GILSTER MARY LEE
HEARTLAND PET FOOD
INTERNATIONAL PAPER
JASPER PRODUCTS
LOZIER
MAPP TECHNOLOGIES
MERCY HOSPITAL OUTFALL
MODINE
PETRO
PROTEIN SOLUTIONS
RED COLLAR PET/SUNSHINE MILLS, INC.
REFRESCO/ CLIFFSTAR
SCHAEFFLER GROUP
TAMKO-HIGH ST
TAMKO-NEWMAN RD
WESTROCK

NEW PERMITTEES
2026 (UP TO DATE)

INDUSTRY NAME
EAGLEPICHER - ENERGETICS
PILOT 669 - FLYING J
PILOT 317

CITY OF JOPLIN
INDUSTRIAL FACILITY INSPECTION REPORT

1. Company:
2. Premise Address:
3. Category:
4. Inspection Contact Person(s):
5. Title:
6. Phone: Inspection Date:
7. Time of Inspection: From To
8. Last Inspection: Inspector:
   Type of Inspection:
9. Shifts Worked and Times:
10. Days Per Week: Is Production Seasonal?
11. Total Number of Employees:
12. Scheduled Shutdowns:
13. SIC Codes(s):
14. Nature of Operation:
15. Products Produced:
16. Raw Materials:
17. Manufacturing Processes:
18. Are Major Processes Batch or Continuous?

CITY OF JOPLIN
INDUSTRIAL FACILITY INSPECTION REPORT

19. Within the Past Twelve (12) Months, Have There Been Any Changes In Processes or Raw Materials?

20. Within the Past Twelve (12) Months, Have There Been Any Changes In the Types of Products Produced?

21. Within the Past Twelve (12) Months, Have There Been Any Changes In Wastewater Quality or Quantity?

22. Is Any Water Used For Cooling? What Does the Water Cool?

23. Contact CW? Non-Contact? Once-Through? Recirculated?

24. Is the Water Conditioned or Treated?

25. What Contaminants May Be Present?

26. Any Cooling Towers? Capacity (Tons):

27. Frequency and Volume of Blow down

28. Discharged To:

29. Is Any Water Used In Boilers? Type:

30. Is the Water Conditioned or Treated?

31. What Contaminants May Be Present?

32. Frequency and Volume of Blow down?

33. Discharged To:

34. Is There Any Water Used In Air Pollution Control Devices?

CITY OF JOPLIN
INDUSTRIAL FACILITY INSPECTION REPORT

35. Type:

36. What Contaminants May Be Present?

37. Discharge To:

38. Are There Any Oil or Grease Traps?

39. Food Wastes? Petroleum Wastes?

40. Frequency of Cleaning: Cleaning Logs?

41. How Is the Oil/Grease Disposed?

42. List the Waste streams Discharging To the City Sewer:

43. Number of Outfalls:

44. Sampling Location(s):

45. Are Any Solvents Used?

46. What Are They Used For?

47. Does the Company Have A Solvent Management Plan?

48. Are Any Infectious Materials Handled?

49. How Is the Waste Disposed?

50. Are Any Radioactive Materials Handled?

51. How is the Waste Disposed?

53. Are There Any X-Ray, Photo or Film Processing Operations?

CITY OF JOPLIN
INDUSTRIAL FACILITY INSPECTION REPORT

54. Silver Recovery Units?

55. Discharged To:

56. Are There Any Wastes Generated Which Are Not Disposed To Sewer?

57. Does the Company Have Any Underground Storage Tanks?

58. What Do They Contain?

59. Have There Been Any Known Leaks From These Tanks?

60. Does the Company Have Any Above Ground Storage Tanks?

61. What Do They Contain?

62. Have There Been Any Known Leaks From These Tanks?

63. How Is the Accumulated Stormwater Disposed?

64. Could Spills or Leaks of Stored Chemicals or Wastes Easily Reach Sanitary Sewers?

65. Does the Company Have a Written Spill Prevention/Slug Discharge Control Plan?

66. Is There a Copy in the City's File?

67. Are Emergency Notification Procedures Posted?

68. Are City Contacts Listed?

69. Last City Actions:

    Sample:
    Violation:
    Enforcement:

70. Has the Problem Been Resolved?

71. Is Any Wastewater Subject To Categorical Pretreatment Standards?

72. Sampling Points:

73. Is the Combined Waste stream Formula (CWF) Applicable?

CITY OF JOPLIN
INDUSTRIAL FACILITY INSPECTION REPORT

74. Is Any Water Subject To Production-Based Standards?

75. Is the Company Required to Self-Monitor Any of Their Discharges?

76. Is Requirement Contained In Permit?

77. Have the Reports Been On-Time and Complete?

78. Is the Company Collecting the Appropriate Type of Sample (Grab or composite?) For Each Pollutant Monitored?

79. Is the Company Using 40 CFR Part 136 Methods For All Reportable Analysis?

80. Does the Company Employ Continuous Monitoring Techniques For pH?

81. Is the Company Submitting the Results of All Reportable Monitoring?

82. Can Flow Be Measured at the Sampling Location?

83. Measuring Device:

84. Is the Company Maintaining Adequate Records?

85. Is the Company Under Any Type of Environmental Enforcement Orders?

86. Does the Company Have Any Discharges Subject to NPDES Permitting?

87. Are There Any Planned Changes to the Facility That Will Affect the Wastewater?

88. Does the Facility Pretreat Its Process Wastewater before Discharge to the POTW?

89. Type:

90. Date Originally Installed: Design Flow: Actual Flow:

91. Is Treatment Batch or Continuous?

92. Hours/Day Operated: Days/Week Operated:

93. FTE Needed to Operate:

CITY OF JOPLIN
INDUSTRIAL FACILITY INSPECTION REPORT

94. Overall Condition:

95. Has the Facility Experienced Any Operational or Upset Problems since Last? Inspection?

96. Is There Any Sludge Generated At This Facility?

97. Sludge Dewatering Method:

98. Amount Generated: Moisture Content:

99. Disposal Method: Storage:

100. Shipping Frequency: Hazardous?

101. Haulers:

102. Disposal Location:

103. Chemical/Waste Storage Areas:

104. Hazardous Waste Storage:

Stormwater Section

105. Where does Stormwater Runoff to (stormwater ditch or drain, stormwater pond, etc.)?

106. Does the Facility have a Stormwater Permit?

107. Does the Facility have a Stormwater Pollution Prevention Plan?

108. Can anything other than what is contained in normal Stormwater runoff (dirt, gravel, yard debris) enter the storm drains? Examples would be waste from production, trash, chemicals, etc.?

109. Does the facility sample stormwater? If so, how often?

CITY OF JOPLIN
INDUSTRIAL FACILITY INSPECTION REPORT

INSPECTION RESULTS

110. Pass: Fail: Other:

111: Has Facility Complied With Their Permit?

112: Recommended Action(s) By the City:

JOPLIN

PUBLIC WORKS

Standard Operating Procedures for Field Response to Spills & Reports of Illicit Discharge

March 2023

Standard Operating Procedures
For
Field Response
to Spills & Reports of Illicit Discharge

In-Office Activities:

1) Gather pertinent information:
   - Responsible Party - name, title, Phone #, location.
   - Complainant - name, title, Phone #, location.
   - Water body, incident location, suspected source.
   - Details of what happened & when.
   - Contact info for Environmental Response
     - Fire Department – 417-623-0403 (non-emergency #)
     - MDNR Environmental Emergency Response 573-638-2436 (Must report if there is contamination of Waters of the State, a fish kill, or a fuel spill of more than 50 gallons.)

2) Gather Equipment:
   - Spill response kit (sampling equipment-bottles, equipment, gloves, chain of custody, SOP etc…)
   - Phone,
   - Camera,
   - GPS,
   - Boots/ waders / field gear,
   - Copy of name/numbers of people that you may need to contact.

On-Site Activities:

NOTE: Do not touch the discharge unless you know it is safe.

1) Determine leading edge of discharge in order to evaluate extent of damage.

2) Locate source and work to get discharge stopped (if applicable). Use "Tracing the Source" procedures found on page 17 of the Field Investigation Guide for Illicit Discharge Detection & Elimination.

3) Require mitigation activities as needed such as dams, diversions, booms, etc. When possible (considering terrain and amount of discharge), require vacuum trucks, or other physical removal of the discharge.

4) Collect samples if possible. Sample locations:
   - Area where discharge entered stream,
   - Upstream of discharge,
   - Any storm system where contaminants were discharged,
   - Area where discharge is at time of investigation,
   - Area downstream of discharge.

5) Take notes of other life in stream, such as macroinvertebrates, algae, and fish. Note their size and behavior.

6) Isolate source with samples, photos, and other evidence. Eliminate other possible sources through sampling and photos.

7) If rainfall is a factor, determine duration, amount, and intensity.

8) Interview neighbors/employees as necessary to determine any other pertinent information on incident.

9) Request that the responsible party post public notice signs if there is possible impact for human health and is in a public access area.

10) Collect Field Notes:
- Arrival time,
- Sample collection times,
- Departure time,
- Contacts,
- Others involved,
- Document any actions by responsible party, and
- Time spent on investigation.

APPENDIX **MCM 4**

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

CHECKLISTS AND SUPPORTING DOCUMENTS

STORMWATER PLAN SUBMITTAL CHECKLIST
City of Joplin – Engineering Division
602 S. Main Street · Joplin, MO 64801 · (417) 624-0820

Date: _____ MDNR Land Disturbance Permit # _____(or N/A)

Name of Project: _____

Location of Project: _____

Name of Owner: _____

Name & Company of Engineer: _____

_____

APPLICABILITY: This form applies when the area of land disturbance for a project site is:

1) 43,560 sq ft (1.0000 acre) or more – OR –
2) Less than 43,560 sq ft, if part of a common plan of development or sale that will disturb 43,560 sq ft or more.

---------- Application ----------

n/a *Yes*

- ☐ Grading Permit Application
- ☐ All Plans and Reports signed and sealed by a Professional Engineer licensed in the state of Missouri.
- ☐ ☐ MDNR Land Disturbance permit & SWPPP (land disturbance of 43,560 sq ft (1.0000 acre) or more.)

---------- Plan & Report Requirements ----------

A. General

n/a *Yes*

- ☐ Applicant information, including name, legal address, telephone number, and email address.
- ☐ Common address and legal description of site.
- ☐ Signature and seal of registered engineer (and/or surveyor, where applicable).
- ☐ Design/owner certification.
- ☐ Vicinity map.
- ☐ Project narrative (in the Drainage Report, usually). Include explanations for n/a responses on this form.
- ☐ ☐ Operation & Maintenance Plan for Permanent Stormwater BMPs (structural and non-structural).
- ☐ ☐ Executed Maintenance Covenant. Must be signed by owner before plan approval.
- ☐ ☐ Evidence of acquisition of all applicable permits, including State or Federal.
- ☐ ☐ Evidence of acquisition of all necessary legal agreements (e.g., easements, covenants, land trusts), including easements for all permanent stormwater BMPs, both structural and non-structural. (See section H below.)

B. Existing and proposed mapping and plans (recommended scale of 1@ = 50 = or greater detail), which illustrate at a minimum:

n/a *Yes*

- ☐ ☐ Existing and proposed topography (minimum of 2-foot contours recommended)
- ☐ ☐ Drainage area map showing watershed and subbasin boundaries, labeled with unique identifiers and areas, for both pre-project and post-project conditions.
- ☐ ☐ Perennial and intermittent streams.
- ☐ ☐ Mapping of predominant soils from USDA soil surveys as well as location of any site-specific borehole investigations that may have been performed.
- ☐ ☐ Boundaries of existing predominant vegetation and proposed limits of clearing.
- ☐ ☐ Locations and boundaries of resource protection areas such as wetlands, lakes, ponds, and other setbacks (e.g., stream buffers, drinking water well setbacks, septic setbacks).
- ☐ ☐ Location of existing and proposed roads, buildings, and other structures.

n/a *Yes*

- ☐ ☐ Minimum finished floor elevations for structures adjacent to drainage features
- ☐ ☐ Location of existing and proposed utilities (e.g., water, sewer, gas, electric) and easements.
- ☐ ☐ Location of existing and proposed conveyance systems such as grass channels, swales, and storm drains.
- ☐ ☐ Flow paths.
- ☐ ☐ Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainages.
- ☐ ☐ Location and dimensions of proposed channel modifications, such as bridge or culvert crossings.
- ☐ ☐ Location, size, maintenance access, and limits of disturbance of proposed structural stormwater management practices.

C. Representative cross-section and profile drawings and details of structural stormwater.

n/a *Yes*

- ☐ ☐ Are necessary details, cross-sections, and profiles included?

D. Management practices and conveyances (i.e., storm drains, open channels, swales, etc.) which include:

n/a *Yes*

- ☐ ☐ Existing and proposed structural elevations (e.g., invert of pipes, manholes, etc.)
- ☐ ☐ Design water surface elevations
- ☐ ☐ Structural details of outlet structures, embankments, spillways, stilling basins, grade control structures, conveyance channels, etc.
- ☐ ☐ Logs of borehole investigations that may have been performed along with supporting geotechnical report.

E. Hydrologic and hydraulic analysis for all structural components of stormwater system (e.g., storm drains, open channels, swales, management practices, etc.) for applicable design storms including:

n/a *Yes*

- ☐ ☐ Summary table of subbasin characteristics, including area, curve numbers/runoff coefficient, percent impervious, times of concentration.
- ☐ ☐ Pre-project condition analysis for time of concentrations, peak runoff rates, times to peak, volumes, velocities, water surface elevations, and routing. Show the methodologies used and any supporting calculations.
- ☐ ☐ For detention design, calculations for pre-project conditions must be based on undeveloped conditions for the project site. (Section 10.2 of the Stormwater Management Criteria Manual).
- ☐ ☐ Post-project condition analysis for time of concentrations, peak runoff rates, times to peak, volumes, velocities, water surface elevations, and routing. Show the methodologies used and any supporting calculations.
- ☐ ☐ Huff's Quartile Rainfall Distributions are to be used to develop the necessary set of hydrographs for consideration (10.4.B).
- ☐ ☐ Summary table of results including peak discharges (and maximum stages) for all storm durations (1-, 2-, 3-, 6-, 12-, and 24-hr) and annual probabilities analyzed, with controlling events highlighted. Summary table to contain peak discharges for pre-project and, if applicable, post-project conditions.
- ☐ ☐ Final sizing calculations for structural stormwater management practices including contributing drainage area, storage, and outlet configuration.
- ☐ ☐ Stage-discharge or outlet rating curves and inflow and outflow hydrographs for storage facilities (e.g., detention basins, ponds, wetlands, etc.)
- ☐ ☐ DRY BASIN: Additional storage volume provided for accumulated sediment below spillway (10.3.B). Either directly calculated and demonstrated to be provided in the design; OR, if 125% of the WQCV is incorporated into the design, that will suffice (Paragraph 13.4.e).

n/a *Yes*

☐ ☐ WET BASIN: Min. of 3.0 feet of depth must be provided (10.3.B).

☐ ☐ Analysis of potential downstream impact/effects of project, where necessary.

F. Erosion and Sediment Control Plan that meets the minimum requirements of the Erosion and Sediment Control Guidelines and Section 14 of the Stormwater Management Criteria Manual.

n/a *Yes*

☐ ☐ Sequence of construction.

☐ ☐ Construction entrances.

☐ ☐ Stockpile areas, staging areas, etc.

☐ ☐ BMP locations and details.

☐ ☐ Identify permanent and temporary BMPs.

☐ ☐ One-Call utility notification information.

G. Water Quality (Section 13 of the Stormwater Management Criteria Manual).

n/a *Yes*

☐ ☐ Does the Grading Plan indicate the designer has minimized the amount of direct runoff into the drainage systems? Are the directly connected impervious areas minimized? (See Figure 33 and Section 13.4.b.)

☐ ☐ Is extended detention or other water quality BMP required? (Paragraph 13.3.a requires it if the total impervious area > 10% of the total land area of the development.)

☐ ☐ Is runoff directed to a sand filter, etc. for runoff from areas having high concentrations of pollutants (fueling areas, etc.)? (13.3.b)

☐ ☐ Are calculations shown to determine water quality control volume (WQCV)? (13.4)

☐ ☐ Is the flow from the 2-year (50% AEP) storm detained to pre-project levels? (13.2.c)

H. Operation & Maintenance Plan for Permanent Stormwater BMPs.

n/a *Yes*

☐ ☐ The Operation & Maintenance Plan shall include the following:

☐ ☐ Post Construction Stormwater Management Site Plan and Drawings. All permanent BMPs must be labeled, both structural (detention, rain gardens, grass swales/filter strips, tree boxes, etc.) and non-structural (downspout disconnection, buffer zones for streams/wetlands, tree protection, etc.). Must include applicable easements.

☐ ☐ General Stormwater Management Facilities Description. Includes applicable easements (for each detention and/or water quality BMP), vegetative cover requirements, and access and safety issues, etc.

☐ ☐ Site Contacts and Change of Ownership (including name, mailing address, phone number and email address of responsible parties for maintenance). Owner must notify the City of any changes in ownership.

☐ ☐ Facility Maintenance Plan, including descriptions of routine and non-routine maintenance activities, with minimum frequencies.

☐ ☐ BMP Type-Specific Inspection Checklists & Descriptions. Must include inspection frequencies (min. annually).

☐ ☐ Annual Reporting Requirements. (Latest version of Annual Report template available on City website.)

☐ ☐ BMP Waste Disposal. Includes any testing and proper disposal of sediments that will likely be necessary.

☐ ☐ Maintenance Agreement. Include a signed copy of the executed Maintenance Agreement, as amended.

☐ ☐ O&M Plan Revisions. Procedures for notifying the City of revisions to the O&M Plan.

☐ ☐ Description of funding source.

☐ ☐ Evidence of acquisition of all necessary legal agreements (e.g., easements, covenants, land trusts).

☐ ☐ Waiver requests

Project: Property Address:

I. Signatures and Certifications

1. As the Owner (Applicant) and Engineer of Record, we understand that the review by the City is only for verification that the proposed improvements generally conform to the Stormwater Management Design Criteria Manual. The City is not approving the design or the suitability of the design for the application. The review does not relieve the applicant from complying with all rules, regulations, ordinances, laws or statutes that are in effect at the time of design or construction.

   The applicant shall retain full responsibility for any damages, which may result from any construction activity.

   It is understood that approval of the plan submitted with this application shall be valid only for the duration of the initial project approval granted by the City. In no case shall the approval extend beyond three- and one-half years at which time resubmission and certification will be required. It is further understood that all documents, site plans, design reports etc. submitted to the City shall be made available to the public (upon request) pursuant to The Sunshine Law.

(Owner's Printed Name)	(Owner's Signature)	(Date)
(Engineer's Printed Name)	(Engineer's Signature)	(Date)

2. One copy of the design plans, all specifications and supporting calculations, forms, reports, and SWPPP (if applicable) are herewith submitted and made a part of this application. I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of the city's Stormwater Management Criteria.

(Engineer's Seal, Signature and Date)

3. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting

false information, including the possibility of fine and imprisonment for knowing violations. I hereby certify that all land-disturbing construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans. I also certify that a responsible person will be assigned to the project for day-to-day control. I hereby grant authorization to the local implementing agency the right of access to the site at all times for the purpose of on-site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity.

_____

(Signature of Project Owner/Operator)

LAND DISTURBANCE PERMIT APPLICATION

City of Joplin - Engineering Division

602 S. Main Street Joplin MO 64801 (417) 624-0820

A. NAME OF PROJECT/DEVELOPMENT

B. OWNER/DEVELOPER

NAME	CONTACT	PHONE
		EMAIL

ADDRESS	STREET	CITY	STATE	ZIP CODE

C. ENGINEER/CONTRACTOR

NAME	CONTACT	PHONE
		EMAIL

ADDRESS	STREET	CITY	STATE	ZIP CODE

D. PROJECT INFORMATION

All submittals must be accompanied by a completed Land Disturbance Permit application and any attachments necessary to perform a complete review of the project. Any incomplete submittal may be returned without review or comment.

D.1. AREA OF LAND THIS PROJECT WILL DISTURB:	SUBMITTAL CATEGORIES REQUIRED
☐ Less than 5,000 square feet (sf).	No Land Disturbance Permit required
☐ Less than 5,000 sf, but is part of common plan disturbing 43,560 sf or more.	ESC & WQ/DET
☐ Between 5,000 & 43,560 sf (1.00000 acre).	ESC
☐ Between 5,000 & 43,560 sf, but is part of common plan disturbing 43,560 sf or more.	ESC & WQ/DET
☐ 43,560 sf or more. (Also needs MDNR Land Disturbance Permit)	ESC, WQ/DET, & MDNR

D.2. IMPERVIOUS AREA EXEMPTION

☐ This project is exempt from WQ/DET requirements because less than 10% of the property will have impervious cover.

D.3. ATTACHMENTS:	SUBMITTAL CATEGORY
☐ Plans	ESC, WQ/DET
☐ Erosion & Sediment Control Plan	ESC
☐ Completed Stormwater Plan Submittal Checklist (with all required attachments)	WQ/DET
☐ Drainage Report	WQ/DET
☐ Calculations	WQ/DET (& ESC upon request)
☐ Maintenance Covenant	WQ/DET
☐ Maintenance Plan	WQ/DET
☐ Stormwater Pollution Prevention Plan	MDNR
☐ Other _____	

ESC = Erosion & Sediment Control WQ/DET = Water Quality & Detention MDNR = MO Dept. of Natural Resources

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge, such information is true, complete, and accurate. If granted this permit, I agree all construction will be in accordance with the approved plans and with current requirements of the City of Joplin, Missouri.

PERMITTEE: NAME AND OFFICIAL TITLE (TYPE OR PRINT)	PHONE
SIGNATURE	DATE SIGNED

NOTICE: CALL 1-800-DIG-RITE FOR UTILITY LOCATIONS PRIOR TO EXCAVATION

Rev. April 2023

LAND DISTURBANCE INSPECTION CHECKLIST

City of Joplin

602 S. Main Street · Joplin, MO 64801 · (417) 624-0820

This form is to be used for stormwater inspections by City of Joplin inspection staff. A copy of this form is to be left with the development's responsible party, on-site if feasible. Form updated Mar. 2023

Date of Inspection:_____ **LD Permit #:**_____ **Bldg Permit #:**_____

Project Name/Location:_____ **Contractor/Owner:**_____

Inspection Type: ☐ Regular ☐ Rain Event (Amt._____) ☐ Complaint ☐ Drive-By ☐ Final

Inspected by:_____

	SWPPP Review	Adequate	Needs Maintenance	Comply By	Comments
1	SWPPP is on site and updated with records attached?	☐	☐		
2	Permit sign/notice is posted at construction site?	☐	☐		
3	Inspections performed every 14 days and after rain events?	☐	☐		

	Best Management Practices (BMPs)	Adequate	Needs Maintenance	Comply By	Comments
4	Streets & other property free of sediment & trash?	☐	☐		
5	Construction debris & trash properly covered/disposed?	☐	☐		
6	Perimeter controls properly installed & maintained?	☐	☐		
7	Inlet protection properly installed & maintained?	☐	☐		
8	Washout facilities available, marked, & maintained?	☐	☐		
9	Construction entrance properly constructed/maintained/ utilized?	☐	☐		
10	Disturbed areas stabilized after activity has ceased for 14 days?	☐	☐		
11	Discharge points & receiving waters free of sediment?	☐	☐		
12	Other erosion & sediment controls properly installed/constructed/maintained according to SWPPP?	☐	☐		
13	Stockpiles stabilized or contained by a BMP?	☐	☐		
14	Are permanent stormwater controls being implemented?	☐	☐		
15	Temporary BMPs no longer needed are removed?	☐	☐		
16	Fuel storage areas have secondary containment?	☐	☐		
17	Solvents, paints, fertilizers, etc. stored in a manner prohibiting exposure to rain or runoff?	☐	☐		
18	Dewatering operations filtering sediment/pollutants?	☐	☐		
19	Dust control practices utilized?	☐	☐		
20	Are natural resource areas (streams, wetlands, mature trees, stream buffers, etc.) protected with barriers or similar BMPs?	☐	☐		

Action Taken: ☐ Verbal Warning ☐ Written Warning ☐ Stop Work Notice

Additional Comments:

☐ See photos.

Additional Comments:

"I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete."

Inspector's Signature:_____ **Date:**_____

Enforcement Procedures
for Erosion and Sediment Control
on Permitted Construction Sites

1. Stop-Work Order; Revocation of Permit: In the event that any person holding a site development permit pursuant to this ordinance violates the terms of the permit, or implements site development in such a manner as to materially adversely affect the health, welfare, or safety or persons residing or working in the neighborhood or development site so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the City of Joplin may suspend or revoke the site development permit.

2. Violation of the provisions of this article or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with granting of variances) shall constitute a misdemeanor. Any person who violates this article or fails to comply with any of its requirements shall, upon conviction thereof, be punished in accordance with the City Code. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the city or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation.

- excerpt from Erosion and Sediment Control Ordinance Section VIII
available online at https://www.joplinmo.org/documentcenter/view/70.

JOPLIN

PUBLIC WORKS

Standard Operating Procedures
for
Stormwater Construction Inspection

March 2023

Inspection Procedures Overview

An on-site construction site inspection will usually consist of the following components, followed by the development of an inspection report:

- Pre-Inspection Preparation
- Entry
- Records Review
- Site Inspection
- Exit Interview

Pre-Inspection Preparation

Prioritize your sites

- With stream buffers or environmentally sensitive areas
- Contractors with a history of non-compliance or frequent violations
- Projects on steep slopes or with major grading plans
- Commercial/Industrial or high density subdivisions

Review available files

- Permits
- Stormwater Pollution Prevention Plan (SWPPP) or Erosion and Sediment Control (ESC) plans
- Past inspection reports
- Monitoring/assessment reports
- Maintenance records

Identify significant pollutant sources and Best Management Practices (BMPs) you want to inspect

- Silt fence, sediment basins/silt traps, slope stabilization, etc.

Entry

Before entering the site

- Observe surroundings and various stages of construction
- Look at the construction exit locations and perimeter controls
- Enter date/time and weather conditions on the inspection form

When entering the site

- Review all postings
- Public Notification Sign in place and visible from construction entrance?
- Announce yourself to the person in charge

Records Review

Ask to see a copy of the SWPPP, permit, and inspection reports

- Specific items to review:
  - SWPPP
    - Date and preparer
    - Primary ESC BMPs used on-site
      - Are all BMPs required by the SWPPP in place?
      - Have BMPs been installed correctly and maintained?
        - Amendments to design, construction, or maintenance

        * If a SWPPP is not available for review, note the lack of an on-site SWPPP on the inspection form.

- Inspection and maintenance records
  - Operator is required to inspect the site:
    - Once every fourteen days,
    - Within 72 hours of any rain event, and
    - Within 48 hours of any storm event of 3.89” or more in 24 hours.
  - Permanent stormwater management practices
  - Pollution prevention practices
  - Discharge points
  - Amendments to design, construction, maintenance, weather or seasonal conditions
- Site Map
  - Should be up to date with construction activities
  - Should be red-lined and dated

Site Inspection

Inspect discharge points and downstream, off-site areas for signs of impact

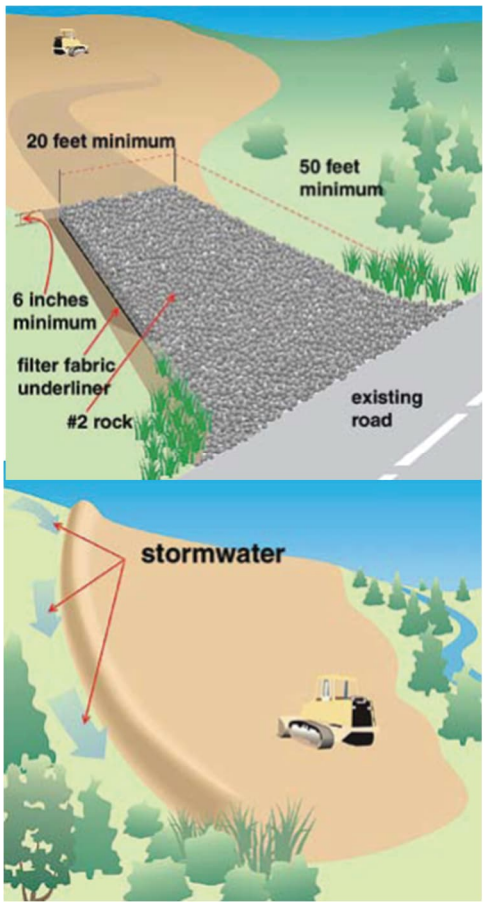
- If sediment is leaving the site, walk downstream and document the extent of travel and impact on receiving
- waters or storm drains.
- Inspect down-slope inlets

Inspect Perimeter Controls

- Note what controls are being used and if they’re installed correctly and being maintained
- Inspect the construction entrance to determine of there is excessive tracking
- Check sediment controls and make sure inlets are protected.

Stabilized Construction Entrance

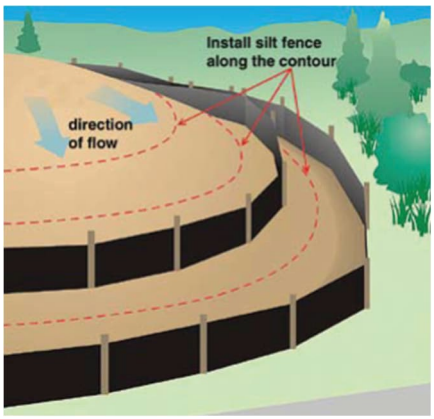
- If there is track-off from the entrance, the operator has 12 hours to clean it up.
- Are vehicles leaving the site from other locations and not using the designated entrance/exit?
- Does the rock need to be replaced, replenished, or raked?
- Is the entrance/exit long enough to remove mud from tires?
- Is the site graded away from the entrance/exit to prevent runoff from leaving the site?



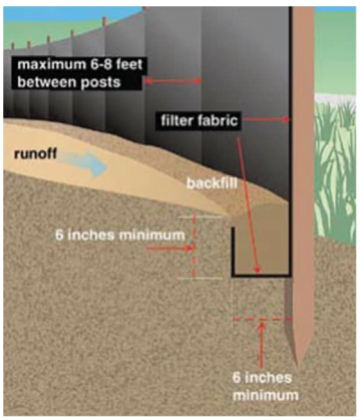
Diversion Berms

- Make sure the diversion discharges to a stable outlet or channel.
- Make sure diversion ditches and berms have been seeded.
- Is the diversion eroding? (channel grades should be relatively flat)
- Check dams may be necessary if high velocity flows are present.

Silt Fence







- Is the silt fence installed along the contour (on a level horizontal plane)?
- Are the ends turned up to help pond the water behind the filter? – J-hooks
- Is the filter trenched in with the stakes on the downhill side (6" deep by 6"wide)? • Has the sediment been removed when it reached 1/3 the height of the barrier?
- Filters should not be installed where concentrated flow is expected
  - Inadequate installation
    - Soil should be compacted after trenching
    - Stakes should be on the downhill side
  - Improper placement
    - Should not be used for steep, long slopes
    - Drainage area should be no greater than ¼ acre per 100 ft. of fence
      - Should be spaced 60-110 ft. apart on long slopes
  - Maintenance
    - Torn or degraded silt fence fabric should be replaced immediately
    - Sediment should be removed after reaching 1/3 the height of the fence

Temporary Silt Traps

- Check the location of the silt trap to make sure if it fails that it doesn't pose a risk to life or property • Silt should be removed after it reaches 1/3 the design volume
- The trap should not be installed in a mainstream or near culvert outlets
- Check the outlet for needed maintenance

Vegetative Stabilization

- Are all exposed soil areas stabilized?
- Check for signs of erosion in vegetated areas
- Concentrated flows should not be allowed across newly seeded slopes
- If late in the year, the slope may need to be mulched versus seeded

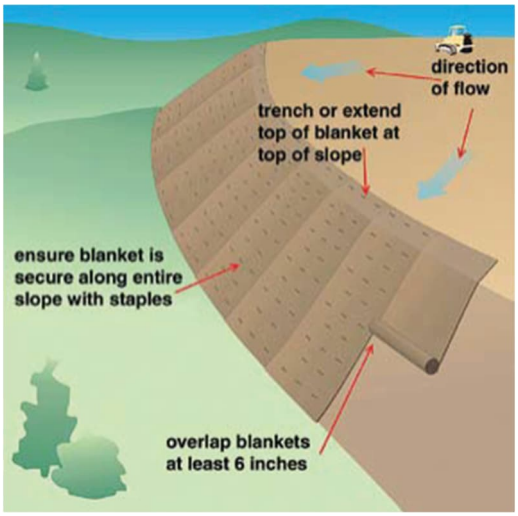


Compare BMPs in the SWPPP with construction site conditions

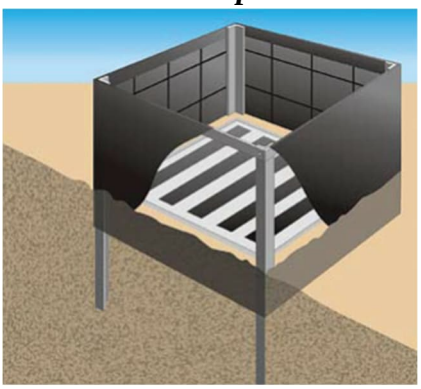
- Are additional BMPs needed? Look for areas where BMPs are needed, but are missing
- Describe potential violations and their locations.

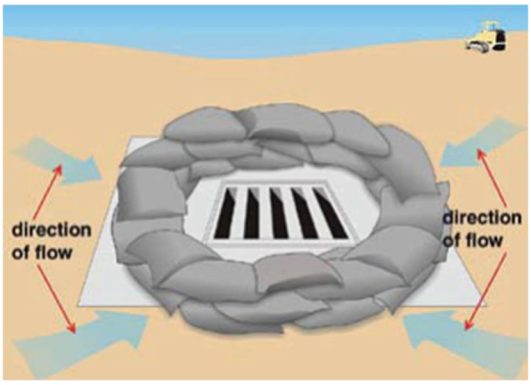
Mats, mulches, and blankets

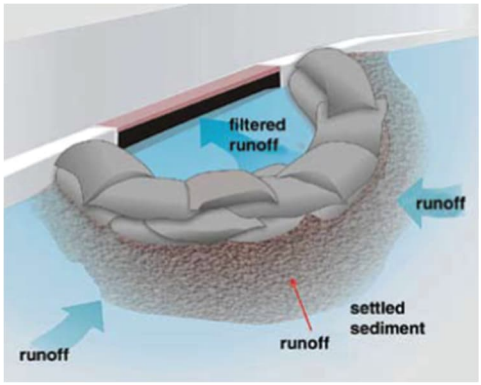
- Should come into complete contact with the soil.
- The top of the blanket should be trenched in – water shouldn't flow underneath it.
- Mulch should not be placed in concentrated flow areas.
- If erosion is occurring in mulched areas, more mulch may need to be applied.
- Check blankets and mats to see if sections are overlapped 4-6 inches and staples are 12 inches apart on tops and 24 inches apart down the sides and in the middle.



Storm drain inlet protection







- Inlet protection is a secondary BMP. Additional controls are also needed.
- Should not block the storm drain or cause flooding
- Should be in place immediately following storm drain installation, or prior to any land disturbance for existing inlets
- Sediment should be removed after each storm event
- Make sure unfiltered stormwater cannot enter the inlet
- If there's a specific safety concern, the BMP can be removed temporarily.

Inspect disturbed areas not currently being worked.

- All exposed soil areas must be stabilized no later than 14 days after the construction activity in that area has temporarily or permanently ceased.
- Temporary seed or straw, permanent seed or straw.

Inspect areas with final stabilization.

- Inspect stabilized areas to ensure that excessive erosion isn't occurring.
- If an area has uniform perennial vegetative cover (100%) with 70% density of the entire area, temporary BMPs need to be removed.

Taking Photographs

Take photos of

- Public notification sign
- All potential violations
- General views of the site
- Impacts to receiving waters.

Exit Interview

- Ask to speak to the responsible party for the ESC. If they're not on site, ask to speak to whomever is in charge.
- Let them know what findings you have (deficiencies, areas of concern, SWPPP not updated, inspections not being done, etc.)
- Don't tell them what BMPs to use! You can tell them what typically works/doesn't work.

APPENDIX **MCM 5**

POST-CONSTRUCTION STORMWATER MANAGEMENT

CHECKLISTS AND SUPPORTING DOCUMENTS

LAND DISTURBANCE INSPECTION CHECKLIST

City of Joplin

602 S. Main Street · Joplin, MO 64801 · (417) 624-0820

This form is to be used for stormwater inspections by City of Joplin inspection staff. A copy of this form is to be left with the development's responsible party, on-site if feasible. Form updated Mar. 2023

Date of Inspection:_____ **LD Permit #:**_____ **Bldg Permit #:**_____

Project Name/Location:_____ **Contractor/Owner:**_____

Inspection Type: ☐ Regular ☐ Rain Event (Amt._____) ☐ Complaint ☐ Drive-By ☐ Final

Inspected by:_____

	SWPPP Review	Adequate	Needs Maintenance	Comply By	Comments
1	SWPPP is on site and updated with records attached?	☐	☐		
2	Permit sign/notice is posted at construction site?	☐	☐		
3	Inspections performed every 14 days and after rain events?	☐	☐		

	Best Management Practices (BMPs)	Adequate	Needs Maintenance	Comply By	Comments
4	Streets & other property free of sediment & trash?	☐	☐		
5	Construction debris & trash properly covered/disposed?	☐	☐		
6	Perimeter controls properly installed & maintained?	☐	☐		
7	Inlet protection properly installed & maintained?	☐	☐		
8	Washout facilities available, marked, & maintained?	☐	☐		
9	Construction entrance properly constructed/maintained/ utilized?	☐	☐		
10	Disturbed areas stabilized after activity has ceased for 14 days?	☐	☐		
11	Discharge points & receiving waters free of sediment?	☐	☐		
12	Other erosion & sediment controls properly installed/constructed/maintained according to SWPPP?	☐	☐		
13	Stockpiles stabilized or contained by a BMP?	☐	☐		
14	Are permanent stormwater controls being implemented?	☐	☐		
15	Temporary BMPs no longer needed are removed?	☐	☐		
16	Fuel storage areas have secondary containment?	☐	☐		
17	Solvents, paints, fertilizers, etc. stored in a manner prohibiting exposure to rain or runoff?	☐	☐		
18	Dewatering operations filtering sediment/pollutants?	☐	☐		
19	Dust control practices utilized?	☐	☐		
20	Are natural resource areas (streams, wetlands, mature trees, stream buffers, etc.) protected with barriers or similar BMPs?	☐	☐		

Action Taken: ☐ Verbal Warning ☐ Written Warning ☐ Stop Work Notice

Additional Comments:

☐ See photos.

Additional Comments:

"I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete."

Inspector's Signature:_____ **Date:**_____

APPENDIX **MCM 6**

POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

SUPPORTING DOCUMENTS

This space reserved for documentation of training materials used in the Stormwater Program Training.

Facility Inspection Checklists shall be included in the facility SWPPPs, but may also be placed here.

List of Municipal Operations & Facilities Impacted by the O&M program
Public Works Center
Recycling Center
Joplin Athletic Complex
Joplin Parks and Recreation
Joplin Cemetery
Schifferdecker Golf Course

Staff Training Resources

Subject	Type	Source	Resource Title	Link	Est. Time	Training Category (from SW Program Training Schedule p 4.6.7 of SWMP): In-Depth PPGH Training	General PPGH Training	IDDE Inspector Training	Constr. Site SW Inpector Training	Post-Const. SW Mgmt	Specific In-Depth Topics* (from Table 4.6.B): 1	2	3	4	5	6	7	8	9	10	11
In-Depth PPGH - for all City staff listed as needing In-Depth PPGH training (under number 1 of the SW Program Training Schedule (p 4.6.3 of SWMP))																					
In-Depth PPGH Playlist	YouTube Video	Wyoming Valley Sanitary Authority	Stormwater Training for Municipal Employees" (Playlist, includes the following 7 videos)	https://www.youtube.com/playlist?list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl	70 min total	x															
PPGH Training Introduction			Stormwater Training for Municipal Emplolyees - Part 6	https://www.youtube.com/watch?v=9dw7YLgK8d0&list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl&index=6	10 min		x														
Fleet Mainenance & Materials Handling			Stormwater Training for Municipal Emplolyees - Part 1	https://www.youtube.com/watch?v=TQXOK0b5MZc&list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl&index=1	9 min	x					x	x	x					x			
Construction Activities and Land Disturbance			Stormwater Training for Municipal Emplolyees - Part 2	https://www.youtube.com/watch?v=rnTg_Jljz98&list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl&index=2	9 min	x									x						
Parks and Grounds Maintenance			Stormwater Training for Municipal Emplolyees - Part 3	https://www.youtube.com/watch?v=dVGrLaPxZ7Y&list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl&index=3	9.5 min	x			x			x		x	x	x			x		x
Solid Waste Management (Floatables, Trash Collection, Transfer Stations, Mulching Operations, Landfill and Composting Operations)			Stormwater Training for Municipal Emplolyees - Part 4	https://www.youtube.com/watch?v=rNhhI9RcFxQ&list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl&index=4	9.5 min	x					x	x	x						x		x
Streets and Drainage Maintenance			Stormwater Training for Municipal Emplolyees - Part 5	https://www.youtube.com/watch?v=kWqgQb6pVr8&list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl&index=5	9.5 min	x					x	x	x		x	x					x
General IDDE			Illicit Discharge Detection and Elimination (IDDE) Training	https://www.youtube.com/watch?v=5bUIeWbL1XI	7 min	x		x													x
General PPGH - for all City staff not listed as needing In-Depth PPGH training under number 1 of the SW Program Training Schedule (p 4.6.3 of SWMP)																					
PPGH Training Introduction	YouTube Video	Wyoming Valley Sanitary Authority	Stormwater Training for Municipal Emplolyees - Part 6	https://www.youtube.com/watch?v=9dw7YLgK8d0&list=PLPSDayYOwbrdhFazirsTjuX7YMu3B1gsl&index=6	10 min		x														
Illicit Discharge Inspection Staff - MANDATORY ADDITIONAL TRAINING - Subject-specific resources, to be used in addition to In-Depth PPGH videos above.																					
General IDDE	YouTube Video	Wyoming Valley Sanitary Authority	Illicit Discharge Detection and Elimination (IDDE) Training	https://www.youtube.com/watch?v=5bUIeWbL1XI	7 min			x													x
IDDE Field Guide	Document	Joplin	Illicit Discharge Field Guide	https://www.joplinmo.org/DocumentCenter/View/11276/Illicit-Discharge-Detection--Elimination-IDDE-Field-Guide-2023	n/a			x													x

Staff Training Resources

Subject	Type	Source	Resource Title	Link	Time	Training Category (from SW Program Training Schedule p 4.6.7 of SWMP): In-Depth PPGH Training	General PPGH Training	IDDE Inspector Training	Constr. Site SW Inpector Training	Post-Const. SW Mgmt	Specific In-Depth Topics* (from Table 4.6.B): 1	2	3	4	5	6	7	8	9	10	11
Construction Site Inspection Staff - MANDATORY ADDITIONAL TRAINING - Subject-specific resources, to be used in addition to In-Depth PPGH videos above.																					
SOP for Construction Site Inspection	Document	Joplin	Standard Operating Procedure for Construction Inspection and Enforcement	Located in Appendix MCM4 of the Stormwater Management Plan, & at: https://www.joplinmo.org/DocumentCenter/View/12802/SOP-Stormwater-Construction-Inspections-2023	12 min				x												
Land Disturbance BMP Types, Installation, and Maintenance	Document	Joplin	Joplin Erosion and Sediment Control Guidelines	https://www.joplinmo.org/DocumentCenter/View/11158/Erosion-and-Sediment-Control-Guidelines-May-2007	n/a				x												
	Document	Neosho, via Springfield, MO	BMP Manual for Land Disturbance Activity	https://neoshomo.gov/DocumentCenter/View/186/Best-Management-Practices-PDF	n/a				x												
Construction Site Inspection - Quick Overview	Youtube Video	Tippecanoe County Partnership for Water Quality	Stormwater Quality: Inspection	https://www.youtube.com/watch?v=HOgtUyWUzRE	8 min				x												
Online Construction Inspection Course	Videos and Exam	Environmental Protection Agency	EPA's Construction Inspection Course (5 Modules, plus Final Exam, with certification available upon completion)	https://www.epa.gov/npdes/construction-inspection-training-course	6.5 hours				x												
Parks Staff - Subject-specific resources, to be used in addition to In-Depth PPGH videos above.																					
Fueling Operations - Vehicles and Portable Gas Cans	Youtube Video	Tippecanoe County Partnership for Water Quality	Proper Refueling - Keeping our Waterways Clean	https://www.youtube.com/watch?v=IGpuWxNVCLM	6 min	x												x			
Parks and Grounds Maintenance	YouTube Video	MN Stormwater	Parks Maintenance and Stormwater Protection Employee Training	https://www.youtube.com/watch?v=6eD29UBINqE	12 min	x								x	x						x
Roads & Maintenance Staff - Subject-specific resources, to be used in addition to In-Depth PPGH videos above.																					
Maintenance & Storage Facilities	Youtube Video	countysandiego	Stormwater Strategies: Housekeeping	https://www.youtube.com/watch?v=UxOam2GEVgQ	14 min	x	x				x	x	x					x			
Fueling Operations - Vehicles and Portable Gas Cans	Youtube Video	Tippecanoe County Partnership for Water Quality	Proper Refueling - Keeping our Waterways Clean	https://www.youtube.com/watch?v=IGpuWxNVCLM	6 min	x												x			
Post-Construction BMP Inspection Staff (Long-Term O&M Inspections) - Subject-specific resources, to be used in addition to In-Depth PPGH videos above.																					
Bioretention Maintenance	Youtube Video	CenterforWatershed	Stormwater BMP & LID Maintenance	https://www.youtube.com/watch?v=coFbdMB-g0U	15 min					x											
Rain Garden Maintenance	Youtube Video	MN Stormwater	Rain Garden Maintenance Employee Training	https://www.youtube.com/watch?v=SM9sI9wQgz0	8.5 min					x						x					

Staff Training Resources

Subject	Type	Source	Resource Title	Link	Time	Training Category (from SW Program Training Schedule p 4.6.7 of SWMP)					Specific In-Depth Topics* (from Table 4.6.B)										
						In-Depth PPGH Training	General PPGH Training	IDDE Inspector Training	Constr. Site SW Inpector Training	Post-Const. SW Mgmt	1	2	3	4	5	6	7	8	9	10	11
PPGH Inspections of City Facilities - Subject-specific resources, to be used in addition to In-Depth PPGH videos above.																					
PPFH Facility Inspections	YouTube Video	West Valley Clean Water Authority	Module 3 - Performing Stormwater Inspections: Facility Inspection	https://www.youtube.com/watch?v=2klhSLPxe0o	13 min	x								x	x						x
Extra Resources - Use as needed, in addition to In-Depth PPGH videos above.																					
General IDDE	Youtube Video	Washington Conservation District	Illicit Discharge Detection and Elimination (IDDE) - *For General Staff Education*	https://www.youtube.com/watch?v=5bUIeWbL1XI	3.5 min	x		x													x
Salt & De-icing Operations	Youtube Video	IowaDOT	Anti-Icing and Deicing - Winter Operations Training Series 12 of 15	https://www.youtube.com/watch?v=HZI_ZbWybIU	7.5 min	x											x				
Additional Resources - Add as needed																					

Abbreviations

PPGH = Pollution Prevention/Good Housekeeping for municipal operations
IDDE = Illicit Discharge Detection and Elimination
SW = Stormwater
Const. = Construction
SWMP = Stormwater Management Plan, located under "MS4 Documents" at https://www.joplinmo.org/900/Storm-Water-Section

** Specific In-Depth Topics from SWMP Table 4.6.B*

1 = Vehicle and equipment washing
2 = Fluid disposal and spills
3 = Fleet, equipment, and building maintenance
4 = Park and open space maintenance procedures (including fertilizer, herbicide, pesticide application)
5 = New construction, road maintenance, and land disturbances
6 = Stormwater system maintenance
7 = MS4 operated salt and de-icing operations
8 = Fueling
9 = Solid waste disposal
10 = Street sweeper operations
11 = Illicit Discharges