City of Wentzville, Missouri

National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer System (MS4)
Permit MO-R040054

2017 MS4 Permit Report

(Reporting Period: June 13, 2016 to December 31, 2016)

Submitted February 28, 2017

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Note: Public comments regarding the Stormwater Management Plan or this report can be submitted online at www.wentzvillemo.org/departments/public_works/stormwater_management.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) – STORMWATER MANAGEMENT PLAN (SWMP) REPORT

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. (Used with E-Reporting)	
City of Wentzville	MOR040054	N/A	
4. ADDRESS	5. CITY	6. STATE	7. ZIP CODE
200 E. Fourth St.	Wentzville	MO	63385
8. TELEPHONE NUMBER WITH AREA CODE	9. EMAIL		
636-327-5102	Jamie.Paige@wentzvillemo.org		
10. NAME OF MS4 CONTACT PERSON			
Jamie Paige			

11. Has 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 SWMP report? If yes, please include a map along with a brief description as an attachment.

YES ☒; NO ☐

Part B – REPORTING PERIOD

1. Is your MS4 subject to a TMDL?
YES ☐; NO ☒

If yes, you are required to submit the MS4 report annually. Reports are due February 28th each year. For the first reporting period, the beginning date will be June 13, 2016, and the ending date will be December 31, 2016. All other annual reports shall cover the reporting period of January 1st to December 31st each year.

2. Is your MS4 new permitted (i.e., is this your first MS4 permit)?
YES ☐; NO ☒

If yes, you are required to submit the MS4 SWMP Report annually. Reports are due February 28th each year. For the first reporting period, the beginning date will be the date of issuance of the permit and the ending date will be December 31, 2016. All other annual reports shall cover the reporting period of January 1st to December 31st each year.

3. Is your MS4 a previously permitted MS4 and not subject to a TMDL?
YES ☒; NO ☐

If yes, you are required to submit the MS4 SWMP Report Biennially (i.e., once every two years). Reports are due February 28th every odd year. The first report will be due February 2017, and will cover the reporting period from June 13, 2016, to December 31, 2016. All other reports shall cover the reporting period of January 1st of the first year to December 31st of the second year.

4. If you are part of a co-permitted MS4 permit, submit combined MS4 SWMP Reports, and one or more of the co-permitted MS4s have annual reporting based on the above criteria, then submit your MS4 SWMP Report annually by February 28th of each year.

IF you are part of a co-permitted MS4 permit and do not submit combined MS4 SWMP Reports, then each MS4 co-permittee will submit their MS4 SWMP Report based on the above criteria.

5. Reporting Period:

BEGINNING: June 13, 2016 ENDING: December 31, 2016

Part C – SWMP PROGRESS AND COMPLIANCE

As an attachment, please provide information for each of the items below. Provide informative data, success stories, and experiences that support the successful implementation of your SWMP.

1. Describe the status of compliance with permit conditions for the permitted MS4.
2. Provide information regarding the progress toward achieving the statutory goal of reducing the discharge of pollutants to the Maximum Extent Practicable to the MS4.
3. If another governmental entity implements any Best Management Practice (BMP) or Minimum Control Measure (MCM), 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 BMP(s) or MCM(s) being implemented by the government entity.

(It is the responsibility of the permittee to provide all information under this report regardless if BMP(s) or MCM(s) are being implemented by another governmental entity. If a complete is being implemented by the other governmental entity, then only indicated the MCM rather than each BMP under the MCM.)

4. Provide a summary of any stormwater activities and known construction activities that will be covered under the authority of the MS4 permit that are scheduled to begin during the next reporting period.
5. Provide a description of any changes to the SWMP, BMP(s), measurable goal(s), and the iterative process that have occurred during the covered reporting period.
6. Provide a list of BMPs that were evaluated during the covered reporting period, and provide information on how the BMP was determined effective.
    a. If any of the BMPs were determined ineffective, provide a summary on how the ineffective BMP was resolved.
7. If any water samples were collected and analyzed during the covered reporting period by the permitted MS4 or on behalf of the permitted MS4, please complete Part D – Water Sample(s) Analysis.

Part D – WATER SAMPLE(S) ANALYSIS

PARAMETER OR INDICATOR	FREQUENCY	RESULT	DRY WEATHER SAMPLE?	WET WEATHER SAMPLE?
pH	Routine (for flowing representative outfalls)	7.3 – 8.3	YES ☒; NO ☐	YES ☐; NO ☐
Fecal coliform	Seldom (for flowing outfalls with potential indicators)	92,000 CFU/100 mL	YES ☒; NO ☐	YES ☐; NO ☐
Nitrogen, Ammonia	Seldom (for flowing outfalls with potential indicators)	0.47 mg/L	YES ☒; NO ☐	YES ☐; NO ☐
Fluoride	Seldom (for flowing outfalls with potential indicators)	0.36 mg/L	YES ☒; NO ☐	YES ☐; NO ☐
Surfactants	Seldom (for flowing outfalls with potential indicators)	0.18 mg/L	YES ☒; NO ☐	YES ☐; NO ☐
Potassium	Seldom (for flowing outfalls with potential indicators)	5.18 mg/L	YES ☒; NO ☐	YES ☐; NO ☐
			YES ☐; NO ☐	YES ☐; NO ☐
			YES ☐; NO ☐	YES ☐; NO ☐

1. Are any of the parameters above being sampled due to the MS4 being subject to an established or approved Total Maximum Daily Load? If yes, please indicate the parameter/pollutant.

YES ☐; NO ☒

2. Does the data support Water Quality attainment or support trend data toward Water Quality attainment? If yes, please describe.

YES ☒; NO ☐

Dry weather sampling for almost all representative outfalls showed no flow and normal ranges for pH. Data collected for one outfall during dry weather screening showed elevated bacteria; other parameters tested showed the source was likely tap and/or irrigation water. Further sanitary dye testing from all business and properties confirmed connection to the public sanitary system with no dye found in the storm system.

Part E – TOTAL MAXIMUM DAILY LOAD (TMDL) ASSUMPTIONS AND REQUIREMENTS ATTAINMENT PLAN (ARAP)
1. Is your MS4 subject to an established or approved TMDL? If no, please indicate "No" below and do not complete any other portion of the TMDL ARAP portion of this report. YES ☒; NO ☐
2. Has your TMDL ARAP been completed and submitted? If no, please provide a summary as an attachment on the progress toward submitting and implementing the TMDL ARAP. YES ☐; NO ☐
3. Has your TMDL ARAP received approval from the Department? If yes, please provided a summary of the status of the ARAP and include implementation status of identified BMPs and measurable goals along with any changes to BMPs or measurable goals (if applicable)..
YES ☐; NO ☐
4. Does the TMDL ARAP incorporate Integrated Planning? If yes, please provide a summary of the status of the Integrated Plan.
YES ☐; NO ☐
PART F – SUBMIT REPORT TO:
Missouri Department of Natural Resources Water Protection Program MS4 Program Coordinator P.O. Box 176 Jefferson City, MO 65102-0176
PART G - CERTIFICATION
I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designated to ensure qualified personnel properly gather and evaluated 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 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
Susan Spiegel	02/27/17
NAME (PRINTED OR TYPED)	TITLE
Susan Spiegel	Director of Public Works

MO 780-1846 (08-16)

B. SWMP Progress and Compliance

Overview

Pursuant to the Federal Water Pollution Control Act and Missouri Clean Water Law, the City of Wentzville has been granted a General State Operating Permit #MO-R040054 for the Wentzville Municipal Separate Storm Sewer System (MS4) that expires September 30, 2021.

The 2017 MS4 Permit Report summarizes accomplishments for the reporting period of June 13, 2016 through December 31, 2016. This 2017 MS4 Permit Report is organized according to requirements of the Missouri Department of Natural Resources (DNR) Stormwater Report Form MO 780-1846.

Please note that the Phase II Small MS4 General Operating Permit was issued to the City of Wentzville on December 12, 2016. Therefore, the 2008-2013 Municipal Separate Storm Sewer System (MS4) permit conditions remained in effect until the date of issuance. The City plans to revise the 2013-2018 SWMP to reflect the permit conditions issued in 2016. Current permit conditions require that the initial 2017 MS4 Permit Report be submitted by Feb. 28, 2017. Thereafter, future reports shall be submitted biennially on odd years only.

The SWMP Progress and Compliance matrix is divided into six sections for each of the permit's required Minimum Control Measures (MCMs). A general summary is provided at the beginning of each regarding the status of permit compliance as outlined in the City's 2013-2018 Stormwater Management Plan to address the requirements of the permit.

More detailed information about the City's permit requirements and the activities reported below are provided in Wentzville's Stormwater Management Plan, available at www.wentzvillemo.org/departments/public_works/stormwater_management/pollution_prevention.php.

Minimum Control Measure #1: Public Education and Outreach on Stormwater Impacts

Target Audiences: General public, businesses, residents, trustees, and students

Target Pollutants and Sources: Trash from littering/dumping, the improper use or disposal of lawn chemicals, yard waste, hazardous wastes, business and construction waste

1. Status of Compliance with Permit Conditions

Summary

All interim milestones and measurable goals for the public outreach component of the Stormwater Management Plan are on-track to meet the measurable goals. The City continues to reach a variety of audiences (residents, contractors, volunteers, etc.) by using a multi-faceted BMP approach to inform the public. Website analytics show that meetings with prior public notice spike interest and inquiries related to stormwater. The general public and key stakeholders are exposed to methods of pollution prevention and reduction through demonstration project outreach, articles, public relations materials, newsletters, utility bill inserts, the city website and social media. Live training, such as public Stormwater Advisory Committee meetings, contractor/developer onsite meetings and education programs, continue to be effective in delivering specific messages and generating discussions with stakeholders.

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete? Yes	No	On-track	Accomplishments
Maintain stormwater program **website** and advertise web address	Track 2,500 visits Track 5,000 pageviews	Track at least 500 visits yearly Track at least 1,000 pageviews yearly	June 2018			x x	Tracked 387 entrances Tracked 628 users Tracked 1,242 pageviews 43% new users
Maintain supply of stormwater **brochures** at City Hall and/or Public Works and distribute to interested citizens	Distribute 2,000 brochures	Distribute 400 brochures annually Replenish quarterly or as needed	May 2018			x	Distributed 303 brochures
Conduct and promote **school educational programs** about stormwater impacts and how to prevent pollution	Impact 4,000 students and teachers	Create 800 impressions yearly	May 2018			x	Created 1,437 impressions
Conduct or promote **training workshops**	Conduct or promote 25 seminars or trainings	Advertise and/or conduct 5 training opportunities yearly	April 2018			x	Advertised and/or conducted 5 training
Submit stormwater **press releases and articles**	Publish 10 articles	Submit 2 articles or press releases annually	May 2018			x	Published 2 articles
Advertise development of the 2018-2023 stormwater management program in local publications	Track at least 50 hits to the SWMP website after notification	Advertisement developed and submitted by May 2018	June 2018			N/A	Scheduled to be revised for 2021 per new permit schedule

Minimum Control Measure #1: Public Education and Outreach on Stormwater Impacts

Target Audiences: General public, businesses, residents, trustees, and students

Target Pollutants and Sources: Trash from littering/dumping, the improper use or disposal of lawn chemicals, yard waste, hazardous wastes, business and construction waste

2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

Accomplishments listed above demonstrate the successful implementation of the BMPs/tasks designed to reduce pollutants to the MEP. Action items and interim milestones are on-track to meet the measurable goals outlined above. GM GREEN educational programs include stream monitoring, pollution detection, and civic action to improve local water quality. The 24-hour online reporting feature, Stormwater Pollution Ordinance, builder/developer SWPPP resources, and Speaker's Bureau continue to be available on the City website. Web activity attracted 43% new visitors. Spikes occurred during proposed changes to the Natural Watercourse Protection Ordinance and the City's Engineering escrows for post-construction BMP guarantees (Chapter 410.140 revisions). Top visited pages include the stormwater homepage, stormwater ordinances, native landscaping and community projects, among others.

3. Notice that the City is relying on another government entity to satisfy permit obligations (if applicable)

Name of Government Entity: N/A

Contact Info:

Primary Contact:

Specific BMPs or MCMs Entity Implements:

4. Summary of Stormwater Activities Scheduled to Begin During the Next Reporting Period

The public outreach strategy will continue to build on existing partnerships, stakeholder participation and interest, and regional outreach opportunities. Specific activities scheduled include a Homeowner's Association Symposium, Earth Force/GM GREEN service learning projects, GM Earth Day Festival, staff training on the Operations & Maintenance Program, and outreach to homeowners about rain gardens and native landscaping. Public survey analytics will also be used to validate baseline audience knowledge and perceptions for the 2016-2021 permit period.

5. Proposed Changes (to the SWMP, BMPs or measurable goals) and the Iterative Processes that Occurred

If BMPs/interim milestones not met, briefly explain reason, status, or new date for meeting goal

There are no proposed changes to the SWMP, BMPs or measurable goals at this time; however, the SWMP and implementation dates will be reviewed, revised, and submitted to reflect new permit conditions per permit section 4.1.3.

6. List of BMPs Evaluated and How BMPs were Determined Effective

BMPs have been determined to be effective as interim milestones remain quantifiable and metrics are on-track to meet the measurable goals. The number and breadth of education programs and outreach materials as well as feedback from educators and participants provided confirmation that the BMPs are appropriate and successful in getting information to target audiences.

Minimum Control Measure #2: Public Involvement/Participation

Target Audiences: Commercial/industrial businesses, homeowner's associations, citizens, educators, youth/service organizations, City officials, and property owners

Target Pollutants and Sources: Trash from littering/dumping and the improper use or disposal of lawn chemicals, yard waste, hazardous wastes, business & construction waste

1. Status of Compliance with Permit Conditions

Summary

Interim milestones and measurable goals for the community involvement component of the Stormwater Management Plan are on-track, and one measurable goal has been met. Board of Aldermen and Stormwater Advisory Committee meetings comply with state and local public notice requirements; agendas and minutes are available on the City website. Stormwater Advisory Committee meetings have engaged stakeholders such as the Home Builders' Association and residents to help evaluate and improve the Stormwater Management Program. Staff updates at each meeting include an overview of permit-related activities. The Concern Hotline continues to be useful to assess customer attitudes and behaviors as they predominantly use this BMP to report pollution and connect with staff to inquire about stormwater quality-related topics. BMPs and public events will continue to be evaluated for effectiveness in actively engaging the public in development and implementation of the Stormwater Management Program.

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete? Yes	No	On-track	Accomplishments
Post the Stormwater Management Plan and comment form online	Plan is available online and track at least 100 hits to the website	Update the plan and/or annual reports yearly	June 2014	x			SWMP and comment form posted online 311 pageviews
Stormwater Advisory Committee	Host bi-yearly public meetings at a minimum.	Post public notice of agendas and minutes for meetings	June 2018			x	Public notice posted for 5 meetings
Advertise volunteer opportunities through website, press releases and flyers	Advertise 10 opportunities and track at least 500 volunteer sign-ups	Advertise at least 2 opportunities and get 100 volunteer sign-ups each year	June 2018			x	Advertised 1 opportunity Spring events scheduled
Volunteer Programs: Stream Teams, Litter Pickups, and Storm Drain Marking	At least 500 volunteers Remove 15,000 pounds of litter from roads and streams Annual monitoring by local clubs/teams	Receive 100 volunteer signups yearly Clean up 3,000 lbs. of trash yearly Track monitoring sites and data annually	June 2018 June 2018 June 2018			x x x	Spring events scheduled
Concern Hotline	Advertise and maintain hotline with concern tracking system for citizens to report pollution or stormwater issues	Annually track the number of concerns received and follow-up	June 2018			x	Concern Hotline & web-based tracking system implemented; 226 stormwater-related concerns received
Stormwater Survey	Distribute survey to customers and receive 500 responses	Distribute survey around Oct. 2017 Compile responses in winter 2018	February 2018			x	Public survey drafted and posted online

Minimum Control Measure #2: Public Involvement/Participation

Target Audiences: Commercial/industrial businesses, homeowner's associations, citizens, educators, youth/service organizations, City officials, and property owners

Target Pollutants and Sources: Trash from littering/dumping and the improper use or disposal of lawn chemicals, yard waste, hazardous wastes, business & construction waste

2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

Action items and interim milestones are on-track to meet the measurable goals. The City of Wentzville implements a variety of activities that allow the public and key community groups and organizations to provide input and become involved in the Stormwater Management Program. Public perceptions, knowledge, and behaviors are gauged by the Citizen Hotline concerns, public meetings and volunteer projects such as Adopt-a-Spot and Mission: Clean Stream. These opportunities give citizens an opportunity to inquire and learn more about stormwater-related topics. The website and 24-hour online reporting continue to encourage citizens to monitor and report activities that may cause pollution.

The Stormwater Advisory Committee schedules public meetings and topics to evaluate and improve program effectiveness. They provide ideas to enhance outreach to stakeholders. Mission: Clean Stream continues to be popular with volunteers and has expanded to include a festival where the community can learn new ways to become engaged in local projects.

3. Notice that the City is relying on another government entity to satisfy permit obligations (if applicable)

Name of Government Entity: N/A
Primary Contact:
Contact Info:
Specific BMPs or MCMs Entity Implements:

4. Summary of Stormwater Activities Scheduled to Begin During the Next Reporting Period

Annual events such as Mission: Clean Stream and GM Earth Day Festival are slated for spring 2017. Adopt-a-Spot signage will be installed to encourage adoption of 'available' areas. Several exciting opportunities are also on the horizon. This includes civic action projects and outreach with Wentzville Middle School to host a contest for trash can designs to reduce litter in parks, encourage multi-family dwelling recycling, and improve bioretention maintenance. Students are also raising awareness at the festival to improve aquatic habitat and presenting ways to deter litter from getting into storm drains. A public survey will be disseminated to support student projects as well as gauge attitudes and evaluate the effectiveness of the SWMP. Further analysis of stream observations and water quality data will be useful in detecting changes in water quality trends.

Minimum Control Measure #2: Public Involvement/Participation

Target Audiences: Commercial/industrial businesses, homeowner's associations, citizens, educators, youth/service organizations, City officials, and property owners

Target Pollutants and Sources: Trash from littering/dumping and the improper use or disposal of lawn chemicals, yard waste, hazardous wastes, business & construction waste

5. Proposed Changes (to the SWMP, BMPs or measurable goals) and the Iterative Processes that Occurred

If BMPs/interim milestones not met, briefly explain reason, status, or new date for meeting goal

There are no proposed changes to the SWMP, BMPs or measurable goals at this time; however, the SWMP and implementation dates will be reviewed, revised, and submitted to reflect new permit conditions per permit section 4.1.3.

6. List of BMPs Evaluated and How BMPs were Determined Effective

Assessment of the Appropriateness of the Identified BMPs

All BMPs listed above have been determined to be effective as interim milestones remain quantifiable and metrics are on-track to meet the measurable goals. Stormwater Advisory Committee members had positive feedback regarding the SWMP and changes to the Natural Watercourse Ordinance and post-construction stormwater BMP guarantees. Wentzville Middle collected monitoring data through the GM GREEN/Earth Force partnership. While not to QA/QC protocol level, this data is being used to create multiple civic action projects with MCM 1, 3, and 5 as mentioned in Section 2 above. Stream Team activities, Earth Force, and Mission: Clean Stream continue to be efficient ways to get citizens of all ages involved in improving water quality. During the previous five–year permit term, the City successfully met the original goal by establishing water quality monitoring sites on Peruque, McCoy, Enon Branch, and Dry Branch Creek. Water quality data indicators, including macro-invertebrate counts and visual surveys, helped assess short and long-term trends in local creeks. The City looks forward to future opportunities to engage volunteer stream teams to continue monitoring efforts. Qualitative indicators of the effectiveness of the Public Involvement and Participation program will be further reviewed with the Public Survey and volunteer program surveys.

Minimum Control Measure #3: Illicit Discharge Detection and Elimination

Target Audiences: Businesses, property owners, city employees, and the general public

Target Pollutants and Sources: The improper use or disposal of lawn chemicals, yard waste, hazardous wastes, trash/litter, and business and construction waste

1. Status of Compliance with Permit Conditions

Summary

All interim milestones and measurable goals have been met, and the Stormwater Pollution Control Ordinance goal is complete. The Concern Hotline and dry weather field screenings allowed the City to inspect major outfalls to determine compliance and locations of illicit discharges. Training opportunities and flyers have educated staff and the general public on ways they can become involved in detecting and tracing the source of illicit discharges. Successful removal or conversion of 14 private sewerage systems to public sanitary system has been effective in reducing potential sources of bacteria from aged systems.

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete?			Accomplishments
				Yes	No	On-track	
Stormwater Pollution Control Ordinance	Maintain ordinance(s) with provision for enforcement to prohibit non-stormwater discharges to the MS4	Regulatory mechanism with sanctions for enforcement continues to be in place and updated as needed to reflect new permit conditions	August 2013	x			Ordinance enacted and reviewed
Illicit Discharge Detection & Enforcement	Conduct dry weather field screenings of all major outfalls and industrial/commercial enterprises	Field screen representative outfalls and priority areas with older sanitary lines	December 2014			x	All 10 representative outfalls screened and no illicit discharges discovered
	Document all concerns and locations and removals of illicit discharges	Field screen other major outfalls	December 2015			x	4 Illicit discharge concerns documented 1 illicit discharge found and eliminated
		Update inventory and inspections for industrial/commercial enterprises	December 2017				
		Screen interior outfalls on a concern-basis and/or as staff time permits	December 2018				Interior outfalls screened on a concern basis
		Respond to concerns received and track follow-up/enforcement annually	June 2018				Responded to and tracked concerns and enforcement
Stormwater Treatment BMP Inspection	Inspect all stormwater treatment BMPs to ensure operation and effectiveness	Biennial review of BMP inspection reports	September 2017			x	Inspections scheduled

Minimum Control Measure #3: Illicit Discharge Detection and Elimination

Target Audiences: Businesses, property owners, city employees, and the general public

Target Pollutants and Sources: The improper use or disposal of lawn chemicals, yard waste, hazardous wastes, trash/litter, and business and construction waste

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete?			Accomplishments
				Yes	No	On-track	
Stormwater Pollution Prevention Outreach	Inform target public employees and businesses about illicit discharges and the hazards of improper waste disposal	Offer training opportunities and/or pollution prevention flyers for targeted staff online, through outreach programs and at city buildings	February 2015			x	Hosted 5 training opportunities and 269 flyers distributed
	Post pollution detection information, alternative disposal options, and 24-hour reporting form online	Information updated biennially or as needed	November 2017			x	Website features ways to identify pollution, alternative disposal methods, and 24-hour reporting
	Stormwater doorknockers used in areas of concern	Track number of doorknockers used over the permit term	June 2018			x	1 doorknocker used for an illicit discharge concern
Storm System Mapping	Continue to update GIS map with storm system and water quality BMPs installed up to 2013 at a minimum	Annually track the total number of structures and BMPs on the map	April 2018			x	GIS mapping complete with storm system infrastructure installed through 2016 8,488 inlets 1,527 outfalls 305 stormwater facilities
Concern Hotline	Advertise and maintain a hotline with tracking system for citizens and staff to report concerns	Annually track the number of concerns received and follow-up	June 2018			x	Tracked 226 concerns
Advertise **Alternative Disposal Options** for Trash, Household Hazardous Wastes (HHW), and Yard Waste	Promote alternative disposal options for target pollutants online and in three press releases or articles	Information submitted annually and website updated as needed	June 2018			x	Alternative disposal options promoted on various city webpages and in 2 press releases/articles

Minimum Control Measure #3: Illicit Discharge Detection and Elimination

Target Audiences: Businesses, property owners, city employees, and the general public

Target Pollutants and Sources: The improper use or disposal of lawn chemicals, yard waste, hazardous wastes, trash/litter, and business and construction waste

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete? Yes	No	On-track	Accomplishments
Storm Drain Marking	Replace markers in existing subdivisions as needed to maintain 85% coverage in right-of-ways	Track the number of markers replaced annually	June 2018			x	Scheduled for 2017
	Encourage developers to use mark highly-visible storm drains in all new developments	Continue to include a standard detail/recommendation in Engineering Design Criteria				x	Standard detail/recommendation used in Engineering Design Criteria for developments; all in-house lid replacements include "Dump No Waste, Drains to Stream"
Private Sewage Systems	Continue to prohibit new private sewer systems and package treatment plants within municipal boundaries.	Regulatory mechanism continues to be in place	June 2018			x	Wastewater ordinance in place
	As areas incorporate, convert private sewage systems to the public sanitary system where practical.	Track the number of systems taken offline or converted annually				x	14 Private sewerage systems removed/connected

2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

Accomplishments listed above demonstrate the successful implementation of the BMPs/tasks designed to reduce pollutants to the MEP. The City continues to implement the Stormwater Pollution Control Ordinance which provides the City a process for incident inspection, response, and remediation cost recovery if needed. Timely update (upon dedication) of GIS storm infrastructure mapping has exceeded the anticipated schedule. This will be a valuable tool as the City begins a Preventative Maintenance Program to help locate priority areas for storm system repairs and identify sources of illicit discharges. Since last reported, 14 septic systems have been removed or connected to the public sanitary system, eliminating potential sources of pollution from several older properties.

Dry weather field screening of representative outfalls found that only one out of ten outfalls were suspected illicit discharges. Water sampling and dye-testing helped confirm that business sanitary lines were not sources. Pollution prevention training for staff has also led to identification of illicit discharges from businesses during their building maintenance activities. The City worked with business owners to use temporary inlet protection/filters to reduce pollutants to the MS4. In addition, alternative disposal opportunities such as the City's curbside yard waste and large item trash pickup days, and the Household Hazardous Waste Collection Program provide convenient options for the public. The 24-hour online reporting continues to encourage citizens to report activities that may cause pollution.

Minimum Control Measure #3: Illicit Discharge Detection and Elimination

Target Audiences: Businesses, property owners, city employees, and the general public

Target Pollutants and Sources: The improper use or disposal of lawn chemicals, yard waste, hazardous wastes, trash/litter, and business and construction waste

3. Notice that the City is relying on another government entity to satisfy permit obligations (if applicable)

Name of Government Entity:

Contact Info:

Primary Contact:

Specific BMPs or MCMs Entity Implements:

4. Summary of Stormwater Activities Scheduled to Begin During the Next Reporting Period

A Preventative Maintenance Program will begin, including stormwater treatment BMP inspections, storm system maintenance tracking, and field screening of other major outfalls and priority areas with older sanitary lines. The GM GREEN partnership with GM, Earth Force and Wentzville Middle School will be working on developing outreach strategies to reduce litter near storm drains and in parks.

5. Proposed Changes (to the SWMP, BMPs or measurable goals) and the Iterative Processes that Occurred

If BMPs/interim milestones not met, briefly explain reason, status, or new date for meeting goal

The task 'Update inventory and inspections for industrial/commercial enterprises' was not addressed, as this requirement was removed from the permit. There are no other proposed changes to the SWMP, BMPs or measurable goals at this time; however, the SWMP, responsible parties and implementation dates will be reviewed, revised, and submitted to reflect new permit conditions per permit section 4.1.3.

6. List of BMPs Evaluated and How BMPs were Determined Effective

The Stormwater Pollution Control Ordinance language was reviewed and deemed appropriate for current permit conditions. The number and nature of illicit discharges located and eliminated were assessed to evaluate BMP effectiveness. Other BMPs will be evaluated with the Preventative Maintenance Program to determine effectiveness.

Minimum Control Measure #4: Construction Site Stormwater Runoff Control

Target Audiences: Developers, builders, other construction site operators, and municipal inspectors

Target Pollutants and Sources: Sediment, litter, concrete truck washout, sanitary waste and hazardous materials from construction sites

1. Status of Compliance with Permit Conditions

Summary

All interim milestones and measurable goals for the Stormwater Management Plan are on-track to achieve the task/BMPs and permit conditions. The City continues to review grading and improvement plans for compliance with city codes. Stormwater pollution prevention and sediment and erosion control plans are integrated into all site plan reviews greater than an acre. The Erosion and Sediment Control Ordinance and inspections remain the primary tool to require BMPs at construction sites; the ordinance includes sanctions to ensure compliance per permit section 4.2.4.1.1.

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete? Yes	No	On-track	Accomplishments
Construction Site Stormwater Runoff Control **Ordinance(s)**	Maintain ordinance(s) with sanctions to require site operators to implement, and maintain BMPs to reduce pollutants to the MS4	Regulatory mechanism continues to be in place and defines sanctions for enforcement Update ordinance to reflect new permit conditions as needed	August 2013			x	Sediment and Erosion Control ordinance enacted and enforced
Training for Operators and/or City Staff	Promote or conduct trainings for staff and/or contractors biennially and as needed	Track the number of trainings promoted/conducted and participation	April 2018			x	1 training offered; 3 staff attended
Pre-Construction Site **Plan Reviews**	Continue to review 100% of plans for construction projects >1 acre or smaller sites part of a larger common plan	Track the number of reviews annually	June 2018			x	Completed 28 site plan reviews
Construction Site **Inspections & Enforcement**	Inspect all active construction sites Document concerns and follow up	Respond to concerns received Annual review of inspection reports; modify inspection priorities or enforcement based on need	June 2018			x x	134 development inspections completed on 34 active construction sites, plus 967 individual lot inspections (home const.) Inspection reports reviewed; inspections are prioritized based on site size, proximity to surface water, history of non-compliance, etc.

Minimum Control Measure #4: Construction Site Stormwater Runoff Control

Target Audiences: Developers, builders, other construction site operators, and municipal inspectors

Target Pollutants and Sources: Sediment, litter, concrete truck washout, sanitary waste and hazardous materials from construction sites

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete?			Accomplishments
				Yes	No	On-track	
Concern Hotline	Advertise and maintain a hotline with concern tracking system for citizens to report construction site runoff issues	Annually track the number of concerns received and follow-up	June 2018			x	Concern Hotline & web-based tracking system implemented; 226 stormwater-related concerns received
Storm Drain Marking	Encourage developers to use highly-visible storm drains in all new developments	Continue to include a standard detail/recommendation in Engineering Design Criteria	June 2018			x	Detail referenced and storm drain marking recommended for new developments and projects in the City's design standards. Existing storm drain lids are marked when replaced in-house.

2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

The accomplishments listed above demonstrate the successful implementation of the BMPs/tasks designed to reduce pollutants to the MEP. Action items and interim milestones are on-track to meet the measurable goals outlined above. City staff evaluate land disturbances and pollution prevention strategies through pre-construction site plan review and comment prior to permitting. In addition, inspectors visit their assigned active grading sites weekly at a minimum. At project pre-construction meetings, contractors are provided a fillable SWPPP inspection report to help meet permit obligations and sediment/erosion control BMPs and requirements are reviewed. Inspectors review SWPPP reports for compliance and inspection prioritization if reports are not received. City policy requires sediment/erosion control BMPs prior to footing inspection approval on individual lots which are part of larger developments. The 24-hour online reporting tool remains instrumental for citizens to report issues to help reduce the discharge of pollutants.

3. Notice that the City is relying on another government entity to satisfy permit obligations (if applicable)

Name of Government Entity: N/A
Primary Contact:
Contact Info:
Specific BMPs or MCMs Entity Implements:

Minimum Control Measure #4: Construction Site Stormwater Runoff Control

Target Audiences: Developers, builders, other construction site operators, and municipal inspectors

Target Pollutants and Sources: Sediment, litter, concrete truck washout, sanitary waste and hazardous materials from construction sites

4. Summary of Stormwater Activities & Known Construction Activities Scheduled to Begin During the Next Reporting Period

A review and update is slated for 1) the City's Standard Specifications and Construction Details for erosion control BMPs, and 2) the Erosion and Sediment Control Ordinance to reflect new MS4 and land disturbance permit conditions. SWPPP training for staff, inspectors, and contractors will also be a focus of stormwater activities over the next reporting period.

Scheduled construction includes Wentzville City Hall, Hwy. 61 Outer Road, and various developments such as Big Tex Trailers and Aldi's.

5. Proposed Changes (to the SWMP, BMPs or measurable goals) and the Iterative Processes that Occurred

If BMPs/interim milestones not met, briefly explain reason, status, or new date for meeting goal

There are no proposed changes to the SWMP, BMPs or measurable goals at this time; however, the SWMP, responsible parties and implementation dates will be reviewed, revised, and submitted to reflect new permit conditions per permit section 4.1.3.

Additional staff and a review of construction inspections led to the Engineering Department assigning an inspector to each project. This has increased project review/inspection efficiency, consistency, and communication with contractors.

6. List of BMPs Evaluated and How BMPs were Determined Effective

Assessment of the Appropriateness of the Identified BMPs

Construction site inspection forms were reviewed across municipal and private development sites. Minor revisions were made for consistency to streamline the information received from city staff and contractors. This BMP was determined effective as inspections led to escalating enforcement action and the reduction or removal of discharges of pollutants.

Minimum Control Measure #5: Post-Construction Stormwater Management in New Development and Redevelopment

Target Audiences: Developers, builders, other construction site operators, and municipal inspectors
Target Pollutants and Sources: Sediment, litter, concrete truck washout, sanitary waste and hazardous materials from construction sites

1. Status of Compliance with Permit Conditions

Summary

Several post-construction measurable goals have been met, with all other interim milestones for this Minimum Control Measure (MCM) on-track to meet the measurable goals. Namely, the Engineering Design Criteria provides standards for long-term stormwater facilities as well as plans and guarantees for maintenance. Planned growth policies help guide staff, developers, and elected boards when making land-use decisions and directives. Alternative disposal options are available to customers for large-item pickup, yard waste, and Household Hazardous Waste collected within the planned growth boundary.

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete? Yes	No	On-track	Accomplishments
Post-Construction Runoff **Ordinance**	Maintain ordinance(s) that ensure controls to prevent or minimize water quality impacts in accordance with permit conditions	Regulatory mechanism continues to be in place and defines maintenance responsibilities Update ordinance to reflect new permit conditions as needed	August 2013	x			Engineering Design Criteria ordinance enacted and enforced Ordinance modified to address post-construction BMP installation and maintenance guarantee
Planned Growth Ordinances and Policies	Maintain and create policies and/or incentives to:	The following planning policies & incentives continue to be in place and reviewed biennially or as needed:	March 2014				
	1) Direct growth to re-development, infill, and brownfields	Wentzville Comprehensive Plan		x			Comprehensive Plan enacted and used to guide land use decisions.
	2) Protect sensitive areas (stream riparian corridors and wetlands)	Natural Watercourse Protection Ord. (25' buffer or more based on size) and Floodway Districts		x			Natural Watercourse Protection Ord. and Floodplain Management implemented
	3) Maintain/increase open space	Parks & Recreation Programs, Tree Preservation and Planned District Ordinances with preservation or open space minimums		x			Open space, tree preseration, and Planned District ordinances in place. Ord. 3660 improves the intent of Planned Development zoning requests to encourage this goal.
	4) Minimize impervious surfaces and disturbance of soil/vegetation	Engineering Design Criteria and Land Use Plan Reviews and Policy promote minimizing impervious areas and land disturbance, and increasing greenspace near sensitive areas		x			EDC enacted and promote a impervious cover reduction. Land use plan reviews assess site design options for protecting sensitive areas and minimizing disturbances.

Minimum Control Measure #5: Post-Construction Stormwater Management in New Development and Redevelopment

Target Audiences: Developers, builders, other construction site operators, and municipal inspectors
Target Pollutants and Sources: Sediment, litter, concrete truck washout, sanitary waste and hazardous materials from construction sites

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete? Yes	No	On-track	Accomplishments
Stormwater Plan Reviews	Continue to review 100% of plans for post-construction BMPs at affected developments	Track the number of reviews annually	June 2018			x	Completed 28 site plan reviews
BMP **Operations & Maintenance Plans and Agreements**	Agreements and maintenance plans on file for 100% of BMPs constructed in affected developments	Staff continue to follow Stormwater Facility O&M Plan Flow Chart and receive plans prior to construction permit issuance	June 2018			x	BMP Operations & Maintenance Plans and Maintenance Covenants tracked for all storm water quality BMPs.
Stormwater Control BMP **Inspections & Enforcement**	Review inspection reports and/or perform inspections at all water quality control BMPs biennially, at a minimum	Biennial review of inspection reports; modify inspection priorities or enforcement based on need	June 2018			x	Scheduled for 2017
Advertise **Alternative Disposal Options** for Trash, Household Hazardous Wastes (HHW), and Yard Waste	Promote alternative disposal options for target pollutants online and in three press releases or articles	Information submitted annually and website updated as needed	June 2018			x	Alternative disposal options promoted on various city webpages and in 2 press releases/articles
Storm Drain Marking	Replace markers in existing subdivisions as needed to maintain 85% coverage in right-of-ways	Track the number of markers replaced annually	June 2018			x	Scheduled for 2017
	Encourage developers to use markers for highly-visible storm drains in all new developments	Continue to include a standard detail/recommendation in Engineering Design Criteria				x	Standard detail/recommendation used in Engineering Design Criteria for developments; all in house lid replacements include "Dump No Waste, Drains to Stream"

2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

The City of Wentzville continues to implement a variety of tools that work together to guide land use decisions, protect sensitive areas, and address long-term stormwater runoff. Natural physiographic features are evaluated and considered for protection through the City's Tree Preservation, Planned District, and Natural Watercourse Protection ordinances. The City's engineering design requirements mimic St. Louis regional post-construction standards for water quality improvement for new and re-development, as required by permit. Overall, the accomplishments listed here demonstrate the successful implementation of the BMPs/tasks designed to reduce pollutants to the MEP. Continued outreach at demonstration projects in residential areas and at Heartland Park serve as a reminder about the intent and success of BMPs such as forebays, bioretention, wetlands and pervious pavement.

Minimum Control Measure #5: Post-Construction Stormwater Management in New Development and Redevelopment

Target Audiences: Developers, builders, other construction site operators, and municipal inspectors
Target Pollutants and Sources: Sediment, litter, concrete truck washout, sanitary waste and hazardous materials from construction sites

3. Notice that the City is relying on another government entity to satisfy permit obligations (if applicable)

Name of Government Entity: N/A
Contact Info:
Primary Contact:
Specific BMPs or MCMs Entity Implements:

4. Summary of Stormwater Activities & Known Construction Activities Scheduled to Begin During the Next Reporting Period

Routine stormwater BMP inspections and storm drain marker tracking is scheduled as part of the Preventive Maintenance Program. Known post-construction BMPs for developments include bioretention and proprietary treatment systems in commercial areas. In addition, the City's planned growth policies and ordinances will be evaluated and updated as necessary. This includes evaluation of the Comprehensive Plan and Natural Watercourse Protection Ordinance.

5. Proposed Changes (to the SWMP, BMPs or measurable goals) and the Iterative Processes that Occurred

If BMPs/interim milestones not met, briefly explain reason, status, or new date for meeting goal

There are no proposed changes to the SWMP, BMPs or measurable goals at this time; however, the SWMP, responsible parties, targeted pollutants and implementation dates will be reviewed, revised and submitted to reflect new permit conditions per permit section 4.1.3.

6. List of BMPs Evaluated and How BMPs were Determined Effective

Assessment of the Appropriateness of the Identified BMPs

Cursory review of the engineering plan review process found that this BMP is functioning as intended. Review engineers have a good understanding of BMP construction and maintenance requirements and ensure maintenance covenants are being recorded.

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations

Target Audiences: Municipal employees and contractors
Target Pollutants and Sources: Sediment and the improper use or disposal of paint, solvents, petroleum products, herbicides, fertilizers, solid and hazardous waste, and concrete truck washout from maintenance of city properties

1. Status of Compliance with Permit Conditions

Summary

All interim milestones and measurable goals for the public outreach component of the Stormwater Management Plan are on-track to meet the measurable goals. Two measurable goals have been achieved, with procedures in place to continue the Operations & Maintenance program for municipal operations and good housekeeping. All other interim milestones and tasks for this component of the Stormwater Management Plan are on-track to meet the measurable goals. The City continues to effectively reach interdepartmental staff with maintenance or contractor oversight responsibilities through in-house training and regional workshops. During this reporting period, the O&M Plan was revised to reflect new municipal property and personnel.

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete?			Accomplishments
				Yes	No	On-track	
Operations & Maintenance (O&M) Program	Continue to track operations that may have water quality impacts	Program continues to be in place with pollution prevention controls/maintenance schedules, inspection procedures	August 2014	x			O&M Program implemented across departments
		Update program to reflect new parks, properties, or operations as needed	February 2016				O&M Program revised to reflect current properties and responsible personnel
		Develop PP/GH Guide of BMPs	June 2016				PP/GH Guide of BMPs included in the City's O&M Program Manual
O&M Training for City Staff and/or contractors	Promote or conduct trainings biennially or as needed in accordance with the O&M Program and in concert with MCM 1 & 3	Continue to track the number of trainings promoted/conducted and participation Provide spill prevention and response flyers at facilities involved in the O&M Program	June 2018			x	4 Trainings held with 59 participants

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations

Target Audiences: Municipal employees and contractors
Target Pollutants and Sources: Sediment and the improper use or disposal of paint, solvents, petroleum products, herbicides, fertilizers, solid and hazardous waste, and concrete truck washout from maintenance of city properties

Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Interim Milestones	Implementation Schedule	Goal Complete?			Accomplishments
				Yes	No	On-track	
PP/GH Inspections & Maintenance	Perform scheduled maintenance activities and inspections at municipal facilities and construction projects in accordance with the O&M Program	Track maintenance schedules and activities annually; keep on file through July 2018 Provide O&M Program updates as needed to the PW Director	June 2018			x	16 O&M Program inspections conducted
Fueling Facilities under the City's control	Adhere to applicable federal and state regulations for spill prevention, control and counter measures	Research updates to regulations that pertain to the City Evaluate the need for and funding mechanism for any necessary improvements Install necessary improvements	January 2014 September 2014 December 2016			x	City facilities assessed for the need to update procedures and BMPs to align with this goal. Individual departments are responsible for addressing federal and state regulations.
Street Sweeping	Sweep main streets twice monthly and subdivision streets quarterly, weather permitting	Track frequency of street sweeping operations and estimated amount of debris removed	June 2018			x	Sweeper deployed 93 days with 51 tons of debris removal (estimated)
Flood Management Projects	Assess all new flood/stormwater projects for water quality impacts Assess existing projects for incorporation of water quality protection practices or devices	Procedures continue to be in place to review all projects and recommend water quality protection practices	December 2013	x			Procedures in place to review all projects for concurrence with the Engineering Design Criteria, municipal code and construction standards

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations

Target Audiences: Municipal employees and contractors
Target Pollutants and Sources: Sediment and the improper use or disposal of paint, solvents, petroleum products, herbicides, fertilizers, solid and hazardous waste, and concrete truck washout from maintenance of city properties

2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

The City has seen observable progress of reducing pollutants through annual staff training, onsite BMPs and inspections. Staff in various departments rotate on a two to three year schedule to help expose many employees to the program. The use of the vehicle/equipment wash bay and Public Works hydrodynamic separator, which drains the three-acre yard, has significantly reduced debris and sediment that discharged from the Public Works facility. Streets maintenance activities include routine sweeping operations and salt brine road applications rather than rock salt. Salt storage piles are under roof. For this reporting period, an estimated 51 tons of debris was kept out of the storm sytem through street sweeping. In addition, the Streets Department has routine maintenance schedules for grated inlets (cleaned every other month) and address non-routine issues related to public concerns from the City's Concern Hotline. All records are kept on the City's WebQA concern system.

3. Notice that the City is relying on another government entity to satisfy permit obligations (if applicable)

Name of Government Entity: N/A
Primary Contact:
Contact Info:
Specific BMPs or MCMs Entity Implements:

4. Summary of Stormwater Activities Scheduled to Begin During the Next Reporting Period

A preventative maintenance program for stormwater infrastructure will further help identify stormwater infrastructure conditions and maintenance needs. Annual refresher training for chemical spill response training is slated for fall 2017. Responsible personnel will conduct their department's O&M inspections at all locations at least once annually.

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations

Target Audiences: Municipal employees and contractors
Target Pollutants and Sources: Sediment and the improper use or disposal of paint, solvents, petroleum products, herbicides, fertilizers, solid and hazardous waste, and concrete truck washout from maintenance of city properties

5. Proposed Changes (to the SWMP, BMPs or measurable goals) and the Iterative Processes that Occurred

If BMPs/interim milestones not met, briefly explain reason, status, or new date for meeting goal

There are no proposed changes to the SWMP, BMPs or measurable goals at this time; however, the SWMP, responsible parties and implementation dates will be reviewed, revised and submitted to reflect new permit conditions per permit section 4.1.3.

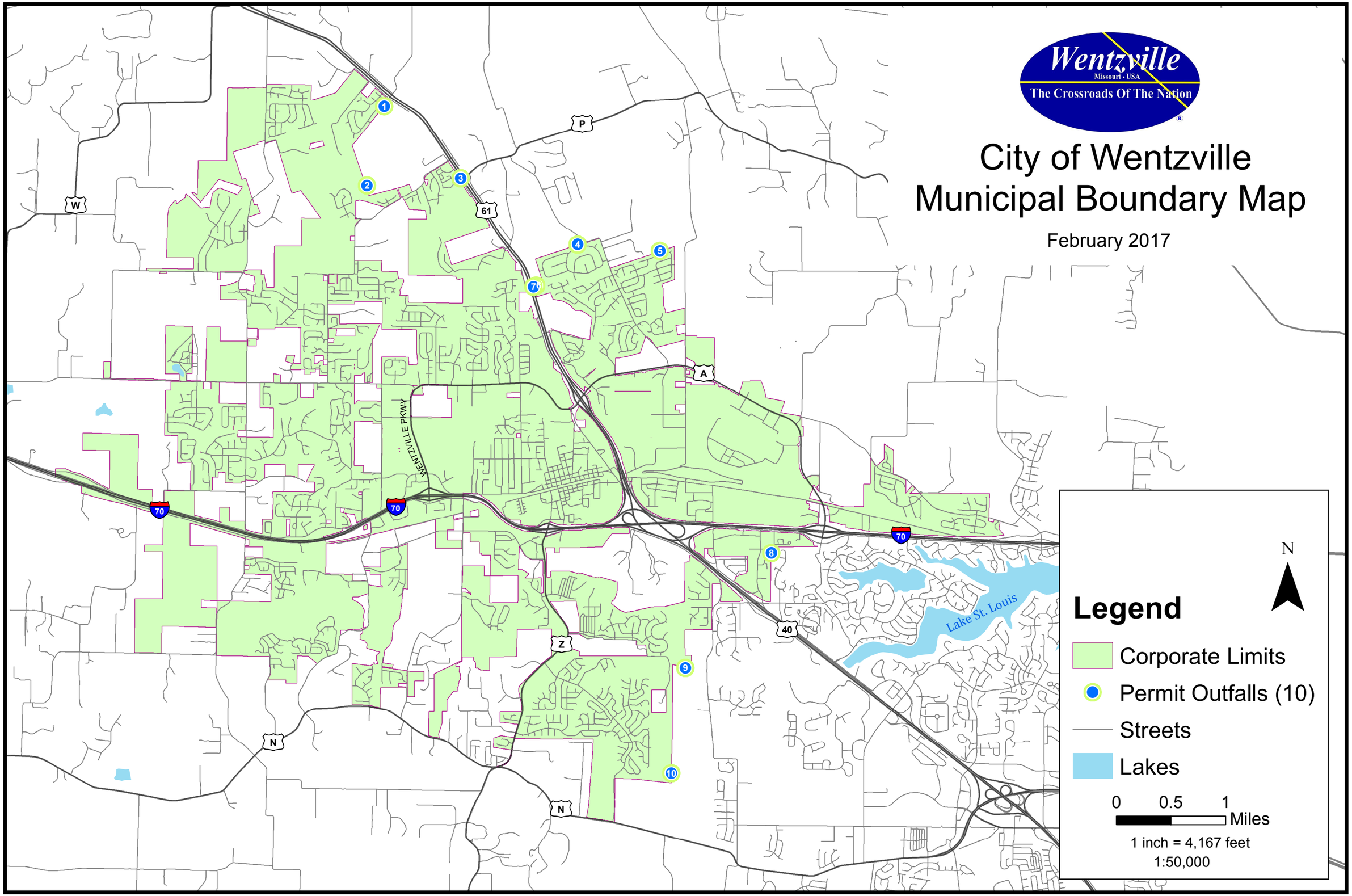
6. List of BMPs Evaluated and How BMPs were Determined Effective

Assessment of the Appropriateness of the Identified BMPs

The O&M Program Manual was reviewed and updated to reflect new municipal properties, personnel, and pollution prevention BMPs. This review included onsite visits at all locations and meeting with supervisors to ensure it covered all pertinent aspects of their department. Further, initial inspections were scheduled with each department's staff as a training opportunity. This allowed staf to have sound comprehension of the Plan, inspection elements and reporting requirements.

Appendix A

City of Wentzville
Municipal Boundary Map


Wentzville
Missouri - USA
The Crossroads Of The Nation
City of Wentzville
Municipal Boundary Map
February 2017
Legend
Corporate Limits
Permit Outfalls (10)
Streets
Lakes
0 0.5 1
Miles
1 inch = 4,167 feet
1:50,000
N
Lake St. Louis
WENTZVILLE PKWY
70
61
40
P
W
A
Z
N
1
2
3
4
5
6
7
8
9
10

Appendix B

City of Wentzville
Water Sample Analysis

Wentzville Stormwater Management
Illicit Discharge Incident Tracking Sheet

Incident ID: 2016 - 9

Responder Information	
Call taken by: JAMIE PRICE (INTERNAL)	Call date: 8/11/16
Call time: 1:40 PM	Precipitation (inches) in past 24-48 hrs: 0
Reporter Information	
Incident time: 1:00 PM	Incident date: 8/11/16

Caller contact information (*optional*):

CELIA LAMPRECHT, MIKE TUCKER

Incident Location *(complete one or more below)*

Latitude and longitude:

Closest street address: 1034 CROSSWINDS CT

Receiving stream or outfall #: TRIB TO LAKE ST. LOUIS

Nearby landmark: EAST OF CRIDER CENTER TRASH ENCLOSURE

Primary Location Description	**Secondary Location Description:**		
☐ Stream corridor *(In or adjacent to stream)*	☑ Outfall	☐ In-stream flow	☐ Along banks
☐ Upland area *(Land not adjacent to stream)*	☐ Near storm drain	☐ Near other water source (storm water pond, wetland, etc.):	

Narrative description of location:

60" RCP

Upland Problem Indicator Description

☐ Dumping	☐ Oil/solvents/chemicals	☐ Sewage ?
☑ Wash water, suds, etc. (Flow)	☐ Other: _____	

Stream Corridor Problem Indicator Description

Odor	☐ None	☐ Sewage	☐ Rancid/Sour	☐ Petroleum (gas)
	☐ Sulfide (rotten eggs); natural gas	☐ Other: Describe in "Narrative" section		
Appearance	☐ "Normal"	☐ Oil sheen	☐ Cloudy	☑ Suds
	☑ Other: Describe in "Narrative" section			
Floatables	☐ None	☐ Sewage (toilet paper, etc)	☐ Algae	☐ Dead fish
	☐ Other (Describe in "Narrative" section)			

Narrative description of problem indicators: DEPOSITS / STAINS IN FLOW LINE
CONDUCTIVITY HIGH.

Suspected Violator (name, personal or vehicle description, license plate #, etc.):
UPSTREAM DRAINAGE INCLUDES FERMENTE'S CAFE
& WENTZ. CORP. MALL (ELEMENT CHURCH, CISCO)

Investigation Notes	
Initial investigation date: 8/11/16, 8/12/16	Investigators: JAMIE PAIGE, CELIA, MIKE
☐ No investigation made	Reason:
☐ Referred to different department/agency	Department/Agency Contact:
☐ Investigated: No action necessary	
☒ Investigated: Requires action	Description of actions: DYE TESTING SCHEDULED WITH WW DEPT.
☐ Illicit Discharge Found	Date Illicit Discharge Eliminated:
Hours between call and investigation: 1	Enforcement Action Taken:
Date case closed: 9/16/16	

Notes:

NO DYE FOUND FROM ALL BUSINESSES/PROPERTIES CONNECTED TO SANITARY SYSTEM.

SUSPECT WILDLIFE DUE TO SIZE OF OUTFALL.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: 8	
Today's date: 8/4/16		Time (Military): 1:00 pm	
Investigators: Celia Mike Jamie		Form completed by:	
Temperature (°F): 88°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- [x] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known):

1034 CROSSWINDS CT.

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[x] Closed Pipe	[x] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[x] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[x] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 60" w/ 12" drain into	In Water: [ ] No [ ] Partially [ ] Fully With Sediment: [ ] No [ ] Partially [ ] Fully
[ ] Open drainage	[ ] Concrete [ ] Earthen [ ] rip-rap [ ] Other: _____	[ ] Trapezoid [ ] Parabolic [ ] Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
[ ] In-Stream	(applicable when collecting samples)				
Flow Present?	[x] Yes [ ] No *If No, Skip to Section 5*				
Flow Description (If present)	[x] Trickle [ ] Moderate [ ] Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
[x] Flow #1	Volume	100 mL	Liter	Bottle
	Time to fill	9.09	Sec	
[ ] Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature		24.7°C	~~°F~~	Thermometer
pH		7.8	pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Conductivity 1,240 µS 1,205 µS

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

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

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

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

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

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

Section 6: Overall Outfall Characterization

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

Section 7: Data Collection

1. Sample for the lab?	☑ Yes	☐ No
2. If yes, collected from:	☑ Flow	☐ Pool
3. Intermittent flow trap set? If Yes, type: ☐ OBM ☐ Caulk dam	☐ Yes	☑ No

Section 8: Stream Channel Assessment

☑ Stream Channel Unstable ~~UNSTA~~

Instability Notes (i.e. scour, incising, lateral migration, slope failure, etc.)

MINOR SCOUR DOWNSTREAM

7' +

Section 9: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

NO

Side Intake GI @ the Crossings Estate

Pizzamentes Cafe is suspected Source but originates and not be detected in field

August 22, 2016

Bill Jacobs
Wentzville Water Relamation Center
2455 Mette Road
Wentzville, MO 63385
TEL: (636) 639-2071
FAX: (636) 639-2075

RE: Storm Water - Outfall #8 **WorkOrder:** 16080790

Dear Bill Jacobs:

TEKLAB, INC received 1 sample on 8/12/2016 12:35:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Emily Pohlman
Project Manager
(618)344-1004 ex 44
epohlman@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: Wentzville Water Relamation Center
Client Project: Storm Water - Outfall #8

Work Order: 16080790
Report Date: 22-Aug-16

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Laboratory Results	5
Receiving Check List	6
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: Wentzville Water Relamation Center **Work Order:** 16080790

Client Project: Storm Water - Outfall #8 **Report Date:** 22-Aug-16

Abbr	Definition
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
E -	Value above quantitation range	H -	Holding times exceeded
I -	Associated internal standard was outside method criteria	J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response	ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits	S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)	X -	Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: Wentzville Water Relamation Center
Client Project: Storm Water - Outfall #8

Work Order: 16080790
Report Date: 22-Aug-16

Cooler Receipt Temp: 3.02 °C

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road	3920 Pintail Dr	8421 Nieman Road	5445 Horseshoe Lake Road
	Collinsville, IL 62234-7425	Springfield, IL 62711-9415	Lenexa, KS 66214	Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2017	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2017	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2017	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2017	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2017	Collinsville
Arkansas	ADEQ	88-0966		3/14/2017	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2016	Collinsville
Kentucky	UST	0073		1/31/2017	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Missouri	MDNR	930		1/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2016	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Wentzville Water Relamation Center
Work Order: 16080790
Client Project: Storm Water - Outfall #8
Report Date: 22-Aug-16
Lab ID: 16080790-001
Client Sample ID: Storm Water - Outfall #8
Matrix: AQUEOUS
Collection Date: 08/12/2016 9:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 18TH ED. 9222 D MEMBRANE FILTER								
Fecal Coliform		1000		**92000**	CFU/100ml	1000	08/12/2016 13:53	R222301
EPA 600 350.1 R2.0 (DISTILLED) TOTAL								
Nitrogen, Ammonia (as N)	NELAP	0.10		**0.47**	mg/L	1	08/16/2016 13:05	121500
STANDARD METHODS 4500-F C (TOTAL)								
Fluoride	NELAP	0.10		**0.36**	mg/L	1	08/12/2016 15:57	R222284
STANDARD METHODS 5540 C								
Surfactants (MBAS)	NELAP	0.25	JH	**0.18**	mg/L	1	08/19/2016 22:35	R222578
Sample required re-analysis out of hold time.								
EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)								
Potassium	NELAP	0.100		**5.18**	mg/L	1	08/16/2016 18:45	121463

Receiving Check List

http://www.teklabinc.com/

Client: Wentzville Water Relamation Center
Client Project: Storm Water - Outfall #8

Work Order: 16080790
Report Date: 22-Aug-16

Carrier: Nick Reed

Received By: AMD

Completed by: Amber Dilallo
On: 12-Aug-16

Reviewed by: Elizabeth A. Hurley
On: 12-Aug-16

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.02
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

Print Form

Teklab Chain of Custody

Pg. ____ of ____ Workorder 1608 0190

5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618)344-1004 ~ Fax:(618)344-1005

Client Name: Wentzville Water Reclamation Center

Address: 2455 Mette Rd.

City: Wentzville | MO | 63385

Project:

Are the samples chilled? (•) Yes ( ) No with: (•) Ice ( ) Blue ice

Preserved in ( ) Lab (•) Field

Cooler Temp 3.0 3.5° Sampler Jamie Paige

Per Jared Conaway, only use 1 fecal cont., store the other w. OMM 8/12/16 OMM 8/12/16

Comments: CRIDER CENTER OUTFALL #8 Dates and times per cont. OMM 8/12/16

TEKLAB Courier

Contact Bill Jacobs eMail bill.jacobs@wentzvillemo.c Phone 636-639-2071 Requested Due Date Billing/PO

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ammonia - Distilled	Potassium	Surfactants/ Detergents	Flouride	Fecal Coliform							
1608 0190 001	Storm Water - Outfall #8	8/12/16 945	H2SO4	Aqueous	X											
	Storm Water - Outfall #8	8/12/16 945	HNO3	Aqueous		X										
	Storm Water - Outfall #8	8/12/16 945	Unpres	Aqueous			X	X								
	Storm Water - Outfall #8 x7	8/12/16 945	Unpres	Aqueous					X							
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												

Relinquished By *	Date/Time	Received By	Date/Time
Jamie Paige	8/12/16 10:00 AM	Nicole Reed	8/12/16 1135
Tyronne Sutton	8/12/16		
Nick Reed	8/12/16 1235	OMOOI OLCILLO	8/12/16 1235

* The individual signing this agreement on behalf of client acknowledges that they have read and understand the terms of this agreement and that they have the authority to sign on behalf of client.

OMM 8/12/16