

MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
**MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) ANNUAL
 STORMWATER MANAGEMENT PROGRAM REPORT FOR
 COMPREHENSIVE PERMIT (MOR04C)**

FOR OFFICE USE ONLY	
PROJECT ID NUMBER	
DATE RECEIVED	

Part A – MS4 PERMIT HOLDER INFORMATION

1. MS4 NAME City of Raymore	2. NPDES PERMIT NUMBER MOR004C036	3. MS4 UNIQUE ID NO. (If applicable – co-permittees only)	
4. ADDRESS 100 Municipal Circle	5. CITY Raymore	6. STATE MO	7. ZIP CODE 64083
8. TELEPHONE NUMBER WITH AREA CODE (816) 892-3019	9. NAME OF MS4 CONTACT PERSON Lorie Crandell		
10. EMAIL OF MS4 CONTACT PERSON lcrandell@raymore.com			
11. Is the MS4 contact person listed above different from the most recent MS4 stormwater management program annual report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
12. Have any areas of the MS4 been added or removed from the MS4 jurisdiction due to annexation or other legal means since the most recent permit application (renewal, new, modification), or most recent MS4 stormwater management program annual report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please provide a map along with a brief description as an attachment.			

Part B – REPORTING REQUIREMENTS

1. Is your MS4 subject to a TMDL? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, you are required to submit the MS4 ARAP report annually. Reports are due Feb. 28 each year. See Part F of this form.
2. Is your MS4 newly permitted (i.e., is this your first MS4 permit)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. If you are part of a co-permitted MS4 permit, will each co-permitted MS4 submit an individual stormwater management program report, or a combined MS4 stormwater management program report? <input checked="" type="checkbox"/> Individual <input type="checkbox"/> Combined
4. Reporting period year (i.e., the previous year from January 1 st to December 31 st) BEGINNING: <u>1/1/22</u> ENDING: <u>12/31/22</u>

Part C – STORMWATER MANAGEMENT PROGRAM PARTNERS

1. If another governmental entity implements any BMPs or MCMs for your stormwater program, please provide the following: a. Name of the government entity; b. Name of the primary contact for the government entity; c. Contact information (i.e., address, city, ZIP code, state, and phone number); and d. Specific best management practices or minimum control measures being implemented by the government entity. It is the responsibility of the permittee to provide all information under this report regardless if programmatic BMPs or MCMs are being implemented by another governmental entity. If an entire MCM is being implemented by an alternative governmental entity, please indicated that under the appropriate MCM below.
2. Does the permittee currently utilize, or is working towards develop of an Integrated Plan? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please provide a summary of the status of the Integrated Plan.

PART D – MINIMUM CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND MEASURABLE GOALS EVALUATION

An attachment is necessary for many items under the MCMs below to provide information regarding the progress toward achieving the statutory goal of reducing the discharge of pollutants to the MS4 to the maximum extent practicable to the MS4. Provide additional informative data, success stories, and experiences that support the successful implementation of your stormwater management plan (SWMP).

MCM 1. Public Education and Outreach

1. (4.1.A) Who are the target audiences? <u>Residents, Developers and Construction Site Operators</u> Were any changes made to target audiences during reporting period? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

2. (4.1.B) What are the target pollutants? HHW, Yard Waste, Runoff, Fertilizers, Petroleum Products, Washout, Floatables
Were any changes made to target pollutants during reporting period? Yes No

3. (4.1.C) Were any changes made to educational resources to be used as BMPs (materials, postings, etc.) in conjunction with the selected pollutants for the selected target audiences during reporting period? Yes No
If Yes, please include an attachment describing changes.

4. (4.1.D, 4.1.E) Were any changes made to involvement activities, or support to be used as BMPs (events, activities, etc.) in conjunction with the selected pollutants for the selected target audiences during reporting period? Yes No
If Yes, please include an attachment describing changes

5. (4.1.F) Were all BMPs for MCM 1 evaluated during reporting period? Yes No
If No, please include an attachment describing what BMPs were not evaluated and why.

6. Were the measurable goals for all BMPs for MCM 1 successfully reached? Yes No
If No, were the measurable goals or BMPs evaluated/modified in an effort for success in the next reporting period? Yes No

For each of the BMPs under this MCM, please provide a brief summary of how the measurable goals were achieved and documented. For any BMPs where the measurable goals were not achieved, provide a brief summary of how the BMP evaluated/modified in an effort for success in the coming reporting year.

7. Were the BMPs for MCM 1 determined effective/successful for this reporting period? Yes No
If No, were the BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? Yes No

8. Were any changes made to MCM 1 during the reporting period that were not covered above, including the addition of programmatic BMPs?
 Yes No
If Yes, please include an attachment describing changes.

MCM 2. Public Involvement and Participation

1. (4.2.A, 4.2.B, 4.2.C) Completing 4.2.A-4.2.C in this form is only applicable during permit renewal OR as a result of major modification to the SWMP. If neither of these apply during this reporting period, please check N/A here and skip to 3 below. N/A

2. Was a public notice period held during reporting period? Yes No
Was the public notice posted on the MS4 website? Yes No
Was a public information meeting held for the public notice during this reporting period? Yes No
If Yes, what was the attendance for the meeting? 0
Were any comments received? Yes No If Yes, how many? _____

3. (4.2.D) Were any changes to publicly available method to accept public inquiries, or concerns, and to take information provided by the public about stormwater and stormwater related topics made during reporting period? Yes No
If Yes, please include an attachment describing changes.

4. Were all BMPs and tracking methods for 4.2.D evaluated during reporting period? Yes No
If No, please include an attachment describing what BMPs were not evaluated and why.

5. (4.2.E) Does the permittee utilize a stormwater management panel or committee during the reporting period? Yes No
If Yes, was the panel or committee determined to be effective/successful for this reporting period? Yes No
If the permittee does not currently utilize a stormwater management panel or committee, did the permittee evaluate the potential benefits of utilizing a stormwater management panel or committee? Yes No

6. Were any changes to 4.2.E made during reporting period? Yes No
If Yes, please include an attachment describing changes.

7. (4.2.F) On what date did the permittee provide an update to the governing board on the status of, or updates on, the Stormwater Management Program, including compliance with the program for this reporting period? 1/10/22

8. (4.2.I) Were all tracking mechanisms and databases for MCM 2 evaluated during this reporting period? Yes No
If No, please include an attachment describing why the mechanisms were not evaluated.

9. Were the measurable goals for all BMPs for MCM 2 successfully reached? Yes No
If No, were the measurable goals or BMPs evaluated/modified in an effort for success in the next reporting period? Yes No

For each of the BMPs under this MCM, please provide a brief summary of how the measurable goals were achieved and documented. For any BMPs where the measurable goals were not achieved, provide a brief summary of how the BMP evaluated/modified in an effort for success in the coming reporting year.

10. Were the programmatic BMPs for MCM 2 determined effective/successful for this reporting period? Yes No
If No, were the BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? Yes No

11. Were any changes made to MCM 2 during the reporting period that were not covered above, including the addition of programmatic BMPs?
 Yes No
If Yes, please include an attachment describing changes.

12. (4.3.A) Were any changes to the storm sewer system map made during reporting period? Yes No

13. (4.3.C) Were any changes made to the ordinance for prohibition of non-stormwater into the storm sewer system during this reporting period? Yes No

14. (4.3.D) Was the measurable goal for dry weather field screening met? Yes No
If No, were the measurable goals evaluated/modified in an effort for success in the next reporting period? Yes No

<p>15. (4.3.H) Were the priority areas evaluated for this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, were the priority areas determined to be appropriate for the next reporting period? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Will additional or new priority areas be identified for the next reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>16. (4.3.J) Were any illicit discharge investigations conducted during this reporting period? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, were the investigation procedures, response times, and tracking mechanisms determined to be appropriate for the next reporting? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, were the BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>17. (4.3.K) Were MCM 3 enforcement procedures evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the procedures were not evaluated.</p>
<p>18. (4.3.L) Were all tracking mechanisms and databases for MCM 3 evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the mechanisms were not evaluated.</p>
<p>19. (4.3.M, 4.3.Q) Were all outreach and internal training procedures for MCM 3 evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the procedures were not evaluated.</p>
<p>20. Were the measurable goals for all BMPs for MCM 3 successfully reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If No, were the measurable goals or BMPs evaluated/modified in an effort for success in the next reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No For each of the BMPs under this MCM, please provide a brief summary of how the measurable goals were achieved and documented. For any BMPs where the measurable goals were not achieved, provide a brief summary of how the BMP evaluated/modified in an effort for success in the coming reporting year.</p>
<p>21. (4.3.N - 4.3.R) Were the programmatic BMPs for MCM 3 determined effective/successful for this reporting period? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If No, were the BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>22. Were any changes made to MCM 3 during this reporting period that were not covered above, including the addition of programmatic BMPs? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please include an attachment describing changes.</p>
<p>MCM 4. Construction Site Stormwater Runoff Control</p>
<p>1. (4.4.A) Were any changes to the ordinance for construction site stormwater made during this reporting period? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please include an attachment describing changes.</p>
<p>2. (4.4.B) Were the pre-construction plan review procedures evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the review procedures were not evaluated.</p>
<p>3. (4.4.C) Were the procedures for construction site inspections, evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the procedures were not evaluated.</p>
<p>4. (4.4.D) Were construction site enforcement procedures evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the procedures were not evaluated.</p>
<p>5. (4.4.E) Were the procedures for requiring construction site operators to conduct site inspections evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the procedures were not evaluated.</p>
<p>6. (4.4.F, 4.4.G) Were all tracking mechanisms and databases for MCM 4 evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the mechanisms and/or databases were not evaluated.</p>
<p>7. (4.4.J) Were all procedures for public submittal of concerns or information related to construction sites evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the procedures were not evaluated.</p>
<p>8. (4.4.K) Were all internal training procedures for MCM 4 evaluated for effectiveness during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the procedures were not evaluated.</p>
<p>9. (4.4.L) Were all procedures outlining the local inspection and enforcement for MCM 4 evaluated during this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why the document(s) were not evaluated.</p>
<p>10. Were the measurable goals for all programmatic BMPs for MCM 4 successfully reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, were the measurable goals or programmatic BMPs evaluated/modified in an effort for success in the next reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No For each of the programmatic BMPs under this MCM, please provide a brief summary of how the measurable goals were achieved and documented. For any BMPs where the measurable goals were not achieved, provide a brief summary of how the BMP evaluated/modified in an effort for success in the coming reporting year.</p>
<p>11. (4.4.H, 4.4.I, 4.4.M) Were the programmatic BMPs and procedures for MCM 4 determined effective/successful for this reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>12. Were any changes made to MCM 4 during the reporting period that were not covered above, including the addition of programmatic BMPs? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please include an attachment describing changes.</p>
<p>MCM 5. Post-Construction Stormwater Management in New Development and Redevelopment</p>

1. (4.5.A) Were any changes to the ordinance for post-construction runoff site stormwater made during this reporting period?
 Yes No
 If Yes, please include an attachment describing changes.

2. (4.5.B) Were any changes to the permittee's strategy to minimize water quality impact made during this reporting period? This includes any policy or ordinance changes to either structural or non-structural controls. Yes No
 If Yes, please include an attachment describing changes.

3. Were all strategies (programmatic BMPs) for 4.5.B evaluated during this reporting period? Yes No
 If No, please include an attachment describing what BMPs were not evaluated and why.

4. (4.5.C) Were the pre-construction plan review procedures evaluated during this reporting period? Yes No
 If No, please include an attachment describing why these procedures were not evaluated.

5. (4.5.D) Were procedures for long-term operation and maintenance of the post-development BMPs evaluated during this reporting period?
 Yes No
 If No, please include an attachment describing why these procedures were not evaluated.

6. (4.5.E) Were the procedures for inspections or requiring inspections, evaluated during this reporting period? Yes No
 If No, please include an attachment describing why these procedures were not evaluated.

7. Were the measurable goals for all BMPs for 4.5.E successfully reached? Yes No
 If No, were the measurable goals evaluated/modified in an effort for success in the next reporting period? Yes No

8. (4.5.F, 4.5.G) Were compliance and enforcement procedures evaluated during this reporting period? Yes No
 If No, please include an attachment describing what BMPs were not evaluated and why.

9. (4.5.H) Was the inventory of all post-construction BMPs, including the tracking mechanism, evaluated during this reporting period?
 Yes No
 If No, please include an attachment describing why these procedures were not evaluated.

10. (4.5.I) Were all tracking mechanisms for post-construction BMP inspections, including the tracking mechanism, evaluated during this reporting period? Yes No
 If No, please include an attachment describing why these procedures were not evaluated.

11. (4.5.L) Were all training procedures for inspections evaluated for effectiveness during this reporting period? Yes No
 No, please include an attachment describing why these procedures were not evaluated

12. Were the measurable goals for all programmatic BMPs for MCM 5 successfully reached? Yes No
 If No, were the measurable goals or programmatic BMPs evaluated/modified in an effort for success in the next reporting period? Yes No
For each of the BMPs under this MCM, please provide a brief summary of how the measurable goals were achieved and documented. For any BMPs where the measurable goals were not achieved, provide a brief summary of how the BMP evaluated/modified in an effort for success in the coming reporting year.

13. (4.5.J, 4.5.K, 4.5.M) Were programmatic BMPs and procedures for MCM 5 determined effective/successful for this reporting period?
 Yes No
 If No, were the programmatic BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? Yes No

14. Were any changes made to MCM 5 during the reporting period that were not covered above, including the addition of programmatic BMPs?
 Yes No
 If Yes, please include an attachment describing changes.

MCM 6. Pollution Prevention/Good Housekeeping for Municipal Operations

1. (4.6.A) Did the permittee maintain and utilize an employee training program for MS4 municipal operations staff? Yes No
 What date or dates was the training held during this reporting period? _____

2. Were any changes to the training program made during reporting this period? Yes No
 If Yes, please include an attachment describing changes.

3. (4.6.B) Were the following topics covered during training for this reporting period?

- Vehicle and equipment washing; Yes No Not applicable
- Fluid disposal and spills; Yes No Not applicable
- Fleet, equipment, and building maintenance; Yes No Not applicable
- Park, open space maintenance procedures (including fertilizer, herbicide, pesticide application); Yes No Not applicable
- New construction, road maintenance, and land disturbances; Yes No Not applicable
- Stormwater system maintenance; Yes No Not applicable
- MS4 operated salt and de-icing operations; Yes No Not applicable
- Fueling; Yes No Not applicable
- Solid waste disposal; Yes No Not applicable
- Street sweeper operations; Yes No Not applicable
- Illicit Discharges; Yes No Not applicable

4. (4.6.C) Were training materials, written procedures for the training program, and a schedule for topics evaluated during this reporting period?
 Yes No
 If No, please include an attachment describing what BMPs were not evaluated and why.

5. (4.6.D) Was a list of municipal operations/facilities impacted by the MS4 permit maintained and evaluated during this reporting period?
 Yes No

6. (4.6.E) Was a list of all industrial facilities owned or operated by the permittee which are subject to NPDES permits for discharges of stormwater associated with industrial activity, maintained and evaluated during this reporting period? Yes No

7. (4.6.F) Were controls and procedures for reducing or eliminating the discharge of floatables and pollutants from municipal facilities evaluated during this reporting period? Yes No
 If No, please include an attachment describing what elements and procedures were not evaluated and why.

8. Were inspections conducted on these facilities at minimum annually? Yes No

9. Were the stormwater control measures and other programmatic BMPs for 4.6.E determined effective/successful for this reporting period?
 Yes No
 If No, were the BMPs, and procedures determined to be ineffective/unsuccessful evaluated for modification or replacement?
 Yes No

10. (4.6.G) Were procedures for proper disposal of waste removed from the MS4 structures and areas of jurisdiction evaluated during this reporting period? Yes No
 If No, please include an attachment describing why the procedures were not evaluated.

11. (4.6.H) Was washing of municipal vehicles and/or equipment taking place on a facility owned and/or operated by the permittee during this reporting period? Yes No
 If Yes, were procedures for proper disposal of wash water evaluated during this reporting period? Yes No
 If No, please include an attachment describing what procedures were not evaluated and why.

12. (4.6.I) Did the permittee maintain written Stormwater Pollution Prevention Plans or an Operations and Maintenance Manual for all applicable MS4 facilities during this reporting period? Yes No
 If No, please include an attachment describing why the document(s) were not created and/maintained.

13. Did the permittee evaluate the results, controls, and inspection procedures to ensure compliance with the permit 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. Yes No
 If No, please include an attachment describing what BMPs were not evaluated and why.

14. (4.6.J) Were any new flood management projects reviewed or begun during this reporting period? Yes No
 If Yes, were procedures used to determine if there are impacts to water quality for the new project? Yes No

15. Were the measurable goals for all BMPs for MCM 6 successfully reached? Yes No
 If No, were the measurable goals evaluated/modified in an effort for success in the next reporting period? Yes No

For each of the BMPs under this MCM, please provide a brief summary of how the measurable goals were achieved and documented. For any BMPs where the measurable goals were not achieved, provide a brief summary of how the BMP evaluated/modified in an effort for success in the coming reporting year.

16. (4.6.K, 4.6.L, 4.6.M) Were BMPs for MCM 6 determined effective/successful for this reporting period? Yes No
 If No, were the BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? Yes No

17. Were any changes made to MCM 6 during the reporting period that were not covered above? Yes No
 If Yes, please include an attachment describing changes.

Part E – MONITORING DATA WATER SAMPLE(S) ANALYSIS

Please include monitoring data collected during the reporting period.

PARAMETER OR INDICATOR	FREQUENCY (Ongoing monitoring or single diagnostic event or date)	RESULT	DRY WEATHER SAMPLE?	WET WEATHER SAMPLE?
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

1. Are any of the parameters being sampled due to the MS4 being subject to an established or approved Total Maximum Daily Load?
 Yes No
 If Yes, please indicate the parameter/pollutant.

2. Does the data support water quality attainment or support trend data toward water quality attainment?

Yes No

If **Yes**, please describe.

Part F – TOTAL MAXIMUM DAILY LOAD (TMDL) ASSUMPTIONS AND REQUIREMENTS ATTAINMENT (ARAP) PLAN

1. Is your MS4 subject to an established or approved TMDL? Yes No

If **No**, please continue to Part G of this report.

2. Has the permittee submitted the TMDL ARAP to the Department for review and approval? Yes No

If **No**, please submit the annual status report providing a brief update on the status of completion of the TMDL ARAP per 6.1.H of the permit.

PART G – SUBMIT REPORT TO:

The facility must register in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due. Registration and other information regarding MoGEM can be found at; [MoGEM Splash Page](#). Information about the eDMR system can be found at [eDMR Splash Page](#). To access the eDMR system, use: [MoGEM Login](#).

For assistance using the eDMR system, contact edmr@dnr.mo.gov or call 855-789-3889 or 573-526-2082.

OPTIONAL QUESTIONS REGARDING MILITARY SERVICE

Have you or an immediate family member ever served in the U.S. Armed Forces?

Yes

No

If yes, would you like information about military-related services in Missouri?

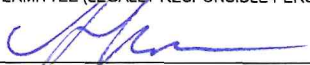
Yes

No

PART H - CERTIFICATION

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.

SIGNATURE OR PERMITTEE (LEGALLY RESPONSIBLE PERSON)



DATE SIGNED

2/20/23

NAME (PRINTED OR TYPED)

Lorie A. Crandell

TITLE

Stormwater Quality Specialist



BMP ATTACHMENTS and SUMMERIES

MCM 1: Public Education and Outreach (4.1)

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.1.A	Y	Define Target Audiences	In SMP	Targets were evaluated based on potential for discharge and deemed to be the biggest contributors that can benefit from education	No modification
4.1.B	Y	Define Target Pollutants	In SMP	Pollutants evaluated based on observation during inspections and erosion control violations	No modification
4.1.C	Y	Social Media Posts Targeted Mailings Contractor/Developer Training Permanent Stormwater Related Signage	*Social Media Hits *Targeted Mailing Units *Online tracking of yearly contractor erosion control certification *Location and type of new stormwater signage	Outreach and education BMP's were evaluated and deemed effective with the exception of Targeted Mailings. A frequency of four mailing a year is too redundant.	Decrease targeted mailings to two times a year unless special circumstances arise.

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.1.D	Y	Stream/Lake or Watershed Cleanup Household Hazardous Waste Collection Event. Assist in planning and advertising.	Cleanup event hosted March 19,2022.Promoted on social media and community signage. Event Hosted June 4,2022.Data compiled in MARC Solid Waste Management year end report	Event well-attended with over 50 participants. Raymore residents collected 32,784 lbs of HHW. Down from 43,880 lbs in 2021.	No modification. Events are successful.

MCM 2: Public Participation (4.2)

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.2.A	Y	Hold a Public Notice Period for 30 days	On City of Raymore Website 2/1/22-3/9/22	Completed	Completed
4.2.B	Y	Have an publicly available method to accept comments	Link available with on City Website and in SMP	Completed	Completed
4.2.C	Y	Hold a public information meeting	Public meeting held March 9, 2022 5pm-7pm at Centerview Community Center 227 Municipal Circle Raymore, Mo	Completed- 0 attended 0 comments	Completed. SMP is still available for viewing on the City's website

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.2.D	Y	Have a publically available method to accept inquiries, concerns, and information from the public about stormwater and related topics.	Residents can contact the stormwater specialist or appropriate contact through the Report-a-Concern link, placed prominently, on the home page of the City's website.	The City utilizes a Request Tracker system. The number of inquiries, concerns, correspondence and resolutions can be tracked for responsiveness and resolution.	No modification. A TextMyGuv feature has also been added for a quicker response.
4.2.E	Y	The City does not utilize a stormwater management panel or committee.	N/A	N/A	No modification.
4.2.F	N	Update the City Council on the SMP.	Public Works, Director Michael Krass updated the governing board on the City's HHW program on January 10, 2022	Goal was not met. The Council needs to be updated on the entire SMP	MS4 Representative Mr. Krass or Lorie Crandell will update the Council annually at a Special Work Session.
4.2.G-F	Y	Evaluate and Update current program		See above	Section 4.2.F

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

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.3.A-B	Y	Update storm sewer system map (if necessary)	In City's GIS Outfall Inventory map and its Storm Sewer Classification map.	The maps are updated as engineering plans and field data becomes available.	Nine outfalls were added in 2022 (bringing the total to 415.) 5120 Feet of storm sewer was added to the inventory
4.3.C	Y	Changes to "non-stormwater into system" ordinance	In SMP	Ordinance evaluated by any instance where it was ineffective	None found. No modification
4.3.D	Y	Conduct dry weather outfall assessments on 12% of outfalls	Scanned reports/checklist saved in the Stormwater drive.	Evaluated to spread out outfall inspection into quadrants to ensure screening of some outfalls in all sections of the City each year.	Inspection map separated into 4 areas.
4.3.E	Y	Maintain diagnostic monitoring procedures.	Procedure links in the SMP. SOP IDDE 3.0 -Dry Weather Sampling SOP IDDE 3.1- Call in Inspections SOP 3.2- Opportunistic ID Observation.	Complete	No modifications

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.3.F	Y	Maintain procedures for tracing illicit discharge	Procedure links in the SMP. SOP IDDE 3.3- Outfall Inspections SOP 3.4-Tracing Illicit Discharges	Complete	No modification.
4.3.G	Y	Maintain procedures for removing the source of discharge	Procedure links in the SMP. SOP IDDE 3.5 Illicit Discharge Elimination and Enforcement	Complete	No modification.
4.3.H	Y	Identify and Inspect Priority Areas Inspect 25% of Priority areas each reporting period.	Stored on City's drive	Of the 30 areas of "higher likelihood" for potential ID. Many are no longer in business or have been deemed unlikely for potential ID based on past inspections	Priority areas have been modified to 18 areas , including new businesses. Maps have been updated
4.3.J	Y	Conduct Investigations in response to discoveries, spills or complaints	Procedure links for investigating ID spills or stormwater complaints are in the SWMP on the City's website.	Adjacent Communities contact persons information have been evaluated for accuracy.	No modification.

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.3.K	Y	Maintain procedures for enforcement of ID.	Procedure links in the SMP UDC 480 Enforcement	Complete	No modification.
4.3.L	Y	Maintain a database for tracking screenings, spills, incidents and investigations.	Reports are scanned and saved	No incidents or investigations to track	None
4.3.M	Y	Inform the general public of hazards associated with ID and improper disposal of waste.	Bi-annual City Survey. HHW collection totals.	City surveys have shown an increase in awareness and HHW events are well attended	No modification
4.3.Q	N	Implement a training program for municipal field staff	Sign in sheets or on-line completion	Assigned virtual training is not as effective as in person instruction	Revert to in-person instruction annually with an initial virtual instruction for new hires.

MCM 4: Construction Site Stormwater Runoff Control (4.4)

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.4.A	Y	Have an ordinance requiring runoff BMPs for sites greater than 1 acre	Regulatory mechanism links in the SMP. Land Disturbance/Grading Application and Checklist UDC Chapter 455 Natural Resource Protection	Completed	No modification
4.4.B	Y	Review Pre-construction Plans	Plans do not proceed without review	Completed	Completed
4.4.C-G	Y	Maintain and enforce runoff control policies to ensure compliance	*Plan Review Checklist *UDC Enforcement *Erosion Control Violation Notices *Individual site SWPPPS and site contractor emailed reports *Land Disturbance Permits *Builders on line erosion control training certification	Policies and requirements in place are effective. The City is utilizing new SWPPPTrak software to track open construction sites and notify operators of violations. At this time we are still evaluating it.	No modifications at this time.

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.4.K	Y	Provide construction site runoff control training to City inspectors and plan reviewers annually	This information is relayed during weekly meetings with engineering staff and during plan review with Development Services on an ongoing basis	As training and support is ongoing, better documentation is required and can be accomplished with a sign-in and subjects covered sheet.	Document training with sign in sheets
4.4.L	Y	Provide written procedures outline inspection and enforcement procedures to inspectors	Links available in the SMP: *Large Residential & Commercial SOPs and Checklists *Erosion Control Inspection Checklist and SOP	Completed	No modifications
4.4.M	Y	Evaluate MCM4		See above	Modifications made to documentation 4.4.K

MCM 5: Post-Construction Stormwater Management in New and Redevelopment (4.5)

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.5.A	Y	Maintain and utilize an ordinance to address post-construction runoff	Links available in the SMP on City's website. Unified Development Code 455 and 450	Completed	None
4.5.B	Y	Continue a strategy to minimize water quality impacts	Links available in the SMP on City's website. *APWA 5600 *UDC 450 Stormwater Management *UDC 455 Natural Resource Protection * UDC 455.040 Stream Buffer Protection	Completed	None
4.5.C	Y	Pre-construction plan review	Attached Plan Review Checklist	Completed	None
4.5.D	Y	Have enforcement mechanism to ensure long term O&M of selected BMPs	Link available in the SMP on City's website. <ul style="list-style-type: none"> UDC 450.090 BMP Surety and Enforcement 	The City requires Stormwater Treatment Facility Maintenance bonds and agreement on all publicly accepted BMPs. Including a notarized maintenance schedule and the responsible party.	None

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.5.E	Y	Inspect BMPs during and post-construction	BMP Inspection Form Attached	Inspection schedule for accepted (post-construction) BMPs is not in place.	Implement Inspection schedule by date accepted.
4.5.F-G	Y	Maintain a plan designed to ensure compliance with post-construction regulatory mechanism	Link available in the SMP on City's website. UDC 450.110 Maintenance Enforcement of Stormwater Facilities	Completed	None
4.5.I	Y	Track post-construction BMP inspections	Copies of inspection reports are kept	Completed	Completed
4.5.L	Y	Training for City Inspectors	During plan review	Completed within other MCMs	Document in plan review notes
4.5.M	Y	Evaluate MCM5		See above	Modified 4.5.E

MCM6: Pollution Prevention/Good Housekeeping for Municipal Operations (4.6)

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.6.A-C	Y	Maintain and utilize an annual training program for municipal employees	Emails with assigned training	In person training is more effective and easier to document	Yes. Conduct in -person group training during Public Works Week Activities
4.6.D	Y	Maintain a list of Municipal facilities	List is maintained in the SMP	Up to Date	None
4.6.E	Y	Maintain a list of facilities subject to permit for industrial activity	N/A	N/A	None
4.6.F	Y	Maintain controls for reducing or eliminating discharge of floatables and pollutants from Municipal facilities	SOPs and SWPPPS on file for each facility	Effective	None
4.6.G	Y	Have procedures for proper disposal of waste removed from City areas of jurisdiction	SOPs and SWPPPS on file for each facility	Waste removed from the City's street sweeping program is properly disposed using a contracted waste disposal company	None
4.6.H	Y	Maintain and utilize procedures for washing of municipal vehicles and equipment	SOPs and SWPPPS on file for each facility	All city-owned vehicles are washed at the city owned car wash bay. The bays are connected to the sanitary sewer and have oil-water separators that are cleaned by a contractor as needed	None

Permit Section	Goal Achieved	Action	Documentation	Evaluation	Modified
4.6.I	Y	Maintain written explanation of controls and procedures	Individual SWPPPs for each facility are maintained	Effective	None
4.5.K,L,M	Y	Evaluate/review MCM6	See above	Complete	4.6.A-C Conduct in-person training

Stormwater BMP Inspection Form - Dry Detention
City of Raymore, Missouri

Address: Country Lane & Coventry Lane

Owner: Brookside HOA

Date: 9/7/2022

Inspector L. Crandell

BMP I.D.: 160 Retention

I. REASON FOR INSPECTION		
	Routine	Other:
II. BMP'S AND INSPECTION RESULTS		
Item	Inspection Results	BMP's in General
1	Apparent problems	BMP does not appear to be well maintained.
2	Design flaws	BMP observed to have significant design flaws which lessens its effectiveness.
3	Unauthorized modifications	BMP has unauthorized modifications that reduce its effectiveness.
4	BMP Removed	BMP has been destroyed or removed from the property.
5	Trash	Trash and debris has accumulated on/in BMP. Yard waste in BMP.
6	Contaminated	Evidence of oil, gasoline, contaminants or other pollutants.
7	Smells	Unpleasant odors from the BMP.
Item	Inspection Results	BMP: Dry Detention
1	Weeds	Invasive, nuisance vegetation, or weeds are present.
2	Brush/Trees	Growth of brush and trees does not allow for proper maintenance. Dead, diseased, or dying trees are present. Tree growth on berms or emergency spillway > 4' in height or covering more than 10% of spillway.
3	Sediment accumulated	Sediment in storage areas, rock filters, and pond has reduced storage volume.
4	Erosion	Eroded damage over two inches deep; potential for continued erosion; any erosion on a compacted berm embankment; soil from adjacent areas washes into/on BMP; continued erosion is prevalent.
5	Rodent holes	If facility acts as a dam or berm, any evidence of rodent holes, or any evidence of water piping through dam or berm via rodent holes.
6	Insects	Wasps, hornets, or bees interfere with maintenance activities. Excessive or nuisance levels.
7	Standing water	Water is observed within the BMP (between storms) and appears not to drain freely or soil is excessively soggy. Excessive ponding of water within BMP.
8	Non level berm	Non level internal berm dividing wet pond cells.
9	Contaminated	Prevalent and visible contaminants such as oil.
10	Clogged	Overflow or low flow orifice is clogged or obstructed with sediment and/or debris.
11	Spillway in disrepair	Emergency spillway is obstructed, filled with sediment, eroded out, or in disrepair.
12	Rip rap needs repair	Rip rap is washed out or insufficient to handle discharges.
13	Forebay non-operational	Sediment forebay is either filled with sediment (greater than 50% of design depth), being bypassed, or does not contain any sediment.
14	Trash racks need cleaning	Debris has accumulated in overflow.
15	Pipes/structural repairs needed	Pipes and structures show signs of corrosion, spalls, leaks, deformation, crushing, or other material failure.
16	Sediment in overflow	Sediment has accumulated in overflow.
17	Dam needs repair	The dam/embankment has visible signs of cracking, sliding, piping, leaking, or bulging.
18	Slope protection failure	Slope reinforcement has been eroded or otherwise damaged so that slope is unstable.
(If an item in the left column contains "Yes," corrective maintenance is required)		
1.	Is maintenance needed at this time?	No
2.	Date maintenance is to be completed:	
3.	Comments/Notes:	Some algae
III. FOLLOW-UP		
1.	Describe corrective actions taken:	
2.	Date Corrected:	



COVER PAGE

- n/a Project Name
- n/a Vicinity Map
- n/a Developer's Contact Information
- n/a Design Engineer's Contact Information
- n/a Design Engineer's Signature & Seal
- n/a List of Drawings
- n/a Utility Contact Information

STREETS (Technical Specifications ST-1)

- n/a Overview sheet of entire project
- n/a All exposed concrete shall be KCMMB 4K mix
- n/a Plan and profile
 - n/a All street sections included
 - n/a Appropriate stationing and control points
- n/a Intersection details sheet
 - n/a ADA- accessible ramp design at each location (i.e., not generic details)
 - n/a ADA - accessible ramp standard details
- n/a Pavement
 - n/a Section view of pavement design
 - n/a Curb/gutter details
 - n/a Signage plan included

- n/a End of road markers at appropriate locations
- n/a City standard details for signs

n/a Grading shown within right-of-way

n/a Traffic control plan specific to the project

STORMWATER (Technical Specifications STM-1)

n/a Overview sheet of entire project

n/a All exposed concrete shall be KCMMB 4K mix

n/a Plan and profile

- n/a Appropriate call-outs on the plan view showing type of storm inlet to be constructed, with appropriate reference to detail sheet number
- n/a Hydraulic grade line of design storm shown in profile view
- n/a Flowline elevations called-out on storm structures

n/a Detention/Retention basin

- n/a Detention basin design, including outlet structure details, anti-clogging Measures
- n/a 40-hour extended detention within the detention basin
- n/a Calculations for the 40-hour extended detention contained within the detention report
- n/a Retention basin design, including emergency drawdown measures

n/a Master Drainage Plan (MDP)

- n/a MDP included
- n/a Contour lines shown on the MDP at an appropriate contour interval
- n/a Drainage flow arrows on MDP as appropriate
- n/a Stream buffers shown on MDP, plans, and Plat
- n/a Regulatory floodplain limits shown on MDP or plans
- n/a Swales and diversion berms shown on MDP
- n/a Minimum Building Opening Elevations (MBOEs) shown on the MDP
- n/a MBOEs set at a minimum of 2.0 feet above the 100-year water surface Elevation
- n/a Elevation of the 100-year water surface elevation within designated Swales
- n/a Emergency overflow swales shown on the MDP
- n/a Existing and finish lot corner elevations shown on the MDP

n/a Basement type shown on the MDP (standard, daylight, walk-out or walkout)

n/a Stormwater Design

n/a Stormwater conveyance system calculations provided within the plans (i.e., not a bound report)

n/a n/a Sufficient number of storm inlets in rear yards to capture no more than 2 acres

n/a Elevation of 100-year water surface elevation within designated swales

n/a Maximum of 400 feet spacing between curb inlets

n/a Culvert design calculations using appropriate modeling

n/a Box culvert design provided (i.e., designed to HL93 loading)

n/a Mud mat shown for cast-in-place box culverts

n/a Note stating the City to review shop drawing for box culvert prior to Approval

n/a Velocity calculations at discharge points

n/a No adverse impact on adjacent property owners

n/a Rip rap dimensions or other energy dissipation features

n/a Rip rap calculations included in plans (i.e., not a bound report)

n/a Floodplain development permit, if needed

n/a Standard Details

n/a Curb inlet

n/a Junction box

n/a Field inlet

n/a Grated inlet

n/a Other standard details as needed

WATER (Technical Specifications WAT-1)

n/a Overview sheet of entire project

n/a Note stating no work will begin before MDNR permit received

n/a Plan and profile included

n/a Location

n/a Water mains contained within an easement

n/a Mains installed at 12" minimum from top of pipe

n/a No dead-end water mains greater than 700 feet in length

n/a Sufficient clearance between sanitary sewer mains

- n/a Water line to be extended around the cul-de-sac to avoid water service lines beneath the cul-de-sac
- n/a Opposite side of the street from the sidewalk, if practical

- n/a Two valves at a tee, and three valves at a cross

- n/a Bends shown at all locations to achieve the minimum radius of curvature

- n/a Gate valves on mains less than 24"

- n/a Butterfly valves on mains 24" and larger

- n/a Water lines to be bored beneath street (i.e., no open-cuts n/a allowed)

- n/a Valves to be called-out along water main at lengths specified

- n/a Fire lines
 - n/a No more than 500-foot separation between fire hydrants
 - n/a Fire hydrant assembly standard detail provided, Clow Medallion only brand accepted
 - n/a Temporary in-line fire hydrant assemblies called-out for dead ends where future extension will occur
 - n/a Fire hydrants located 20 feet beyond the radius of curvature at Intersections
 - n/a Fire line to include a valve on the public main where a valve does not exist within 500 feet

- n/a Standard Details
 - n/a Valve and valve box
 - n/a Trenching and backfill
 - n/a Backflow vault and backflow assembly
 - n/a Meter vault detail provided for meters 3" and larger
 - n/a Standard water meter and vault
 - n/a Thrust block
 - n/a Manhole frame and lid standard details with standard lettering

- n/a Water demand analysis, if required

- n/a MDNR concurrence letter prepared for signature

- n/a MDNR permit acquired

SANITARY SEWER (Technical Specifications SAN-1)

- n/a Overview sheet of entire project

- n/a Plan and Profile
 - n/a All line segments included
 - n/a Minimum of 0.2 feet fall between manhole flowline in/out, or 0.5 where the deflection angle is excessive
 - n/a Pipe material called out
 - n/a Sanitary sewer manholes called out with appropriate references to sheet numbers
 - n/a All lots to be provided with sanitary sewer laterals and wyes. service lines can't cross property lines
 - n/a All sanitary sewer service laterals clearly shown on the plans, either on the plan view with sufficient notes, or tabulation format
 - n/a Minimum pipe slopes for sanitary sewer lines shown
 - n/a Sanitary sewer mains to be shown with minimum of 36" cover

- n/a Design
 - n/a Sanitary sewer analysis, including off-site sanitary, on-site sanitary, hydraulic grade line, velocity, based on the peak base flow and peak infiltration and inflow in bound report form
 - n/a Maximum of 400 feet between manholes

- n/a Location
 - n/a Sanitary sewer mains to be extended to plat boundary
 - n/a Wyes 4 feet from manhole and each other

- n/a Standard details
 - n/a Sanitary sewer manhole
 - n/a Inside drop manhole standard
 - n/a Shallow manhole
 - n/a Manhole frame and lid standard details with standard lettering
 - n/a Trenching and backfill
 - n/a Wye and tracer wire
 - n/a Stream crossing detail in accordance with the specifications
 - n/a Trench check

- n/a Manholes within floodplain to be constructed with bolt-down lids

- n/a Dead end manholes to have 8' stub for future expansion. (where applicable)

n/a MDNR permit required prior to construction.

EROSION AND SEDIMENT CONTROL (DCM Section 5100)

n/a ESC plan included

n/a Turf reinforcement mat where appropriate

n/a Restoration plan

n/a Temporary sediment basin or sediment traps

n/a Design of temporary sediment basins or sediment trap

n/a Calculations supporting the design of the temporary sediment basins or traps

n/a SWPPP

STREETLIGHTS

n/a Is all conduit called out on the plans

n/a Are the photometrics and voltage drop shown

n/a Does the controller have a time delay/ light shield

n/a Is the pole 30' tall

n/a Is the light 4000K LED

MISCELLANEOUS

n/a Easements shown on engineering plans match the plat

n/a Easements shown are minimum 15' wide.

n/a Off-site easements acquired or noted in approval letter