

St. Joseph MS4 Annual Report

The document describes the stormwater control practices that were implemented by the City of St. Joseph (City) within the MS4 area between January 1, 2022, and December 31, 2022. These practices are consistent with permit MO-R04C038 requirements to minimize the discharge of pollutants into Waters of the State from the storm sewer system.

Executive Summary

The Federal Clean Water Act, Phase II rule requires operators of communities with a population of less than 100,000 and greater than 10,000 to obtain a permit to discharge stormwater to waters of the state under the National Pollutant Discharge Elimination System (NPDES). The Missouri Department of Natural Resources (MDNR) is the regulatory agency having the Phase II NPDES oversight authority for the State of Missouri. The City is permitted under MO-R04005 and MO-R04C038 (Permit) to discharge stormwater to the One Hundred and Two River (102 River), Candy Creek, and Contrary Creek. The current permit was issued in December of 2021 and expires on September 30, 2026.

Under the Comprehensive Permit, the City is not required to submit a SWMP detailing how the Stormwater Management Program (Program) will be implemented but shall retain the most recent copy of the SWMP at a reasonable location accessible to the Department. The Permit provides guidance for each regulated Municipal Separate Storm Sewer System (MS4) to develop a comprehensive program that contains the six minimum control measures (MCMs).

1. Public Education and Outreach
2. Public Participation/Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post Construction Site Runoff Control
6. Pollution Prevention/Good Housekeeping for Municipal Operations

Each of these MCMs include required activities, best management practices (BMPs), targets, and tracking measures. Additionally, the City is required to submit an annual report documenting progress made towards the goals and objectives in the SWMP.

Watershed Characteristics

The topography of St. Joseph is characterized by rolling hills, open plains, and prairie next to the Missouri River. The western side of St. Joseph drains to the Missouri River. This area is mainly serviced by the Combined Sewer System (CSS). The land on the eastern side of St. Joseph drains to the 102 River, a tributary to the Platte River. This area is mainly serviced by municipal separate storm sewer system (MS4). The land on the eastern side of town is the focus of this Stormwater Management Plan.

The 102 River is approximately 80 miles (130 km) long, located in northwestern Missouri, with its source tributaries rising in southwestern Iowa. The 102 River is the largest tributary of the Platte River, which flows into the Missouri River south of Platte City, MO. In the early 1900s much of the river was channelized, resulting in a 19% reduction of total stream miles, and an overall loss of riffle and pool habitats. Channelization has also caused a widening of the stream channel, and reduction in low flow

conditions. The riparian corridor is less than 100 feet wide through much of the stream length. This loss of woody vegetation has resulted in destabilized banks that are highly susceptible to erosion and elevated water temperatures.

MDNR, under the Clean Water Act, works to restore and maintain the chemical, physical, and biological integrity of the state's waters. To do that, MDNR assigns uses for each waterbody based on current and historic consumption. Once those uses are assigned, then water quality standards are established to meet those uses. The beneficial uses for the 102 River include irrigation, livestock and wildlife watering, protection of warm water aquatic life and human health fish consumption, whole body contact recreation (subset B), secondary contact recreation and drinking water supply.

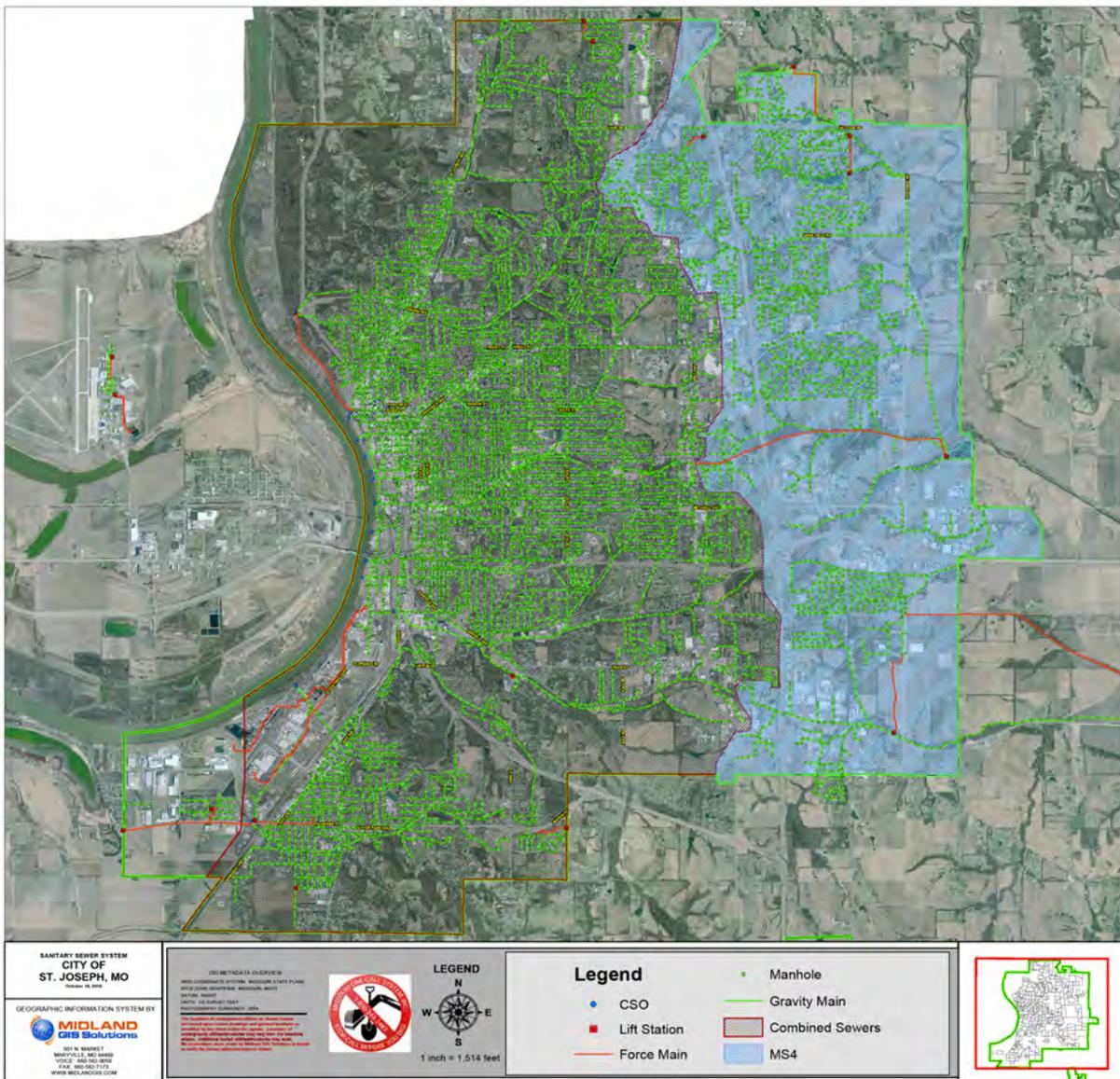


Figure 1: Map of St. Joseph, with MS4 area identified in blue.

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

2022 Reporting Period:

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

Target Audience	Target Pollutants	Educational BMP	Changes to Educational Resources
City Employees	Street sweepings, de-icing products/rock salt, sediment from construction projects, fluids from vehicles, floatables	1. In-house training created through HR training platform, Paycor.	Staff training for 2022 consisted of one-on-one training with Parks, Streets, and Line Maintenance Departments.
Residents	fertilizers (nutrients), chemicals/toxics, yard/pet waste, salt or other de-icing products	1. City Stormwater webpage with educational materials.	Reviewed in 2022 – No changes were made to resources.
		2. Peachjar flyers to School District Parents	1 PeachJar flyer submitted on ways to reduce stormwater pollution. Two newspaper articles were published in NewsPress in 2022, both covering stormwater pollution and how we can all play our part in decreasing stormwater pollution. We are going to publish 4 Peachjar fliers in 2023.
		3. Stormdrain stenciling	40 inlets stenciled with Eagle Scout group
Business Owners	Restaurant waste (FOG) fertilizers (nutrients), Chemicals	4. FOG handouts supplied to restaurants	The City has a Fats, Oils, and Grease (FOG) program that works with restaurants to ensure that they are in compliance with their FOG permit. A part of this program is educating restaurant workers and owners on how they can impact stormwater quality through proper grease trap clean out schedule to prevent overflows, covering dumpsters, and proper cleaning methods around grease dumpsters.
		5. City Stormwater Webpage	Reviewed in 2022 – No changes were made to resources.

Contractors Developers	Improperly managed land disturbance sites lead to sediment runoff, chemical/toxics spills, trash/waste/floatables leaving the site.	1. Targeted educational campaign - Handouts on proper site management given out during permitting	Educational handouts are provided at the time of permitting or during the pre-construction site meeting with operators. ESC inspectors see a decrease in land disturbance site issues on sites that followed the land disturbance permit requirement of a pre-con meeting. In 2022 12 pre-construction meetings were held for construction sites.
		2. Site management discussion during preconstruction meeting	

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

In 2022 our involvement activities consisted of a Stream Team clean-up, the City’s biannual Clean-Sweep and street sweeping program, and two tabling events (Preservation event and a Safety fair). The City’s Stormwater Management Plan calls out volunteer water quality monitoring as one of our involvement BMPs, although this goal was not met in 2022, our volunteer base is continuously growing and we plan to host a monitoring event in 2023 through Water Protection’s Stream Team #4260. The two tabling events in 2022, allowed for stormwater staff to collaborate with other city departments and businesses in town. Due to this we choose to utilize these opportunities to reach a larger audience of residents, city staff, business owners, and contractors.

7. The BMPs for MCM 1 were deemed effective for the 2022 reporting period. We saw an increase in participation from residents in cleanup activities and planting events. As we expand our program and continue to work with various community groups, we are seeing more interest in the Stormwater program.

Permit Section	BMP Description	Measurable Goals	Measurable Goal Assessment
4.1.A	Target Audience Identification	Update/review lists annually and determine if the lists should include other audiences. Tracking will include flyers dropped off at City Hall and participation at events.	No changes deemed necessary to the target audience list. Participation numbers at stormwater events are tracked via excel sheet. We have seen an increase in participation and interest in the stormwater program.
4.1.B	Target Pollutant Identification	Evaluate previously identified pollutants of concern annually to determine if the City should target other pollutants.	No changes deemed necessary to the targeted pollutants list.

4.1.C	City Staff Training	Training materials exist. Transition to Paycor in first year of permit cycle. Training will include a test: track test scores to see improvement.	Training consisted of one-on-one in 2022, with the goal of transiting to formal training via Paycor in 2023.
	Residents & businesses Educational Program - Stormwater Webpage	Review webpage content annually. Create/update educational materials. Quantify participation of audience through number of visits to the site.	Stormwater educational materials on the city's webpage were reviewed, and no updates to materials at this time.
	Publish articles in local newsletter. Residents Educational Program - Flyer Distribution via PeachJar	Develop topics that are group specific and address activities or a pollutant of concern. distributed via PeachJar to School District Parents. Two (2) flyers per year will be sent out.	Only one flyer was published in Peachjar in 2022, titled "how you can help reduce stormwater pollution this spring". In 2023 we will develop and submit more stormwater education materials via Peachjar.
	Concept review and preconstruction meetings to educate Contractors and Developers	Update handouts on proper site management given out with ALL permits and conduct site management discussions during pre-construction meetings.	Concept review meetings were held in 2022, and stormwater control runoff for development and redevelopment was discussed with developers and the engineers present.
	Mark storm inlet with "No-Dumping-Drains to Stream"	Placard, stencil, or paint, a minimum of 10% of all known stormwater inlets in MS4 area per year.	We did not hit the goal of marking 10% of all know stormwater inlets, but we have determined that we have 1,993 inlets in the separated sewer. Stormwater staff partnered with an Eagle Scout group for a stenciling day and we stenciled 40 inlets in the separated sewer.
	Targeted Education Campaign, FOG Handouts to restaurants	Track number of handouts to restaurants per year. Follow up with restaurants that are not in compliance with FOG permits.	The FOG program had high staff turnover in 2022, but compliance inspections and handout of educational materials still occurred throughout the year.
4.1.D	Stream or Watershed clean-up events; Litter clean-up events such as Missouri Stream Team	Determine site location, host volunteer event, and clean up or 400 yards of stream/ streambank/ watershed or 2 miles of roadside (site determinate) (These may be combined such as 1 acre of land and	Water Protection hosted a stream cleanup in 2022. In 2023 we are planning to host a kayak cleanup along the 102 river.

		200 yards of stream.)	
	Stream or Watershed clean-up events; Litter clean-up events such as Missouri Stream Team	Water quality monitoring will be completed 1 time per year on the same stream to assess if educational efforts are improving water quality.	A volunteer water quality monitoring event was not held in 2022, but will be held in 2023, to meet permit goals and to assess the programs effectiveness on aquatic organisms.
	Ongoing yard waste collection, designated yard waste collection area, household hazardous waste collection, or street sweeping program.	Provide the service as an annual occurrence or at readily accessible location. For street sweeping, this shall be conducted at minimum twice a year.	The city's biannual clean sweep was held in 2022 in April and October. In 2022 2,856 miles were swept.

MCM 2: Public Involvement and Participation

2022 Reporting Period:

ASSESSMENT OF EFFECTIVENESS: The City's SWMP and BMPs were effective in 2022 for MCM 2. The Stormwater Subcommittee (Subcommittee) of the Sustainable Environment Advisory Committee of St. Joseph (SEAC) was created in 2020. The Subcommittee was successful in increasing public involvement and participation. Through SEAC and the Subcommittee, a Planting Native Committee was formed to get stakeholders within the city involved in Green Infrastructure (GI) and native plantings within the city. This committee has been a valuable resource for the Stormwater Management Team to educate citizens on the Program.

3. (4.2.D)

MCM 2 Measurable Goals:

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.

Permit Section	BMP Description	Measurable Goals	Measurable Goal Assessment
4.2.A	30-day Public Notice Period Required items posted on public website	Revised SWMP posted on City's website for at least 30 days during permit renewal.	NA
4.2.C	Public Meeting with 30-day notice	Public notice of the public meeting for at least 30 days before	NA

		meeting. Posted on City's website during permit renewal.	
4.2.D	Public Comments submitted via email to Stormwater Quality Coordinator	The Stormwater Quality Coordinator will track communication with the public. Correspondence will be divided into different categories: concerns, ideas for improvement, general questions.	Reports, comments, or questions submitted are tracked via an excel spreadsheet. After reviewing this tracking method, we have determined that it is not effective and will be updated in 2023. In 2022 the Stormwater Quality Coordinator's email was added to the city's SW page.
4.2.E	Stormwater Subcommittee of SEAC	Participation in the subcommittee will be monitored, membership will be tracked from year to year. Also, the number of nonmembers participating at events will be tracked.	This is not a stormwater committee, but it does provide the opportunity for people within the community to participate in our program. Tracking of membership did not occur in 2022, but membership participation in events was tracked.
4.2.F	Update to City Council	Questions, attendance, and suggestions will be tracked.	Presented 7/18 Questions and suggestions were not tracked, due to it being at a council work session.
4.2.G	Evaluate program	Evaluate tracking to modify program as needed	Tracking measures for all MCMs determined to be ineffective, these will be revamped in 2023.
4.2.I	Tracking mechanisms to track attendance, inquires, or concerns	Participation and communication from the public will be tracked. See increase in public participation in the SW program.	We have seen an increase in participation in the program. We have also seen an increase in communication from the public via direct communication and reports from other city departments related to stormwater.

MCM 3: Illicit Discharge Detection and Elimination

2022 Reporting Period:

ASSESSMENT OF EFFECTIVENESS:

The separation of Blacksnake Creek has been completed, although this is still a part of the combined sewer and not the MS4, we are including monitoring, clean-up events, and identifying priority areas within the Blacksnake Creek watershed. Mapping of this watershed is not complete yet, but the city has a contract with SAM to complete the mapping, there are three phases of mapping left to complete at a cost of \$77,000.

Permit Section	BMP Description	Measurable Goals	Measurable Goal Assessment
4.3.A	Maintain storm sewer map in GIS system	Maintain map of constructed outfalls on GIS through contract	Many outfalls within the city are already mapped, SW staff is working

	showing MS4 outfalls, waters of the state, and boundary of the MS4 area.	with SAM, LLC. One local watershed will be updated each year.	to identify city owned outfalls that discharge to WOTS.
4.3.B	Update post-construction Stormwater BMPs in GIS during final inspections. Create numbering system for outfalls, include date for outfall surveyed in field, and date that new outfalls are added to system.	Finalize inspection procedures and GIS layers. Add all new stormwater BMPs in GIS as development projects are completed.	Inspection procedures were reviewed. In 2022, we hired a part time employee/student intern to map post-construction stormwater BMPs. Working with our streets department to determine what the best number system for outfalls is. In 2023 we will finalize our city owned outfall identification.
4.3.C	Illicit discharge ordinance (Chapter 25: Sec. 25-98)	Review Illicit Discharge Ordinance. Enforce City ordinance and record all enforcement actions.	IDDE ordinance was reviewed in 2022, and updates were made, which were presented to council during the Stormwater Program council meeting. All stormwater ordinances will be updated in 2023 in conjunction with the local limits ordinance updates.
4.3.D	Outfall field assessments Dry Weather Field Screening SOP 1.4.002	Review and update Dry Weather Field Screening SOP. Conduct screening at 12% of outfalls. Use enforcement actions when needed. Determine priority areas to be screened annually.	We are still in the process of determining which outfalls are city owned. If the outfall is on private property, then the city will not maintain it, making all outfalls that are not on the city's property or within the ROW, private outfalls. All city owned outfalls will be identified in 2023, if these are located during dry weather, screening will be conducted at that time.
4.3.E 4.3.F	Illicit Discharge Detection and Elimination SOP 1.4.001 (Appendix C) Dry Weather Field Screening SOP 1.4.002	Review IDDE SOP. Respond to reports of illicit discharges and illegal dumping. Identify illicit discharges and the source, take enforcement actions when needed. Record all responses.	We are still in the process of determining which outfalls are city owned, this will be completed in 2023. Outfalls will be identified in the field, and DWS will be conducted at that time, if it has been 72 hours after the last precipitation event.
4.3.G	Maintain procedures for removing the source of an illicit discharge. Work with source of illicit discharge to remedy situation.	Review and update IDDE SOP to include details on how to remedy the situation. Identify illicit discharges and the source. Work with source to remove the discharge. Record all responses.	Procedures are reviewed annually, staff works with source of illicit discharge to prevent occurrence, educate, and determine if remediation needs to be completed.
4.3.H	Identify illicit discharge priority areas.	Identify priority areas and create list/map.	As we continue to identify city owned outfalls, we are developing a list of

			priority areas with in the MS4 area. Majority of illicit discharge reports received by SW staff are located within the combined sewer area, due to this being the older and more developed area.
4.3.I	Maintain written procedures for implementing IDDE program. Illicit Discharge Detection and Elimination SOP Dry Weather Field Screening SOP	Implement dry weather screening program and implement schedule to address all non-stormwater discharges.	Identification of city owned outfalls will be completed in 2023, and review of procedures, along with updates as needed.
4.3.J	Conduct investigations in response to field screening discoveries, spills, or complaints from public, or municipal staff.	Update Dry Weather Screening and IDDE SOP to reflect permit requirements. Conduct investigations regarding all discovered and reported spills.	All reports of illicit discharges were investigated in 2022, response time will be improved in 2023 and the SOP will be updated.
4.3.K	Appropriate enforcement procedures for illicit discharge ordinance	Enforce City ordinance and record all enforcement actions.	Code was reviewed in 2022, and presented to council during a work session, code updates for permit regulations will be completed in 2023 in conjunction with other code updates from Water Protection.
4.3.L	Create and maintain database for tracking dry weather screenings, spills, incidents, and investigations.	Review data to determine if there are new priority areas for the IDDE program and ways to eliminate them.	Tracking for DWS, IDDE, and reports is completed in an excel spreadsheet. We have found this to not be the most effective or efficient tracking method and will be revamped in 2023.
4.3.M	Education and Outreach Strategies in MCM 1 and MCM 6 regarding the hazards of illegal discharges and improper disposal of waste.	Review training and educational materials. Conduct annual City staff training about IDDE. Record public presentations regarding IDDE and enforcement procedures. Provide illicit discharge materials to all open land disturbance site managers.	Training for city staff consisted of one-on-one training for the reporting period, this will be transitioned to Paycor in 2023. SW staff is working with a community group (Beautify St. Joe) to conduct litter clean-ups, and train residents and business owners on the importance of removing trash of stormwater pollution prevention.
4.3.N 4.3.O	Review program annually and update implementation procedures as necessary	Revisions to ordinance completed in 1st yr of permit cycle, update map to include permit requirements. Review program and update implementation	Code was reviewed in 2022, and presented to council during a work session, code updates for permit regulations will be completed in 2023 in conjunction with other code updates from Water Protection.

		procedures. Ensure program is in compliance with permit. Maintain an updated map with all items in MCM3.	
4.3.Q	Develop and implement training program for all municipal field staff, who may come in contact with an illicit discharge. Training will be in conjunction with MCM 1 training.	Review and update training and educational materials. Conduct annual City staff training about IDDE. Record training dates, topics, and attendance.	Training consisted of one-on-one with other city departments in 2022, in 2023 we will be transiting to Paycor to distribute training to all municipal staff who have the potential to impact stormwater.

MCM 4: Construction Site Stormwater Runoff Control

2022 Reporting Period:

ASSESSMENT OF EFFECTIVENESS:

Permit Section	BMP Description	Measurable Goals	Measurable Goal Assessment
4.4.A	Land Disturbance and Sediment Control Ordinance (Chapter 25: Section 25-9)	Review and update ordinance as needed. Track all enforcement actions.	Code was reviewed in 2022, and presented to council during a work session, code updates for permit regulations will be completed in 2023 in conjunction with other code updates from Water Protection.
4.4.B	Commercial and Subdivision Review SOP	Develop pre-construction plan review checklist to ensure consistency during review. Review all pre-construction plans and document.	A pre-construction plan review checklist was created in 2022, this is used for all commercial plan review conducted by stormwater staff.
4.4.C 4.4.L	City of St. Joseph Land Disturbance Requirements and LD Inspection SOP	Review and update LD Requirements and LD Inspection procedures. Track inspections and enforcement actions.	All inspections and enforcement actions were tracked. Tracking methods will be updated in 2023. We will be transiting to Cartegraph for LD items, making tracking more efficient and easier to assess the data.
4.4.D	Land Disturbance and Sediment Control Ordinance (Chapter 25: Section 25-9), City LD Requirements, Enforcement Response Plan	Record all enforcement actions taken by the City.	All enforcement actions taken by the SW team are tracked. We are planning to transition to using Cartegraph for enforcement tracking.
4.4.E	City of St. Joseph Land Disturbance	During each LD inspection, ESC	During each inspection ESC Inspectors verify if inspections are being

	Requirements and LD Inspection SOP	inspectors verify that inspections are occurring. Track and use enforcement measures when necessary.	conducted by site operators, and this is noted on the inspection form.
4.4.F 4.4.G	Inventory of active LD sites, including all relevant info regarding the site and inspection details.	Update list as new LD sites become active.	As new projects are approved for permits, these are added to the Stormwater land disturbance projects, under the city's server.
4.4.H	Review & update Stormwater Program (ordinances, permitting procedures, review procedures, inspection procedures, & enforcement procedures	Review Stormwater Management Program and complete inventory of active LD sites.	Active land disturbance site inventory is complete and is added to when new LD projects are approved for permits. This inventory is housed on the city's server, containing approved plans, and all stormwater related documents.
4.4.I	Web-based comment submission platform, customer comment drop box in City Hall lobby, "Report a Spill" form on SW webpage.	Record all complaints and responses	All reports submitted to the stormwater team are saved on an excel sheet, this tracking method was deemed ineffective and will be revamped in 2023.
4.4.K	Provide construction site runoff control training to all ESC inspectors and plan reviewers, once per permit cycle	Provide training to inspectors when current training expires. Track and document.	All ESC inspectors have received for construction site runoff control. We hired a new Green Infrastructure Inspector in 2022, he received ESC training in the fall and is now able to conduct ESC inspections. Two project managers under the City's Engineering dept, received ESC training in 2022.

MCM 5: Post-Construction Stormwater Management in Development and Redevelopment

2022 Reporting Period:

ASSESSMENT OF EFFECTIVENESS:

Permit Section	BMP Description	Measurable Goals	Measurable Goal Assessment
4.5.A 4.5.B 4.5.C	Post-Construction Stormwater Ordinance (Chapter 25: Sect. 25-97)	Review and update ordinance as needed. Track document reviews.	Code was reviewed in 2022, and presented to council during a work session, code updates for permit regulations will be completed in 2023 in conjunction with other code updates from Water Protection. The SW program enforces water quality standards for all development and redevelopment within the city, following the APWA MARC BMP Manual. All plan review is tracked, and completed using a plan review checklist.
	APWA/MARC's BMP Manual, SWPPP template, Pre-construction plan review.	Enforce APWA/MARC manual requirements for all plan reviews over one acre. Document plan reviews.	The City has adopted APWA/MARC's BMP Manual and provided a Stormwater Pollution Prevention Plan (SWPPP) template to protect sensitive areas, minimize the creation of stormwater pollution, utilize BMPs that effectively remove stormwater pollution, and attempt to maintain predevelopment runoff conditions. During the plan review stage of a project, the Stormwater Quality Coordinator review the submittals for these requirements.
4.5.D 4.5.E	Stormwater Treatment Facility Registration and Maintenance as listed in post-Construction Stormwater Ordinance (Chapter 25: Sect. 25-97)	Create stormwater treatment facility registry. Track all enforcement actions. Require O&M manuals for the close out of the project.	Plan review checklist was updated in 2022 to ensure that all WQ items are being accounted for during plan review. O&M manuals are required for closeout of project, if they are not supplied during the review process.
	Inspection of each water quality structural and nonstructural water postconstruction BMP.	Inspect all post-construction BMPs during construction and once during first 3 years post construction. Inspect 12% of all post-con BMPs, including ongoing enforcement cases. Update SW ordinance to	BMPs are inspected during the ESC inspections during construction, and during the final inspection of the project. We will have to increase the percentage of inspections yearly, to meet the 60% goal. We are in the process of completing the inventory of post-con BMPs.

		meet compliance.	
4.5.F 4.5.G	Post-Construction Stormwater Ordinance (Chapter 25: Sect. 25-97 25-99)	Update ERP to match enforcement actions noted in permit. Evaluate and update ordinance as needed. Record all enforcement actions taken.	The City has an ordinance in place, Chapter 25: Section 25-99 that gives the authority to the City to use a range of enforcement actions for violations. EER will be reviewed and updated in 2023.
4.5.H 4.5.I	Stormwater Treatment Facility Registration and Maintenance as listed in Post-Construction Stormwater Ordinance (Chapter 25: Sect. 25-97)	Create inventory list of all post construction BMPs and inspections. Test Cartegraph for tracking functions. Update post-construction BMP inventory as new BMPs are constructed. Track all BMP inspections.	In 2022, we hired a student intern to complete post-construction BMP mapping, while onsite, the intern takes photos of the BMP for record. Water Protection will get Cartegraph online in 2023, and testing for tracking will occur. All new BMPs will be mapped during the final inspection, code updates for annual inspections of BMPs will be completed in 2023 in conjunction with other code updates from Water Protection.
4.5.J	Evaluate post-construction stormwater management program.	Review ordinances, permitting procedures, review process, inspection procedures, and enforcement procedures to ensure compliance with permit requirements.	Code was reviewed in 2022, and presented to council during a work session, code updates for permit regulations will be completed in 2023 in conjunction with other code updates from Water Protection.
4.5.L	Provide training for ESC inspectors once per permit cycle; must include structural and nonstructural BMPs, can include GI training, or specific operation of proprietary post-construction BMPs.	Provide training at minimum once during permit cycle. Document training, attendance, and date.	In 2022, Green Infrastructure techs completed a GI class, with staff turnover a new GI Tech was hired and ESC training was offered and completed, two project managers in the Engineering dept completed the ESC training as well. Additional training courses were taken by stormwater staff, these trainings were tracked, including a stormwater seminar in St. Charles county, Stormcon, WEFTech, and MWEA.

4.5.D Procedures for long term operations and maintenance of post-development BMPs were not evaluated during the 2022 reporting period, because these procedures have not been fully developed and implemented into our program. Our goal for 2023 is to fully develop and implement these policies and procedures.

4.5.F and 4.5.G: Compliance and enforcement measures were not evaluated for the reporting period, because we have not fully developed and implemented these measures. We have encountered situations where the developer installed the post-construction BMP and the current owner/operator is

unaware of the facility and their responsibility to maintain. Through expanding our outreach and education, with the addition of the Industrial stormwater training day, we will hit a large percentage of post-construction facility owners.

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Employees

2022 Reporting Period:

ASSESSMENT OF EFFECTIVENESS:

Many of the measurable goals for good housing for municipal operations were not met in 2022. This is due to several factors, including staff turnover in the stormwater department, public works, and the city’s IT department. Training for municipal staff consisted of one-on-one or during meetings with other city departments. MoKAN received approval from the DNR to use remaining grant funding for consultant led stormwater training for industries and city staff. It will be included in the proposal to consultant companies, that the training materials can be accessible and utilized by city staff after the in-person training is completed. These training materials will be transitioned into Paycor and assigned to applicable city staff. This training opportunity will be hosted in 2023, the city will use its industrial pretreatment contacts to invite industries, and will be discussed during the industrial pretreatment day, being hosted in March.

Permit Section	BMP Description	Measurable Goals	Measurable Goal Assessment
4.6.A 4.6.B	City Staff Training (MCM 1 BMP 3) to prevent and reduce stormwater pollution.	Training materials exist. Transition to PayCor in first year of permit cycle. Training will include a test: track test scores to see improvement.	This goal was not achieved in 2022. Water Protection incoming hires all receive new employee training that includes stormwater pollution prevention.
4.6.C	Maintain training materials for City staff used to reduce stormwater pollution.	Maintain materials used in training program, including those from other organizations. Create and maintain written procedures for training program. Create a schedule to offer for specific training (must be completed 1st yr permit cycle)	Training materials from MoKAN industrial stormwater training day, will be used by the city for stormwater training, and issued to staff via Paycor.
4.6.D	Maintain a list of all municipal ops/facilities impacted by operation and maintenance program	Update municipal operations and facilities list as needed. Review O&M program. Staff at these facilities will be specifically targeted by MCM 1 BMP3/MCM 6 BMP 1.	List of all municipal operations impacted by this O&M program is complete and updated as necessary. No new operations were added in 2022.
4.6.E	Maintain a list of industrial facilities owned and operated	Update industrial facilities list as needed. Staff at these facilities will be	The industrial facilities list is complete for all city owned facilities within the MS4.

	by the City that discharge to the MS4.	specifically targeted by MCM 6 BMP 1.	
4.6.F	Policies for trash reducing and eliminating floatables and pollutants from permittee owned or operated municipal sites listed in 4.6.D & 4.6.E.	Compile different department policies on floatables and pollutant elimination. Create policies in SWMP. Annual inspections of all municipal facilities.	Policies were not reviewed in 2022, stormwater staff will review, update, and create policies as needed in 2023.
4.6.G	Procedures for the proper disposal of waste removed from separate storm sewers and areas of jurisdiction	Review procedures in CMOM and SWMP annually. Track waste disposed of from MS4 area.	Within the <i>City of St. Joseph, MO Capacity, Management, Operations, and Maintenance (CMOM) Comprehensive Index</i> are the Sewer Maintenance Sewer Cleaning Procedures. Also in the CMOM plan is the Sanitary Sewer Overflow Response Plan (SSORP) which contains information about the containment and clean-up of SSOs. Department heads are in the process of updating the SSORP.
4.6.H	Procedures for the washing of municipal vehicles and equipment	Create inspection procedures.	Each municipal facility maintains their own fleet washing procedures. These procedures will be reviewed and updated as necessary in 2023.
4.6.I	Maintain written explanation of the controls, procedures, inspection schedules, and explanation of tracking of these controls.	Create and maintain explanation of the controls, procedures, inspection schedules, and explanation of tracking of these controls. Create tracking mechanism for inspections. (Must be completed 1st yr permit cycle)	Some facilities already have developed O&M manuals. Due to staff turnover and implementing other areas of the permit, stormwater staff was unable to achieve this goal in 2022.
4.6.K	Evaluate current Stormwater Management Program (training, inspection procedures, and other municipal operation procedures)	Any changes necessary must be completed in 1st year of permit cycle.	MCM 6 goals were not met for the reporting period, with industrial/staff training to be hosted by MoKAN and the sw staff in 2023, we are planning to meet these goals.