STORMWATER MANAGEMENT PLAN

MOR04C063

OCTOBER 2026- SEPTEMBER 2031
PERMITTING PERIOD

PREPARED BY:
ALLGEIER, MARTIN AND ASSOCIATES, INC.

REVISED JANUARY 2026

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

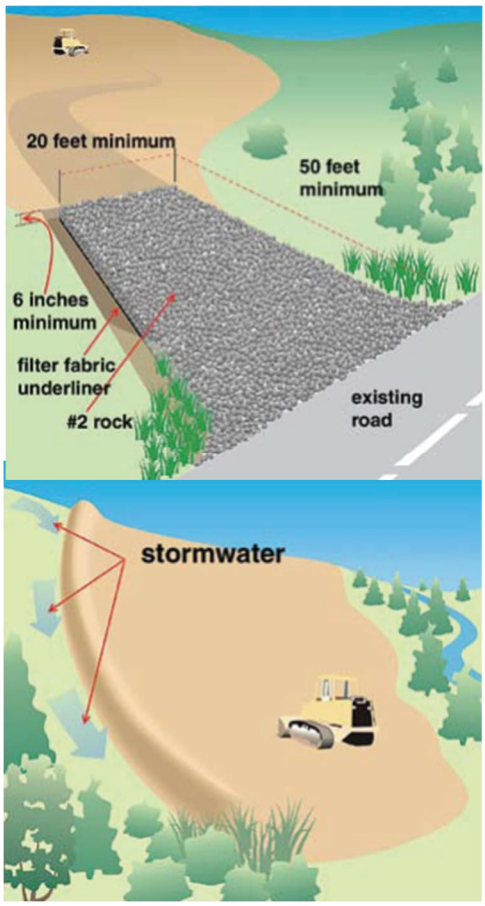
- If sediment is leaving the site, walk downstream and document the extent of travel and impact on receiving
- waters or storm drains.
- Inspect down-slope inlets

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

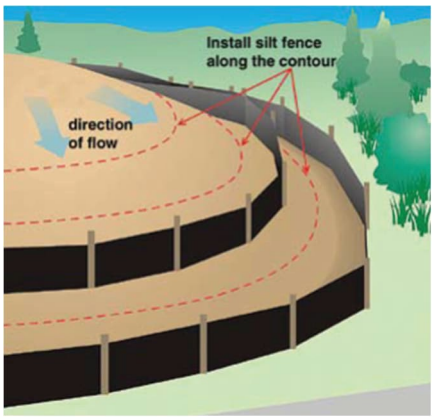
- If there is track-off from the entrance, the operator has 12 hours to clean it up.
- Are vehicles leaving the site from other locations and not using the designated entrance/exit?
- Does the rock need to be replaced, replenished, or raked?
- Is the entrance/exit long enough to remove mud from tires?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



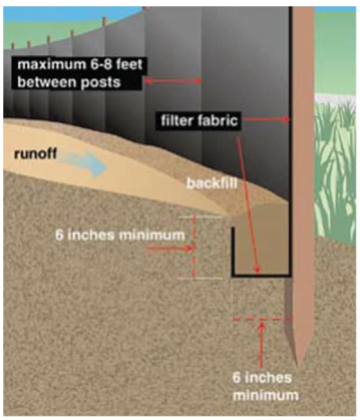
Diversion Berms

- 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

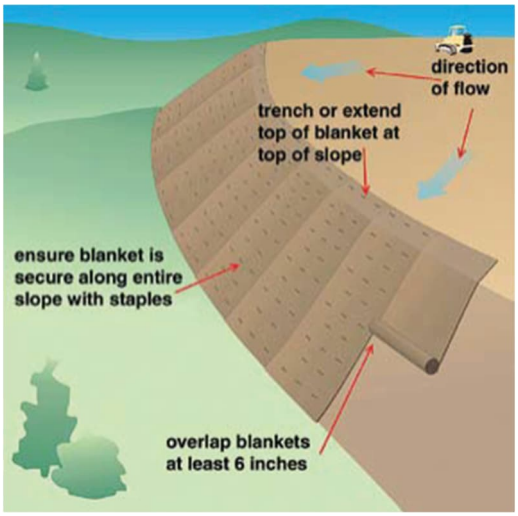


Compare BMPs in the SWPPP with construction site conditions

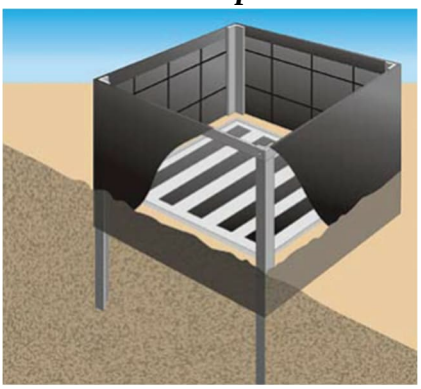
- Are additional BMPs needed? Look for areas where BMPs are needed, but are missing
- Describe potential violations and their locations.

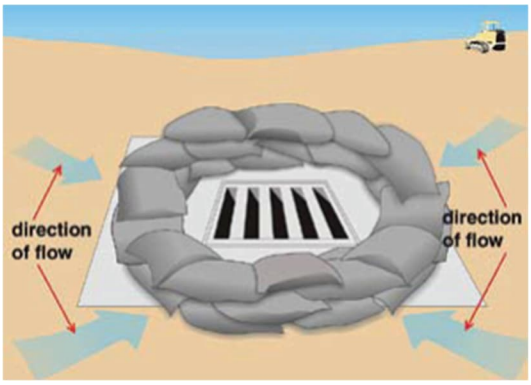
Mats, mulches, and blankets

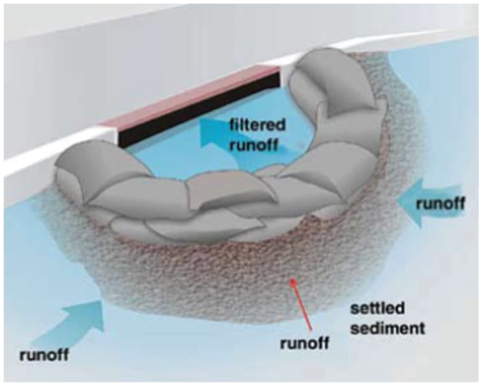
- Should come into complete contact with the soil.
- The top of the blanket should be trenched in – water shouldn't flow underneath it.
- Mulch should not be placed in concentrated flow areas.
- If erosion is occurring in mulched areas, more mulch may need to be applied.
- Check blankets and mats to 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 #:**_____

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

Inspected by:_____

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	Best Management Practices (BMPs)	Adequate	Needs Maintenance	Comply By	Comments
4	Streets & other property free of sediment & trash?	☐	☐		
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13	Stockpiles stabilized or contained by a BMP?	☐	☐		
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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