

2024 City of St. Joseph MS4 Annual Report



MOR04C038: 2021-2026

This document describes the stormwater control practices that were continued or implemented in 2024 by the City of St. Joseph within the MS4 area to minimize the discharge of pollutants into Waters of the State from the storm sewer system.

Table of Contents:

- Cover Page and Table of Contents.....
- Executive Summary..... 2-3
- MCMs.....4-23
- Photo Logs.....24-27
- Sampling Data.....28-29
- MCM 1: Public Education and Outreach Tracking Log.....
- Dry Weather Screening and Illicit Discharge Sampling Data.....



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, 2024, and December 31, 2024. 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-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, although stormwater regulations are enforced across the city.

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.

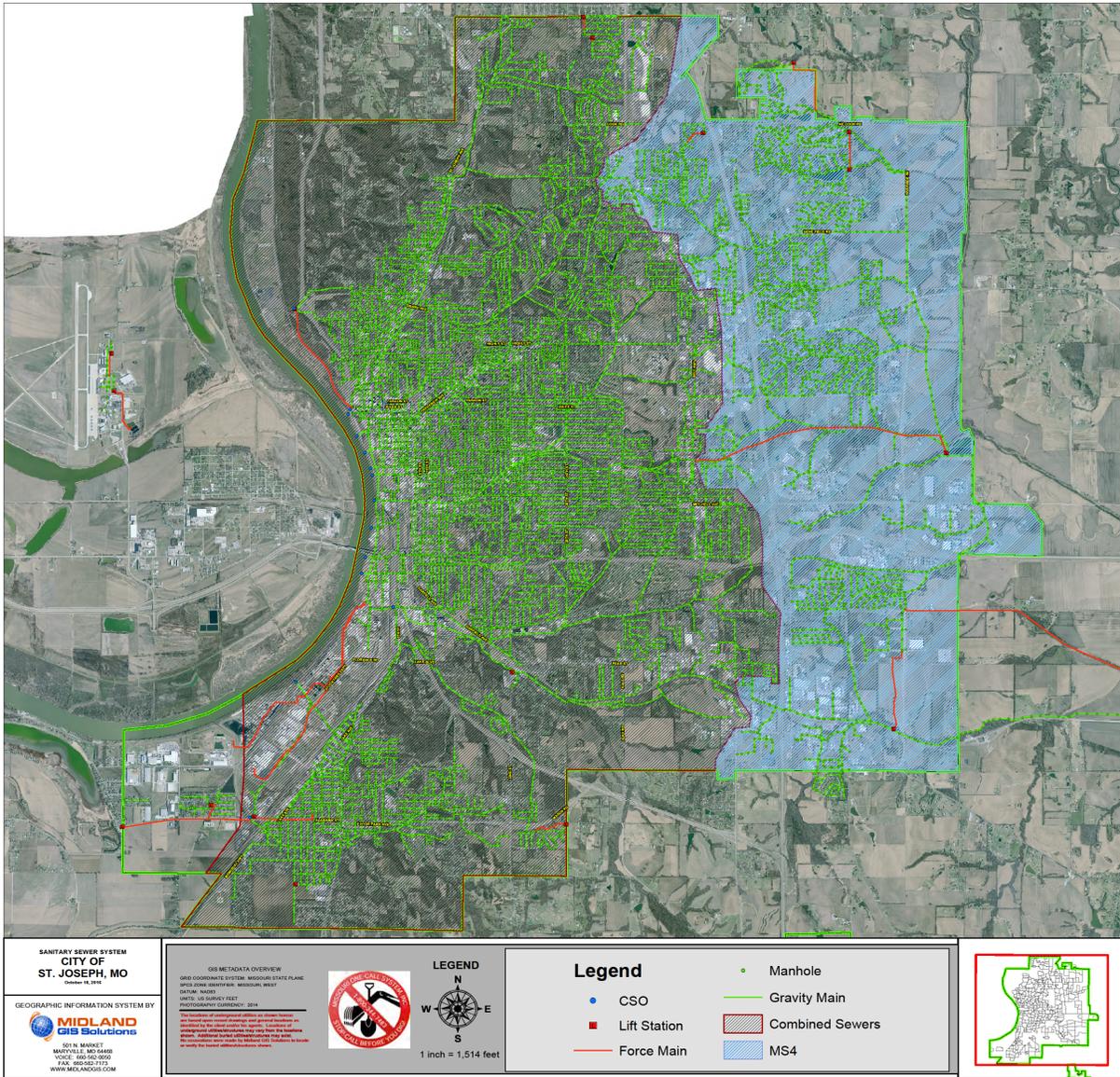


Figure 1: Map of St. Joseph, with MS4 area identified in blue.

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

2024 Reporting Period:

ASSESSMENT OF EFFECTIVENESS:

2024 provided many public education and outreach opportunities for Stormwater Staff to connect with and educate community members. The Sustainable Advisory Committee to the Mayor subgroup, Plant Native!, adopted a 900 sqft roundabout from Mosaic. Through an MDC Community, Grant Plant Native and the Stormwater Quality Coordinator installed planter boxes, and native plants to provide pollinator habitat, and decrease stormwater runoff.

This year we hosted our second annual Water Week in partnership with St. Joseph Youth Alliance. The weeks activities consisted of CSO versus MS4 storm sewer overview and Water Protection plant tour, green infrastructure education, storm drain stenciling, and a Stream Clean up on the One Hundred and Two river, with students 11-18 years old. Youth Alliance Program Director and Stormwater Quality Coordinator have started planning the Water Week for 2024.

In 2024, the Stormwater Quality Coordinator presented to the St. Joseph Flower Society, topics covered were Combined sewer system, versus MS4, our City's Stormwater Program, and how to decrease stormwater pollution at home. Coordinator is slated to present to the group again in February 2025. Presenting to this group, allowed for us to hit a wider group of residents and expanded the knowledge within the community, regarding our stormwater program.

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 the reporting period? Yes, city supplied EPA Erosion and Sediment Control BMP fact sheets to utility companies, as a part of Right of Way Permitting. Staff training resources, such as a training PowerPoint, and city stormwater link QR code handout, and who to contact for illicit discharges, which were given to attendees during the 8/9 staff training session. Stormwater education handouts were created for the Industrial Open house, such as hazardous waste disposal locations in town.

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 2024 was hosted on 8/9. This was a facilitator led training with PEC Engineering, training focused on industrial users and Municiple staff. A virtual option to distribute to staff via Paycor was created to ensure that training will be available for Municiple staff in 2024. Multiple occurrences of one-on-one training with Parks, Streets, engineering project managers, Property maintenace, and Line Maintenance Departments, during site visits and project collaboration with other departments.
Residents	fertilizers (nutrients), chemicals/	1. City Stormwater webpage with educational materials.	Reviewed in 2024 – No changes were made to resources. Links on City website checked on 5/01/2024, to ensure that all links were operational.

	toxics, yard/pet waste, salt or other de-icing products		In 2024, industrial stormwater documents, created by PEC Engineering
		2. Peachjar flyers to School District Parents	1 PeachJar flyer submitted on ways to reduce stormwater pollution geared towards residents and yard waste. This flyer was also shared on the City's Facebook page, and SEAC's page, reaching a larger audience. One newspaper article was published in Q2 in 2024, covering stormwater pollution and how we can all play our part in decreasing stormwater pollution. We are going to assess the program and determine if this is the best BMP to reach our community members in 2025.
		3. Storm drain stenciling	115 inlets stenciled during Youth Alliance Water Week. Altec, and Industrial facility participated during event, incorporating education to this industrial user, and to residents.
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 and links checked in 2024 – 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 2024 13 pre-construction meetings were held for construction sites.
		2. Site management discussion during preconstruction meeting	City supplied EPA Erosion and Sediment Control BMP fact sheets to utility companies, as a part of Right of Way Permitting. Stormwater Quality Coordinator attended utility Coordinators meetings, discussing ESC plan requirements for submittal/review and approval, restoration and seeding, stockpiling, and ESCs in the field.

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? No

In 2024, our involvement activities consisted of Stream Team clean-up events, the City’s biannual Clean-Sweep and street sweeping program, volunteer water quality monitoring, habitat improvement via native planting volunteer events, and educational booth MOAM’s Safety fair. Partnering with Missouri River Relief for an 11.5 mile river clean-up, provided a wonderful opportunity for resident participation and engagement. GI staff maintain the City’s constructed stormwater wetland, this past summer GI Techs undertook an invasive species (Tree of Heaven) removal project at the wetland, in what we call the “mini-me wetland”. Although this was not a volunteer activity, removal/control of the invasive tree helps prevent spreading to other areas of the wetland/parkway/private property. During the project, several residents stopped by and asked what the project was, providing an opportunity for resident engagement and education. Staff partnered with Spire, and Mear’s Construction for a large scale cattail removal, and invasive species removal at our Constructed NE Parkway Wetland. This is a high traffic area for residents to enjoy nature and the parkway trail, which provided us many in-person/one on one education opportunities with residents. In 2024, one GI Tech and SWQC started the Mo Master Gardener in-person program, unfortunately the GI Tech found other employment, and did not complete, but SWQC graduated in December, after completing the course and final presentation to class over Planting for Night Time Pollinators.

Several new groups were hit this year through opportunities to present to the Main host of St. Joseph’s Lion Club, Rosendale Garden Club, Persisterhood, a 50 acre Prairie tour for Missouri Master Gardeners Conference tour. Staff presented on night time pollinators, and the affect of pesticides, fertilizers, and insecticides on our nighttime pollinators.

The three tabling events in 2024 were scheduled, unfortunately due to weather one was canceled. The other two (MOAM Safety Fair and Grow Native Gardening event. 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 2024 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.	During annual review of program, staff determined that participation numbers at stormwater events have increased, and tracking is conducted via sign in sheets and excel sheet. We have seen an increase in participation and interest in the stormwater program. In 2024, staff sent volunteer opportunities to MWSU students, as a result, and we had an increase in college students attending volunteer events.
4.1.B	Target Pollutant Identification	Evaluate previously identified pollutants of concern annually to determine if the City should target other pollutants.	Transitioned from FOG as a target pollutant to unauthorized discharges from Industrial facilities. – Due to # of restaurants verse industrial facilities within the MS4.
4.1.C	City Staff Training	Training materials exist. Transition to Paycor in first year of permit	A virtual option to distribute to staff via Paycor was created to ensure that training will be

		cycle. Training will include a test: track test scores to see improvement.	available for Municipal staff, and will be issued virtually in 2025. Multiple occurrences of one-on-one training with Parks, Streets, and Line Maintenance Departments, during site visits and working with other departments. See Public Education and outreach spreadsheet attached.
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 Industrial Stormwater education materials will be added in 2025.
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 2024, titled "Lawn care and reducing stormwater pollution". In 2024 we will develop and submit more stormwater education materials via Peachjar. We are going to assess the program and determine if this is the best BMP to reach our community members in 2025.
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 2024, and stormwater control runoff for development and redevelopment was discussed with developers and the engineers present. Development, engineering firm, comments provided by staff, and date are tracked via excel spreadsheet. 11 concept review meetings hosted in 2024, as well as, multiple site visits for project discussion prior to plan submittal.
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 have 1,993 inlets in the separated sewer. -Stormwater staff partnered with Youth Alliance to host Water Week for kids ages 11-18. 173 inlets stenciled between Youth Alliance Water Week and City staff stenciling, and 74 inlets marked as enforcement actions. - In 2023 the City purchased 2 concrete stamps with the messages "No dumping, drains to stream" and "No Dumping, I live downstream." These are installed as inlets are repaired/replaced throughout the city. - 50 installed in 2023, and 60 installed in 2024. TOTAL for 2024: 307 inlets stenciled, placard, or precast inlets.
Promote, host, or develop educational		A minimum of two events shall be held, hosted, or promoted annually. These events may	Change to educational BMP (Targeted Education Campaign to educational meetings/training), to match change in Target Audience, this change was based on number of

	meetings, seminars, or trainings Targeted Education Campaign, FOG Handouts to restaurants	address different pollutants/audiences. Industrial Pretreatment Day and Industry Open House Track number of handouts to restaurants per year. Follow up with restaurants that are not in compliance with FOG permits.	restaurants in MS4 area compared to industrial facilities. WPC's FOG techs will continue to inspect/regulate/educate restaurants in the City. In 2024, 2 educational meetings/trainings were hosted by City. 3/19 - Industrial Pretreatment Day – 25 attendees from different industrial facilities. Stormwater Coordinator presented on illicit discharges, stormwater program, and maintenance of post construction water quality and quantity BMPs. 6/13 – Stormwater Standards Training - Presented by Black and Veatch - Amy Dietz and Kaitlyn Loeffler for local Engineers and Developers. The goal of the training was to ensure understanding of Stormwater Management Design regulations, per the City of St. Joseph requirements. The goal was to increase awareness, and in turn increase plan submittal compliance for stormwater requirements.
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 200 yards of stream.)	In 2024, staff had a wonderful opportunity to assist Missouri River Relief in a Missouri River Clean-Up event. Staff provided time and staff support during planning meetings, scouting, and day of event. With the help of 136 volunteers, 150 bags of trash, a couch, 2 deep freezers, for a total of 2.8 tons of trash removed from 11.5 miles of the Mighty MO! Beautify St. Joe had a land-based crew, who collected 12 bags of trash (ford truck bed full) with 9 volunteers. During our 2 nd annual water week, Youth Alliance volunteers and staff collected 1 tire and 3 bags of trash from Odoo creek on Missouri Western State University's campus. Stormwater staff planned, participated, and provided resources/materials for multiple litter clean up events in 2024. Staff was able to participate in litter clean up events, as well as attended numerous Beautify St. Joe Steering Committee meetings, where events were planned and coordinated. See Public Education Tracking.
	Volunteer water quality monitoring;	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 held on 10/11/2024, in conjunction with MWSU Stream Team Training (Monitoring data submitted by MWSU and Stream Team Staff. SWQC, Kevin Lytton and Sam Miller attended

			Level 2 Training hosted by Stream Team and MDC Staff
	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 2024 in April and October. During Clean Sweep week, Water Protection staff participate in picking up trash at the wastewater plant, and receive an overview on stormwater pollution. In 2024 2,725 miles were swept.

MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

2024 REPORTING PERIOD:

ASSESSMENT OF EFFECTIVENESS: The City's SWMP and BMPs were effective in 2024 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. Along with the Subcommittee, the Stormwater Management Team are very active in Beautify St. Joe, a community group focused on planning, hosting litter cleanup events, and increasing awareness for antilittering within the city. Through working with this group, we have seen an increase in volunteers at litter clean up events, and more community groups who want to participate and give back to the community.

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 meeting. Posted on City's website during permit renewal.	NA

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 in 2022, it was determined that it is not effective and was 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 2024, but membership participation in events was tracked.
4.2.F	Update to City Council	Questions, attendance, and suggestions will be tracked.	Staff will be provide update to Council in early 2025, inconjunction with additional code updates.
4.2.G	Evaluate program	Evaluate tracking to modify program as needed	Tracking measures for all MCMs were determined to be ineffective in 2022 and were revamped in 2023. Tracking measures for 2024 deemed effective, but staff will continue to evaluate and improve in 2024.
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

2024 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.

2024 PROGRAM –

In 2024, the Streets Department identified unused funds that they are using to complete mapping of Blacksnake watershed. For our MS4 area, staff had to reassess the City owned outfalls due to several roads falling under MoDOTs jurisdiction, as

this was previously unknown to staff. Through utilizing the City’s GIS and MoDOT’s maps of city vs state roads and highways, staff identified outfalls that the Green Infrastructure Technicians field scouted and monitored. 24 outfalls were screened in the MS4 area in 2024. Illicit discharges, cleanup, and reporting requirements were all included during staff Clean-sweep training, and Industrial Pretreatment Day stormwater training for Industrial users. In partnership with Youth Alliance, we hosted our 2nd annual Water Week in early June, providing an opportunity to educate students on stormwater and stormwater pollution. The week’s activities included storm drain stenciling, teaching about water quality and macroinvertebrate sampling, and a stream team clean-up. In 2024 staff received a report of a resident dumping yard waste next to a stream, on an adjacent property owner’s property. Due to staff not observing the illicit dumping event take place, staff chose this opportunity to distribute door hangers in the neighborhood as a form of education on illegal dumping and the deterrents to stream health. Staff responded to multiple reports of potential illicit discharges, and any sampling data collected during site visits, is included in the report below.

Permit Section	BMP Description	Measurable Goals	Measurable Goal Assessment
4.3.A	Maintain storm sewer map in GIS system showing MS4 outfalls, waters of the state, and boundary of the MS4 area.	Maintain map of constructed outfalls on GIS through contract with SAM, LLC. One local watershed will be updated each year.	<p>Outfalls within the city are already mapped, SW staff is working to identify city owned outfalls that discharge to WOTS. In 2024, staff gained admin access on GIS to mark outfalls as privately owned (pink) versus city (yellow), this allows for staff to easily identify city outfalls for DWS and IDDE.</p> <p>In 2023, a WOTS layer was added to City’s GIS, streams and conveyances were already mapped, but this additional layer is a valuable resource when identifying priority areas, & City owned outfalls to WOTS.</p> <p>Due to funding, one new watershed a year is not being met, but all watersheds in MS4 are mapped, and updates added as urban area expands east. In 2024, Streets Department had additional monies not being utilized. Monies issued in 2024 for the remaining 3 phases of Blacksnake Watershed (in CSO area/MS4 monitoring) to be mapped.</p>
4.3.B	The MS4 Operator must record the sources of information used for the map and track, at minimum: 1. A numbering or naming system of all outfalls; 2. Dates that the outfall locations were verified/ or last field survey; and 3. For newly added outfalls, the date that it was added to the storm sewer system	Finalize inspection procedures and GIS layers. Add all new stormwater BMPs in GIS as development projects are completed.	<p>Inspection procedures were reviewed. In 2022, we hired a part time employee/student intern to map post-construction stormwater BMPs. In 2024, new basins were mapped.</p> <p>Staff is working with our streets department to determine what the best number system for outfalls is. In 2023 we started to transition to using Cartegraph for our DWS and outfall screening information. This includes the date that the outfall is surveyed in the field. In 2024, staff re-evaluated city owned outfalls, due to multiple roads on east side of City, being within MoDOT’s jurisdiction thus not falling within the City’s MS4 jurisdiction. Any outfalls directly associated with these State roads, are not the City’s to maintain or within the City’s Right-of-Way.</p>

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 in 2022. All stormwater ordinances were passed by City Council in March 2023.
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.	If the outfall is on private property, then the city will not maintain it, per city ordinances, making all outfalls that are not on the city's property or within the ROW, private outfalls, unless deterioration or damage to outfall will cause ROW issues. Then the City will repair said outfall, at which time that outfall will be deemed a city owned outfall. All city owned outfalls were identified in 2024, apart from 3 small watersheds, determinations for these and DWS will be completed early 2024.
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.	IDDE SOP was reviewed in 2024. Staff responded to all illicit discharge reports, and sampling data is included at the end of this report. In 2025 staff will strive to improve response time for enforcement actions relating to illicit discharges.
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.	Priority areas within the MS4 area have been established, and the industrial area within the MS4 has been deemed a priority screening 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.	IDDE and DWS SOPs have been developed for the City's Stormwater Program, and staff reviewed in 2024.
4.3.J	Conduct investigations in response to field screening discoveries, spills, or complaints	Update Dry Weather Screening and IDDE SOP to reflect permit requirements. Conduct investigations regarding	All reports of illicit discharges were investigated in 2024, response time will be improved in 202 and the SOP will be updated.

	from public, or municipal staff.	all discovered and reported spills.	
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 were completed in 2023, and passed through City Council in March, 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 were previously completed in an excel spreadsheet. We found this to not be the most effective or efficient tracking method and were revamped in 2023. DWS forms are now in Cartegraph., although due to staff turnover, and training time restraints, staff primarily used paper inspection forms, and all saved to City server.
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 with Parks, Line Maintenance, Streets, and Property Maintenance and training on 8/9 with PEC Engineering in 2023. Water Protection staff received additional IDDE training before WPC's biannual plant clean sweep in April October. Training resources will be transitioned to Paycor in 2025. 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. Although, SWQC does not directly work with the ADOPT a Block program started in 2023-24, it is a wonderful development for our community.
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 procedures. Ensure program is in compliance with permit. Maintain an updated map with all items in MCM3.	Code was reviewed in 2022 and presented to council during a work session. Code updates for permit regulations were completed in 2023, and passed through City Council in March, in conjunction with other code updates from Water Protection.
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, project/enforcement collaboration, meetings, and WPC biannual stormwater training with Clean Sweep. In 2023: training on 8/9 with PEC Engineering in 2023, in 2025 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

2024 REPORTING PERIOD:

ASSESSMENT OF EFFECTIVENESS:

We are seeing more contractors reach out to SW staff to discuss their site, and work to mitigate issues prior to them starting. With more involvement by the contractors, we feel that the BMPs in place and education to contractors is effective for Construction Site Stormwater Runoff Control.

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 were completed in 2024, and passed through City Council in March, in conjunction with other code updates from Water Protection. City Land Disturbance Permit requirements were reviewed in 2024, and no updates were necessary for compliance requirements. Staff will be completed additional updates to the Land Disturbance Permit requirements in 2025, to reflect issues we have seen on plan submittal and issues that are seen in the field.
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 2023, this is used for all commercial plan reviews conducted by stormwater staff. It was reviewed in 2024 and found to still be effective.
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 were updated in 2023. 2023 Land Disturbance inspection tracking methods are effective and cartograph was found to be cumbersome to our tracking and not being used at this time. Enforcement tracking spreadsheet was updated to include verbal enforcement actions in

			<p>addition to written. Training was also given to stormwater staff on how to track enforcement due to turnover.</p>
			<p>One item that was improved in 2024, is tracking of all verbal education and enforcement. City codes provides an enforcement option that allows us to issue <i>compensatory action in the form of storm drain stenciling, attendance at compliance workshops, creek cleanup, or other actions that serve to promote and further goals of City's MS4 program</i>. In 2024, we utilized this option for 2 construction sites, requiring that they install "no dumping drains to stream" placards on inlets near the sites. (74 inlets total). – 2024 was our first time utilizing this enforcement avenue, and we felt that it was a successful measure that we will continue to use in the future for construction site enforcement.</p>
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.	<p>All enforcement actions taken by the SW team are tracked via land disturbance inspection form or tracking sheet. We are planning to transition using Cartegraph for enforcement tracking. One deficiency noted in 2023, was not tracking all verbal enforcement for sites, this was evaluated and improved for 2024.</p> <p>All enforcement actions taken by the SW team are tracked via land disturbance inspection form or tracking sheet. We found during the transition to Cartegraph for enforcement tracking that it was cumbersome and created an enforcement spreadsheet. This spreadsheet is updated when inspection forms are uploaded and filed.</p>

4.4.E	City of St. Joseph Land Disturbance Requirements and LD Inspection SOP	During each LD inspection, ESC inspectors verify that inspections are occurring. Track and use enforcement measures when necessary.	During each inspection ESC Inspectors verify if inspections are being conducted by site operators, and this is noted on the inspection form. During plan review, SWQC checks SWPPPs to ensure that inspection requirements are called out, and during preconstruction meetings inspectors, emphasize/remind site reps the importance of site inspections.
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, correspondence, land disturbance, 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	Tracking measures for all MCMs were determined to be ineffective in 2022 and were revamped in 2023. Tracking measures for 2024 deemed effective, but staff will continue to evaluate and improve in 2025. Tracking measures for 2024 deemed effective. Spreadsheets are used to track relevant information.
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 2023. All ESC inspectors have received for construction site runoff control. We hired 2 new Green Infrastructure Inspector in 2024, they received ESC

			training and are Qualified Stormwater Inspectors. ESC Inspector will renew their certification in 2025.
--	--	--	---

MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT IN DEVELOPMENT AND REDEVELOPMENT

2024 REPORTING PERIOD:

In 2024 was a big learning experience for our team, as we had our most senior Green Infrastructure Inspector retire at the end of April, and 2 internal hires occurred after his retirement. With these hires being internal and staffing shortages, the 2 new hires were shared between their original departments at Water Protection and their new GI Positions. This caused a lag in training and inspections for Post Con BMPs, and our goals were not met for 2024. One of the new GI hires left WPC, and a new GI Tech was hired at the end of 2024. Now that we have a stable staff force, GI training for inspectors can be completed, and inspection of facilities in town will be completed and goals met for 2025.

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 were completed in 2023, and passed through City Council in March, 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 reviews are 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 reviews the submittals for these requirements. In 2024 the city hired a Stormwater

			Consulting firm to help assist in stormwater plan review. The goal for this is a strategy to minimize our water quality impacts through higher level plan review for post construction BMPs.
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 2024 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. In 2024, plan submittal was not approved until O&M manual is submitted and reviewed for project.
	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 meet compliance.	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. This list will continue to evolve as projects are completed. Staff is reviewing older projects that have the potential for Post Construction BMPs onsite, to ensure that list is all encompassing.
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 as needed in 2025.
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 were completed in 2024, 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	Code was reviewed in 2022, and presented to council during a work session, code updates for permit regulations were completed in 2023, and passed through City Council in

		compliance with permit requirements.	March, 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, multiple online webinars, and DNR trainings.

4.5.D Procedures for long term operations and maintenance of post-development BMPs were evaluated during the 2024 reporting period, staff is utilizing EPA post construction BMP resources for education materials to owner/operators, who do not have O&M manuals for their sites. These are sites who installed their BMPs prior to issuance of O&M manual requirements.

- One large goal for 2025 is requiring the owner/operator, who will be responsible for maintaining their BMPs, to be present at final inspections. This will provide an opportunity to discuss inspection and maintenance requirements for these facilities, and too ensure that the responsible party is aware of these items.

4.5.F and 4.5.G: Compliance and enforcement measures were evaluated for the reporting period, and thus far we have experienced sites working with the city to get into compliance, verses having to use enforcement 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

2024 REPORTING PERIOD:

ASSESSMENT OF EFFECTIVENESS:

Training for municipal staff consisted of one-on-one or during meetings with other city departments, such as Sewer Line Maintenance, Streets, Property Maintenance, Zoning, Building and Permitting. The City hired a new City Planner and Permits Coordinator, SWQC took advantage of many opportunities to via meetings/phone calls to cover our Stormwater Management Program and Land Disturbance regulations with these new staff members. Two new Green Infrastructure Technicians received MS4 compliance and stormwater inspector training.

Date	Training	Attendees	Length	Overview - Additional Details
1/17/2024	Hydrology of Stormwater - Center for Stormwater NPDES	Colleen Armstrong	1 hr	This presentation discusses the water cycle, stormwater runoff, and how humans have impacted these. But, there is good news. We will discuss changes in stormwater management to improve our waterways.
1/24/2024	Industrial Stormwater and MS4's - DNR	Colleen Armstrong Sam Miller Kevin Lytton		
2/8/2024	Env Services Meeting	12 Env Services Staff Meeting	30 Min	Illicit discharges, what are they, sampling regs, permit requirements
2/21/2024	"Steps to Inspect a Detention Pond " Center for Stormwater NPDES	Colleen Armstrong Sam Miller	1.5 Hr.	40 CFR,
2/27/2024	Level 2 Water Quality Monitoring	Colleen Armstrong Sam Miller Kevin Lytton	3 hours	Stream Team level 2 Water Quality monitoring - Lee's Summit
3/5/2024	Winter Learning Series - Doug Tallamy Bring Nature Home	Colleen	2hr	How incorporating native plants into our home landscapes can provide food, shelter, and habitat for native insects and wildlife
3/11/2024	Winter Learning Series - Herbicides in the environment	Colleen	1.5 hr	State forester for Missouri, discussed Dicamba and its effects in the environment; ecological implications; application in a forested area.
3/13/2024	DNR Training Impaired Waters and MS4 requirements	Colleen		MS4 requirements with TMDLs.
3/25 - 3/27	MWEA Annual Conference	Colleen	3 days	MWEA Annual conference
4/9/2024	Creating Age-Friendly Communities with Green Infrastructure: How Addressing Needs of Children and Older Adults Benefits All	Colleen	1.5Hr	Online Webinar
11/6/24	WPF Clean-Sweep - Good housekeeping	19 WPF staff (Ops, Maintenance, Env Sci, Stormwater)		Good house keeping - permit compliance items, litter, cig butts, spill cleanup and prevention
11/12/24	MO Master naturalist Ed talk by Missouri dept of conservation	SWQC	1hr	Tory with MDC presented on water quality - invasive aquatic plants, how to manage, how nutrients are impacting, solutions
11/15/24	National Municipal Stormwater Alliance	SWQC	1hr	Resources available at National Stormwater Day/Alliance: Stormwater Day – November 16 Stormwater resource center for public ed and outreach, speaking to Municipal employees, and case studies. Intergrated long term planning for stormwater.
11/20/24	Webinar - Preparing for the new Administration EPA	SWQC, GI Techs J. Parker and S. Miller	1 hr	

Evaluation of MCM 6

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.	<p>This goal was achieved in 2024. Water Protection incoming hires all receive new employee training that includes stormwater pollution prevention. WPC has a Pollution Prevention Team that focuses on reducing stormwater pollution at the facility. 2x/yr. WPC has a Clean Sweep, where staff receives stormwater education, and picks up trash onsite.</p> <ul style="list-style-type: none"> - With staff turnover in 2024, training for other municipal departments was not held in a formal setting, as training consisted of one on one, project collaborations, and reports from other departments. The goal for 2025, is to continue to collaborate with other departments, and issue training videos on the PayCor.
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)	<p>Training materials from MoKAN industrial stormwater training day, will be used by the city for stormwater training, and issued to staff via Paycor.</p> <p>All training materials are saved on City server.</p>
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	List of all municipal operations impacted by this O&M program is complete and updated as necessary. No new operations were added in 2024.

		MCM 1 BMP3/MCM 6 BMP 1.	
4.6.E	Maintain a list of industrial facilities owned and operated by the City that discharge to the MS4.	Update industrial facilities list as needed. Staff at these facilities will be specifically targeted by MCM 6 BMP 1.	The industrial facilities list is complete for all city owned facilities within the MS4. List was reviewed and updated as necessary in 2024, and no new industrial facilities were added.
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 reviewed in 2024, stormwater staff will review, update, and create policies as needed as we continue to grow our stormwater program, and as need arises.
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.	<p><i>Within the City of St. Joseph, MO Capacity, Management, Operations, and Maintenance</i></p> <p><i>(CMOM) Comprehensive Index</i> are the Sewer Maintenance Sewer Cleaning Procedures. Also in the CMOM plan is the Sanitary Sewer Overflow Response Plan (SSORP)</p> <p>which contains information about the containment and clean-up of SSOs. Department heads are in the process of updating the SSORP.</p>
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 were reviewed and updated as necessary in 2024.
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	Facilities have developed O&M manuals for sites, these will be reviewed and updated as necessary in 2024.

		completed 1st yr. permit cycle)	
4.6.J	Were any new flood management projects reviewed or begun during this reporting period?		Replacement of stormwater outfall at Heritage Ball Park completed by site. Water Quality impacts were not evaluated due to it being a replacement of existing/failing outfall. Parks will be installing a concrete bottom to the swale. This is to add staff in removing any sediment or debris buildup after heavy rain or post flooding event.
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 was not met for the 2022 reporting period. Goal was met in 2023 with industrial/staff training hosted by MoKAN and the sw staff working with other city departments. Goal was met in 2024 via one-on-one staff training, WPC SW training in conjunction with biannual clean sweep Site inspections occurred at the Rosecrans airport (Airguard SWPPP Inspections), parks within the MS4, and Water Protection (CSO Area). Facility inspection form was created in 2023 for site inspections.



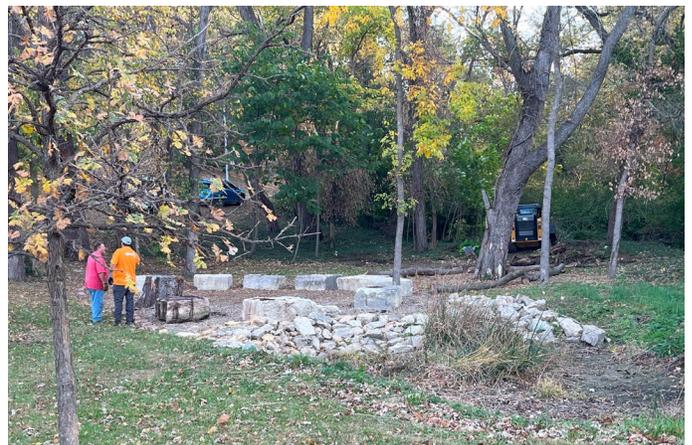
Robidoux Roundabout – Adopted, planted, and maintained by Plant Native Group, and SWCQ.



6/29/2024: SWQC speaking at MDC Cultivating Native Gardens Workshop



10/11/2024 MWSU Stream Team Event



Outdoor classroom at Constructed SW Wetland – Designed and installed by Green Infrastructure Technicians



Invasive species removal @ Outdoor Classroom



Invasive species removal with Spire Volunteer crew – Wetland Workday



Missouri Western Ecology Class – Water quality and Macroinvertebrate sampling – Stormwater talk/Education event @ Wetland 2024

2023 Bioswale Native planting event: 1 Mosaic rep



2023- Remington spillway project with parks and native planting volunteer event.

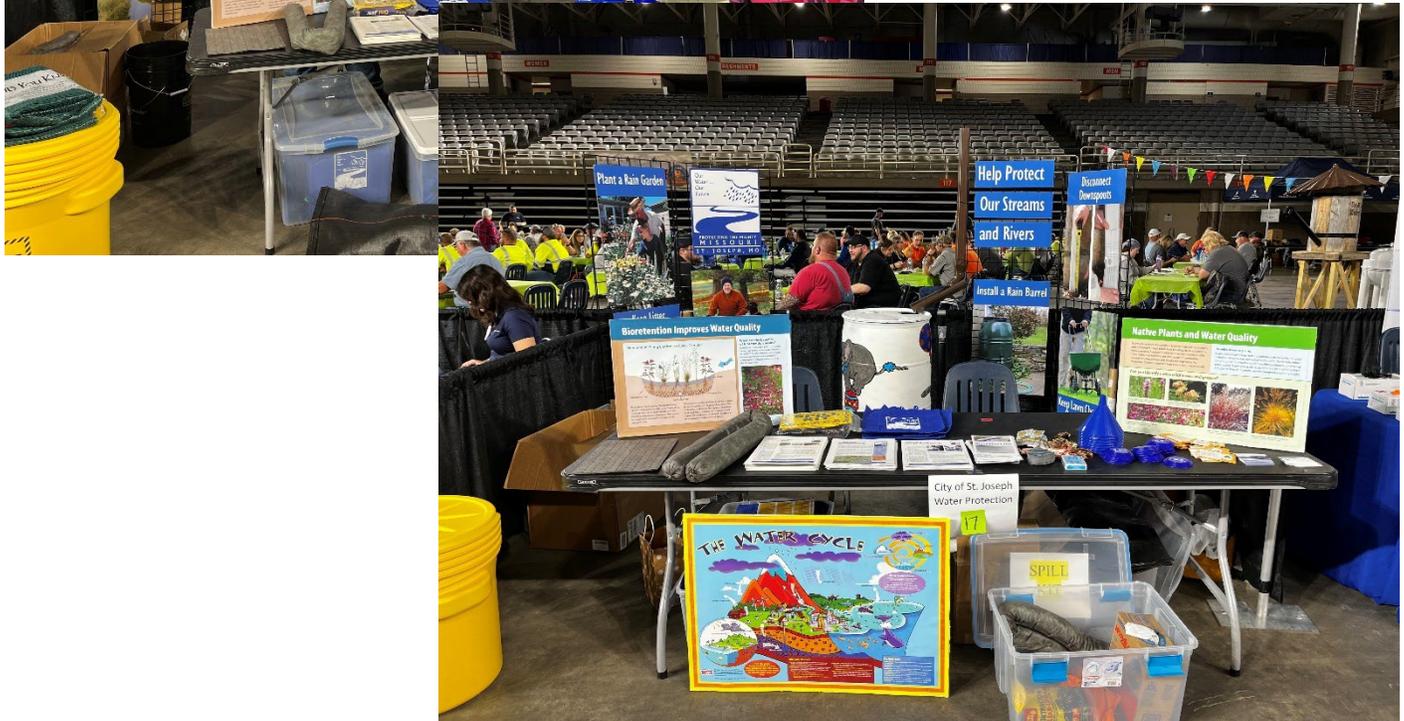
Youth Alliance Water Week – Storm Drain stenciling Day 2023



2023 Beautify St. Joe River Front Park Clean-up



Missouri American Safety Fair



Sampling Data

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	Total Phosphorus	E. coli	Total Coliform
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	mg/l	MPN	MPN
2/7/2024	Drainage area SW of Stormwater Wetland	1412	63.2	7.14	6.75	20.11	17.7	0.094	4	>2419.6	>2419.6
2/7/2024	Constructed Stormwater Wetland	598	190.1	5.67	7.37	<0.5	2.05	0.02	0.3	387.3	>2419.6
2/7/2024	Corby Pond	852	239.6	5.37	6.07	<0.5	0.623	0.008	0.16	7.5	>2419.6

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	E. coli	Total Coliform
		uS/cm	%	°C	SU	mg/l	mg/l	MPN	MPN
2/13/2024	Blacksnake Creek Site 1	605	16.36	5.9	8.3	0.625	2.8	77	>2419.6
2/13/2024	Blacksnake Creek Site 2	601	25.51	8.1	8.5	1.858	3.29	488.4	>2419.6

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	E. coli	Total Coliform	Chlorine
		uS/cm	%	°C	SU	mg/l	mg/l	MPN	MPN	mg/L
2/29/2024	Mall Basin	2434	7.74	3.91	7.65	<0.5	2.37	14.8	1119.9	0.16

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform	Chlorine
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN	mg/L
4/10/2024	Potential SSO/IDDE	N/A	N/A	18.9	8.2	5.86	0.564	0.059	65.7	>2419.6	N/A

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform	Chlorine
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN	mg/L
6/21/2024	Upstream	N/A	N/A	N/A	N/A	<.5	1.87	N/A	>2419.6	>2419.6	0.00
6/21/2024	Downstream	N/A	N/A	N/A	N/A	1.36	4.79	N/A	>2419.6	>2419.6	0.00

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform	Chlorine
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN	mg/L
6/21/2024	SEM Row	N/A	N/A	N/A	N/A	<.5	15.1	N/A	N/A	N/A	N/A
6/21/2024	SEM Pool	N/A	N/A	N/A	N/A	2.65	3.21	N/A	N/A	N/A	N/A
						SEM 6-20-24 Composite					
						3.85					

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform	Chlorine
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN	mg/L
7/8/2024	Monterey	n/a	N/A	22.1	6.96	<0.5 (.030)	4.56	0.059	60.2	>2419.6	N/A

Reporter: Streets/Line Maitenance Dept. to SWQC Reported on: 7/8/2024
 Sampling notes/observations: what appears to be a sump pump discharge pipe from basement discharging in yard and sheet flowing onto city ROW (sidewalk onto street and into CSO inlet across st from house). Sample was collected at end of pipe/point of discharge

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform	Chlorine
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN	mg/L
7/9/2024	MacArthur+Roy's Branch	1020	N/A	21.2	8.03	0.824	8.57	0.003	>2419.6	>2419.6	

IDDE reported by: Phillips Hardey - Construction crew working on Bridge over MacArthur Drive to PW PM over project.
 Sampling data notes: Sample collected by C. Armstrong and J. Selland - after samples were collected, they were returned to the lab for testing. Staff continued investigating, traveling upstream of where the IDDE was sighted. Staff identified the source of the illicit discharge - due to high waters from recent rains and high Mo River levels, Roy's Branch lift station's CSO pipe is half submerged. This combined with improperly working floats within the lift station wetwell, combined sewer overflows were occurring from the CSO pipe. Miantenance staff is working to troubleshoot and resolve the situation. during which time gate to the CSO pipe is closed to prevent further CSOs from occurring.

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform	Chlorine
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN	mg/L
7/10/2024	CC Road North	N/A	N/A	N/A	N/A	0.494	3.89	0.027	N/A	N/A	N/A
7/10/2024	CC Road South	N/A	N/A	N/A	N/A	0.356	3.32	0.036	435.2	>2419.6	N/A
7/10/2024	CC Wetwell	N/A	N/A	N/A	N/A	22.22	102	0.079	N/A	N/A	N/A

Sampling Data notes: Collected by MPO Sean C.

Citizen concern called in by farmer in area who drove through a puddle and thought it smelled like sewage. Staff collected 2 samples from roadway

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform	TSS
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN	mg/L
7/16/2024	909 Alabama St.	N/A	N/A	N/A	N/A	27.7	11.9	1.6	1986.3	>2419.6	8300

Heavy rainfall in the morning - unsure of inches amount. Sample not taken during dry weather. Sample very turbid. - JS

<S:\Environmental Services\Lab\Discharge Monitoring Reports\2024 Reports\07 July\St. Joseph WWTF\909 Alabama St..pdf>

Date	Sample	Conductivity	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform
		uS/cm	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN
7/23/2024	MO West Parking Lot (downstream) (39.7650614, -94.7817239)	N/A	N/A	24.8	7.55	<0.5	6.49	0.04	435.2	>2419.6

No upstream access point available.

Date	Sample	Conductivity	Chlorine	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform
		uS/cm	mg/l	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN
12/17/2024	North Point Drive.	N/A	0.06	N/A	9.8	6.79	<0.5	0.537	0.009	27.9	1413.6

Date	Sample	Conductivity	Chlorine	DO	Temp	pH	Ammonia	Nitrate	Nitrite	E. coli	Total Coliform
		uS/cm	mg/l	%	°C	SU	mg/l	mg/l	mg/l	MPN	MPN
12/31/2024	Pond Upstream				6	7.12				>2419.6	>2419.6
12/31/2024	Pond Downstream				5.1	7.05				>2419.6	>2419.6



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		2. NPDES PERMIT NUMBER		3. MS4 UNIQUE ID NO. (If applicable – co-permittees only)	
4. ADDRESS		5. CITY		6. STATE	7. ZIP CODE
8. TELEPHONE NUMBER WITH AREA CODE			9. NAME OF MS4 CONTACT PERSON		
10. EMAIL OF MS4 CONTACT PERSON					

11. Is the MS4 contact person listed above different from the most recent MS4 stormwater management program annual report?
 Yes 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?
 Yes 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? Yes 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)? Yes 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? Individual Combined

4. Reporting period year (i.e., the previous year from January 1st to December 31st)
BEGINNING: _____ ENDING: _____

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? Yes 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? _____
Were any changes made to target audiences during reporting period? Yes No

2. (4.1.B) What are the target pollutants? _____
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? _____
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? _____

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 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 type="checkbox"/> No Will additional or new priority areas be identified for the next reporting period? <input 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 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 type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>17. (4.3.K) Were MCM 3 enforcement procedures evaluated during this reporting period? <input 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 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 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 type="checkbox"/> No If No, were the measurable goals or 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 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 type="checkbox"/> No If No, were the BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? <input 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 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 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 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 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 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 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 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 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 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 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 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 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 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>

<p>1. (4.5.A) Were any changes to the ordinance for post-construction runoff site stormwater made during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please include an attachment describing changes.</p>
<p>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. <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please include an attachment describing changes.</p>
<p>3. Were all strategies (programmatic BMPs) for 4.5.B evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing what BMPs were not evaluated and why.</p>
<p>4. (4.5.C) Were the pre-construction plan review procedures evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why these procedures were not evaluated.</p>
<p>5. (4.5.D) Were procedures for long-term operation and maintenance of the post-development BMPs evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why these procedures were not evaluated.</p>
<p>6. (4.5.E) Were the procedures for inspections or requiring inspections, evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why these procedures were not evaluated.</p>
<p>7. Were the measurable goals for all BMPs for 4.5.E successfully reached? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, were the measurable goals evaluated/modified in an effort for success in the next reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>8. (4.5.F, 4.5.G) Were compliance and enforcement procedures evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing what BMPs were not evaluated and why.</p>
<p>9. (4.5.H) Was the inventory of all post-construction BMPs, including the tracking mechanism, evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why these procedures were not evaluated.</p>
<p>10. (4.5.I) Were all tracking mechanisms for post-construction BMP inspections, including the tracking mechanism, evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing why these procedures were not evaluated.</p>
<p>11. (4.5.L) Were all training procedures for inspections evaluated for effectiveness during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No No, please include an attachment describing why these procedures were not evaluated</p>
<p>12. Were the measurable goals for all programmatic BMPs for MCM 5 successfully reached? <input 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 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>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? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, were the programmatic BMPs determined to be ineffective/unsuccessful evaluated for modification or replacement? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>14. Were any changes made to MCM 5 during the reporting period that were not covered above, including the addition of programmatic BMPs? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please include an attachment describing changes.</p>
<p>MCM 6. Pollution Prevention/Good Housekeeping for Municipal Operations</p>
<p>1. (4.6.A) Did the permittee maintain and utilize an employee training program for MS4 municipal operations staff? <input type="checkbox"/> Yes <input type="checkbox"/> No What date or dates was the training held during this reporting period? _____</p>
<p>2. Were any changes to the training program made during reporting this period? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please include an attachment describing changes.</p>
<p>3. (4.6.B) Were the following topics covered during training for this reporting period?</p> <ul style="list-style-type: none"> • Vehicle and equipment washing; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Fluid disposal and spills; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Fleet, equipment, and building maintenance; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Park, open space maintenance procedures (including fertilizer, herbicide, pesticide application); <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • New construction, road maintenance, and land disturbances; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Stormwater system maintenance; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • MS4 operated salt and de-icing operations; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Fueling; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Solid waste disposal; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Street sweeper operations; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable • Illicit Discharges; <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
<p>4. (4.6.C) Were training materials, written procedures for the training program, and a schedule for topics evaluated during this reporting period? <input type="checkbox"/> Yes <input type="checkbox"/> No If No, please include an attachment describing what BMPs were not evaluated and why.</p>

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?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
--	------------------------------	-----------------------------

If yes, would you like information about military-related services in Missouri?	<input type="checkbox"/> Yes	<input type="checkbox"/> 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
NAME (PRINTED OR TYPED)	TITLE

BILL # 864-22**AN ORDINANCE AUTHORIZING THE EXECUTION OF A WORK ORDER WITH SURVEYING AND MAPPING LLC, AND AN AMENDMENT TO THE WATER PROTECTION FUND BUDGET IN AN AMOUNT NOT TO EXCEED \$72,800.00 FOR WATERSHED MAPPING SERVICES.**

WHEREAS, the City's Water Protection Division is required to have current watershed mapping; and

WHEREAS, the City Council has pending before it, an ordinance to approve a Master Agreement for On Call GIS services with Surveying and Mapping LLC; and

WHEREAS, should the City Council approve said Master Agreement, Surveying and Mapping LLC is qualified and available to perform the watershed mapping.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF ST. JOSEPH, MISSOURI, AS FOLLOWS:

SECTION 1. That the Water Protection Fund budget be, and hereby is, amended for Fiscal Year 2023-2024 as follows:

APPROPRIATION

<u>Account</u>	<u>Description</u>	<u>Increase</u>	<u>Decrease</u>
6430-1475	M&R of Bldg. and Facilities		\$72,800.00
6430-1410	Professional Services	\$72,800.00	

SECTION 2. That Work Order No. SAM2403 by and between the City of St. Joseph, Missouri, and Surveying and Mapping LLC, to provide watershed mapping services for the City's Sewer Maintenance Division in an amount not to exceed \$72,800.00 be, and hereby is, approved and that said work order is attached hereto and incorporated herein by reference as though fully set out herein.

SECTION 3. That the City Manager or his designee be, and hereby is, authorized to issue said work order with Surveying and Mapping LLC, in substantially the form as that attached hereto, by and on behalf of the City of St. Joseph, Missouri, and is further authorized to sign all necessary documents, amendments, and addenda thereto which may subsequently be required to effectuate the purpose and intent of said work order.

SECTION 4. That the Finance Director be, and hereby is, authorized to record the budget amendments in the financial records of the City, to issue a warrant pursuant to the aforesaid work order and to charge \$72,800.00 for the Fiscal Year 2024, Water Protection Fund budget, Account Number 6430-1410 (Professional Services) when directed to do so by the Director of Public Works & Transportation.

SECTION 5. That this ordinance shall be in full force and effect from and after the date of passage.

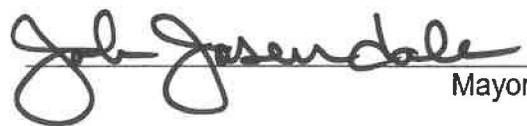
Approved as to form:



City Attorney

Attest: 

City Clerk

Passed: June 10, 2024


Mayor

	Davis	Eslinger	Grimm	Josendale	Novak	Randolph	Schomburg	Schultz	Trout	Total
Aye										0
Nay										0
Pass										0
Absent	1									1
Abstain										0

Special Ordinance

Council Agenda #: 48962, 18993-4

Ordinance #: 10501

Sponsored by Councilmember:

AGENDA ACCEPTED BY COUNCIL

Read first time: May 28, 2024
Statutory wait after first reading complied with

June 4, 2024

Passed June 10, 2024

CITY CLERK

2024 MAY 23 AM 10:05

Date: May 28, 2024
Amount: \$72,800.00
Account Number: 6430-1410

EXPLANATION TO COUNCIL BILL

ORIGINATING DEPARTMENT: Public Works & Transportation

PURPOSE: To authorize the execution of a Work Order with Surveying and Mapping LLC, for the City's Sewer Maintenance Division in an amount not to exceed \$72,800.00 for watershed mapping.

REMARKS: Surveying and Mapping LLC will perform watershed mapping within the Blacksnake watershed. New and adjusted GPS surveys will be tied to the City's control network. Stormwater structures that will be located include manholes, stormwater pipes, inlets, junction boxes, culverts, stormwater conveyances, and outfalls, with dates when items listed are surveyed/verified in the field. Inlets that are inaccessible by GPS will be shot using traditional survey methods.

The watershed mapping program is part of the mandated CMOM (capacity, management, operation, and maintenance) requirements the City must follow; the activity is also required to meet state and federal regulations. The City was issued its MS4 permit from the Missouri Department of Natural Resources in October 2021, which requires the City to maintain and update the storm sewer map. Any items not included must be added within the first 2 years of the permit cycle. Mapping of the Blacksnake Creek watershed is required to ensure that the City complies with this portion of the MS4 permit, as well as the Clean Water Act.

Originally, the Blacksnake watershed was going to be done in three phases over three years. New stormwater regulations require the mapping to be completed immediately to allow the stormwater coordinator and their team to perform the duties required by state and local regulations, which keeps the City in compliance with its CMOM agreement. Due to low staffing numbers, Account Number 6430-1475 (M&R of Bldg. & Facilities) has been underutilized this budget year and will be able to support the funding for this necessary expense.

The project reflects the following action items in the City's strategic plan:

1. Ensure Fiscal Responsibility: Improve utilization of city-owned technological assets.
2. Ensure Fiscal Responsibility: Budget accurately and stay within our own budget.

THIS ORDINANCE HAS BEEN CERTIFIED THAT THE FOREGOING CONTRACT OR ORDER IS WITHIN THE PURPOSE OF THE APPROPRIATION TO WHICH IT IS TO BE CHARGED, AND THAT THERE IS AN UNENCUMBERED BALANCE TO THE CREDIT OF SUCH APPROPRIATION SUFFICIENT TO PAY THEREFORE.

MASTER AGREEMENT WORK ORDER
Professional Services

MAWO # SAM2043 **MA ORD. #** SO10492 **MAWO Date:** 6-11-2024

The term "Master Agreement" shall mean the Master Agreement for On-Call Services and Work dated 05/29/2024 between the City and the Professional, which authorizes total funding in the amount of \$ 72,480.00 and sets forth the general responsibilities and obligations associated with smaller-scope projects, such as the specific Project referenced below.

Project: Blacksnake Watershed Mapping

Professional: Surveying & Mapping (SAM)

No MAWO issued to complete a Project pursuant to the above-referenced Master Agreement may be subsequently modified by the Professional without receiving prior written authorization from either the applicable Department Director or Deputy Director via Change Order. Any modification/Change Order that would increase the amount reflected in the original MAWO for the Project to an amount in excess of the total funding authorized in the corresponding Master Agreement (referenced above) shall require City Council action. [See Section 6.2 of Master Agreement.]

Initials of Professional: KL

1. General Nature of Services/Work for identified Project (mark "x" where applicable):

Construction

Design

Other

(Description) GPS data collection & implementation

2. Method of Determining Cost (lump sum, hourly rate, other): Hourly

3. Scope of Services/Work for identified Project:

Please see MAWO Exhibit 1 - "Scope of Services"

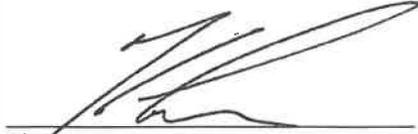
4. Maximum Amount that may be charged for Completion of Services/Work for identified Project:

Please see MAWO Exhibit 1 - "Schedule of Values"

5. Time Frame/Date for Completion of Services/Work for identified Project:

December 31, 2024

PROFESSIONAL:



Signature

Kirk Larson

Printed Name

The Project described in this MAWO is hereby authorized (if less than \$5,000.00):

By: _____
Department Director
City of St. Joseph, Missouri

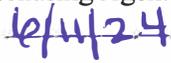
Printed Name of Designee
(*if executed by designee)

The Project described in this MAWO is hereby authorized (if \$5,000.00 through the total amount approved in the corresponding Master Agreement):

By: 

City Manager
City of St. Joseph, Missouri

****This MAWO shall be forwarded to the Purchasing Division and attached to the corresponding Master Agreement.***

Initials of Purchasing Agent: 
Received on:  _____

Initials of Finance Director: 
[if randomly reviewed per Section 2.1(e) of Master Agreement]

ATTACHMENT to MAWO

Name(s) of Individual(s) Performing Work on Identified Project:

Field Staff as assigned

Training or Certifications Received by Named Individual(s) related to Work to be Performed on Identified Project:

OSHA - Construction Safety & Health
North American Sewer Service Companies

Hourly Rates for Identified Project:

Operations Manager	\$240.00 per hour
Senior Project Manager	\$196.00 per hour
GIS Project Manager	\$150.00 per hour
GIS Programmer	\$135.00 per hour
GIS Specialist	\$118.00 per hour
GIS Technician	\$105.00 per hour
(2) Person Survey Crew with GPS	\$185.00 per hour
Office Administration	\$125.00 per hour

Hourly Equipment Rates for Identified Project (if applicable):

NA

Other Pertinent information:

NA

TECHNICAL WORK PLAN

Blacksnake Watershed Storm Water GPS Field Data Collection

SAM will locate, through RTK (survey grade) GPS methods, the storm water facilities contained within the Blacksnake watershed. Captured features through GPS surveys will include all attributes designated by the City of St. Joseph during the planning phase of the project. GPS surveys will be referenced to the Missouri State Plane coordinate system to allow for direct insertion into the city's GIS program.

Horizontal (x,y) coordinates and vertical (z) elevations will be obtained in the field for the storm water facilities. Features will be collected at sub-centimeter horizontal and vertical accuracies.

SAM will GPS field locate above ground utility features for the storm water network within the project limits of Blacksnake watershed.



Storm Water Structures to be Located:

- **Manholes**
- **Inlets**
- **Junctions Boxes**
- **Outfalls**



Inlets that are inaccessible by GPS due to tree cover or satellite visibility will be noted and shot utilizing traditional survey methods. All data will be coded in reference to method of collection utilized.

Storm Water Field Attribute Collection

SAM will collect the storm water attribute data during this phase of the project. Any storm water structures that require further assistance in opening or gathering attribute data will be noted and SAM will work with city staff to gain access to the identified storm water structures.

SAM will utilize our customized storm water field application that has been successfully used on various other similar projects.



All field data will be pre-defined for field staff to ensure accurate and consistent attribute collection. Field staff will run the custom application on a GPS unit to allow for quick and easy identification and navigation of the storm water features. All data will be downloaded nightly and transferred via the internet to the Maryville office and inserted into the project geodatabase. All data will be backed up nightly.

Storm water features will be opened, inspected and attribute data will be collected. Attribute features to be collected will correlate with the required attribute fields to allow for seamless integration with the Esri ArcGIS software.

SAM field staff will collect the following attribute information of the storm water utility features within the Blacksnake watershed:

- **Structure depth (ft.)**
- **GPS coordinate**
- **Rim elevation**
- **Structure #**
- **Diameter/Height (in.)**
- **Downstream Invert**
- **Downstream structure**
- **Length**
- **Material**
- **Shape**
- **Slope %**
- **Type**
- **Upstream Invert**
- **Upstream Structure**
- **Structure type**

Attribute data collected in the field will be electronically collected and a hard copy record will be created. Strict safety procedures will be followed by SAM during this phase of the project. Proper signage and cone placement will be utilized when storm water features are being located and inspected.

GIS Feature Creation

SAM will incorporate the storm water data into the city's existing Esri ArcGIS Desktop 10.x geodatabase for the storm water network.



Custom domains will be added to SAM's custom field inspection application to ensure that field staff will collect clean and consistent data throughout the storm water GIS project. These domains will also be utilized by city staff for future management of the geodatabase to help simplify the editing and data management processes.

Storm water line segments will be created utilizing custom, in-house editing tools developed by the SAM development team. These tools will incorporate inspection data collected by field staff and will auto-generate storm water line segments illustrating flow direction, slope and exact length measurements. Quality assurance warnings have been built into these tools to verify positive slopes and to check for inconsistencies with pipe material and diameter.

SAM will develop the initial GIS database for the utility network. Database fields will be setup in the GIS program to allow SAM staff to enter information for specific data features in the GIS.

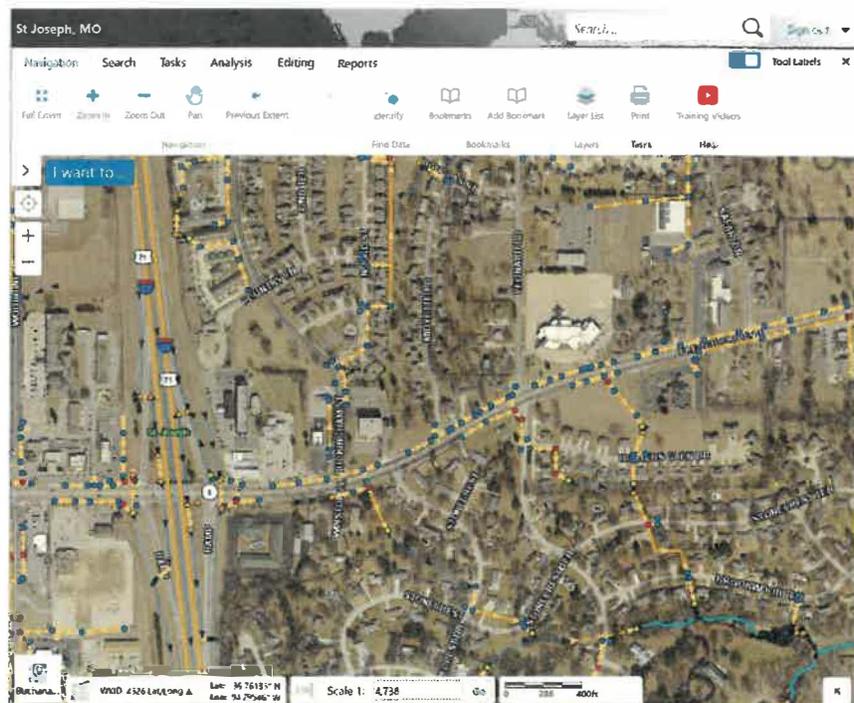


EXHIBIT 2

SCHEDULE OF VALUES NOT TO EXCEED AMOUNT

Project fees to complete storm water GPS services and GIS mapping have been compiled for Blacksake Watershed Phase I, Phase II, & Phase III.

Blacksake Watershed – Phase I

Work Task	Associate	Rate/Hr.	Hours	Fee
Project Administration	Project Manager	\$140.00	10	\$1,400.00
GPS Field Work	2-Man Survey Crew	\$184.00	100	\$18,400.00
GIS Mapping	GIS Technician	\$100.00	42	\$4,200.00
Total Proposed Fee:				\$24,000.00

Blacksake Watershed – Phase II

Work Task	Associate	Rate/Hr.	Hours	Fee
Project Administration	Project Manager	\$140.00	10	\$1,400.00
GPS Field Work	2-Man Survey Crew	\$184.00	100	\$18,400.00
GIS Mapping	GIS Technician	\$100.00	42	\$4,200.00
Total Proposed Fee:				\$24,000.00

Blacksake Watershed – Phase III

Work Task	Associate	Rate/Hr.	Hours	Fee
Project Administration	Project Manager	\$140.00	12	\$1,680.00
GPS Field Work	2-Man Survey Crew	\$184.00	100	\$18,400.00
GIS Mapping	GIS Technician	\$100.00	44	\$4,400.00
Total Proposed Fee:				\$24,480.00

MEMORANDUM

TO: Mayor and Council
FROM: Paula Heyde, CMC, City Clerk *pmh*
DATE: June 5, 2024
SUBJECT: Bill #864-22 (Item #24) – Proposed Amendment

Please amend Bill #864-22 (Item #24) to attach the attached “Master Agreement Work Order” with Surveying & Mapping (SAM).

cc: Bryan Carter, City Manager
Lisa M. Robertson, City Attorney
Abe Forney, Public Works & Transportation Director