

Municipal Separate Storm Sewer System (MS4) ANNUAL REPORT



NOVEMBER 2023

**KPDES PERMIT NO. KYS000001
AI 8235**

**REPORTING YEAR 7
07.01.2022 TO 06.30.2023**

COMPILED AND SUBMITTED BY: Louisville and Jefferson County
Metropolitan Sewer District
700 West Liberty Street
Louisville, KY 40203

REPORTING TO: Kentucky Division of Water
Surface Water Permits
Branch 300 Sower Boulevard
Frankfort, KY 40601



CO-PERMITTEES:
City of Anchorage
City of Jeffersontown
City of St. Matthews
City of Shively
Louisville Metropolitan Government
Metropolitan Sewer District





700 West Liberty Street | Louisville, KY 40203-1911
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November 15, 2023

Kentucky Division of Water
Surface Water Permits Branch
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601

Subject: Annual Report Submittal for KYS000001 (AI No. 8235)

To Whom It May Concern:

Enclosed is the Annual Report for the Louisville and Jefferson County MS4 stormwater discharge permit. The primary co-permittee for this municipal stormwater discharge permit is the Louisville and Jefferson County MSD. Other co-permittees include Louisville Metro and the cities of Anchorage, Jeffersontown, St. Matthews, and Shively. The current MS4 permit became effective on February 1, 2017. Enclosed is the reporting year seven Annual Report for the reporting period of July 1, 2022 to June 30, 2023.

The enclosed Annual Report documents the efforts of each of the co-permittees to comply with the MS4 permit by implementing MS4 permit elements during the reporting period. Co-permittee reports and certification statements are provided in Chapter 3.

MSD hereby submits the Annual Report as required by KPDES Permit KYS000001.

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.

Sincerely,

Ms. Lori Rafferty, PE
MS4 Program Manager

Mr. David Johnson, PE
Chief Engineer

Enclosures: MS4 Annual Report
cc: File



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EXECUTIVE SUMMARY

Objective

The objective of the MS4 Annual Report is to provide information to the Kentucky Division of Water (KDOW) on how items in the Metropolitan Sewer District's (MSD) Municipal Separate Storm Sewer System (MS4) permit have been addressed for compliance in the reporting year between July 1, 2022 and June 30, 2023.

Purpose

As a river city, and a community with approximately 760 miles of streams and 38 miles of Ohio River shoreline, the purpose of MSD's MS4 program, as outlined in the Stormwater Quality Management Plan (SWQMP), is to address the Kentucky Pollutant Discharge Elimination System (KPDES) MS4 Phase 1 program requirements as specified in MSD's KPDES Permit KYS000001. The Kentucky Division of Water (KDOW) regulates MSD's MS4 Program. The SWQMP does not establish new regulatory requirements, but is to be utilized as a guide for compliance with the permit.

The SWQMP describes activities in the functional areas of responsibility that help protect and improve the water quality in our streams, as outlined in the current effective permit. Schedules for compliance are outlined in the SWQMP. The MS4 Annual Report is intended to provide a snapshot of permit compliance for permit reporting year 7 (PY 7) to KDOW. This document also provides MSD the opportunity to utilize adaptive management to the SWQMP, as necessary. If program technologies change or programmatic approaches to the MS4 compliance are modified, alterations to the SWQMP through the annual reporting is a mechanism to achieve this without full permit modification and negotiation.

The focus areas included in the MS4 permit that are addressed in the MS4 Annual Report are as follows: Public Education, Outreach, Participation & Learning Experiences (PEOPLE), Illicit Discharge Detection and Elimination (IDDE), Industrial Program (IP), Construction Site Stormwater Runoff Controls (CS), Post-Construction Stormwater Runoff Controls (PC), Good Housekeeping and Pollution Prevention (GH/P2), Monitoring Programs (M), Program Assessment and Reporting (PAR), Total Maximum Daily Loads (TMDL), and Co-permittee reports. Applicable fact sheets are provided in Chapter 2. The Co-permittee reports are provided without comment in Chapter 3.

MSD has achieved compliance with the MS4 permit activities, with the following highlights:

- Facilitated, attended, or engaged the public at over 20 events (PEOPLE).
- Responded to and addressed 541 illicit discharge investigation requests. (IDDE)



- Performed 17 High Risk Industrial Facility inspection as part of the Industrial Program of the permit. (IP)
- Performed over 37,000 construction inspections for compliance with the EPSC Ordinance. (CS)
- Reviewed performance of 528 water quality BMPs. (PC)
- Performed 12 Stormwater Pollution Prevention Plan (SWPPP) compliance inspections at major MSD facilities. (GH/P2)
- Collected over 1,000,000 data points at Louisville streams to assess water quality.

The MS4 Annual Report is a valuable tool to document, report, and track progress that ultimately helps protect and improve the water quality in our streams.



MS4 POINTS OF CONTACT

The MSD is the primary permittee for the MS4 Program and is co-permitted with Louisville Metro, City of Anchorage, City of Jeffersontown, City of St. Matthews, and City of Shively. Points of contact including executive staff and MS4 Program coordinators are provided below. The MSD Engineering Division organizational chart effective 10/02/2023, including full-time MS4 program staff is provided in Appendix 1.2.1 MSD Organizational Chart.

Louisville & Jefferson County MSD

Name	Agency	Role	Phone Number
Mayor Craig Greenberg	Louisville Metro	Mayor	(502) 574-2003
James A. Parrott	Louisville & Jefferson County MSD	Executive Director	(502) 540-6000
David Johnson	Louisville & Jefferson County MSD	Chief Engineer	(502) 540-6000
VACANT	Louisville & Jefferson County MSD	Development and Stormwater Services Director	(502) 540-6000
Lori Rafferty	Louisville & Jefferson County MSD	MS4 Program Manager	(502) 540-6000

Louisville Metro

Name	Agency	Role	Phone Number
Mayor Craig Greenberg	Louisville Metro	Mayor	(502) 574-2003
Jennifer Caummisar-Kern	Public Works	Director	(502) 574-5925
Mark Zoeller	Facilities Management	Director of Facilities Project Management	(502) 574-0104
Sean Woods	Louisville Zoo	Zoo Facilities Manager	(502) 459-2181
Jason Canuel	Metro Parks	Assistant Director	(502) 485-8113

City of Anchorage

Name	Agency	Role	Phone Number
Mayor Neil Ramsey	City of Anchorage	Mayor	(502) 245-4654
Renee Major	City of Anchorage	City Clerk/MS4 Coordinator	(502) 245-4654
Gary Burkhead	City of Anchorage	Public Works	(502) 245-4654
Greg Smith	City of Anchorage	Stormwater/Drainage Officer	(502) 245-4654

City of Jeffersontown

Name	Agency	Role	Phone Number
Mayor Carol Pike	City of Jeffersontown	Mayor	(502) 267-8333
Matt Meunier	City of Jeffersontown	MS4 Coordinator	(502) 267-8333
Allison Padron	Stantec for City of Jeffersontown	Consultant	(502) 212-5000

City of St. Matthews

Name	Agency	Role	Phone Number
Mayor Richard J. Tonini	City of St. Matthews	Mayor	(502) 895-9444
Jim Birch	City of St. Matthews	City Engineer	(502) 899-2518
Kenan Stratman	City of St. Matthews	Public Works Director	(502) 899-2517

City of Shively

Name	Agency	Role	Phone Number
Mayor Beverly Chester-Burton	City of St. Shively	Mayor	(502) 449-5000
Steve Lingerfelt	City of St. Shively	MS4 Coordinator	(502) 449-4749
Rick Storm	BA Engineers for City of Shively	Consultant	(502) 775-5741



CHAPTER 1 INTRODUCTION

1.1 REGULATORY BACKGROUND

The Clean Water Act (CWA), enacted in 1972, was amended in 1987 to prohibit the discharge of any pollutant to the waters of the United States from a point source unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Since the CWA amendment, there is increasing evidence that there are additional and more diffuse sources of surface water pollution. Specifically, stormwater runoff draining large surface areas (agriculture and urban lands) were found to be major causes of water quality impairment and contributors to non-attainment of designated beneficial uses.

The primary federal regulation pushing communities towards the goal of “fishable and swimmable water” is the Clean Water Act. Sections of the Clean Water Act, which specifically are relevant to stormwater, address:

- Regulation of stormwater discharges
- Water quality standards for water bodies receiving stormwater runoff
- Implications of non-attainment of water quality standards

The primary objective of the MS4 Permit is the reduction of pollutant discharges to the Maximum Extent Practicable (MEP) from stormwater runoff. MSD is to implement the practices, policies, procedures, and stormwater controls contained in the permit and addressed in this plan throughout the regulated area. MSD is required to develop, administer, and update a Storm Water Quality Management Plan (SWQMP) and update as necessary to maintain compliance with the MS4 Permit.

1.2 STORMWATER QUALITY MANAGEMENT PLAN OVERVIEW

The latest MS4 Permit was issued with an effective date of February 1, 2017, for a term of five years. The majority of the permit requirement responses are provided in Chapter 2 of the MS4 Permit “Stormwater Quality Management Plan”. This plan expands the Permit Tables to also include set verifiable performance measures for each activity. The programmatic elements performed in the SWQMP are documented in the MS4 Annual Report. This report shows activities and performance for the period of July 1, 2022 to June 30, 2023.

MSD is required to develop and implement a SWQMP with the objective of reducing the discharge of pollutants to the MEP. The SWQMP is a planning tool to define how the MS4 program will be administered. While it is not a part of the permit, it provides a more detailed description of the activities in the permit. The SWQMP addresses the Minimum Control Measures (MCMs).



The SWQMP covers the following:

- **Public Education and Outreach (PEOPLE):** MSD will develop and implement a program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.
- **Public Involvement and Participation (PEOPLE):** MSD will provide representatives to local stormwater management work groups, public hearings, and schools, and will assist with program coordination and monitoring efforts, per applicable state and federal requirements.
- **Illicit Discharge Detection and Elimination Program (IDDE):** MSD will develop, implement and enforce a program to detect and eliminate illicit discharges into the districts maintained and operated portions of the MS4.
- **Industrial Stormwater Program (IP):** MSD will develop, implement, and enforce programs to minimize pollutants and stormwater pollution in runoff from developed and redeveloped commercial and industrial sites.
- **Construction Site Runoff Control (CS):** MSD will develop, implement, and enforce a program to reduce pollutants in any stormwater runoff from construction activities that result in land disturbance of greater than or equal to one acre.
- **Post-Construction Site Runoff Control (PC):** MSD will develop, implement, and enforce a program that addresses stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre.
- **Good Housekeeping/Pollution Prevention (GH/P2):** MSD will develop and implement an operations and maintenance program that includes a training component and has a goal of preventing or reducing polluted runoff from their daily operations, including maintenance.
- **Monitoring (M):** MSD will develop and maintain a water quality monitoring network, and report on permit required pollutants in annual reporting.
- **Performance Assessment and Reporting (PAR):** MSD will prepare timely and accurate reporting documents, track critical program elements, and make programmatic changes as needed based on trends in data as needed.

The SWQMP for the Fourth Permit Cycle was submitted to KDOW in July 2017. An annual review of the SWQMP is required as part of the MS4 Annual Report submittal. During this time, the prior year's activities and the need for changes in implementation strategies and schedules should be addressed. The MS4 permit specifies that the SWQMP may be modified over time by MSD to facilitate implementation of permit requirements. Modifications are to be made based on lessons learned and the effectiveness of the various BMPs. There are no recommended SWQMP modifications at this time.



1.3 REGULATORY SUBMITTAL REQUIREMENTS

From the effective MS4 permit, the following requirement for submittal of a MS4 Annual Report is stated:

2.5. Annual Reporting

Annual MS4 compliance reporting requirements shall also include a special section identifying approved TMDL(s) and special efforts or management practices to address the Pollutant(s) of Concern. As appropriate for the pollutant of concern, the permittee will identify measures taken to address in the following program areas:

- *Public Education, Outreach, Participation & Learning Experiences (PEOPLE)*
- *Illicit Discharge Detection and Elimination (IDDE)*
- *Industrial Stormwater Program (IP)*
- *Construction Site Stormwater Runoff Controls (CS)*
- *Post-Construction Site Stormwater Runoff Controls (PC)*
- *Good Housekeeping/Pollution Prevention (GH/P2)*
- *Monitoring (M)*
- *Performance Assessing and Reporting (PAR)*

The permittee shall include water quality trend analysis for the pollutant(s) of concern with other MS4 monitoring program data with annual compliance reports.

From the MS4 permit, Section 3 - "Reporting" identifies the following reporting requirements for permit compliance:

3.1. Reporting Requirements

The permittee shall prepare an annual system-wide report (Annual Report) to be submitted no later than November 15th of the year following the fiscal year covered by the report (July 1 - June 30). The Annual Report shall include at a minimum:

1. *An overall evaluation of the stormwater quality management program developments and progress including: major findings such as water-quality improvements or degradation, major accomplishments, overall program strengths/weaknesses; and future direction of the program. The permittee shall state an overall assessment of the effectiveness of the SWQMP taking into account water quality/watershed improvements;*
2. *The number of illicit discharges discovered; describing discharge and resolution;*
3. *A summary of inspections and enforcement actions for regulatory programs;*
4. *A summary of installed BMPs for post-construction stormwater management for new and redevelopment;*
5. *A summary of pollution prevention and good housekeeping BMPs performed at the*



municipal operations;

6. The status of implementation and proposed changes to the stormwater quality management program, including assessment of controls and specific improvements or degradation to water quality;

7. Any improvements in water quality due to watershed activities;

8. Annual Report shall be submitted electronically. Permittees can access the system at the following web address: <http://dep.gateway.ky.gov/eForms/default.aspx?FormId=50>

The permittee shall retain records accumulated pursuant to this individual permit for no fewer than three years following the termination of this individual permit.

1.4 SUMMARY

The MS4 Annual Report is developed to meet regulatory requirements outlined in the MS4 permit, while also providing information to the public, regulators, media, and others on the activities being performed every day in this community that improve water quality to the **Maximum Extent Practicable**. The MS4 Annual Report documents the compliance with the PY 7 activities as outlined in the SWQMP.

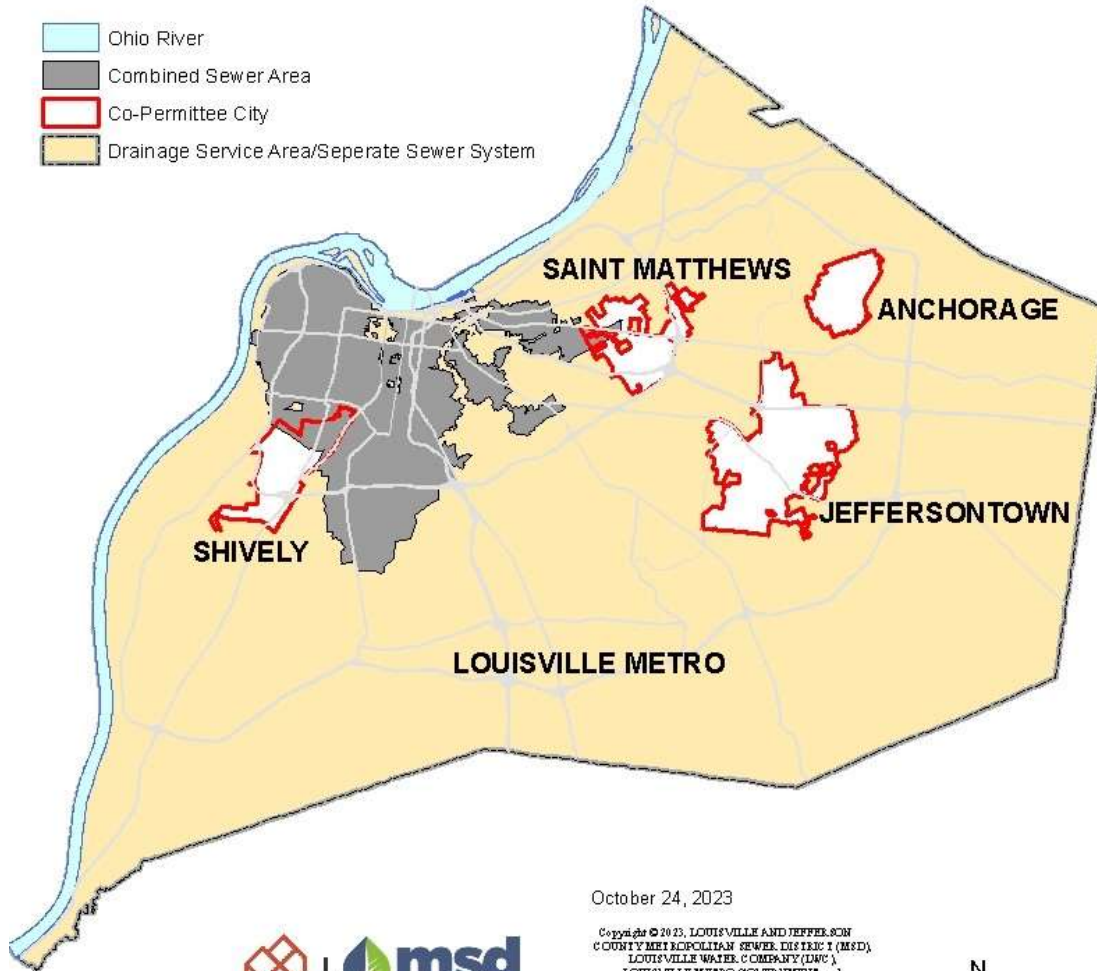
MSD has achieved compliance with the MS4 permit activities, with the following highlights:

- Facilitated, attended, or engaged the public at over 20 events. (PEOPLE)
- Responded to and addressed 541 illicit discharge investigation requests. (IDDE)
- Performed 17 High Risk Industrial Facility inspection as part of the Industrial Stormwater Program section of the permit. (IP)
- Performed over 37,000 construction inspections for compliance with the Erosion Prevention and Sediment Control (EPSC) Ordinance. (CS)
- Reviewed performance of 528 water quality Best Management Practices (BMPs). (PC)
- Performed 12 Stormwater Pollution Prevention Plan (SWPPP) compliance inspections at major MSD facilities. (GH/P2)
- Collected over 1,000,000 data points at Louisville streams to assess water quality. (M)

MSD and its co-permittees strive to provide the public with an understanding of complex water quality issues and regulatory programs that protect our waterways. MSD-administered regulatory programs are enforced through the following mechanisms: the Erosion Prevention and Sediment Control (EPSC) Ordinance to manage stormwater runoff from construction sites, the Hazardous Materials Ordinance (HMO) to manage stormwater runoff from industrial facilities and detect and eliminate illicit discharges, and the Wastewater/Stormwater Discharge Regulations (WDR) to manage post-construction stormwater runoff. Louisville Metro administers regulatory programs including ordinances and codes enforcing waste disposal and other environmental protection requirements, and the Cornerstone 2020 Land Development Code (LDC).

MSD - MS4 Permit Area

- Ohio River
- Combined Sewer Area
- Co-Permittee City
- Drainage Service Area/Seperate Sewer System



October 24, 2023



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1.5 PERMIT RENEWAL AND LONG-TERM PLANNING

Each permit cycle, MSD enhances and improves the program through planning activities, regulatory authority, environmental education programs and leadership. The requirements in the MS4 permit represent the Kentucky Division of Water’s determination of MEP for Louisville MSD and Jefferson County and co-permittee communities. The MS4 permit was most recently renewed in early 2017, with an effective date of February 1, 2017. This report represents activities performed in the period of July 1, 2022 to June 30, 2023. The following table shows the Seventh Permit Cycle Activity Summary.



TABLE 1.6.1 PUBLIC EDUCATION, OUTREACH, PARTICIPATION, AND LEARNING EXPERIENCES (PEOPLE)

PEOPLE General Public & Stakeholder Education Program											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.1.1	General Public-Mass Media Integration/Distribution	Report the number of potential households and estimate the numbers of households were reached.	The permittee shall integrate MS4 stormwater quality topics in to existing print mass media, local government cable channel, social marketing materials, and/or new materials with the intent of affecting behavior change.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.2	General Public-Direct Interaction	Permittee shall present educational materials to the public at least six (6) event days per year; update booth material annually. Provide summary of the educational activities in annual report	The permittee shall present the "Key Messages" at community events, through the use of a display booth, "enviroscape" or other direct personal integration approaches.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.3	General Public-Meeting Topic Integration	Permittee shall integrate water quality topics in MS4 public meetings at least six (6) events per year; provide summary of the events in the Annual Report	The permittee shall integrate MS4 stormwater quality topics, as feasible and appropriate into other MSD sponsored public meetings.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.1 PUBLIC EDUCATION, OUTREACH, PARTICIPATION, AND LEARNING EXPERIENCES (PEOPLE)

PEOPLE General Public & Stakeholder Education Program											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.1.4	Volunteer Programs Participation, Promotion or Support	Permittee shall have direct participation in at least three (3) events per year; and promote additional two (2) events per year, provide summary of volunteer opportunities the permittee participated, facilitate, or supported in the Annual Report	The permittee shall participate in, facilitate, encourage or support volunteer program opportunities on a case by case basis to optimize resources and potential to affect behavioral changes through participation events.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.5	MetroCall Hotline and MSD Customer Relations	Permittee shall provide a summary of MS4 complaints and comments received in the Annual Report	The permittee shall provide support to the 24-hour central reporting hotline "Metro Call" and internet communication channels for use by the public and MSD employees to report complaints, spills, and illegal dumping.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.6	Elected Officials	Permittee shall provide a summary of its attendance of meetings at Mayors and/or Council Member's discretion in the Annual Report	The permittee shall attend and participate at the discretion of Mayor's office and Louisville Metro Council members to address resident's concerns and questions.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.1 PUBLIC EDUCATION, OUTREACH, PARTICIPATION, AND LEARNING EXPERIENCES (PEOPLE)

PEOPLE General Public & Stakeholder Education Program											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.1.7	Public Speakers	Permittee shall provide public speakers to various community stakeholders at least six (6) events per year	The permittee shall provide speakers to various community stakeholder groups that could benefit from environmental stormwater information.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.8	News Media-Press Releases	Permittee shall provide at least two (2) press releases per year highlighting public participation opportunities	The permittee shall provide press releases to the local news media highlighting opportunities for the public to participate in outreach and involvement events to make a positive difference through behavior change.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.9	MSD Web Site	Permittee shall report summary of updates in the Annual Reports of Permit Years 2 and 4	The permittee shall review and revise the website with the "Key Messages" content and other related PEOPLE plan elements.		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				N/A
2.1.10	Behavior Change Assessment Survey	Permittee shall provide summary in the Annual Report of the Baseline Survey in Permit Year one (1) and the Behavior Assessment in Permit Year four (4)	The permittee shall perform a statistical survey to gauge the population's knowledge of stormwater quality issues and establish baseline to assess the changes in behavior and outreach program effectiveness. The permittee shall utilize the survey results to refocus and reprioritize PEOPLE activities.	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.1 PUBLIC EDUCATION, OUTREACH, PARTICIPATION, AND LEARNING EXPERIENCES (PEOPLE)

PEOPLE General Public & Stakeholder Education Program											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.1.11	Building Industry Association of Greater Louisville Land Development Committee Monthly Meetings and Developers Advisory Group	Permittee shall participate in at least 75% of the meetings annually	The permittee shall attend Building Industry Association of Louisville land development committee and Developer Advisory Group meetings to address concerns and comments from the local homebuilder professional and provide information regarding changes in procedures, checklist, regulations, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.12	Greater Louisville Inc. Environmental and Water Committees	Permittee shall participate in at least three (3) events per year	The permittee shall participate in committee meetings to address concerns and comments from key local development professionals and provide information regarding changes in construction procedures, checklist, regulations, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.13	Construction Operators	Permittee shall evaluate educational materials and/or multimedia presentations for the construction industry related to point and non-point source pollution and stormwater pollution annually	The permittee shall make available educational materials and/or multimedia presentations for the construction industry related to point and non-point source pollution, green infrastructure and stormwater pollution prevention measures for operational procedures and erosion and sediment controls.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.1 PUBLIC EDUCATION, OUTREACH, PARTICIPATION, AND LEARNING EXPERIENCES (PEOPLE)

PEOPLE General Public & Stakeholder Education Program											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.1.14	Rain Garden Outreach	Permittee shall estimate handbook distribution and report in the Annual Report	The permittee shall maintain and update rain garden handbook with the intent of general public outreach. Consider expanding use to support residential, non-residential, professional, and non-professional audiences. The permittee shall evaluate changes and make updates at least every even numbered year.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.15	Green Infrastructure Demonstration Projects	Permittee shall provide a Summary Report of Green Infrastructure demonstration projects in the Annual Report	The permittee shall monitor previously identified and constructed projects in outreach efforts aimed at demonstrating the feasibility and effectiveness of green infrastructure including, but not limited to rain gardens, green roofs, pervious pavement, bio-swales and infiltration. Prioritize, select and implement projects to support a variety of residential, non-residential, professional and non-professional audiences in MSD and co-permittee areas. Where feasible collaborate and/or cooperate with local government agencies, schools, co-permittees and/or private properties with significant use and exposure to the general public.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

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TABLE 1.6.1 PUBLIC EDUCATION, OUTREACH, PARTICIPATION, AND LEARNING EXPERIENCES (PEOPLE)

PEOPLE General Public & Stakeholder Education Program											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.1.16	Public Notification of Major Program Changes	Permittee shall maintain and update as needed the notification system or program changes.	The permittee shall maintain a web site-based system to notify the public and affected stakeholders of proposed major program changes that will significantly impact stormwater runoff quality, negatively or positively. The public shall be given the opportunity to informally comment on proposed changes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Cooperative Efforts (MSD provides supportive or other non-lead role)											
2.1.17	Jefferson County MS4 Workgroup-Communication	Permittee shall attend at least two (2) meetings per year	The permittee shall participate in the Jefferson County MS4 Co-Permittee Workgroup meetings discussing program progress, challenges, activity changes, shared activity requests communication needs and lesson learned.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.1.18	Louisville Metro Office of Sustainability	Permittee shall report its activities and support of the Louisville Metro Department of Sustainability initiatives in the Annual Report	The permittee shall continue to support Louisville Metro Office of Sustainability initiatives with development of guidance materials to be applied to new Metro Government Facilities incorporating green infrastructure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.2 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

IDDE 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.2.1	Assess Legal Prohibition/Control Authority	Permittee shall evaluate, once per permit cycle proposed changes in Wastewater Stormwater Discharge Regulations (WDRs) for consideration by MSD Board	The permittee shall evaluate existing ordinances and regulations with an emphasis on Article 5 of the WDRs to determine if they are sufficient relative to MSD's ability to implement an effective IDDE program per 40 CFR. 122.26(b) (2). The permittee shall periodically update WDRs as needed to identify and eliminate risk of illicit discharges due to changes in technology, industrial management processes, regulations or program modifications. The permittee shall provide a summary of the adoption of such changes and information about implementation, and effective date in the Annual Report.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.2	IDDE Source Investigation and Elimination Procedures	Permittee shall provide in the annual report, a summary of the process changes to IDDE investigations	The permittee shall develop and implement a formal plan of illicit discharge detection including how to trace the source of an illicit discharge and procedures for removing or eliminating them once they are located or reported. The plan should also include the enforcement procedures outlined in the WDRs for illicit discharge elimination, which includes ten (10) days from the receipt of the Notice of Violation; the source of the illicit discharge shall submit a mitigation plan for removal.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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TABLE 1.6.2 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

IDDE 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.2.3	Public Illicit Discharge Report Investigation	Permittee shall provide in the annual report, a summary of the investigations of illicit discharges performed	The permittee shall continue to receive and investigate public reports of potential illicit discharges via customer service hotline, webpage reporting and MetroCall. The permittee shall update and perform customer service hotline staff training for receiving calls regarding potential illicit discharges and appropriate routing procedures.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.4	Dry Weather Screening	Permittee shall provide in the annual report, a summary of the dry weather screenings performed.	The permittee shall conduct dry weather screening of representative outfalls. The recommended level of effort is twenty percent (20%) of the major outfalls per year. However, all the major outfalls shall be addressed within the permit term. The permittee shall also conduct dry-weather screenings at ninety percent (90%) of large industrial outfalls of industrial facilities once per permit cycle.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.5	Screening Follow-up	Permittee shall starting in Permit Year One (1) inspect at least 25% of suspect outfalls per year	After the initial follow-up to insure the illicit discharge has been mitigated, the permittee shall re-evaluate outfalls that were previously found to have had contaminated discharges to determine the current status of those outfalls.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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TABLE 1.6.2 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

IDDE 2 Management Activities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/27	Legal Auth
2.2.6	Mapping - Stormwater Infrastructure Inventory	Permittee shall maintain a storm sewer system map.	The permittee shall continue to maintain the GIS Louisville Jefferson County Information Center (LOJIC) layers constituting its storm sewer system map, showing the location of all known major outfalls, and the names and location of all waters of the Commonwealth that receive discharges from those outfalls.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.7	Non-Industrial IDDE Program Enforcement	Permittee shall report annually, including number of investigations, enforcement actions and referrals to KDOW, and follow-up investigations.	The permittee shall continue to utilize the Wastewater/Stormwater Discharge Regulations, related checklists and procedures for investigation of potential illicit discharges and elimination of illicit discharges.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.8	Hazmat/Spill Unified Response Program	Permittee shall report, if necessary, any changes to the policies and programs and procedures, in the annual report	The permittee shall continue to maintain and enforce the ordinances, policies, programs and procedures for response and containing spills that may discharge into the MS4. The spill response procedures outlined in Section 95.07 of the Louisville Metro Code of Ordinances relating to hazardous materials shall continue to be implemented and enforced.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.9	MVA Mitigation Kit Program	Permittee shall report metrics for kit distribution and after-use collection in the annual report	The permittee shall continue motor vehicle accident (MVA) mitigation kit distribution program to meet Fire Department and emergency response spill containment needs.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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TABLE 1.6.2 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

IDDE 2 Management Activities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/27	Legal Auth
2.2.10	IDDE Identification SWPPP Training Integration	Training shall occur at least once per year and the permittee shall report in the annual report the date of training and the number of staff participating in training	The permittee shall integrate techniques and practices to assist staff identify potential illicit discharges into facility and system operations and maintenance training.	☑	☑	☑	☑	☑	☑	☑	N/A
Cooperative Efforts (MSD provides supportive or other non-lead role)											
2.2.11	KDOW Support	Permittee shall summarize and include in the annual report any assistance given to the Kentucky Division of Water (KDOW) by MSD	As KDOW requests, the permittee shall accompany KDOW on inspection of KPDES stormwater permitted facilities in Jefferson County	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.3 INDUSTRIAL PROGRAM REQUIREMENTS (IP)

IP 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/22	Legal Auth
2.3.1	Industrial IDDE Program Enforcement	Permittee shall summarize in the annual report the industrial enforcement actions and referrals to Kentucky Division of Water	For industrial properties, the permittee shall continue to utilize the Wastewater/Stormwater Discharge Regulations, Hazardous Materials Ordinance and related checklists and procedures for identification of potential illicit discharges and elimination of illicit discharges/ unauthorized stormwater discharges. The permittee shall perform analysis of industry property data layer in LOJIC cross linking with properties holding a Hazardous Materials (spill) Prevention Control (HMPC) Plan to identify potential sites that should be added to the program with consideration for High Risk Industrial Facilities designation (determined in other activities).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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TABLE 1.6.3 INDUSTRIAL PROGRAM REQUIREMENTS (IP)

IP 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.3.2	Industrial IDDE Program Enforcement (Legal Authority)	Permittee shall update as needed and maintain adequate legal authority to require compliance with this measure.	The permittee shall maintain adequate legal authority, per 401 KAR 5:060, Section 12(9)(b)3 and 40 CFR 122.26(b)(2), to require compliance and inspection of sites, inspection of priority industrial and commercial facilities, including establishing control measure requirements such as HMPC, Spill Prevention, Control and Countermeasure (SPCC) Plan and/or the Groundwater Protection Plan (GPP) for facilities that have a potential to discharge to the MS4 and enforce stormwater requirements.	☑	☑	☑	☑	☑	☑	☑	☑
2.3.3	Industrial Facility Inventory	Permittee shall update annually and made available to the KDOW upon request	The permittee shall maintain an inventory of all potential industrial and commercial sites/sources that could contribute pollutant loads to the MS4.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.3 INDUSTRIAL PROGRAM REQUIREMENTS (IP)

IP 2 Inventory and Inspection of Industrial Facilities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.3.4	"High Risk" Facility Definition	Review "High Risk" facility definition each permit cycle	The permittee shall identify Risk Factors to define facilities as "High Risk", "Moderate Risk" and "Low Risk".			☑					N/A
2.3.5	HRIF Inventory Update	Permittee shall summarize and report annually, the assessment and updates of any industrial facilities identified as "High", "Moderate", and "Low" risk	The permittee shall compare the datasets for local Approved HMPC Plan Facilities to the publicly available Facility data from local and state environmental and emergency response agencies to address the completeness and accuracy of High Risk Industrial Facilities identification. The permittee shall update the list of HRIFs at least once over the permit term, to account for the most recently available North American Industry Classification System (NAICS), Standard Industrial Classification (SIC) codes, Toxic Release Inventory (TRI) data, MSD's HMPC data and MSD's pretreatment program data with the goal of establishing a tiered list of industries to support priorities in MSD's industrial facility inspection program.	☑	☑	☑	☑	☑	☑	☑	N/A
2.3.6	High-Risk and Medium Risk Facilities	Permittee shall report the summary of prioritized inspections completed, and any enforcement resulting from the inspections.	Based on the results of the updated HRIF assessment, the permittee shall inspect high-risk facilities at least once every three (3) years and moderate risk facilities at least once every five (5) years.	☑	☑	☑	☑	☑	☑	☑	☑

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TABLE 1.6.3 INDUSTRIAL PROGRAM REQUIREMENTS (IP)

IP 2 Inventory and Inspection of Industrial Facilities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.3.7	Industrial Facility Control Measures	Permittee shall report annually on control measures required of the high-risk industrial and commercial facilities to ensure compliance with this measure	The permittee shall require the High Risk industrial and commercial facilities to select, install, implement, and maintain control measures that promote prevention and source control for discharge of applicable pollutants of concern. This requirement may be addressed through Hazardous Materials (spill) Prevention Control (HMPC) Plan and/or federal programs such as SPCC Plan and/or the GPP that are already implemented at the industrial and commercial facilities. The permittee shall require the applicable facilities to identify the specific control measures, good housekeeping and maintenance procedures, and employee training necessary.	☑	☑	☑	☑	☑	☑	☑	☑
2.3.8	Enforcement / Inspections	Within six months of the permit issuance, the Permittee shall develop the required criteria or procedures to comply with this measure.	The permittee shall develop criteria or procedures for site inspections and enforcement including criteria to address how the MS4 will use enforcement authorities to ensure compliance with the industrial program requirements. The permittee shall enforce the procedures outlined in Section 95.11 of the Louisville Metro Code of Ordinances relating to hazardous materials.	☑	☑	☑	☑	☑	☑	☑	☑

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.3 INDUSTRIAL PROGRAM REQUIREMENTS (IP)

IP 2 Inventory and Inspection of Industrial Facilities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.3.9	MSD Plan Review	Permittee shall assess at least every three (3) years and report changes to process in the annual report	The permittee shall determine if existing triggers in the new development and redevelopment plan and plumbing systems review process are sufficient to include appropriate industrial stormwater quality specialists/inspectors in the plan approval process.	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	N/A
2.3.10	Industrial & Commercial Community Outreach	The Permittee shall continue to identify materials developed and distribution estimates and summarize in the annual report	The permittee shall update as necessary and distribute outreach materials (brochure, fact sheets, etc.) to HMPC Facilities and other commercial operations of concern to promote illicit discharge elimination awareness.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Cooperative Efforts (MSD provides supportive or other non-lead role)											
2.3.11	Third Party Oversight Inspection	Document training materials and the number of third party inspections conducted to be reported in the annual report	The permittee shall utilize third party inspections for development of recommendations of efficacy of permittee inspections and enforcement. Updates to training materials shall be administered for permittee personnel at least once per year, if necessary.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.3.12	KDOW Support	Permittee shall summarize and include in the annual report any assistance given to the KDOW by MSD	As KDOW requests, the permittee shall accompany KDOW on inspections of KPDES stormwater permitted facilities in Jefferson County.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

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TABLE 1.6.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL REQUIREMENTS (CS)

CS 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.4.1	Assess Legal Prohibition/Control Authority	Permittee shall summarize proposed changes enumerated by end of permit years one (1) and three (3) and report proposed changes in to Wastewater/Stormwater Discharge Regulations for consideration by MSD Board in the Annual Report	The permittee shall assess existing ordinance and regulations to identify changes needed to account for changes in standard of care (as directed by KDOW General Construction Permit KYR10), changes in technology, changes to development management process and related program needs in satisfaction 40 CFR 122.26(b)(15)(i) for construction activities that result in a land disturbance of greater than or equal to one acre and construction activity disturbing less than one acre that is part of a larger common plan of development that would disturb one acre or more.	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>
2.4.2	Implement Legal Prohibition/Control Authority	Permittee shall require routine inspections of active construction sites with reasonable potential to discharge to MS4. A summary of these inspections and any enforcement actions resulting from these inspections shall be included in the Annual Report	The permittee shall continue to enforce existing ordinances and regulations intended to limit construction phase stormwater quality impacts from new construction and significant redevelopment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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TABLE 1.6.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL REQUIREMENTS (CS)

CS 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.4.3	Site Plan Review	Permittee shall review plans as needed and report the number of plans reviewed in the Annual Report	The permittee shall conduct site plan reviews in accordance with the procedures outlined in Section 159.02 of the Louisville/Jefferson County Erosion Prevention and Sediment Control Ordinance to assess whether the plans include measures that address potential water quality impacts from construction prior to authorization of land disturbance.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.4.4	Construction Site Inspection	Permittee shall continue to implement the criteria and/or procedures for site inspections.	The permittee shall develop and implement criteria and/or procedures for site inspection. The procedures shall include an Enforcement Response Plan outlined in Section 159.05 of the Louisville/Jefferson County Erosion Prevention and Sediment Control Ordinance.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.4.5	Construction Site Inspection Frequency	Permittee shall report the number of inspections performed in the Annual Report	The permittee is required to conduct inspections bi-monthly of at least 90% of active sites.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.4.6	Construction Site Inventory	Inventory continually updated as projects are permitted and projects are completed	The permittee shall maintain an inventory of all active public and private construction sites that result in a total land disturbance of greater than or equal to one acre and less than one acre that is part of a larger common plan of development. Inventory should include the project's name, address, contact person, inspection dates, and any enforcement actions issued to the project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

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TABLE 1.6.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL REQUIREMENTS (CS)

CS 2 CS Management Activities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.4.7	Construction BMP Guidance Materials	Permittee shall update the Design Manual and Standards Specifications as needed and make the updates publicly available	As needed to account for changes in the KDOW general construction permit(s), the permittee shall update the guidance materials facilitating current technology use, local plan review/inspection requirements and related implications, Design Manual chapters and Standard Specifications sections to address EPSC and other construction phase (waste concrete, fueling and repairs operations, etc.) topics including BMP selection, feasibility, design considerations, operation, maintenance, inspection checklist and related matters.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.4.8	On-site SWPPP	Permittee shall document SWPPP procedures and expectations and make the procedures and expectations publicly available	The permittee shall continue the procedure for receiving Stormwater Pollution Prevention Plans (SWPPP) for qualifying construction sites.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

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TABLE 1.6.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL REQUIREMENTS (CS)

CS 2 CS Management Activities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.4.9	Construction Stormwater Runoff Control Program Inspection Refresher	Permittee shall complete refresher review with Construction inspectors annually, reporting the date and the number of attendees in the Annual Report	The permittee shall review inspector practices with individual MSD and contract inspectors to communicate/confirm oversight responsibilities, documentation requirements, and frequency of inspection, inspection standards and protocols. The refresher review (performed on-site) will include EPSC and non-EPSC construction stormwater control metrics, the most current KDOW General Construction Permit and the current USEPA MS4 Program Evaluation Construction Site Checklist.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.4.10	Construction Inspector Training	Permittee shall provide at least three (3) training opportunities annually reporting the date and the number of attendees in the Annual Report	The permittee shall continue construction inspector training program placing new emphasis on delivering similar messages and understanding between MSD inspectors (regular and contracted) and qualified local contractor inspectors.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.4.11	Local Utility Construction General Permit Entities	Permittee shall hold meetings with MSD's EPSC general permit holders as needed.	The permittee shall continue to coordinate policy level stakeholders from local utility agencies holding construction general permits from MSD to confirm inter-agency communication protocols and review changes to standard, policies, procedures, BMP operation expectations and related matters.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL REQUIREMENTS (CS)

CS 2 CS Management Activities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.4.12	MSD General Construction Permits Evaluations	Permittee shall evaluate all general permits by the end of Permit Year three (3); and report general construction permits issued by MSD in the annual report	Permittee shall evaluate all general permits by the end of Permit Year three (3); and report general construction permits issued by MSD in the annual report			☑					N/A
2.4.13	Enforcement Tracking Log/Database	Permittee shall summarize in the annual report. A summary of the tracked enforcement actions issued shall be included in the annual report.	The permittee shall continue to track enforcement actions issues (SWO/NOVs) to support follow-up inspections and issuance of penalties and/or Notice of Compliance.	☑	☑	☑	☑	☑	☑	☑	N/A
2.4.14	Third Party Oversight Inspection	Document training materials and the number of third party inspections conducted	The permittee shall utilize third party inspections for development of recommendations of efficacy of permittee inspections and enforcement. Updates to training materials shall be administered for permittee personnel at least once per year, if necessary.	☑	☑	☑	☑	☑	☑	☑	N/A
Cooperative Efforts (MSD provides supportive or other non-lead role)											
2.4.15	Plan Development Process Identification	Permittee shall make up-to-date guidance documents publicly available. A summary of the revised guidance materials shall be included in the Annual Report	The permittee shall review and update, as needed guidance materials identifying the process that developers must follow to obtain related construction permits, including process flow charts and checklists.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL REQUIREMENTS (CS)

CS 2 CS Management Activities											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.4.16	Metro Construction Review Enforcement Coordination	Permittee shall hold at least one (1) conference every other year starting in Permit Year one (1)	The permittee shall coordinate program enforcement actions with Metro Inspections, Permits and Licensing (IP&L), as necessary, to support overall site compliance with an emphasis on Notices of Deficiency, Notices of Violation, and Stop Work Orders issued by MSD and implications on land disturbances and "in building" activities.	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.1	Assess Legal Prohibition/Control Authority	Permittee shall make assessments as needed, and report proposed changes in the WDR for consideration by MSD Board.	The permittee shall assess existing Wastewater/Stormwater Discharge Regulations and other relevant ordinances and regulations, to identify changes needed to account for changes in standard of care, changes in technology, changes to development management process and related program needs for new development and redevelopment projects that disturb greater than or equal to one acre and construction activity disturbing less than one acre, including projects less than one acre that are part of a larger common plan of development.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.5.2	Implement Legal Prohibition/Control Authority	Permittee shall summarize enforcement actions in the annual report. The permittee shall include the number of inspections and enforcement actions	The permittee shall enforce existing ordinances and regulations intended to limit long-term stormwater quality impacts from new construction and significant redevelopment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.5.3	Site Plan Review	Permittee shall continue to conduct site plan reviews	The permittee shall conduct site plan reviews through procedures for reviewing development plans for compliance with stormwater management requirements.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.5.4	Stormwater Infrastructure Inventory	Permittee shall update the GIS LOJIC System as data becomes available	The permittee shall continue to maintain the GIS-LOJIC layers incorporating system changes from new development plans, MSD projects and related system projects.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 1 Legal Prohibition/Control Authority											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.5	Post-Construction BMP Inventory Update	Permittee shall incorporate related data on an ongoing basis; Permittee shall assess data to identify and fill dataset gaps every other year	The permittee shall develop and maintain an inventory and map of post-construction stormwater controls, including retention ponds, detention basins, and stormwater quality treatment facilities. The permittee shall update LOJIC and HANSEN® datasets to reflect the location, extent, and condition of post-construction stormwater quality BMPs.	☑		☑		☑		☑	N/A
2.5.6	Post-Construction Inspector Training	At least two trainings per year for the inspectors of Post-Construction BMPs. Report in the annual report, the dates of training, # of attendees, and subject matter	The permittee shall provide training to the inspectors including internal staff that have been designated to inspect the effectiveness of the post-construction BMPs, as well as, the local residents who are required to provide operation and maintenance of privately-owned Post-Construction BMPs.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.7	Inspect "Credit" Basins	Permittee shall continue to perform spot check inspections for at least 50% of qualifying facilities annually and summarize for the annual report	The permittee shall inspect private flood control basins, (retention ponds) receiving a stormwater utility user fee credit (reduction) to determine ability to fulfill original, current, and projected drainage demands. Continue to enforce, per existing basin credits documentation requirements, necessary to fulfill maintenance agreements and long-term system integrity.	☑	☑	☑	☑	☑	☑	☑	N/A
2.5.8	Inspection Plan Procedures for Treatment BMPs	Permittee shall continue to perform spot check inspections for at least 20% of treatment BMPs annually. All BMPs should be inspected by the end of the permit cycle. A summary of this activity shall be included in the annual report	The permittee shall update inspection and oversight protocol for private stormwater quality treatment BMPs to facilitate long-term maintenance demands including requirements for qualified private inspection of private BMPs with local government oversight access inspection and controls, as needed.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.9	Post-Construction and Green Infrastructure BMP Guidance Materials	Permittee shall update the guidance materials specifically the Design Manual chapters and Standards Specifications sections and make the document publicly available	The permittee shall evaluate and update the guidance materials facilitating current technology use and to reflect local plan review, construction site inspection and post-construction inspection requirements. Design Manual chapters and Standard Specifications sections to address long-term BMP operation, inspection and maintenance including checklists. "Green Infrastructure" is a combination of natural and engineered infrastructure that is designed to reduce the environmental footprint of the system. In terms of stormwater, green infrastructure can effectively manage stormwater runoff through the use of infiltration, biofiltration, detention, and other stormwater management techniques.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.10	Plan Preparers & Reviewers Training (MSD Facilitates)	Permittee shall continue to offer at least two (2) events annually. A summary of workshops topics and attendance shall be submitted in the annual report	The permittee shall provide available content, such as EPA web casts, through periodic training classes, workshops and meetings for designers, planners, and developers including emphasis on green infrastructure, post-construction planning, and design procedures for structural and non-structural BMPs, pollutant removal and inspection. MSD shall incorporate comments from stakeholders in the plan review process from designers to internal MSD review staff to facilitate training sessions to address evolving technologies and lessons learned.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.5.11	Project DRI	Permittee shall provide program progress summarizing cost, number and type of projects in the annual report	The permittee shall continue to implement Drainage Response Initiative (DRI) program aimed at identifying and solving the local drainage problems in Jefferson County.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.5.12	User Fee Credits (Green Infrastructure Incentives) Program Planning	Permittee shall evaluate incentives as needed.	The permittee shall evaluate enhancements to the utility user fee credits program for green infrastructure and post-construction BMPs based on post-construction lessons learned.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.13	Stream Restoration Inspection and Maintenance	Permittee shall continue to provide in the annual report, summarized stream reaches and maintenance. Permittee shall assess or implement at least one restoration project per year starting in Permit Year two (2)	The permittee shall identify restored stream reaches that MSD has maintenance responsibilities. The permittee shall also determine status of restored reaches and identify, prioritize/schedule and implement maintenance needs. MSD shall prioritize, design, and implement restoration practices on at least one stream segment per year.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.5.14	Certified/Qualified Construction BMP Inspector Program	Permittee shall continue to administer Qualified Post Construction Inspector training and include summary of activities in the annual report	The permittee shall enhance the Qualified Post Construction Inspector training program to identify and hold accountable third party private BMP inspectors to facilitate periodic operation and maintenance of private facilities resulting from the credits program, regulations changes and demonstration projects.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.15	Stormwater runoff quality treatment standard for all new development and redevelopment projects	Permittee shall continue to administer a local treatment standard for addressing stormwater runoff quality.	The permittee shall continue to administer an on-site stormwater runoff quality treatment standard, to be adopted by ordinance or other regulatory mechanism for all new development and redevelopment projects at any location within Louisville Metro. The proposed local standard will require, in combination or alone, management measures that are designed, built and maintained to infiltrate, evapo-transpire, harvest and reuse stormwater runoff, or otherwise manage the stormwater runoff quality. The standard shall be based, at a minimum, on an analysis of precipitation records to determine the equivalent surface depth of runoff (e.g. 0.60 inches) produced from an 80th percentile precipitation event.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.16	Private BMP Maintenance Agreement/Long Term O & M	Permittee shall continue to require all new development and redevelopment projects to have this agreement	The permittee shall require all new development or redevelopment to establish and enter into a long-term maintenance agreement and maintenance plan approved management practices for property owners. Alternatively, the permittee may establish other enforceable mechanisms for requiring long-term maintenance of structural and non-structural BMPs. Such authorities shall allow the MS4, or its designee, to conduct inspections of the management practices and also account for transfer of responsibility in leases and/or deed transfers. The agreement shall also allow the MS4s, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and authority to recover costs from the property owner/operator when the owner/operator has not performed the necessary maintenance.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cooperative Efforts (MSD provides supportive or other non-lead role)											

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.17	Green Infrastructure Demonstration Site(s)	Permittee shall report its role and activities, lessons learned, and overall project progress and summarize for the annual report	The permittee shall continue, in cooperation with Louisville Metro Mayor's administration, University of Louisville and other local agencies, to pursue development of stormwater quality and green infrastructure interpretative center(s) at strategic location(s) around Jefferson County with the intent of providing a positive highly visible platform to promote the viability and desirability of green infrastructure BMPs. Where feasible explore the opportunity for BMP evaluation and pre-/post-monitoring.	☑	☑	☑	☑	☑	☑	☑	N/A
2.5.18	Rain Barrels Partnerships	Permittee shall report its role, lessons learned and overall programs progress and summarize for the annual report	The permittee shall explore the opportunity for MSD to continue program with Louisville Nature Center that provided public guidance to construct and maintain rain barrels.	☑	☑	☑	☑	☑	☑	☑	N/A
2.5.19	No Mow/Riparian Zone	Permittee shall report its role and activities, lessons learned, and overall project progress and summarize for the annual report	The permittee shall assess existing mowing areas as part of maintenance activities to determine if the original need or impetus still exists. Opportunities to adjust the mowing contracts to include or exclude mowing areas will be incorporated into those contracts as they are rebid or renewed. Areas that are removed from the mowing list will be considered for "no mow" signage and education.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.5 POST-CONSTRUCTION (PC) STORMWATER RUNOFF CONTROL FOR NEW DEVELOPMENT AND REDEVELOPMENT

PC 2 PC Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.5.20	Urban Reforestation – MS4	Permittee shall report its role and activities, lessons learned, and overall project progress and summarize for the annual report	The permittee shall create a grant funding mechanism to provide incentives for the planting of trees in the MS4 area and improve tree canopy for the benefit of stream health and water quality. The co-permittee will budget to provide grant funding of private or public grantees to plant 1000 trees per year in the MS4. Funds will be administered in accordance with water quality goals, and on a first-come first-serve basis.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.5.21	Regional Basin Retrofit Analysis	Permittee shall by the end of Permit Year four (4) produce a technical memo outlining findings and recommendations	The permittee shall assess the regional flood control basins to determine if there is potential for enhancement to the basin or the outlet structure to provide additional capture for smaller water quality events. A technical memo and recommendation outline shall be provided prior to the end of Permit Year four (4).				<input checked="" type="checkbox"/>				N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.6 GOOD HOUSEKEEPING/POLLUTION PREVENTION (GH/P2) PROGRAMS FOR MUNICIPAL FACILITIES

GH/P2 Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.6.1	Stormwater Pollution Prevention Plans for MSD Operations	Permittee shall assess plans within six (6) months of major facility changes or at least once every two years by the facility superintendents and operation managers who make up the SWP3 Committee	The permittee shall periodically update and implement SWPPPs (also known as BMP Plans or Stormwater Plans) to control the discharge of pollutants from POTWs and other applicable MSD-owned facilities as defined in 40 CFR 122.26 including wastewater treatment plants and major operating facilities. SWPPPs will include provisions for maintenance activities on facility grounds, materials and equipment storage, security, preventative maintenance, risk identification and assessment, materials inventory, floor drain protection/controls, inspections and records.		☑		☑		☑		N/A
2.6.2	Training on MSD Facility SWPPPs	Permittee shall starting in Permit Year one (1) utilize third party inspectors to address at least three (3) SWPPP issues annually and summarize training and attendance for the Annual Report	The permittee shall utilize third party inspectors working with the facility SWPPP Committees to perform routine training of key SWPPP issues	☑	☑	☑	☑	☑	☑	☑	N/A
2.6.3	Maintenance Staff Training on Pollution Prevention	Permittee shall report the number of staff attending related training and include in the Annual Report	The permittee shall provide training to key maintenance staff on good housekeeping activities related to stormwater quality in MSD operations including but not limited to: green infrastructure operation and maintenance, fleet and building maintenance, and stormwater conveyance/drainage system maintenance.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.6 GOOD HOUSEKEEPING/POLLUTION PREVENTION (GH/P2) PROGRAMS FOR MUNICIPAL FACILITIES

GH/P2 Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.6.4	Pesticides Management	Permittee shall track employees with related state certifications.	The permittee shall utilize Commonwealth of Kentucky pesticide management registration and certifications to qualify MSD employees applying pesticides. The permittee shall develop and maintain a list of pesticides used and stored, including storage locations.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.6.5	Incident Response Staff Training	Permittee shall continue to report incident response staff training participation	The permittee shall provide training to unified incident response staff on related stormwater issues including good housekeeping, IDDE, construction, post-construction BMP/controls and program management.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.6.6	MSD Capital Project Control	Permittee shall summarize changes to MSD Capital Project requirements, as necessary	The permittee shall, for MSD directed capital, rehabilitation and reconstruction projects, disturbing more than one acre, performed by a contractor, ensure the contract documents/agreements/work orders will include stipulations that require the work be designed/performed/implemented/constructed under the same standards for construction and post-construction stormwater quality that MSD requires of private development it regulates.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.6.7	MSD Stormwater Quality BMP Data	Permittee shall every other year assess datasets for completeness and ability to support staff scheduling stormwater-quality BMPs MSD is responsible for maintaining	The permittee shall update LOJIC and HANSEN® datasets to identify stormwater-quality BMPs located on MSD properties, rights-of-way and easements that MSD is responsible for operating and/or maintaining. The datasets will be updated in a manner to support ongoing prioritization and tracking of operation and maintenance.	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.6 GOOD HOUSEKEEPING/POLLUTION PREVENTION (GH/P2) PROGRAMS FOR MUNICIPAL FACILITIES

GH/P2 Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.6.8	Catch Basin and Storm Sewer Cleaning	Permittee shall summarize and include in the Annual Report	The permittee shall continue to clean catch basins and sewers (closed pipe systems) to prevent debris from entering receiving streams and address drainage/flooding issues in MSD area based on known priorities and information gathered from the customer hotline.	☑	☑	☑	☑	☑	☑	☑	N/A
Cooperative Efforts (MSD provides supportive or other non-lead role)											
2.6.9	Channel Maintenance	Permittee shall summarize and include in the Annual Report	The permittee shall continue to maintain open channel system in MSD area based on priorities and information from the customer hotline including ditch cleanings, ditch regrading, drainage obstruction removals, erosion repairs, floodwall levee maintenance, headwall install/repair, concrete channel installation, tree removal, driveway apron restoration, routine mowing and closed pipe installations.	☑	☑	☑	☑	☑	☑	☑	N/A
2.6.10	Stormwater Pollution Prevention Plans for Co-Permittee Operations	Permittee shall assist in the review of at least one (1) facility annually	The permittee shall provide co-permittees with periodic 3rd-party technical assistance and/or review of the facility stormwater pollution prevention plans (SWPPPs, BMP plans, or Stormwater Plans and BMPs) and/or site visit/walkthrough to help identify opportunities to improve the effectiveness of the plans and their implementation.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.7 MONITORING (M)

TABLE 1.6.7 MONITORING (M)											
M Monitoring Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/27	Legal Auth
2.7.1	Long-Term Monitoring Network (LTMN)	Permittee shall provide datasets electronically with annual report.	<p>The permittee shall continue the existing program of the collection of long-term data on stream quality and habitat for at least 28 LTMN locations selected to support the various types of data collected. This program includes:</p> <p>Continuous – pH, conductivity, temperature, dissolved oxygen, and stream flow.</p> <p>Quarterly – Ambient monitoring for Total Suspended Solids (TSS); E. coli; Total Nitrogen (as N) Oil and Grease, Total Recoverable Copper and pH.</p> <p>5/month (May-October) - Recreational monitoring for E. coli.</p> <p>Once Every Two Years – Biological sampling and/or evaluation rotating to include: algae, fish and benthic macro invertebrates.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.7.2	Monitoring Summary	Permittee shall summarize and include in annual report	The permittee shall provide a summary of monitoring collection efforts and results in the annual report.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.7.3	Trend Analysis	Permittee shall, at least once per permit cycle, provide synthesis report	The permittee shall perform trend analysis to support long-term assessments of local waterways and program performance. Report analysis through the "Synthesis Reports" at least once every permit cycle.					<input checked="" type="checkbox"/>			N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.7 MONITORING (M)

M Monitoring Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.7.4	Flow Estimate to Support Quarterly Ambient Monitoring	Permittee shall provide available data and include in annual reports	The permittee shall utilize total precipitation estimates over the previous twenty-four (24) hour period to estimate flow. When flow is measured with in stream gauging equipment, that data will be utilized rather than precipitation based estimates.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.7.5	Monitoring Location Maintenance	Permittee shall summarize activities and include in annual reports	The permittee shall continue its collaboration with United States Geological Survey (USGS) on flow gages and monitoring locations maintenance and data management.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.7.6	Precipitation Estimate	Permittee shall continue to make rain gage network data available on-line	The permittee shall continue to maintain the continuous rain gage network and on-line public access to that data.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.7.7	Water Quality Standards	Permittee shall apply the most stringent standard	The permittee shall compare stream monitoring analytical results to the applicable water quality standards for each parameter of the monitoring program. The most stringent applicable standard shall be used for comparison. Constituents that exceed applicable Water Quality Standards shall be highlighted. The permittee shall include a discussion of possible pollutant sources through the annual report.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.7.8	Location Mapping	Permittee shall maintain the monitoring stations reflected in mapping system	The permittee shall maintain the geo-coded monitoring station locations and descriptions through related geographic datasets and databases.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.7 MONITORING (M)

M Monitoring Plan Maintenance and Update											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.7.9	Sampling Methodology and Test Procedures	Permittee shall perform the sampling methodology to insure compliance with 40 CFR 122.26 and 136, and provide a summary of as-needed updates to the QAPP in the annual report	The permittee shall perform the sampling methodology according to the EPA stormwater application regulation at 40 CFR 122.26. The permittee shall perform the analyses according to the procedures approved under 40 CFR Part 136, unless other test procedures have been specified. The permittee shall assess the monitoring Quality Assurance Project Plan (QAPP), and update as needed.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.7.10	Annual Data Summary	Permittee shall provide a summary electronically with the annual report	The permittee shall submit a stormwater monitoring report annually. The monitoring reports shall include: status of implementation of the monitoring program, methods of evaluating data, graphical summaries of the data, and an explanation/discussion of the data for each component of the monitoring program. The monitoring data/results obtained each year will be submitted electronically with the Annual Report. A narrative data analysis shall be submitted annually within the Annual Report.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



TABLE 1.6.8 PERFORMANCE ASSESSMENT AND REPORTING (PAR)

PAR Performance Assessment and Reporting											
SWQMP ID	Element Task	Frequency or Measure of Success	Activity Required	PY 1 6/17	PY 2 6/18	PY 3 6/19	PY 4 6/20	PY 5 6/21	PY 6 6/22	PY 7 6/23	Legal Auth
2.8.1	Activity Measures Reporting	Permittee shall develop and retain Annual Reports for three years beyond permit term.	As described in the specific activity listings, the permittee shall compile information necessary to provide in the annual report. The metrics defined by "Measure of Success" shall be reported and kept for program assessment purposes. The permittee shall track the appropriate metrics through existing databases/spreadsheets to support staff assignments and budget development.	☑	☑	☑	☑	☑	☑	☑	N/A
2.8.2	PEOPLE	Permittee shall, by the end of Permit Year one (1), summarize tracking procedures and results and include with Annual Report.	The permittee shall continue activity tracking to support consistent coordination and integrated reporting in a way that enables the variety of MSD staff to report their individual activities, target audiences, and related metric.	☑	☑	☑	☑	☑	☑	☑	N/A
2.8.3	Illicit Discharge Trend Analysis	Permittee shall provide, during Permit Year Five (5) a report of trends and potential implications of IDDE investigations.	The permittee shall perform a trend analysis of illicit discharge investigations and enforcement actions over the term of the permit.					☑			N/A
2.8.4	Industrial/IDDE Compliance Actions Portal	Permittee shall maintain and report progress summarized in the Annual Report.	The permittee shall maintain a Compliance Actions Web Portal supplementing existing databases for functionality for internal use to expedite follow-up inspections of HRIFs.	☑	☑	☑	☑	☑	☑	☑	N/A
2.8.5	Post-Construction Inspection Portal	Permittee, shall maintain and report progress summarized in the Annual Report.	The permittee shall maintain a Compliance Actions Database for internal use to expedite follow-up inspections of private post-construction BMPs.	☑	☑	☑	☑	☑	☑	☑	N/A

Schedule/Applicability Key: ☐ = Due in Permit Year (PY), ☑ = Scheduled/completed in PY



TABLE 1.6.8 PERFORMANCE ASSESSMENT AND REPORTING (PAR)

PAR Performance Assessment and Reporting											
2.8.6	Six-Level Program Assessment Methodology	Permittee shall continue to assess performance with the six-level program and report on progress in Annual Reports	The permittee shall continue to evaluate and report portions of the six-level program EPA began advocating in 2008 to assist MS4 programs in identifying success and future areas of focus.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
2.8.7	Cooperative annual report	Permittee shall prepare and submit Annual Report in a timely manner	The permittee shall coordinate and cooperate with co-permittees in compilation of the annual compliance demonstration reports	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

Schedule/Applicability Key: = Due in Permit Year (PY), = Scheduled/completed in PY



2.0 MS4 Annual Report Fact Sheet Introduction

The MS4 Permit (KYS000001) includes a table that outlines compliance measures for programmatic activities. Each item in this permit table was addressed in the narrative description provided in the SWQMP, submitted to KDOW in July 2017. For this report, a summary of activities and performance during the reporting year is provided in the following sections:

- Section 2.1 - Public Education, Outreach, Participation, and Learning Experiences (PEOPLE)
- Section 2.2 - Illicit Discharge and Detection (IDDE)
- Section 2.3 - Industrial Program Requirements (IP)
- Section 2.4 - Construction Site Stormwater Runoff Control (CS)
- Section 2.5 - Post-Construction Controls (PC)
- Section 2.6 - Good Housekeeping/Pollution Prevention (GH/P2)
- Section 2.7 - Monitoring (M)
- Section 2.8 - Program Assessment and Reporting (PAR)

In each section the needed information is delivered in the following format for each Permit table item:

		SWQMP ID	ACTION REQUIRED	SCHEDULE	FREQUENCY OR MEASURE OF SUCCESS	RESULT	APPENDIX	PROPOSE CHANGE
Minimum Control Measure Heading	Individual SWQMP Title	ID #	Detailed description of action required from SWQMP	How often permittee must address and report on ACTION REQUIRED	Frequency or measure of which permittee must address and report on ACTION REQUIRED	Permit Year Achievement for the ACTION REQUIRED	Supporting documentation	Any proposed changes to the permittees ability to measure and report on ACTION REQUIRED.



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001

Public Education, Outreach, Participation and Learning Experiences (PEOPLE)

Refer to Appendix 2.1.1 for examples of materials

7th Reporting Period - November 2023

Task		Activity Required	Measure of Success	Event	Key Messaging	Target Audience	Estimated Engagement
PEOPLE General Public & Stakeholder Education Program	General Public - Mass Media Integration/Distribution	2.1.1 Integrate MS4 stormwater quality topics in to existing print mass media, local government cable channel, social marketing materials, and/or new materials with the intent of affecting behavior change.	Report the number of potential households and estimate the numbers of households were reached.	2.1.1.A Mass media - Business First Ads 3 Ads total (July and October 2022, February 2023)	Various Water Quality Messages - Pick up after dogs, reduce use of lawn chemicals, fix oil leaks, illegal discharges	General Public	10,900
				2.1.1.B Mass media - Bill inserts (August/September 2022)	Clean up after you pet, don't flush wipes	MSD Customers	255,000
				2.1.1.C Mass media - Floodplain News (November 2022)	Plant a rain garden, keep storm drains clear, decrease fertilizer & pesticides, pickup after pets, swimming pool draining	Residents in floodplain	10,000
				2.1.1.D Mass media - Anchor Age (August and September 2022, January, February, and June 2023)	Clear drains and catch basins, plant a rain garden, pool draining safety, road salt advisory, stormwater collection using rain barrels, clean up after pet	Residents of Anchorage, KY	2,300
				2.1.1.E Social marketing materials - Facebook, Twitter, Instagram, You Tube	Plant a rain garden, encourage native plantings, don't dump grease down drains, remove leaves from catch basins, plumbing modification, clean up after your dog, volunteer for trash cleanups, stay out of creeks after rain, don't mow stream buffers	General Public	4,300
General Public - Direct Interaction	2.1.2 Present the "Key Messages" at community events, through the use of a display booth, "enviroscape" or other direct personal integration approaches.	Present educational materials to the public at least six (6) event days per year; update booth material annually. Provide summary of the educational activities in annual report.	2.1.2.A Summer Works Program (July 1 and 8, 2022)	Impacts of green infrastructure. Louisville MSD staff hosted a tour of green infrastructure, stormwater and sanitary facilities on the University of Louisville Belknap Campus.	High School and College-aged students	10	
			2.1.2.B Waterfront Park 4th of July Celebration (July 4, 2022)	MSD hosted a booth at the Waterfront Park 4th of July Celebration. Louisville MSD staff demonstrated the enviroscape and talked about watersheds and water quality.	General Public	1,000+	
			2.1.2.C Louisville Free Public Library Workshops (July 11 and 22, 2022) 2 Event Days	MSD staff introduced mascot Mandy the Salamander. Discussion topics included keeping streams safe and things the public can do to protect our waterways.	School-Aged Children	20	
			2.1.2.D Kentucky State Fair 11 Event Days (August 18-28, 2022)	MSD cohosted a booth at the Kentucky State Fair with the Ripple Effects Project. A rain garden and native plants were on display, native plant seed packets were given away. Talking points included stream health, macroinvertebrates, and ways the public can protect our waterways.	Residential Home Owners and/or General Public	10,000+	
			2.1.2.E Jeffersontown Gaslight Event - Touch a Truck (September 17, 2022)	In conjunction with MSD's vactor truck and TVI truck demonstration, MSD hosted the enviroscape to teach the public about pollution that can impact local streams. Children and adults learned about human impacts on water quality and participated in water quality trivia.	Residential Home Owners and/or General Public	100	
			2.1.2.F Family Steam Day (September 24, 2022)	MSD staff promoted how we protect our waterways through the treatment of wastewater and protection of stormwater.	General Public	500	

Task		Activity Required	Measure of Success	Event	Key Messaging	Target Audience	Estimated Engagement
General Public - Meeting Topic Integration	2.1.3	Integrate MS4 stormwater quality topics, as feasible and appropriate into other MSD sponsored public meetings.	Integrate water quality topics in MSD public meetings at least six (6) events per year; provide summary of the events in the annual report.	2.1.3.A MSD Clarity (Odor Control) Meeting (July 12, September 13, and November 29, 2022 and March 28, 2023)	Topics included how water quality treatment centers clean water and sources of odors. Removal of leaves that could clog catch basins was discussed.	General Public	83
				2.1.3.B Can you dig it? (January 19, 2023)	The annual Can You Dig It event co-sponsored by Louisville Water and Louisville MSD, gives local contractors and engineers an opportunity to learn about upcoming capital projects, procurement bids and how to do business with MSD.	Contractors and Engineers	250
				2.1.3.C Floodplain Management Plan Meetings (January 18, February 1 and 15, March 1 and 15, 2023)	Topics included protecting and improving natural floodplain functions through green infrastructure, buffers, and education.	General Public	35
				2.1.3.D Field Day (May 18, 2023)	This annual event is an educational day for professionals in the construction and engineering industries. Topics included EPSC, native plantings and water quality.	Engineers, designers, planners, developers	200
Volunteer Programs - Participation, Promotion or Support	2.1.4	Participate in, facilitate, encourage or support volunteer program opportunities on a case by case basis to optimize resources and potential to affect behavioral changes through participation events.	Direct participation in at least three (3) events per year; and promote additional two (2) events per year, provide summary of volunteer opportunities the permittee participated, facilitate, or supported in the annual report.	2.1.4.A Day of Service with Holy Cross High School (September 21, 2022)	MSD partnered with Holy Cross to give back to the Mill Creek Watershed through a trash cleanup and park rehabilitation day. (While in the Mill Creek watershed, this event was not used for 319 grant purposes.)	High School-aged Students	20
				2.1.4.B Mini Beargrass Creek River Sweep (October 15, 2022)	Building responsibility for water quality. MSD promoted and participated in this event sponsored by Metro Council District 21.	General Public	40
				2.1.4.C CMF Tree Planting (October 12, 2022)	MSD hosted a tree planting at the Central Maintenance Facility (CMF) for Louisville Tree Week. Trees were planted along the edge of the employee parking lot and will help capture runoff from the parking lot.	MSD Employees	20
				2.1.4.D Southend Beautification Campaign Tree Planting (March 18, 2023)	Building responsibility for water quality. MSD promoted and participated in this event sponsored by Metro Council Districts 21 and 25.	General Public	100
				2.1.4.E Mayor's Give-A-Day (April 11, April 19, April 21, April 27, 2023)	Building responsibility for water quality. MSD promoted and participated in this month long volunteer campaign by weeding and mulching the Cabbage Patch, mulching and landscaping the Crane House, and cleaning up trash around Downtown Louisville.	General Public	100
				2.1.4.F Beargrass Creek Earth Day Sweep (April 22, 2023)	MSD supported a cleanup in coordination with councilmen from Districts 8 and 9, Louisville Olmsted Parks Conservancy, Brightside, KWA, and BCA. Trash was picked up along the Butchertown Greenway.	General Public	200
				2.1.4.G Krashey Way Tree Planting (April 26, 2023)	MSD hosted a tree planting at Krashey Way, Orville Drive, and Whitlock Street which were FEMA buyout properties. Trees will help with the uptake of water in the neighborhood.	General Public	10
				2.1.4.H Sylvania Park Sweep (June 10, 2023)	MSD coordinated with Metro Parks Natural Areas to clean up Sylvania Park and adjacent banks of Mill Creek. (While in the Mill Creek watershed, this event was not used for 319 grant purposes.)	General Public	12
				2.1.4.I Shawnee Park Ohio River Sweep (June 18, 2023)	MSD hosted a coordinated effort with Origin Park and David Wicks to clean up trash at Shawnee Park.	General Public	7

Task		Activity Required	Measure of Success	Event	Key Messaging	Target Audience	Estimated Engagement
Elected Officials	2.1.6	Permittee shall provide a summary of its attendance of meetings at Mayors and/or Council Member's discretion in the Annual Report	The permittee shall attend and participate at the discretion of Mayor's office and Louisville Metro Council members to address resident's concerns and questions.	2.1.6.A District 12 Dialogue (August 23, 2022)	General water quality education	General Public	30
				2.1.6.B District 19 Meeting (September 20, 2022)	General water quality education	General Public	30
				2.1.6.C District 5 Meeting (September 21, 2022)	General water quality education	General Public	30
				2.1.6.D District 12 Meeting (November 15, 2022)	General water quality education	General Public	30
				2.1.6.E District 12 Community Conversation (February 7, 2023)	General water quality education	General Public	30
				2.1.6.F Mayor's Night Out (March 15, 2023)	General water quality education	General Public	100
				2.1.6.G Fowler Forum (March 21, 2023)	General water quality education	General Public	30
				2.1.6.H CW Hawkins and Purvis Meeting (April 25, 2023)	General water quality education	General Public	30
				2.1.6.I Mayor's Night Out (June 27, 2023)	General water quality education	General Public	100
Public Speakers	2.1.7	Provide speakers to various community stakeholder groups that could benefit from environmental stormwater information.	Provide public speakers to various community stakeholders at least six (6) events per year.	2.1.7.A Louisville MSD MS4 Water Quality Monitoring Program Presentation at KSA Conference (July 13, 2022)	Colette Easter presented at the Kentucky Stormwater Association conference about the history of the MS4 water quality monitoring program and how data can be used to evaluate watershed needs.	Engineers, designers, planners, developers	80
				2.1.7.B Post-Construction Inspection Field Observations Drive Louisville MSD Design Manual Updates Presentation at KSA Conference (July 14, 2022)	Lori Rafferty and Brett Clark presented at the Kentucky Stormwater Association conference about the changes made to Chapter 18 of the MSD Design Manual based on real-life experience inspecting and maintaining green infrastructure.	Engineers, designers, planners, developers	56
				2.1.7.C Sprouting Gardeners Rain Garden/Watershed Presentation (July 28, 2022)	MSD employees Lori Rafferty and Jennifer Kern spoke to the group about water conservation and presented the Color Me a Watershed activity, macroinvertebrate activity, and lead tours of two rain gardens.	Elementary School-aged Students	12
				2.1.7.D KSPE Watershed Planning in Jefferson County Presentation (September 21, 2022)	MSD employee Colette Easter presented on the value and need for watershed planning to improve water quality in Jefferson County. Colette summarized progress on the two active watershed plans and how engineers can help in their development and implementation.	Engineers	25
				2.1.2.E Trinity High School Field Trip at Floyds Fork (October 18 and 26, 2022)	Water quality education through classroom and field workshop learning. Attendees participated in stream sampling, Enviroscape and stream bug activities. Other discussion topics included how watersheds work and ways the public can protect our waterways.	High School Students	65
				2.1.7.F Green Infrastructure and the MS4 Permit: A Compendium of Case Studies presentation for EPA webinar (January 25, 2023)	MSD staff Brett Clark and Lori Rafferty presented on green infrastructure and the MS4 permit for an EPA webinar.	MS4 permitted municipalities	500
				2.1.7.G St. Margaret & Mary Mandy Meet and Greet (March 21, 2023)	MSD visited a classroom with Mandy the Salamander and talked about the water cycle and water quality.	Elementary School-aged Students	60
				2.1.7.H University of Louisville Cornerstone Engineering Class Visit (March 30, April 3, 4, and 10, 2023)	MSD helped develop material for an engineering course at U of L where students design, build, and optimize a physical model of a combined system, including wet-weather storage and treatment.	College Students	130
				2.1.7.I Mill Creek Final Concept Plan Release Presentation (April 19, 2023)	MSD employees Brett Clark and Trent Winlock attended Louisville Metro Parks' Natural Areas event and shared information about the current 319 project and rain gardens.	General Public	22

Task		Activity Required	Measure of Success	Event	Key Messaging	Target Audience	Estimated Engagement
News Media Press Releases	2.1.8	Provide press releases to the local news media highlighting opportunities for the public to participate in outreach and involvement events to make a positive difference through behavior change.	Provide at least two (2) press releases per year highlighting public participation opportunities.	2.1.8.A Safe Swimming Pool Draining Tips Offered as Summer Closes (September 13, 2022)	Drain pool responsibly by not draining with 48 hours of a rain event and dechlorinating the pool before draining to prevent harm to aquatic ecosystems.	General Public	200
				2.1.8.B Mini Beargrass Creek River Sweep (October 11, 2022)	Keeping trash out of the waterways by participating in community cleanup events.		
Building Industry Association of Greater Louisville Land Development Committee Monthly Meetings and Developers Advisory Group	2.1.11	Building Industry Association of Greater Louisville Land Development Committee Monthly Meetings and Developers Advisory Group - Permittee shall participate in at least 75% of the meetings annually	The permittee shall attend Building Industry Association of Louisville land development committee and Developer Advisory Group meetings to address concerns and comments from the local homebuilder professional and provide information regarding changes in procedures, checklist, regulations, etc.	2.1.11.A BIA July 2022 Meeting (July 6, 2022)	Government agency and utility updates	Builders, contractors and developers	30
				2.1.11.B BIA August 2022 Meeting (August 3, 2022)	Government agency and utility updates		30
				2.1.11.C BIA September 2022 Meeting (September 7, 2022)	Government agency and utility updates		30
				2.1.11.D BIA October 2022 Meeting (October 5, 2022)	Government agency and utility updates		30
				2.1.11.E BIA November 2022 Meeting (November 2, 2023)	Government agency and utility updates		30
				2.1.11.F BIA December 2022 Meeting (December 7, 2022)	Government agency and utility updates		30
				2.1.11.G BIA January 2023 Meeting (January 4, 2023)	Government agency and utility updates		30
				2.1.11.H BIA March 2023 Meeting (March 1, 2023)	Government agency and utility updates		30
				2.1.11.I BIA April 2023 Meeting (April 12, 2023)	Government agency and utility updates		30
				2.1.11.J BIA June 2023 Meeting (June 14, 2023)	Government agency and utility updates		30
Greater Louisville Inc	2.1.12	Greater Louisville Inc. Environmental and Water Committees - Permittee shall participate in at least three (3) events per year	The permittee shall participate in committee meetings to address concerns and comments from key local development professionals and provide information regarding changes in construction procedures, checklist, regulations, etc.	2.1.12 September 14, 2022 Meeting	Development procedures and regulations	Developers and officials.	50
				2.1.12 October 12, 2022 Meeting	Development procedures and regulations	Developers and officials.	50
				2.1.12 November 9, 2022 Meeting	Development procedures and regulations	Developers and officials.	50
				2.1.12 February 8, 2023 Meeting	Development procedures and regulations	Developers and officials.	50
				2.1.12 March 8, 2023 Meeting	Development procedures and regulations	Developers and officials.	50
				2.1.12 April 12, 2023 Meeting	Development procedures and regulations	Developers and officials.	50
				2.1.12 May 10, 2023 Meeting	Development procedures and regulations	Developers and officials.	50
Construction Operators	2.1.13	Make available educational materials and/or multimedia presentations for the construction industry related to point and non-point source pollution, green infrastructure and stormwater pollution prevention measures for operational procedures and erosion and sediment controls.	Evaluate educational materials and/or multimedia presentations for the construction industry related to point and non-point source pollution and stormwater pollution annually.	2.1.13.A Online EPSC and builders classes through JCPS	Post-construction water quality topics	Builders, contractors and property owners	400
				2.1.13.B Online QPCI Certifications	Post-construction water quality topics	Builders, contractors and property owners	400

Task		Activity Required	Measure of Success	Event	Key Messaging	Target Audience	Estimated Engagement	
PEOPLE General Public & Stakeholder Education Program	Rain Garden Outreach	2.1.14	Public Notification of Major Program Changes - Permittee shall estimate handbook distribution and report in the Annual Report	The permittee shall maintain and update rain garden handbook with the intent of general public outreach. Consider expanding use to support residential, non-residential, professional, and non-professional audiences. The permittee shall evaluate changes and make updates at least every even numbered year.	2.1.14.A Rain Garden Outreach (Update completed October 2021)	General information on how to construct and plant a rain garden, including the benefits of rain gardens and how they benefit water quality.	Builders, contractors and property owners	1,000+
	Green Infrastructure Demonstration Projects	2.1.15	Green Infrastructure Demonstration Projects	The permittee shall monitor previously identified and constructed projects in outreach efforts aimed at demonstrating the feasibility and effectiveness of green infrastructure including, but not limited to rain gardens, green roofs, pervious pavement, bio-swales and infiltration.	2.1.15 MSD continues to inspect demonstration projects at locations including: Churchill Downs, Lynn Family Soccer Stadium, MSD Main Office, Kentucky Career Center and Norton Healthcare Sports & Learning Center. Design for rehabilitation projects for the MSD Main Office and Kentucky Career Center rain gardens was initiated last year and construction was completed on the Career Center rain gardens this year.	Green infrastructure signs are outreach at highly visible locations that explain how green infrastructure works to encourage the public to build green infrastructure on their properties.	General Public	1,000+
	Public Notification of Major Program Changes	2.1.16	Permittee shall maintain and update as needed the notification system or program changes.	The permittee shall maintain a web site-based system to notify the public and affected stakeholders of proposed major program changes that will significantly impact stormwater runoff quality, negatively or positively. The public shall be given the opportunity to informally comment on proposed changes.	2.1.16 MSD maintains a news webpage with any updates to affected stakeholders. www.louisvillemsd.org/news	Webpage updates include road closures due to construction, volunteer opportunities, upcoming meetings and project updates. No major program changes that impact stormwater runoff quality were made in the reporting period.	MSD customers, developers, builders, contractors, property owners	1,000+
Cooperative Efforts	Jefferson County MS4 Workgroup Communication	2.1.17	Jefferson County MS4 Workgroup-Communication - Permittee shall attend at least two (2) meetings per year	The permittee shall participate in the Jefferson County MS4 Co-Permittee Workgroup meetings discussing program progress, challenges, activity changes, shared activity requests communication needs and lesson learned.	2.1.17.A FY23 Co-Permittee Meeting #1 (February 28, 2023)	Outreach survey, IWD spill response cases, and SWPPP.	Agency and government representatives	15
					2.1.17.B FY23 Co-Permittee Meeting #2 (June 13, 2023)	IWD spill response, Internal Field Day, MS4 reporting, green infrastructure rehab projects	Agency and government representatives	15
	Louisville Metro Office of Sustainability Assistance	2.1.18	Louisville Metro Office of Sustainability - Permittee shall report its activities and support of the Louisville Metro Department of Sustainability initiatives in the Annual Report Note: In an effort to save funds, City leaders chose to merge the Office of Sustainability into the Office of Planning.	The permittee shall continue to support Louisville Metro Office of Sustainability initiatives with development of guidance materials to be applied to new Metro Government Facilities incorporating green infrastructure	2.1.18.A MSD is working closely with Louisville Parks and Kentucky Fish and Wildlife for the Mill Creek stream and wetland restoration as well as the greenway plan for that area.	Integrating green spaces in urban areas and restoring natural spaces.	General public	1,000+



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001

Illicit Discharge Detection and Elimination (IDDE)

7th Reporting Period - November 2023

	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
IDDE 1 Legal Prohibition/Control Authority	2.2.1	The permittee shall evaluate existing ordinances and regulations with an emphasis on Article 5 of the WDRs to determine if they are sufficient relative to MSD's ability to implement an effective IDDE program per 40 CFR. 122.26(b) (2). The permittee shall periodically update WDRs as needed to identify and eliminate risk of illicit discharges due to changes in technology, industrial management processes, regulations or program modifications. The permittee shall provide a summary of the adoption of such changes and information about implementation, and effective date in the Annual Report.	Annually, as needed	Permittee shall evaluate, once per permit cycle proposed changes in Wastewater Stormwater Discharge Regulations (WDRs) for consideration by MSD Board.	No proposed changes in the current reporting period. A copy of the WDRs can be found here: https://louisvillemsd.org/sites/default/files/file_repository/Industrial%20Waste/MSD%20WDR%20062722%20Final.pdf		No
	2.2.2	The permittee shall develop and implement a formal plan of illicit discharge detection including how to trace the source of an illicit discharge and procedures for removing or eliminating them once they are located or reported. The plan should also include the enforcement procedures outlined in the WDRs for illicit discharge elimination, which includes ten (10) days from the receipt of the Notice of Violation; the source of the illicit discharge shall submit a mitigation plan for removal.	Annually	Permittee shall provide in the annual report, a summary of the process changes to IDDE investigations.	Dry Weather Screening for Illicit Discharge/Connection SOP was created June 1, 2021 and approved by the State in the current reporting period. SOP is awaiting approval from the MSD Board.		No
	2.2.3	The permittee shall continue to receive and investigate public reports of potential illicit discharges via customer service hotline, webpage reporting and MetroCall. The permittee shall update and perform customer service hotline staff training for receiving calls regarding potential illicit discharges and appropriate routing procedures.	Annually	Permittee shall provide in the annual report, a summary of the investigations of illicit discharges performed.	There were 541 total requests for investigation for potential illicit discharges that were received from the public via the customer service hotline, webpage reporting, and MetroCall. All 541 requests were investigated.	2.2.3 IDDE Summary	No

	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
IDDE 1 Legal Prohibition/Control Authority	Dry Weather Screening	2.2.4 The permittee shall conduct dry weather screening of representative outfalls. The recommended level of effort is twenty percent (20%) of the major outfalls per year. However, all the major outfalls shall be addressed within the permit term. The permittee shall also conduct dry-weather screenings at ninety percent (90%) of large industrial outfalls of industrial facilities once per permit cycle.	Once per permit cycle	Permittee shall provide in the annual report, a summary of the dry weather screenings performed.	MSD began outfall screening through an aerial infrared thermal imaging process beginning in the winter of 2013. The most recent thermal imaging flyover was performed in winter of 2020. Thermal screening during winter months allows optimal visibility and temperature conditions to identify thermal anomalies potentially associated with illicit discharges. Infrared thermal imagery methods allow MSD to identify and quantify the following types of possible illicit discharges: leaking sewage collection lines, non-stormwater discharges from outfalls and pipes, illegal connections to storm drainage ditches and systems, septic tank or degraded sanitary sewer discharges, non-stormwater industrial discharges, groundwater to surface water discharges, and force main exfiltration. A desktop analysis of thermal imagery for hotspots was performed along 150-foot stream buffers and industrial land uses in the MS4 system. This desktop analysis identified anomalies for field screening, which then identified illicit discharges. All dry weather screenings of the anomalies were conducted in the 2nd quarter of 2021 and reported on in the previous reporting year. This work is scheduled to continue in 2023.		No
	Screening Follow-up	2.2.5 After the initial follow-up to insure the illicit discharge has been mitigated, the permittee shall re-evaluate outfalls that were previously found to have had contaminated discharges to determine the current status of those outfalls.	Annually	Permittee shall starting in Permit Year One (1) inspect at least 25% of suspect outfalls per year.	All suspect outfalls, identified from the 2020 thermal imagery flyover, were inspected, resolved and reported on in the previous reporting period.		No
	Mapping - Stormwater Infrastructure Inventory	2.2.6 The permittee shall continue to maintain the GIS Louisville Jefferson County Information Center (LOJIC) layers constituting its storm sewer system map, showing the location of all known major outfalls, and the names and location of all waters of the Commonwealth that receive discharges from those outfalls.	Annually	Permittee shall maintain a storm sewer system map.	Mapping routinely updated. Public mapping information can be found here: https://lojic.maps.arcgis.com/home/index.html		No
IDDE 2 Management Activities	Non-Industrial IDDE Program Enforcement	2.2.7 The permittee shall continue to utilize the Wastewater/Stormwater Discharge Regulations, related checklists and procedures for investigation of potential illicit discharges and elimination of illicit discharges.	Annually	Permittee shall report annually, including number of investigations, enforcement actions and referrals to KDOW, and follow-up investigations.	Emergency Response Incident (ERI) investigation outcomes and enforcement actions (63 total cases): <ul style="list-style-type: none"> • 48 No Further Action Required • 1 Field Correction Notice • 11 Notices of Violation (4-HMO; 7-MS4) 	2.2.7 ERI Referrals	No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
IDDE 2 Management Activities	Hazmat/Spill Unified Response Program	2.2.8	The permittee shall continue to maintain and enforce the ordinances, policies, programs and procedures for response and containing spills that may discharge into the MS4. The spill response procedures outlined in Section 95.07 of the Louisville Metro Code of Ordinances relating to hazardous materials shall continue to be implemented and enforced.	Annually	Permittee shall report, if necessary, any changes to the policies and programs and procedures, in the annual report.	MSD will continue to maintain and when needed coordinate the improvement of ordinances, and improve MSD policies, programs and procedures for response and the containment of spills that may discharge into the MS4. No changes were made during current reporting period.	No	
	MVA Mitigation Kit Program	2.2.9	The permittee shall continue motor vehicle accident (MVA) mitigation kit distribution program to meet Fire Department and emergency response spill containment needs.	Annually	Permittee shall report metrics for kit distribution and after- use collection in the annual report.	1891 (30-lb) bags of mitigation materials were given out in the current reporting period. The dumpster was not emptied in the current reporting period There have been no changes to MSD's Motor Vehicle Accident (MVA) Mitigation Program.	No	
	IDDE Identification SWPPP Training Integration	2.2.10	The permittee shall integrate techniques and practices to assist staff identify potential illicit discharges into facility and system operations and maintenance training.	Annually	Training shall occur at least once per year and the permittee shall report in the annual report the date of training and the number of staff participating in training.	<p>MSD staff participated in training modules that highlighted techniques and practices to assist staff with identifying potential illicit discharges;</p> <p>*Morris Forman Spill Response Training (1 hour) - 89 participants between 3/7/23 and 6/28/23</p> <p>*Virtual Stormwater Pollution Prevention Plan Training (1.0 hours) - 232 participants in 7/1/22 and 6/27/23</p> <p>*GHS - HazComm Standard NEO (1.0 hours) - 46 participants on 7/28/2022, 10/12/2022, 1/25/2023, and 4/19/2023</p> <p>*HazMat Refresher Training (8.0 hours) - 139 participants in 12/19/22 and 5/4/23</p> <p>*Hazmat Training (40 hours) - 20 participants on 9/19/22 and 4/21/23</p>	2.6.3 MS4 Related Training Summary	No
	KDOW Support	2.2.11 - Cooperative Efforts (MSD provides supportive or other non-lead role)	As KDOW requests, the permittee shall accompany KDOW on inspection of KPDES stormwater permitted facilities in Jefferson County	Annually	Permittee shall summarize and include in the annual report any assistance given to the Kentucky Division of Water (KDOW) by MSD.	MSD did not accompany DOW on any inspections during the current reporting year.		No



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001

2.3 Industrial Stormwater Program Requirements (IP)

7th Reporting Period - November 2023

		SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
IP 1 Legal Prohibition/Control Authority	Industrial IDDE Program Enforcement	2.3.1	For industrial properties, the permittee shall continue to utilize the Wastewater/Stormwater Discharge Regulations, Hazardous Materials Ordinance and related checklists and procedures for identification of potential illicit discharges and elimination of illicit discharges/ unauthorized stormwater discharges. The permittee shall perform analysis of industry property data layer in LOJIC cross linking with properties holding a Hazardous Materials (spill) Prevention Control (HMPC) Plan to identify potential sites that should be added to the program with consideration for High Risk Industrial Facilities designation (determined in other activities).	Annually	Permittee shall summarize in the annual report the industrial enforcement actions and referrals to Kentucky Division of Water.	MSD routinely evaluates SIC codes and refers facilities to the Kentucky Division of Water when a facility is identified that has a SIC code requiring an Industrial Stormwater Permit and is not permitted. During the current reporting period, MSD referred 9 facilities DOW for SIC Code matters.		No
	Industrial IDDE Program Enforcement (Legal Authority)	2.3.2	The permittee shall maintain adequate legal authority, per 401 KAR 5:060, Section 12(9)(b)3 and 40 CFR 122.26(b)(2), to require compliance and inspection of sites, inspection of priority industrial and commercial facilities, including establishing control measure requirements such as HMPC, Spill Prevention, Control and Countermeasure (SPCC) Plan and/or the Groundwater Protection Plan (GPP) for facilities that have a potential to discharge to the MS4 and enforce stormwater requirements.	Annually, as needed	Permittee shall update as needed and maintain adequate legal authority to require compliance with this measure.	MSD Wastewater/Stormwater Discharge Regulations were evaluated and Section 5.04 updated and approved in the current report year. A copy of the WDRs can be found here: https://louisvillemsd.org/sites/default/files/file_repository/Industrial%20Waste/MSD%20WDR%2006272%20Final.pdf		No
IP 2 Inventory and Inspection of Industrial Facilities	Industrial Facility Inventory	2.3.3	The permittee shall maintain an inventory of all potential industrial and commercial sites/sources that could contribute pollutant loads to the MS4.	Annually	Permittee shall update annually and made available to the KDOW upon request.	During the current reporting period, MSD identified a total of 1,239 industrial facility sources that could impact the MS4. Designated sites/sources inventoried are assessed for their risk; risk parameters are defined in Activity 2.3.4 – High Risk Facility Definition and an update on high-risk industrial facility inventory is provided in Activity 2.3.5 – HRIF Inventory Update . MSD will continue to update the industrial facility inventory in the next permit year.		No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
IP 2 Inventory and Inspection of Industrial Facilities	"High Risk" Facility Definition	2.3.4	The permittee shall identify Risk Factors to define facilities as "High Risk", "Moderate Risk" and "Low Risk".	Permit Year 3	Review "High Risk" facility definition each permit cycle.	The high and moderate risk facilities were identified in reporting year 3.	No
	HRIF Inventory Update	2.3.5	The permittee shall compare the datasets for local Approved HMPC Plan Facilities to the publicly available Facility data from local and state environmental and emergency response agencies to address the completeness and accuracy of High Risk Industrial Facilities identification. The permittee shall update the list of HRIFs at least once over the permit term, to account for the most recently available North American Industry Classification System (NAICS), Standard Industrial Classification (SIC) codes, Toxic Release Inventory (TRI) data, MSD's HMPC data and MSD's pretreatment program data with the goal of establishing a tiered list of industries to support priorities in MSD's industrial facility inspection program.	Annually	Permittee shall summarize and report annually, the assessment and updates of any industrial facilities identified as "High", "Moderate", and "Low" risk.	The current industrial facility inventory is comprised of 60 HRIFs, 4 MRIFs, and 1,175 LRIFs for a total of 1,239 industrial facilities. *High Risk facilities are updated on a continuous basis based upon new information and incident response status. Facilities identified by MSD that need an Industrial Stormwater Permit or are referred to the State for other reasons are moved to a High Risk Facility until all issues are resolved.	No
	High-Risk and Medium Risk Facilities	2.3.6	Based on the results of the updated HRIF assessment, the permittee shall inspect high-risk facilities at least once every three (3) years and moderate risk facilities at least once every five (5) years.	Annually	Permittee shall report the summary of prioritized inspections completed, and any enforcement resulting from the inspections.	MSD has completed inspections for high and moderate risk industrial facilities, as identified in the Threat Matrix. During the current reporting period, MSD performed 17 HRIF facility inspections, which aligned with protocol; MSD also inspected 1 Medium Risk Facility; MSD will continue to perform high and medium risk inspections every three and five years, respectively.	2.3.6 Summary of High and Moderate Risk Facility Inspections

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
IP 2 Inventory and Inspection of Industrial Facilities	Industrial Facility Control Measures	2.3.7	The permittee shall require the High Risk industrial and commercial facilities to select, install, implement, and maintain control measures that promote prevention and source control for discharge of applicable pollutants of concern. This requirement may be addressed through Hazardous Materials (spill) Prevention Control (HMPC) Plan and/or federal programs such as SPCC Plan and/or the GPP that are already implemented at the industrial and commercial facilities. The permittee shall require the applicable facilities to identify the specific control measures, good housekeeping and maintenance procedures, and employee training necessary.	Annually	Permittee shall report annually on control measures required of the high-risk industrial and commercial facilities to ensure compliance with this measure.	During the current reporting period, MSD continued to administer the HMO; soliciting, reviewing and approving Hazardous Material Spill Prevention Control (HMPC) plans, verifying inventory, storage amounts and storage locations through facility inspections. Additionally, MSD worked with industrial and commercial facilities to implement and maintain control measures that promote source control for and prevention of the discharge of applicable pollutants. During the reporting period, as part of the combined HMPC and Industrial Stormwater programs, MSD continued to inspect both HMPC and HMPC-exempt facilities in an effort educate facility's management of the importance of good housekeeping practices to protect stormwater quality.		No
	Enforcement/Inspections	2.3.8	The permittee shall develop criteria or procedures for site inspections and enforcement including criteria to address how the MS4 will use enforcement authorities to ensure compliance with the industrial program requirements. The permittee shall enforce the procedures outlined in Section 95.11 of the Louisville Metro Code of Ordinances relating to hazardous materials.	Six months after permit issuance	Within six months of the permit issuance, the Permittee shall develop the required criteria or procedures to comply with this measure.	SOP Developed. During the Permit period, the step-by-step SOP for industrial facility inspections and enforcement continued to be implemented by MSD. This SOP may be modified as necessary, to compliment the ERP and support staff implementation of the enforcement program. The SOP includes instructions for: inspection preparation, conducting inspections and IPS® data entry.		No
	MSD Plan Review	2.3.9	The permittee shall determine if existing triggers in the new development and redevelopment plan and plumbing systems review process are sufficient to include appropriate industrial stormwater quality specialists/inspectors in the plan approval process.	PYs 1 & 4	Permittee shall assess at least every three (3) years and report changes to process in the annual report.	Adequate triggers in place. As a matter of routine business, the MSD Development and Stormwater Services Department refers potential projects to the IWD for additional review. Periodically, MSD determines if triggers in the new development and redevelopment plan and plumbing systems review process are sufficient to include appropriate industrial stormwater quality specialists/inspectors in the plan approval process. The existing plan review triggers provide a means to involve the IWD. This task is intended to refresh associated staff with the indicators and/or checklists used to trigger their involvement and provide a basis for the expanded plan review process.		No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
IP 2 Inventory and Inspection of Industrial Facilities	IDDE Identification SWPPP Training Integration	2.3.10	The permittee shall update as necessary and distribute outreach materials (brochure, fact sheets, etc.) to HMPC Facilities and other commercial operations of concern to promote illicit discharge elimination awareness.	Annually	The Permittee shall continue to identify materials developed and distribution estimates and summarize in the annual report.	<p>All educational material related to the Industrial Program has been added to the MSD website and made readily available. Inspectors frequently point facilities to these materials. During the current reporting period, the following brochures were posted online to support industrial, commercial and residential education of stormwater impacts:</p> <ul style="list-style-type: none"> • Stormwater BMP Brochure • Downspout Disconnection Program Brochure • Hazardous Materials Use and Spill Prevention Control (HMPC) Plan booklet • Fats, Oils and Grease Brochure <p>• Stormwater Inspection Program Brochure brochure During the current reporting period, the following outreach was sent to facility representatives to support industrial and commercial education of stormwater impacts:</p> <ul style="list-style-type: none"> • MSD mailed 212 newsletters (see appendix 2.3.10) • MSD emailed 32 brochure packets (see appendix 2.3.10) 		No
	Industrial & Commercial Community Outreach	2.3.11	The permittee shall utilize third party inspections for development of recommendations of efficacy of permittee inspections and enforcement. Updates to training materials shall be administered for permittee personnel at least once per year, if necessary.	Annually	Document training materials and the number of third party inspections conducted to be reported in the annual report.	During the current reporting year MSD staff discussed building out an internal audit review program to improve the efficiency of the Industrial Facility Inspections Program. Due to time constraints, the inspections were not completed until July and August of this year. MSD will submit a full report of these inspections in the next reporting year.		No
	Third Party Oversight Inspection	2.3.12 - Cooperative Efforts (MSD provides supportive or other non-lead role)	As KDOW requests, the permittee shall accompany KDOW on inspections of KPDES stormwater permitted facilities in Jefferson County.	Annually	Permittee shall summarize and include in the annual report any assistance given to the KDOW by MSD.	KDOW did not request any assistance from MSD on KPDES stormwater permitted facilities in the current reporting period.		No



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001

2.4 Construction Site Stormwater Runoff Control Requirements (CS)

7th Reporting Period - November 2023

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
CS 1 Legal Prohibition/Control Authority	Access Legal Prohibition/Control Authority 2.4.1	The permittee shall assess existing ordinance and regulations to identify changes needed to account for changes in standard of care (as directed by KDOW General Construction Permit KYR10), changes in technology, changes to development management process and related program needs in satisfaction 40 CFR 122.26(b)(15)(i) for construction activities that result in a land disturbance of greater than or equal to one acre and construction activity disturbing less than one acre that is part of a larger common plan of development that would disturb one acre or more.	Permit Years 1 & 3	Permittee shall summarize proposed changes enumerated by end of permit years one (1) and three (3) and report proposed changes in to Wastewater/ Stormwater Discharge Regulations for consideration by MSD Board in the Annual Report.	Not required for this reporting period.		No
	Implement Legal Prohibition/Contr 2.4.2	The permittee shall continue to enforce existing ordinances and regulations intended to limit construction phase stormwater quality impacts from new construction and significant redevelopment.	Annually	Permittee shall require routine inspections of active construction sites with reasonable potential to discharge to MS4. A summary of these inspections and any enforcement actions resulting from these inspections shall be included in the Annual Report.	In the current reporting period, MSD conducted 2,010 EPSC related inspections.	2.4.2 Construction Inspection Summary	No
	Site Plan Review 2.4.3	The permittee shall conduct site plan reviews in accordance with the procedures outlined in Section 159.02 of the Louisville/Jefferson County Erosion Prevention and Sediment Control Ordinance to assess whether the plans include measures that address potential water quality impacts from construction prior to authorization of land disturbance.	Annually	Permittee shall review plans as needed and report the number of plans reviewed in the Annual Report.	In the current reporting period, 283 site plan reviews were conducted that warranted the issuance of a Land Disturbance Permit.	2.4.3 List of Reviewed Construction Plans	No

	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
CS 1 Legal Prohibition/Control Authority	Construction Site Inspection 2.4.4	The permittee shall develop and implement criteria and/or procedures for site inspection. The procedures shall include an Enforcement Response Plan outlined in Section 159.05 of the Louisville/Jefferson County Erosion Prevention and Sediment Control Ordinance.	Annually	Permittee shall continue to implement the criteria and/or procedures for site inspections.	<p>Standard Operating Procedures for inspection and enforcement of the Erosion Prevention and Sediment Control Ordinance are in place. MSD follows Standard Operating Procedures (SOPs) that document protocols for construction site inspections and oversight:</p> <ul style="list-style-type: none"> • EPSC Construction Site Inspection (SOP CS-01) documents how inspections are conducted and documented as well as how enforcement procedures are implemented and tracked • EPSC Inspector Field Verification Training (SOP CS-02) documents oversight inspection review responsibilities, frequency and standards. 		No
	Construction Site Inspection Frequency 2.4.5	The permittee is required to conduct inspections bi-monthly of at least 90% of active sites.	Annually	Permittee shall report the number of inspections performed in the Annual Report.	MSD maintains an electronic database of inspections to assign inspectors and track activities. MSD inspects at least 90% of active construction sites. More information on construction inspections performed over the course of the reporting period is provided in Activity 2.4.2 – Implement Legal Prohibition/Control Authority.	2.4.2 Construction Inspection Summary	No
CS 2 CS Management Activities	Construction Site Inventory 2.4.6	The permittee shall maintain an inventory of all active public and private construction sites that result in a total land disturbance of greater than or equal to one acre and less than one acre that is part of a larger common plan of development. Inventory should include the project's name, address, contact person, inspection dates, and any enforcement actions issued to the project.	Annually	Inventory continually updated as projects are permitted and projects are completed.	Project inventory database maintained. MSD tracks active construction sites greater than 2,000 sq. ft. per the EPSC Ordinance, and the inspection team conducts inspections for all permitted active construction sites. Sites are tracked using the Inspection Application. The Application catalogs construction site project name, address, primary contact and inspection dates and tracks any enforcement actions issued. The number of active sites varies daily based on the number of site disturbance permits issued (new sites added) to and released from the system. In addition, MSD adjusts the frequency of construction site inspections based on site drainage characteristics or impact to sensitive features/streams with more frequent inspections to protect sensitive areas.		No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
CS 2 CS Management Activities	Construction BMP Guidance Materials	2.4.7	As needed to account for changes in the KDOW general construction permit(s), the permittee shall update the guidance materials facilitating current technology use, local plan review/inspection requirements and related implications, Design Manual chapters and Standard Specifications sections to address EPSC and other construction phase (waste concrete, fueling and repairs operations, etc.) topics including BMP selection, feasibility, design considerations, operation, maintenance, inspection checklist and related matters.	Annually, as needed	Permittee shall update the Design Manual and Standards Specifications as needed and make the updates publicly available.	Chapter 18 of the MSD Design Manual was updated during reporting year 5. Updates to Chapter 10, Stormwater Facilities Design, and Chapter 13, Native Vegetation, have been completed and will be incorporated into the Design Manual in the next reporting year.	No
	On-site SWPPP	2.4.8	The permittee shall continue the procedure for receiving Stormwater Pollution Prevention Plans (SWPPP) for qualifying construction sites.	Annually	Permittee shall document SWPPP procedures and expectations and make the procedures and expectations publicly available.	Effective July 14, 2008, MSD instituted a requirement and procedure for receiving SWPPPs for qualifying construction sites. MSD notified the development community that SWPPPs should be submitted to KDOW as well as to MSD as part of the construction plan submittal process. This requirement was intended to reduce confusion associated with existing MSD requirements for a "BMP Plan" and KDOW's KPDES General Construction (KYR10) Permit language references to a "SWPPP." Certified developers, homebuilders and related stakeholders were sent letters indicating the requirement for SWPPPs. Through its EPSC Ordinance (effective 2000), MSD requires that qualifying construction plan submittals include a SWPPP, as shown on MSD's Site Plan Review Checklist. SWPPPs must be prepared for sites disturbing greater than one acre. The site plan checklist is available on MSD's website at: https://louisvillemsd.org/sites/default/files/inline-files/SITE_PLAN_REVIEW_CHECKLIST_2.pdf . MSD will continue to administer requirements for SWPPPs on construction sites.	No

	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
CS 2 CS Management Activities	Construction Stormwater Runoff Control Program Inspection Refresher 2.4.9	The permittee shall review inspector practices with individual MSD and contract inspectors to communicate/confirm oversight responsibilities, documentation requirements, and frequency of inspection, inspection standards and protocols. The refresher review (performed on-site) will include EPSC and non-EPSC construction stormwater control metrics, the most current KDOW General Construction Permit and the current USEPA MS4 Program Evaluation Construction Site Checklist.	Annually	Permittee shall complete refresher review with Construction inspectors annually, reporting the date and the number of attendees in the Annual Report.	During the current reporting period, a third-party conducted an audit of the overall MS4 Enforcement Program. While serving as the interim MSD Enforcement Officer, Freedom Engineering, had the opportunity to observe the entire enforcement process, work with inspection staff and contractors on the proper EPSC control measures and documentation. A recommendation memo including process improvement, training and outreach needs were documented in the memo found in Appendix 2.4.9 EPSC Enforcement Program Review.	2.4.9 EPSC Enforcement Program Review	No
	Construction Inspector Training 2.4.10	The permittee shall continue construction inspector training program placing new emphasis on delivering similar messages and understanding between MSD inspectors (regular and contracted) and qualified local contractor inspectors.	Annually	Permittee shall provide at least three (3) training opportunities annually reporting the date and the number of attendees in the Annual Report.	MSD provides a number virtual EPSC related trainings to contractors and builders through Jefferson County Public Schools. There were 373 total attendees for these trainings in the current reporting period. See Appendix 2.4.10 EPSC Training Summary.	2.4.10 EPSC Training Summary	No
	Local Utility Construction General 2.4.11	The permittee shall continue to coordinate policy level stakeholders from local utility agencies holding construction general permits from MSD to confirm inter-agency communication protocols and review changes to standard, policies, procedures, BMP operation expectations and related matters.	Annually, as needed	Permittee shall hold meetings with MSD's EPSC general permit holders as needed.	MSD did not hold any meetings with General Permit holders in the current report year. MSD is currently assessing the General Permits and will potentially look to hold routine meetings or trainings with the General Permit holders in the future.		No
	MSD General Construction 2.4.12	Permittee shall evaluate all general permits by the end of Permit Year three (3); and report general construction permits issued by MSD in the annual report	Evaluate general permits by end of Permit Year 3. Reported annually.	Permittee shall evaluate all general permits by the end of Permit Year three (3); and report general construction permits issued by MSD in the annual report.	All general permits have been assessed during the permit cycle. MSD is currently working on updates.		No
	Enforcement Tracking 2.4.13	The permittee shall continue to track enforcement actions issues (SWO/NOVs) to support follow-up inspections and issuance of penalties and/or Notice of Compliance.	Annually	Permittee shall summarize in the annual report. A summary of the tracked enforcement actions issued shall be included in the annual report.	Enforcement actions tracked. During the reporting period, MSD issued approximately 1,239 FCNs, 70 NOVs, and 70 SWOs. MSD issued \$259,500 in fines and received \$191,500 (\$68,000 fine is pending). MSD will continue to track enforcement on construction sites and issue corrective actions in accordance with the WDRs.		No

		SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
CS 2 CS Management Activities	Third Party Oversight Inspection	2.4.14	The permittee shall utilize third party inspections for development of recommendations of efficacy of permittee inspections and enforcement. Updates to training materials shall be administered for permittee personnel at least once per year, if necessary.	Annually	Document training materials and the number of third party inspections conducted.	During the current reporting period, MSD Regulatory and Inspection Management Staff utilized input from the third party audit to inform training held with inspection staff on June 12, 2023. See Memo in Appendix 2.4.9 EPSC Enforcement Program Review. Engineering Division hosted and participated in the first Internal Erosion Prevention and Sediment Control (EPSC) and Post Construction Field Day. A total of 85 MSD employees spent the day at CMF where topics including regulatory requirements, an overview of the Stormwater and Development Services Department, the permit process, post-construction requirements, and floodplain permitting were discussed. The afternoon portion of the day included a hands on activity led by MS4 staff educating the group about different soil types, native plants, and green infrastructure.		No
	Plan Development Process Identification	2.4.15 - Cooperative Efforts (MSD provides supportive or other non-lead role)	The permittee shall review and update, as needed guidance materials identifying the process that developers must follow to obtain related construction permits, including process flow charts and checklists.	Annually, as needed	Permittee shall make up-to- date guidance documents publicly available. A summary of the revised guidance materials shall be included in the Annual Report.	Updated Guidance Materials. Up-to-date guidance materials are available on the MSD website: https://louisvillemsd.org/what-we-do/stormwaterdrainage		No

	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
CS 2 CS Management Activities	Metro Construction Review Enforcement Coordination	2.4.16 - Cooperative Efforts (MSD provides supportive or other non-lead role)	The permittee shall coordinate program enforcement actions with Metro Inspections, Permits and Licensing (IP&L), as necessary, to support overall site compliance with an emphasis on Notices of Deficiency, Notices of Violation, and Stop Work Orders issued by MSD and implications on land disturbances and "in building" activities.	Permit Years 1, 3, & 5	Permittee shall hold at least one (1) conference every other year starting in Permit Year one (1).	MSD coordinates construction program enforcement actions with Develop Louisville (formerly Metro Inspections, Permits and Licenses), as necessary, to support overall site compliance with an emphasis on Notices of Deficiency (NODs), NOV's and SWOs issued by MSD with implications on land disturbance and "in building" activities. MSD's enforcement policies allow MSD to issue a SWO to halt work on land disturbing activities that have failed to comply with EPSC requirements, while Develop Louisville has responsibility for applying enforcement on activities on or inside the structures. MSD and Develop Louisville regularly communicate, when appropriate, to make each other aware of enforcement activities that halt work. MSD also routinely coordinates with Develop Louisville field staff. Continual communication is occurring between MSD and Metro inspection staff in an effort to educate and streamline inspection requirements. MSD regularly coordinates construction program enforcement actions with Develop Louisville. This includes education and coordination on green infrastructure features such as rain gardens and no-mow areas, which use native plants to provide stormwater uptake and increase infiltration rates. MSD coordinates with Develop Louisville on these green infrastructure practices so that violations are not issued by Develop Louisville for these features.		No



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001

Post-Construction Controls (PC)

7th Reporting Period - November 2023

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
PC 1 Legal Prohibition/Control Authority	Assess Legal Prohibition/Control Authority	2.5.1	The permittee shall assess existing Wastewater/Stormwater Discharge Regulations and other relevant ordinances and regulations, to identify changes needed to account for changes in standard of care, changes in technology, changes to development management process and related program needs for new development and redevelopment projects that disturb greater than or equal to one acre and construction activity disturbing less than one acre, including projects less than one acre that are part of a larger common plan of development.	Annually, as needed	Permittee shall make assessments as needed, and report proposed changes in the WDRs for consideration by MSD Board.	No proposed changes in the current reporting period.	No	
	Implement Legal Prohibition/Control Authority	2.5.2	The permittee shall enforce existing ordinances and regulations intended to limit long-term stormwater quality impacts from new construction and significant redevelopment.	Annually	Permittee shall summarize enforcement actions in the annual report. The permittee shall include the number of inspections and enforcement actions.	MSD inspected 528 Post-Construction Best Management Practices (BMP's) in the reporting period. MSD identified 119 BMP inspections in the reporting period to be "Unsatisfactory." Of those 119, 29 received a Notice of Violation (NOV) for failure to respond to the Maintenance Request Letter. 17 of the 29 NOV's have been resolved. A total of \$1000 of fines was collected in the current reporting period.	2.5.2 Post-Construction Inspection and Enforcement Tracking Map	No
	Site Plan Review	2.5.3	The permittee shall conduct site plan reviews through procedures for reviewing development plans for compliance with stormwater	Annually	Permittee shall continue to conduct site plan reviews.	MSD reviewed plans and issued a Site Disturbance Permit at 283 sites. 85 of those sites were required to meet the post-construction water quality runoff regulations. There were a total of 112 BMP's built in the reporting period.	2.5.3 List of Reviewed Post-Construction BMP Required Projects	No
	Stormwater Infrastructure Inventory	2.5.4	The permittee shall continue to maintain the GIS-LOJIC layers incorporating system changes from new development plans, MSD projects and related system projects.	Annually	Permittee shall continue to conduct site plan reviews.	GIS-LOJIC layers are updated routinely. Much of the LOJIC data is publically available through a series of interactive mapping tools administered by LOJIC such as the "LOJIC Online Map" available at: https://www.lojic.org/lojic-online . More information about LOJIC is available at: www.lojic.org .		No

	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
PC 1 Legal Prohibition/Control Authority	Post-Construction Site BMP Inventory Update 2.5.5	The permittee shall develop and maintain an inventory and map of post-construction stormwater controls, including retention ponds, detention basins, and stormwater quality treatment facilities. The permittee shall update LOJIC and HANSEN® datasets to reflect the location, extent, and condition of post-construction stormwater quality BMPs.	Reporting years 1 & 3	Permittee shall incorporate related data on an ongoing basis; Permittee shall assess data to identify and fill dataset gaps every other year.	GIS-LOJIC layers are updated routinely, including retention ponds, detention basins, and stormwater quality treatment facilities. MSD uses both ESRI ArcGIS Online and IPS to track the location, extent, and condition of all post-construction stormwater quality BMPs. These datasets are routinely updated.	2.5.2 Post-Construction Inspection and Enforcement Tracking Map	No
	Post-Construction Inspector Training 2.5.6	The permittee shall provide training to the inspectors including internal staff that have been designated to inspect the effectiveness of the post-construction BMPs, as well as, the local residents who are required to provide operation and maintenance of privately-owned Post-Construction BMPs.	Annually	At least two trainings per year for the inspectors of Post- Construction BMPs. Report in the annual report, the dates of training, # of attendees, and subject matter.	A free, online Qualified Post-Construction Inspection Training module is offered at: http://oit.louisvillemsd.org/ . MSD chose to make the modification from in-class training to an online training to achieve better participation. As a result, 79 individuals became certified MSD Qualified Post-Construction BMP inspectors in this reporting year.		No
PC 2 PC Plan Maintenance Update	Inspect "Credit" Basins 2.5.7	The permittee shall inspect private flood control basins, (retention ponds) receiving a stormwater utility user fee credit (reduction) to determine ability to fulfill original, current, and projected drainage demands. Continue to enforce, per existing basin credits documentation requirements, necessary to fulfill maintenance agreements and long-term system integrity.	Annually	Permittee shall continue to perform spot check inspections for at least 50% of qualifying facilities annually and summarize for the annual report.	During the current reporting period, MSD used a third-party inspector to assess 80 of the 185 credited basins. MSD created an inspection app and inspection form using the ESRI Collector and Survey123 apps. During these inspections, the third-party inspector identified 50 basins as being in "Unsatisfactory". The MSD DRI Program is currently working on enforcement and any repairs that MSD would be responsible for. MSD also completed inspections internally.		No
	Inspection Plan Procedures for Treatment 2.5.8	The permittee shall update inspection and oversight protocol for private stormwater quality treatment BMPs to facilitate long- term maintenance demands including requirements for qualified private inspection of private BMPs with local government oversight access inspection and controls, as needed.	Annually, as needed	Permittee shall continue to perform spot check inspections for at least 20% of treatment BMPs annually. All BMPs should be inspected by the end of the permit cycle. A summary of this activity shall be included in the annual report.	During the current reporting period, oversight inspections were conducted for 528 of the total 1155 post-construction best management practices. This meets the goal inspecting at least 20% of active treatment BMPs during the reporting period. Among the sites inspected, MSD identified 119 of the BMPs with maintenance deficiencies.		No

	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
PC 2 PC Plan Maintenance Update	Post-Construction and Green Infrastructure BMP Guidance Materials	2.5.9	The permittee shall evaluate and update the guidance materials facilitating current technology use and to reflect local plan review, construction site inspection and post-construction inspection requirements. Design Manual chapters and Standard Specifications sections to address long-term BMP operation, inspection and maintenance including checklists. "Green Infrastructure" is a combination of natural and engineered infrastructure that is designed to reduce the environmental footprint of the system. In terms of stormwater, green infrastructure can effectively manage stormwater runoff through the use of infiltration, biofiltration, detention, and other stormwater management techniques.	Annually, as needed	Permittee shall update the guidance materials specifically the Design Manual chapters and Standards Specifications sections and make the document publicly available.	Last year, MSD completed the update of Chapter 13, the Native and Invasive species guidance. Chapter 13 updates are expected to be published in 2024. In spring 2021, MSD published updates to Chapter 18 of the Design Manual. These changes reflect lessons learned in the design, construction and long term maintenance of post-construction BMP's. MSD is currently updating Chapter 10, guidance for Stormwater Facilities Design. The current version of the Design Manual can be downloaded from the MSD website: https://louisvillemad.org/sites/default/files/inline-files/designmanual_rev%2006-29-2021.pdf .		No
	Plan Preparers & Reviewers Training (MSD Facilitates)	2.5.10	The permittee shall provide available content, such as EPA web casts, through periodic training classes, workshops and meetings for designers, planners, and developers including emphasis on green infrastructure, post-construction planning, and design procedures for structural and non-structural BMPs, pollutant removal and inspection. MSD shall incorporate comments from stakeholders in the plan review process from designers to internal MSD review staff to facilitate training sessions to address evolving technologies and lessons learned.	Annually	Permittee shall continue to offer at least two (2) events annually. A summary of workshops topics and attendance shall be submitted in the annual report.	<p>MSD offered at least 2 training sessions related to green infrastructure and post-construction design:</p> <p>*7/13/2022 - Chapter 18 Design Manual Updates: MS4 staff presented to local stormwater professionals at the KSA Annual Conference in Louisville about the key changes to Chapter 18 of the MSD Design Manual, Post-Construction Best Management Practices</p> <p>*5/18/2023 - Maintaining and Rehabilitating Green Infrastructure in Louisville Presentation: MS4 staff presented to local design, construction and development community about MSD Owned green infrastructure case studies in Jefferson County.</p>	2.1.2 Outreach Summary	No
	Project DRI	2.5.11	The permittee shall continue to implement Drainage Response Initiative (DRI) program aimed at identifying and solving the local drainage problems in Jefferson County.	Annually	Permittee shall provide program progress summarizing cost, number and type of projects in the annual report.	Project DRI complete 92 projects aimed at solving drainage issues in Jefferson County. These drainage projects carried a budget of \$3.6 million. 4 of these projects were bank stabilizations; • Penacock Road • Vista Green Drive • 2314 Fallsview Road • 4326 Foeburn Road		No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
PC 2 PC Plan Maintenance Update	User Fee Credits (Green Infrastructure Incentives) Program Planning	2.5.12	The permittee shall evaluate enhancements to the utility user fee credits program for green infrastructure and post- construction BMPs based on post-construction lessons learned.	Annually, as needed	Permittee shall evaluate incentives as needed.	Since 2010, MSD has worked with local businesses and developments to build and promote green infrastructure and post-construction BMP's. During this period, MSD has used the lessons learned in the design, construction, and maintenance of these BMPs to drive the direction of the Post-Construction Controls Program. During this reporting period, an underground infiltration basin at the Brown-Forman Distillery was completed. The basin was designed to treat the 0.6" rain event and capture stormwater from 644,077 square feet of impervious surfaces.	No
	Stream Restoration Inspection and Maintenance	2.5.13	The permittee shall identify restored stream reaches that MSD has maintenance responsibilities. The permittee shall also determine status of restored reaches and identify, prioritize/schedule and implement maintenance needs. MSD shall prioritize, design, and implement restoration practices on at least one stream segment per year.	Start in Reporting Year 2	The permittee shall identify restored stream reaches that MSD has maintenance responsibilities. The permittee shall also determine status of restored reaches and identify, prioritize/schedule and implement maintenance needs. MSD shall prioritize, design, and implement restoration practices on at least one stream segment per year.	According to MSD's WO system approximately 46,673,156 linear feet of channel underwent maintenance activities. In the current reporting period, MSD completed an approximately 150 foot emergency stream bank restoration at 3518 Woodside Road. A total of 70 feet of articulated block wall with a reinforced soil slope was installed on the east side of stream to reinforce the bank, prevent further scour while keeping connection with the floodplain. Upstream and downstream riffles were rehabilitated to reduce instream energy and promote oxygenation. To finish the project MSD planted native species along the buffer to further stabilize the slope.	2.6.8 Summary of Storm Sewer System Maintenance No
	Certified/Qualified Post-Construction BMP	2.5.14	The permittee shall enhance the Qualified Post Construction Inspector training program to identify and hold accountable third party private BMP inspectors to facilitate periodic operation and maintenance of private facilities resulting from the credits program, regulations changes and demonstration projects.	Annually	Permittee shall continue to administer Qualified Post Construction Inspector training and include summary of activities in the annual report.	Administration of the online QPCI Training Program is on-going. 79 individuals completed the training and received their certificates in the current reporting period. The training module can be found on the MSD website at; http://oit.louisvillemad.org/ .	No

		SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
PC 2 PC Plan Maintenance Update	Stormwater Quality Runoff Treatment Standard For All New Development and Redevelopment Projects	2.5.15	The permittee shall continue to administer an on-site stormwater runoff quality treatment standard, to be adopted by ordinance or other regulatory mechanism for all new development and redevelopment projects at any location within Louisville Metro. The proposed local standard will require, in combination or alone, management measures that are designed, built and maintained to infiltrate, evapo-transpire, harvest and reuse stormwater runoff, or otherwise manage the stormwater runoff quality. The standard shall be based, at a minimum, on an analysis of precipitation records to determine the equivalent surface depth of runoff (e.g. 0.60 inches) produced from an 80th percentile precipitation event.	Annually	Permittee shall continue to administer a local treatment standard for addressing stormwater runoff quality.	Administration/ enforcement for treatment standard compliance is on-going. MSD's post-construction treatment standard is available in the Green Infrastructure Design Manual, Section 18.2. The Green Infrastructure Design Manual is publicly available at: https://louisvillemetro.org/sites/default/files/inline-files/designmanual_rev%2006-29-2021.pdf		No
	Private BMP Maintenance Agreement Assessment/Long Term O&M	2.5.16	The permittee shall require all new development or redevelopment to establish and enter into a long-term maintenance agreement and maintenance plan approved management practices for property owners. Alternatively, the permittee may establish other enforceable mechanisms for requiring long-term maintenance of structural and non-structural BMPs. Such authorities shall allow the MS4, or its designee, to conduct inspections of the management practices and also account for transfer of responsibility in leases and/or deed transfers. The agreement shall also allow the MS4s, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and authority to recover costs from the property owner/operator when the owner/operator has not performed the necessary maintenance.	Annually	Permittee shall continue to require all new development and redevelopment projects to have this agreement.	Long Term Maintenance and Operation Agreements (LTMOA) are in place and administered. Any development that meets the post-construction water quality runoff requirement must execute an LTMOA. These agreements are recorded at the County Clerks Office.		No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
PC 2 PC Plan Maintenance Update	Green Infrastructure Demonstration Site(s)	2.5.17	The permittee shall continue, in cooperation with Louisville Metro Mayor's administration, University of Louisville and other local agencies, to pursue development of stormwater quality and green infrastructure interpretative center(s) at strategic location(s) around Jefferson County with the intent of providing a positive highly visible platform to promote the viability and desirability of green infrastructure BMPs. Where feasible explore the opportunity for BMP evaluation and pre-/post-monitoring.	Annually	Permittee shall report its role and activities, lessons learned, and overall project progress and summarize for the annual report.	Although the Green Infrastructure Stipend program has met the requirements of the Combined Sewer Consent Decree, MSD still continues to fund projects on a case-by-case basis. In the previous reporting year, MSD also adopted a post-construction fee-in-lieu-of (FILO) program. For projects that choose to participate, they will pay \$1.60 per square foot of untreated impervious surface. These funds will then be used to fund a grant program that allows for the dollars to be used on green infrastructure in the same watershed as the FILO project. To date, MSD has collected over \$93,000 in this program. MSD will continue to report on these projects.	No
	Rain Barrels and Louisville Nature Center	2.5.18	The permittee shall explore the opportunity for MSD to continue program with Louisville Nature Center that provided public guidance to construct and maintain rain barrels.	Annually	Permittee shall report its role, lessons learned and overall programs progress and summarize for the annual report.	MSD continues to support the education efforts of the Louisville Nature Center (LNC). Through collaboration and funding when requested the LNC hosts educational camps, tree give-aways, and other educational initiatives. MSD will continue to maintain partnerships with entities that support its mission.	No
	No Mow/Riparian Zone	2.5.19	The permittee shall assess existing mowing areas as part of maintenance activities to determine if the original need or impetus still exists. Opportunities to adjust the mowing contracts to include or exclude mowing areas will be incorporated into those contracts as they are rebid or renewed. Areas that are removed from the mowing list will be considered for "no mow" signage and education.	Annually	Permittee shall report its role and activities, lessons learned, and overall project progress and summarize for the annual report.	MSD periodically evaluates mowed properties to seek alternative maintenance options including tree planting and managed meadows. MSD continues to evaluate mow vs. no-mow areas to determine feasibility of removing properties from mowing contracts.	2.5.19 Map of MSD Mowing Boundaries No
	Urban Reforestation - MS4	2.5.20	The permittee shall create a grant funding mechanism to provide incentives for the planting of trees in the MS4 area and improve tree canopy for the benefit of stream health and water quality. The co-permittee will budget to provide grant funding of private or public grantees to plant 1000 trees per permit cycle in the MS4. Funds will be administered in accordance with water quality goals, and on a first-come first-serve basis.	Annually	Permittee shall report its role and activities, lessons learned, and overall project progress and summarize for the annual report.	23 tree partnership and planting projects were completed in the reporting period for a total of 1144 trees planted. MSD awarded \$241,600 in grant funding for these projects.	2.5.20 List of Tree Projects No

PC 2 PC Plan Maintenance Update	SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
Regional Basin Retrofit/Analysis	2.5.21	The permittee shall assess the regional flood control basins to determine if there is potential for enhancement to the basin or the outlet structure to provide additional capture for smaller water quality events. A technical memo and recommendation outline shall be provided prior to the end of Permit Year four (4).	Annually	Permittee shall by the end of Permit Year four (4) produce a technical memo outlining findings and recommendations.	Completed in reporting year 4.		No



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001

Good Housekeeping/Pollution Prevention (GH/P2)

7th Reporting Period - November 2023

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
GH/P2 Plan Maintenance and Update	Stormwater Pollution Prevention Plans for MSD Operations	2.6.1	The permittee shall periodically update and implement SWPPPs (also known as BMP Plans or Stormwater Plans) to control the discharge of pollutants from POTWs and other applicable MSD-owned facilities as defined in 40 CFR 122.26 including wastewater treatment plants and major operating facilities. SWPPPs will include provisions for maintenance activities on facility grounds, materials and equipment storage, security, preventative maintenance, risk identification and assessment, materials inventory, floor drain protection/controls, inspections and records.	PYs 2 & 4	Permittee shall assess plans within six (6) months of major facility changes or at least once every two years by the facility superintendents and operation managers who make up the SWP3 Committee.	In Summer 2021, MSD updated the SWPPPs for the following facilities: Central Maintenance Facility, Cedar Creek WQTC, Derek R. Guthrie WQTC, Floyds Fork WQTC and Morris Forman WQTC. MSD chose to wait on Hite Creek WQTC due to significant ongoing construction. All of the SWPPPs for the required MSD owned and operated facilities will be updated in the current reporting period (2023-2024). This effort will include good housekeeping trainings for facility staff, the development of inspection forms, facility inspections, recommendations for good housekeeping practices, and the development of work orders. MSD will continue to monitor major changes at facilities and update the SWPPPs appropriately.		No
	Training on MSD Facility SWPPPs	2.6.2	The permittee shall utilize third party inspectors working with the facility SWPPP Committees to perform routine training of key SWPPP issues	Annually	Permittee shall starting in Permit Year one (1) utilize third party inspectors to address at least three (3) SWPPP issues annually and summarize training and attendance for the Annual Report.	Virtual Stormwater Pollution Prevention Plan Training (1.0 hours) - Training covered illicit discharge detection and elimination, spill response, good housekeeping, and pollution prevention. 232 participants between February and June 2022.		No
	Maintenance Staff Training on Pollution Prevention	2.6.3	The permittee shall provide training to key maintenance staff on good housekeeping activities related to stormwater quality in MSD operations including but not limited to: green infrastructure operation and maintenance, fleet and building maintenance, and stormwater conveyance/drainage system maintenance.	Annually	Permittee shall report the number of staff attending related training and include in the Annual Report.	The virtual SWPPP training, mentioned in Activity 2.6.2 - Training and MSD Facility SWPPPs, covered good housekeeping and fleet and building maintenance. MSD offered 19 different MS4 related training that totaled over 4400 hours of MSD employees trained.	2.6.3 MS4 Related Training Summary	No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
GH/P2 Plan Maintenance and Update	Pesticides Management	2.6.4	The permittee shall utilize Commonwealth of Kentucky pesticide management registration and certifications to qualify MSD employees applying pesticides. The permittee shall develop and maintain a list of pesticides used and stored, including storage locations.	Annually	Permittee shall track employees with related state certifications.	MSD contracts with Louisville Metro Department of Public Health and Wellness (LMDPHW) to apply pesticides for mosquito control. Louisville Metro applies pellets in catch basins to control mosquitos. MSD maintains a facilities inventory of all material safety data sheet information and is available to all employees through MSDNet.	Yes, MSD no longer administers pesticides.
	Incident Response Staff Training	2.6.5	The permittee shall provide training to unified incident response staff on related stormwater issues including good housekeeping, IDDE, construction, post- construction BMP/controls and program management.	Annually	Permittee shall continue to report incident response staff training participation.	Incident response staff participated in the following trainings; <ul style="list-style-type: none"> • SORP (Four Quarterly Courses - Throughout the year) • SWPPP (Spring 2022) • HazMat Refresher Training (12/19/2022-5/4/2023) • HazMat 40 Hour Training (9/19/2022, 4/21/2023) • Morris Forman Emergency Spill Response Training (2/12/2023-6/6/2023) 	2.6.3 MS4 Related Training Summary No
	MSD Capital Project Control	2.6.6	The permittee shall, for MSD directed capital, rehabilitation and reconstruction projects, disturbing more than one acre, performed by a contractor, ensure the contract documents/agreements/work orders will include stipulations that require the work be designed/performed/implemented/constructed under the same standards for construction and post-construction stormwater quality that MSD requires of private development it regulates.	Annually, as needed	Permittee shall summarize changes to MSD Capital Project requirements, as necessary.	MSD capital projects are reviewed identically to private development projects. MSD reviews projects to meet the requirements set forth in the Design Manual, WDRs, EPSC and Floodplain Management Ordinances. The reviews and permits are tracked in IPS®. MSD will continue to subject its own projects to the rigorous review process that is administered for private construction.	No
	MSD Stormwater Quality BMP Data	2.6.7	The permittee shall update LOJIC and HANSEN® datasets to identify stormwater-quality BMPs located on MSD properties, rights-of-way and easements that MSD is responsible for operating and/or maintaining. The datasets will be updated in a manner to support ongoing prioritization and tracking of operation and maintenance.	PYS 1, 3, & 5	Permittee shall every other year assess datasets for completeness and ability to support staff scheduling stormwater-quality BMPs MSD is responsible for maintaining.	MSD continually updates LOJIC and IPS datasets to reflect the construction of all new assets. All stormwater-quality BMP's, owned and operated by MSD, are inspected annually. Work orders or third-party contracts have been created for most BMP's for maintenance.	No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
GH/P2 Plan Maintenance and Update	Catch Basin and Storm Sewer Cleaning	2.6.8	The permittee shall continue to clean catch basins and sewers (closed pipe systems) to prevent debris from entering receiving streams and address drainage/flooding issues in MSD area based on known priorities and information gathered from the customer hotline.	Annually	Permittee shall summarize and include in the Annual Report.	Using MSD's IPS database tracking system, 4,740 work orders were completed for maintenance of storm sewers and catch basins in the MS4 area in the current reporting period.	2.6.8 Summary of Storm Sewer System Maintenance	No
	Channel Maintenance	2.6.9	The permittee shall continue to maintain open channel system in MSD area based on priorities and information from the customer hotline including ditch cleanings, ditch regrading, drainage obstruction removals, erosion repairs, floodwall levee maintenance, headwall install/repair, concrete channel installation, tree removal, driveway apron restoration, routine mowing and closed pipe installations.	Annually	Permittee shall summarize and include in the Annual Report.	Using MSD's IPS database tracking system, 6,698 work orders were created to maintain 24,783,173 linear feet of drainage ways, amounting to \$301,839 for drainage way maintenance in the MS4 area in the current reporting period.	2.6.8 Summary of Storm Sewer System Maintenance	No
	Stormwater Pollution Prevention Plans for Co-Permittee Operations	2.6.10 - Cooperative Efforts (MSD provides supportive or other non-lead role)	The permittee shall provide co-permittees with periodic 3rd-party technical assistance and/or review of the facility stormwater pollution prevention plans (SWPPPs, BMP plans, or Stormwater Plans and BMPs) and/or site visit/walkthrough to help identify opportunities to improve the effectiveness of the plans and their implementation.	Annually, as needed	Permittee shall assist in the review of at least one (1) facility annually.	Upon request by a co-permittee, MSD provides third-party technical assistance and/or review of the facility stormwater pollution prevention plans (SWPPPs, BMP plans, or Stormwater Plans and BMPs) and/or site visits or walkthroughs to help identify opportunities to improve the effectiveness of the plans and their implementation. The permit requires at a minimum that MSD shall assist in the review of at least one facility annually if requested. During the reporting period MSD assisted the City of Anchorage with a SWPPP inspection at their Public Works Facility. On 6/27/2022 two MSD staffers assisted at the 10317 Grand Avenue Public Works Facility. Suggestions were given for both facilities. Sign-in sheet can be shared if requested.		No



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001 Monitoring (M)

7th Reporting Period - November 2023

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
Monitoring Plan Maintenance and Update	Long-Term Monitoring Network (LTMN)	2.7.1	The permittee shall continue the existing program of the collection of long-term data on stream quality and habitat for at least 28 LTMN locations selected to support the various types of data collected. This program includes: <ul style="list-style-type: none"> • Continuous – pH, conductivity, temperature, dissolved oxygen, and stream flow. • Quarterly – Ambient monitoring for Total Suspended Solids (TSS); E. coli; Total Nitrogen (as N) Oil and Grease, Total Recoverable Copper and pH. • 5/month (May-October) - Recreational monitoring for E. coli. • Once Every Two Years – Biological sampling and/or evaluation rotating to include: algae, fish and benthic macro invertebrates. 	Annually	Permittee shall provide datasets electronically with annual report.	Monitoring data collected.	2.7.1. Monitoring Data	No
	Monitoring Summary	2.7.2	The permittee shall provide a summary of monitoring collection efforts and results in the annual report.	Annually	Permittee shall summarize and include in annual report.	See Chapter 5 – Monitoring for a detailed description of environmental data collection activities and monitoring data assessment for permit required parameters and analytics.		No
	Trend Analysis	2.7.3	The permittee shall perform trend analysis to support long-term assessments of local waterways and program performance. Report analysis through the “Synthesis Reports” at least once every permit cycle.	Once per permit cycle	Permittee shall, at least once per permit cycle, provide synthesis report.	MSD completed the most recent State of the Streams report in 2021. The report can be found on the MSD website at https://louisvillemsd.org/sites/default/files/file_repository/Stormwater/Files/2022%20Files/2021%20MSD%20Water%20Quality%20Report%20Final.pdf		No
	Flow Estimate to Support Quarterly Ambient Monitoring	2.7.4	The permittee shall utilize total precipitation estimates over the previous twenty-four (24) hour period to estimate flow. When flow is measured with in stream gauging equipment, that data will be utilized rather than precipitation based estimates.	Annually	Permittee shall provide available data and include in annual reports.	USGS Flow Monitoring Data is provided in Appendix 5A and 5B – Continuous Monitoring Data.	5A & 5B - Continuous Monitoring Data	No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
Monitoring Plan Maintenance and Update	Monitoring Location Maintenance	2.7.5	The permittee shall continue its collaboration with United States Geological Survey (USGS) on flow gauges and monitoring locations maintenance and data management.	Annually	Permittee shall summarize activities and include in annual reports.	MSD continues to collaborate with USGS on the operation of 27 flow gauges throughout the MSD service area. USGS maintains flow gauges, manages flow data, and provides access to the data through the National Water Information System website at http://waterdata.usgs.gov/ky/nwis . MSD continues to collaborate with USGS on the operation of 27 water quality sondes throughout the MSD service area. Through its contract with USGS, MSD operates and maintains the sondes and USGS provides on-line access to provisional (i.e., as collected) water quality data through the National Water Information System website (http://waterdata.usgs.gov/ky/nwis). USGS reviews and finalizes the data annually and delivers the final sonde water quality data.		No
	Precipitation Estimate	2.7.6	The permittee shall continue to maintain the continuous rain gauge network and on-line public access to that data.	Annually	Permittee shall continue to make rain gauge network data available on-line.	MSD continues to maintain a rain gauge network and provides on-line public access to that data. This rain gauge network data is currently available on MSD's website (raingauge.louisvillemtd.org). There are a total of 46 rain gauges.	2.7.6. Rain Gauge Map	No
	Water Quality Standards	2.7.7	The permittee shall compare stream monitoring analytical results to the applicable water quality standards for each parameter of the monitoring program. The most stringent applicable standard shall be used for comparison. Constituents that exceed applicable Water Quality Standards shall be highlighted. The permittee shall include a discussion of possible pollutant sources through the annual report.	Annually	Permittee shall apply the most stringent standard.	Comparison completed; source evaluation performed using wet vs. non-wet. MSD compared analytical results of the stream monitoring to the most stringent applicable water quality standards for each parameter of the monitoring program. Constituents that exceed applicable Water Quality Standards were highlighted. The comparison with water quality criteria and parameters without numeric criteria are provided in Chapter 5 – Monitoring of this report.		No
	Location Mapping	2.7.8	The permittee shall maintain the geo- coded monitoring station locations and descriptions through related geographic datasets and databases.	Annually	Permittee shall maintain the monitoring stations reflected in mapping system.	The LOJIC database maintains geocoded LTMN monitoring station locations and descriptions.	2.7.8. Monitoring Stations Map	No

		SWQMP ID	Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
Monitoring Plan Maintenance and Update	Sampling Methodology and Test Procedures	2.7.9	The permittee shall perform the sampling methodology according to the EPA stormwater application regulation at 40 CFR 122.26. The permittee shall perform the analyses according to the procedures approved under 40 CFR Part 136, unless other test procedures have been specified. The permittee shall assess the monitoring Quality Assurance Project Plan (QAPP), and update as needed.	Annually	Permittee shall perform the sampling methodology to insure compliance with 40 CFR 122.26 and 136, and provide a summary of as- needed updates to the QAPP in the annual report.	Sampling methodology is conducted according to the EPA stormwater application regulations. Analyses are conducted according to procedures approved under 40 CFR Part 136 or similar methods. Analytical methods are included with raw monitoring data in Appendix 5D – Raw LIMS Data . MSD plans to review, evaluate, and revise the Quality Assurance Project Plan (QAPP) in the upcoming reporting period.	5D Raw LIMS Data	No
	Annual Data Summary	2.7.10	The permittee shall submit a stormwater monitoring report annually. The monitoring reports shall include: status of implementation of the monitoring program, methods of evaluating data, graphical summaries of the data, and an explanation/discussion of the data for each component of the monitoring program. The monitoring data/results obtained each year will be submitted electronically with the Annual Report. A narrative data analysis shall be submitted annually within the Annual Report.	Annually	Permittee shall provide a summary electronically with the annual report.	Monitoring data assessment is reported in Chapter 5 – Monitoring of this report.		No



MS4 ANNUAL REPORT - MSD FOURTH PERMIT CYCLE PROGRAM

KY000001

Performance Assessment and Reporting (PAR)

7th Reporting Period - November 2023

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change
PAR Performance Assessment and Reporting	2.8.1	As described in the specific activity listings, the permittee shall compile information necessary to provide in the annual report. The metrics defined by "Measure of Success" shall be reported and kept for program assessment purposes. The permittee shall track the appropriate metrics through existing databases/spreadsheets to support staff assignments and budget development.	Annually	Permittee shall develop and retain Annual Reports for three years beyond permit term.	Annual report submitted and posted on website. MSD also keeps digital version on server and a hard copy.		No
	2.8.2	The permittee shall continue activity tracking to support consistent coordination and integrated reporting in a way that enables the variety of MSD staff to report their individual activities, target audiences, and related metric.	Annually	Permittee shall, by the end of Permit Year one (1), summarize tracking procedures and results and include with Annual Report.	MSD has developed an internal MS4 Sharepoint site that helps track any outreach efforts. In the current reporting year, MSD developed an updated outreach plan to to improve the effectiveness of it's outreach and streamline reporting.		No
	2.8.3	The permittee shall perform a trend analysis of illicit discharge investigations and enforcement actions over the term of the permit.	Permit Year 5	Permittee shall provide, during Permit Year Five (5) a report of trends and potential implications of IDDE investigations.	Infrared thermal imagery was collected in February 2020. MSD completed the permit cycle trend analysis in reporting year six.		No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
PAR Performance Assessment and Reporting	Industrial/IDDE Compliance Actions Portal	2.8.4	The permittee shall maintain a Compliance Actions Web Portal supplementing existing databases for functionality for internal use to expedite follow-up inspections of HRIFs.	Annually	Permittee shall maintain and report progress summarized in the Annual Report.	<p>During previous reporting periods, MSD has reviewed current data collection processes and developed a plan to improve the current industrial facility inspections tracking system. Currently, MSD uses the Threat Matrix spreadsheet in conjunction with IPS® to collect and maintain data (see Activity 2.3.1 – Industrial IDDE Program Enforcement). No improvements were made in this year’s reporting period based on previous reporting period reviews. In 2013, MSD designed a customized table in its IPS® Asset Data Management system to host the data contained in the spreadsheet version of the Threat Matrix, which assesses facility risk into low, moderate and high-risk categories. IPS® does not currently include a mechanism to score facilities based on inspection results. Therefore, Industrial Waste Department (IWD) staff has been entering inspection information into both IPS® and the spreadsheet version of the Threat Matrix. In 2014, MSD developed an Industrial Inspection Compliance Actions Portal Implementation Plan Memo for IPS® improvements to modify IPS® to include risk assessment and scoring capability. MSD will continue to enhance the IPS® database to improve efficiency and data integrity.</p>		No
	Post-Construction Inspection Portal	2.8.5	The permittee shall maintain a Compliance Actions Database for internal use to expedite follow-up inspections of private post- construction BMPs.	Annually	Permittee, shall maintain and report progress summarized in the Annual Report.	<p>MSD currently tracks inspection and enforcement using an ArcGIS online application and Survey123. Using this method, MSD has seen compliance rise from 25% to over 90%. MSD continues to follow up and escalate enforcement if needed. Inspection and enforcement is also tracked using the IPS database. MSD is working to have the ArcGIS data and IPS database sync.</p>		No

SWQMP ID		Activity Required	Schedule	Measure of Success	Result	Appendix	Propose Change	
PAR Performance Assessment and Reporting	Six-Level Program Assessment Methodology	2.8.6	The permittee shall continue to evaluate and report portions of the six-level program EPA began advocating in 2008 to assist MS4 programs in identifying success and future areas of focus.	Annually	Permittee shall continue to assess performance with the six-level program and report on progress in Annual Reports.	<p>Evaluation Complete. By administering the MS4 permit, MSD seeks to attain the ultimate goal of water quality improvement in Louisville by educating the public, effectively regulating private industry and development, maintaining critical public facilities and infrastructure, and by closely monitoring in-stream water quality trends. MSD recognizes that to attain water quality improvement in Louisville, special attention must be given to reducing non-point source pollutant loading. MSD has routinely exceeded regulatory targets related to public education and outreach. During the last reporting period, MSD exceeded regulatory targets for direct public interaction, public meetings with water quality topics, volunteer program support, and public speaking engagements (see Activities 2.1.2, 2.1.3, 2.1.4, and 2.1.7, respectively). MSD routinely publishes the State of the Streams report (http://www.louisvillemsd.org/WaterQuality), to both document and communicate improvements in local water quality and to highlight areas where future improvement is necessary. By exceeding regulatory targets, effectively communicating stormwater issues to the public, and regularly analyzing water quality trends, MSD can accelerate progress toward realizing water quality improvement in Louisville.</p>		No
	Cooperative Annual Report	2.8.7	The permittee shall coordinate and cooperate with co-permittees in compilation of the annual compliance demonstration reports	Annually	Permittee shall prepare and submit Annual Report in a timely manner.	<p>Seventh Annual Report completed. MSD coordinates and cooperates with co-permittees to compile annual compliance reports. Ultimately, the co-permittees are responsible for their own MS4 Annual Reports, just as they are for their portions of the SWQMP. MSD continues to provide leadership and assistance to the co-permittees as they compile the reports and utilize MS4 program partner opportunities.</p>		No



CHAPTER 3 CO-PERMITTEE PROGRAM REPORTS

CO-PERMITTEE CERTIFICATION
2023 MS4 STORM WATER ANNUAL REPORT
KPDES PERMIT NUMBER KYS000001

THE CITY OF SHIVELY, KY is designated as a co-permittee covered by the Municipal Separate Storm Sewer System (MS4) permit that was issued by the Kentucky Division of Water under the Kentucky Pollutant Discharge Elimination System (KPDES) program. **THE CITY OF SHIVELY, KY** has prepared the attached annual compliance report for the reporting period of **July 1, 2022 to June 30, 2023**.

Under the terms of KPDES Permit No. KYS000001 [Part I.A.2), and implemented through an interlocal agreement with Louisville and Jefferson County Metropolitan Sewer District dated 10/27/2023,

THE CITY OF SHIVELY certifies that it has responsibility for the following:

- Construction oversight in addition to the regulatory inspections conducted by Louisville MSD pursuant to the Erosion Prevention and Sediment Control Ordinance, Chapter 159;
- Drainage system and outfall mapping.
- Drainage system operation and maintenance.
- Road maintenance and upkeep, including snow and ice removal and related stormwater management activities.
- Drafting and implementing fleet and facility stormwater pollution prevention plans.
- Reporting and referring potential illicit discharges observations by municipal employees or other reports from residents to MSD for investigation and potential enforcement.
- Inspection, operation, maintenance and/or applicable certification that permanent (also known as post-construction) water quality devices, controls, and management practices are operating effectively.
- Implementation of education and outreach within the City of SHIVELY to complement the education and outreach provided by MSD which is tailored to local water bodies pollutants of concern.
- Preparation and timely submittal of annual compliance demonstration report to MSD according to agreed upon formats and standards; and

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 above statements are, 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.

Title: DIRECTOR OF THE SHIVELY WORKS DEPARTMENT----- Steve Lingerfelt

Signature: _____



Date: _____

10/27/2023



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3.5 COMPLIANCE ACTIVITIES REPORT FOR THE CITY OF SHIVELY

The Co-Permittees individually and collectively continue to perform the required activities specified in KPDES Permit # KYS000001. This section will focus on those activities for which the City of Shively was responsible during the permit period and will document the compliance tasks performed by City of Shively during the period of July 1, 2022 – June 30, 2023.

3.5.1 Illicit Discharge Detection and Elimination (IDDE)

City crews graded approximately 2700 feet of drainage channels within the city.

3.5.1.1 Illicit Discharge / Illegal Dumping Ordinance IDDE-4

The City of Shively enforces its illegal dumping ordinance.

The city's Code Enforcement Board, is continuing to cite residents with debris blocking their drainage ditches.

- City crews abated 564 abandoned properties.

3.5.1.2 Provide education on the Revised Wastewater Discharge Regulations IDDE-5

The City of Shively posts "no dumping" signs at new locations within the city.

3.5.2 Construction Site Runoff Controls (CS)

The City of Shively has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain CS program tasks.

3.5.2.1 Erosion Prevention and Sediment Control Plan (EPSC) CS-1

The City of Shively has an approved EPSC General Permit issued by MSD for Public Works activities.

3.5.2.2 Scheduled Inspections of BMPs CS-5

A City of Shively Code Enforcement Officer inspects construction sites as needed.

3.5.3 Post Construction Controls (PC)

3.5.3.1 Pilot BMP Projects PC-2

Shively continued a practice of not installing paved curbs and gutters on residential streets. Grass swales are used to collect street runoff.



3.5.3.2 Built-Upon Area Reductions PC-3

Shively adopted the provisions of Cornerstone 2020.

3.5.3.3 Source Controls PC-4

The City of Shively facilities have approved HMPC plans.

3.5.4 Good Housekeeping / Pollution Prevention (GH)

The components of the drainage system require routine inspections and maintenance. The City of Shively performed the following activities during the permit year:

- Augured approximately 1950 feet of drainage pipe.
- Cleaned approximately 2100 feet of curbing.
- Cleaned and maintained 7500 feet of drainage ditches.
- Installed approximately 900 feet of drainage pipe.

3.5.4.1 Street Maintenance GH-1

Street maintenance by Shively is performed on an as-needed basis. The City of Shively follows the EPSC General Permit requirements.

3.5.4.2 Street Sweeping GH-2

The City of Shively manually collects debris along Dixie Highway as needed. The City of Shively cleans curb and gutter roads within the city on an average of twice per year. Debris removed from streets and gutters is sent to a landfill.

3.5.4.3 Catch Basin Cleaning GH-3

Catch basins are manually cleaned as needed. The debris is taken to a landfill.

3.5.4.4 Storm Sewer Cleaning GH-4

Storm sewers are cleaned as needed with a new high-pressure auger purchased March 2022. Debris is collected and sent to a landfill.



3.5.4.5 Channel Maintenance GH-5

Silt is removed from drainage ditch channels as needed. Silt is generally removed by hand to minimize the impact to the channel, though equipment is sometimes used when necessary. Debris removed from drainage channels is sent to a landfill.

3.5.4.6 Pollution Prevention for De-icing GH-6

The City of Shively calibrates salt spreaders as needed. Salt is pre-wetted with liquid calcium chloride to maximize effectiveness. De-icing salts are stored in a building.

3.5.4.7 BMP Inspections GH-7

Good Housekeeping/Pollution Prevention BMPs are inspected regularly by the City of Shively Maintenance Director.

3.5.4.8 BMP Maintenance GH-8

Good Housekeeping/Pollution Prevention BMPs are regularly maintained.

3.5.4.9 Pollution Prevention for Herbicides and Pesticides GH-9

The City of Shively does not use pesticides. Herbicides are used sparingly.

3.5.4.10 Continuation of Existing Programs GH-10

The city collects municipal waste, recycling and yard waste weekly. In an effort to reduce loose recyclable items from blowing out of their bins, the city purchased 95 gallon recycling totes with lids for the residents. The City of Shively recycles newspaper, cardboard, plastic, aluminum cans and glass. A private contractor picks up used oil from the City of Shively's maintenance facility.

3.5.5 Public Education/Outreach Programs (PE)

The City of Shively has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain public education program tasks. Therefore, only those tasks performed by the City of Shively are listed in this report.

The City of Shively offers educational materials at the annual Easter Egg Hunt, Trunk or Treat and Light Up Shively.

3.5.5.1 Public Education Programs PE-1

The City of Shively maintained a website, www.shivelyky.org. Public education also takes place through quarterly newsletters which address services including recycling, leaf pick-up, appliance and junk pickup days and catch basin cleaning.



3.5.5.2 Earth Day PE-2

The City of Shively does not hold separate Earth Day activities. Community-wide Earth Day celebrations at the Louisville Zoo are sponsored by Louisville Metro.

3.5.5.3 Litter Control PE-3

The City of Shively continues to work on litter control. With signage and public education.

3.5.5.4 Internal Training PE-5

The City of Shively has regular meetings with employees to stress the importance of keeping the Stormwater areas clean. Steve Lingerfelt is a qualified Kentucky Erosion Prevention and Sediment Control Specialist.

3.5.6 Monitoring (M)

The City of Shively has an interlocal agreement with MSD to perform the Monitoring requirements of the MS4 permit. Watershed monitoring performed on the Mill Creek Cutoff characterized the water quality downstream from the City of Shively MS4.

3.5.7 Reporting (R)

The City of Shively has an interlocal agreement for MSD to perform the Annual Reporting function. Shively provided MSD with the information regarding its MS4 program activities for this Annual Report.

CO-PERMITTEE CERTIFICATION
2023 MS4 STORMWATER ANNUAL REPORT
KPDES PERMIT NUMBER KYS000001

THE CITY OF ANCHORAGE is designated as a co-permittee covered by the Municipal Separate Storm Sewer System (MS4) permit that was issued by the Kentucky Division of Water under the Kentucky Pollutant Discharge Elimination System (KPDES) program. **THE CITY OF ANCHORAGE** has prepared the attached annual compliance report for the reporting period of **July 1, 2022 to June 30, 2023**.

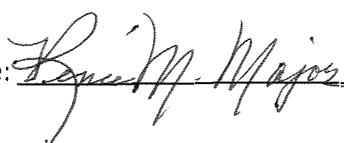
Under the terms of KPDES Permit No. KYS000001 [Part I.A.2], and implemented through an interlocal agreement with Louisville and Jefferson County Metropolitan Sewer District dated 17 April 2014, **THE CITY OF ANCHORAGE** certifies that it has responsibility for the following:

- Construction oversight in addition to the regulatory inspections conducted by Louisville MSD pursuant to the Erosion Prevention and Sediment Control Ordinance, Chapter 159;
- Drainage system and outfall mapping;
- Drainage system operation and maintenance;
- Road maintenance and upkeep, including snow and ice removal and related stormwater management activities;
- Drafting and implementing fleet and facility stormwater pollution prevention plans;
- Reporting and referring potential illicit discharges observations by municipal employees or other reports from residents to MSD for investigation and potential enforcement;
- Inspection, operation, maintenance and/or applicable certification that permanent (also known as post-construction) water quality devices, controls, and management practices are operating effectively;
- Implementation of education and outreach within the City of Anchorage to compliment the education and outreach provided by MSD which is tailored to local water bodies pollutants of concern;
- Preparation and timely submittal of annual compliance demonstration report to MSD according to agreed upon formats and standards; and

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 above statements are, 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."

CITY OF ANCHORAGE

Name: Renee M. Major

Signature:  _____

Title: City Administrative Officer/City Clerk

Date: September 6, 2023



3.2 COMPLIANCE ACTIVITIES REPORT FOR THE CITY OF ANCHORAGE

The KPDES Large MS4 stormwater discharge permit program requirements are classified into seven Program Elements, each designated with an acronym. The Program Elements include Illicit Discharge Detection and Elimination (IDDE), Construction Site Runoff Controls (CS), Post-construction Controls (PC), Good Housekeeping/Pollution Prevention (GH), Public Education/Outreach Programs (PE), Monitoring (M), and Reporting (R).

The Co-Permittees individually and collectively continue to perform the required activities specified in KPDES Permit # KYS000001. This subsection will focus on those activities for which the City of Anchorage, Kentucky was responsible during the permit period and will document the compliance tasks performed by City of Anchorage during the period of July 1, 2022 – June 30, 2023.

3.2.1 Illicit Discharge Detection and Elimination (IDDE)

The City of Anchorage has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain IDDE tasks. Therefore, only those tasks performed by the City of Anchorage are listed in this report. MSD performs illicit discharge investigation and follow up throughout Louisville Metro, including the City of Anchorage. Previously, most of the City of Anchorage did not have sanitary sewers. With the June 2008 completion of the Hazelwood Extension of its sanitary sewer, the City of Anchorage brought 95 properties previously on septic systems onto an MSD-operated sewer system. Of the approximate 860 residences in Anchorage, 432 residences are now estimated to be on MSD-operated sewer systems. In 2016, MSD installed a gravity interceptor sewer in the southwest quadrant of Anchorage. The Anchor Estates Pump Station Elimination Project eliminated three pump stations in Anchorage, adding approximately 30 septic-tank properties to new sewer service, and providing future expansion for other areas on the south side of Anchorage. The project was completed in August 2016. Since 2017, six residences were connected to sewers. Although the City performed water sample testing twice and extensive soundings/boring geotechnical testing to determine the feasibility of expanding sewer service to the southeast quadrant of the City, Anchorage residents voted to not pursue a project to financially support connecting to sewers due to the exorbitant cost.

3.2.1.1 Illicit Discharge / Illegal Dumping Ordinance IDDE-4

The City of Anchorage enforces its illegal dumping ordinance and posts signs that prohibit dumping at locations that are problem areas. City of Anchorage staff investigates areas regularly and responds to resident complaints. In the past four years, the City has had zero instances of illicit dumping or discharge to MSD. However, July 2022, the City required assistance from MSD for a hazardous material fire that accidentally occurred at a residential garage.

3.2.1.2 Provide education on the revised Wastewater Discharge Regulations IDDE-5

The City of Anchorage provides education on their local ordinance(s) that prohibit illicit connections and illegal dumping. Anchorage has no wastewater treatment plants, however, has two pumping stations on Creel Lodge Drive and Lucas Lane. The City of Anchorage has marked all Catch Basins throughout the City with markers informing the public that there is no dumping



into the basins and that these basins drain to local creeks. Currently, there are a total of 134 *No Dumping* decals located throughout the City. All commercial properties and the Anchorage school system have marked all their Catch Basins. The City of Anchorage monthly newsletter periodically contains information on the prohibition of dumping into catch basins and drains, and proper disposal of leaf and grass debris.

3.2.2 Construction Site Runoff Controls (CS)

The City of Anchorage has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain CS program tasks. MSD administers the Erosion and Sediment Control Ordinance. The City of Anchorage requires contractors to show proof of EPSC Certification before they can obtain a Zoning Compliance Certificate. A copy of their certification is attached to their building permit. The City's Public Works department checks worksites to insure EPSC measures are in place. The City's Flood Safety Officer reviews residential building plans for any increase in impervious surface. Residents with problematic or excessive impervious surface overages (greater than 20% of the lot acreage/size) will need to obtain an engineering report to mitigate the overage or satisfactorily resolve the problem before approval will be granted by Anchorage City Council. During this current term, the Flood Safety Officer reviewed 72 sites for drainage issues or potential problems. Anchorage ordinances require any lot with more that 20% impervious to obtain an approved variance from the Anchorage City Council to retain excess runoff on site and provide an approved plan.

3.2.2.1 Erosion Prevention and Sediment Control Plan (EPSC) CS-1

An EPSC Plan with provisions for Best Management Practices (BMPs) to keep sediment on-site (silt fences, staked bales, sediment ponds, gravel mats, etc.) and to capture sediment that would enter local or on-site drainage systems is required for any new development within the City of Anchorage. Twenty-six trenching permits were issued by the City Forester in the last year for various projects from new homes to fence and cable wire installations. Any stockpiled soil is required to be contained by silt fencing. Thirty-seven Zoning Compliance Certificates were issued for building projects where the contractor or subcontractor was required to be EPSC certified.

The City of Anchorage has an approved EPSC General Permit issued by MSD for Public Works activities.

3.2.2.2 Training for Operators CS-3

The City of Anchorage ensures that appropriate staff members attend training for equipment operators and construction managers that describes the proper installation and maintenance of construction site BMPs. Three Public Works employees, the Director of Public Works, Foreman, and Technician attended the MSD class for certification in 2023. The Anchorage Flood Safety Officer attended one MSD class in 2022.

3.2.2.3 Scheduled Inspections of BMPs CS-5

The City of Anchorage city officials check construction sites to ensure that the EPSC Ordinance is being followed. The Public Works Director visits all construction projects to review compliance with permits. The City of Anchorage reviews plans to ensure the proposed work does not increase or inappropriately divert storm water runoff. The City of Anchorage requires a



specific drainage retention plan approval when the construction plans call for a 20% or more impervious area or if neighboring properties are affected.

3.2.3 Post Construction Controls (PC)

The City of Anchorage has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain PC program tasks. MSD performs the PC-1, Watershed Planning, Post Construction tasks on behalf of the City of Anchorage. The City of Anchorage Flood Safety Officer reviews construction plans and meets with contractors and homeowners where there may be runoff issues. The City's Flood Safety Officer met with 12 property owners this year to review and remedy storm water/drainage/impervious surface issues. Storm water retention is discussed with contractors and homeowners for projects increasing impervious surface in excess of 20% of the lot size. Bio-swale, rain garden, rain barrel, and other information is discussed with and given to contractors and homeowners. During the current fiscal year, nine MSD Rain Garden Handbooks were disbursed. This information is also readily available in the lobby at Anchorage City Hall for visitors to obtain at no cost.

3.2.3.1 Pilot BMP Project PC-2

Over the permit term, the City of Anchorage was required to complete a minimum of three BMP Pilot Projects. Anchorage adopted and continues a policy to not install curbs on city streets so that runoff filters through nearby pervious areas. Residents are required to outlet downspouts into yards or channel to French drains, bio swales, dry wells, etc., to filter runoff before it enters a stream. The City's Annual Canopy Campaign is an effort to repopulate the tree canopy within the City of Anchorage, especially adjacent to roadways. The Annual Canopy Campaign takes place each fall. Through this program, the City pays for one half the cost of a canopy-type tree as determined by the City Forester and Forestry Board and professional planting of the tree selected by the residents. These trees are designated for the rights-of-way only. Fall 2022, residents purchased 15 canopy trees. The City also offers a Spring Tree Give-away Program. Spring 2023, 300 one-inch caliper trees were given free of charge to Anchorage residents for planting anywhere on their properties. The City of Anchorage has a tree preservation ordinance that requires one tree replacement for every one to three trees removed depending on the trunk caliper of the replacement tree. The City has an on-going hazardous tree removal program for trees in the City's right-of-ways. Dead, dying, or hazardous trees are removed, and other trees are pruned, as needed. Early 2023, 50 trees were removed, four trees were pruned, and 58 stumps were ground/removed. Trees removed by the Anchorage Public Works Department are chipped and taken to a mulch operation which turns it into compost and mulch. The City has been a "Tree City USA" for 34 years and achieved the Growth Award status level for 13 years by continuing to provide increased awareness and public education of accepted urban forestry practices.

3.2.3.2 Built-Upon Area Reductions PC-3

The City of Anchorage adopted the Land Development Code provisions of the Comprehensive Plan 2040. Many provisions in the Land Development Code version that Anchorage follows favor smaller homes on larger lots than traditional zoning allows so that there is a reduction in impervious surface. The streets are narrower and easements adjacent to the drainage swales are wider in order to save trees and to provide more green space. The City's floor-area-to-open-space ratio requirement requires more open space than Louisville Metro's floor-area-to-open-space ratio. Residents are required to outlet downspouts into yards or French drains, rain



gardens, bio swales, etc. to filter runoff before it enters a stream. The City requires lots with more than 20% of impervious surface to now provide a professional engineering analysis/report to provide alternative measures in place to retain on the lot excess stormwater created by the additional impervious surface. Prescribed methods to mitigate excessive runoff include rain gardens, dry wells, French drains, retention ponds, bio swales, etc.

3.2.3.3 Source Controls PC-4

City of Anchorage facilities have approved HMPC plans. The City of Anchorage maintains salt storage in a covered building. Recently, a large garage entry door has been added to keep salt secure. The salt under roof is also covered with tarps. The City of Anchorage has a refueling area for Public Works vehicles. The area is diked so that spills are controlled and maintained. A spill management system controls any spilled fuel in the dike area and allows rainwater to be removed without causing erosion to the ground. Employees are required to stay with vehicles while refueling. In addition, a sign is posted reminding employees of this policy. The City of Anchorage investigates downspout connectivity to the streams. Residents are required to daylight their downspout or direct to a French drain rather than flow entering the stream directly.

3.2.4 Good Housekeeping / Pollution Prevention (GH)

By agreement with the Anchorage Middletown Fire and EMS Department, all public works vehicles that are heavily soiled (dirt, salt, asphalt, etc.) must be washed inside the Anchorage Middletown Firehouse. The Firehouse has a containment pit to catch the material, so it can be disposed of properly. City policy dictates that any vehicle cleaned outside is washed with an environmentally safe soap only.

3.2.4.1 Street Maintenance GH-1

The City of Anchorage follows the EPSC General Permit requirements. Street maintenance in Anchorage is performed on an as-needed basis. During any roadway repair all remaining unused material is swept up and disposed of properly. Staked bales and silt fencing are used to minimize impacts of construction. Public roads are constructed without curbs, allowing the runoff to be filtered through the nearby grasses.

3.2.4.2 Street Sweeping GH-2

The City of Anchorage picks up trash along all the roadways within its city limits monthly or more often, if needed. An annual Litter Abatement spreadsheet can be reviewed with the Public Works Director showing miles of road cleaned, number of bags collected and total cost. The City of Anchorage uses a leaf vacuum to keep the culverts and ditch lines clear of leaves during the fall and maintaining a list by month of ditch areas cleaned/restored. Leaves collected throughout the fall are taken to a mulch operation which turns leaves into compost and mulch. Road culverts are cleaned weekly in the fall to remove leaves. A City of Anchorage stormwater management and control ordinance requires property owners to maintain both natural and man-made drainage channels on their properties. It is unlawful to deposit leaves, grass clippings, or other forms of debris in the drainage channels.

3.2.4.3 Catch Basin Cleaning GH-3

Catch basins were checked and cleaned by hand 55 times including before and/or after rain events. During this term, all catch basins were inspected and serviced while in the field



documenting data for a new outflow map of the City. Outlets are plugged so that debris cannot get into the stream. This debris is taken to a landfill.

3.2.4.4 Storm Sewer Cleaning GH-4

Storm sewer cleaning is performed on an as-needed basis. Anchorage Public Works performed 55 culvert inspections this year. Through an agreement with the Anchorage Middletown Fire and EMS Department, blocked Anchorage culverts are flushed with water from a high-pressure hose, and the debris collected and taken to a landfill, as needed. During this fiscal year, three culverts required flushing.

3.2.4.5 Channel Maintenance GH-5

Grass drainage channels in Anchorage are mowed no lower than 6-inches. Debris is removed from channels and sent to a landfill. Concrete channels are cleaned of sediment manually. Staked hay bales and silt fencing are required during channel maintenance where heavily accumulated siltation needs removal. Anchorage Public Works inspected channels 55 times this year and had no reason to create any new concrete channels to stop erosion and road deterioration.

3.2.4.6 Pollution Prevention for De-Icing GH-6

The City of Anchorage inspects and adjusts its two salt spreaders distribution rates before and during any long-term snow events. Salt spreaders are adjusted to minimize the amount of overspray. The salt is pre-wetted with calcium chloride. Anchorage uses a brine road pre-treatment. Pushing the snow off the roadway is the preferred method for snow removal. The City applied less than 140 tons of salt and 400 gallons of brine this year. The City of Anchorage Public Works does yearly Internet research and employees attend training to learn about new application technologies.

3.2.4.7 BMP Inspections GH-7

Good Housekeeping/Pollution Prevention BMPs are inspected regularly by the Public Works Director.

3.2.4.8 BMP Maintenance GH-8

Good Housekeeping / Pollution Prevention BMPs are maintained on a regular basis. The Public Works crew inspects the building and grounds on a daily basis to assure materials and stock are stored properly.

3.2.4.9 Pollution Prevention for Herbicides and Pesticides GH-9

In the last 13 years, the City of Anchorage has used no pesticides and only minimal herbicides and is committed to continue on this course. No herbicides or pesticides are stored.

3.2.4.10 Continuation of Existing Programs GH-10

An outside contractor continues to collect municipal waste, yard waste and recyclables weekly. The yard waste is taken to a compost site. The City, under the direction of Jefferson County, requires recyclable paper bags for yard waste. Approximately 86.4% of the City of Anchorage residents participate in the recycling program! The City of Anchorage utilizes a private



contractor to reclaim its used oil and antifreeze. The City maintains a collection tank for used oil. This year, there was no oil or antifreeze reclaimed and removed.

3.2.5 Public Education/Outreach Programs (PE)

In a large metropolitan area, the impact of the actions of the citizens can cause great harm to the environment if the actions are careless or un-informed or can have great benefit if the actions are positive. Individual behavior repeated by many people has a cumulative effect.

3.2.5.1 Public Education Programs PE-1

Water quality issues are discussed in the monthly newsletter and on the City of Anchorage's website at www.cityofanchorage.org. The website includes information on the City of Anchorage's Tree Preservation Program and the Storm water Management ordinance. The newsletter contains information on the recycling program, leaf pick-up schedules, rain gardens, swimming pool drainage, and mosquito control. This year, 12 articles in the city's newsletter contained information relating to recycling, yard waste, lawns, drainage, and forestation. The City of Anchorage continues to offer the "Forestry Handbook," which is free, to Anchorage residents. The City works with developers who install innovative "green" storm water control and encourage the developers to allow the City and other organizations to observe the installation, and become more educated about rain gardens, retention ponds, and other storm water retention and water quality. Throughout the year, City Council was advised on five separate occasions of storm water and drainage related issues.

3.2.5.2 Earth Day PE-2

The City of Anchorage does not have separately planned activities for Earth Day, but they do celebrate Arbor Day. Coordinated through the Anchorage Forestry Board, Arbor Day's celebration focuses on tree-related activities often coordinated with the Anchorage Public School. Past activities have included identifying tree species, clearing invasive plants, spreading wood chips on the Anchorage horse trails, the Emerald Ash Bore, replacing dying trees, and identifying tree diseases and decline. This year, 300 free 3-gallon trees were given to Anchorage residents for planting on their properties. An additional 15 trees were purchased under the Annual Fall Tree Canopy sale; no specialty or non-canopy trees were offered for purchase.

3.2.5.3 Litter Control PE-3

The City supplies the garbage bags and is responsible for disposing of the collected debris. In addition, the City's Public Works Department regularly collects litter and debris from public rights-of-way along 42 miles of paved roads in the City. During this past year, 87 large bags of trash were collected and disposed of.

3.2.5.4 Internal Training PE-5

The City Administrative Officer and Public Works Director have attended MS4 presentations by MSD staff. Routinely, all public works employees receive SWQMP training every year, all employees attended one class during this fiscal year. Training would be in the area of IDDE, IDE-4, CS, CS-3, etc., spill prevention, or disposal of contaminants.



3.2.6 Monitoring (M)

The City of Anchorage has an interlocal agreement with MSD to perform the Monitoring requirements of the MS4 permit. In early 2020, that agreement was amended and renegotiated to account for higher maintenance costs.

3.2.7 Reporting (R)

The City of Anchorage provides information on implementation of the MS4 permit requirements to MSD. The City of Anchorage has an interlocal agreement for MSD to prepare the Annual Report.

3.3 Financial

This section is a summary of the City of Anchorage's SWQMP budget for FY 2023:

City of Anchorage FY 2023 Total Operating Budget: \$3,010,538				
Drainage	Bridge/Culvert Repair	City Drainage Officer	Forestry Budget	Litter Cleanup
\$0	\$60,000	\$3,500	\$34,045	\$2,015

**CO-PERMITTEE CERTIFICATION
2023 MS4 STORMWATER ANNUAL REPORT**

LOUISVILLE METRO is designated as a co-permittee covered by the Municipal Separate Storm Sewer System (MS4) permit that was issued by the Kentucky Division of Water under the Kentucky Pollutant Discharge Elimination System (KPDES) program. **LOUISVILLE METRO** has prepared the attached annual compliance report for the reporting period of **July 1, 2022 to June 30, 2023**.

Under the terms of KPDES Permit No. KYS000001 [Part 1.A.2], and implemented through an interlocal agreement with Louisville and Jefferson County Metropolitan Sewer District dated **July 1, 2023**, **LOUISVILLE METRO** certifies that it has responsibility for the following:

- Construction oversight in addition to the regulatory inspections conducted by Louisville MSD pursuant to the Erosion Prevention and Sediment Control Ordinance, Chapter 159;
- Drainage system and outfall mapping;
- Drainage system operation and maintenance;
- Road maintenance and upkeep, including snow and ice removal and related stormwater management activities;
- Drafting and implementing fleet and facility stormwater pollution prevention plans;
- Reporting and referring potential illicit discharges observations by municipal employees or other reports from residents to MSD for investigation and potential enforcement;
- Inspection, operation, maintenance and/or applicable certification that permanent (also known as post-construction) water quality devices, controls, and management practices are operating effectively;
- Implementation of education and outreach within **Louisville Metro** to compliment the education and outreach provided by MSD which is tailored to local water bodies pollutants of concern;
- Preparation and timely submittal of annual compliance demonstration report to MSD according to agreed upon formats and standards; and

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 above statements are, 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."

LOUISVILLE METRO

Name: Mark Beller

Title: Director

Signature: 

Date: 11-1-2023



ANNUAL REPORT FOR LOUISVILLE METRO GOVERNMENT

(JULY 1, 2023 – JUNE 30, 2024)

The following report covers the three primary departments of Louisville Metro Government that have direct impact with the MS4 Program. The Louisville Metro Government MS4 Committee continues its efforts to increase strong communication and cooperation between departments to successfully fulfil its co-permittee responsibilities.

As one of the co-permittees with MSD on the Kentucky Pollution Discharge Elimination System (KPDES) Large Municipal Separate Storm Sewer System (MS4) stormwater discharge permit, it is necessary for Louisville Metro Government to fulfill applicable permit requirements. Through an interlocal agreement with MSD, the primary co-permittee on the KPDES MS4 permit, Louisville Metro Government is not responsible for performing certain tasks required as these tasks are overseen and implemented by MSD.

1. LOUISVILLE METRO GOVERNMENT – PARKS

Public Education, Outreach, Participation, and Learning Experiences (PEOPLE)

- Newsletter

Frequency or Measure of Success	Activity Required
Permittee shall report the number of hits received on an annual basis and revise as needed	Louisville Metro Government – Parks shall employ its various social media outlets, and its other electronic communications, to discuss pollution prevention information.

- Louisville Metro Government –Parks regularly updates its page on the www.louisvilleky.gov website and offers pollution prevention and litter reduction as regular discussion points for social media blasts across all platforms.

Illicit Discharge Detection and Elimination (IDDE)

- Training session(s) for applicable staff

Frequency or Measure of Success	Activity Required
Permittee shall report number of staff trained per year	Louisville Metro Government – Parks shall require staff to attend training on the recognition and reporting of illicit discharges as provided by MSD.

- Louisville Metro Government – Parks ensures that appropriate employees attend the Erosion Prevention and Sedimentation (EPSC) training class. Topics covered include pre-construction planning, design procedures for structural and non-structural Best Management Plans, pollutant removal and inspections.

Construction Site Stormwater Runoff Control Requirements (CS)

- City construction projects to follow construction site BMP requirements

Frequency or Measure of Success	Activity Required
Permittee shall summarize the contracts, city code officer inspection log of sites and will include with the annual report	Louisville Metro Government – Parks shall require all contracts specify compliance with the Erosion Prevention and Sediment Control Program requirements and require that in-house projects be inspected for compliance.



ANNUAL REPORT FOR LOUISVILLE METRO GOVERNMENT

- Louisville Metro Government – Parks follows guidance materials for EPSC plan and inspections. Inspections of Louisville Metro Government – Parks construction sites are conducted by Louisville Metro Government inspectors using a checklist provided by MSD to assist the inspectors and developers on proper procedures and requirements.

Post-Construction Stormwater Runoff Control for New Development and Redevelopment (PC)

- Tree-green space replacement to provide future ground cover

Frequency or Measure of Success	Activity Required
Permittee shall continue the memorandum-for-record filed yearly by participating departments	Louisville Metro Government – Parks shall maintain or increase the total amount of trees or other green space/grounds covered on its properties, in accordance with appropriated resources.

- In FY 2015 Louisville Metro Government completed a comprehensive tree canopy analysis that established Louisville’s land is 37% covered by trees. With the goal set at 45%, 5% higher than the American Forests recommendation, Louisville Metro Government – Parks continues to maintain current green spaces and increases ground cover by green spaces in every available opportunity.

Good Housekeeping/Pollution Prevention for Municipal Operations

- Municipal Facility SWPPPs

Frequency or Measure of Success	Activity Required
Permittee shall revise SWPPPs as needed and retain the revised SWPPPs on file	Louisville Metro Government – Parks shall maintain and revise, as needed, MS4 SWPPPs for applicable “industrial” type facilities.

- Louisville Metro Government-Parks shall maintain and revise, as needed, MS4 SWPPPs for applicable “industrial” type Metro facilities. For “industrial” type Metro facilities with KPDES Individual Stormwater Discharge Permits, preparation, maintenance, and revision of Best Management Practices (BMPs) in permit-required BMP Plan is an acceptable equivalent for this required activity.

Staff Training

Frequency or Measure of Success	Activity Required
Permittee shall retain copies of training records and training references as provided	Louisville Metro Government – Parks shall train staff, as needed, on the SWPPP requirements.

- Louisville Metro Government-Parks shall train the municipal facility staff on the SWPPP requirements, as needed, for facilities that have KPDES Individual Stormwater Discharge Permits, training on BMP requirements is an acceptable equivalent for this required activity.

Parks Ground Maintenance

Frequency or Measure of Success	Activity Required
Permittee shall continue the memorandum-for-record filed yearly by the department	Louisville Metro Government – Parks shall develop and implement a Pesticide, Herbicide and Fertilizer (PHF) Program which includes required certification of applicators, reporting on the number of certifications, procedures for the storage and proper use of PHFs and the corresponding measures to protect MS4s and receiving waters from the PHFs.



ANNUAL REPORT FOR LOUISVILLE METRO GOVERNMENT

- Louisville Metro Government – Parks requires all employees that work in the application of pesticides and herbicides on their golf courses and park locations to be properly trained and certified as required.

Monitoring (M)

- Louisville Metro Government, and its agencies (Parks), have an inter-local agreement with MSD, the primary Co-Permittee on this MS4 permit; the responsibilities are divided according to the Part I, Section A.

Performance Assessment and Reporting (PAR)

- Louisville Metro Government, and its agencies (Parks), have an inter-local agreement with MSD, the primary Co-Permittee on this MS4 permit; the responsibilities are divided according to the Part I, Section A. Louisville Metro Government – Parks shall submit its annual report to MSD for submittal to the Division of Water in the appropriate time frame developed by MSD.

2. LOUISVILLE METRO GOVERNMENT – PUBLIC WORKS & ASSETS

Public Education, Outreach, Participation, and Learning Experiences (PEOPLE)

- Website

Frequency or Measure of Success	Activity Required
Permittee shall report the number of hits received on an annual basis and revise as needed	Louisville Metro Government – Public Works & Assets shall employ its various social media outlets and other electronic communications to discuss pollution prevention information.

- The Solid Waste Management Division of Louisville Metro Government – Public Works & Assets provides presentations and publications to encourage the establishment of residential compost piles for yard waste and annually publishes reminders to residents to keep leaves out of the street gutter. The Louisville Metro Government website, www.louisvilleky.gov, addresses littering, water quality, snow removal, recycling issues, pollution prevention and air quality. In addition to newsletters, pollution prevention and litter reduction are regular discussion points for social media blasts across all platforms.

Illicit Discharge Detection and Elimination (IDDE)

- Mapping

Frequency or Measure of Success	Activity Required
Permittee shall complete and submit to the Division of Water within 24 months of the effective date of this permit	Louisville Metro Government – Public Works & Assets shall develop and maintain a storm sewer system map, showing the location of all known major outfalls, as defined herein, and the names and location of all waters of the Commonwealth that receive discharge from those outfalls. If this mapping is completed using Geographical Information Systems (GIS) or Computer Aided Drafting (CAD) software, the permittee shall provide to the Division of Water, at a minimum, the MS4 boundary and the mapping infrastructure in either ESRI shape file format geo-referenced AutoCAD drawings.

- Louisville Metro Government – Public Works & Assets continually updates the stormwater asset inventory data and supplies it to the Louisville-Jefferson County Information Consortium GIS system.



ANNUAL REPORT FOR LOUISVILLE METRO GOVERNMENT

- Training session(s) for applicable staff

Frequency or Measure of Success	Activity Required
Permittee shall report number of staff trained per year	Louisville Metro Government – Public Works & Assets shall require staff to attend training on the recognition and reporting of illicit discharges as provided by MSD.

- Louisville Metro Government – Public Works & Assets ensures that appropriate employees attend the Erosion Prevention and Sedimentation (EPSC) training class. Topics covered include pre-construction planning, design procedures for structural and non-structural Best Management Plans, pollutant removal and inspections.

Construction Site Stormwater Runoff Control Requirements (CS)

- City construction projects to follow construction site BMP requirements

Frequency or Measure of Success	Activity Required
Permittee shall summarize the contracts, city code officer inspection log of sites and will include with the annual report	Louisville Metro Government – Public Works & Assets shall require all contracts specify compliance with the Erosion Prevention and Sediment Control Program requirements and require that in-house projects be inspected for compliance.

- Louisville Metro Government – Public Works & Assets follows guidance materials for EPSC plan and inspections. Inspections of Louisville Metro Government – Public Works & Assets construction sites are conducted by Louisville Metro Government inspectors using a checklist provided by MSD to assist the inspectors and developers on proper procedures and requirements.

Post-Construction Stormwater Runoff Control for New Development and Redevelopment (PC)

- Tree-green space replacement to provide future ground cover

Frequency or Measure of Success	Activity Required
Permittee shall maintain records of trees removed and planted by participating departments	Louisville Metro Government – Public Works & Assets shall maintain or increase the total amount of trees or other green space/grounds covered on its properties, in accordance with appropriated resources.

- In FY 2015 Louisville Metro Government completed a comprehensive tree canopy analysis that established Louisville’s land is 37% covered by trees. With the goal set at 45%, 5% higher than the American Forests recommendation, Louisville Metro Government – Public Works & Assets continues to maintain current green spaces and increases ground cover by green spaces at every available opportunity.

Good Housekeeping/Pollution Prevention for Municipal Operations

- Municipal Facility SWPPPs

Frequency or Measure of Success	Activity Required
Permittee shall revise SWPPPs as needed and retain the revised SWPPPs on file	Louisville Metro Government – Public Works & Assets shall maintain and revise, as needed, MS4 SWPPPs for applicable “industrial” type facilities.

- Louisville Metro Government – Public Works & Assets shall maintain and revise, as needed, MS4 SWPPPs for applicable “industrial” type Metro facilities. For



ANNUAL REPORT FOR LOUISVILLE METRO GOVERNMENT

“industrial” type Metro Facilities with KPDES Individual Stormwater Discharge Permits, preparation, maintenance, and revision of Best Management Practices (BMPs) in permit-required BMP Plan is an acceptable equivalent for this required activity.

Staff Training

Frequency or Measure of Success	Activity Required
Permittee shall retain copies of training records and training references as provided	Louisville Metro Government – Public Works & Assets shall train staff, as needed, on the SWPPP requirements.

- The permittee shall train the municipal facility staff on the SWPPP requirements, as needed, for facilities that have KPDES Individual Stormwater Discharge Permits, training on BMP requirements is an acceptable equivalent for this required activity.

Metro Government Environmental Program

Frequency or Measure of Success	Activity Required
Permittee shall revise the Environmental Program and manual as needed	Louisville Metro Government – Public Works & Assets shall make recommendations to incorporate the Mayor’s Green Initiative Strategies within the Metro Environmental Program Manual, as needed.

- Louisville Metro Government – Public Works & Assets supports the Mayor’s Green Initiative Strategies through assisting other Louisville Metro Government departments in environmental education and outreach programs and other established environmental initiatives. I.E.- Litter-Free Louisville, Operation Brightside, Community-Wide Planting Days, increasing tree canopies, and supporting the Green Infrastructure Incentives.

Monitoring (M)

- Louisville Metro Government, and its agencies (Public Works & Assets), have an inter-local agreement with MSD, the primary Co-Permittee on this MS4 permit; the responsibilities are divided according to the Part I, Section A.

Performance Assessment and Reporting (PAR)

- Louisville Metro Government, and its agencies (Public Works & Assets), have an inter-local agreement with MSD, the primary Co-Permittee on this MS4 permit; the responsibilities are divided according to the Part I, Section A. Louisville Metro Government – Public Works & Assets shall submit its annual report to MSD for submittal to the Division of Water in the appropriate time frame developed by MSD.

3. LOUISVILLE METRO GOVERNMENT – ZOO

Public Education, Outreach, Participation, and Learning Experiences (PEOPLE)

- Environmental Outreach Events

Frequency or Measure of Success	Activity Required
Permittee shall conduct at least four environmental outreach events annually	Louisville Metro Government – Zoo shall employ its various social media outlets and other electronic communications to discuss pollution prevention information.



ANNUAL REPORT FOR LOUISVILLE METRO GOVERNMENT

- Louisville Metro Government – Zoo continues to conduct their annual environmental outreach events that include Earth Day events, educational night safaris, Zoo-at-the-School and Wetland Programs.

Illicit Discharge Detection and Elimination (IDDE)

- Training session(s) for applicable staff

Frequency or Measure of Success	Activity Required
Permittee shall report number of staff trained per year	Louisville Metro Government – Zoo shall require staff to attend training on the recognition and reporting of illicit discharges as provided by MSD.

- Louisville Metro Government – Zoo ensures that appropriate employees attend the Erosion Prevention and Sedimentation (EPSC) training class. Topics covered include pre-construction planning, design procedures for structural and non-structural Best Management Plans, pollutant removal and inspections.

- Stormwater Improvements

Frequency or Measure of Success	Activity Required
Permittee shall retain project reports and documents	Louisville Metro Government – Zoo shall continue to partner with MSD on identified improvements to the drainage and monitoring systems for control of flow and contamination of Stormwater from facilities.

- Louisville Metro Government – Zoo follows guidance materials for EPSC plan and inspections. Inspections of Louisville Metro Government – Zoo construction sites are conducted by Louisville Metro Government inspectors using a checklist provided by MSD to assist the inspectors and developers on proper procedures and requirements.

Construction Site Stormwater Runoff Control Requirements (CS)

- City construction projects to follow construction site BMP requirements

Frequency or Measure of Success	Activity Required
Permittee shall summarize the contracts, city code officer inspection log of sites and will include with the annual report	Louisville Metro Government – Zoo shall require all contracts specify compliance with the Erosion Prevention and Sediment Control Program requirements and require that in-house projects be inspected for compliance.

- Louisville Metro Government – Zoo follows guidance materials for EPSC plan and inspections. Inspections of Louisville Metro Government – Zoo construction sites are conducted by Louisville Metro Government inspectors using a checklist provided by MSD to assist the inspectors and developers on proper procedures and requirements.

Post-Construction Stormwater Runoff Control for New Development and Redevelopment (PC)

- Louisville Metro Government, and its agencies (Zoo), have an inter-local agreement with MSD, the primary Co-Permittee on this MS4 permit; the responsibilities are divided according to the Part I, Section A.



ANNUAL REPORT FOR LOUISVILLE METRO GOVERNMENT

Good Housekeeping/Pollution Prevention for Municipal Operations

- Municipal Facility SWPPPs

Frequency or Measure of Success	Activity Required
Permittee shall revise SWPPPs as needed and retain the revised SWPPPs on file	Louisville Metro Government – Zoo shall maintain and revise, as needed, MS4 SWPPPs for applicable “industrial” type facilities.

- Louisville Metro Government-Zoo shall maintain and revise, as needed, MS4 SWPPPs for applicable “industrial” type Metro facilities. For “industrial” type Metro facilities with KPDES Individual Stormwater Discharge Permits, preparation, maintenance, and revision of Best Management Practices (BMPs) in permit-required BMP Plan is an acceptable equivalent for this required activity.

Staff Training

Frequency or Measure of Success	Activity Required
Permittee shall retain copies of training records and training references as provided	Louisville Metro Government – Zoo shall train staff, as needed, on the SWPPP requirements.

- The permittee shall train the municipal facility staff on the SWPPP requirements, as needed, for facilities that have KPDES Individual Stormwater Discharge Permits, training on BMP requirements is an acceptable equivalent for this required activity.

Metro Government Environmental Program

Frequency or Measure of Success	Activity Required
Permittee shall revise the Environmental Program and manual as needed	Louisville Metro Government – Zoo shall make recommendations to incorporate the Mayor’s Green Initiative Strategies within the Metro Environmental Program Manual, as needed.

- Louisville Metro Government – Zoo supports the Mayor’s Green Initiative Strategies through assisting other Louisville Metro Government departments in environmental education and outreach programs and other established environmental initiatives. I.E.- Litter-Free Louisville, Operation Brightside, Community-Wide Planting Days, increasing tree canopies, and supporting the Green Infrastructure Incentives.

Monitoring (M)

- Louisville Metro Government, and its agencies (Zoo), have an inter-local agreement with MSD, the primary Co-Permittee on this MS4 permit; the responsibilities are divided according to the Part I, Section A.

Performance Assessment and Reporting (PAR)

- Louisville Metro Government, and its agencies (Zoo), have an inter-local agreement with MSD, the primary Co-Permittee on this MS4 permit; the responsibilities are divided according to the Part I, Section A. Louisville Metro Government – Zoo shall submit its annual report to MSD for submittal to the Division of Water in the appropriate time frame developed by MSD.

**CO-PERMITTEE CERTIFICATION
2023 MS4 STORMWATER ANNUAL REPORT
KPDES PERMIT NUMBER KYS000001**

THE CITY OF ST MATTHEWS is designated as a co-permittee covered by the Municipal Separate Storm Sewer System (MS4) permit that was issued by the Kentucky Division of Water under the Kentucky Pollutant Discharge Elimination System (KPDES) program. **THE CITY OF ST MATTHEWS** has prepared the attached annual compliance report for the reporting period of **July 1, 2022 to June 30, 2023**.

Under the terms of KPDES Permit No. KYS000001 [Part I.A.2], and implemented through an interlocal agreement with Louisville and Jefferson County Metropolitan Sewer District dated _____, **THE CITY OF ST MATTHEWS** certifies that it has responsibility for the following:

- Construction oversight in addition to the regulatory inspections conducted by Louisville MSD pursuant to the Erosion Prevention and Sediment Control Ordinance, Chapter 159;
- Drainage system and outfall mapping;
- Drainage system operation and maintenance;
- Road maintenance and upkeep, including snow and ice removal and related stormwater management activities;
- Drafting and implementing fleet and facility stormwater pollution prevention plans;
- Reporting and referring potential illicit discharges observations by municipal employees or other reports from residents to MSD for investigation and potential enforcement;
- Inspection, operation, maintenance and/or applicable certification that permanent (also known as post-construction) water quality devices, controls, and management practices are operating effectively;
- Implementation of education and outreach within the City of St. Matthews to compliment the education and outreach provided by MSD which is tailored to local water bodies pollutants of concern;
- Preparation and timely submittal of annual compliance demonstration report to MSD according to agreed upon formats and standards; and

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 above statements are, 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."

CITY OF ST MATTHEWS

Name: KENAN STRATMAN

Title: PUBLIC WORKS DIRECTOR

Signature: 

Date: 11/06/23



3.4 COMPLIANCE ACTIVITIES REPORT FOR THE CITY OF ST. MATTHEWS

The City of St. Matthews, Kentucky has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform required activities specified in the KPDES Permit No. KYS000001 to reduce discharge of pollutants and prohibit illicit discharges. The City of St. Matthews was incorporated as a sixth-class city in March of 1950. Since that time, the City's limits have expanded as several neighborhoods been annexed. Since 2000, all residences annexed into the City of St. Matthews, by an ordinances passed by the city council, still pay a storm water fee to MSD. For these specific areas, the City of St. Matthews is not responsible for storm drainage. These areas, and the date they were annexed are as follows:

- Springlee – September 2000
- Plymouth Village – July 2000
- Fairmead – September 2000
- Cherrywood – September 2000
- Broadfields – July 2000
- Springwood – July 2014

This subsection will focus on those activities for which the City of St. Matthews was responsible during the permit period and will document the compliance tasks performed by St. Matthews during the period of July 1, 2022– June 30, 2023.

3.4.1 Illicit Discharge Detection and Elimination (IDDE)

The IDDE program is intended to detect and eliminate illicit connections and improper disposal to the MS4. St. Matthews has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain IDDE tasks. Therefore, only those tasks performed by the City of St. Matthews are listed in this report. MSD performs illicit discharge investigation and follow-up throughout Louisville Metro, including the City of St. Matthews.

In 2011 the City of St. Matthews contracted with HDR to develop a GIS system to map the City's drainage facilities. The interactive site can be used to display all pipes, direction of flow, and sizes. Many of the systems which constructions plans were available can be accessed from the site. In March of 2020 the program that housed the technology was no long supported. The City is actively working with HDR to generate a more up to date system.

3.4.1.1 Illicit Discharge / Illegal Dumping Ordinance IDDE-4

In 2008 the City of St. Matthews put together a hotline list and distributed the list to all its residents via a Newsletter sent to residents four times a year. The intention was to provide a quick and easy to use reference for residents. The hotline provides a directory for city personnel from police to council members. Amongst those numbers on the list is a direct line for individuals to report illegal dumping or illegal discharge into the storm sewer system. The goal is to simplify the reporting process of this illegal act, and to inform the appropriate people so that quick action can be taken. The city has also added this directory of numbers to the St. Matthews website. <http://www.stmatthewsky.org/>

The City has two fulltime employees that are dedicated to Code Enforcement. A part of their daily duties are associated with investigating and enforcing our illegal dumping ordinance.

Signs are posted in areas which continue to be problem areas. City maintenance staff performs inspections at these sites throughout the year in an effort to reduce dumping & improve enforcement.

3.4.1.2 Provide Education on the Revised Wastewater Discharge Regulations IDDE-5

The City of St. Matthews publishes and distributes a newsletter at least four times per year to all residential property owners within the city limits. This newsletter is an excellent vehicle with which to provide information to the citizens and to alert them to issues and programs that affect the community. In the past, small narratives have been periodically provided to inform residents of drainage problems and ways to report them.

In 2009 the City of St. Matthews added a “Green” page to its website. The “Green” page provides links to various websites, including <http://www.louisvillegreen.com>, <http://www.stormwater.kytc.ky.gov/>, <http://msdlouky.org>, & <http://rumpke.com>, all of which provide educational material about the Wastewater Discharge Regulations. In 2022 a new section/link was added specifically for education. The link is to the KYTC stormwater webpage “If its on the ground, its in your water.”

The City of St. Matthews City Engineer and Director of Public Works/MS4 Coordinator have attended all MS4 presentations and meetings held with MSD and other co-permittees staff. Information is then relayed to appropriate staff (ie Public Works and City Council).

Annually the City of St. Matthews hosts an elementary school to show then the “insides” of City Hall and how the government operates. A separate break-out session related to public works and maintenance is given. During this session the Director of Public Works provides a 10 min informative session on what happens to water that goes into the drain. However, since COVID this was cancelled, we are currently working with St. Matthews Elementary to restart the program.

The City is in the planning session of developing an outdoor class room at Community Center Park. The outdoor class room will be located in the city park, next to an existing wetland. The class room can be utilized by local science teachers to aid in the understanding of the environment.

The City recently renovated City Hall and our Free Public Library. With that project, the City added an outdoor class room setting in an area know as the Childrens Garden. The City has been working with library staff to hold children friendly informational classes about the environment.

3.4.2 Construction Site Runoff Controls (CS)

Sedimentation and erosion from land disturbing activities can have severe impacts to stream systems. The City of St. Matthews has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit to perform certain CS program tasks. MSD administers and enforces the Erosion & Sediment Control Ordinance. Therefore, only those tasks performed by City of St. Matthews are listed in this report.

3.4.2.1 Erosion Prevention and Sediment Control Plan (EPSC) CS-1

St. Matthews obtains EPSC and Site Disturbance Permits from MSD on applicable projects constructed with Public Works crews and projects bid out. The City holds themselves and their contractors to the same EPSC standards as private contractors working within the City.



Before a building permit is granted, the developer needs to pay a review fee to MSD for plan approval on all storm and sanitary design. MSD is responsible for all sanitary systems located within St. Matthews, but it does not maintain the storm water system (with the exception of the six areas annexed after 2000). Prior to any approvals, MSD confirms with the City of St. Matthews that there are not any existing complaints or reported problems in the project area.

3.4.2.2 Scheduled Inspections of BMP's CS-5

The City of St. Matthews has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, however MSD administers approval and inspection on EPSC and Site Disturbance Permits for construction projects within the City. For private construction, a city official or representative periodically inspects sites for compliance with the EPSC Ordinance. Should a violation occur, St. Matthews will request MSD's assistance to bring the site into compliance.

3.4.3 Post Construction Controls (PC)

Best Management Practices for managing the increase in impervious area and controlling the subsequent increases in runoff quantity, velocity and pollutant migration include planning for on-site capture systems, protecting stream corridors, and implementing regulations and policies. The City of St. Matthews has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain PC program tasks. Therefore, only those tasks performed by the City of St. Matthews are listed in this report.

3.4.3.1 Pilot BMP Projects PC-2

The City of St. Matthews is known as an urban environment populated with many mature trees and the City intends to keep it that way. Following the ice and wind storms in 2008, the City increased its tree planting efforts in an effort to maintain this atmosphere. During this reported cycle, the city has planted approximately 125 two to three-inch diameter trees. The City's maintenance crews planted the new trees in public parks and in public rights of way. Should residents want a tree in front of their house, inside the City R/W, they can request a tree on the City's website or by calling.

In years past, the City of St. Matthews developed a Storm Water Drainage Master Plan in order to provide a separate storm sewer system for its residents. The City is in its final stages of development of the Master Plan and continuously maintains the areas previously constructed. The plan is continuously updated to handle ongoing issues. During this reported period the City has primarily focused on design project that will be constructed next year.

Trinity Hills Ditch – Regrade and stabilize 1400 LF of Ditch
Draut Park Bank Stabilization – Stabilize 2800 LF of Middle Fork
Girard Drive Drainage Improvements – 450 LF of 15 IN Pipe & 9 Catch Basins

The City of St. Matthews has been actively replacing all open throat catch basins with grated type basins where possible. This program provides improved capture and removal of debris from grates, rather than allowing the debris to enter the separate storm sewer system. During this report period the City has replaced 1 open throat catch basin.



In November of 2015 the City of St. Matthews reconstructed a portion of the ditch along Trinity Hills. The area continuously flood as a resident had filled in the ditch and placed a structure in the easement. Continuous erosion and sediment deposits downstream were constant maintenance issues. The \$78,000 project awarded to E/Z Construction reconstructed 200' of channel and included the instillation of diffusers to help reduce velocities in the channel. In 2017, St. Matthews hired HDR to do a detailed drainage study on the Trinity Hills Ditch drainage area. The purpose of the study was to identify ways to remove 19 homes within a 100 year flood zone. The \$35,000 study revealed option that could remove 13 of the 19 homes and solutions ranged in cost of \$500K - \$2 million. The study was completed in December 2018. The City took preemptive measures and constructed a 3' berm at 4074 Gilman to prevent structure flooding from a 2 year event. The HDR study produced multiple projects. In fall of 2021 the City replaced the culvert under Trinity Hills, cost \$175K. In July of 2020 a drainage project along Massie (est. cost \$150K). In September 2019, St. Matthews entered into a contract (\$180K) with HDR to work on the final design of the Trinity Hills Ditch Design (est. cost \$1.5M). This project is expected to be constructed in 2023.

3.4.3.2 Built-upon Area Reductions PC-3

The City has a program to reduce the number of off-street parking pads within the public right of way. This activity will reduce the amount of impervious surfaces and replace with grass; thus decreasing surface runoff and providing additional filtering of runoff before entering the separate storm sewer systems.

This program provides property owners wanting this service an easy and free solution. Once the resident contacts the City; City forces will remove the pad, haul away the material, regrade the area, & then restore the disturbed area back to turf. During this report period, Nine property owner participated in this program, which is by far more than double the amount we do. To date there have been 40 pads removed from the City right of way, including the 9 green-up during this report period. The program was advertised in the newsletter a few years ago. To help shed light on the program the newsletter runs an add in each newsletter.

The City finalized the revitalization project for the City Hall Campus in July of 2019. The project provides for a complete campus parking and circulation. With the construction of 9,000 SF library addition and new parking lots, the design implements “green technologies” to reduce the overall impervious footprint. The project optimizes parking lot layout and is designed with pervious concrete pavers. The new parking lot was over excavated 2' and backfilled with stone. The pervious pavers in the parking stalls allow the water to infiltrate and store in the stone. The outlet structure was throttled back to allow for more storage and reduce the down stream impacts. A water quality unit was also installed with the project. Weekly the City uses blowers to clean the parking lot to keep the infiltration spaces open.



3.4.3.3 Source Control PC-4

Dumpsters in St. Matthews are required to be fenced for litter control. All garbage cans that are proposed or replaced within the city parks are equipped with lids to limit animal access and to reduce litter resulting from wind. Two/Three times a week, City forces empty the trash in all public trash cans to decrease the occurrence of cans overflowing. All City salt storage facilities are covered with permanent roofs. New developments and redevelopments within the City of St. Matthews require downspouts to discharge onto surface areas or rocked French drains rather than tied directly to the storm sewers. The City (Public Works, Fire & Rescue, and Police) refuel all vehicles at commercial fueling stations to limit the occurrence of unmanaged spills.

3.4.4 Good Housekeeping / Pollution Prevention (GH)

3.4.4.1 Street Maintenance GH-1

The City of St. Matthews abides by the EPSC General Permit regulations. Street maintenance is performed on an as-needed basis, the city utilizes Louisville Metro's annual contract to resurface local streets. All storm drainage projects are finalized with resurfacing to assure positive drainage. St. Matthews uses inlet protection (stone bags and magnetic inlet filters) and/or silt fence on its storm sewer projects to minimize soil and debris entering the storm sewer system. Throughout the year, on an as needed basis, city crews remove storm debris from public rights-of-way and transport to the landfill.

3.4.4.2 Street Sweeping GH-2

The majority of the City's streets are not curbed. This drainage system allows water to run-off into adjacent yards and into small yard inlets. The small yard inlets or catch basins allow time for the storm water runoff to infiltrate the greenscape prior to entering the storm sewer system. The City uses a private street sweeping company, Sweep All, to clean all curbed streets. The majority of the curb streets in St. Matthews are under the direction of Louisville Metro, but St. Matthews takes the initiative to clean these streets. This reduces the amount of pollutants that enter the separate storm sewer system by removing sediment and debris from streets and disposing of them properly. Street sweeping is performed on an as needed basis (min of 2 times per year)

3.4.4.3 Catch Basin Cleaning/ Repair GH-3

Storm sewers are cleaned as needed by city employees or contract services. The usual problem areas are routinely checked. During the fall months, when catch basin blockages are at their highest, City forces use vacuum systems to remove leaves throughout the community's rights of way and catch basin inlets. Debris is transported to a landfill. This report period, the city retained records for removing approximately 46–30 cubic yard dumpsters of mulched leaves. The leaf collection period ran from November 4th, 2022 – January 28th, 2023.



3.4.4.4 Storm Sewer Cleaning GH-4

Storm sewers are cleaned as needed by city employees or contract service. Debris is transported directly to a landfill or place in a dumpster and transported. Below is a list of storm sewer cleanings or repairs performed this report period:

Grandview Catch Basins & Ditch	Approx. 2 CY Leaves over the year
Various CB throughout City	2 times per year

3.4.4.5 Channel Maintenance GH-5

Public Works performs drainage channel maintenance as needed. Maintenance is done during periods of low flow and low frequency. Problem areas are routinely checked and maintained. The debris is transported to a landfill. The following are the areas cleaned and the amount of material removed. This reporting season the City Partnered with four volunteer organizations to help keep the streams cleaned. They visited Community Park and Draut Park twice to pick up litter along the stream deposited after heavy storms.

Kentucky Ave	1 CY
Weicher Creek	3 CY
Trinity Hills Ditch	1 CY
Community Center Park	34 – 30 gal. garbage bags
Draut Park	36 – 30 gal garbage bags

3.4.4.6 Pollution Prevention for De-icing GH-6

Beginning in the winter of 2007, the City of St. Matthews began experimenting with the use of Geomelt, a natural anti-icing fluid derived from sugar beets in its street salting program. The use of this material is expected to allow a reduction of the use of salt as well as fewer applications, which translates into a much more environmentally friendly solution to snow and ice response that uses less fuel and causes less wear and tear on equipment.

During this reporting period, the City did not use and Geo Melt we used Salt that was previous treated.

3.4.4.7 BMP Inspection GH-7

Good Housekeeping / Pollution Prevention BMP's are inspected by public works and construction personnel.

3.4.4.8 BMP Maintenance GH-8

Maintenance activities are performed by city crews and contract services. On 08/15 the City constructed a secondary covered storage bin constructed for mulch, and debris (overflow for salt if needed). In the past this material was just stockpiled and created opportunities for the material to wash out during heavy rain events. The concrete bins provide a confined area to store the material. In August of 2022, the City constructed a 4' wall around a portion of the our laydown yard. Dumpster and other items are stored



there, wall traps any loose items that may fall out of the dumpsters. During this reporting period, the City paved this laydown area to prevent and stored materials from migrating into the soil.

3.4.4.9 Pollution Prevention for Herbicides and Pesticides GH-9

City of St. Matthews uses “Round-up” sparingly on weeds. These chemicals are not bought or stored in bulk by the City of St. Matthews. No pesticides are used. The lack of necessary license limits us to certain operations. The only area that is fertilized is a section of Brown Park, this work is performed under a contract with Tru Green.

3.4.4.10 Continuation of Existing Programs GH-10

The City contracts out the collection of municipal waste, yard waste, and recyclables weekly to Rumpke. The City has operated a leaf collection program citywide since 1990 to assist residents in the collection and disposal of leaves during the fall season. This activity provides the residents a strong incentive to rake leaves in a timely manner and is important in that it dramatically reduces sediment and debris from the separate storm sewer systems and its discharge waters.

This program provides for two to three leaf pickups along each residential street throughout the City during the fall months. The Fall Newsletter identifies an approximate schedule for each street the schedule is also posed on our Website and Facebook page. Signs are posted approximately 1 week in advance of the pickup to provide residents time to rake leaves to the front of their properties.

- During this reporting period, the City filled approximately 46 – 30 cubic yard dumpsters. This yard waste material was collected and placed in steel dumpsters and was picked up and removed by Rumpke.

3.4.5 Public Education/outreach programs (PE)

The Permit included requirements for support of existing programs plus several new initiatives to increase public awareness of water quality issues and to promote a sense of stewardship for the streams in Jefferson County. The City of St. Matthews has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain public education program tasks. Therefore, only those tasks performed by the city are listed in this report.

3.4.5.1 Public Education Programs PE-1

The City of St. Matthews publishes and distributes a newsletter at least four times per year to all residential property owners within the city limits. This newsletter is an excellent vehicle with which to provide information to the citizens and to alert them to issues and programs that affect the community. In the past, small narratives have been periodically provided to inform residents of drainage problems and ways to report them. The City implements an annual drainage improvement program to address surface drainage concerns throughout the city. Typically, drainage projects affecting approximately one block have a public information meeting prior to finalizing the design to solicit input from the public on the problems as well as possible solutions.

The City will continue to utilize its newsletter to provide details about the leaf pickup and yard waste bag/sticker program available to its citizens. Specific program details include scheduled leaf pickup dates



for areas of town, and phone number/contacts for problems or requests for additional pickups.

The City has revamped its website. www.stmatthews.org/. The website provides another, "at your fingertip," source for property and business owners to find the specific information such as leaf pickup, storm damage pickup, recycling programs, etc.. A featured link informs property owners how to choose the correct tree in order to reduce utility costs while maintaining pedestrian and vehicular safety.

Within the website, there is a link for property owners to place a request for a tree to be planted in the R/W at their house. This program not only greens up the city, it gives its residents a viable option to help improve the area at no cost to themselves individually.

3.4.5.2 Earth Day PE-2

The City of St. Matthews at this time does not hold separate Earth Day activities.

3.4.5.3 Litter Control PE-3

The City of St. Matthews has not organized specific events, but uses its public works crew to maintain litter control on streets and public properties. The city has hired employees to empty public garbage cans located within public parks and spaces a minimum of 2 – 3 times a week.

The City has initiated a program to install signs and waste receptacles at City parks and community centers to inform/remind the public they are responsible for cleaning up after their pets. The major city owned public parks now have waste receptacles and bags on site for pet owners' use while on the property. These will be placed at strategic locations within the facilities to maximize availability by the public.

The City partners with several church groups and local scouts in the area as has clean up days in the parks and within the streams. This report period there were 5 different service organization that visited our parks and pick up littler along the streams of Community Park and Draut Park.

3.4.5.4 Internal Training PE-4

The City of St. Matthews Mayor and City Engineer have attended MS4 presentations by MSD staff. MSD attended a city council meeting during this reporting period to inform city council members and citizens about the MS4 program and the roles the co-permittees play.

3.4.5.5 Children Training PE-5

Annually the City of St. Matthews hosts an elementary school to show then the "insides" of City Hall and how the government operates. A separate break-out session related to public works and maintenance is given. During this session the Director of Public Works provides a 15 min informative session to each of the 5 classes on what happens to water that goes into the drain. The City was not able to perform this event this reporting period but is working with local schools to get it reestablished.

The City is in the planning session of developing an outdoor class room at Community Center Park. The outdoor class room will be located in the city park, next to an existing wetland. The class room can be utilized by local science teachers to aid in the understanding of the environment. This fiscal year the City did finalize the construction of an outdoor children's garden associated with our Library. The garden is a fenced in landscaped area that provides for a class room setting. In the spring and fall the library host



various events for kids to learn about the environment and to read. During this period much of the events were cancelled due to COVID related issues and the library Closing.

3.4.5.6 City Festival/Informational Propaganda PE-6

Beginning in the 2015/2016 reporting period the City will provide handouts and other informational material in the City Tent displayed at the various social events. The two main events that will provided information is at the Halloween Festival (held in October at Brown Park) and the Potato Festival (held May).

3.4.6 Monitoring (M)

St. Matthews has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 Permit. St. Matthews provides an annual report which documents the compliance tasks performed during the individual permit periods.

3.4.7 Reporting (R)

St. Matthews has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 Permit. St. Matthews provides an annual report which documents the compliance tasks performed during the individual permit periods.

3.4.8 Financial

This Section provides a summary of the SWQMP Financing. St. Matthews utilizes the SWQMP as a business plan to guide the various agencies and departments in how they will implement the various requirements of the MS4 Permit. While there are interlocal agreements between MSD and St. Matthews, including compensation for the monitoring program, finances are managed separately.



3.4.8.1 St. Matthews

*Includes operating budgets for stormwater related efforts.

St. Matthews Annual Operating Budget for 2020 (\$,000)						
	Fiscal Year					
	2017	2018	2019	2020	2021	2022
Total Operating Budget	20,391	19,826	15,230	16,430	14,295	20,321
Estimated Stormwater Operating Budget*	50	770	1700	1,700	600	500
Annual Capital Budget (\$,000)						
	Fiscal Year					
	2017	2018	2019	2020	2021	2022
MS4 Capital Budget	700	350	800	900	1000	500

Historical Estimated Full Time Equivalent (FTEs)						
	Fiscal Year					
	2017	2018	2019	2020	2021	2022
Stormwater Staff Position (FTE) *	15	14	14	16	14	14

* includes staff from various departments including drainage, engineering, public works, maintenance.. Staff with a portion of their time related to stormwater are consolidated.

CO-PERMITTEE CERTIFICATION
2023 MS4 STORMWATER ANNUAL REPORT
KPDES PERMIT NUMBER KYS000001

THE CITY OF JEFFERSONTOWN is designated as a co-permittee covered by the Municipal Separate Storm Sewer System (MS4) permit that was issued by the Kentucky Division of Water under the Kentucky Pollutant Discharge Elimination System (KPDES) program. **THE CITY OF JEFFERSONTOWN** has prepared the attached annual compliance report for the reporting period of **July 1, 2022 to June 30, 2023**.

Under the terms of KPDES Permit No. KYS000001 [Part I.A.2], and implemented through an interlocal agreement with Louisville and Jefferson County Metropolitan Sewer District dated _____, **THE CITY OF JEFFERSONTOWN** certifies that it has responsibility for the following:

- Construction oversight in addition to the regulatory inspections conducted by Louisville MSD pursuant to the Erosion Prevention and Sediment Control Ordinance, Chapter 159;
- Drainage system and outfall mapping;
- Drainage system operation and maintenance;
- Road maintenance and upkeep, including snow and ice removal and related stormwater management activities;
- Drafting and implementing fleet and facility stormwater pollution prevention plans;
- Reporting and referring potential illicit discharges observations by municipal employees or other reports from residents to MSD for investigation and potential enforcement;
- Inspection, operation, maintenance and/or applicable certification that permanent (also known as post-construction) water quality devices, controls, and management practices are operating effectively;
- Implementation of education and outreach within the city of JEFFERSONTOWN to compliment the education and outreach provided by MSD which is tailored to local water bodies pollutants of concern;
- Preparation and timely submittal of annual compliance demonstration report to MSD according to agreed upon formats and standards; and

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 above statements are, 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."

CITY OF JEFFERSONTOWN

Name: Matt Meunier _____

Signature: *Matthew W. Meunier* _____

Title: Dir. Community Development _____

Date: 10/23/2023 _____



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3.5 COMPLIANCE ACTIVITIES REPORT FOR THE CITY OF JEFFERSONTOWN

The City of Jeffersontown has an interlocal agreement with MSD, the primary Co-Permittee on the MS4 permit, to perform certain tasks and negotiated a new interlocal agreement in 2019. This subsection will focus on those activities for which the City of Jeffersontown, Kentucky was responsible during the permit period of July 1, 2022 – June 30, 2023 and will document the compliance tasks performed by the City of Jeffersontown during the period.

3.5.1 PUBLIC EDUCATION, OUTREACH PARTICIPATION AND LEARNING EXPERIENCES (PEOPLE)

3.5.1.1 Public Education Programs PE-1

The City of Jeffersontown continues to provide downloadable information, services, and participation opportunities available to the public through the Jeffersontown website, <http://www.jeffersontownky.gov/>. These include articles and handouts on recycling and yard waste, as well as pollution prevention activities, catch basin cleaning, and general dumping requirements. Jeffersontown has continued to update the City's website to create a page that will engage residents and visitors and supply them with current information. It also includes alerts using Code Red software. The City has over 10,700 Facebook page followers (9,347 in 2022, 7,978 in 2021, 7,368 in 2020, 6,586 in 2019, 5,716 in 2018, 5,110 in 2017 and 4,446 in 2016), 881 Twitter followers (870 in 2022, 830 in 2021, 805 in 2020, 738 in 2019, 627 in 2018, 497 in 2017 and 395 in 2016), and 1,570 Instagram followers (1,373 in 2022, 1,144 in 2021, 976 in 2020, 798 in 2019, 597 in 2018, 463 in 2017 and 344 in 2016). These followers receive messages by the City, including periodic stormwater messages, providing the ability to reach a greater number of residents through the City's main outreach platforms. The City also participated in community events to further public education and outreach such as the Gaslight Festival and the Farmers Market.

The City will continue to implement their public education program, initiated in 2009, to include public education on the effects of litter, trash, and illegal dumping. This program supplies garbage bags and clean-up materials to volunteers and provides disposal of the collected debris.

The City has found that working with various groups already actively engaged in the community has been the most beneficial for raising public awareness, as well as promoting public involvement. However, due to safety concerns, including drug paraphernalia, the City has scaled back clean-ups with groups. When requested by approved groups, the City evaluates sites and safety, and provides materials for litter clean-ups.

The City staff continue to perform litter pick-up as a matter of routine. The City will provide information through social media regarding the importance of litter clean-up and the connection to stream health.



Other notable programs promoted by the City are as follows:

“Gaslight Clean Up” - This is a Citywide clean-up day aimed at not only litter control but education on the importance of a clean community and the impact litter/trash has on the environment and water quality. If other groups express interest, the City will coordinate with the group giving preference for clean-up participation to adults due to safety concerns.

“Gutter Gremlins” - Street sweeping all around the City and clearing drainage ways allows catch basins to function properly and minimizes flooding in neighborhoods and streets. In most instances, maintaining an effective drainage system will also minimize the possibility of erosion and sediment deposits. The City of Jeffersontown, on average, cleans approximately 350 miles of roadway each year through the Litter Abatement Program. In an effort to maintain water quality, the street sweeping crew has sought to clean every street throughout Jeffersontown at least once this past year, not just the main thoroughfares. The visibility of the street sweeper also raises awareness of the importance of litter control.

“Bright Spot” - This program explores places that could become a bright spot for the City instead of areas that may hold water (which may become mosquito breeding grounds), begin or continue to erode, or otherwise be unattractive. Establishing landscaping and vegetation relative to these features enhances the visual quality of community while providing a balance between surface runoff and stormwater management planning. When a Homeowners Association (HOA) expresses interest, the City partners with the HOA. For the reporting period, the City communicated with HOA boards regularly throughout the permit year including Monticello Place, Watterson Woods, Southern Breeze, Raintree Meadows, and Stonybrook Woods.

“Tree Treasure Program” - This is an educational and sponsorship program that supports planting trees throughout the City and along riparian ways. Developing a strategy for plantings will create a stable environment to promote good stewardship of the land. This program continues to grow as people become aware of the significance of trees and the benefits provided by them. Many additional trees have been planted in Veterans Park during the redesign of the park.

“Recycle-Reuse-Renew Environmental Educational Program” - The City has a robust recycling program which is promoted on the City website. The City is moving toward a social media platform for education and outreach but continues to distribute fliers to schools and churches in an effort to increase awareness of these efforts within our community and environment.

“Jefferson Gardens” - This program includes community gardening to promote a healthy lifestyle, while also using gardens to help promote the absorption of storm water runoff (i.e. rain gardens). Native plants infiltrate greater amounts of stormwater and filter pollutants. The City has made progress on expanding this program by reaching out to community groups such as the Reserve Officer Training Course (ROTC), Boy Scouts of America and other school service projects to connect them with the importance of keeping the streams, channels, ditches, and drains free of debris and pollutants from dumping. Through the City-sponsored Farmer’s Market, flyers and handouts have been distributed to increase awareness of community gardens and the proper maintenance of them during off-seasons. The City will continue to track requests to participate in this program. During this reporting period there were no requests for participation.



3.5.1.2 “Gaslight Clean Up” PE-2

The City of Jeffersontown organizes “Gaslight Clean Up” which promotes National Earth Day efforts. In the past, residents pick up litter and clean creeks throughout the City. Due to safety concerns related to needles and other safety issues, the City has limited City sponsored clean ups with civic and church groups. The City is currently exploring other opportunities, which will be documented in the next permit cycle and reported in the annual report. If an interest group requests to participate, the City will identify a potential location. The City supplies garbage bags and is responsible for properly disposing of collected debris. City officials connect with the public regarding various public issues, including stormwater at the annual Gaslight Festival.

3.5.1.3 Litter Control Patrol PE-3

During prior permitting years, the City provided litter abatement five (5) days a week by utilizing work release programs to perform roadside cleanup. Typically, there were 3-4 inmates in a crew for roadside maintenance activities. However, this program has been discontinued and City staff perform the litter abatement. Municipal employees continue to routinely inspect high traffic areas to gauge program success, as well as to target new areas in need of attention. City employees are also utilized in collection efforts. In 2022-23, there were 975 trash bags collected through the Litter Abatement Program.

3.5.1.4 Internal Training of City Officials and Employees PE-4

The City of Jeffersontown’s Director of Community Development and Assistant to the Mayor has attended MS4 presentations and meetings held with MSD staff. These include the co-permittee coordination meetings held throughout the year. The City attended co-permittee meetings on February 28, 2023 and June 13, 2023; as well as the MSD Field Day on May 18, 2023. The City also attends Kentucky Stormwater Association (KSA) meetings. During the current permit year, the City attended KSA meetings on November 3, 2022, February 9, 2023, and April 18, 202. The City attended the KSA Annual Conference on July 12-14, 2023.

Jeffersontown had a series of employee training materials developed, in association with a third-party facility inspection, at the City’s Public Works Department located at 10317 Grant Avenue. The training materials cover a wide variety of issues pertinent to stormwater awareness for municipal employees. Additionally, the City utilizes available MSD materials for municipal employee and public education. The City employs a Safety Director who has overseen training and safety meetings, including mowing and equipment maintenance, for municipal Public Works employees. The Safety Director and Director of Public Works has attended safety conferences with Kentucky League of Cities (KLC), state agencies, equipment safety meetings, and has educated the Public Works Department during meetings and during day-to-day activities.

3.5.1.5 External Training PE-5

The City of Jeffersontown is developing signage, Stormwater 101, that will be used to engage students and the public along bike/pedestrian trails. The City is also pursuing a partnership or sponsorship with members of the community to provide certain amenities to the developing



bike/pedestrian trail system in the City. The goal of the partnership is to develop story boards and signs that will educate the biking/walking community about various water quality issues and stormwater management issues including floodplains, erosion and sediment control, stream water quality, and environmental awareness. The City reviewed draft signage in 2022 with City of Jeffersontown branding standards for future use. The City developed draft signage covering both water quality and quantity that will be located at Grassland Trail.

The City has eight (8) employees who have attended the EPSC certification training course. The City also provides brown bag luncheons on new trends and activities that could benefit the City and community. During this reporting period, City officials received external training on such topics as municipal facilities management, municipal field and maintenance activities, public education and outreach, and overall stormwater quality strategies. This external training, given to department heads, was then distributed to other City employees, in a “train-the-trainer” system. The City is continuing to find ways to connect with key employees and first responders to increase awareness of stormwater management and the things that impede these efforts.

The Director of Community Development and Assistant to the Mayor attended the Jeffersontown Chamber Business Blast during this permit period on March 22, 2023 and June 21, 2023 as well as a joint outreach opportunity with MSD at the Jeffersontown Farmer’s Market on September 17, 2022.

3.5.1.6 Kentucky Stormwater Association (KSA) PE-6

The City of Jeffersontown regularly attends Kentucky Stormwater Association (KSA) meetings, and actively participates in KSA discussions. The Director of Community Development and Assistant to the Mayor, has attended three KSA meetings this period (November 3, 2022 and February 9, 2023, and April 18, 2023), as well as the past Annual KSA meetings from 2012 – 2019 and 2021 - 2023. KSA provides members with training on MS4 water quality topics, industry trends, new technologies, and shared experiences from across the state of Kentucky. It also provides an opportunity for members to interact with state and federal regulators. KSA routinely coordinates with the Kentucky Division of Water (DOW) on current and upcoming regulations, and for education and outreach opportunities. Membership in KSA has helped keep the City of Jeffersontown knowledgeable about MS4 topics which may affect the City.

3.5.1.7 Kentucky Transportation Cabinet (KYTC) – Public Education Materials PE-7

The City of Jeffersontown utilizes existing educational materials whenever feasible, including KYTC’s MS4 Toolkit Resources, MSD-developed educational content, EPAs Educational Toolkit, and other educational stormwater materials. Jeffersontown feels that utilizing KYTC, MSD, and EPA educational materials allows for the dissemination of proven educational content, as well as facilitates a regionally consistent message.

3.5.1.8 Jeffersontown – Coalition of Neighborhoods PE-8

In 2002, the City of Louisville was divided into eight Coalition of Neighborhoods as part of a county-wide, grassroots, non-profit group to promote environmental, economic, and community



development. Jeffersontown has been implementing a Coalition of Neighborhoods program throughout the City to promote a variety of efforts to benefit the overall stormwater program, including litter control, community beautification, and neighborhood stormwater management.

HOAs are active in Jeffersontown, and efforts continue to be implemented to further coordinate with these groups. The Public Works Director coordinates with the HOA Boards regularly. The Director of Community Development and Assistant to the Mayor attended five HOA meetings: Monticello Place, Watterson Woods, Southern Breeze, Raintree Meadows, and Stonybrook Woods.

3.5.2 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

3.5.2.1 Mapping IDDE-1

Jeffersontown retained a professional consultant to assist with mapping the City's stormwater infrastructure in 2012 and has performed updates as needed. Mapping and collection of stormwater outfalls and proximal infrastructure has been compiled into a geographic information system (GIS) to facilitate Citywide sharing, tracking, and simplified infrastructure updates. City staff have been actively involved with the mapping process, and employees have received hands-on training for mapping and system screening efforts. Citywide mapping was completed in January 2014, while annexations were mapped in 2016 and 2020.

The City completed the development and is implementing surveys in Survey 123 to aid with City mapping and document routine maintenance.

3.5.2.2 Illicit Discharge / Illegal Dumping Ordinance IDDE-2

The City of Jeffersontown enforces the MSD Wastewater/Stormwater Discharge Regulations ordinance, effective November 26, 2013, which applies to incorporated cities in Jefferson County. The regulations prohibit non-stormwater discharges to the MS4, prevent illicit discharges and improper disposal of chemicals and other materials which degrade water quality, and provide enforcement mechanisms.

City staff investigate areas regularly and respond to resident complaints. The City has established a database entry portal called Community Awareness Tracking System to serve as a first line quick response system. This web-based system is used to track complaints and concerns from the community in an effort to minimize the response time to various issues. It controls the proper direction of the particular issue to the appropriate department. The service request entry system is available on the City website.

For this permit year, outfall inspections were completed at eight (8) locations. There were no major problems reported.



In 2013, the City executed a Memorandum of Agreement (MOA) with MSD that contains provisions for the enforcement of illicit discharges. This MOA outlines the roles and responsibilities for how investigations will take place, when parties will get involved, and how countermeasures are deployed in the event of an active spill. This agreement will help with appropriate countermeasures and cleanup to larger incidents, as MSD is better equipped to manage such events, should they occur. The Interlocal Agreement was updated in November 2019.

3.5.2.3 Provide Education on Illicit Discharge Detection and Elimination IDDE-3

The City of Jeffersontown previously published a bi-monthly newsletter which periodically contained information on the proper disposal of leaf debris and other ways in which water quality is affected. Costs associated with the newsletter became prohibitively expensive. Consequently, the City developed an e-newsletter system where residents can subscribe to various newsletters through email regarding City events and news. Subscription services are available on the City's updated website. Stormwater information was included in the fall, spring, and summer e-newsletters. Text message alerts are also available. Alerts are also available on the City's social media Facebook page and Twitter newsfeed. Currently, the City has over 10,700 Facebook page followers (9,347 in 2023, 7,978 in 2021, 7,368 in 2020, 6,586 in 2019, 5,716 in 2018, 5,110 in 2017 & 4,446 in 2016), 881 Twitter followers (870 in 2022, 830 in 2021, 805 in 2020, 738 in 2019, 627 in 2018, 497 in 2017 & 395 in 2016), and 1,570 Instagram followers (1,373 in 2022, 1,144 in 2021, 976 in 2020, 798 in 2019, 597 in 2018, 463 in 2017 & 344 in 2016). These followers receive all messages by the City, including periodic stormwater messages reaching a greater number of residents through the City's main outreach platforms. As more constituents embrace tablets, smart-phones, and other handheld devices, the City believes this will be a more effective and efficient system moving forward. This is anticipated as a more effective method for the City to communicate with citizens not only during storm events but as an educational tool to keep people informed.

3.5.2.4 Co-permittee IDDE-4

The City of Jeffersontown attends and actively participates in co-permittee meetings when they are held. Jeffersontown staff and other co-permittees discuss common IDDE problems, detection strategies, educational and outreach measures, and opportunities for more program consistency countywide. The Director of Community Development and Assistant to the Mayor attended co-permittee meetings on November 18, 2022, February 9, 2023, and April 2023.

3.5.3 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (CS)

3.5.3.1 Jeffersontown/MSD Partnership CS-1

The City of Jeffersontown has continued to partner with MSD through a formal Interlocal Agreement. This agreement, entered into in 2013, outlines the roles and responsibilities for both Jeffersontown and MSD. The City signed a new Interlocal Agreement with MSD in November 2019.



The City has a working relationship with MSD for the development review process which includes construction inspection and coordinated approval of construction plans including drainage improvements. MSD is the permitting agency for all development construction and they perform site inspections until such time as the bonds and construction is completed. Once it is completed, the City begins to provide the management oversight and drainage maintenance responsibilities. On all City-funded drainage projects, the City maintains the best management practices (BMPs) for erosion protection and sediment control (EPSC) and general construction inspection services. The City receives an approved EPSC permit from MSD for each project, along with general information under our general permit with the DOW and MSD.

3.5.3.2 Erosion Prevention and Sediment Control (EPSC) Plan CS-2

The City continues to support MSD in highlighting the basic requirements for EPSC practices. Additionally, Jeffersontown has developed a binder containing resource materials and other information that is used to educate contractors, developers, and the general public. The City also relies on KYTC's Environmental Resource Handbook, which contains numerous one-page factsheets on EPSC activities.

The City of Jeffersontown follows the provisions of the Louisville and Jefferson County Erosion Prevention and Sediment Control ordinance, Ord. No. 186, Series 2007. The ordinance was adopted on November 21, 2000, and is intended to conserve, preserve, and enhance the natural resources throughout Jefferson County by controlling degradation caused by soil erosion and sedimentation from land disturbing activities. The required EPSC measures follow the requirements of the KPDES Permit and outlines design standards, maintenance procedures during construction, and enforcement procedures.

3.5.3.3 Scheduled Inspection of Maintenance of BMPs CS-3

Eight (8) members of the City of Jeffersontown staff are certified in EPSC practices and are available to assist MSD with inspections of construction sites to assist with the implementation of the EPSC Ordinance. Typically, City staff will alert MSD of a citizen complaint and/or City staff observations related to active construction sites. Jeffersontown staff continue to work with MSD to implement consistent, standardized requirements for construction site inspections. As previously mentioned, Jeffersontown has an interlocal agreement with MSD for approval of EPSC plans, as well as monitoring and inspection of active construction sites.

3.5.3.4 Construction Development Plan Process CS-4

The City of Jeffersontown continues to work with MSD to review and update guidance materials for developers regarding construction permits and procedures, as needed. The City works with MSD to review EPSC Plans, as part of the application and construction drawings, for approval. If required, a pre-construction site meeting will be held before a site disturbance permit will be issued. A checklist for EPSC Detailed Construction Plans is available on the MSD website. During the 2022 annual reporting period, the City developed surveys in Survey 123 to electronically document EPSC and post-construction site visits. The City completed the surveys during the 2023 annual reporting period and is currently using Survey 123 to document site visits.



3.5.3.5 Collaborative Guidance and Training CS-5

The City of Jeffersontown continues to work with MSD to help educate design engineers on appropriate erosion prevention and sediment control (EPSC) measures most appropriate for the various construction site conditions. Jeffersontown will continue to encourage engineers and contractors to take the EPSC training certification courses offered by MSD.

3.5.4 POST CONSTRUCTION CONTROLS (PC)

3.5.4.1 Pilot BMP Projects PC-1

During the first permit term, the City of Jeffersontown was required to complete a minimum of three BMP Pilot Projects. One of the projects the City of Jeffersontown implemented was a no-mow forest restoration area on a steep slope of Veteran's Park above Chenoweth Run. Also, the wooded riparian buffer along Chenoweth Run is protected in City easements. Lastly, approximately 80% of City of Jeffersontown's grass channels have at least a ten-foot buffer strip, which filters runoff before it reaches the stream and helps improve water quality. The City will continue to provide oversight for these ongoing projects.

In association with these and other post-construction BMPs, Jeffersontown is revisiting the checklist to implement a user-friendly tracking system to aid in the review of post-construction BMPs. The City finalized the excel tracking document to document the review of BMPs. During the 2022 annual reporting period, the City developed surveys in Survey 123 to electronically document EPSC and post-construction site visits. The City is using Survey 123 to document EPSC and post-construction site visits.

The City expanded Veterans Park, as referenced above. This project adjoins Chenoweth Run and reconnects park visitors to nature and the local waterway. As part of the redesign, the City included two bioswales and an Aqua-Swirl water quality unit. The City anticipates installing educational signage to further promote water quality awareness prior to the end of this permit cycle.

Also referenced above is Jeffersontown's commitment to working with local HOAs to identify projects to improve water quality for private detention/retention systems. Monticello Place is an example of a study performed by the City with the focus on partnering with HOAs on stormwater enhancement projects.

3.5.4.2 Built-Up on Area Reductions PC-2

The City of Jeffersontown has adopted and observes the water quality provisions of Cornerstone 2040 which represents a vision of the next twenty years of Louisville and Jefferson County's Metro Government, including the City of Jeffersontown, to make the area more attractive, mobile,



efficient and environmentally aware. A primary vision of this community plan is to protect environmental resources as the population of the area increases.

3.5.4.3 Collaborative Guidance and Training PC-3

Consistent with the 2020 Audit conducted by DOW, the City of Jeffersontown developed the checklist and later improved the checklist by creating a survey in Survey 123 to implement a post-construction runoff control tracking system, consistent with MS4 permit and SWQMP requirements, that will be used for observing post-construction stormwater management controls. The City will continue communications with MSD throughout this process.

The City of Jeffersontown encourages people involved with stormwater to attend the MSD Qualified Post-Construction Inspector Program (QPCIP). Certification allows a person to perform inspections and oversee maintenance activities for stormwater quality BMPs.

3.5.5 GOOD HOUSEKEEPING / POLLUTION PREVENTION FOR MUNICIPAL OPERATIONS (GH)

During the 2022 reporting period, the City developed surveys in Survey 123 to track maintenance activities for municipal operations including street sweeping and stormwater infrastructure.

3.5.5.1 Street Maintenance GH-1

Street maintenance in Jeffersontown is performed on an as-needed basis and follows EPSC General Permit requirements. Appropriate EPSC measures, such as silt fencing and catch basin inlet protection are used during maintenance activities.

In 2022-2023, there were 975 trash bags collected through the Litter Abatement Program.

3.5.5.2 Street Sweeping GH-2

The City of Jeffersontown regularly performs vacuum sweeping five (5) days per week, except in winter months. During the current reporting period, the street sweeper was used irregularly due to maintenance issues. A new truck was purchased during the reporting period. The City of Jeffersontown vacuum-sweeps heavily traveled roads more often but has also swept residential and side-roads during this past year. The City of Jeffersontown swept approximately 221 miles of roadway during the reporting period, collecting approximately 100.30 tons of debris. The number of miles decreased due to maintenance needs with the street sweeper. The City maintains sweeper logs documenting the daily locations for street sweeping. These logs are available upon request. Woody debris that is collected is sent through the chipper-shredder for easier disposal. The debris collected during street sweeping is sent to a transfer station where it is weighed before being sent to a landfill. In 2022-2023, the City collected 159,180 pounds (79.59 tons) of debris from street sweeping.



3.5.5.3 Catch Basin “Gutter Gremlins” GH-3

The previous permit term, the City mapped its entire storm sewer infrastructure, including all catch basins. Jeffersontown catch basins are cleaned as needed, although an effort is made to clear catch basins prior to a storm event to prevent flooding from clogged drains. The collected debris is sent to a landfill.

In the past, the City has collaborated with MSD to implement the “FOG No Dumping! Drains to our Creeks” program, whereby the City placed decals on catch basins promoting the no dump provisions. This was in conjunction with the City’s annual clean-up program, which is a community-wide event to pick up litter, clean debris from streams and other parts of the City. Inspections are made of catch basins, detention basins and drainage courses to make sure they are free of debris that would impede positive drainage.

The City has continued efforts through its education and outreach programs aimed at educating the public on the importance of minimizing erosion and sediment deposits, litter, and the importance of a clean and green community. The City has implemented several additional programs beside litter control.

3.5.5.4 Storm Sewer Cleaning GH-4

Jeffersontown storm sewers are cleaned as needed, especially prior to a rain event. The City is working to develop inspection standards for drainage easements and stormwater channels. A draft checklist has been created, and will be updated as needed, as conveyance systems are inspected and maintained. The online citizen request tracker has been used to target areas where maintenance is needed.

3.5.5.5 Channel Maintenance GH-5

The City of Jeffersontown has a fulltime drainage crew that maintains concrete channels as needed. Grass channels are maintained on a regular schedule. The debris removed during drainage channel maintenance is sent to a landfill, although large woody debris is shredded first. The online citizen request tracker has been used to target areas where maintenance is needed.

3.5.5.6 Pollution Prevention for De-icing GH-6

The City of Jeffersontown calibrates the salt spreaders with the manufacturer as needed and inspects de-icing equipment at least annually. Brine pretreatment is applied at the beginning of the storm to minimize the amount of salt required. Sand and salt are also used as needed to maintain motorist safety. There are twenty-two (22) de-icing trucks used by the City, which are cleaned after events.

Jeffersontown has focused on investing in infrastructure that will reduce potential pollutant exposure and releases to the drainage system. Construction on the new salt storage facility was completed at the beginning of August 2016. This sizeable project has helped reduce salt loss and pollutants from reaching nearby streams.



3.5.5.7 BMP Inspections and Maintenance GH-7

Good Housekeeping / Pollution Prevention BMPs are inspected monthly by the Public Works/Maintenance Director. Inspections are tracked using a log which is kept in the Stormwater Municipal Operations Plan binder at the Public Works Facility. BMPs inspected include the fuel storage tanks, fuel island, salt barn, vehicle impound lot, AGG piles, oil storage facility, drains in the workshop, and spoil piles. Good Housekeeping / Pollution Prevention BMPs are regularly maintained; however, if a problem is discovered during the monthly inspection, immediate action is taken. A Spill Inventory Form is utilized by the City to track spills and cleanup actions taken. In the reporting period (July 2022-June 2023), no spills of reportable quantities were documented on the inspection forms.

The City employs a Safety Director who holds regular training sessions for Public Works employees to enhance oversight of various construction projects, safety, and stormwater quality within the City. The City utilizes various training materials, including an easy-to-follow training manual with nine categories, focused on such topics as vehicle maintenance and refueling, deicing operations, illicit discharges, and spill response. The education system is designed to be flexible by allowing new materials to be regularly delivered over the course of the year. Alternatively, new/seasonal employees can review the entire training program when first hired to provide a comprehensive review of stormwater quality initiatives.

3.5.5.8 Source Controls GH-8

The City of Jeffersontown's Public Works Department has an approved Hazardous Materials Use and Spill Prevention Control (HMPC) Plan to cover such items as salt storage areas and refueling areas. All dumpsters located within the City of Jeffersontown must be covered and fenced. The City continues to monitor these point source areas and maintains a high level of control for possible runoff.

In 2013, the City finalized and adopted a Stormwater Municipal Operations Plan (SMOP) for the Public Works Facility located at 10317 Grand Avenue. This plan contains information regarding water quality with respect to municipal operations at the facility, as well as general recommendations for municipal operations in the field. The plan also contains training logs, outfall inspection sheets, and facility maintenance inspection sheets to document activities on the site. In the process of developing this plan, Jeffersontown reviewed a copy of MSD's facility stormwater pollution prevention plan (SWPPP), which was developed for MSD's central maintenance facility.

The City has updated all documents utilized to record the various activities of the City. Checklists were updated and created to track activities, and proper procedures for various activities such as stormwater management, hazardous material, point source places were developed. During this reporting period, the City's consultant performed a third-party review of the Public Works Department facility for stormwater quality considerations. The City will use these observations to update materials including the facility map to document the new Public Works building.



3.5.5.9 Pollution Prevention for Herbicides and Pesticides GH-9

Appropriate Jeffersontown employees are licensed by the Commonwealth of Kentucky for herbicide and pesticide application. Currently, there are three (3) employees who are licensed to perform herbicide and pesticide applications for the City.

3.5.5.10 Continuation of Existing Programs GH-10

The City of Jeffersontown has a contractor collect municipal waste, yard waste and recyclables weekly. Residents within the City participate in the recycling program. The City of Jeffersontown picks up appliances with Freon and has a contractor properly manage and recycle these appliances.

3.5.5.11 Stormwater Pollution Prevention Plans for Co-permittee Operations GH-11

The City regularly attends co-permittee meetings with MSD and will continue to actively participate in the co-permittee partnership. The City will explore additional opportunities to collaborate and share resources, as well as participate in peer reviews for program enhancements. The City and/or the City's representative attend regularly scheduled co-permittee meetings. The City and MSD performed a joint walk through of the Jeffersontown Public Works Facility on June 27, 2022 to perform a peer review of the SWPPP and the associated operations at the Facility. The City is updating its Municipal Operations Plan to reflect changes at the facility, including the acquisition of a storage facility.

A Master Plan for Veterans Park, adjacent to the site where the Jeffersontown WQTC was removed, has been developed and takes into account water quality. Taylor, Siefker, Williams Design Group gave presentation of the conceptual plan for the New Veterans Park layout to the City Council on January 20, 2015. Work on the project has continued through 2023. Future phases are anticipated into 2024, including construction. The City is in the process of constructing an adaptive reuse project of the former location of the Jeffersontown WQTC that will include an amphitheater, green space, and stream bank restoration to minimize sedimentation and erosion.

3.5.6 MONITORING (M)

The City of Jeffersontown has an interlocal agreement with MSD to perform the monitoring requirements of the MS4 permit. Watershed monitoring performed on Chenoweth Run characterized the water quality of the stream within the City of Jeffersontown MS4 area.



3.5.7 PERFORMANCE ASSESSMENT AND REPORTING (PAR)

The City of Jeffersontown has an interlocal agreement for MSD to prepare the Annual Report. The City of Jeffersontown has provided information on the implementation of the MS4 permit requirements of the City to MSD for this report.

City personnel provide quarterly updates on the Stormwater Program to the City Council. Stormwater was discussed in committee reports throughout the year.

3.5.8 BUDGET: PERSONNEL, CAPITAL PROJECTS, AND SUPPORT SERVICES

The City of Jeffersontown estimates the following summary to support the stormwater program:

Personnel/ Staffing

City Hall Staff - MS4 Coordinator - Director of Community Development and Assistant to the Mayor

Public Works Director

Twenty-five (25) full-time employees (Public works employees are being cross trained regarding stormwater practices)

Capital Projects & Drainage Related Projects (2022-23)

Drainage: \$300,000

MS4 Program: \$25,000

(Outfall screening; catch basins and drainage ways maintenance; community outreach)

Co-permittee Commitment

Jeffersontown portion of co-permittee responsibilities:

Public Education (PEOPLE), Monitoring by MSD Staff (annual fee) \$33,759

IDDE Control Program Requirements (unit cost per event) \$4,321

Industrial Program Requirements (unit cost per event) \$500-\$2,500

*Costs will automatically escalate 3% annually.

PICTURES, CHECKLISTS, CHARTS AND REPORTS ARE AVAILABLE UPON REQUEST.

CHAPTER 4 TOTAL MAXIMUM DAILY LOADS

4.1 BACKGROUND

The Kentucky Division of Water (DOW) uses monitoring data they collect as well as data collected by other agencies to assess whether waterbodies are attaining their designated uses with respect to water quality standards. The term **waterbody** refers to a stream, river, pond, or lake. For streams and rivers, the extent of the waterbody is reported in miles from the downstream confluence (mile 0.0) to the upper extent of the assessment. For ponds and lakes, the assessment is reported in acres. The Kentucky DOW assigns the extent of the assessment based on the location of monitoring station(s), changes in land use, location of major tributaries and other factors.

Designated uses that apply to some or all Jefferson County waterbodies include:

- Warm Water Aquatic Habitat (WAH) – fish and other aquatic life
- Primary Contact Recreation (PCR) – swimming
- Secondary Contact Recreation (SCR) – wading and boating
- Fish Consumption (FC) – contaminants in fish consumed by humans
- Drinking Water Supply (DWS) – protects the quality of water used for potable supplies at the point of intake

The Kentucky DOW assesses each designated use separately using methods described in Consolidated Assessment and Listing Methodology: Surface Water Quality Assessment in Kentucky, The Integrated Report (KDOW, 2015) and Addendum to the CALM: Kentucky's Updated Fish Consumption Methodology (KDOW 2020). Results are placed into one of three *designated use attainment categories*:

- Full Support (FS): the designated use is fully supported, the use is not impaired
- Partial Support (PS): the designated use is partially supported, the waterbody is impaired
- Non-Support (NS): the designated use is not supported, the waterbody is impaired

Kentucky DOW places each assessed waterbody into one of five assessment categories, which are summarized on **Table 4.1.1**. Good quality waterbodies are placed into Category 1 or 2, because monitoring data shows that all assessed designated uses are fully supported. Waterbodies that have not been monitored or assessed are placed into Category 3. Waterbodies with one or more designated use impairments are placed into Category 5 until a Total Maximum Daily Load (TMDL) is completed and approved for the impairment(s). Once the TMDL is completed for all the impaired uses, the waterbody is moved to Category 4, if impairment still exists. If the waterbody is monitored and found to be attaining all the designated uses after a TMDL is completed, it is moved to Category 2C.

Note that a waterbody can be listed in only one (1) category that reflects the worst-case assessment if impairments are found. Therefore, if a waterbody is classified as Full Support for Warm Water Aquatic Health, but Partial Support (i.e., impaired) for Primary Contact Recreation, it is included in Category 5. If a waterbody is classified as Full Support for one or more designated

uses and the other uses are classified as Not Assessed, the waterbody is classified as Full Support (i.e., not impaired).

Table 4.1.1 – Assessment Categories

Category	Definition
1	All designated uses for water body fully supporting.
2	Assessed designated use(s) is/are fully supporting, but not all designated uses assessed.
2B	Segment currently supporting use(s), but 303(d) listed & proposed to EPA for delisting.
2C	Segment with an EPA approved or established TMDL for the following use(s) now attaining Full Support. TMDL approval # _____
3	Designated use(s) has/have not been assessed (insufficient or no data available).
4A	Segment with an EPA approved or established TMDL for the listed uses not attaining full support. TMDL approval # _____
4B	Nonsupport segment with an approved alternative pollution control plan (e.g. BMP) stringent enough to meet full support level of all uses within a specified time.
4C	Segment is not meeting full support of assessed use(s), but this is not attributable to a pollutant or combination of pollutants.
5	TMDL is required.
5B	Segment does not support designated uses based on evaluated data, but based on Kentucky listing methodology insufficient data are available to make a listing determination. No TMDL needed.
Definitions	
WAH	Warm Water Aquatic Habitat (fish and other aquatic creatures)
PCR	Primary Contact Recreation (swimming)
SCR	Secondary Contact Recreation (wading and boating)
FC	Fish Consumption (contaminants in fish consumed by humans)
DWS	Drinking Water Supply (Applies at the Ohio River intakes – Mile 600.6 and 594.7)
FS	Fully supports the use
PS	Partially supports the use and is considered to be impaired
NS	Non-support of the use and is considered to be impaired
Source: Consolidated Assessment and Listing Methodology (CALM): Surface Water Quality Assessment in Kentucky, the Integrated Report (KDOW 2015). And Addendum to the CALM: Kentucky's Updated Fish Consumption Methodology (KDOW 2020).	

Approximately every two years, Kentucky DOW publishes an Integrated Report. The draft 2022 303(d) list was open for public input February 21 – April 22, 2023. The 2022 Integrated Report to Congress on the Condition of Water Resources in Kentucky was released by Kentucky DOW on June 9, 2023, and received EPA approval of Kentucky's 2022 303(d) list on July 7, 2023. The report describes monitoring and assessment results, TMDL development, de-listing and water quality programs. Waterbody-specific assessment results (305b) and impaired waterbodies list (303d) were provided in an Integrative Report Hub Site (<https://integrated-report-site-kygis.hub.arcgis.com/>) and in spreadsheets. Integrated reports and appendices are available to be downloaded from the following website: (<https://eec.ky.gov/Environmental-Protection/Water/Monitor/Pages/IntegratedReportDownload.aspx>).

The 303d List is first issued as a draft subject to public comment and is finalized after responding to public comments and approval by USEPA. The draft 303(d) List includes the following categories:

- Delisting Requests – monitoring and assessment data show that designated uses are currently attained, or that the original listed was in error.

- Draft New Listings – monitoring and assessment performed since the last report have identified new impairments.
- Draft Current Year Listings – the compiled list of waterbodies that have one or more impairments.

USEPA may request more information, approve, or deny changes to waterbody status that are proposed by KDOW. These reports are required by the Clean Water Act.

Kentucky DOW is responsible for developing Total Maximum Daily Loads (TMDLs), i.e., waterbody clean-up plans, for the Kentucky waterbodies that are included on the 303d List. The 2022 Integrated Report is the most recent final document and was used to prepare this chapter of the MS4 Annual Report. Assessed waterbodies can be viewed in the Kentucky Water Health Portal mapping application: <http://watermaps.ky.gov/WaterHealthPortal/>. The assessment status of Jefferson County waterbodies per the final 2022 305(b) Workbook is summarized on **Table 4.1.2**.

Table 4.1.2 – 2022 Assessment Status of Jefferson County Waterbodies

Category ^{(1) (2)}	Stream Segments ⁽³⁾	Stream Miles	Lake Count	Lake Acres
2 - Assessed designated use(s) is/are fully supporting, but not all designated uses assessed.	0	0	5	48.4
4A - Segment with an EPA approved or established TMDL for the listed uses not attaining full support.	25	124.5	0	0
4C - Segment is not meeting full support of assessed use(s), but this is not attributable to a pollutant or combination of pollutants.	1	4.4	0	0
5 - TMDL is required.	32	238.7	2	63.2
Totals	58	367.6	7	111.6
Notes				
<ol style="list-style-type: none"> 1. As of the 2022 Integrated Report, no waterbodies were assessed as Category 1. All designated uses for water body fully supporting. 2. The 2022 Integrated Report does not identify waterbodies in Category 3 in Jefferson County. Designated use(s) has/have not been assessed (insufficient or no data available). 3. Eight (8) Ohio River stream segments listed for Jefferson County account for 113.1 stream miles. A total of twelve (12) internal (non-Ohio River) streams were listed as crossing county boundaries with Oldham, Shelby, Spencer, and Bullitt Counties. 				

In the sections that follow, the status of Jefferson County waterbodies, as reported by the approved Kentucky DOW 2022 Integrated Report are described in more detail.

4.2 JEFFERSON COUNTY WATERBODIES THAT FULLY SUPPORT ASSESSED DESIGNATED USES

The following Jefferson County waterbodies were shown to be fully supporting assessed designated uses in the 2022 Integrated Report. Note that not all designated uses in these water bodies were assessed.

Table 4.2.1 – Jefferson County Waterbodies Meeting Designated Uses

Waterbody	Size	Units	WAH	PCR	SCR	FC	DWS	Assessment Category	Assessment Date
Long Run Lake	30	Acres	2-FS	3	3	3	3	2	3/20/2020
William F. Miles Angler Lake	4.2	Acres	3	3	3	2-FS	3	2	1/31/2008
Tom Wallace Lake	6.2	Acres	3	3	3	2-FS	3	2	9/25/2007
Waterson Park Lake	3.9	Acres	3	3	3	2-FS	3	2	3/4/2009
Willow Pond	4.1	Acres	3	3	3	2-FS	3	2	10/7/2005
Definitions									
WAH	Warm Water Aquatic Habitat (fish and other aquatic creatures)								
PCR	Primary Contact Recreation (swimming)								
SCR	Secondary Contact Recreation (wading and boating)								
FC	Fish Consumption (contaminants in fish consumed by humans)								
DWS	Drinking Water Supply (Applies at the Ohio River intakes – Mile 600.6 and 594.7)								
FS	Fully supports the use								
PS	Partially supports the use and is considered to be impaired								
NS	Non-support of the use and is considered to be impaired								

4.3 JEFFERSON COUNTY WATERBODIES WITH APPROVED TMDLS

Kentucky DOW is responsible for preparing TMDLs for impaired waters. This section provides an assessment of the Total Maximum Daily Loads (TMDLs) requirements in the MS4 Permit, Section D.1.c. Beginning in 2019, Kentucky DOW has a new TMDL report type for addressing the many water bodies throughout the state listed for bacteria, the Statewide TMDL for Bacterial Impaired Waters, including the Core Document and thirteen river basin specific appendices. **Table 4.3.1** below shows the TMDLs that have been approved and published by KDOW for waterbodies in Jefferson County. TMDL documents are available at: <https://eec.ky.gov/Environmental-Protection/Water/Protection/TMDL/Pages/Approved-TMDLs.aspx>.

Table 4.3.1 – Approved TMDLS

Title	303(d) Impairment	Year Approved	County
Harrods Creek Dissolved Oxygen TMDL	Organic Enrichment	1995	Oldham, Jefferson
Development of a Total Phosphorus TMDL for Chenoweth Run (Phase I)	Nutrients	1997	Jefferson
Development of an Ultimate Oxygen Demand TMDL for Floyds Fork and its Tributaries	Organic Enrichment	1997	Jefferson, Shelby
Final TMDL for Fecal Coliform – Six Stream Segments within the Beargrass Creek	Fecal Coliform	2012	Jefferson
Total Maximum Daily Load for E. Coli and Fecal Coliform – 18 Stream Segments within the Floyds Fork Watershed – Bullitt, Henry, Jefferson, Oldham, Shelby and Spencer Counties, Kentucky	E. coli, Fecal Coliform	2014	Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer
Kentucky Statewide Total Maximum Daily Load for Bacteria Impaired Waters, Core Document	E. coli, Fecal Coliform	2019	Statewide
Statewide TMDL for Bacteria, Salt and Licking River Basins	E. coli, Pathogens	2021	Statewide
Statewide TMDL for Bacteria, Ohio Basin Minor Tributaries	Pathogens	2022	Statewide

The 1997 TMDLs for Floyds Fork and Chenoweth Run and the 1995 TMDL for Harrods Creek address wastewater facilities and do not include wasteload allocations for stormwater or load allocations for nonpoint sources. The 2012 TMDL for Beargrass Creek includes wasteload allocations for sanitary sewer overflows, combined sewer overflows, MS4 stormwater, other permitted sources, and wasteload and load allocations for groundwater sources. The 2014 bacteria TMDL for Floyds Fork includes a margin of safety, sanitary wastewater facilities, future growth, MS4 stormwater, and load allocations for nonpoint sources.

The statewide bacteria TMDL approach, implemented in 2019, uses a streamlined perspective (in contrast to watershed-level TMDLs) and applies over a range of flow conditions as wasteload and load allocations are left in equation form. Kentucky DOW finalized a Statewide TMDL for Bacteria in December 2018 that included the statewide document with appendices for the Green River Basin and Tradewater River Basin. Kentucky DOW issued the approved Statewide Bacteria TMDL appendices for the Salt River Basin on September 23, 2021, and for the Ohio River Minor Tributaries on September 6, 2022. Kentucky DOW's fact sheet can be accessed using this link: <https://eec.ky.gov/Environmental-Protection/Water/Protection/TMDL/Documents/Statewide%20bacteria%20TMDL%20FactSheet.pdf>. The 2022 Integrated Report refers to the TMDL List serve as the means to receive updates for future draft 303(d) lists or TMDL actions. The email address for the Listserv is TMDL@ky.gov

Waterbodies in Jefferson County that are listed in Category 4A following approval of a TMDL in the 2022 Integrated Report are shown on **Table 4.3.2**.

Table 4.3.2 – Jefferson County Waterbodies in Category 4A - TMDL Approved

Waterbody	Size (Miles)	WAH	PCR	SCR	FC	DWS	Assessment Category	Assessment Date
Big Bee Lick Creek 0.0 to 4.15	4.15	3	4A-NS	3	3	3	4A	5/15/2014
Blue Spring Ditch 0.0 to 2.15	2.15	2-FS	4A-NS	3	3	3	4A	5/15/2014
Blue Spring Ditch UT 0.0 to 2.6	2.60	3	4A-NS	3	3	3	4A	5/15/2014
Cane Run 0.0 to 7.3	7.30	2-FS	4A-NS	3	3	3	4A	2/11/2011
Chenoweth Run 0.0 to 5.2	5.20	4A-PS	4A-NS	4A-PS	3	3	4A	8/30/2022 (WAH); 2/22/2011 (PCR)
Chenoweth Run 5.2 to 9.2	4.00	4A-PS	4A-NS	4A-NS	3	3	4A	3/12/2001
Fishpool Creek 0.0 to 2.0	2.00	2-FS	4A-NS	3	3	3	4A	5/16/2014
Floyds Fork 24.2 to 34.2	10.00	2-FSC	4A-PS	2-FS	3	3	4A	3/2/2022
Floyds Fork 34.2 to 40.1	5.90	2-FSC	4A-NS	4A-NS	3	3	4A	4/28/2014
Floyds Fork 40.1 to 45.65	5.55	2-FSC	4A-NS	4A-NS	3	3	4A	4/28/2014
Greasy Ditch 0.0 to 2.6	2.60	3	4A-NS	3	3	3	4A	5/15/2014
Little Bee Lick Creek 0.0 to 2.7	2.70	3	4A-NS	3	3	3	4A	10/23/2013

Waterbody	Size (Miles)	WAH	PCR	SCR	FC	DWS	Assessment Category	Assessment Date
Little Goose Creek 0.0 to 9.5	9.50	2-FS	4A-NS	3	3	3	4A	9/28/2022
Long Run 0.0 to 10.0	10.00	2-FS	4A-NS	3	3	3	4A	2/24/2011
Middle Fork Beargrass Creek 2.0 to 2.9	0.90	2-FS	4A-NS	3	3	3	4A	3/3/2009
Middle Fork Beargrass Creek 2.9 to 15.4	12.50	2-FS	4A-NS	3	3	3	4A	3/3/2009
Mill Creek Cutoff 0.0 to 2.3	2.30	2-FS	4A-NS	3	3	3	4A	9/28/2022
Mud Creek 0.0 to 4.35	4.35	3	4A-NS	3	3	3	4A	5/15/2014
Muddy Fork 0.0 to 7.2	7.20	2-FS	4A-NS	3	3	3	4A	3/12/2001
Pope Lick 0.0 to 2.1	2.10	2-FS	4A-NS	3	3	3	4A	2/28/2011
Pope Lick 2.1 to 5.6	3.50	4C-NS	4A-NS	3	3	3	4A	2/24/2011
Salt Block Creek 0.0 to 3.35	3.35	3	4A-NS	3	3	3	4A	5/15/2014
Southern Ditch 0.0 to 5.75	5.75	2-FS	4A-NS	3	3	3	4A	3/30/222
Southern Ditch 5.75 to 9.0	3.25	3	4A-NS	3	3	3	4A	5/15/2014
Wilson Creek 0.0 to 5.6	5.60	3	4A-NS	3	3	3	4A	5/15/2014
Definitions								
WAH	Warm Water Aquatic Habitat (fish and other aquatic creatures)							
PCR	Primary Contact Recreation (swimming)							
SCR	Secondary Contact Recreation (wading and boating)							
FC	Fish Consumption (contaminants in fish consumed by humans)							
DWS	Drinking Water Supply (Applies at the Ohio River intakes – Mile 600.6 and 594.7)							
FS	Fully supports the use							
PS	Partially supports the use and is considered to be impaired							
NS	Non-support of the use and is considered to be impaired							

The U.S. Environmental Protection Agency (EPA) Region 5 has retained Tetra Tech, Inc., to provide consulting services for the development of the bacteria Total Maximum Daily Load (TMDL) for the Ohio River. The Ohio River Sanitation Commission (ORSANCO), the six states that lie along the river (Illinois, Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia), and U.S. EPA Regions 3 and 4 are also participating. ORSANCO is conducting the extensive monitoring program to provide the stream water quality data necessary to complete the project. During 2019 the Ohio River Bacteria Trends report for the study period of 2001 to 2015 was published to ORSANCO's website. More information about this TMDL can be accessed using this link: <http://www.orsanco.org/programs/bacteria-tmdl/>

4.4 303(d) LISTED WATERBODIES IN JEFFERSON COUNTY

The waterbodies shown on **Table 4.4.1** were included on the 2016 Impaired Waterbodies List (i.e., 303(d) List) because it was classified as impaired (Category 5) for one or more designated uses. In the future, these waterbodies may be moved to Category 4 after a TMDL is developed

and approved, Category 2 if new monitoring and assessments show that the waterbody attains designated uses or remain on Category 5 if one or more additional designated uses are impaired.

Table 4.4.1a – 303(d) Listed Lakes/Reservoirs in Jefferson County

Waterbody	Size (Acres)	WAH	PCR	SCR	FC	DWS	Assessment Category	Assessment Date
Chickasaw Park Lake	1.2	3	3	3	5-PS	3	5	10/7/2005 (FC)
Mc Neely Lake	62	5-PS	3	3	5-NS	3	5	3/26/2020 (WAH); 3/29/2011 (FC)

Table 4.4.1b – 303(d) Listed Rivers/Streams in Jefferson County

Waterbody	Size (Miles)	WAH	PCR	SCR	FC	DWS	Assessment Category	Assessment Date
Beargrass Creek 0.3 to 1.7	1.40	5-NS	3	3	3	3	5	3/3/2009 (WAH)
Brier Creek 0.0 to 2.6	2.60	3	5-NS	3	3	3	5	3/30/2022 (PCR)
Cedar Creek 12.1 to 16.1	4.00	5-PS	3	3	3	3	5	4/7/2014 (WAH)
Cedar Creek 4.3 to 12.1	7.80	5-PS	4A-NS	2-FS	3	3	5	7/6/2022 (WAH); 4/7/2014 (PCR); 4/7/2014 (SCR)
Chenoweth Run (Upper) 0.0 to 4.1	4.10	5-NS	3	3	3	3	5	7/6/2022 (WAH)
Fern Creek 0.0 to 1.3	1.30	5-PS	4A-NS	3	3	3	5	12/20/2021 (WAH); 5/15/2014 (PCR)
Fern Creek 1.3 to 4.4	3.10	5-NS	4A-NS	3	3	3	5	5/2/2001 (WAH); 3/30/2022 (PCR)
Fern Creek 4.4 to 5.9	1.50	5-PS	4A-NS	3	3	3	5	3/12/2001 (WAH); 5/15/2014 (PCR)
Floyds Fork 11.7 to 24.2	12.50	5-PS	4A-NS	2-FS	3	3	5	7/6/2022 (WAH); 4/25/2014 (PCR); 4/25/2014 (SCR)
Goose Creek 0.05 to 3.3	3.25	5-PS	4A-NS	3	3	3	5	3/3/2009 (WAH); 9/28/2022 (PCR)
Goose Creek 3.3 to 12.85	9.55	5-PS	4A-NS	3	3	3	5	3/3/2009 (WAH); 9/28/2022 (PCR)
Harrods Creek 0.05 to 3.2	3.15	5-NS	4A-PS	2-FS	3	3	5	12/1/2005 (WAH); 7/16/2020 (PCR); 12/1/2005 (SCR)
Harrods Creek 3.2 to 21.4	18.20	2-FS	5-NS	2-FS	3	3	5	6/24/2022 (WAH); 6/24/2022 (PCR); 3/17/2016 (SCR)
Hite Creek 0.0 to 5.8	5.80	5-NS	5-NS	3	3	3	5	4/9/2001 (WAH); 3/17/2022 (PCR)
Middle Fork Beargrass Creek 0.0 to 2.0	2.00	5-NS	4A-NS	3	3	3	5	3/13/2001 (WAH); 3/13/2001 (PCR)
Mill Creek 0.0 to 9.8	9.80	5-NS	4A-NS	3	3	3	5	3/13/2001 (WAH); 9/28/2022 (PCR)
Northern Ditch 0.0 to 7.3	7.30	5-PS	4A-NS	3	3	3	5	5/22/2014 (WAH); 3/30/2022 (PCR)
Ohio River 592.95 to 561.45 (McAlpine Pool)	31.50	2-FS	2-FS	3	5-NS	3	5	9/13/2022 (WAH); 9/22/2014 (PCR); 9/21/2022 (FC)



Waterbody	Size (Miles)	WAH	PCR	SCR	FC	DWS	Assessment Category	Assessment Date
Ohio River 594.0 to 592.95 (McAlpine Pool)	1.05	2-FS	5-PS	3	5-NS	2-FS	5	9/14/2022 (WAH); 9/22/2014 (PCR); 9/21/2022 (FC); 9/14/2022 (DWS)
Ohio River 598.95 to 594.0 (McAlpine Pool)	4.95	2-FS	5-NS	3	5-NS	3	5	9/14/2022 (WAH); 9/14/2022 (PCR); 9/21/2022 (FC)
Ohio River 599.95 to 598.95 (McAlpine Pool)	1.00	2-FS	2-FS	3	5-NS	2-FS	5	9/14/2022 (WAH); 9/22/2014 (PCR); 9/21/2022 (FC); 9/14/2022 (DWS)
Ohio River 605.1 to 599.95 (McAlpine Pool)	5.15	2-FS	5-PS	3	5-NS	3	5	9/14/2022 (WAH); 9/22/2014 (PCR); 9/21/2022 (FC)
Ohio River 607.7 to 605.1 (Cannelton Pool)	2.60	5-PS	5-PS	3	5-PS	3	5	9/21/2022 (WAH); 9/22/2014 (PCR); 9/22/2014 (FC)
Ohio River 612.1 to 607.7 (Cannelton Pool)	4.40	5-PS	5-NS	3	5-PS	3	5	9/21/2022 (WAH); 9/22/2014 (PCR); 9/22/2014 (FC)
Ohio River 675.45 to 613.0 (Cannelton Pool)	62.45	5-PS	5-NS	3	5-PS	3	5	9/21/2022 (WAH); 9/20/2022 (PCR); 9/23/2014 (FC)
Pennsylvania Run 0.0 to 3.3	3.30	5-PS	4A-NS	4A-NS	3	3	5	7/6/2022 (WAH); 4/8/2014 (PCR); 4/8/2014 (SCR)
Pond Creek 5.2 to 8.1	2.90	5-NS	4A-NS	3	3	3	5	5/22/2014 (WAH); 4/27/2022 (PCR)
South Fork Beargrass Creek 0.0 to 2.65	2.65	5-PS	4A-NS	3	3	3	5	3/3/2009 (WAH); 3/3/2009 (PCR)
South Fork Beargrass Creek 2.65 to 13.65	11.00	5-NS	4A-NS	3	3	3	5	3/15/2001 (WAH); 3/15/2001 (PCR)
South Long Run 0.0 to 3.6	3.60	5-PS	4A-NS	3	3	3	5	4/8/2014 (WAH); 4/8/2014 (PCR)
Southern Ditch UT 0.0 to 2.8	2.80	5-NS	3	3	3	3	5	4/16/2004 (WAH)
Wet Woods Creek (Slop Ditch) 2.2 to 4.25	2.05	5-PS	4A-NS	3	3	3	5	4/1/1998 (WAH); 5/16/2014 (PCR)
Definitions								
WAH	Warm Water Aquatic Habitat (fish and other aquatic creatures)							
PCR	Primary Contact Recreation (swimming)							
SCR	Secondary Contact Recreation (wading and boating)							
FC	Fish Consumption (contaminants in fish consumed by humans)							
DWS	Drinking Water Supply (Applies at the Ohio River intakes – Mile 600.6 and 594.7)							
FS	Fully supports the use							
PS	Partially supports the use and is considered to be impaired							
NS	Non-support of the use and is considered to be impaired							

4.5 DE-LISTED WATERBODIES

Documented improvements in stream water quality through water quality sampling can result in streams being removed from the 303(d) list where water quality standards are being met. Alternatively, some impairments or pollutants may be removed, but the waterbody continues to

be on the 303(d) list because of other impairments. **Table 4.5.1** shows waterbodies or pollutants removed (i.e., delisted) from the 303(d) list in Jefferson County. This list was derived from KDOW's TMDL program delisted streams, available on the following website <http://water.ky.gov/waterquality/Pages/DelistedStreams.aspx>. The 2016 KY 303(d) List was also referenced.

MSD developed a de-listing strategy in 2014. The strategy focuses on removing impaired waterbodies from the 303(d) list (i.e. de-listing) if current monitoring data are sufficient and document that applicable surface water standards are met. The following factors are considered: the listed impairment, the data supporting the listed impairment, monitoring data, and the land uses upstream and near the listed impairment. Implementation of the de-listing strategy is ongoing. In 2015, MSD submitted a successful de-listing proposal for two stream segments in the Pond Creek watershed for un-ionized ammonia. Continued collaboration with KDOW on future stream de-listings is ongoing.

Table 4.5.1 – Jefferson County Waterbodies Delisted from 303(d)

Waterbody	Impairment	Approval Date
Cane Run 0.0 to 7.6	Organic Enrichment/Low DO	6/1998
Fishpool Creek 0.0 to 5.4	Organic Enrichment/Low DO	6/1998
Fishpool Creek 0.0 to 5.4	Metals	6/1998
Fishpool Creek 0.0 to 5.4	Pathogens	6/1998
Goose Creek 4.5 to 11.7	Metals	6/1998
Goose Creek 0.0 to 4.5	Metals	6/1998
Little Goose Creek 0.0 to 8.7	Metals	6/1998
Mill Creek 0.0 to 4.4	Turbidity	6/1998
Muddy Fork Beargrass Creek 0.0 to 6.9	Metals	6/1998
Muddy Fork Beargrass Creek 0.0 to 6.9	Organic Enrichment/Low DO	6/1998
Muddy Fork Beargrass Creek 0.0 to 6.9	Unknown Toxicity	6/1998
South Fork Beargrass Creek 0.0 to 14.6	Metals	6/1998
Cedar Creek 0.0 to 15.3	Pathogens	4/2003
Harrods Creek 3.2 to 4.0	Organic Enrichment/Low DO	4/2003
Little Goose Creek 0.0 to 8.7	Organic Enrichment/Low DO	4/2003
Middle Fork Beargrass Creek 2.3 to 15.2	Organic Enrichment/Low DO	4/2003
Ohio River 606.8 to 629.9	Chlordane	4/2003
Southern Ditch 0.0 to 5.5	Organic Enrichment/Low DO	4/2003
Ohio River 609.7 to 617.6	Pathogens	5/2005
Pond Creek/Southern Ditch 14.7 to 16.1	Metals	5/2005
Pond Creek/Southern Ditch 14.7 to 16.1	Organic Enrichment/Low DO	5/2005
(Blue) Spring Ditch 0.0 to 2.1	Metals (Cadmium)	7/2007
(Blue) Spring Ditch 0.0 to 2.1	Metals (Zinc)	7/2007
Fern Creek 1.3 to 4.4	Metals (Cadmium)	7/2007
Fern Creek 4.4 to 5.9	Metals	7/2007
McNeely Lake Lake	Nutrients	7/2007
Pennsylvania Run 0.0 to 3.35	Nutrients	7/2007
Beargrass Creek 0.5 to 1.8	Cadmium	9/2011
Goose Creek 0.3 to 3.6	Cadmium	9/2011
Goose Creek 3.6 to 13.0	Cadmium	9/2011
Middle Fork Beargrass Creek 0.0 to 2.0	Cadmium	9/2011
Middle Fork Beargrass Creek 2.0 to 2.9	Cadmium	9/2011

Waterbody	Impairment	Approval Date
Middle Fork Beargrass Creek 2.9 to 15.3	Cadmium	9/2011
Ohio River 593.0 to 603.3	Fecal Coliform	9/2011
South Fork Beargrass Creek 0.0 to 2.7	Cadmium	9/2011
Floyds Fork 24.2 to 34.1	Organic Enrichment (Sewage) Biological Indicators	2/2018
Fern Creek 0.0 to 1.3	Ammonia, Un-ionized (1)	7/2023
Notes		
1. Ammonia, Un-ionized impairment in Fern Creek 0.0 to 1.3 was approved for delisting with the approval of the 2022 303d List component of the Integrated Report based on applicable WQS being attained/original basis for listing was incorrect. This waterbody remains in Category 5, (impaired, TMDL required) due to the Nutrient/Eutrophication Biological Indicators not meeting WQS for WAH, (TMDL priority= Medium).		

4.6 REFERENCES

Kentucky Division of Water. 2023. 2022 Integrated Report to Congress on the Condition of Water Resources in Kentucky Assessment Results with an emphasis on the following basin management units: 1) Big and Little Sandy Rivers and Tygarts Creek, 2) Kentucky River, 3) Salt and Licking Rivers, and 4) Upper Cumberland and Four Rivers, along with statewide updates including the Ohio River mainstem. https://eec.ky.gov/Environmental-Protection/Water/Monitor/2022_IR_Hub_Site_Images/2022_Integrated-Report.pdf

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CHAPTER 5 MONITORING

5.1 INTRODUCTION

5.1.1 MSD Long Term Monitoring Network History

Instream monitoring data provides an important metric for the health of the streams. Physical, chemical, and biological measurements made in surface water can provide a reasonable estimation of what types of organisms thrive in a particular water body and an explanation for the current health of a stream. In some circumstances, the measurements indicate natural phenomena of the watershed based on its geology and topography. In other circumstances, the measurements indicate the impact of human development, including point source and nonpoint source contaminants in the water. Studying these data can often provide guidance on things that could be managed in the watershed to improve water quality and overall instream health.

In 1988, a group of MSD employees and the local scientific community began a robust monitoring program that focused on gathering samples in the 11 MSD defined watersheds in Jefferson County. The monitoring program consisted mainly of water samples collected in streams and transported to the laboratory to be measured for physical and chemical composition. The locations were selected to have some sampling in each watershed. The locations were chosen to be accessible during wet and dry weather, so access from bridges crossing the stream is most common. Many locations were chosen to bracket or isolate specific point sources or groups of nonpoint sources. Regional treatment plant effluent is an example of a point source approach. Placing a sampling location downstream of several tightly grouped combined sewer overflows (CSOs) or a large commercial/industrial area is an example of a nonpoint source approach. Sampling a stream as it enters Jefferson County from a neighboring county or leaves Jefferson County is an example of bracketing. There were also reference reach streams selected with little development to serve as a basis for how a relatively undisturbed watershed would perform.

Over time, the cost of labor for collecting samples and laboratory analysis led to some permanent installations of stream monitors that provided the added benefit of continuous measurements for parameters such as pH, temperature, dissolved oxygen, and specific conductance. The data from continuous monitors paved the way for less frequent grab sampling and laboratory results as well as biological measurements and habitat evaluations at each site. The MSD Monitoring program has always provided short-term and long-term evaluation opportunities. Short term evaluation opportunities include real-time or near real-time anomalies to be detected in the MS4 that allow MSD to investigate acute point source detection including collection system overflows or chemical spills from industrial or chemical sources. Mid-term evaluations of laboratory data can lead to discovery of construction or other development-related impacts to the MS4. Long-term evaluations of the monitoring program include MS4 Annual Reports and the Synthesis Report.

Over time, the list of pollutants monitored has changed to reflect long-term trends indicating that certain pollutants have never been detected or are not consistently detected in surface water in Jefferson County. In these circumstances, the MS4 Permit has been modified to change or reduce the number of analyses requested.

5.1.2 Long-Term Monitoring Network

Figure 5.1.2 Long Term Monitoring Network Locations

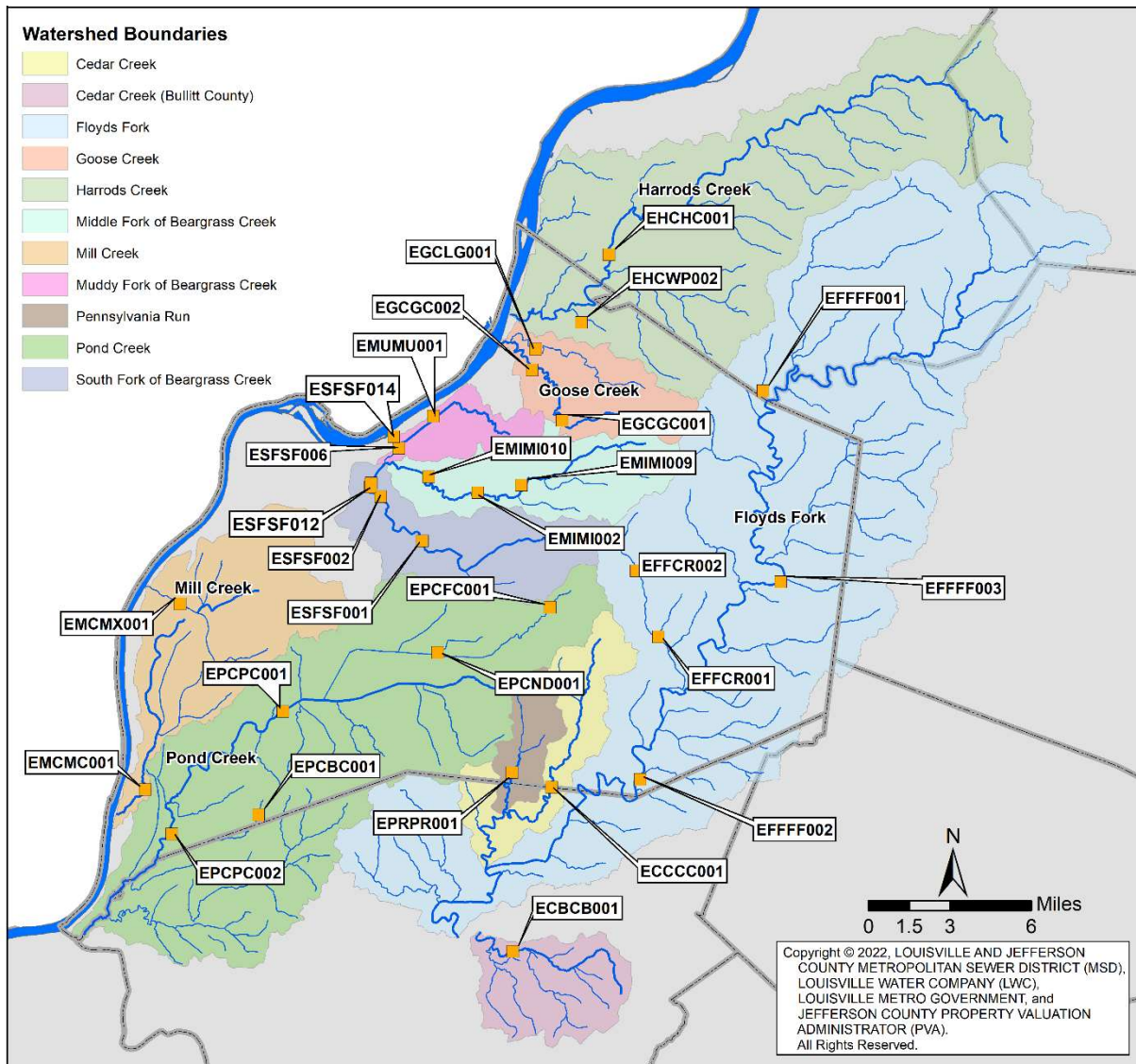


Table 5.1.2.1 Long Term Monitoring Network Site Location Choice Description

LOCCODE	SITE NAME	HISTORIC SITE LOCATION REASONING	SITE NOTES
EHCHC001	HARRODS CREEK AT HIGHWAY 329 NR GOSHEN, KY.	Sonde installed to measure the contribution to the Harrods Creek from Oldham County and including the Hite Creek WQTC	Bank-mounted installation.
EHCWP002	WOLF PEN BR AB POND DISCHARGE NR PROSPECT, KY	Sonde was added to this site to include a small-watershed in-county low density housing site. It was moved from a previous site EHCWP001. USGS did not install flow at this site because the flow is too low to sustain.	Bank-mounted installation.
EGCGC001	GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY	One of two sonde sites installed on Goose Creek.	Site is immediately downstream of Goose Creek Pump Station, and downstream of the MS4 draining the Plantation neighborhood.
EGCGC002	GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	One of two sonde sites installed on Goose Creek.	Furthest downstream of two gauges on Goose Creek.
EGCLG001	LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	Only sonde site on Little Goose Creek.	
EMUMU001	MUDDY FK AT MOCKINGBIRD VALLEY RD AT LOUISVILLE, KY	Only sonde site on the Muddy Fork of Beargrass Creek.	
EMIMI009	M FK BEARGRASS CR AT BROWNS LN AT LOUISVILLE, KY	Sonde was added to include a high-use recreational site and because this location is immediately downstream of stream restoration projects near Bowling Boulevard, the Sinking Fork and the Beechwood Village SSO pumpings.	
EMIMI002	M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE	Sonde site was chosen because it is immediately upstream of Seneca and Cherokee Parks.	Bank-mounted installation. Site is immediately downstream of SSO IS021A-SI.
EMIMI010	M FK BEARGRASS CR AT LEXINGTON RD AT LOUISVILLE, KY	Sonde site was chosen because it is immediately downstream of Seneca and Cherokee Parks, including CSO and SSO contributions in the area.	Site is downstream of highly channelized section of creek.



LOCCODE	SITE NAME	HISTORIC SITE LOCATION REASONING	SITE NOTES
ESFSF001	SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	Sonde site was chosen to be just upstream of the last CSO (CSO 108). It was also chosen to be downstream of large Southeast Diversion (SED) Overflow, the Buechel Fork and the Bishop Lane Forks of Beargrass Creek.	
ESFSF012	S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE	Sonde site was monitored periodically up until 2015. Due to the construction on the improved channel from Eastern Parkway to just South of Breckinridge Street, this site became unofficially part of the LTMN. The Schiller Avenue Site has been and will continue to be unavailable to sample as of summer 2015 .	Site has been removed from service since December of 2022 due to safety concerns at the site. Work is underway to relocate this monitoring site to the historic location near Winter Ave.
ESFSF002	S FK BEARGRASS CR AT WINTER AVE AT LOUISVILLE, KY	Sonde site was chosen to be in the improved channel and in the middle of the large number of CSOs on the South Fork. The sonde is at the bottom of the Schiller Terrace ramp due to driving access. The Stream flow meter is at the Bridge at Winter Ave due to bridge access.	This location is currently only used for biological sampling, with all other parameters being collected at the East Breckinridge site.
ESFSF006	BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE	Sonde site was installed to be downstream from the Confluence with the Middle and South Forks and upstream of the confluence with the Muddy Fork.	Site is also affected by Ohio River backwater during periods of little rain.
ESFSF014	BEARGRASS CREEK AT RIVER ROAD AT LOUISVILLE, KY	Sonde site was chosen by USGS to measure the flow leaving Beargrass. The Side-looking doppler meter is more accurate than a traditional stilling well gauge, but the Ohio River backwater is significantly affected by the McAlpine Lock and Dam system. It cycles to measuring positive and negative flows several times daily.	Gauge and sonde data reflects backwater conditions at the site. These conditions are compounded during periods of little rain.
EFFFF001	FLOYDS FORK NEAR PEWEE VALLEY, KY	Sonde site was added to measure the contribution from Floyds Fork in Oldham County.	Site is immediately downstream of Kentucky Correctional Institute for Women and the Red Penn Sanitation Co Landfill, a USEPA Superfund site.
EFFFF003	FLOYDS FORK AT FISHERVILLE, KY	Sonde site was added to measure Floyds Fork (FF) in the center of its Jefferson County Reach and specifically because it is downstream of the FFWQTC and upstream of the confluence with Chenoweth Run.	
EFFFF002	FLOYDS FORK NEAR MT WASHINGTON, KY	Sonde site was chosen to measure Floyds Fork before leaving Jefferson County.	

LOCCODE	SITE NAME	HISTORIC SITE LOCATION REASONING	SITE NOTES
EFFCR002	CHENOWETH RUN AT RUCKRIEGEL PARKWAY, KY	One of two sonde sites chosen to bracket the JTWQTC. This one was chosen to be downstream of the J-Town Industrial Park and just upstream of the JTWQTC.	The JTWQTC was removed in 2016.
EFFCR001	CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY	One of two sites chosen to bracket the JTWQTC. This one was chosen to be downstream of the JTWQTC but after it had gone through about 3 miles of sparse land with a riparian buffer.	The JTWQTC was removed in 2016.
ECCCC001	CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY	Only sonde site in the Jefferson County Cedar Creek watershed and was specifically chosen to be downstream of the CCWQTC.	
EPRPR001	PENNSYLVANIA RUN AT MT WASHINGTON RD NR LOUISVILLE	Only sonde site on Pennsylvania Run and downstream of McNealy Lake, which had documented water quality impairments for fish consumption.	
EPCFC001	FERN CREEK AT OLD BARDSTOWN RD AT LOUISVILLE, KY	Only sonde site on Fern Creek.	
EPCND001	NORTHERN DITCH AT OKOLONA, KY	Only sonde site on Northern Ditch. It was also chosen to be upstream of the airport and the Outer Loop Landfill.	
EPCPC001	POND CREEK NEAR LOUISVILLE, KY	Sonde site chosen because it is downstream of the confluence of Northern Ditch and Southern Ditch.	Issues with sedimentation have caused data gaps.
EPCPC002	POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY	Sonde site was chosen as the final Pond Creek site before entering the Salt River.	High discharges have caused sandbar migration, resulting in occasional lateral relocation of sonde.
EPCBC001	BRIER CREEK AT PENDELTON ROAD NEAR LOUISVILLE, KY	Sonde site was chosen as a low-flow minimal residential impact stream primarily draining undeveloped forested Jefferson Memorial Forest.	Livestock and residential septic systems are located directly upstream of site.
EMCMX001	MILL CREEK CUTOFF NEAR LOUISVILLE, KY	Only sonde site on the Mill Creek cutoff. In the 1990s when this site was first monitored, there were several small WTPs and thousands of septic tanks that discharged to the cutoff of this watershed. When they were taken off-line, much of the water dried up.	Sonde is removed during periods of no rain when streambed is dry.
EMCMC001	MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	Only sonde site on the main stem of Mill Creek and flow is often too low to monitor during dry periods.	Sonde is removed during periods of no rain when streambed is dry.



LOCCODE	SITE NAME	HISTORIC SITE LOCATION REASONING	SITE NOTES
ECBCB001	CEDAR CREEK AT HWY 1442 NEAR SHEPHERDSVILLE, KY	Sonde site was added as a reference reach. Surrounding land use is less urban than most areas in Jefferson County.	

Table 5.1.2.2 lists monitoring sites and data collected at each site and the descriptions of each data set are provided in the sections that follow.

Table 5.1.2.2 – Long-Term Monitoring Network Locations

Number	MSD Site #	USGS Gauge	LTMN Location	Drainage Area (mi ²)	Flow	Sonde	WQ	Biological
1	EHCHC001	03292470	HARRODS CREEK AT HIGHWAY 329 NR GOSHEN, KY.	70.3	1	1	1	1
2	EHCWP002	0329247350	WOLF PEN BR AB POND DISCHARGE NR PROSPECT, KY	2.1	No Gauge	1	1	1
3	EGCGC001	03292474	GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY	6.0	1	1	1	1
4	EGCGC002	03292475	GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	10.1	1	1	1	1
5	EGCLG001	03292480	LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	5.8	1	1	1	1
6	EMUMU001	03293530	MUDDY FK AT MOCKINGBIRD VALLEY RD AT LOUISVILLE, KY	6.2	1	1	1	1
7	EMIMI009	03292900	M FK BEARGRASS CR AT BROWNS LN AT LOUISVILLE, KY	15.2	No Gauge	1	1	1
8	EMIMI002	03293000	M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE	18.9	1	1	1	1
9	EMIMI010	03293500	M FK BEARGRASS CR AT LEXINGTON RD AT LOUISVILLE, KY	24.8	No Data	1	1	1
10	ESFSF001	03292500	SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	17.2	1	1	1	1
11	ESFSF012	03292555	S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE ^{1,2}	22.8	1	1	1	1
12	ESFSF006	03293532	BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE	51.5	No Gauge	1	1	1
13	ESFSF014	03293510	BEARGRASS CREEK AT RIVER ROAD AT LOUISVILLE, KY	60.1	1	1	No Data	No Data
14	EFFFF001	03297900	FLOYDS FORK NEAR PEWEE VALLEY, KY	80.0	1	1	1	1
15	EFFFF003	03298000	FLOYDS FORK AT FISHERVILLE, KY	138.0	1	1	1	1
16	EFFFF002	03298200	FLOYDS FORK NEAR MT WASHINGTON, KY	213.0	1	1	1	1
17	EFFCR002	03298135	CHENOWETH RUN AT RUCKRIEGEL PARKWAY, KY	5.5	1	1	1	1
18	EFFCR001	03298150	CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY	11.6	1	1	1	1
19	ECCCC001	03298250	CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY	11.1	1	1	1	1
20	EPRPR001	03298300	PENNSYLVANIA RUN AT MT WASHINGTON RD NR LOUISVILLE	6.4	1	1	1	1
21	EPCFC001	03301900	FERN CREEK AT OLD BARDSTOWN RD AT LOUISVILLE, KY	3.5	1	1	1	1



Number	MSD Site #	USGS Gauge	LTMN Location	Drainage Area (mi ²)	Flow	Sonde	WQ	Biological
22	EPCND001	03301940	NORTHERN DITCH AT OKOLONA, KY	11.1	1	1	1	1
23	EPCPC001	03302000	POND CREEK NEAR LOUISVILLE, KY	64.0	1	1	1	1
24	EPCPC002	03302030	POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY	80.0	1	1	1	1
25	EPCBC001	03302050	BRIER CREEK AT PENDELTON ROAD NEAR LOUISVILLE, KY	4.1	1	1	1	1
26	EMCMX001	03294550	MILL CREEK CUTOFF NEAR LOUISVILLE, KY	24.4	1	No Sonde	1	1
27	EMCMC001	03294570	MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	13.5	1	1	1	1
28	ECBCB001	03297800	CEDAR CREEK AT HWY 1442 NEAR SHEPHERDSVILLE, KY	12.1	1	1	1	1
Total					24	27	27	27

Notes

1. South Fork of Beargrass Creek at East Breckenridge Street is replacing South Fork of Beargrass Creek at Mason Avenue
2. Site was removed on December 19, 2022, due to safety concerns at the site. Work is underway to move the site back to its historical location at Winter Ave.

5.1.3 Monitoring Program Description

MSD is required to monitor stream segments in Jefferson County for stream health. It has been noted that Louisville has one of the most robust monitoring systems and programs in Kentucky. Using this established network, MSD is able to identify water quality trends, and adjust programs to improve water quality.

Chapter 5 provides an overview of MSD’s monitoring program and the most recent final monitoring data. A description of the analysis of monitoring data is provided. Results, including comparison to applicable water quality criteria and characterization of water quality under wet and dry conditions, are presented as summaries and on a watershed basis. MSD collects and analyzes monitoring data based on its State approved Quality Assurance Project Plan (QAPP). The report period for each monitoring data set is shown on **Table 5.1.3.1**. The state regulatory water quality criteria for all parameters required by the permit is shown on **Table 5.1.3.2**.

Table 5.1.3.1 – MS4 Permit Required Monitoring Parameters

Monitoring Data Set	Current Permit Period 2/1/2017 to 1/31/2022 (administratively extended)
Stream Flow	Daily mean discharge
Water Quality - Sonde	Dissolved Oxygen, Temperature, pH, Specific Conductance (Conductivity)
Water Quality – Quarterly	Ambient monitoring for Total Suspended Solids (TSS); <i>E. coli</i> ; Total Nitrogen (as N), Oil and Grease, Copper, Total Recoverable and pH
Recreation Season Bacteria	5 samples per month (May-October) - Recreational monitoring for <i>E. coli</i> .
Biological Communities & Habitat	Once Every Two Years – Biological sampling and/or evaluation rotating to include: algae, fish, and benthic macro invertebrates.

Table 5.1.3.2 – Regulatory Designated Water Quality Criteria

Parameter	Units	Water Quality Criteria
Temperature	°C	31.7 °C (instantaneous maximum)
Dissolved Oxygen	mg/l	4.0 mg/l (instantaneous minimum), 5.0 mg/l (24-hour average)
pH	Std. units	6.0 to 9.0
Escherichia coli (<i>E. coli</i>)	MPN/100 ml	Geometric mean of 5 samples collected within 30-day period does not exceed 130 colonies/100 ml and less than 20% of samples exceed 240 colonies/100 ml
Copper	ug/l	Acute and Chronic Aquatic Life: calculated per equations in 401 KAR 10:031

5.2 Trending & Data Analysis

5.2.1 Streamflow

Approved daily average flow data were collected between July 1, 2022, and June 30, 2023. Data and analysis for streamflow conditions can be found in **Appendix 5.2.1: Streamflow**.

5.2.2 Sonde Data

MSD and USGS jointly conduct the continuous (i.e., sonde) monitoring program. Sondes collect pH, temperature, conductivity, and dissolved oxygen data every 15 minutes. MSD or USGS ensure compliance with quality assurance standards through the performance of calibration and maintenance of sonde equipment and USGS performs periodic cross section checks of the data, hosts provisional and final data in USGS's National Water Information System (NWIS) database, and provides quality assurance review to finalize the data. This Quality Assurance Project Plan (QAPP) is limited to MSD calibration and maintenance of sonde equipment with references to USGS procedural and quality assurance documentation for aspects of the program carried out by USGS.

USGS is solely responsible for operating, maintaining and validating the stream gaging program that measures stream discharge, which is a required component of the MS4 program. The stream gage program is joint funded, and all data is made publicly available for download and use. USGS operates this program according to rigorous federal protocols and quality assurance requirements. MSD is an end user of this data provided by an external entity.

Sondes that are deployed specifically for the MS4 program record water quality parameters. Four different parameters are measured, recorded, and analyzed as part of the sonde monitoring program: dissolved oxygen, pH, temperature, and specific conductance. Dissolved oxygen is an important parameter for the overall health of a stream. Water with low dissolved oxygen can stress fish and other forms of aquatic life. The degree to which a stream is acidic or alkaline is reported using a pH scale measured in standard units, which ranges from very acidic (pH of 0) to neutral (pH of 7) to very alkaline (pH of 14). Water that is too acidic or too alkaline stresses native aquatic life. Water temperature is another important parameter for the overall health of a stream, since hot water can stress fish and other forms of aquatic life. Specific conductance is a measure of the ability of water to conduct electricity due to the presence of salts, which can affect aquatic life when elevated. Sources include natural geology, road salt application, wastewater discharges, and pavement weathering.

Sonde data is aggregated daily for days that had at least 88 of a possible 96 records. USGS utilizes at least 88 records per day to classify a daily record as "complete". For each day with at least 88 records, the sonde data was compared against the water quality criteria. A comparison between the current water year for both complete daily record and passing of water quality criteria can be reviewed in **Table 5.2.2.2**. A comparison by watershed to previous year's data as well as a trending analysis over the previous four years can be viewed in **Figures 5.2.2.2**.

Table 5.2.2.1 – Annual Reporting Years with Approved Sonde Data Time Ranges

Annual Report Year	Approved Data Start	Approved Data End
2019	7/1/2018	6/30/2019
2020	7/1/2019	6/30/2020
2021	7/1/2020	3/22/2021
2022	3/23/2021	3/31/2022
2023	4/1/2022	6/30/2023

A reorganization was conducted for the Annual Report during the 2022 Annual Report. The intent of this change was to create a more useable report for both annual analysis and reporting, but also for long-term trending and evaluation. This redesign included analysis and comparisons for the previous four years' worth of data. For 2021, the approved data available at the time of analysis differed from the typical water year date range. The same occurred for the 2022 annual report as well. Prior to 2021, the typical Annual Report date range was used to establish historical data comparisons. From 2021 and onward, the actual date range used for that year's Annual Report analysis will be used for analysis and updated in **Table 5.2.2.1** for future reports.

For the 2022 Annual Report, sonde data was made available for three additional sites that were not included in previous Annual Reports. Previously internally logged sites including Wolf Pen Branch near Prospect, Middle Fork of Beargrass Creek at Browns Lane, and Beargrass Creek at Brownsboro Road were included in the USGS reviewed data beginning in April (Wolf Pen available starting on April 6, Middle Fork available starting on April 14, and Beargrass Creek available beginning on April 16.) Charts, tables, and comparisons made to historical data for the sonde analysis will not include these three sites for this Annual Report.

Table 5.2.2.2 compares the sonde data for this current Annual Reporting year to the previous year's data. The green values represent data where this year's analyzed results were higher compared to the previous year's for either complete record or water quality criteria being met and the red values indicate a decrease. For this reporting year, final sonde data was collected between April, 2022 and June 30, 2023. Analyzed sonde data for this reporting year can be found in **Appendix 5.2.2: Sonde Site Data Summary**.

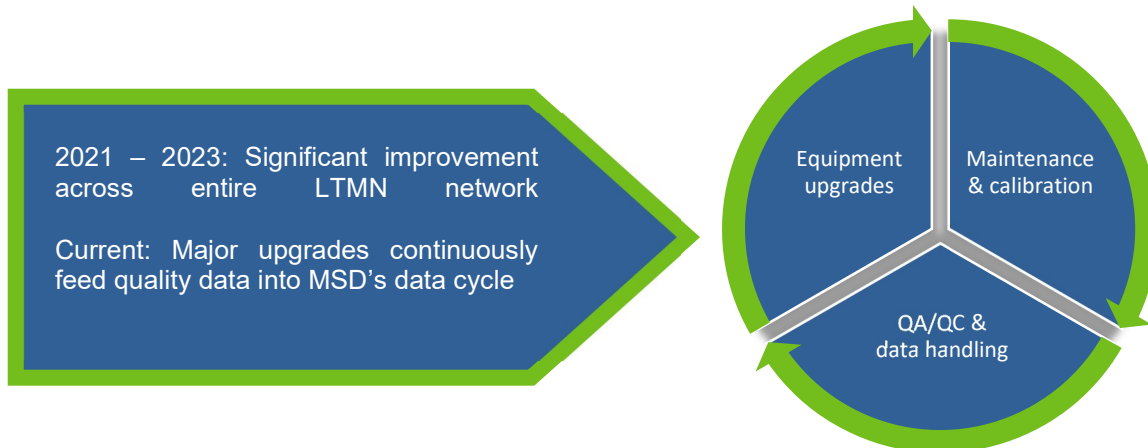
Table 5.2.2.2 - Percentage Difference in Current Year (2023) to Previous Year (2022)
Sonde Data

Site Name	Dissolved Oxygen		pH		Temperature		Conductivity
	Complete Record	Criteria Met	Complete Record	Criteria Met	Complete Record	Criteria Met	Complete Record
HARRODS CREEK AT HIGHWAY 329 NR GOSHEN, KY.	3	2	18	0	4	0	6
WOLF PEN BR AB POND DISCHARGE NR PROSPECT, KY	0	0	1	-4	0	0	-5
GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY	-4	2	39	0	-1	0	2
GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	-8	1	-2	2	-1	0	7
LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	2	0	14	0	1	0	1
MUDDY FK AT MOCKINGBIRD VALLEY RD AT LOUISVILLE, KY	4	1	26	0	1	0	3
M FK BEARGRASS CR AT BROWNS LN AT LOUISVILLE, KY	7	0	11	0	7	0	17
M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE,	2	0	3	0	4	0	0
M FK BEARGRASS CR AT LEXINGTON RD AT LOUISVILLE, KY	13	-10	10	0	5	0	10
SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	-5	0	-4	0	-5	0	-5
S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE ¹	-18	-5	-20	-1	-18	0	-8
BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE	4	-10	20	0	11	0	13
BEARGRASS CREEK AT RIVER ROAD AT LOUISVILLE, KY	26	-13	-5	0	-5	0	-2
FLOYDS FORK NEAR PEWEE VALLEY, KY	12	-5	44	0	-1	0	7
FLOYDS FORK AT FISHERVILLE, KY	6	1	5	0	3	0	-1
FLOYDS FORK NEAR MT WASHINGTON, KY	10	0	10	0	1	0	6
CHENOWETH RUN AT RUCKRIEGEL PARKWAY, KY	6	1	3	0	-1	0	-1

Site Name	Dissolved Oxygen		pH		Temperature		Conductivity
	Complete Record	Criteria Met	Complete Record	Criteria Met	Complete Record	Criteria Met	Complete Record
CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY	-2	0	-17	0	0	-1	-1
CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY	-11	-2	-3	-5	-3	0	-7
PENNSYLVANIA RUN AT MT WASHINGTON RD NR LOUISVILLE	16	-3	13	-2	1	0	1
FERN CREEK AT OLD BARDSTOWN RD AT LOUISVILLE, KY	10	0	37	0	1	0	0
NORTHERN DITCH AT OKOLONA, KY	0	-4	-6	0	-2	-1	-4
POND CREEK NEAR LOUISVILLE, KY	-10	-3	28	0	-11	-1	-10
POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY	6	1	9	0	-1	0	0
BRIER CREEK AT PENDELTON ROAD NEAR LOUISVILLE, KY	3	-7	3	0	0	0	6
MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	-3	-5	15	-5	-2	0	-3
CEDAR CREEK AT HWY 1442 NEAR SHEPHERDSVILLE, KY	-15	-1	1	0	-10	0	-6

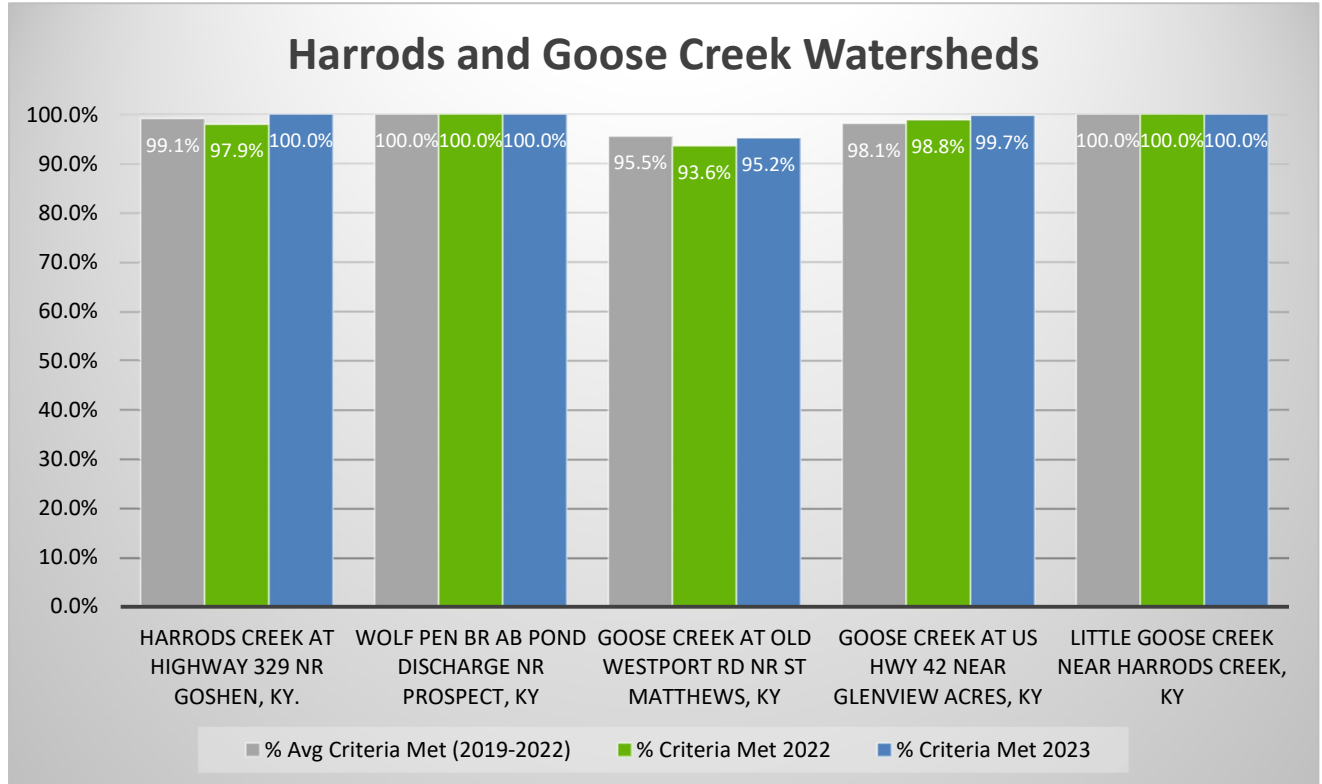
Footnote¹: South Fork of Beargrass Creek at East Breckinridge site was turned offline on 12/19/2022. Data for this site is only analyzed up to this date.

Continuous improvement of MSD's sonde equipment and maintenance program has been a major effort of the MS4 program. Instrument and hardware upgrades have resulted in a more reliable and complete data record, as seen in **Appendix 5.2.2**. Migration to a swinging pipe design has decreased downtime and increased installation resilience. Upgrades to site safety are underway, assuring safe access and secure working conditions during site visits.

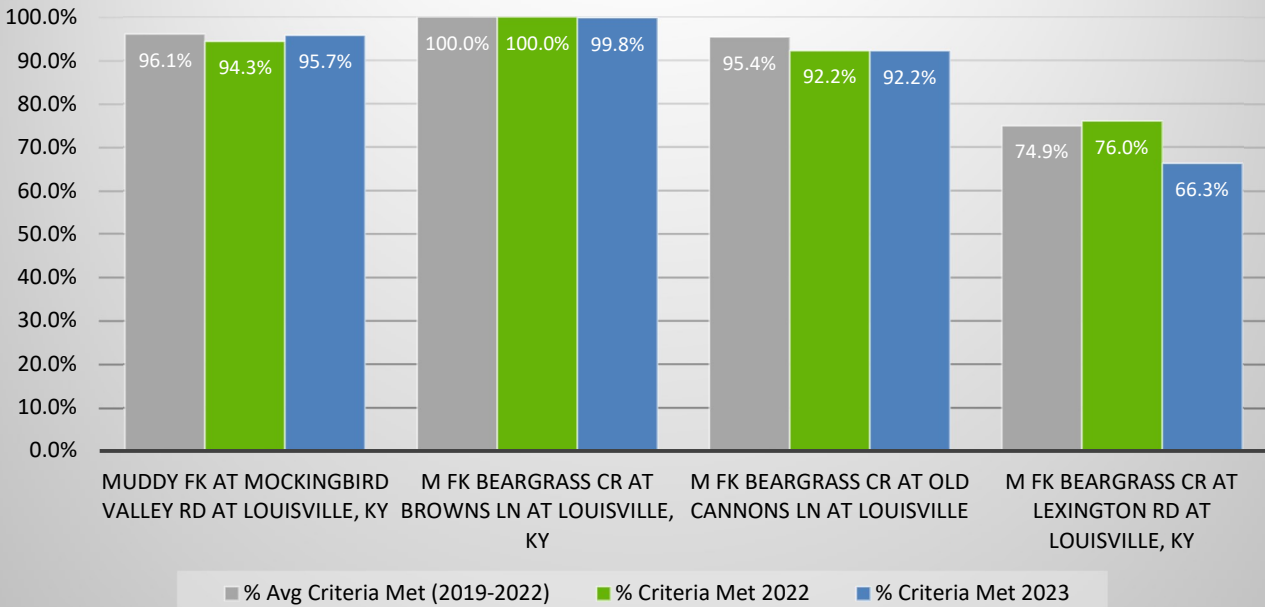


Future planning efforts include implementation of a fleet-style management program, across all aspects of the LTMN network. Major site components will be tracked in detail. Ultimately, the Fleet program will allow MSD to better understand performance at each LTMN site, while proactively planning for routine site maintenance and instrument expenditures.

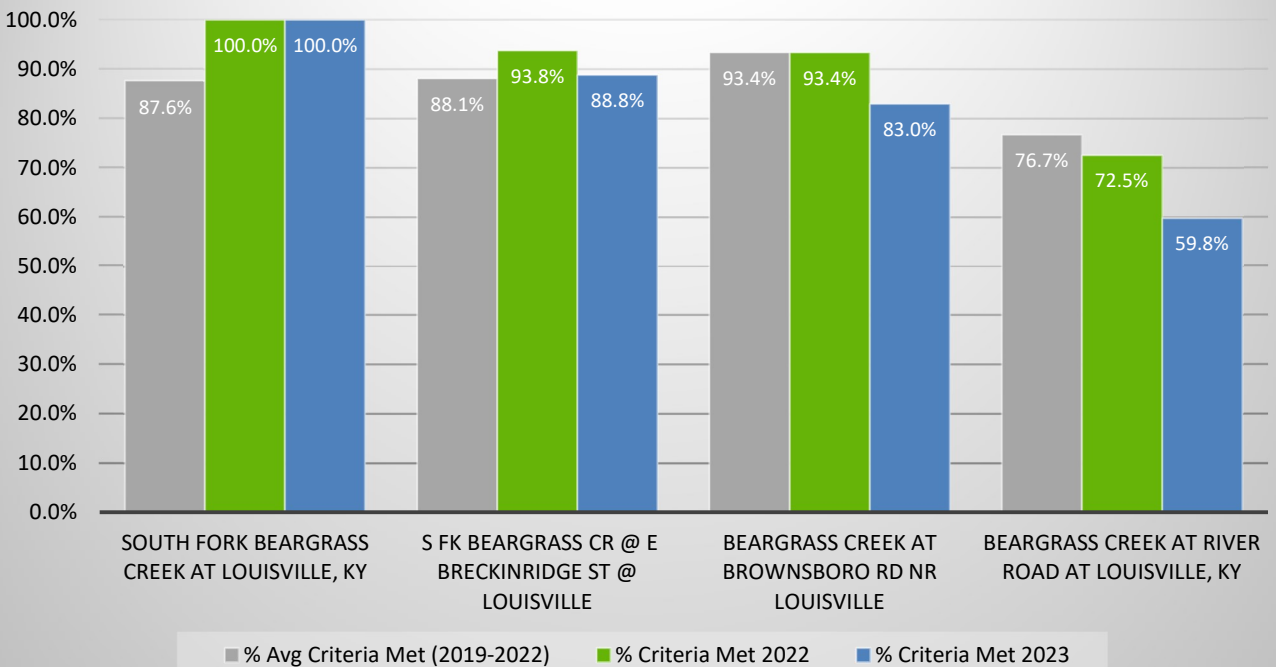
Figure 5.2.2.2 - Dissolved Oxygen % Criteria Comparison by Watershed

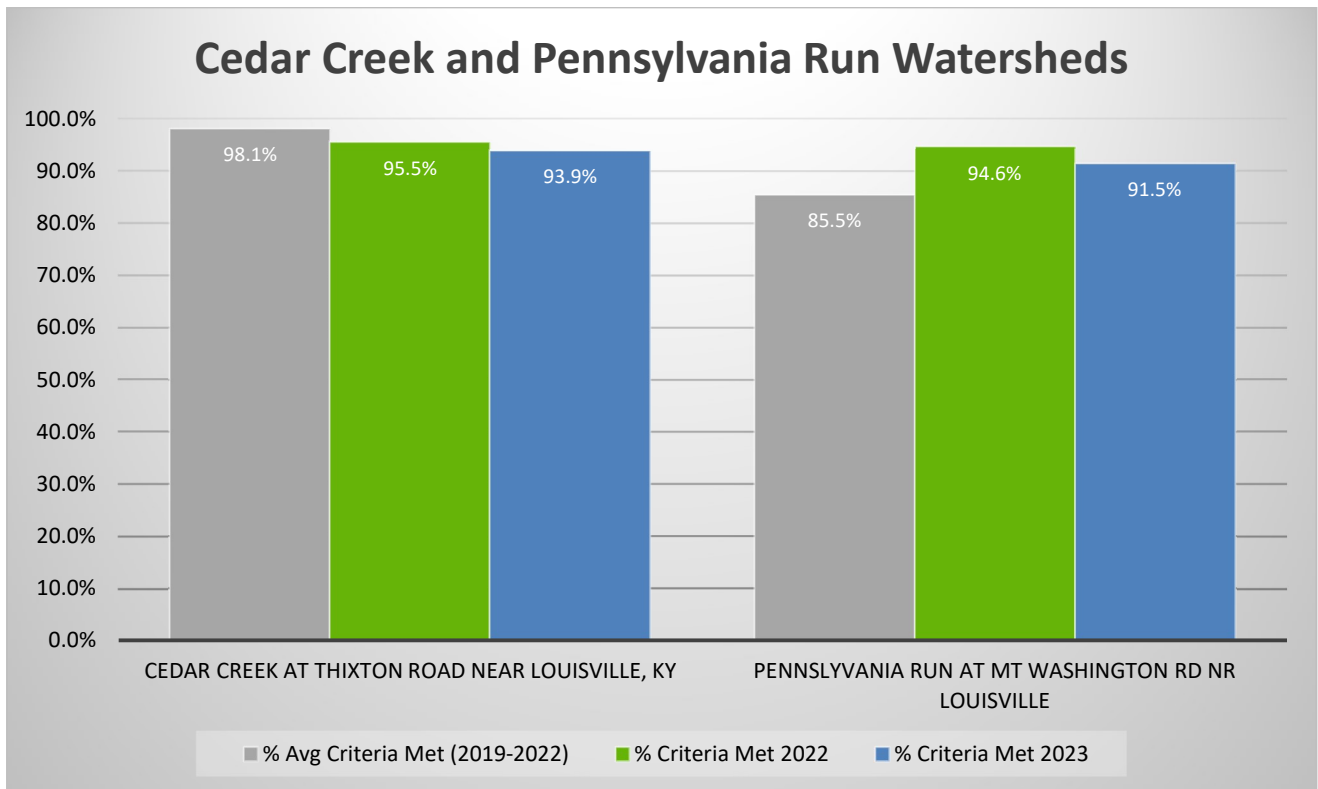
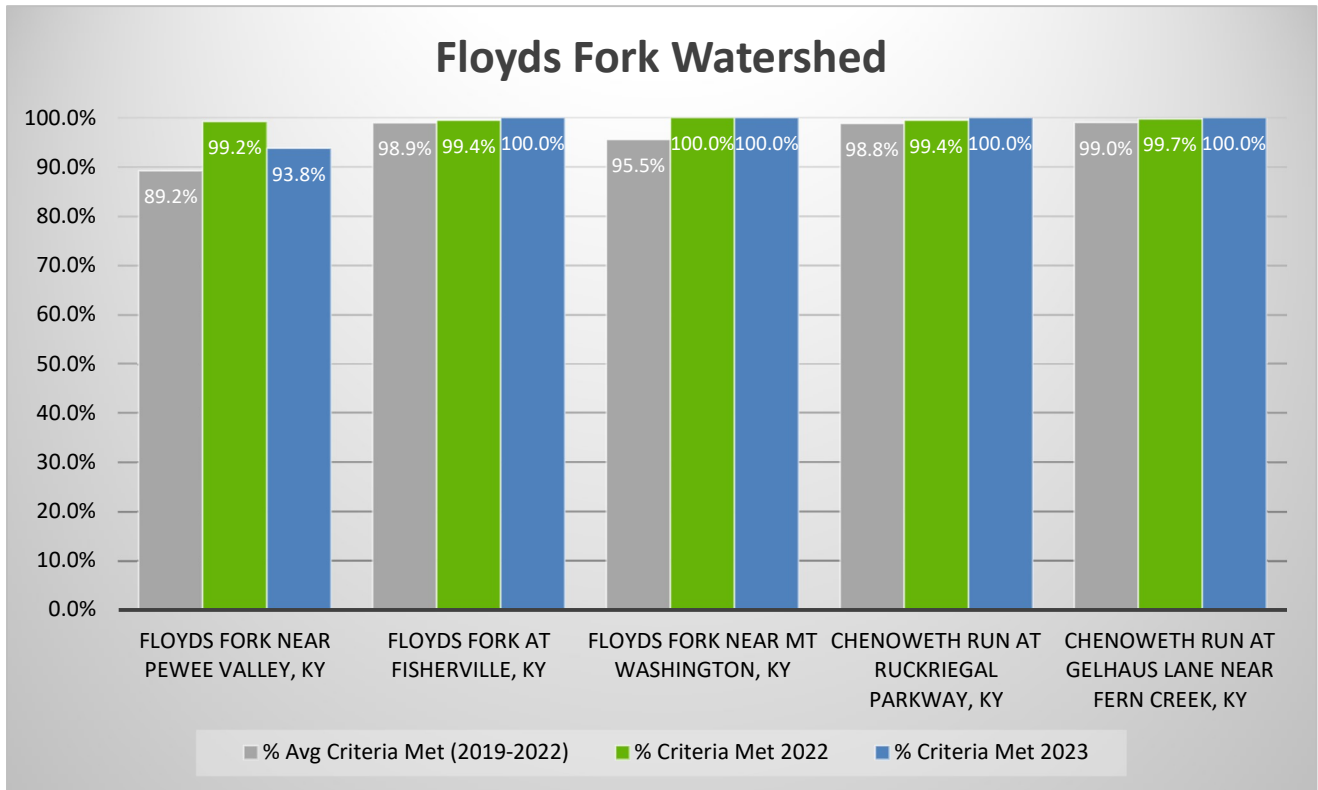


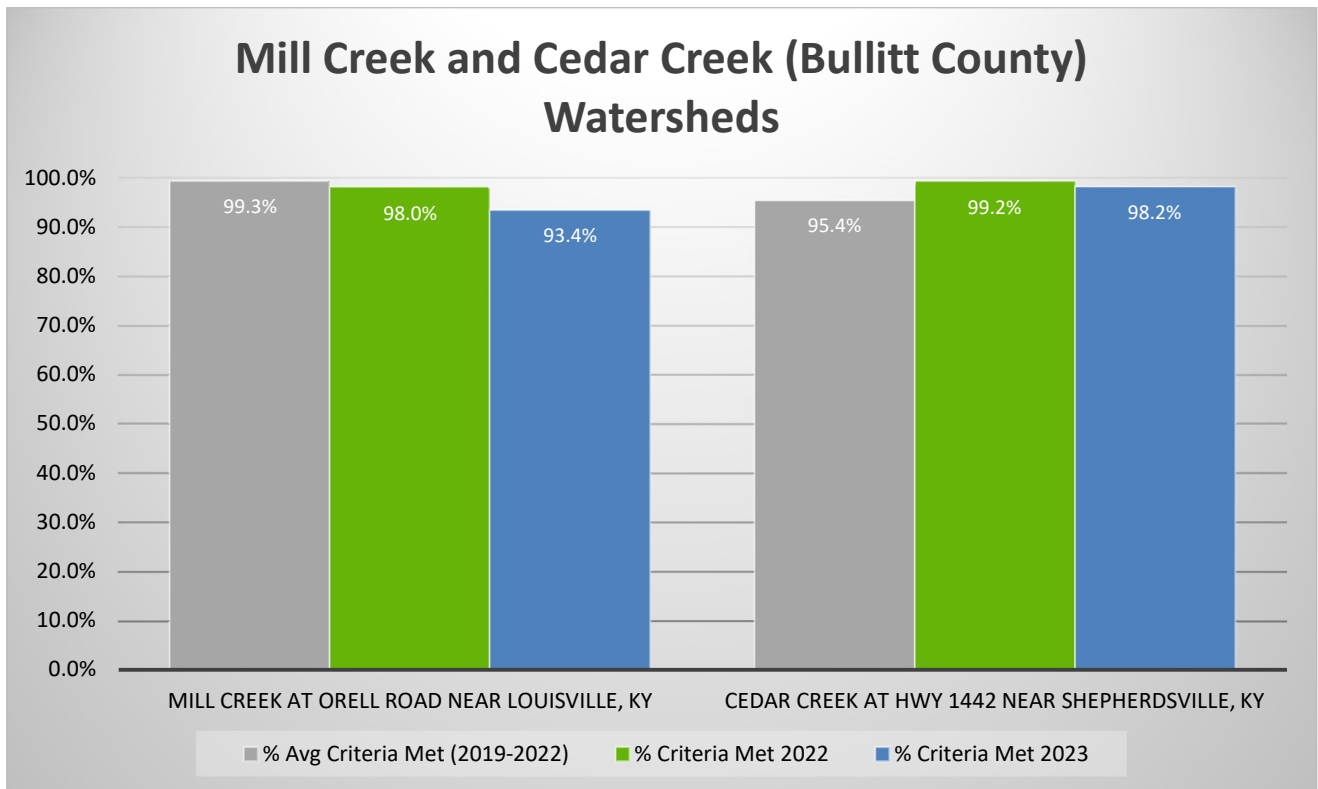
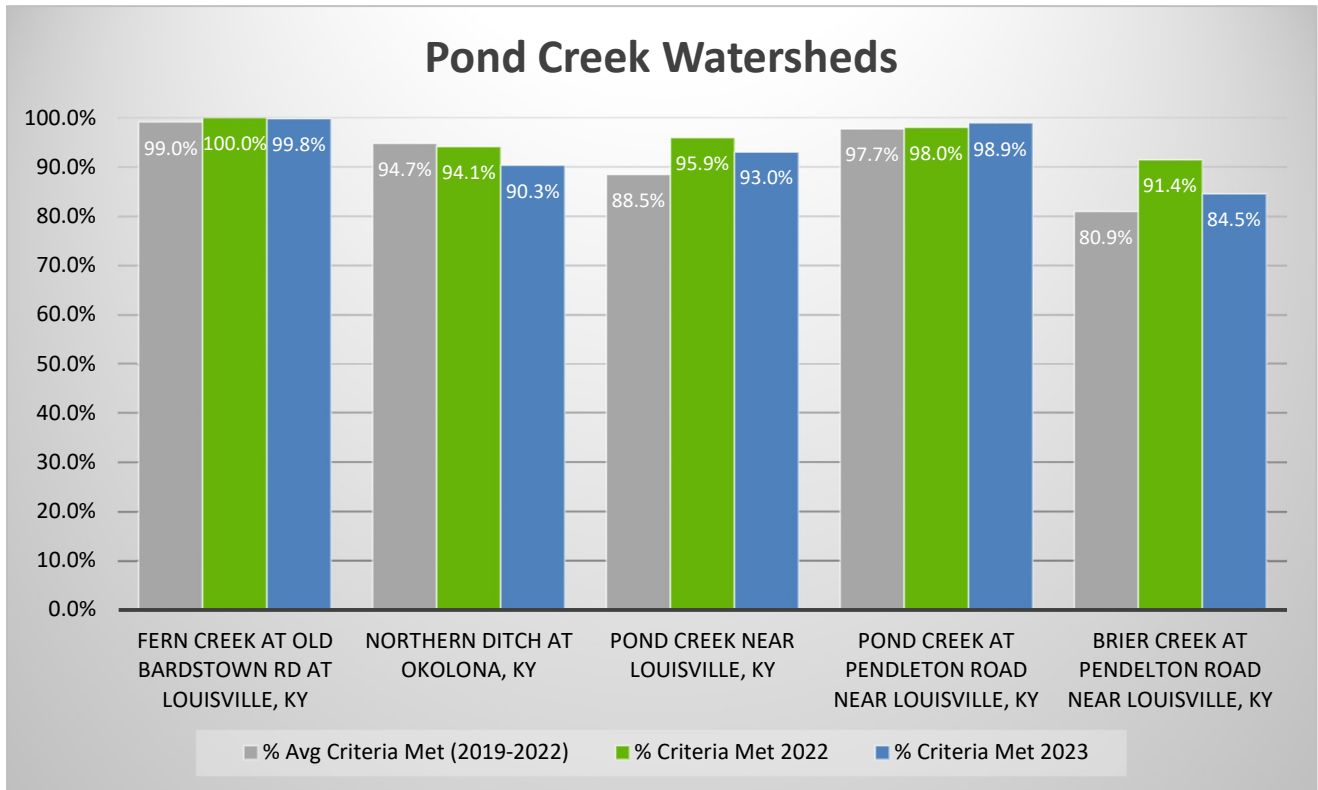
Muddy and Middle Fork of Beargrass Creek Watersheds



South Fork of Beargrass Creek Watershed







5.2.3 LIMS Quarterly

For the quarterly LIMS sampling, several parameters are collected as part of the permit requirements. Total Suspended Solids, *E. coli*, Total Nitrogen (calculated as the sum of Nitrate, Nitrite, and Total Kjeldahl Nitrogen (TKN), Oil and Grease, Copper, pH are all collected on a quarterly sampling schedule. For the annual reporting, *E. coli* is analyzed for the recreational contact season sampling that occurs, and the sonde data is used for pH analysis. The only other quarterly parameter with water quality criteria to compare to is copper. Summary of results for parameters that do not have numeric water quality criteria can be found in **Appendix 5.2.3: Quarterly LIMS Parameters W/O Water Quality Criteria**.

5.2.4 Copper

Data were reviewed for quality assurance purposes, and final data from quarterly samples collected at all 27 LTMN sites were compared to numeric criteria. For copper, hardness samples were taken at the time of sample collection and used to calculate hardness-dependent criteria using equations in the Kentucky Surface Water Standards (401 KAR 10:031 Surface Water Standards). If hardness data were not available, hardness from a nearby LTMN site was used to calculate hardness-dependent criteria. Sample concentrations were compared to the acute and chronic aquatic life criterion for copper. Copper exceedances in past years results can be found in **Appendix 5.2.4: Quarterly LIMS Copper**.

Between July 1, 2022, and June 30, 2023, 108 quarterly samples were analyzed for total recoverable copper. Concentrations ranged from less than the minimum detection limit to 28 parts per billion. All quarterly samples for copper were less than the chronic aquatic life criteria, except for one sample at South Fork of Beargrass Creek at Louisville, KY. This sample had an elevated copper concentration (28 ug/l) that exceeded the calculated chronic and acute aquatic life criterion based on hardness of 15.0 ug/l and 23.7 ug/l, respectively.

5.2.5 *E. Coli*

E. coli bacteria occurs in the digestive tracts of humans and warm-blooded animals but do not reproduce outside the bodies of humans and animals. Thus, *E. coli* bacteria results provide an indicator of fecal pollution that is not complicated by reproduction outside the hosts' digestive tracts. *E. coli* is currently the most reliable indicator of fecal bacterial contamination of surface waters in the U.S. according to water quality standards set by the United States Environmental Protection Agency (EPA). In water bodies where recreational use is common, the contact or ingestion of water is high, so the acceptable concentrations of *E. coli* are lower. Whereas, in waterbodies where contact with the water is minimal, acceptable concentrations of *E. coli* may be higher because there is a lower risk of a person becoming sick. *E. coli* bacteria concentrations are measured as "Most Probable Number" (MPN) of bacteria in a 100 milliliter (ml) sample. As a reference, 100 ml is about 3.4 ounces.

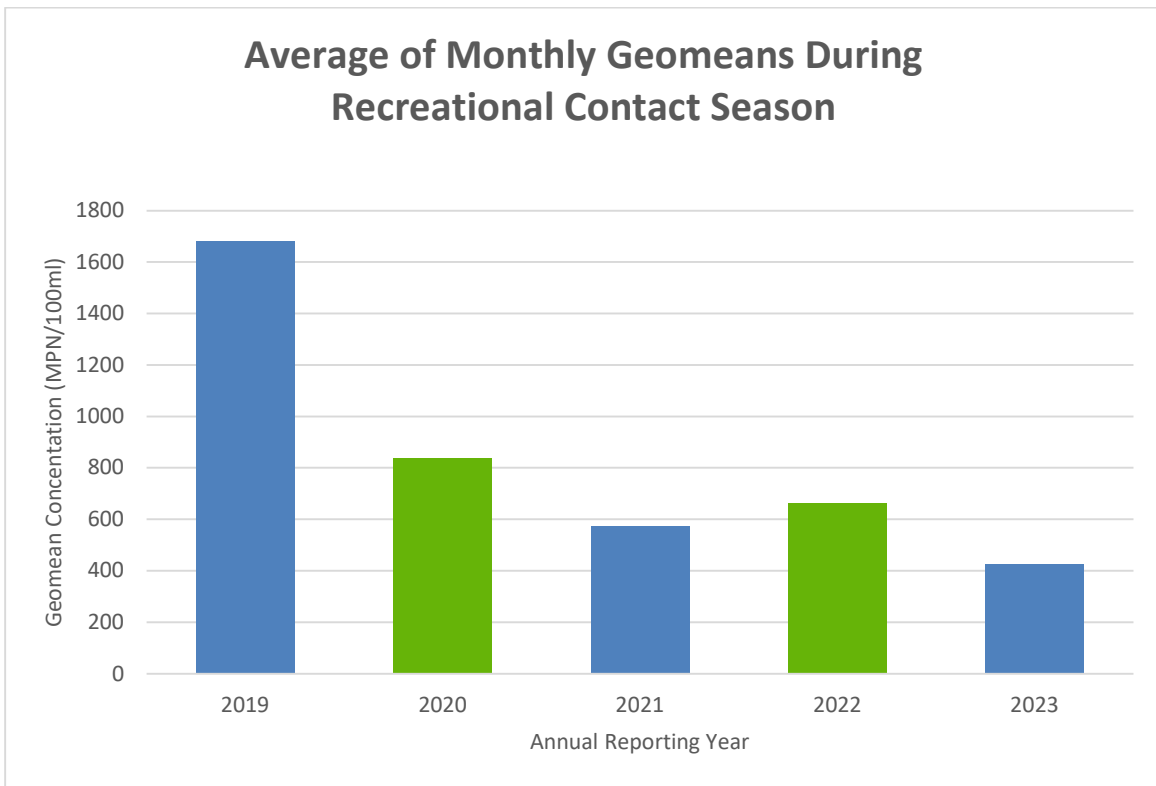
For this reporting period, data were reviewed for quality assurance, and final data were compared to 401 KAR 10:031 Surface Water Standards criteria for *E. coli* bacteria during the May 1 to

October 31 recreational season. *E. coli* bacteria results are reported on a monthly basis during the recreational season and on a quarterly basis for the remainder of the year.

As specified in the approved QAPP, trained MSD staff collected and analyzed five *E. coli* samples within a 30-day period during the six-month recreational season in 2022 (July to October) and in 2023 (May and June). The sample period coincides with the MS4 reporting period. During the remainder of the year, one sample per quarter was collected in October 2022, and in January and April 2023. *E. coli* samples were analyzed in MSD’s laboratory using EPA approved methods.

Data were reviewed for quality assurance and final data were analyzed for this report. During the reporting period, 882 *E. coli* bacteria samples were collected at the 27 LTMN monitoring sites. *E. coli* bacteria concentrations ranged from 25 MPN/100 ml to 88,500 MPN/100 ml. **Figure 5.2.5** shows the trend of geomean (i.e., geometric mean) averages over the last five years. Additional water quality information about *E. coli* for the 2023 Annual Reporting year can be found in **Appendix 5.2.5: E. Coli**.

Figure 5.2.5 - Average of Monthly Geomeans during Recreational Contact Season by Year



5.2.6 Biological Data

Narrative ratings that include “excellent”, “good”, “fair”, “poor” and “very poor” were developed by Division of Water to characterize fish, benthic macroinvertebrate, algal communities as well as habitat quality collected during both fish and macroinvertebrate sampling. The standard operating

procedures (SOPs) documenting the rating system are available from Division of Water at this website: <http://water.ky.gov/Pages/SurfaceWaterSOP.aspx>. The narrative ratings are tailored to watershed size and ecological region of the state. LTMN sites were classified as “headwaters”, “wadeable” or “boatable” using these protocols. All LTMN sites except Brier Creek at Pendleton Road and Pond Creek near Louisville were located in the Bluegrass ecological region. Brier Creek at Pendleton Road and Pond Creek near Louisville are in the Pennyroyal ecological region.

MSD had biological community samples collected using protocols developed by EPA and Division of Water. Fish community samples and habitat quality data were collected in spring 2023. Concurrent data for stream temperature, dissolved oxygen, pH, and conductivity were also collected. Benthic macroinvertebrate community and aquatic habitat data were collected in spring and summer 2023. MSD is currently in the process of collecting algae samples in the fall of 2023 and this data will be made available in the 2024 Annual Report.

Table 5.2.6.1 shows the years sampling was collected for each parameter. **Table 5.2.6.2** compares the latest sampling for each parameter to the average of the previous samplings, within a five-year range. A lookup table for the scores and parameter ratings based on drainage area and ecological region can be found in **Appendix 5.2.6: Biological** (reference for drainage area can be found in **Table 5.1.2.2.**)

Table 5.2.6.1 – Years Sampling was Completed for Biological Parameters

	Algae	Fish	Habitat (Fish Sampling)	Macroinvertebrate	Habitat (Macro Sampling)
2019				X	X
2020	X	X	X		
2021	X	X	X	X	X
2022					
2023	*	X	X	X	X

Algae sampling for 2023 occurred in the fall and data was not available during Annual Reporting period. Data will be made available in the 2024 Annual Report.

Table 5.2.6.2 – Biological Sample Rating and Previous Samplings Average Difference Comparison

Site Name	Algal Communities		Fish Communities		Macroinvertebrate Communities		Habitat (Fish Sampling)		Habitat (Macro Sampling)	
	2021 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference
HARRODS CREEK AT HIGHWAY 329 NR GOSHEN, KY.	FAIR	-10.0	GOOD	-4	EXCELLENT	8.2	GOOD	-7.0	GOOD	-9.0
WOLF PEN BR AB POND DISCHARGE NR PROSPECT, KY	FAIR	-9.0	FAIR	1.2	POOR	4.5	POOR	-11.0	POOR	-20.0
GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY ¹	GOOD	N/A	EXCELLENT	-1	FAIR	3.7	FAIR	5.5	FAIR	-16.0
GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	POOR	-20.0	EXCELLENT	-3	FAIR	4.4	GOOD	-0.5	GOOD	-14.0
LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	FAIR	-6.0	EXCELLENT	-4.2	FAIR	8.3	GOOD	-3.5	GOOD	-17.5
MUDDY FK AT MOCKINGBIRD VALLEY RD AT LOUISVILLE, KY	FAIR	-6.0	GOOD	-15.2	POOR	-0.3	POOR	4.0	POOR	-7.5
M FK BEARGRASS CR AT BROWNS LN AT LOUISVILLE, KY	FAIR	-10.0	FAIR	5.2	FAIR	10.2	FAIR	6.5	FAIR	1.5



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Site Name	Algal Communities		Fish Communities		Macroinvertebrate Communities		Habitat (Fish Sampling)		Habitat (Macro Sampling)	
	2021 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference
M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE,	POOR	-12.0	FAIR	-5.9	POOR	3.4	GOOD	10.5	GOOD	-1.5
M FK BEARGRASS CR AT LEXINGTON RD AT LOUISVILLE, KY	EXCELLENT	0.0	GOOD	-3.1	FAIR	5.7	FAIR	20.5	FAIR	-1.0
SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	EXCELLENT	4.0	GOOD	4.8	POOR	0.8	POOR	14.5	POOR	3.0
S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE	GOOD	2.0	FAIR	8.2	POOR	3.2	POOR	6.0	POOR	-3.0
BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE ²	FAIR	N/A	FAIR	8.8	POOR	0.6	FAIR	12.5	FAIR	3.0
FLOYDS FORK NEAR PEWEE VALLEY, KY	GOOD	-2.0	EXCELLENT	1	GOOD	-2.2	FAIR	-5.5	FAIR	-22.0
FLOYDS FORK AT FISHERVILLE, KY	GOOD	-7.0	EXCELLENT	1.9	EXCELLENT	6.2	GOOD	-7.0	GOOD	-21.0
FLOYDS FORK NEAR MT WASHINGTON, KY	GOOD	5.0	EXCELLENT	-3.3	EXCELLENT	3.0	FAIR	5.5	FAIR	-26.0
CHENOWETH RUN AT RUCKRIEGEL PARKWAY, KY	EXCELLENT	-2.0	GOOD	-0.9	POOR	8.1	FAIR	5.5	FAIR	-0.5



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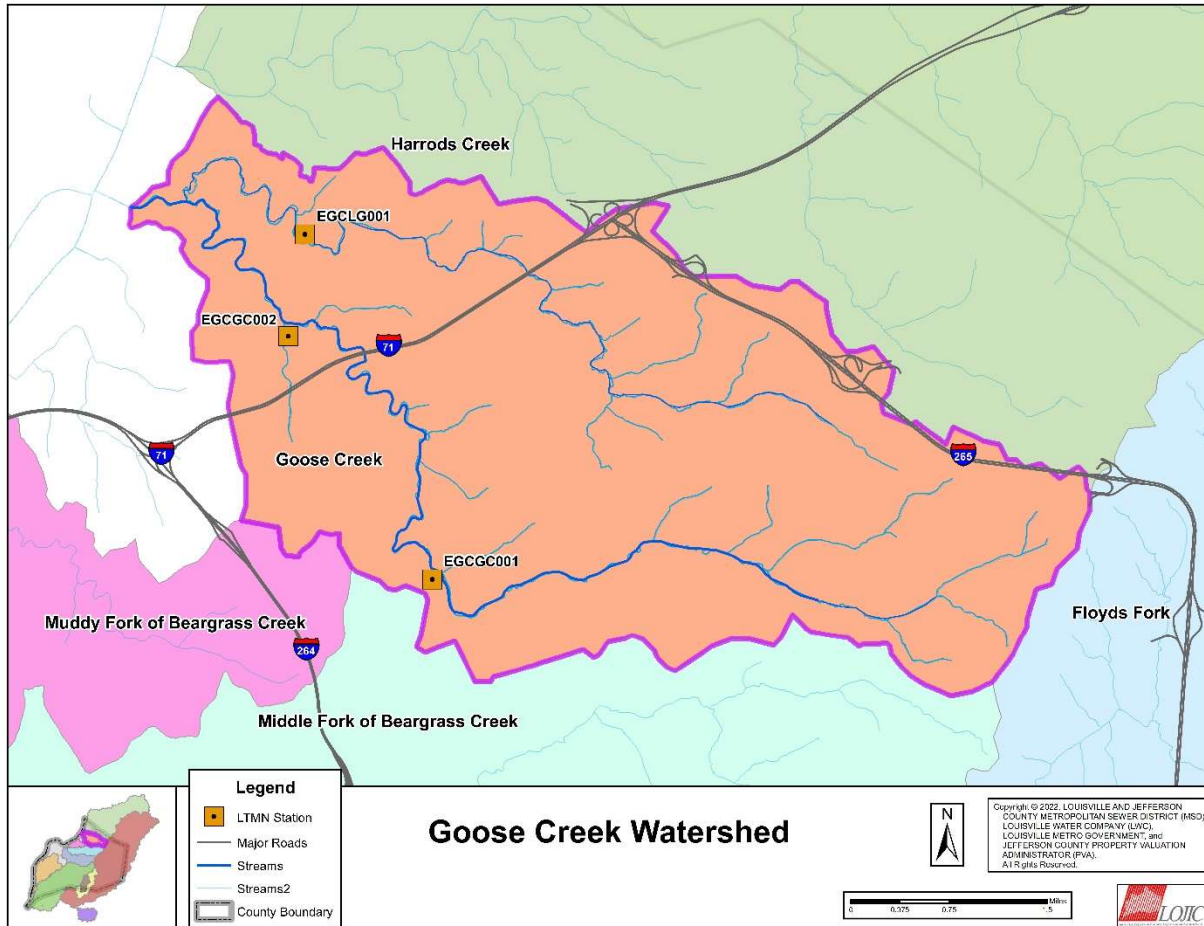
Site Name	Algal Communities		Fish Communities		Macroinvertebrate Communities		Habitat (Fish Sampling)		Habitat (Macro Sampling)	
	2021 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference
CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY	EXCELLENT	-6.0	EXCELLENT	2.8	FAIR	15.7	FAIR	11.5	FAIR	-2.5
CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY	FAIR	-3.0	EXCELLENT	-10.6	FAIR	4.2	GOOD	1.5	GOOD	-5.0
PENNSYLVANIA RUN AT MT WASHINGTON RD NR LOUISVILLE	EXCELLENT	11.0	EXCELLENT	-1.5	FAIR	2.2	FAIR	-1.0	FAIR	2.5
FERN CREEK AT OLD BARDSTOWN RD AT LOUISVILLE, KY	GOOD	-1.0	POOR	-5.9	POOR	5.8	POOR	2.0	POOR	-4.0
NORTHERN DITCH AT OKOLONA, KY	GOOD	-14.0	EXCELLENT	2.7	FAIR	13.3	POOR	-8.0	POOR	-2.5
POND CREEK NEAR LOUISVILLE, KY	POOR	-3.0	FAIR	11.5	GOOD	18.9	POOR	6.0	POOR	-1.5
POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY	FAIR	-1.0	FAIR	7.8	FAIR	19.1	POOR	-3.0	POOR	8.5
BRIER CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY	POOR	-19.0	GOOD	-0.6	EXCELLENT	15.6	POOR	8.5	POOR	-19.0
MILL CREEK CUTOFF NEAR LOUISVILLE, KY	GOOD	2.0	POOR	0.7	FAIR	17.0	POOR	-3.0	POOR	3.0



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Site Name	Algal Communities		Fish Communities		Macroinvertebrate Communities		Habitat (Fish Sampling)		Habitat (Macro Sampling)	
	2021 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference	2023 Rating	Trailing Avg Difference
MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	GOOD	11.0	POOR	-16.5	POOR	-5.9	POOR	-1.5	POOR	0.0
CEDAR CREEK AT HWY 1442 NEAR SHEPHERDSVILLE, KY	GOOD	-17.0	EXCELLENT	-4.7	GOOD	-8.3	GOOD	-6.0	GOOD	1.0
Footnote ¹ : GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY was not sampled in 2021 for algae, value in table is the value from 2020 sampling event Footnote ² : BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE only sampled in 2021 for algae										

5.3 Watershed Spotlight: Goose Creek Watershed



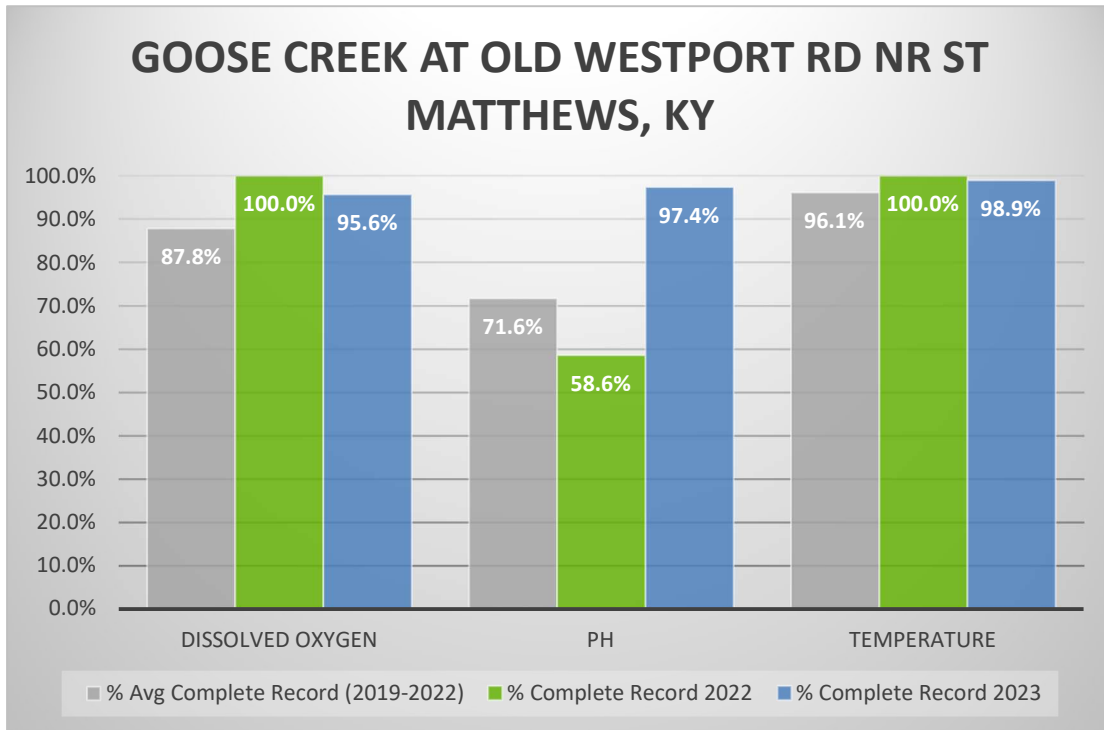
5.3.1 Watershed Description

Watershed Description: The streams that form Goose Creek watershed, Little Goose Creek and Goose Creek, flow northwest from Anchorage to Glenview Acres. Goose Creek enters the Ohio River near Lime Kiln Lane and River Road. The Goose Creek watershed drains approximately 19 square miles.

MSD has been monitoring water quality in Goose Creek watershed at three sites since 2000: Goose Creek at Old Westport Road (EGCGC001), Goose Creek at US Hwy 42 (EGCGC002) and Little Goose Creek near Harrods Creek (EGCLG001). There are 6.0 square miles of land draining to Goose Creek at Old Westport Road with 10% impervious surfaces. There are 10.1 square miles of land draining to Goose Creek at US Hwy 42 with 11% impervious surfaces. There are 5.8 square miles of land draining to the Little Goose Creek near Harrods Creek with 18% impervious surfaces.

5.3.2 Sonde Data

Figure 5.3.2.1 - Goose Creek Watershed Sonde Percent Complete Record Comparison



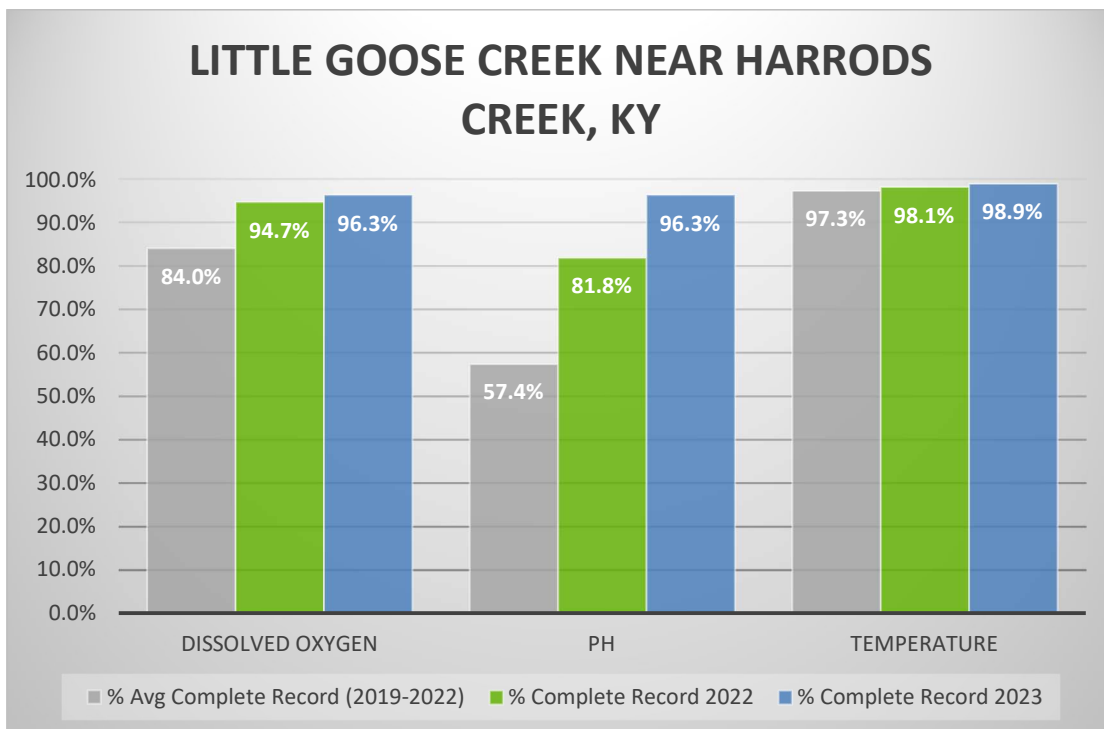
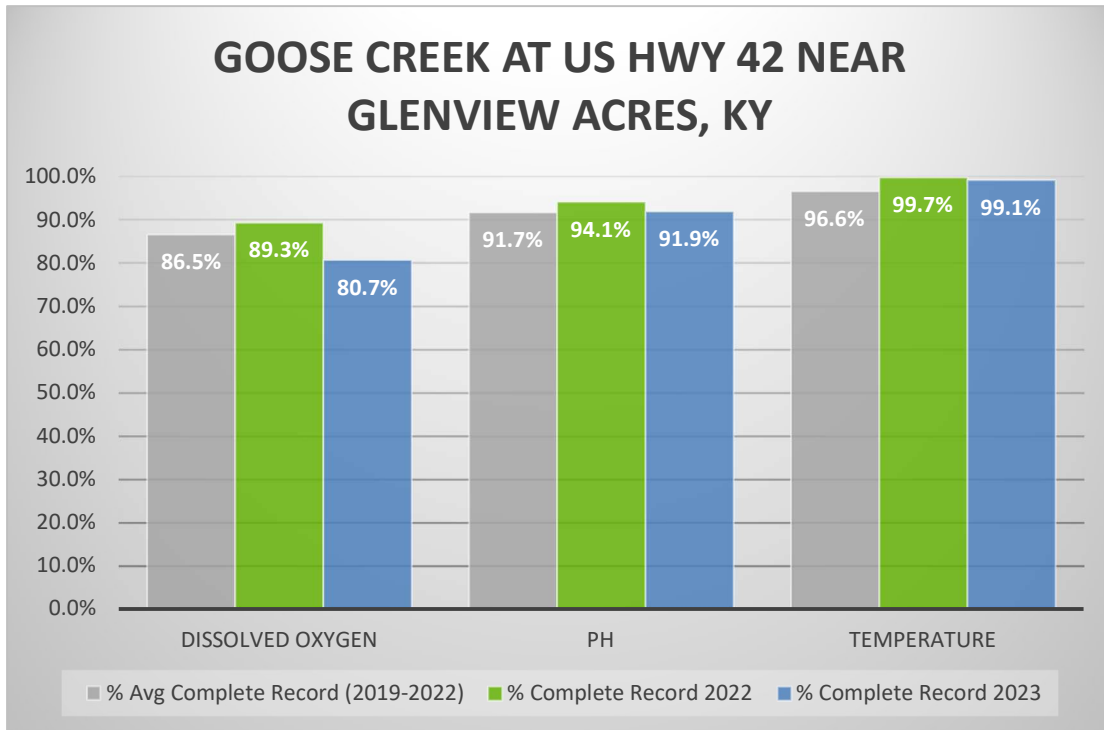


Figure 5.3.2.1 above highlights the comparison of this year's complete record sonde data compared to last year's data and the average of the previous four years. For all three sites, record completeness was very strong this year, with all sites and parameters having greater than 90% complete record, except for dissolved oxygen at Goose Creek at US Hwy 42.

Figure 5.3.2.2 - Goose Creek Watershed Dissolved Oxygen Percent Criteria Met 5 - Year Trend Lines

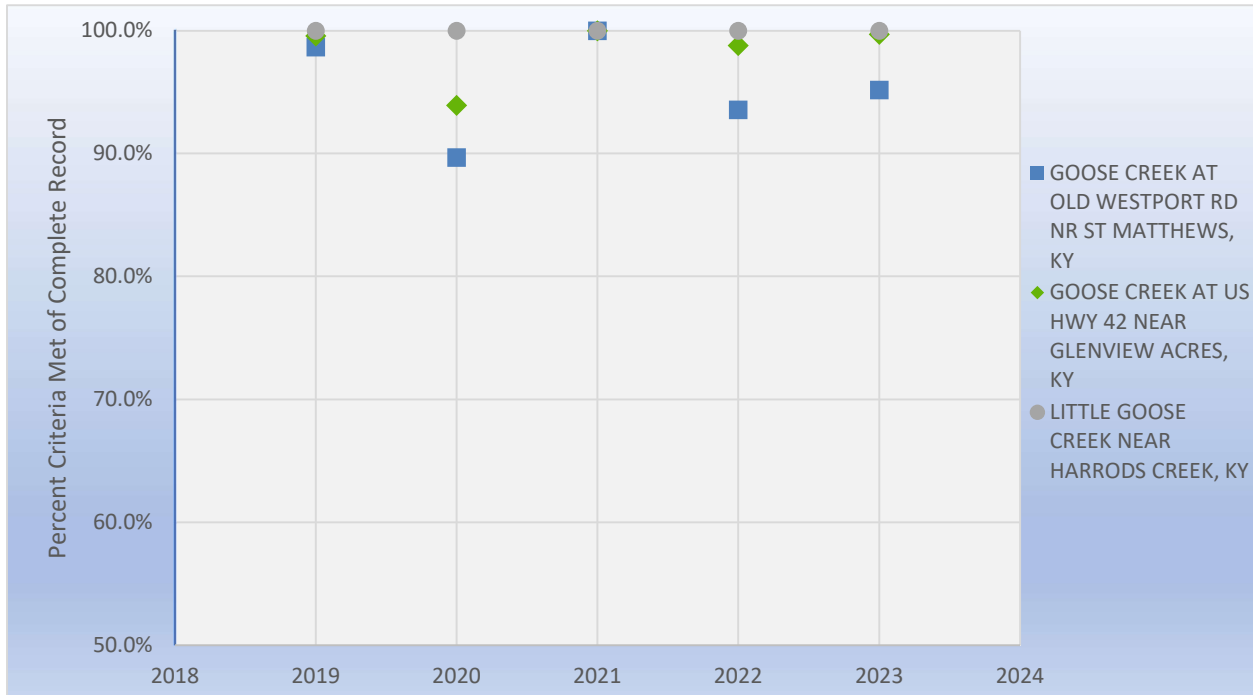


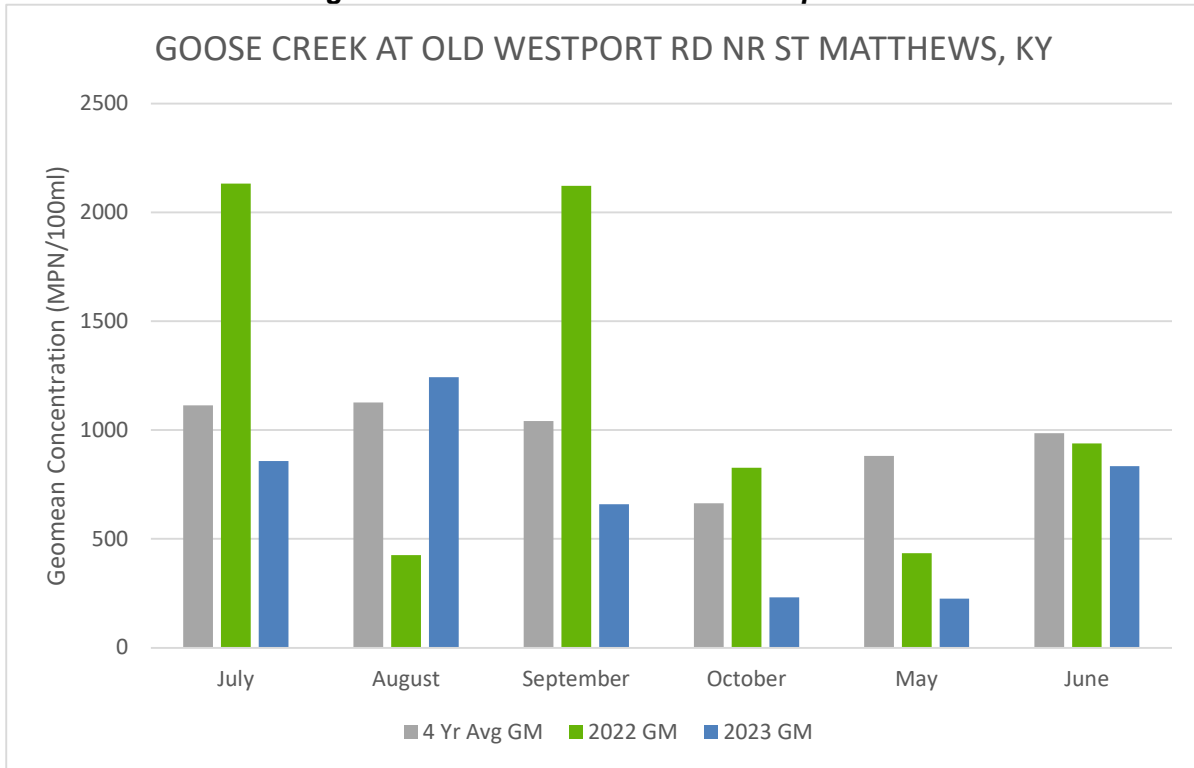
Figure 5.3.2.2 shows the trend for water quality criteria for dissolved oxygen across the last five years. Water quality criteria for dissolved oxygen in the Goose Creek watershed does not seem to pose an issue, with high percentages of criteria being met across the last five years.

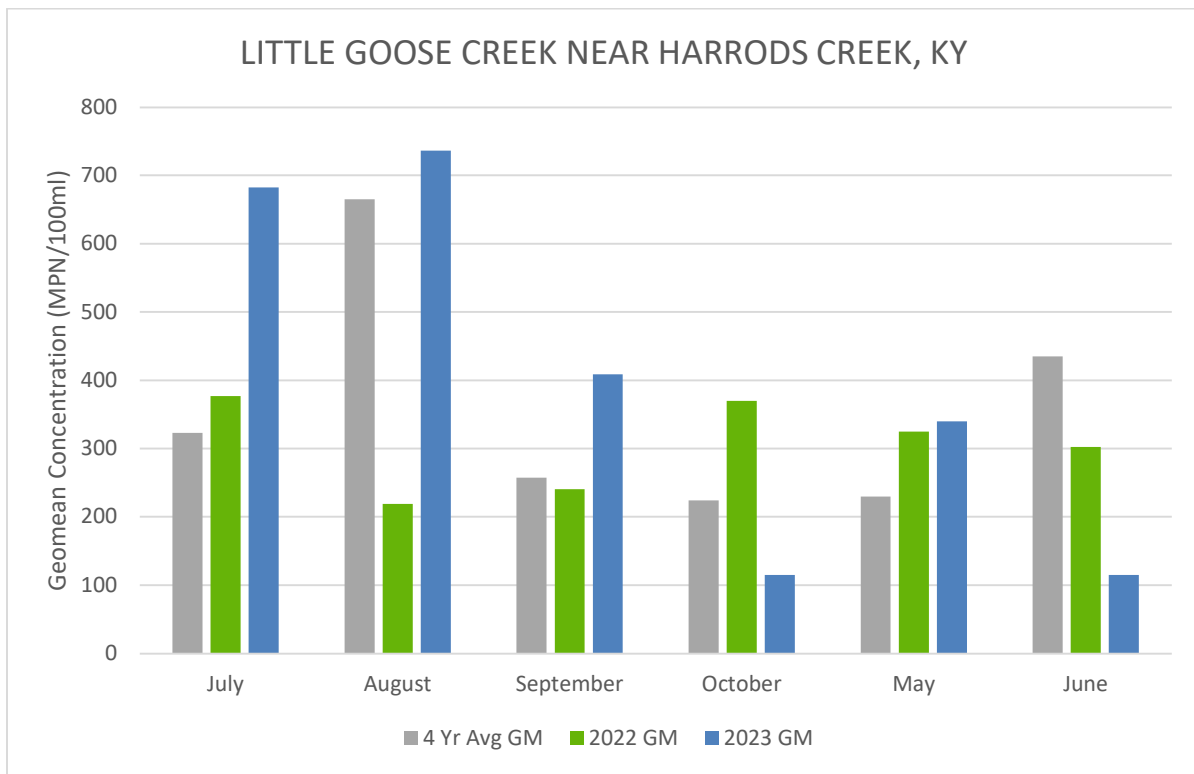
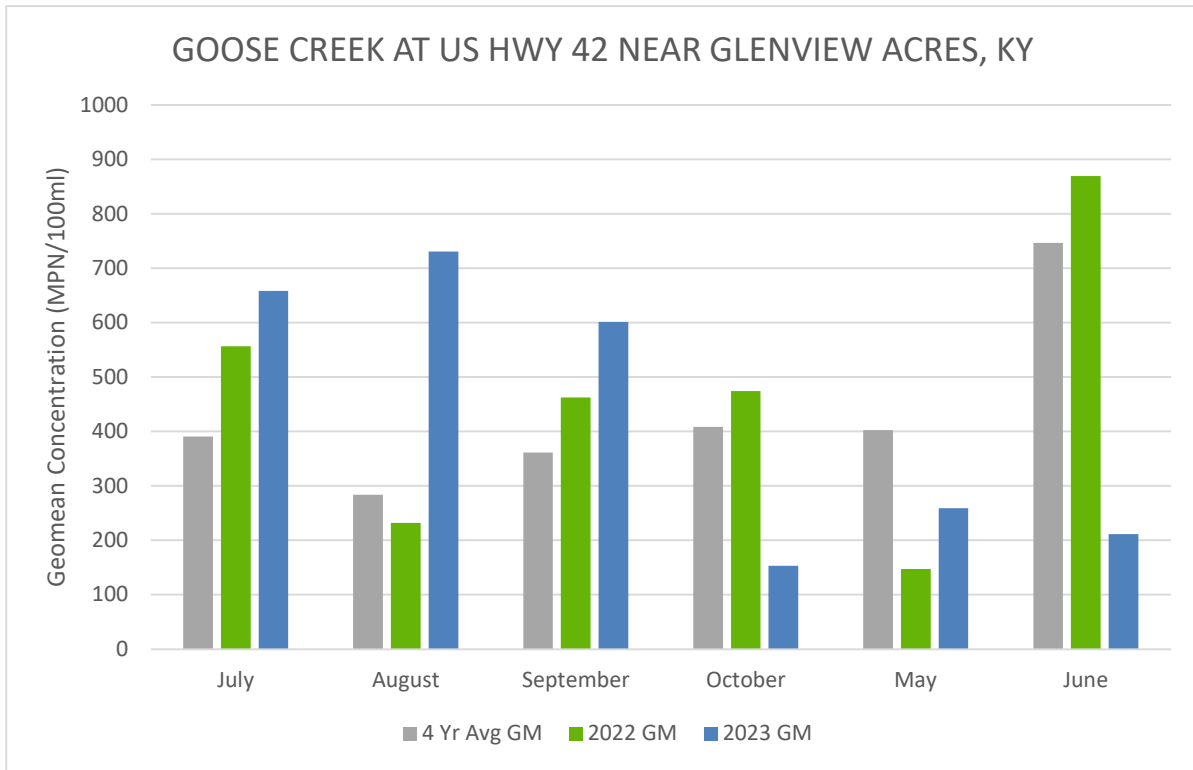
5.3.3 Copper

There were no copper exceedances that occurred during the 2023 Annual Reporting period in the Goose Creek watershed; all samples met both acute and chronic water quality criteria.

5.3.4 E. Coli

Figure 5.3.4 – E. Coli Geomean Comparison





For the *E. coli* data within the Goose Creek watershed, the geomean average values for each month were compared to last Annual Report’s results and against a trailing four-year average. For the Goose Creek watershed results were mixed for the comparison. Goose Creek at Old Westport Road showed mostly decreasing values in 2023 compared to the four-year average and last year’s results. However, both Goose Creek at US Hwy 42 and Little Goose Creek showed mixed results.

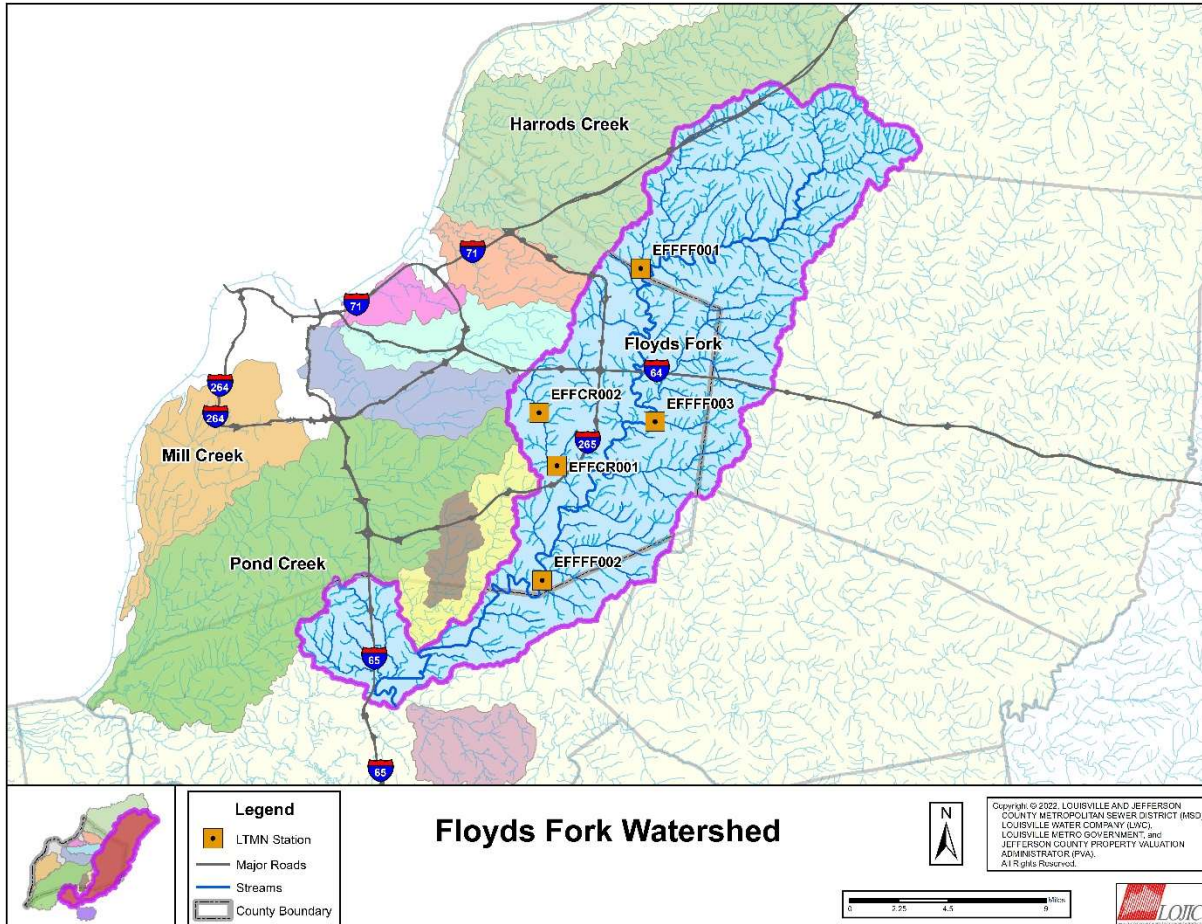
Note: For the May four year averages, there are only three data points for this average; there were less than 5 samples for May of 2019, so a geomean analysis could not be performed for that month.

5.3.5 Biological

Table 5.3.5 – Biological Watershed Comparison (Previous to Current Year)

Site Name	Algae	Fish	Macroinvertebrate	Habitat (Fish Sampling)	Habitat (Macro Sampling)
Goose Creek at Old Westport Road	Decreased	Decreased	Increased	Increased	Increased
Goose Creek at US Hwy 42	Decreased	Decreased	Decreased	Increased	Decreased
Little Goose Creek near Harrods Creek	Decreased	Decreased	Increased	Decreased	Decreased

5.4 Watershed Spotlight: Floyds Fork Watershed



5.4.1 Watershed Description

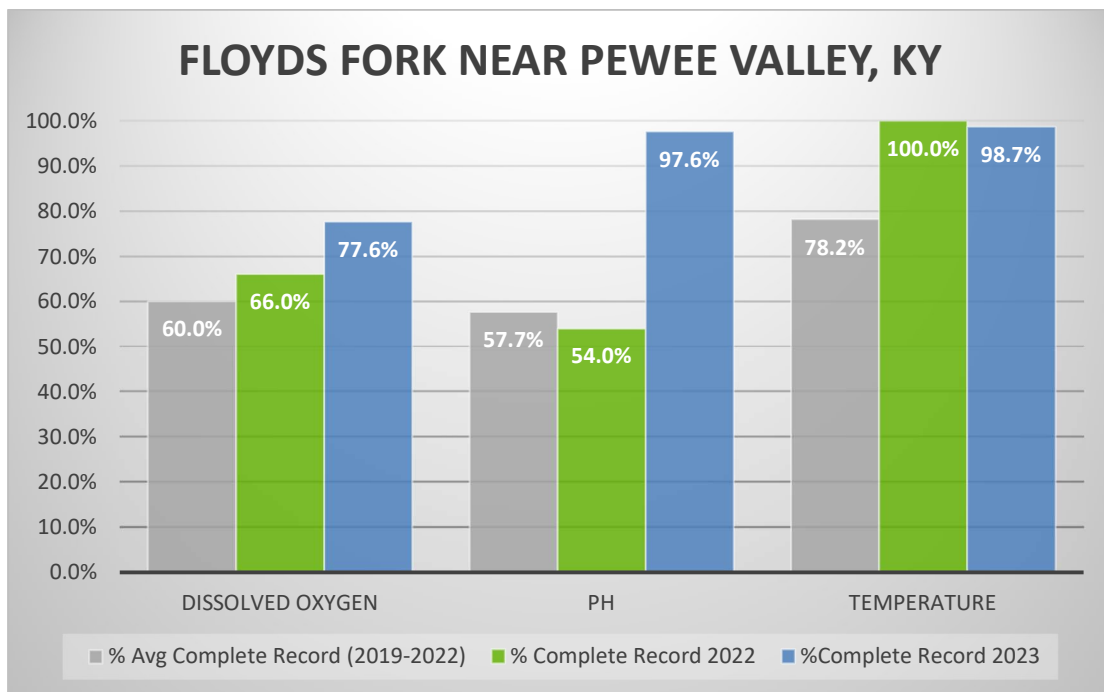
The small streams that form Floyds Fork originate in Oldham, Henry, and Shelby counties. Floyds Fork flows south through Oldham County, eastern Jefferson County, and northern Bullitt County where it drains into the Salt River near Shepherdsville. This watershed drains 257 square miles and is the largest metro area watershed. Approximately 104 square miles of the Floyds Fork watershed lies within Jefferson County.

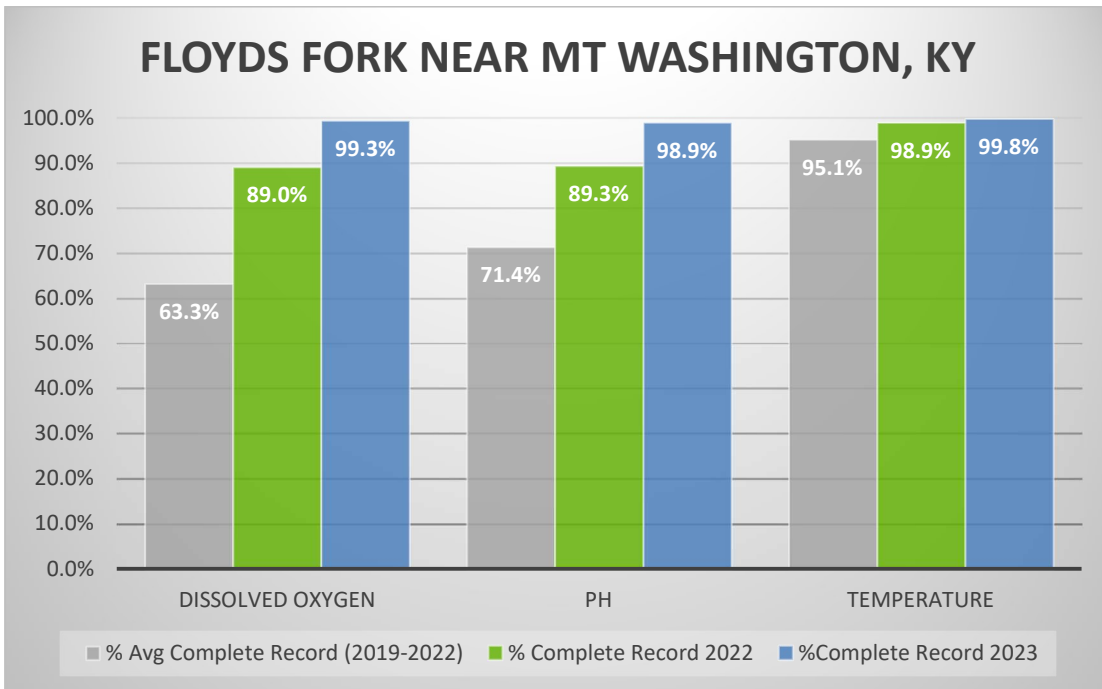
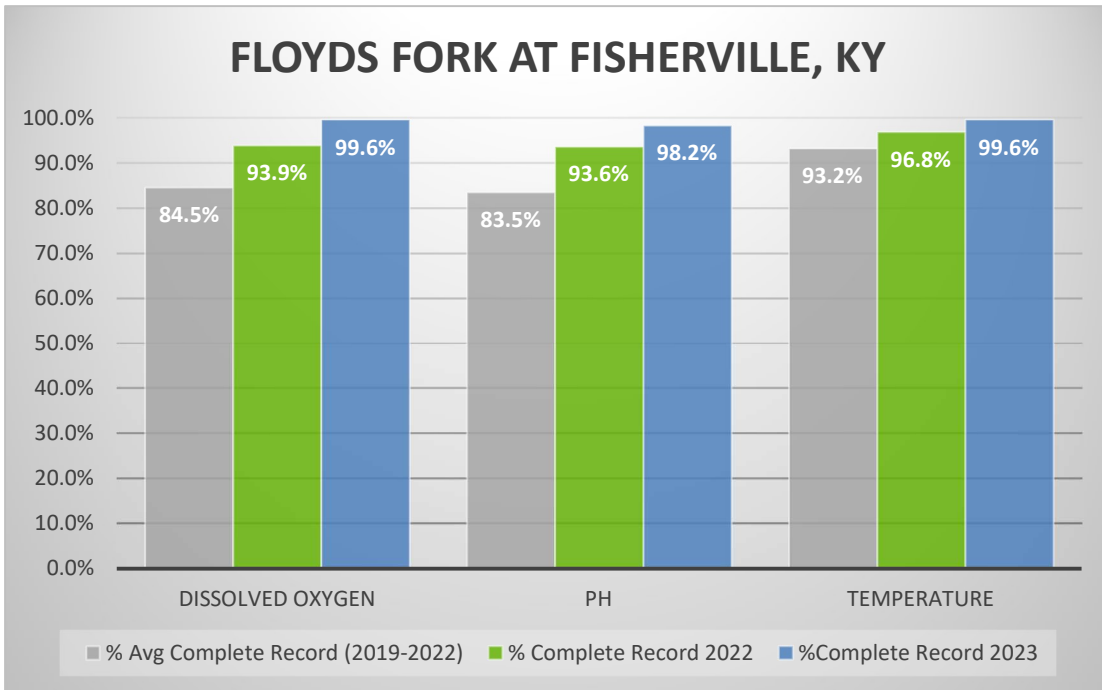
MSD monitors water quality at five locations in the Floyds Fork watershed. Along the main stem of Floyds Fork, monitoring stations are located at Floyds Fork near Pewee Valley (EFFFF001), Floyds Fork at Fisherville (EFFFF003), and Floyds Fork near Mt Washington (EFFFF002). The Pewee Valley site drains 80 square miles, mostly in Henry and Oldham Counties. This monitoring location is downstream of the Ash Avenue wastewater treatment plant, which is operated by Oldham County. There are 138 square miles draining to the Fisherville monitoring site (EFFFF003). This monitoring site is located downstream of the Floyds Fork Water Quality

Treatment Center. There are 213 square miles draining to the Mt. Washington monitoring site (EFFFF002), near the border of Jefferson and Bullitt Counties. There are two monitoring sites on Chenoweth Run, at Ruckriegel Parkway (EFFCR002) and Gelhaus Lane (EFFCR001), which drain 5.5 and 11.6 square miles, respectively. The Gelhaus Lane monitoring site was located downstream of the Jeffersontown Water Quality Treatment Center (WQTC), which was taken offline in January 2016.

5.4.2 Sonde Data

Figure 5.4.2.1 – Floyds Fork Watershed Sonde Percent Complete Record Comparison





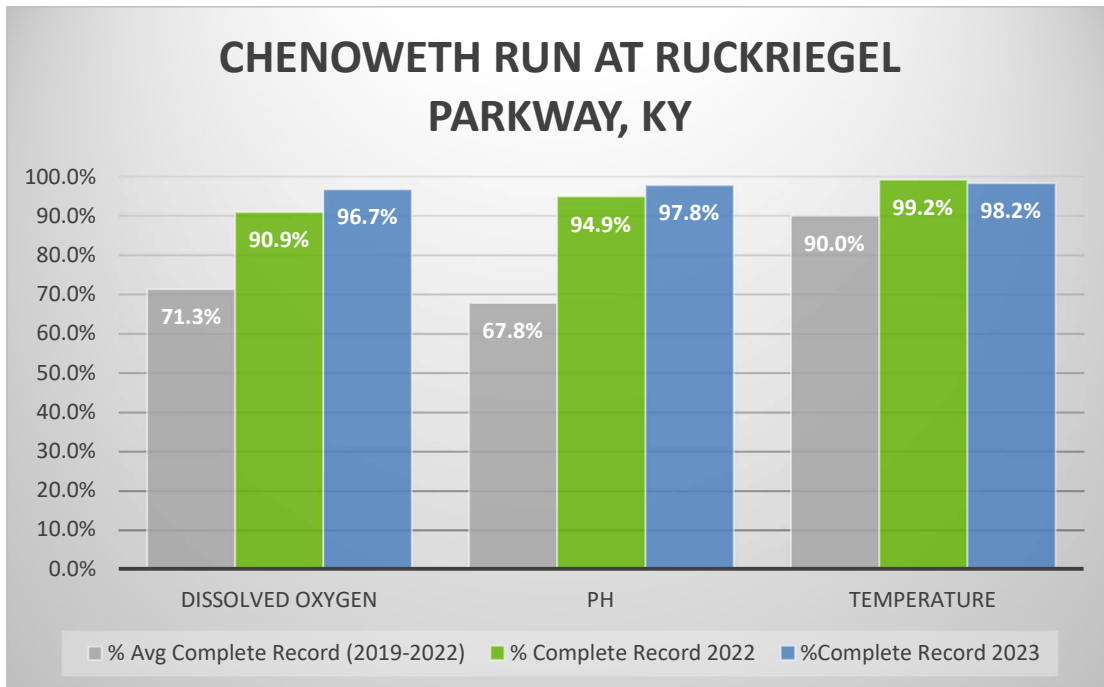
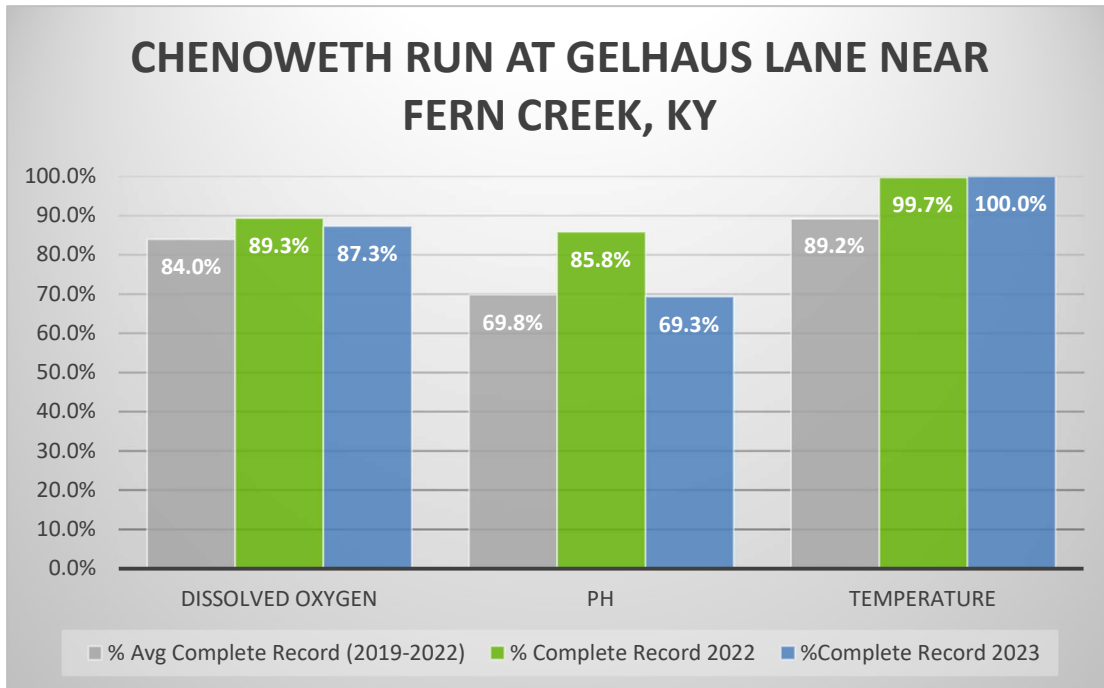
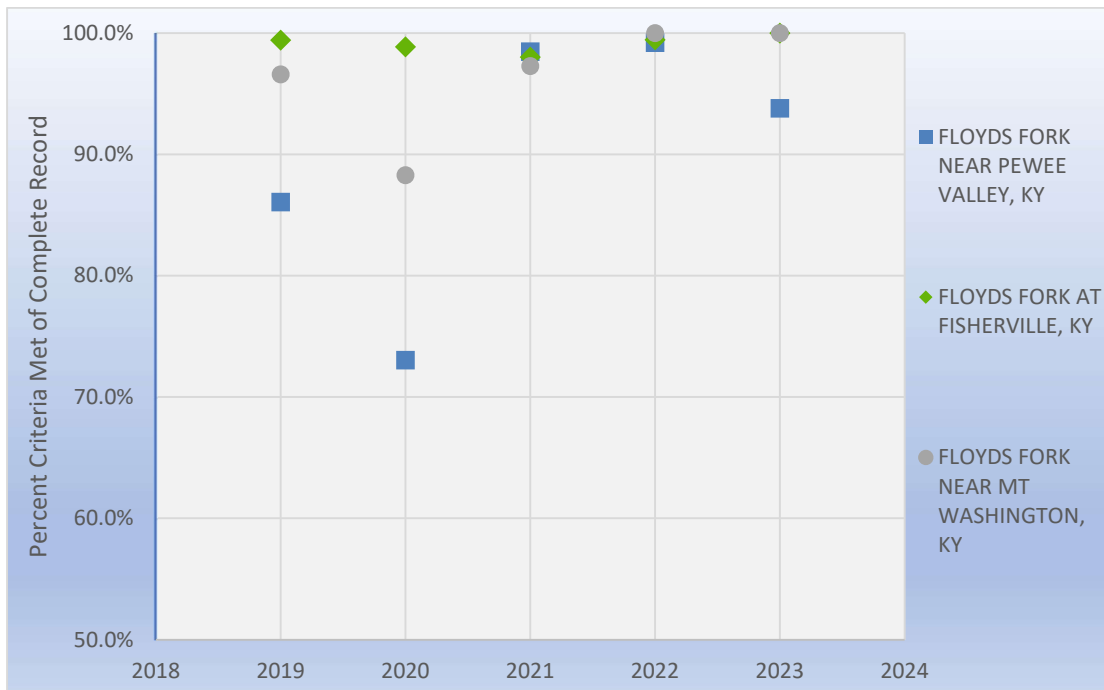


Figure 5.4.2.1 above highlights the comparison of this year’s complete record sonde data compared to last year’s data and the average of the previous four years. For nearly every site and parameter, complete records were very high, often above both last year’s results and the trailing four-year averages. Only Chenoweth Run at Gelhaus Lane for pH stood out as a decrease from previous year’s results, though this site still aligned well with the trailing average.

Figure 5.4.2.2 – Floyds Fork Watershed Dissolved Oxygen Percent Criteria Met - 5 Year Trendlines



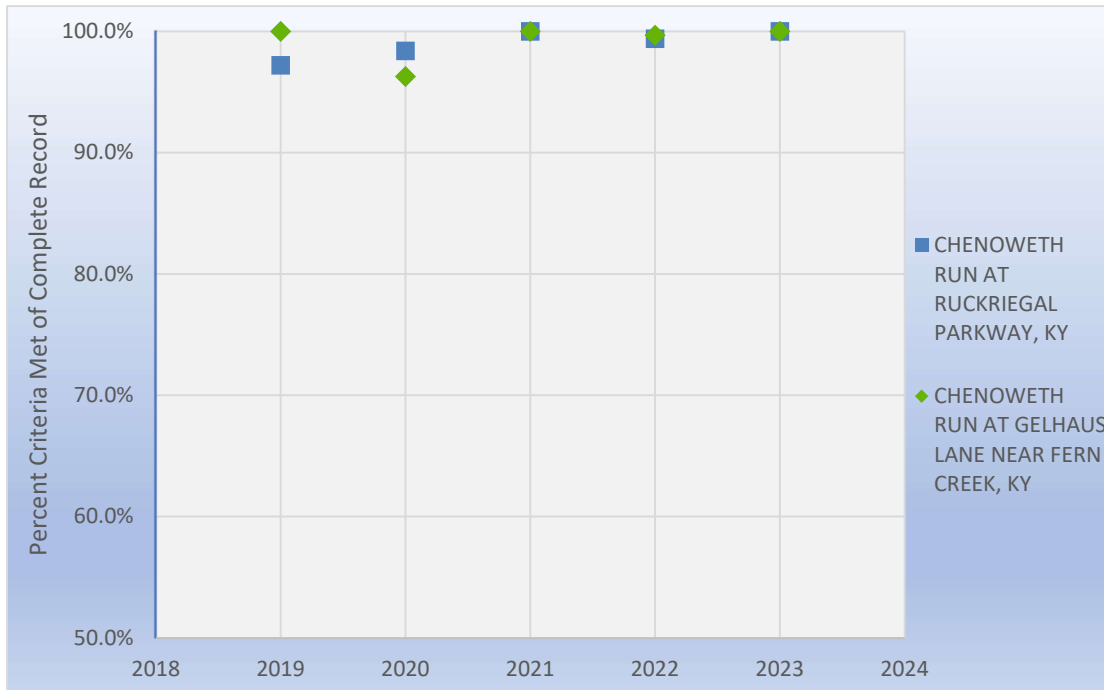


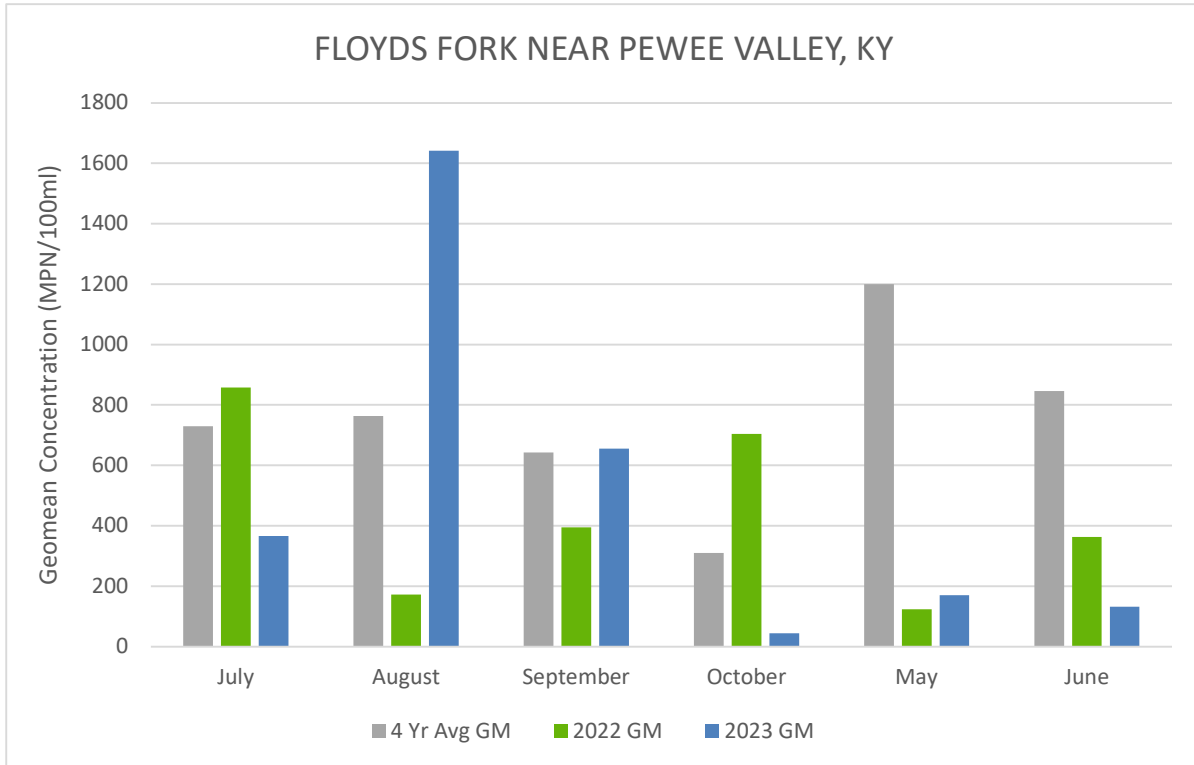
Figure 5.4.2.2 shows the trend for water quality criteria for dissolved oxygen across the last five years. All sites were at 100% criteria met for this reporting year, except for Floyds Fork near Pewee Valley.

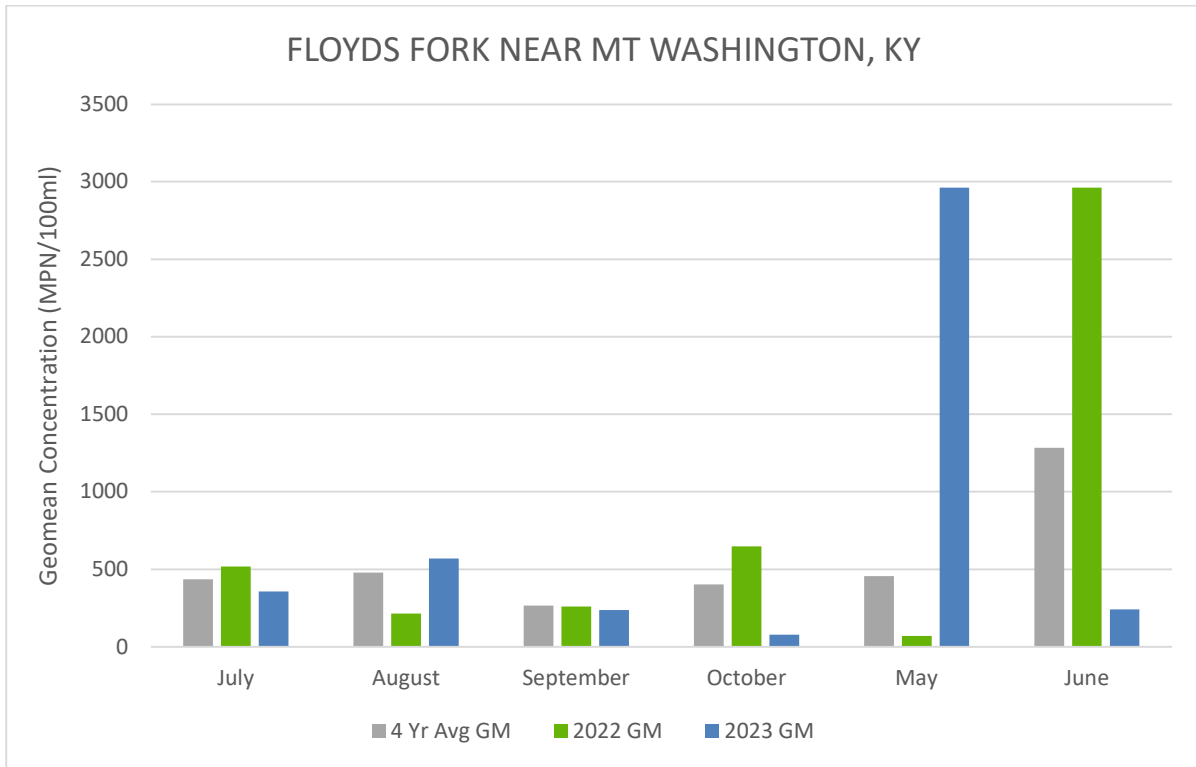
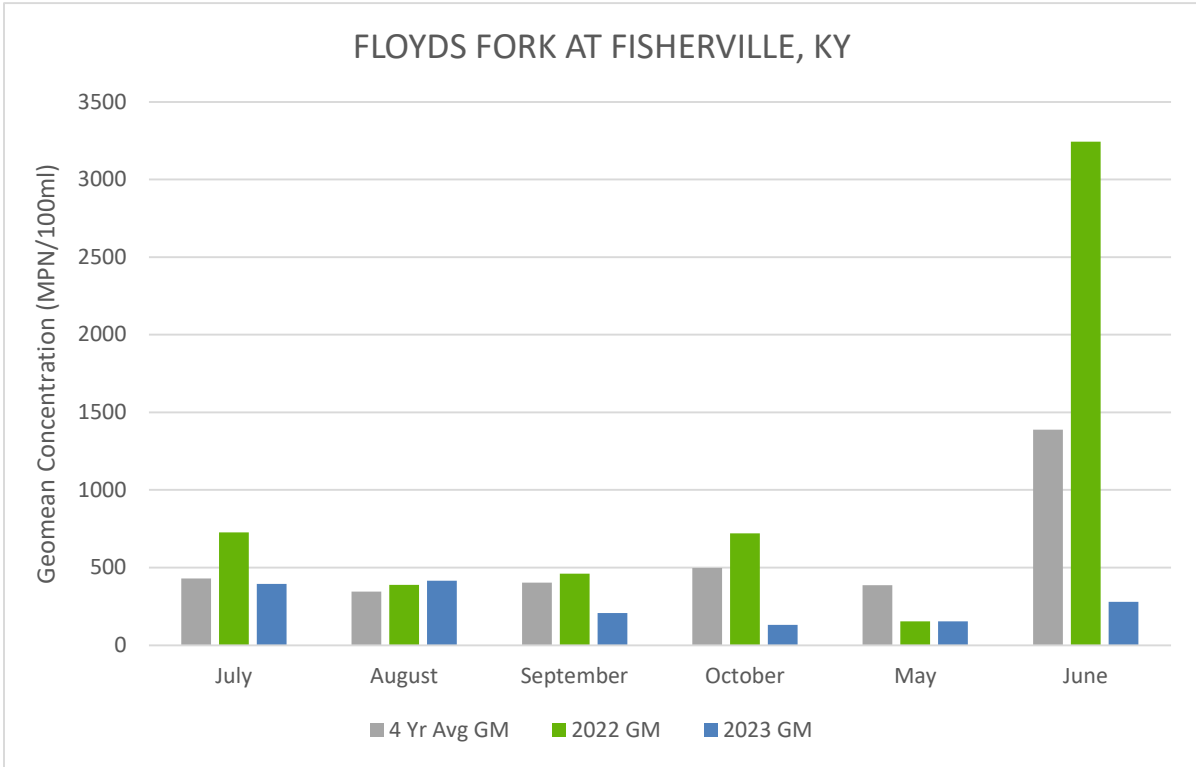
5.4.3 Copper

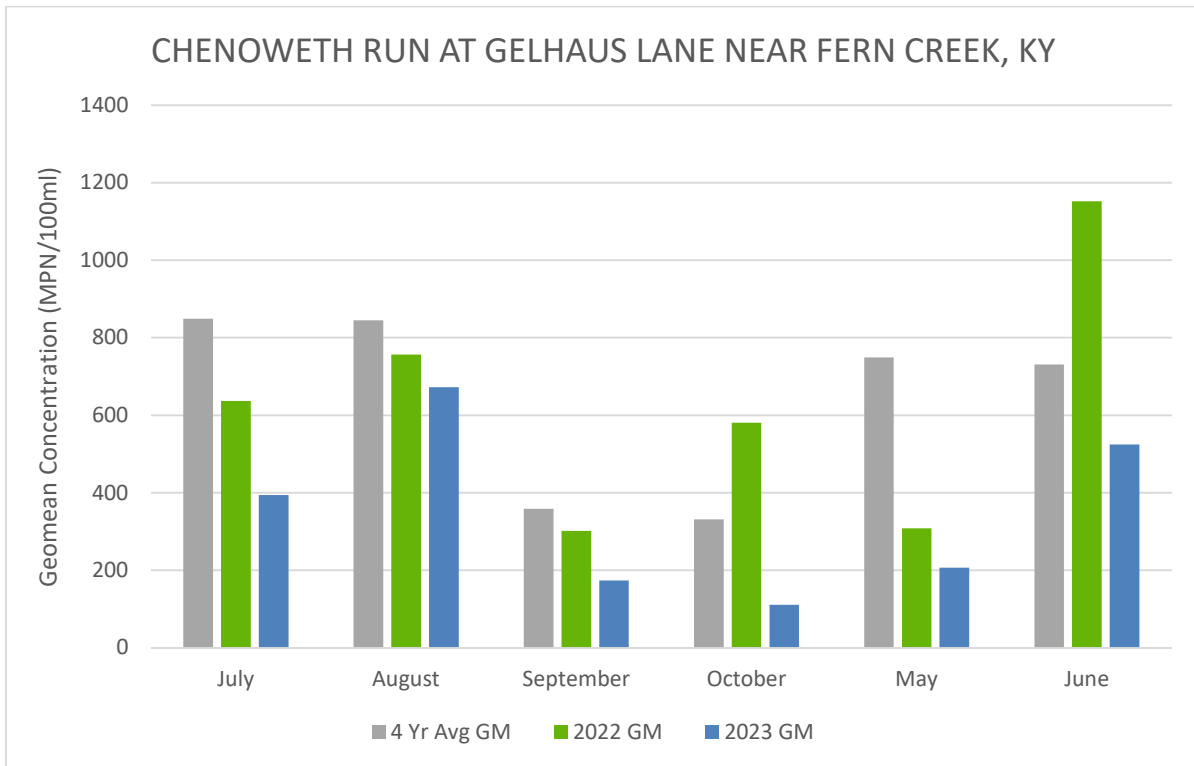
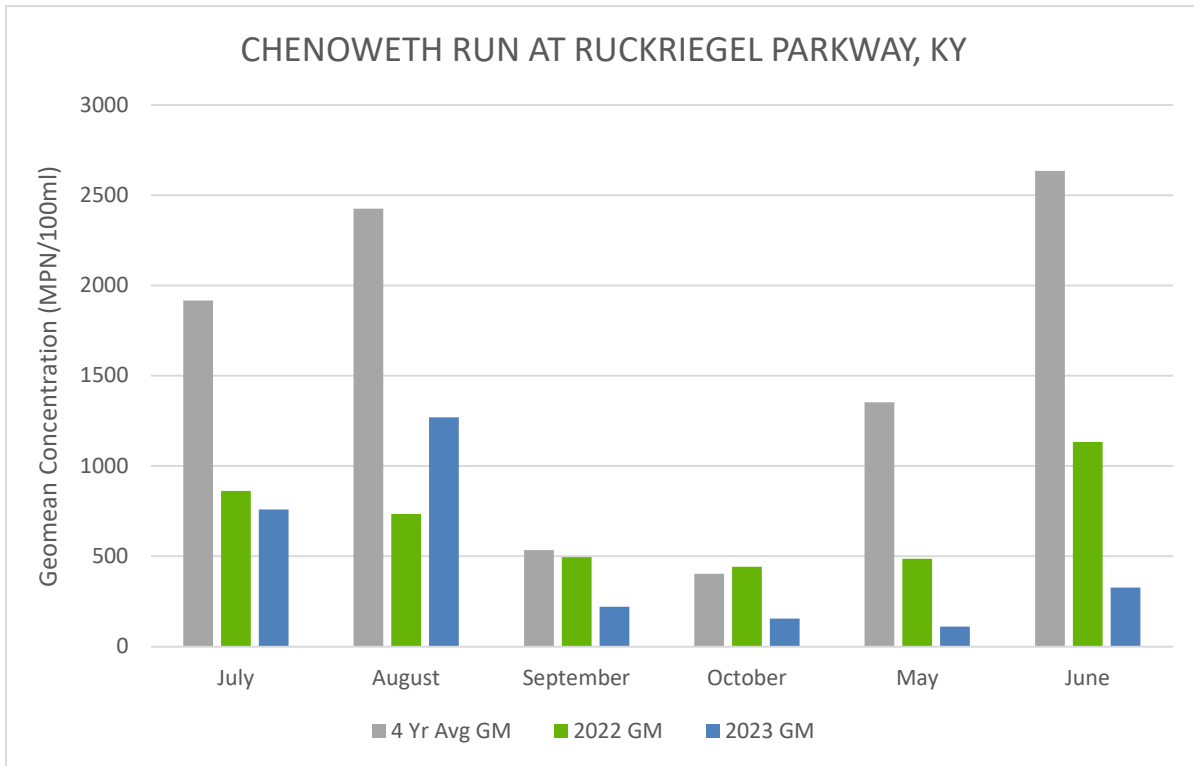
There were no copper exceedances that occurred during the 2023 Annual Reporting period in the Floyds Fork watershed; all samples met both acute and chronic water quality criteria.

5.4.4 E. coli

Figure 5.4.4 – E. coli Geomean Comparison







Data comparison for the *E. coli* data within the Floyds Fork watershed varied when compared to the previous year and previous four-year averages. The geomean averages for the 2023 reporting period, were, in general, lower than both the 2022 geomeans and the trailing four-year averages with some exceptions. Chenoweth Run at Gelhaus Lane stands out as a site where all the 2023 values were below both 2022 and the trailing averages. Most sites were below the 2022 and trailing average values with one or two exceptions per site location.

Note: For the May four year average for Floyds Fork near Pewee Valley, there are only three data points for this average; there were less than 5 samples for May of 2019, so a geomean analysis could not be performed for that month at that site.

5.4.5 Biological

Table 5.4.5 – Biological Watershed Comparison (Previous to Current Year)

Site Name	Algae	Fish	Macroinvertebrate	Habitat (Fish Sampling)	Habitat (Macro Sampling)
Floyds Fork near Pewee Valley	Decreased	Increased	Decreased	Decreased	Decreased
Floyds Fork at Fisherville	Decreased	Decreased	Decreased	Decreased	Decreased
Floyds Fork near Mt. Washington	Increased	Decreased	Decreased	Decreased	Decreased
Chenoweth Run at Ruckriegel Parkway	Decreased	Decreased	Increased	Increased	Increased
Chenoweth Run at Gelhaus Lane	Decreased	Increased	Increased	Increased	Increased

5.4.6 Floyds Fork Project Highlights

Floyds Fork was chosen as one of the highlight watershed sections for the 2023 Annual Report since a number of efforts have been completed or are currently under way for water quality improvements within the watershed. In the last year, several tours of the Floyds Fork Water Quality Treatment Center (WQTC) took place with local schools and student groups. MSD partners with schools to provide environmental education about water quality monitoring, flood safety, and wastewater treatment.

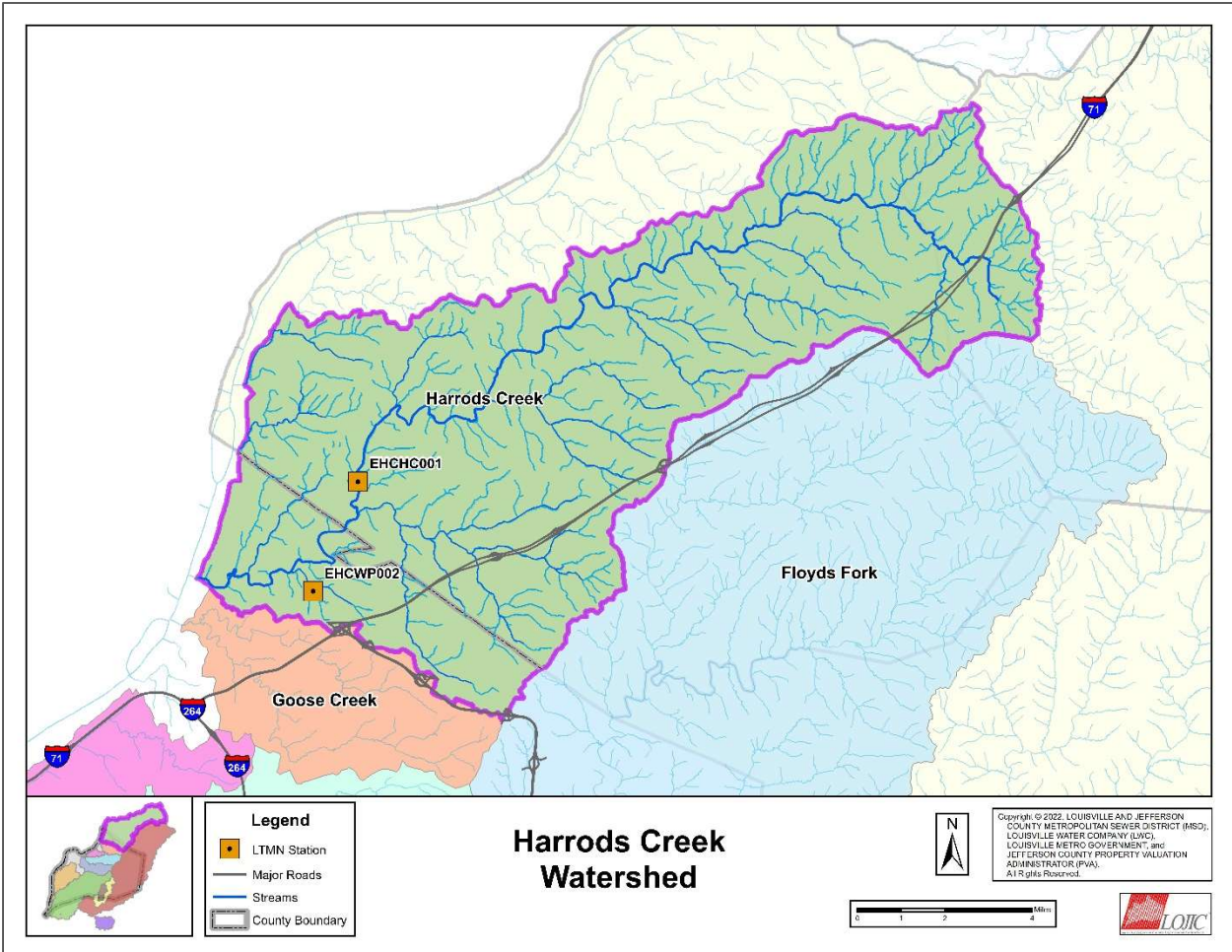
One major project underway in the watershed is the Lake Forest Pump Station Elimination project. This project will decommission five pump stations that have caused sanitary sewer overflows (SSOs) into Floyds Fork due to capacity and mechanical issues. The five pump stations



to be decommissioned include Lake Forest, Worthing Court, Beckley Station, St. Patrick, and St. Patrick School. Three gravity lines will be installed to replace the pump stations which will mitigate the SSOs and reduce the likelihood of force main breakage. SSO eliminations are a key infrastructure investment that aid in reducing E.coli and other water quality impacts from sanitary sewers.

Another project in the watershed is the Floyds Fork Interceptor project. The Southeastern Sanitary Sewer (Floyds Fork Interceptor) is a sanitary sewer interceptor that generally follows the Floyds Fork that meets the initial development needs of the area. This new proposed interceptor design will route flow from a decommissioned South Pope Lick Pump Station downstream to the Billtown Road Pump Station located off Seatonville Road at the convergence of Floyds Fork and Chenoweth Run for approximately 42,000 linear feet of interceptor pipe.

5.5 Watershed Spotlight: Harrods Creek



5.5.1 Watershed Description

The small streams that eventually form Harrods Creek originate in Trimble County. Harrods Creek flows southwest through Oldham County and drains into the Ohio River in northern Jefferson County near Prospect. The Harrods Creek watershed drains approximately 92 square miles.

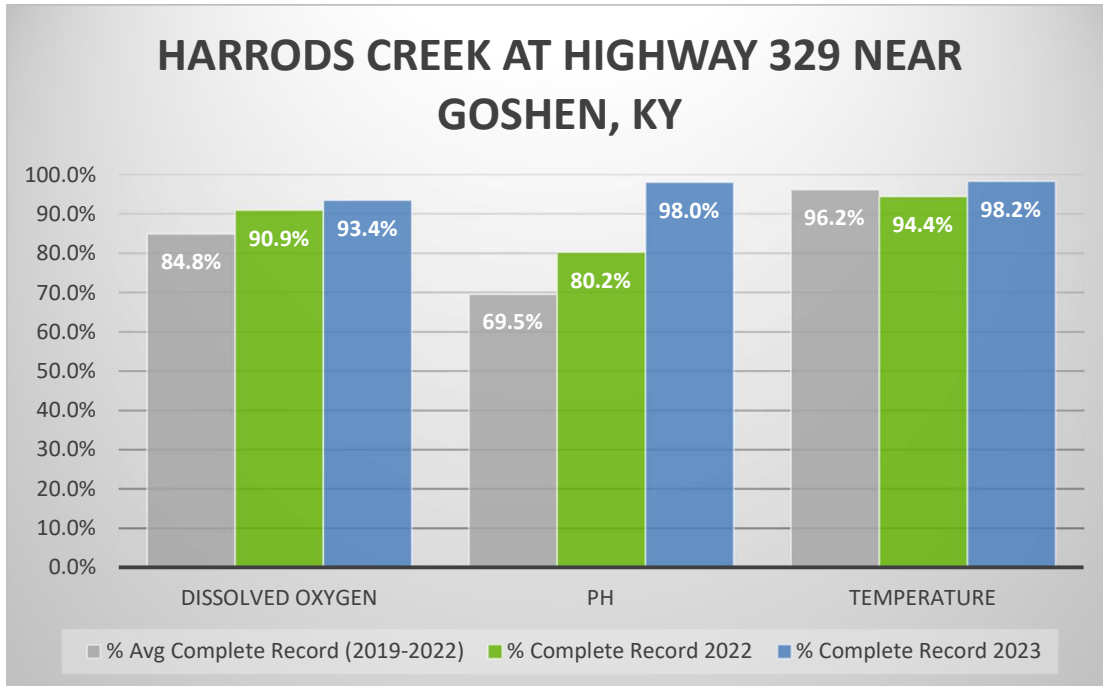
MSD has been monitoring water quality in Harrods Creek at Highway 329 near Goshen (EHCHC001) since 1999. There are 70.3 square miles of land draining to this site. This land is mostly agricultural and forest, with about 9% developed for urban and suburban uses. Approximately 1.3% of the land is covered by impervious surfaces.

MSD has been monitoring water quality in the Wolf Pen Branch near Prospect (EHCWP002) since 2002. Stream flow data are not collected at this location. There are 2.08 square miles of land draining to the monitoring site on Wolf Pen Branch. This land is a mix of agricultural, forest, and

24% developed for urban and suburban uses. Approximately 7% of the land is covered by impervious surfaces.

5.5.2 Sonde Data

Figure 5.5.2.1 – Floyds Fork Watershed Sonde Percent Complete Record Comparison



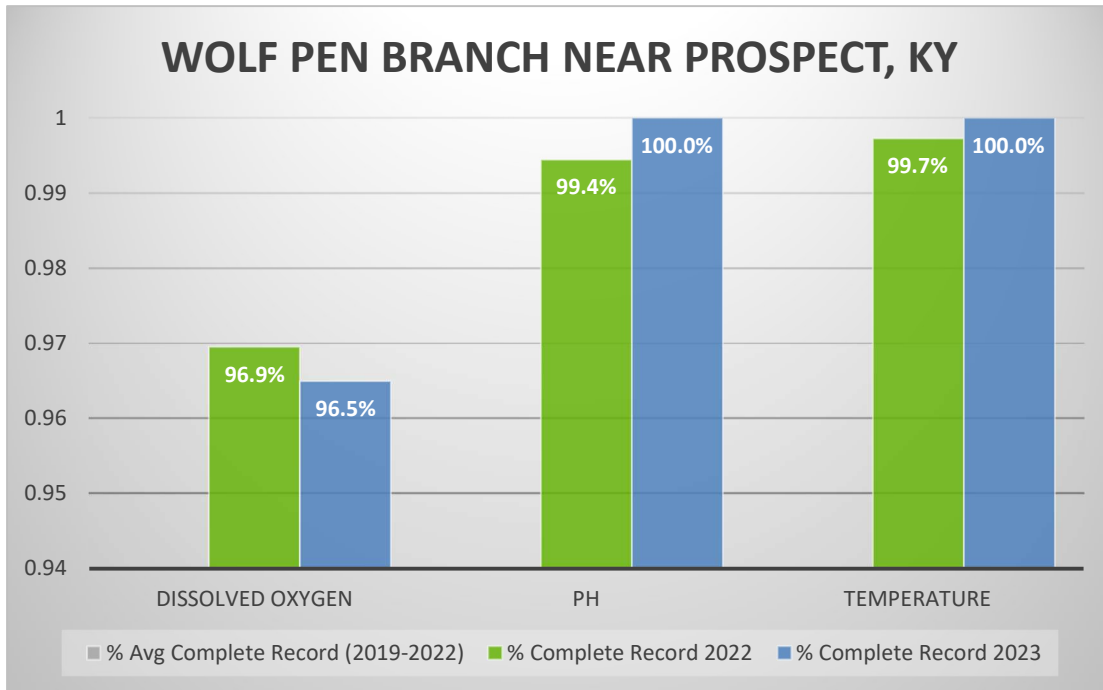


Figure 5.5.2.1 above highlights the comparison of this year’s complete record sonde data compared to last year’s data and the average of the previous four years. There is no data series for the four-year average for Wolf Pen Branch near Prospect, KY since data collection for that site started with the 2022 Annual Report. For all sites and all parameters, the 2023 complete record data was higher than both the four-year averages and last year’s results, except for dissolved oxygen at Wolf Pen Branch.

Figure 5.5.2.2 – Harrods Creek Watershed Dissolved Oxygen Percent Criteria Met - 5 Year Trendlines

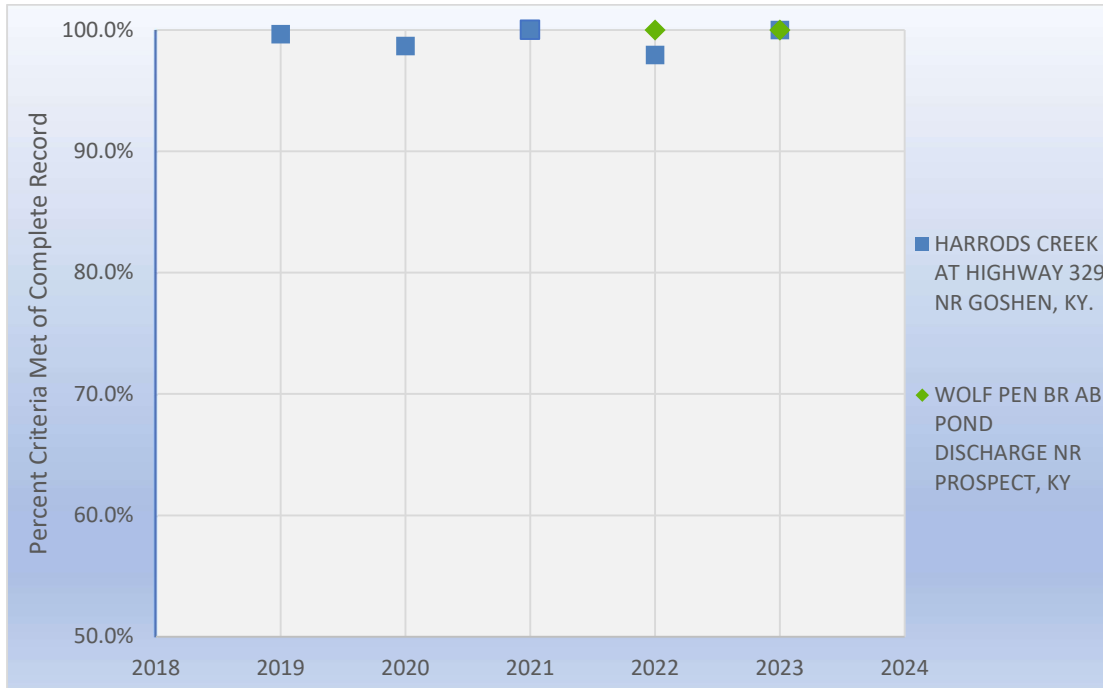


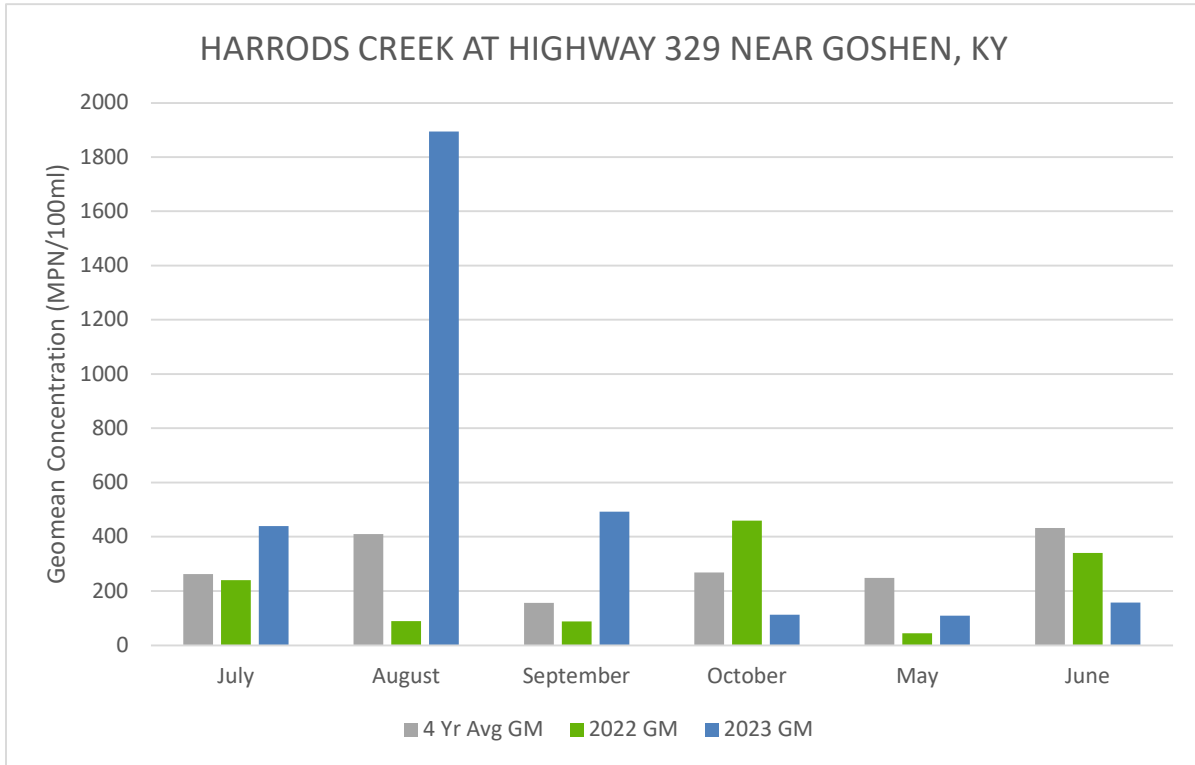
Figure 5.5.2.2 shows the trend for water quality criteria for dissolved oxygen across the last five years. Both years at Wolf Pen Branch were 100% criteria met, and for all five years at Harrods Creek near Goshen, KY criteria met was above 97%, with two years at 100%.

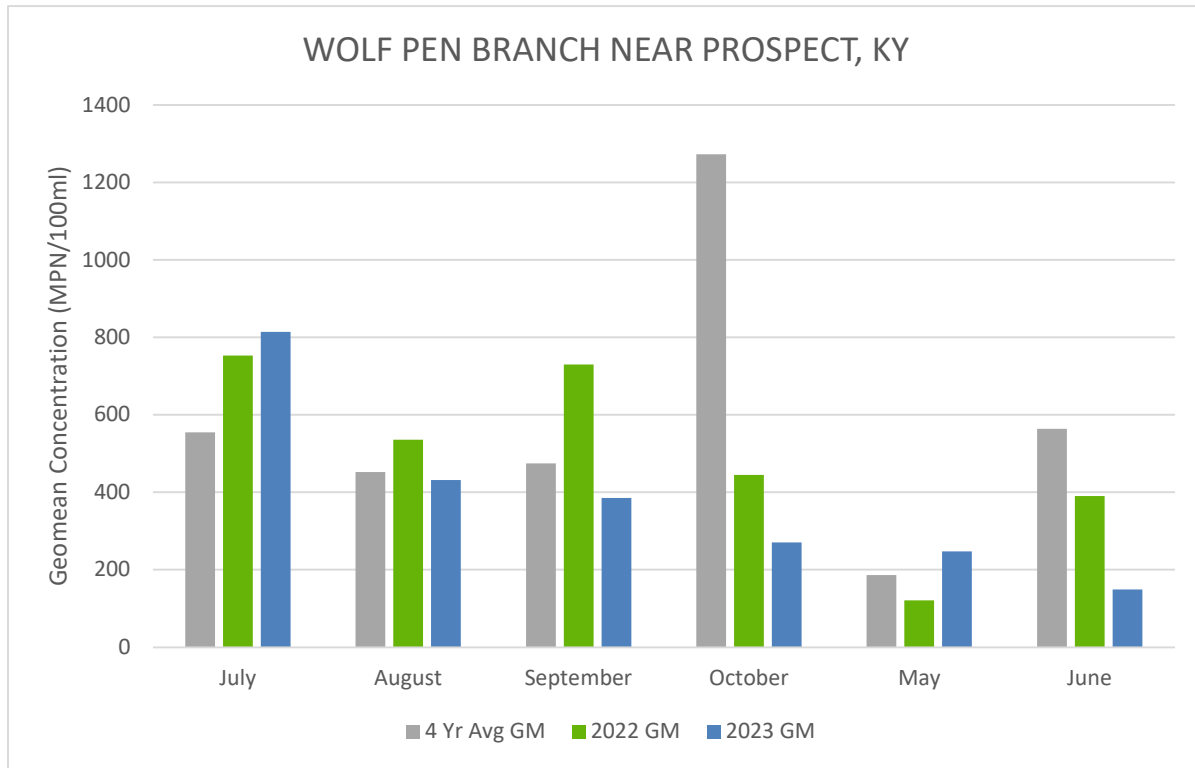
5.5.3 Copper

There were no copper exceedances that occurred during the 2023 Annual Reporting period in the Harrods Creek watershed; all samples met both acute and chronic water quality criteria.

5.5.4 E. coli

Figure 5.4.4 – E. coli Geomean Comparison





Data comparison for the *E. coli* data within the Harrods Creek watershed varied when compared to the previous year and previous four-year averages. There were several months where the 2023 geomean averages were below both the 2022 results and the four-year averages, but neither of the two sites had lower values for all six months.

Note: For the May four year averages, there are only three data points for this average; there were less than 5 samples for May of 2019, so a geomean analysis could not be performed for that month.

5.5.5 Biological

Table 5.5.5 – Biological Watershed Comparison (Previous to Current Year)

Site Name	Algae	Fish	Macroinvertebrate	Habitat (Fish Sampling)	Habitat (Macro Sampling)
Harrods Creek at Highway 329 near Goshen, KY	Decreased	Decreased	Decreased	Decreased	Decreased
Wolf Pen Branch near Prospect, KY	Decreased	Increased	Increased	Decreased	Decreased

5.5.6 Harrods Creek Project Highlights

The history of Harrods Creek has been influenced by its interaction with the Ohio River and its location upstream from downtown Louisville. Harrods Creek, which is upstream of the Falls of the Ohio, provided a natural harbor for travelers to stop and go inland along the creek. The land along Harrods Creek became rich farmland where farmers raised crops such as corn, hogs, and hemp. Still today, the creek is an important part of the watershed community where residents enjoy recreation and wildlife that thrive throughout the watershed.



The Harrods Creek watershed has projects underway to improve water quality throughout the community. One current project that is underway in the watershed is the Gunpowder Pump Station Elimination. This project will decommission the Gunpowder and Prospect Pointe Pump Stations by constructing approximately 3000 feet of 18-inch sewer, spanning from the Gunpowder Pump Station to the River Road Interceptor. As part of the IOAP, this project will address overflows that occur at the Gunpowder Pump Station.

5.6 Chapter 5 Summary and Conclusions

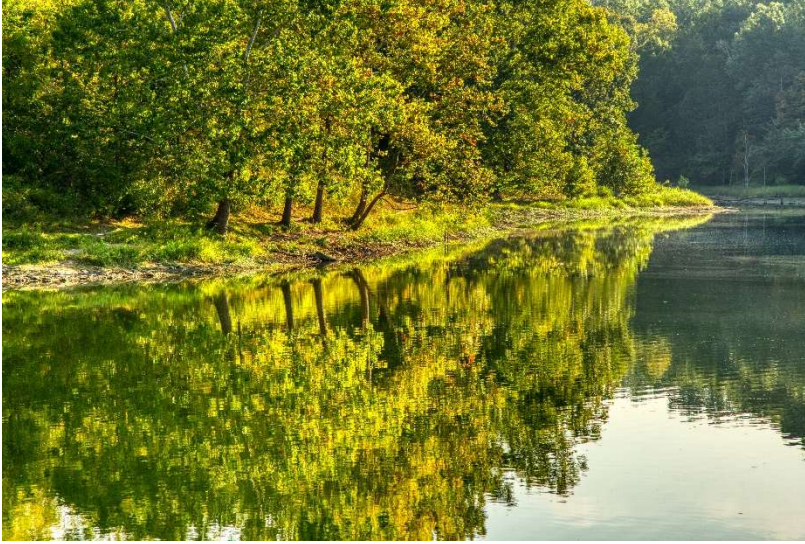
As our communities continue to grow and change, it is valuable to recognize that a constant remains—humans continue to have a strong connection to water. Whether you live, work or play in a watershed, the water connects us all and plays an important part in our health and well-being. The recent 50th anniversary of the 1972 amendments to the Clean Water Act (CWA) serves as a reminder to reflect on the efforts put toward clean water and the value that water brings to our everyday lives. Included in the CWA are national water quality goals for waterways to be fishable, swimmable, and safe for use as drinking water supplies, as well as strict standards to measure and protect water quality. MSD recognizes that continued public education and outreach, as well as expanded engagement through new approaches is key to improving water quality in our community.

MSD continues to work to improve our infrastructure and focus our investments on efforts that help us achieve our mission of safe, clean waterways. This year's Annual Report reports on the continued efforts to improve the infrastructure of the monitoring program, the planning of watershed projects and improvement efforts, and strategic changes to the program going forward to continually work to improve water quality within the watersheds.

During this reporting period, MSD made continued investments in upgrading and improving the sonde fleet program across the county. Between FY21 and present, over \$225,000.00 has been spent on the 27 long term monitoring sites sonde replacements and rehabilitation; however, the purchase of the new upgraded sondes is only the first part of improving the sonde program. Updates to the sonde maintenance program are planned and underway, with continued investment going towards maintaining the updated sonde fleet program to ensure there are no future dips in data availability. The effects of the sonde program expenditure are already being seen in the data, with improvements in sonde data complete records across the sites. With the continued upgrading of the sites over the next several years, future Annual Reports should validate this improvement as more data becomes available to compare across five-year trends.

As part of MSD's efforts to apply continuous improvement management practices to the MS4 program, MSD has made adjustments to the wet weather program that will hopefully yield data that better fits program needs. Included in these changes is the approach to bring the wet weather sampling in house at MSD, allowing for improved efficiency and reduced cost associated with these sampling events. It is also anticipated that MSD staff will become more familiar with how watersheds react to weather patterns and be able to respond to information obtained during wet weather events in a much more timely and effective manner.

MSD continues to implement and develop watershed planning efforts for the Mill Creek and Middle Fork Beargrass Creek watersheds. MSD plans to develop watershed plans for the remainder of Jefferson County's watersheds, and it is through these watershed planning efforts that water quality issues can be identified as they arise, allowing MSD to be proactive in the response. The watershed plans will be used to identify issues in the watershed and continue to improve water quality throughout the county. With the addition of a newly hired Watershed Coordinator, efforts are ongoing to increase citizen engagement and seek opportunities to improve water quality through culture change and investments.



A significant amount of work was done during this annual reporting period to improve the monitoring program and additional planning work was conducted to continue improvements through the next annual reporting years. Improvements to the data can already be seen throughout the annual report, and hopefully will continue to improve across the future Annual Reporting periods.



APPENDIX 1.0 DEFINITIONS, ACRONYMS AND UNITS



DEFINITIONS, ACRONYMS AND UNITS

Baseline. The existing conditions. An initial set of observations or data used as a comparison or starting point from which the magnitudes of an alternative's effects are measured.

BMPs, Best Management Practices. Management procedures, equipment or facilities that either prevents pollutant from contaminating runoff or that treat runoff before it enters a stream. BMPs may also reduce runoff velocity or volume in order to prevent stream degradation from excessive erosive forces. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BIA, Building Industry Association of Greater Louisville. MSD coordinates with this organization to educate the development and construction community on the requirements of the stormwater quality permit.

BOD, Biochemical Oxygen Demand. A measurement of the amount of oxygen used by the decomposition of organic material over a specified time period (usually 5 days) in a wastewater sample. Used as a measurement of the readily decomposable organic content of water. Also referred to as BOD5, this is a measure of the amount of oxygen required by microbes to consume the pollutants in a sample of water during the five days after the sample is taken.

CFR, Code of Federal Regulations. A codification of the general and permanent rules published by the Federal Register by the executive departments and agencies of the federal government.

Clean Water Act. The MS4 permit is a result of the 1987 amendments to the Clean Water Act, where congress mandated that the EPA address non-point source pollution in stormwater runoff.

Consent Decree. Is a judicially recognized and enforceable voluntary settlement of potential claims, charges or violations in which a party agrees to take or perform specific actions, without admitting fault or guilt for the situation that led to the potential charges, in resolution of the potential case.

CPESC, Certified Professional in Erosion and Sediment Control. A CPESC is a recognized specialist in soil erosion and sediment control by EnviroCert International, Inc. CPESCs have educational training, demonstrated expertise, experience in controlling erosion and sedimentation, and meet certification standards.

CPSWQ, Certified Professional in StormWater Quality. A CPSWQ is a recognized specialist in stormwater quality by EnviroCert International, Inc. CPSWQs have educational training, demonstrated expertise, experience in managing storm water quality, and meet certification standards.



CRS, Community Rating System. The CRS was developed by the National Flood Insurance Program (NFIP) and is a voluntary incentive-based program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Benefits of participation in the program include reduced flood insurance premium rates and reduced flood risk due to community action to meet the goals of the CRS.

CS, Construction Site stormwater management. One of the requirements (section 2.4) under the NPDES stormwater program to address erosion prevention and sediment control issues on construction sites.

CSO, Combined Sewer Overflow. An outfall identified as a combined sewer overflow or CSO in MSD's KPDES permit for the Morris Forman WQTC, from which MSD is authorized to discharge during wet weather. Dry Weather CSO – An unauthorized overflow from a permitted outfall identified as a combined sewer overflow or CSO in MSD's Morris Forman WQTC KPDES permit that is not the result of a wet weather event. Wet Weather CSO - An overflow from a permitted outfall identified as a combined sewer overflow or CSO in MSD's Morris Forman WQTC KPDES permit that is the result of a wet weather event. Combined sewers carry both sanitary waste and stormwater drainage. CSOs are outlets that relieve sewers into streams and rivers, keeping the sewers from backing up into homes, businesses and streets when it rains.

CSS, Combined Sewer System. The portion of MSD's Sewer System designed to convey municipal sewage (domestic, commercial, and industrial wastewaters) and stormwater runoff through a single-pipe system to MSD's Morris Forman WQTC or CSOs. The system of drainage pipes built in the urban area of the City of Louisville after a public water supply was provided in the 1860s. The CSS conveys combined stormwater and sewage away from urbanized areas into the Ohio River and Beargrass Creek during wet weather. During dry weather, sewage is conveyed to the water quality treatment plant. The MS4 does not include the CSS area.

DO, Dissolved Oxygen. A measurement of the amount of oxygen dissolved in water, typically expressed in mg/L.

Drainage and Flood Protection, MSD's (formerly Infrastructure and Flood Protection) crews address improvements associated with the combined and storm sewer systems as well as inspect and repair the levee system to improve community flood protection.

DRI, Drainage Response Initiative. Project DRI is a partnership between Louisville Metro government and MSD that was created to respond to local drainage issues.

EPA, Environmental Protection Agency. The US federal agency responsible for regulating environmental hazards.

EPSC, Erosion Prevention and Sediment Control. EPSC measures and best management practices are designed to reduce sediment runoff and erosion from occurring on construction sites and other locations.



ERPI, Emergency Response Pretreatment Inspector. MSD utilizes with ERPIs to respond to spills, including HAZMAT response, to comply with illicit discharge detection and elimination components of this permit. This has been renamed to Senior Environmental Compliance Inspector.

FEMA, Federal Emergency Management Agency. An agency of the US Department of Homeland Security that was created to coordinate response to disasters, recovery efforts, and disaster preparation and planning.

FPO, Floodplain Management Ordinance. The local ordinance enacted in 1997. The FPO has specific requirements for storage of hazardous materials in the floodplain as well as limits on development and redevelopment.

GDP, General Discharge Permit. A general discharge permit is issued to a category of dischargers and covers all projects or activities associated with their permit.

GHP2, Good Housekeeping and Pollution Prevention. Programs and activities performed to reduce pollution by not creating it or by not releasing it from the source at municipal facilities. Includes materials substitution by use of less-toxic alternatives, management procedures that minimize the quantity of waste generated, housekeeping practices that reduce spillage and recover materials, reuse of materials recovered and recycling of waste.

GIS, Geographic Information System. An information system for capturing, storing, analyzing, managing and presenting data which are spatially referenced. MSD uses GIS platforms to efficiently and effectively manage and store data associated with its storm sewer system and stormwater permit. This capability includes producing maps, displaying the results of data queries, and conducting spatial analysis.

Gray Infrastructure. Constructed structures such as treatment facilities, sewer systems, stormwater systems, or storage basins. The term “gray” refers to the fact that such structures are typically made of, or involve the use of concrete and steel.

Green Infrastructure. An adaptable term used to describe an array of materials, technologies, and practices that use natural systems—or engineered systems that mimic natural processes—to enhance overall environmental quality and provide utility services. As a general principal, green infrastructure techniques use soils and vegetation to infiltrate, evapotranspire, and/or recycle stormwater runoff. Examples of green infrastructure include green roofs, porous pavement, rain gardens, and vegetated swales. “Green” infrastructure is a combination of natural and engineered infrastructure that is designed to reduce the environmental footprint of the system.

IPS®. Trademark name of the database and software program used by MSD for recording, tracking, and reporting geocoded data. IPS® houses MSD sewer and drainage system asset data, the MIDAS property and permit data, the customer service request data and the pretreatment program permit and hazardous materials response program data. IPS® geocoded tables are theme layers in the LOJIC GIS.



HMO, Hazardous Materials Ordinance. First adopted in 1986, the local HMO requires HMPC plans and local HAZMAT release reporting. The amended HMO was approved July 2, 2007.

HMPC, Hazardous Materials (spill) Prevention and Control. Local facilities that store reportable quantities of hazardous materials are required to file a plan application with MSD. There are currently over 3,000 approved plans. HMPC plans include requirements for adequate secondary containment, training, release response, and reporting requirements.

HSPF, Hydrological Simulation Program – A comprehensive package developed by the USEPA for simulation of watershed hydrology and water quality for both conventional and toxic organic pollutants. The program incorporates hydrology and water quality to allow the integrated simulation of land and soil contaminant runoff processes with in-stream hydraulic and sediment-chemical interactions.

IDDE, Illicit Discharge Detection and Elimination. One of the requirements (section 2.2) under the NPDES stormwater program to address non-stormwater discharges into waterways through regulatory measures, identification and removal.

IWD, Industrial Waste Department. The MSD Industrial Waste Department is part of the Support Services Division. It administers the WDRs through the industrial pretreatment program, the customer service request response and HAZMAT incident response program, and the HMO through the hazardous materials plan program. The motor vehicle accident (MVA) mitigation program is also administered by IWD.

JCPS, Jefferson County Public Schools. JCPS is the local countywide public school system. MSD coordinates with JCPS on several public education, outreach and involvement initiatives associated with the stormwater permit.

KDOW, Kentucky Division of Water. (In the Department for Environmental Protection in the Environment and Public Protection Cabinet). Responsible for issuing all permits for discharges into the waters of the Commonwealth.

KPDES, Kentucky Pollutant Discharge Elimination System. Any National Pollutant Discharge Elimination System permit issued to MSD by the Cabinet pursuant to the authority of the Clean Water Act and Kentucky Revised Statutes (KRS) Chapter 224 and the regulations promulgated thereunder. KPDES is the state regulatory permitting program through which MSD's stormwater program is directed.

KPPC, Kentucky Pollution Prevention Center. The KPPC at the University of Louisville provides pollution prevention and energy efficiency services to Kentucky's businesses, industries, state government agencies and communities. KPPC also provides free, non-regulatory waste assessments to Kentucky businesses.

KRS, Kentucky Administrative Regulations. Administrative regulations published by the Kentucky Legislative Commission. An unofficial posting of the KAR is available via the Commission's website at www.lrc.ky.gov.



KWA, Kentucky Waterways Alliance. A non-profit organization that promotes networking, communication and mutual support among groups, government agencies, and businesses working on waterway issues.

KYTC, Kentucky Transportation Cabinet. The Kentucky Transportation Cabinet operates storm sewers on their properties and state road and highway rights-of-way within the Louisville Metro MS4. KYTC was previously co-permitted with MSD, and in 2011 received an individual MS4 stormwater permit. KYTC continues to partner with MS4 communities across the state to implement their permit.

LDP, Louisville Downtown Partnership. Formed in 2013 and is comprised of two governmental entities: the Louisville Downtown Management District (LDMD) and the Louisville Downtown Development Corporation. The mission of the partnership is to improve the economy of Louisville Metro by coordinating an aggressive public/private program to promote the redevelopment, vitality and economic growth of the Central Business District and surrounding areas and to promote Downtown's quality of life by creating a safer, cleaner and more enjoyable environment.

LIMS, Laboratory Information Management System. This database houses the monitoring location and analytical results for MSD monitoring.

LLW, Living Lands and Waters. An organization that promotes the riparian restoration of watersheds and mobilizes local volunteers to participate in stream clean up, planting and invasive species removal efforts.

LMDPHW, Louisville Metro Department of Public Health and Wellness. A branch of the Louisville Metro Government operating under the direction of the Mayor and Louisville Metro Council, with the role of improving health and wellness in the Louisville Metro area.

LMEMA, Louisville Metro Emergency Management Agency. A branch of the Louisville Metro Government responsible for preparation, mitigation, response, and recovery from natural and manmade disasters.

LMFD, Louisville Metro Fire Department. A branch of the Louisville Metro Government that provides fire protection, prevention, environmental protection, education, building inspection, and fire cause determination throughout the Louisville Metro area.

LMPD, Louisville Metro Police Department. A branch of the Louisville Metro Government and built through the merger of the City of Louisville and Jefferson County governments. LMPD provides law enforcement, security, and education for the Louisville Metro area.

LNC, Louisville Nature Center. A community resource that provides nature education and recreation for community members to enjoy. Projects and resources are sponsored by community donations and supported by MSD.



Loading. Pounds of pollutants per day in running water calculated as concentration in parts per million (mg/L), multiplied by water flow in million gallons per day (MGD), multiplied by 8.34 pounds per gallon: Parts/million × million gallons/day × 8.34 pounds/gallon = pounds/day.

LOJIC, Louisville and Jefferson County Information Consortium. The local ArcView GIS project founded by MSD in partnership with the Louisville Water Company, Louisville Metro Government and the Jefferson County Property Valuation Administration. LOJIC mapping capabilities include physical, commercial, socioeconomic and political geographic information. The LOJIC ArcView and the HANSEN® data tables are linked. LOJIC mapping is available to the public at www.lojic.org.

LTMN, Long Term Monitoring Network. System of in-stream monitoring locations that have a data sonde continuously recording water quality parameters and USGS flow gages. Samples are taken and laboratory analyses performed for other pollutants of concern as described in this SWQMP. Data is available online at <http://waterdata.usgs.gov/ky/nwis>.

M, Monitoring. One of the requirements (section 2.7 and Chapter 5) under the NPDES stormwater program to monitor improvements to local water quality and the overall effectiveness of permit activities.

Mg/L, Milligrams per Liter. Unit of concentration of pollutants in water in parts per million.

MGD, Million Gallons per Day. Unit of measure for water flow used to calculate pollutant loading.

MIDAS, Metro Information, Development and Assets System. The portion of the HANSEN® database used by Louisville Metro government for permit and inspection programs.

MS4, Municipal Separate Storm Sewer System. Jefferson County contains MS4s operated by MSD, Anchorage, Jeffersontown, St. Matthews, and Shively. The Kentucky Transportation Cabinet also operates storm sewers on their properties and state road and highway rights-of-way within the other Metro MS4s. Louisville Metro Government provides for stormwater conveyance in public streets and parks.

MSD, the Louisville and Jefferson County Metropolitan Sewer District. MSD is responsible for wastewater collection, conveyance and treatment, stormwater drainage and flood control within its District except for those drainage areas operated by the co-permittees and those areas located outside the boundaries of the MS4 drainage service area. MSD is also responsible for response, mitigation, notification, and reporting of overflows, including unauthorized discharges. MSD administers the Louisville Metro Erosion Prevention and Sediment Control Ordinance, the Floodplain Ordinance, the Hazardous Materials Ordinance and the Wastewater/Stormwater Discharge Regulations. www.msdlouky.org

NOD, Notice of Deficiency. Permittees not meeting the regulatory intent of their permit may receive a NOD. A NOD includes the deficient item or items and necessary corrective actions.



NOV, Notice of Violation. Permittees not meeting the regulatory requirements of their permit may receive a NOV. A NOV may include the item or items in violation, corrective actions and fines incurred.

NPDES, National Pollutant Discharge Elimination System. NPDES is the federal regulatory permitting program through which MSD's stormwater program is directed.

NPS, Nonpoint Source. Nonpoint source pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, and eventually deposits them into lakes, rivers, wetlands and other waterbodies. Nonpoint source pollutants often include excess fertilizers and herbicides from agricultural and residential areas, oil and grease from urban areas, sediment from improperly managed construction sites and eroding streambanks, and bacteria and nutrients from livestock and pet wastes.

OHWM, Ordinary High Water Mark. Ephemeral streams that are tributary to other waters of the U. S. are also waters of the U. S., as long as they possess an OHWM. The upstream limit of waters of the United States is the point where the OHWM is no longer perceptible (see 51FR 41217). An ephemeral stream that does not have an OHWM is not a water of the United States. The frequency and duration at which water must be present to develop an OHWM has not been established for the USACE regulatory program. District engineers use their judgment on a case-by-case basis to determine whether an OHWM is present.
<http://www.epa.gov/owow/wetlands/regs/nwfinal.pdf>

PAR, Program Assessment and Reporting. One of the requirements under the NPDES stormwater program to evaluate the stormwater program on a regular basis to determine program improvement and progress, and to document activities for regulatory compliance.

PAT, Project Activity Tracking – Access database used to track plan development project names and numbers.

Pathogen. An organism capable of causing disease, including disease-causing bacteria, protozoa, and viruses.

PC, Post-Construction stormwater runoff and pollutant controls. One of the requirements (section 2.5) under the NPDES stormwater program to manage stormwater runoff and maintain stormwater best management practices in a sustainable fashion to allow effective long-term stormwater treatment.

PCR, Primary Contact Recreation. PCR is a surface water use of full-body contact recreation that includes immersion of the head and face, such as swimming.

PEOPLE, Public Education, Outreach, Participation and Learning Experiences. One of the requirements (section 2.1) under the NPDES stormwater program to improve the knowledge of the general public and target audiences to make individual behavior changes to improve stormwater quality.



PER, Program Evaluation and Reporting. One of the requirements under the NPDES stormwater program to evaluate the stormwater program on a regular basis to determine program improvement and progress, and to document activities for regulatory compliance.

POTW, Publicly Owned Treatment Works. Wastewater collection, conveyance and treatment utility owned and operated by a public agency. MSD is a POTW.

Project XL, Project eXcellence in Leadership Program. The US EPA national pilot program designed to allow selected sewage treatment agencies to test whether better and more cost-effective methods can be used to improve water quality.

PRR, Preliminary Response Report. A report issued by IWD in response to a hazardous materials release incident call and investigation. The report is issued to the responsible party and directs them to immediate corrective actions that are required. PRRs and inspection findings are reviewed by the IWD Response Group.

PS, Point Source. Point source pollution is a single, identifiable point discharge of pollution. An example of a point source discharge would include a sewage treatment plant or an industrial discharge facility.

PY, Permit Year. A permit year starts on August 1 and ends July 31 of the following year.

QA/QC, Quality Assurance/Quality Control. This is a process to check the quality of work and activities.

QPCI Training, Qualified Post Construction Inspector Training. This training course produced by MSD is intended to transfer knowledge of proper Green Management Practice (GMP) inspection and maintenance protocols to individuals responsible for maintaining GMPs in Jefferson County.

S&F, Solids and Floatables. Materials in sewage that are large enough to be visibly recognizable. Most solids and floatables in combined sewage are comprised of street litter and debris, but some plastic and paper products flushed down toilets stay in a visibly recognizable form, and are objectionable to some people.

Sanitary Sewer. A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the publicly owned treatment works.

SCR, Secondary Contact Recreation. SCR is a surface water use for recreational contact with surface waters that does not include full-body immersion.

SEC, Specific Electrical Conductance. The measure of the electrical conductance of water normalized to a unit length and a unit cross-section at a specific temperature.



SIU, Significant Industrial User. As defined by the EPA, any industry which is designated as such on the basis that the industrial user has a reasonable potential for adversely affecting the operation of the collection system or treatment plant, or violating any pretreatment requirement.

SOP, Standard Operating Procedure. These procedures are defined by MSD and are followed by MSD staff and personnel.

SSO, Sanitary Sewer Overflow. Any discharge of wastewater to waters of the United States from MSD's Sewer System through a point source not authorized by a KPDES permit, as well as any release of wastewater from MSD's Sewer System to public or private property that does not reach Waters of the United States, such as a release to a land surface or structure that does not reach Waters of the United States; provided, however, that releases or wastewater backups into buildings that are caused by blockages, flow conditions, or malfunctions in a building lateral, or in other piping or conveyance system that is not owned or operationally controlled by MSD are not SSOs.

SSS, Sanitary Sewer System. The portion of MSD's sewer system designed to convey only municipal sewage (domestic, commercial, and industrial wastewaters) to MSD's WQTCs.

Stream. Surface water channel having well-defined banks and bed, either constantly or intermittently flowing. "Ephemeral stream" means a watercourse which only flows in direct response to precipitation in the immediate watershed, or in response to the melting of a cover of snow and ice, and which has a channel bottom that is above the local water table. An ephemeral stream is a water of the United States, provided it has an OHWM. "Intermittent stream" means a stream or part of a stream that does not flow continuously throughout the calendar year; but that has a bed below the local water table for at least one month of the calendar year during which it obtains its flow from both surface water and ground water discharge. The term does not include an ephemeral stream. "Perennial stream" means a stream or part of a stream that flows continuously during all of the calendar year as a result of ground-water discharge or surface runoff. The term does not include "intermittent stream" or "ephemeral stream".

Surface Waters. Those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface.

SWO, Stop Work Order. A permit holder or regulatory authority may issue a stop work order for permit violations within their jurisdiction.

SWPPP, Stormwater Pollution Prevention Plan. A plan for stormwater discharge that when implemented will decrease nonpoint source pollution.

SWQMP, Stormwater Quality Management Plan. As stated in the MSD's MS4 Permit, the SWQMP is a plan that MSD is required to develop, implement, and enforce. This includes controls intended to reduce the discharge of pollutants from MS4 conveyances.



TDS, Total Dissolved Solids. The fine particles that are suspended in water as measured by a laboratory analysis. TDS are typically small enough to pass through a sieve size of two micrometers.

TMDL, Total Maximum Daily Load. A calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources.

TTO, Total Toxic Organics. The sum of the analytical results greater than 0.01 mg/L of a list of toxic organics as specified by EPA.

TSS, Total Suspended Solids. The fine particles suspended in water as measured by a laboratory analysis. High TSS causes adverse water quality conditions for sensitive aquatic organisms.

TVS, Total Volatile Solids. TVS includes organic compounds of animal or plant origin.

Unauthorized Discharge. (a) any discharge of wastewater to waters of the United States from MSD's Sewer System or WQTCs through a point source not authorized by a KPDES permit and (b) any Bypass at MSD's WQTCs prohibited pursuant to the provisions of 40 CFR § 122.41(m)(2) and (4) or 401 KAR 5:065, Section 1(13)(a) and (c).

USACE, U.S. Army Corps of Engineers. A branch of the US Government, made up of civilians and military members with a wide diversity of disciplines. From biologists, engineers, geologists, hydrologists, natural resource managers, to other professionals needed within this entity. The Corps plans, designs, builds, operates, and regulates water resources projects that are crucial to the citizens of the United States.

USGS, United States Geological Survey. A division of the US Government, Department of Interior. USGS is the sole science agency for the Department of Interior.

WAH, Warm Water Aquatic Habitat. "Warm Water Aquatic Habitat" or "WAH" means any surface water and associated substrate capable of supporting indigenous warm water aquatic life.

WASP, Water Quality Analysis Simulation Program. This is a model created by the EPA to model contaminant fate and transport in surface waters.

WAT!, Watershed Assessment Tool! A spreadsheet watershed characterization tool that models point and non-point source pollution loads to assess green infrastructure.

Water. From [KRS 224.1-010](#) (33) "Water" or "waters of the Commonwealth" means and includes any and all rivers, streams, creeks, lakes, ponds, impounding reservoirs, springs, wells, marshes, and all other bodies of surface or underground water, natural or artificial, situated wholly or partly within or bordering upon the Commonwealth or within its jurisdiction; Effluent ditches and lagoons used for waste treatment which are situated on property owned, leased, or



under valid easement by a KPDES-permitted discharger are not considered to be waters of the Commonwealth. From USEPA [40 CFR 230.3](#) “waters of the United States” means all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flows of the tide, all interstate waters including interstate wetlands, and territorial seas. This also includes all bodies of water near the aforementioned waters including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.

Watershed. Land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

WDR, Jefferson County Wastewater/Stormwater Discharge Regulations. The WDR applies to all users of the sewer collection system as well as the MS4. It contains regulations that prohibit discharge of materials that could cause damage to the sewer system or the environment in WDR Section 2. WDR Section 5 prohibits discharges to stormwater conveyances. Penalties and enforcement are authorized by WDR Section 6. MSD’s IWD administers the WDR.

WQS, Water Quality Standards. Standards that set the goals, pollution limits, and protection requirements for each waterbody. These standards are composed of designated (beneficial) uses, numeric and narrative criteria, and antidegradation policies and procedures.

WQTC, Water Quality Treatment Center. MSD owns and operates five wastewater treatment centers in Louisville Metro. These include the Morris Forman, Derek R. Guthrie, Hite Creek, Cedar Creek, and Floyds Fork WQTCs. Jeffersontown WQTC was eliminated December 2015.



ACRONYMS & UNITS

APCD	Air Pollution Control District
BIA	Building Industry Association of Greater Louisville
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CFR	Code of Federal Regulations
cfs	Cubic feet per second
cfu	Colony forming unit
CMF	Central maintenance facility
COD	Chemical oxygen demand
CPESC	Certified Professional in Erosion and Sediment Control
CPSWQ	Certified Professional in StormWater Quality
CRS	Community Rating System
CS	Construction Site
CSO	Combined sewer overflow
CSRs	Customer Service Requests
CSS	Combined sewer system
CWA	Clean Water Act
DAG	Developers Advisory Group
DMR	Discharge monitoring report
DO	Dissolved oxygen
DWS	Drinking Water Standard
E. Coli	Escherichia Coli
EMS	Emergency Management Service
EPA	U.S. Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
ERP	Enforcement Response Plan
ERPI	Emergency Response Pretreatment Inspector
EWB	Engineers without Borders
FAQS	Frequently Asked Questions
FEMA	Federal Emergency Management Agency
FOG	Fats, oils, and grease
FPMP	Floodplain Management Plan
FPO	Floodplain Management Ordinance
FS	Fully Supports the Use
FTE	Full time equivalents



FY	Fiscal Year
GDP	General Discharge Permit
GH	Good Housekeeping
GH/P2	Good Housekeeping/ Pollution Prevention
GIS	Geographic Information System
GMP	Green Management Practice
GPD	Gallons per day
GPP	Groundwater Protection Plan
HMO	Hazardous Materials Ordinance
HMPC	Hazardous Materials (spill) Prevention and Control
HRIFs	High Risk Industrial Facilities
HSPF	Hydrological Simulation Program – FORTRAN
IDDE	Illicit Discharge Detection and Elimination
IFPD	Infrastructure and Flood Protection Division
IOAP	Integrated Overflow Abatement Plan
IP	Industrial Program
IPCC	Intergovernmental Panel on Climate Change
IWD	Industrial Waste Department
JCPS	Jefferson County Public Schools
JTown	Jeffersontown
KAMM	Kentucky Association of Mitigation Managers
KAR	Kentucky Administrative Regulations
KDEP	Kentucky Department of Environmental Protection
KDOW	Kentucky Division of Water
KEEC	Kentucky Environmental Education Council
KEPSC	Kentucky Erosion Prevention and Sediment Control
KPDES	Kentucky Pollutant Discharge Elimination System
KPPC	Kentucky Pollution Prevention Center
KRS	Kentucky Revised Statute
KSA	Kentucky Stormwater Association
KWA	Kentucky Waterway Alliance
KYTC	Kentucky Transportation Cabinet
LD	Legal Department
LDC	Louisville Development Code
LDMD	Louisville Downtown Management District
LEED	Leadership in Energy and Environmental Design
LG&E	Louisville Gas & Electric



LIMS	Laboratory Information Management System
LLW	Living Land & Water
LMDPHW	Louisville Metro Department of Public Health and Wellness
LMEMA	Louisville Metro Emergency Management Agency
LMFD	Louisville Metro Fire Department
LMG	Louisville Metro Government
LNC	Louisville Nature Center
LOJIC	Louisville and Jefferson County Information Consortium
LTCP	Long-Term Control Plan
LTMN	Long Term Monitoring Network
LWC	Louisville Water Company
M	Monitoring
MEP	Maximum Extent Practicable
mg/L	Milligrams per liter
MGD	Million gallons per day
MIDAS	Metro Information, Development and Assets System
MS4	Municipal Separate Storm Sewer System
MSD	Louisville and Jefferson County Metropolitan Sewer District
MVA	Motor Vehicle Accident
NEXRAD	Next-Generation Radar
NFIP	National Flood Insurance Program
NICET	National Institute for Certification in Engineering Technologies
NMC	Nine Minimum Controls
NOAA	National Oceanographic and Atmospheric Administration
NOD	Notice of Deficiency
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint Source
NS	Non-Support of the use
NWS	National Weather Service
O&M	Operations and Maintenance
OHWM	Ordinary High Water Mark
ORSANCO	Ohio River Sanitation Commission
OSHA	Occupational Safety and Health Administration
P2	Pollution Prevention
PAR	Program Assessment and Reporting
PAT	Project Activity Tracking



PC	Post construction
PCR	Primary Contact Recreation
PE	Professional Engineer
PEOPLE	Public Education, Outreach, Participation and Learning Experiences
PER	Program Evaluation and Reporting
PIO	Public Information and Outreach
PM	Preventive maintenance
POTW	Publicly owned treatment works
Project DRI	Project Drainage Response Initiative
Project WIN	Project Waterway Improvements Now
Project XL	Project eXcellence in Leadership Program
PRR	Preliminary Response Report
PS	Point Source
PVA	Jefferson County Property Valuation Administrator
PVC	Polyvinyl chloride
PY	Permit Year
QA/QC	Quality Assurance / Quality Control
QAPP	Quality Assurance Project Plan
QPCI	Qualified Post-Construction Inspector
RBP	Stream Rapid Bioassessment Protocol
ROW	Right-of-way
RTC	Real time control
S&F	Solids and Floatables
SCADA	Supervisory Control and Data Acquisition
SCR	Secondary Contact Recreation (wading or boating)
SEC	Specific Electrical Conductance
SIU	Significant Industrial User
SMMP	Stormwater Management Master Plan
SOP	Standard Operating Procedure
SORP	Sewer Overflow Response Protocol
SPCC	Spill Prevention, Control and Countermeasure
SPCC	Spill Prevention, Control and Countermeasure
SSDP	Sanitary Sewer Discharge Plan
SSES	Sanitary Sewer Evaluation Survey
SSO	Sanitary Sewer Overflow
SSOP	Sanitary Sewer Overflow Plan
SSS	Sanitary Sewer System



SWMM	Stormwater and Wastewater Management Model
SWO	Stop work order
SWPPP	Stormwater Pollution Prevention Plan
SWQMP	Stormwater Quality Management Plan
TARC	Transit Authority of River City
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total maximum daily load
TRI	Toxic Release Inventory
TSS	Total suspended solids
TTO	Total Toxic Organics
TVS	Total Volatile Solids
U of L	University of Louisville
UAA	Use Attainability Analysis
UPS	United Parcel Service
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
WAH	Warm Water Aquatic Habitat
WASP	Water Quality Analysis Simulation Program
WATERS	Watershed Approach to Environmentally Responsible Stewardship
WDR	Wastewater/Stormwater Discharge Regulations
WEF	Water Environment Federation
WERF	Water Environment Research Foundation
WLA	Waste Load Allocation
WQS	Water Quality Standards
WQT	Water Quality Tool
WQTC	Water Quality Treatment Center
WWT	Wet Weather Team



APPENDIX 1.1 CURRENT ORGANIZATION CHART



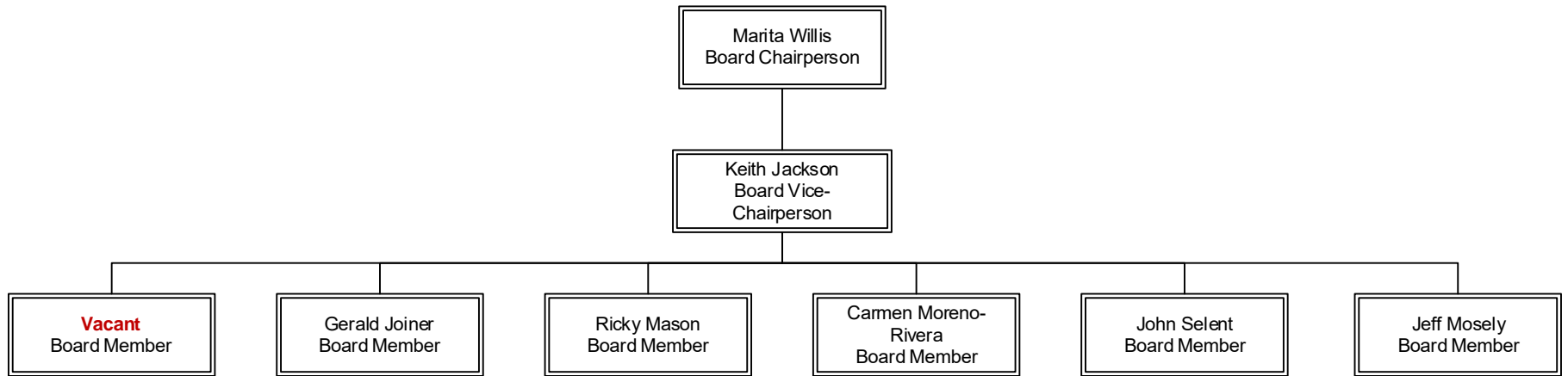
Louisville and Jefferson County Metropolitan Sewer District

Organizational Chart
Effective 10/02/2023

Organizational Summary

	<u>Total</u> <u>Positions</u>	<u>Current</u> <u>Actual</u>	<u>Vacant</u> <u>(Budgeted)</u>	<u>New/Unbudgeted</u> <u>(Vacant)</u>	<u>Exempt</u>	<u>Non-</u> <u>Exempt</u>	<u>Union</u>	<u>Net</u> <u>Overbudget</u>
Executive Offices Division								
Executive Offices	8	7	1	0	8	0	0	0
Innovation, Customer Relations and Dispatch	24	19	5	0	5	19	0	0
Government & Public Affairs	7	6	1	0	4	3	0	0
Records and Information Governance	9	8	1	0	3	6	0	0
Community Benefits and Partnerships	8	6	2	0	6	2	0	0
Facilities, Safety and Security Division	35	29	6	0	16	19	0	1
Supply Chain and Economic Inclusion Division	27	22	5	0	13	14	0	0
Legal Division	10	8	2	0	10	0	0	0
Human Resources Division	21	19	2	0	15	6	0	0
Information Technology Division	33	31	2	0	28	5	0	0
Finance Division	22	19	3	0	10	12	0	0
Engineering Division								
Eng Admin, Reg Compliance, Records & GIS	17	16	0	1	11	6	0	1
Engineering Technical Services	49.5	43	6.5	0	27	22.5	0	0
Development & Stormwater Services	33	28	5	0	20	13	0	0
Operations Division								
Administration	3	2	1	0	2	1	0	0
Collections System and Emergency Response	57	50	7	0	13	8	36	0
Treatment Facilities (Maintenance)	48	45	3	0	6	0	42	0
Flood Protection	20	19	1	0	5	0	15	0
Operations Control	15	13	2	0	4	11	0	0
Treatment Facilities	81	79	2	0	17	8	56	0
Laboratory Services	12	10	2	0	4	8	0	0
Support Services	40	37	3	0	13	27	0	0
Wastewater and Drainage	131	114	17	0	15	13	103	0
Wastewater and Drainage (Sanitary)	81	64	17	0	11	1	69	0
Fleet Services	21	19	2	0	5	1	15	0
DISTRICT TOTAL	812.5	713.0	98.5	1.0	271.0	205.5	336.0	2.0

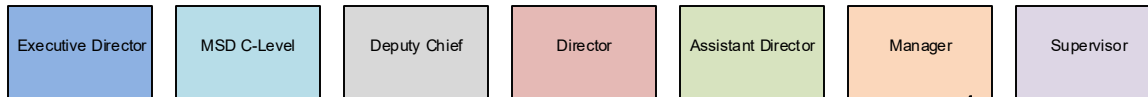
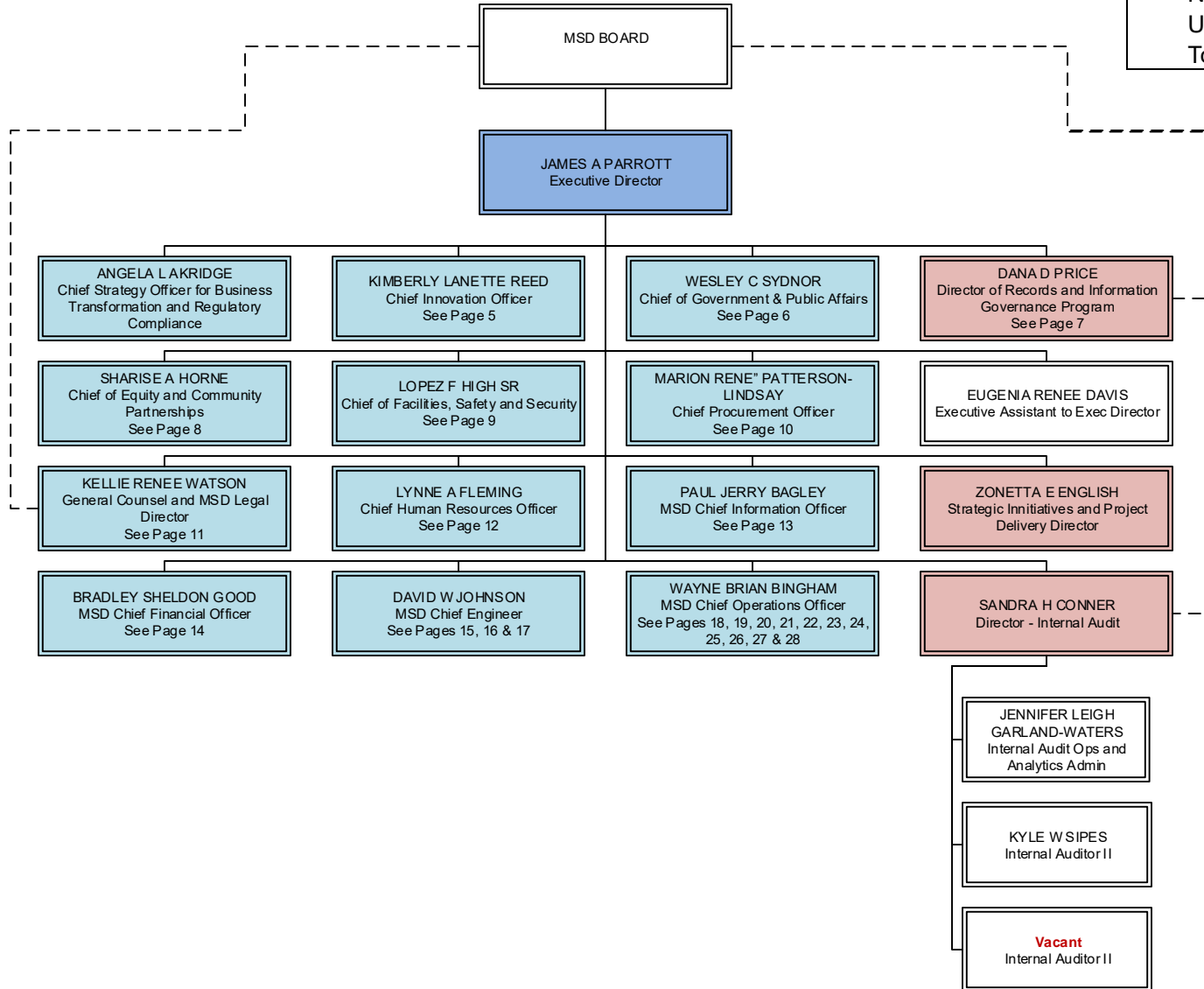
Board Members



Executive Offices Division Executive Offices

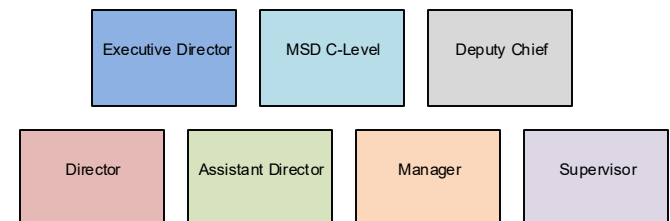
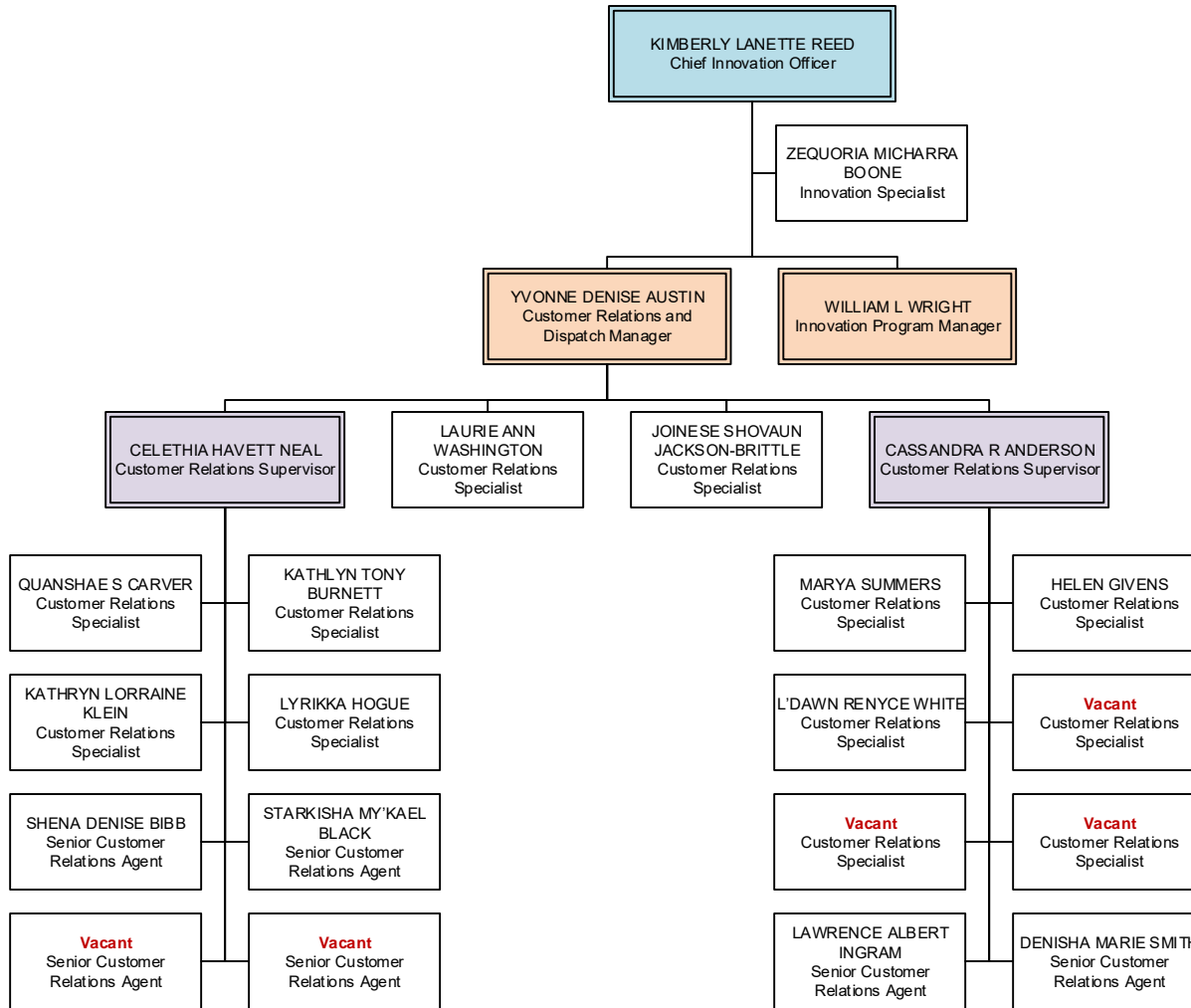
DIVISION BUDGET STATUS	
Actual	46.0
Vacant	<u>10.0</u>
Authorized	56.0
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Exempt	26.0
Non-Exempt	30.0
Unit	<u>0.0</u>
Total	56.0

BUDGET STATUS	
Actual	7
Vacant	<u>1</u>
Authorized	8
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Exempt	8
Non-Exempt	0
Unit	<u>0</u>
Total	8

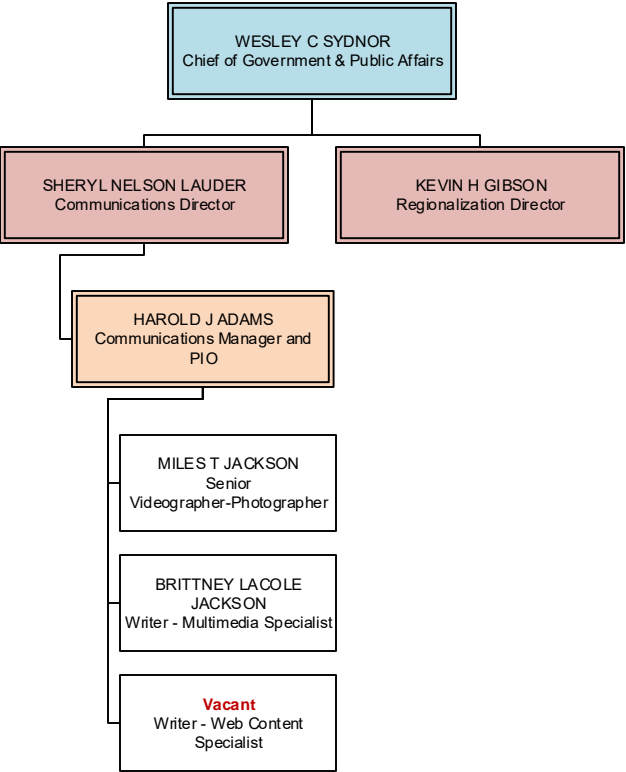


Executive Offices Division Innovation, Customer Relations & Dispatch

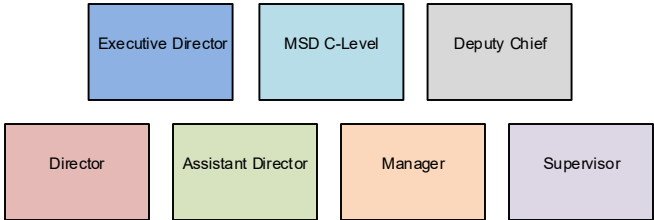
BUDGET STATUS	
Actual	19
Vacant	5
Authorized	24
█ Exempt	5
— Non-Exempt	19
Unit	0
Total	24



Executive Offices Division Government & Public Affairs



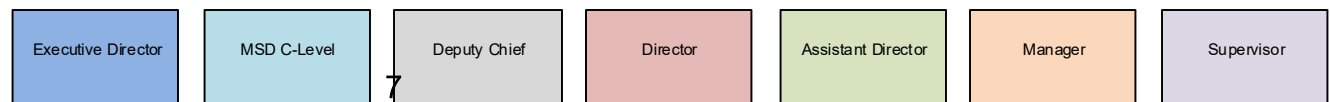
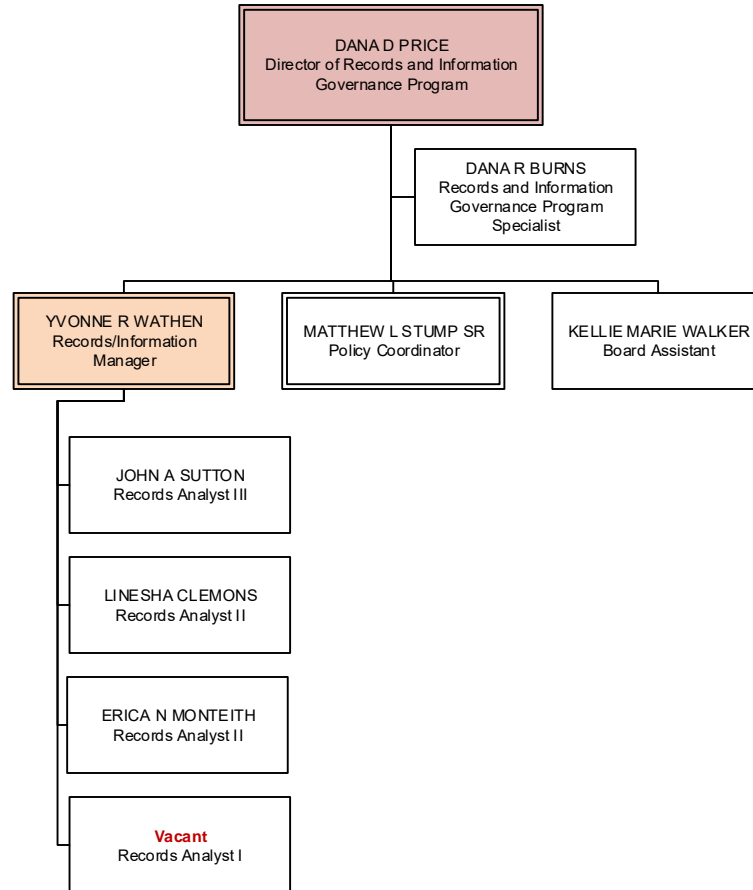
BUDGET STATUS	
Actual	6
Vacant	1
Authorized	7
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█ Exempt	4
— Non-Exempt	3
Unit	0
Total	7



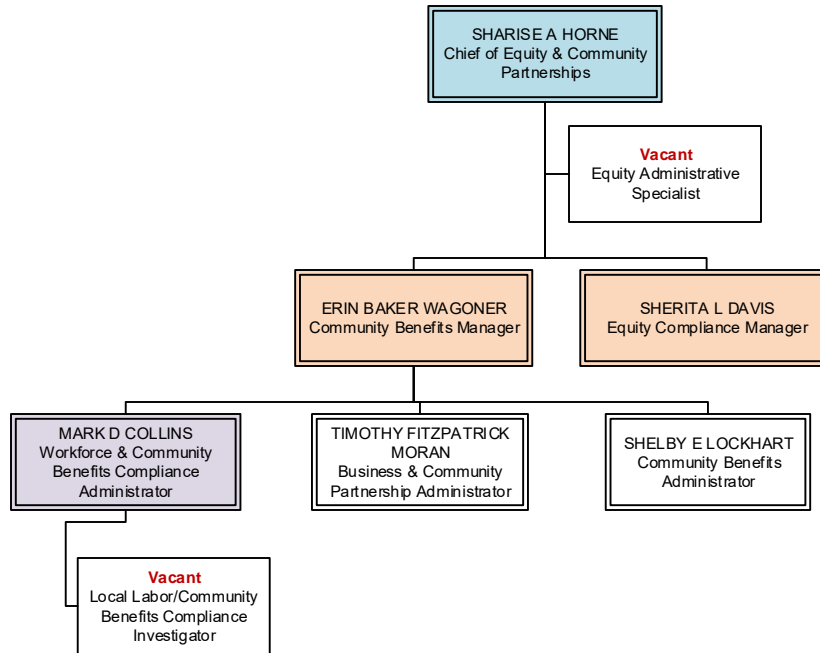
Executive Offices Division

Records and Information Governance

BUDGET STATUS	
Actual	8
Vacant	1
Authorized	9
 Exempt	3
 Non-Exempt	6
Unit	0
Total	9



Executive Offices Division Equity and Community Partnerships



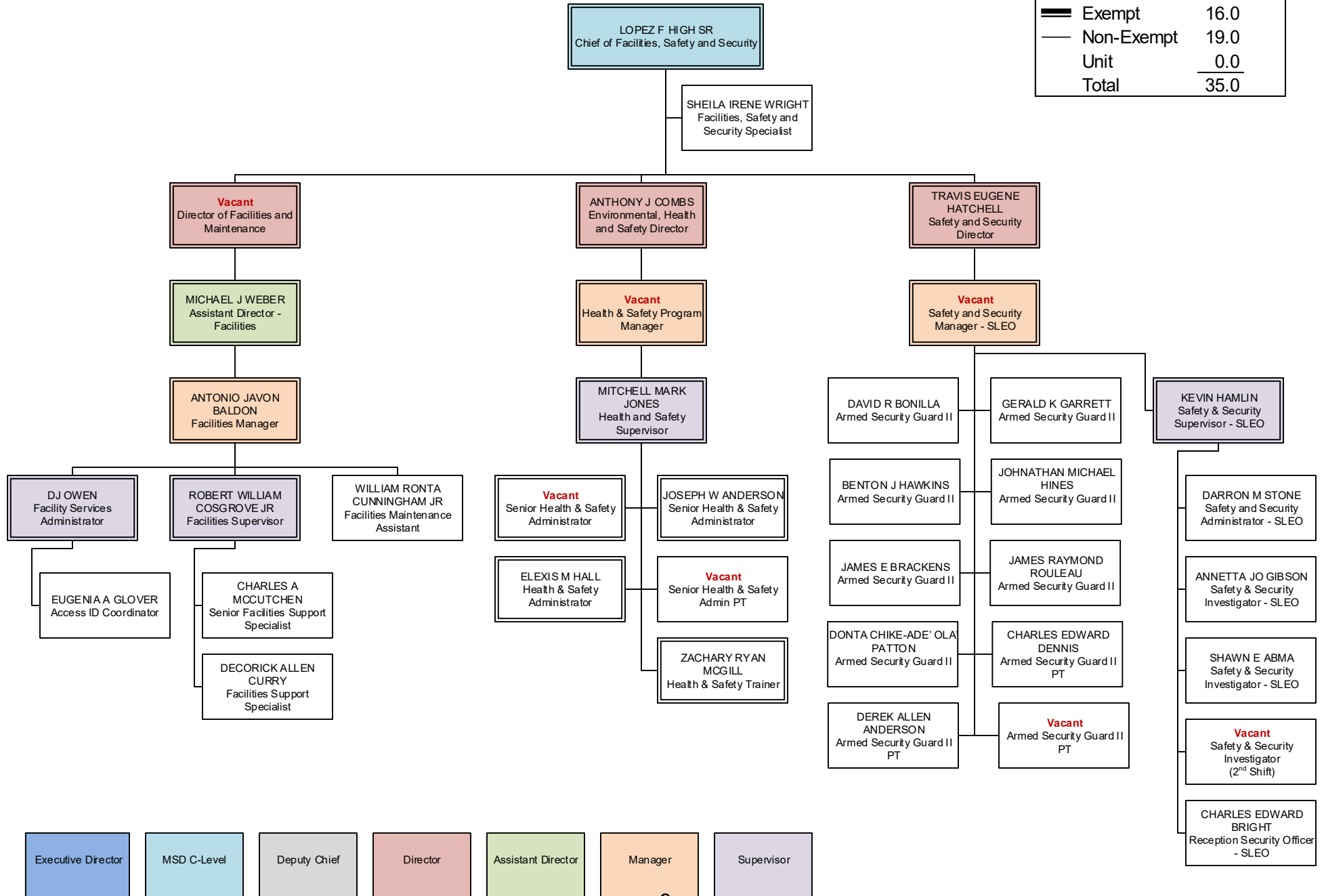
BUDGET STATUS	
Actual	6
Vacant	<u>2</u>
Authorized	8
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█ Exempt	6
— Non-Exempt	2
Unit	<u>0</u>
Total	8



Facilities, Safety and Security Division

Facilities, Safety & Security

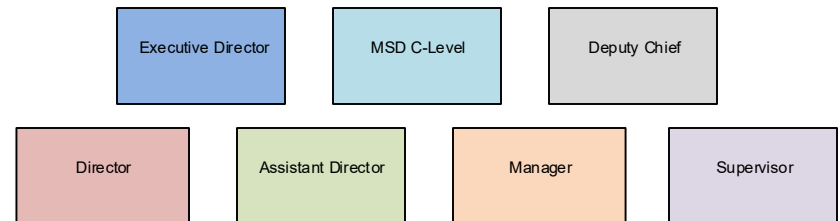
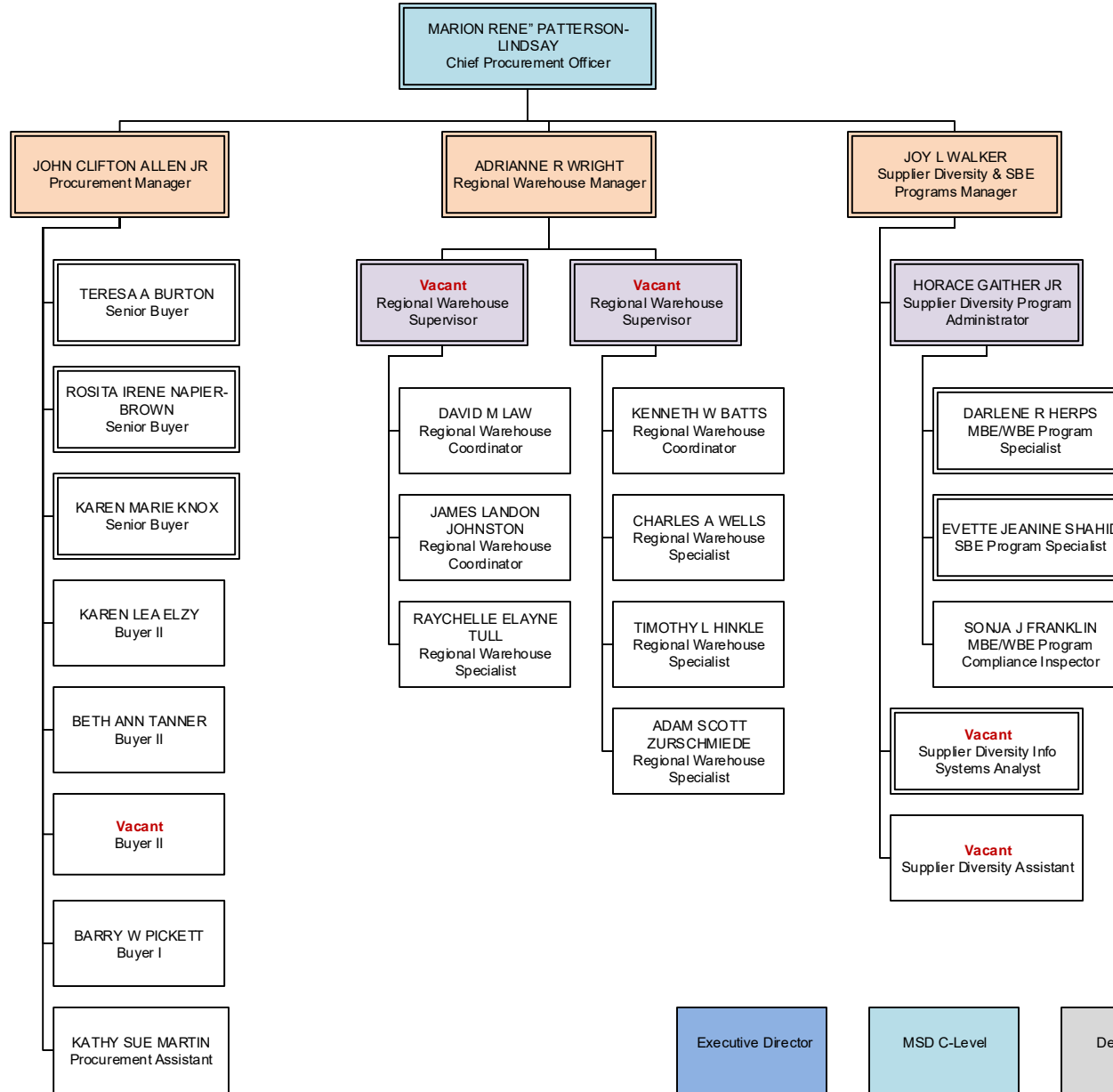
BUDGET STATUS	
Actual	29.0
Vacant	<u>6.0</u>
Authorized	35.0
█ Exempt	16.0
— Non-Exempt	19.0
Unit	<u>0.0</u>
Total	35.0



BUDGET STATUS	
Actual	22.0
Vacant	5.0
Authorized	27.0
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Exempt	13.0
Non-Exempt	14.0
Unit	0.0
Total	27.0

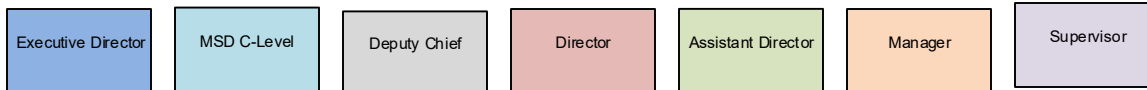
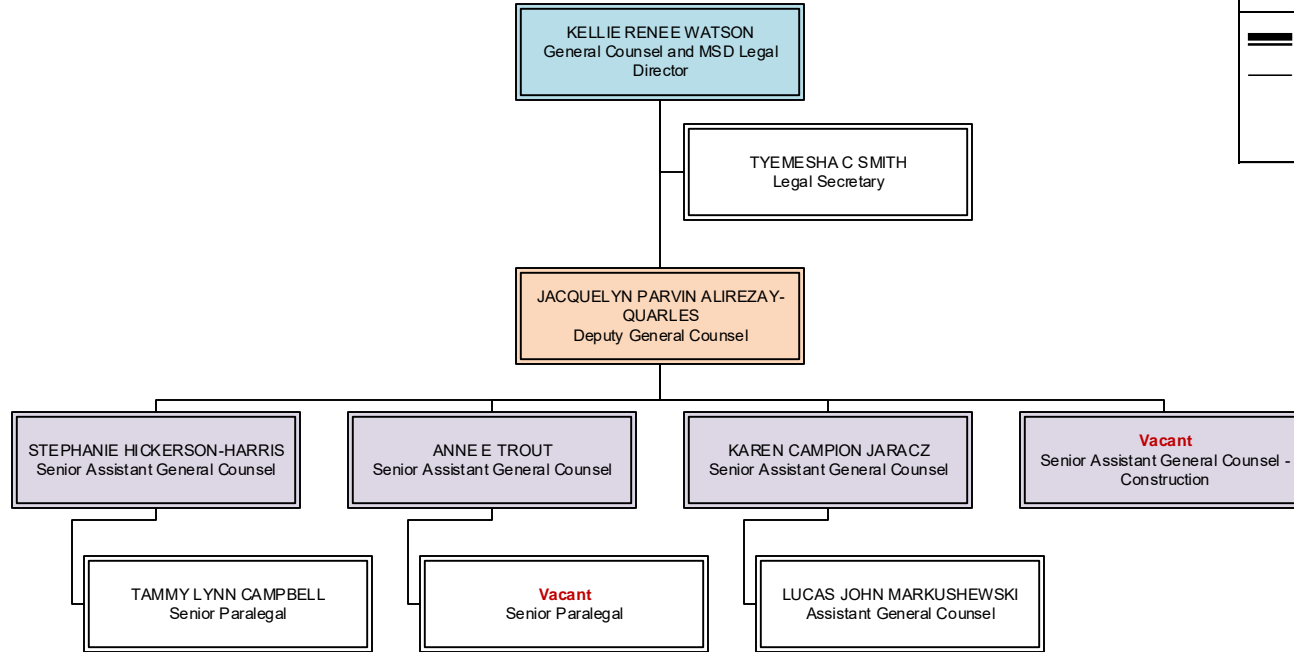
Supply Chain and Economic Inclusion Division

Procurement, Storeroom & Supplier Diversity



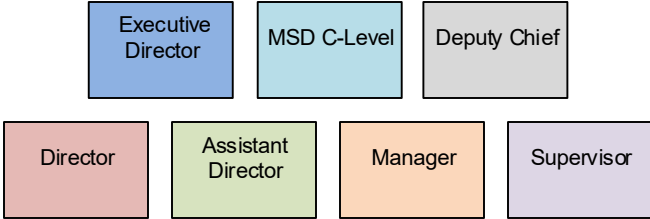
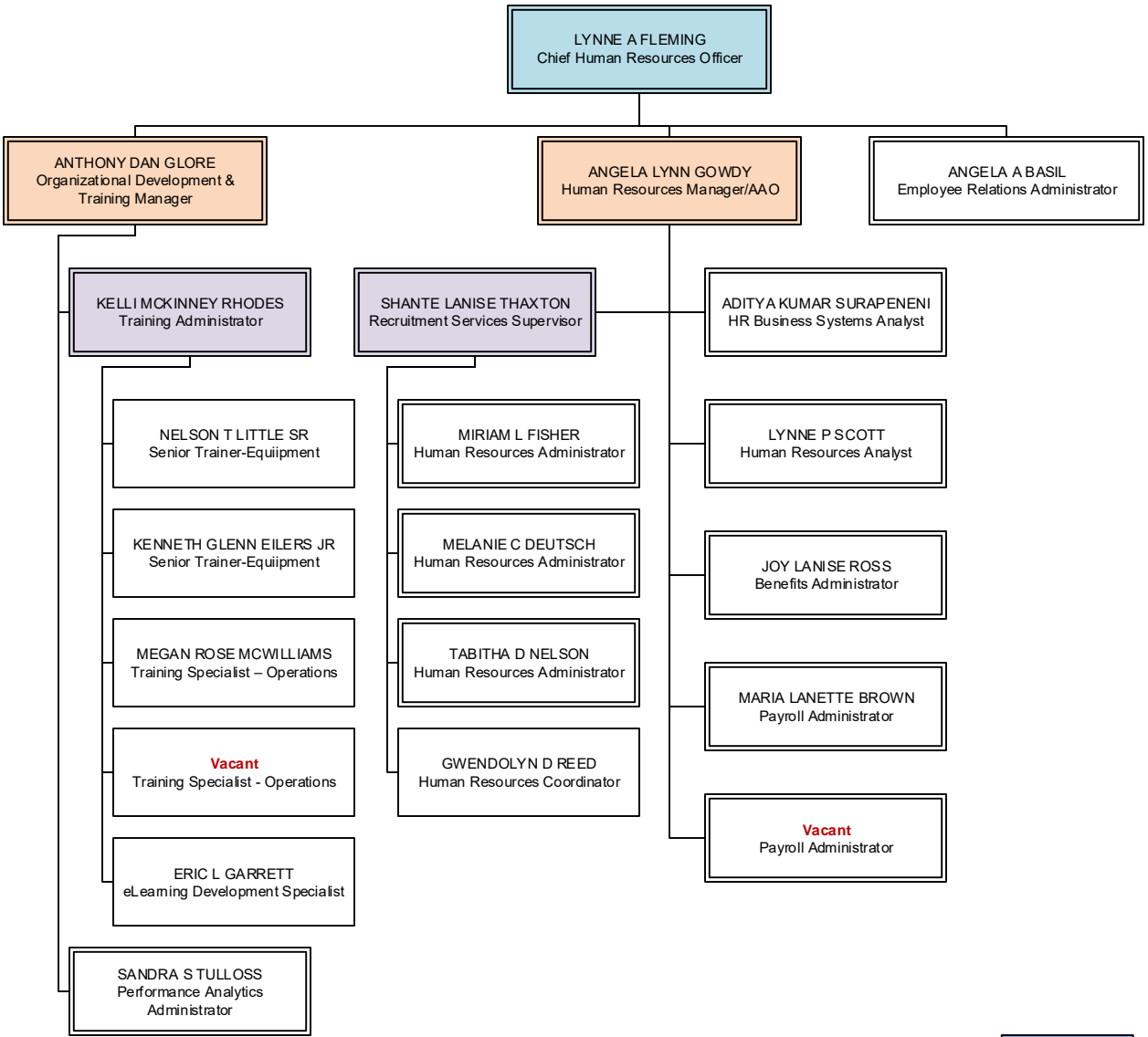
Legal Division

BUDGET STATUS	
Actual	8
Vacant	<u>2</u>
Authorized	10
█ Exempt	10
— Non-Exempt	0
Unit	<u>0</u>
Total	10



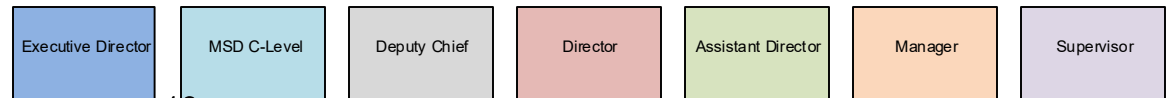
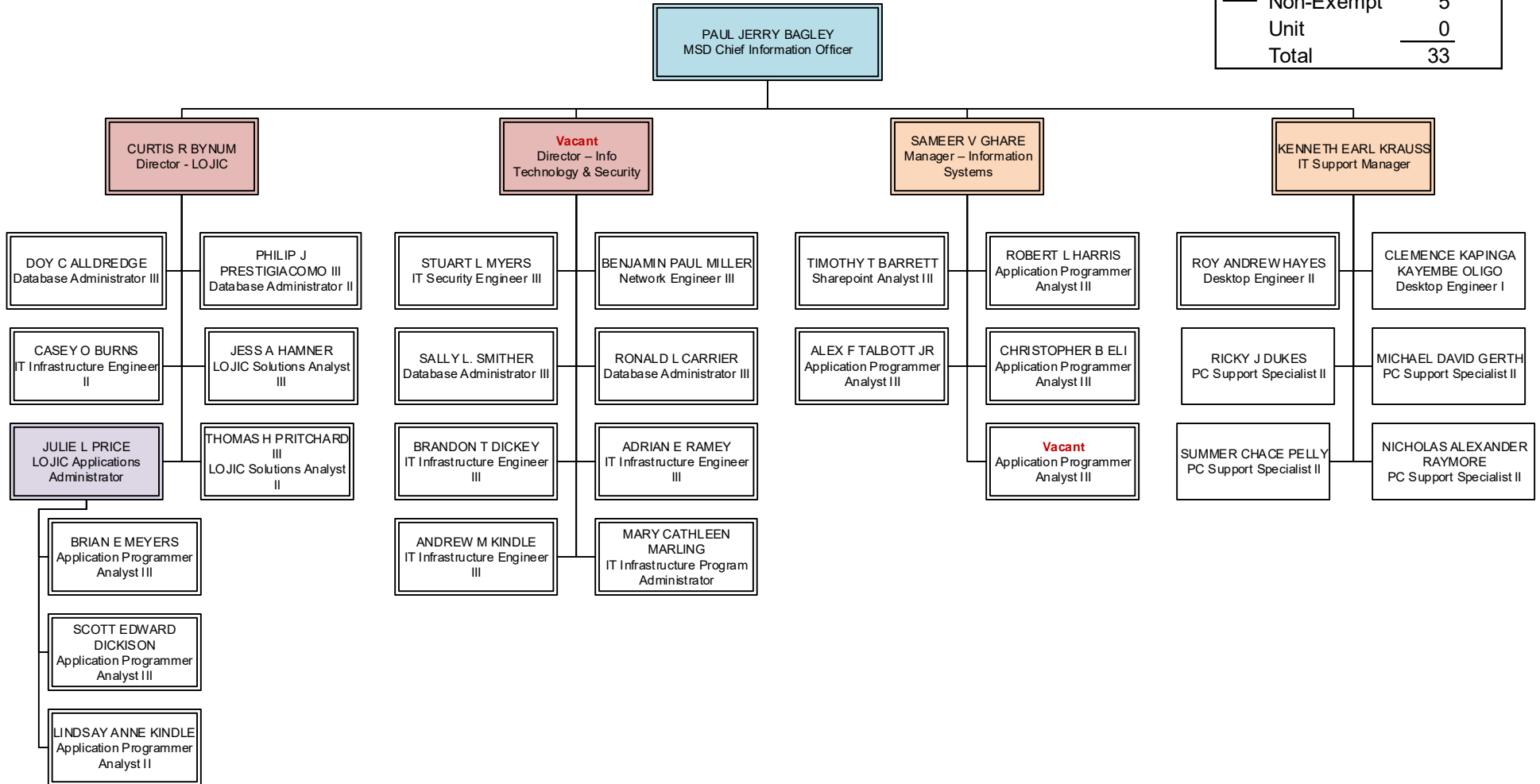
Human Resources Division

BUDGET STATUS									
Actual	19.0								
Vacant	2.0								
Authorized	<u>21.0</u>								
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█ Exempt	15.0								
— Non-Exempt	6.0								
Unit	<u>0.0</u>								
Total	21.0								



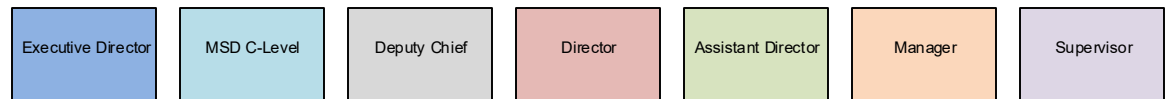
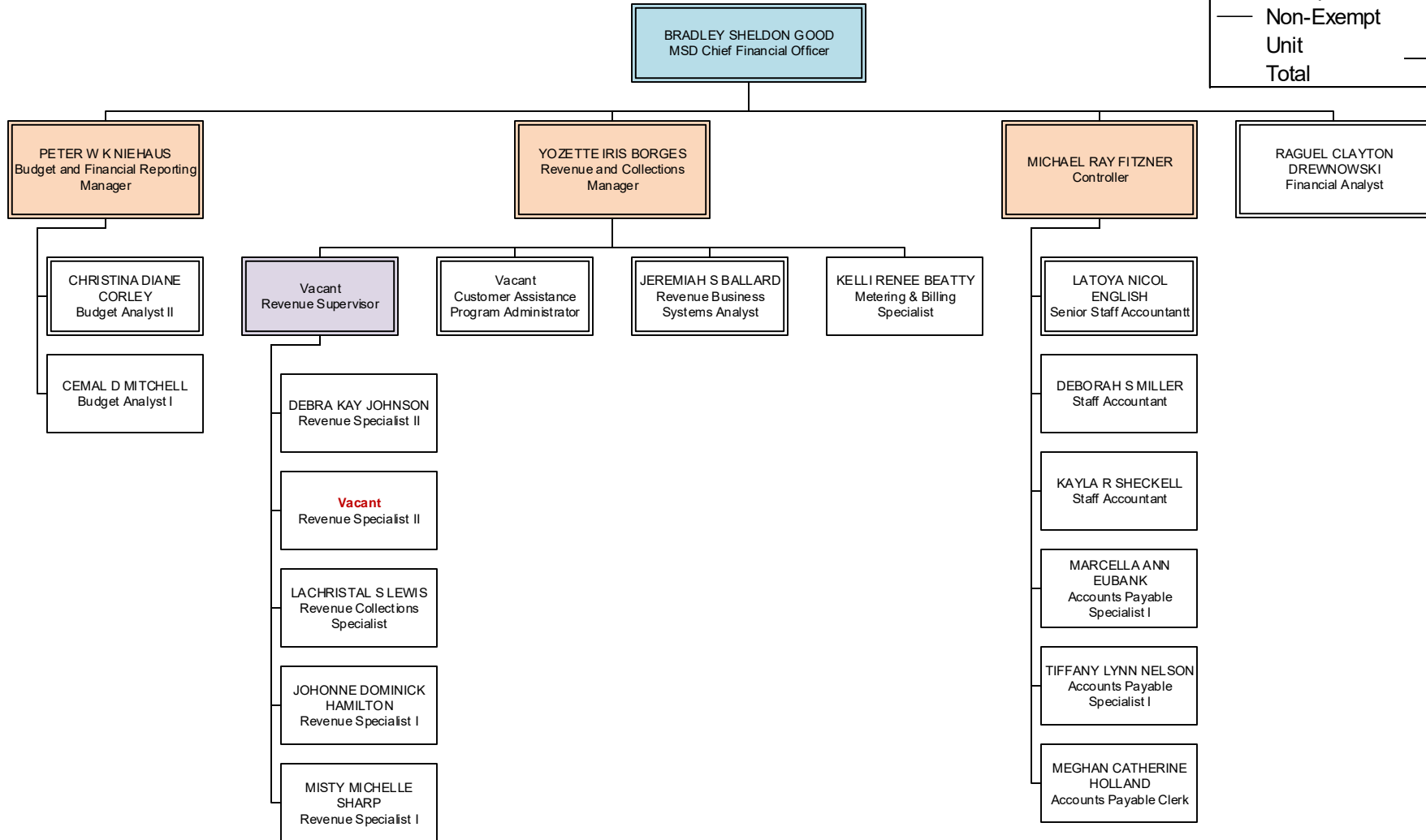
Information Technology Division

BUDGET STATUS	
Actual	31
Vacant	2
Authorized	33
<hr/>	
█ Exempt	28
— Non-Exempt	5
Unit	0
Total	33



Finance Division

BUDGET STATUS	
Actual	19
Vacant	<u>3</u>
Authorized	22
<hr/>	
— Exempt	10
— Non-Exempt	12
Unit	<u>0</u>
Total	22

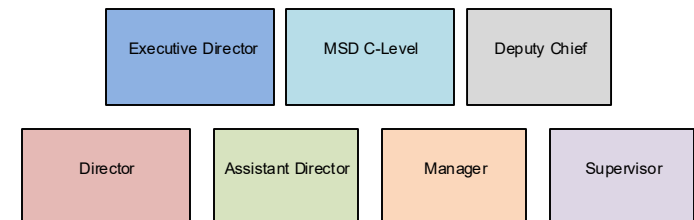
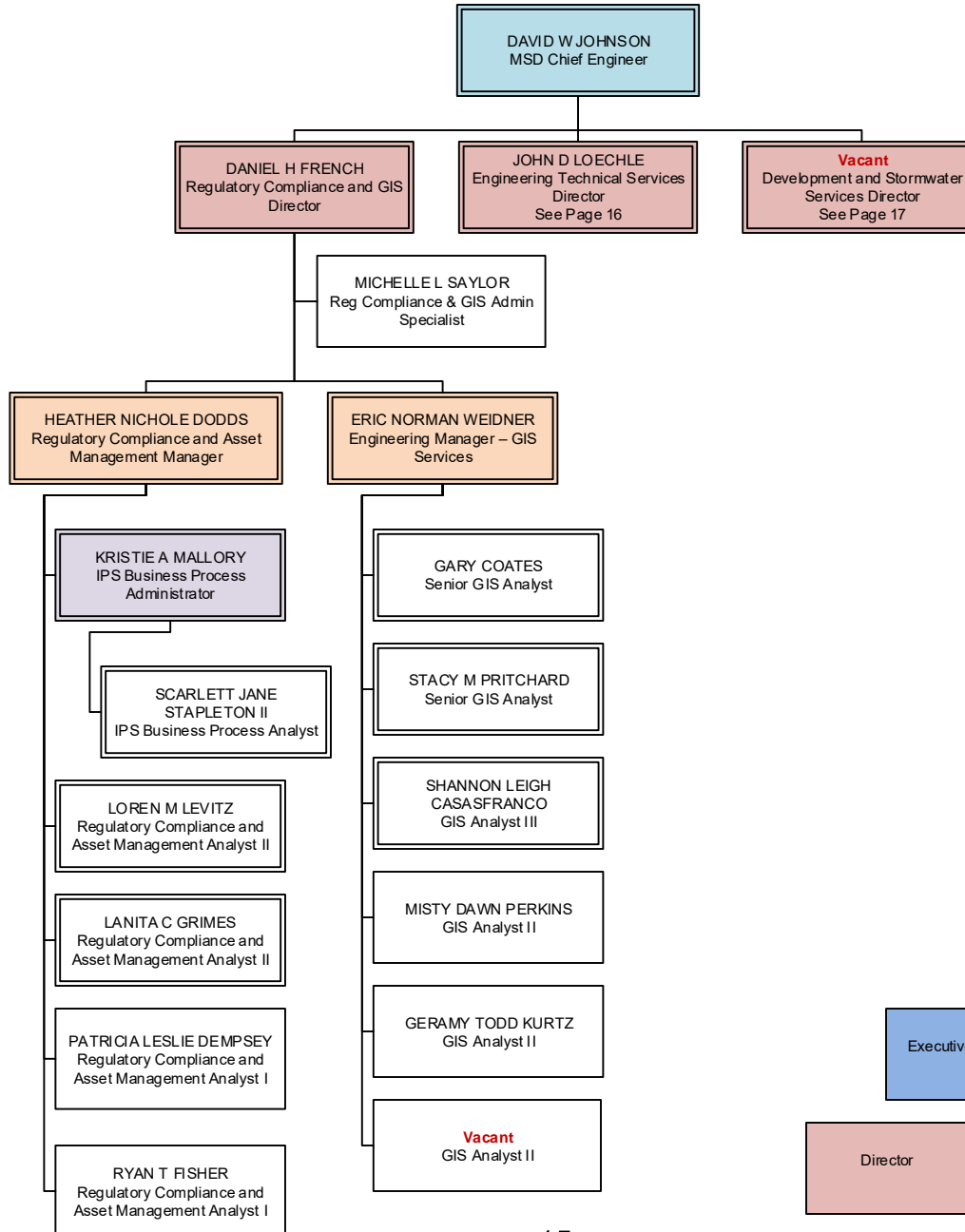


Engineering Division

Engineering Admin, Regulatory Compliance, Records & GIS

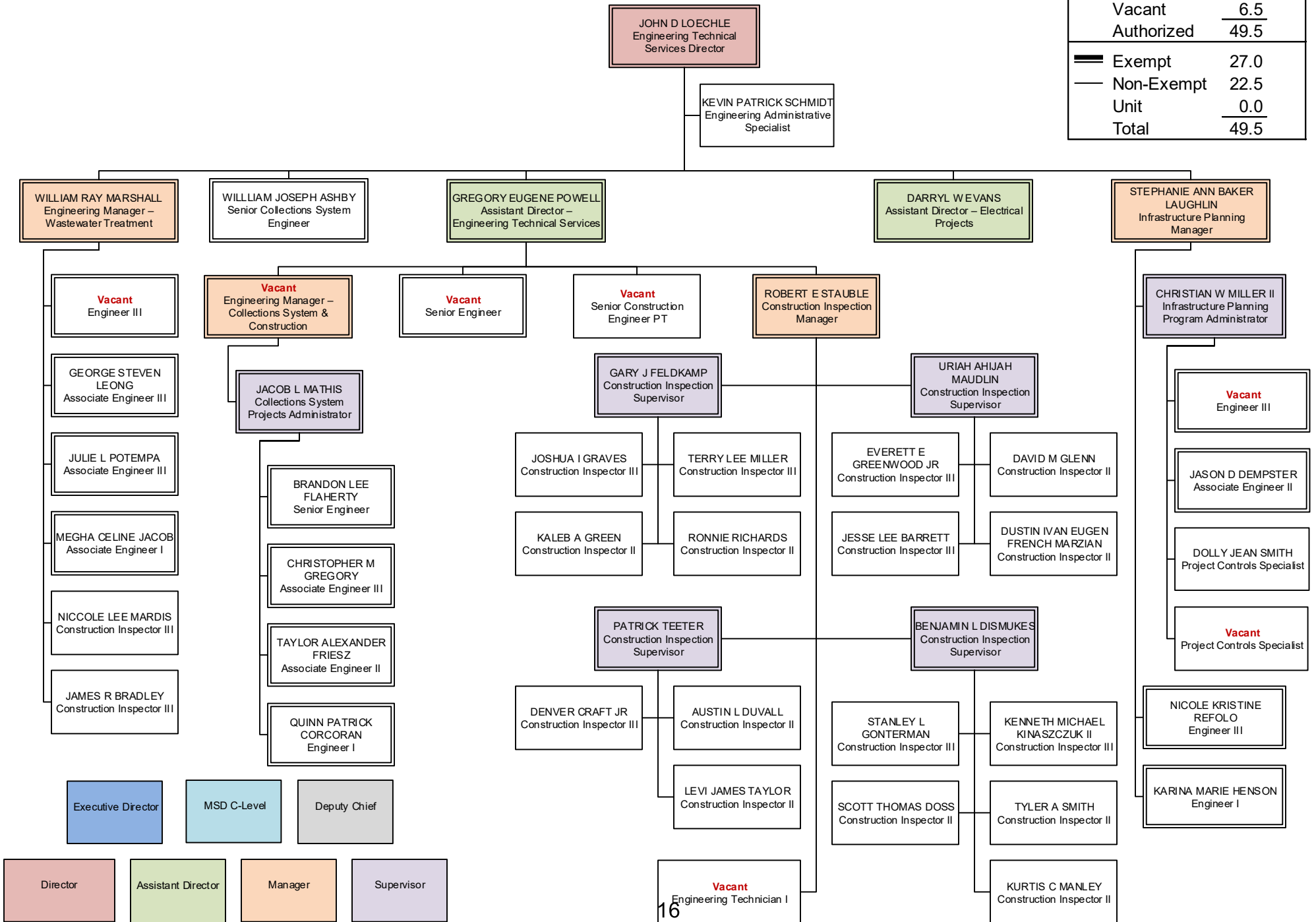
DIVISION BUDGET STATUS	
Actual	87.0
Vacant	12.5
Authorized	<u>99.5</u>
█ Exempt	58.0
— Non-Exempt	41.5
Unit	<u>0.0</u>
Total	99.5

BUDGET STATUS	
Actual	16.0
Vacant	<u>1.0</u>
Authorized	17.0
█ Exempt	11.0
— Non-Exempt	6.0
Unit	<u>0.0</u>
Total	17.0



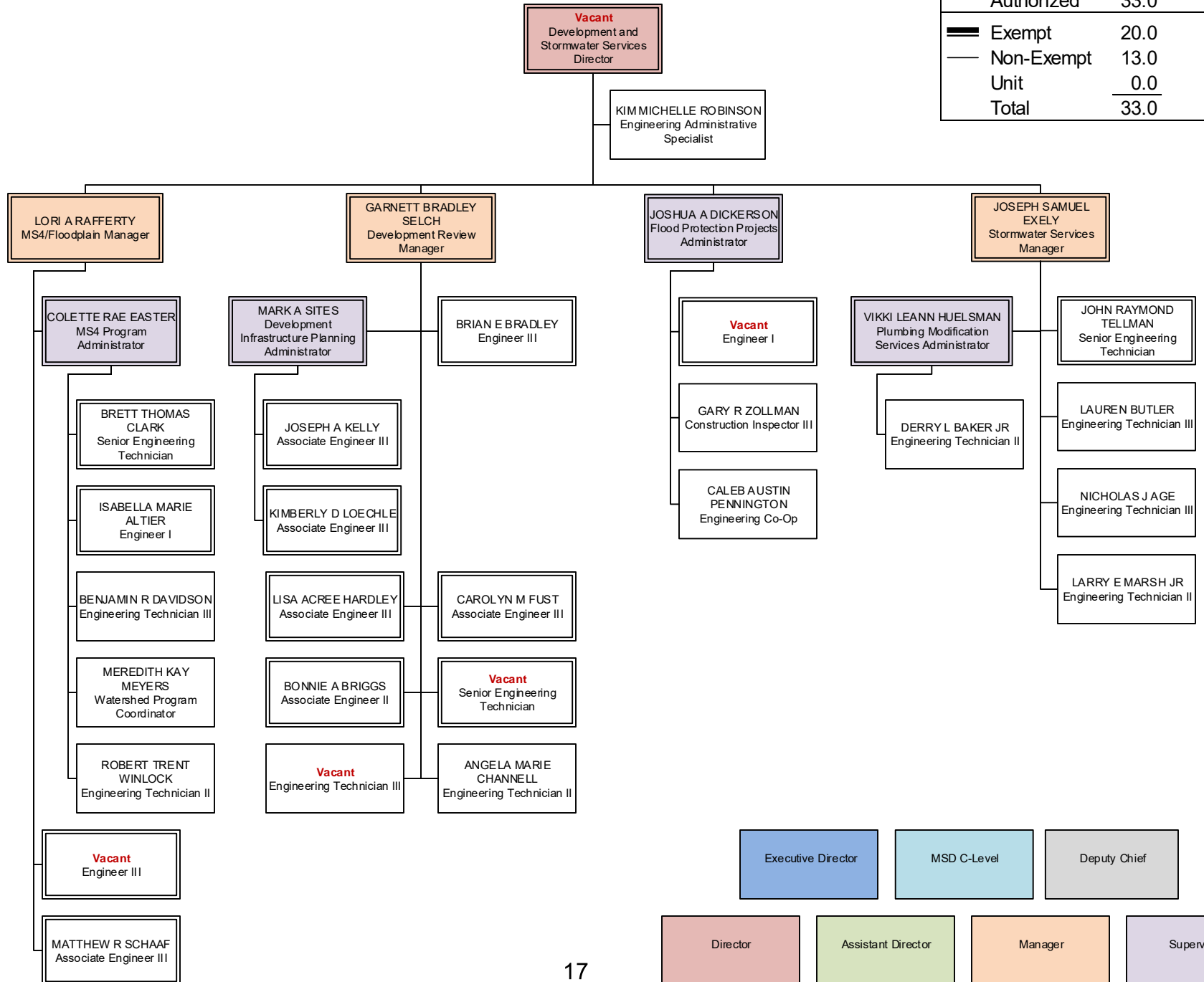
Engineering Division Engineering Technical Services

BUDGET STATUS	
Actual	43.0
Vacant	<u>6.5</u>
Authorized	49.5
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— Exempt	27.0
— Non-Exempt	22.5
Unit	<u>0.0</u>
Total	49.5



Engineering Division Development & Stormwater Svcs

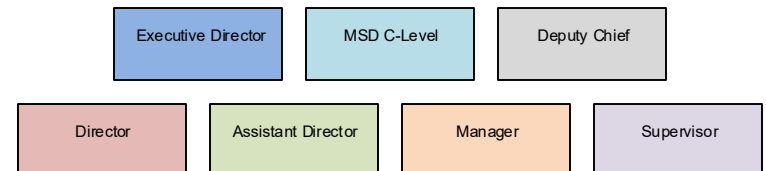
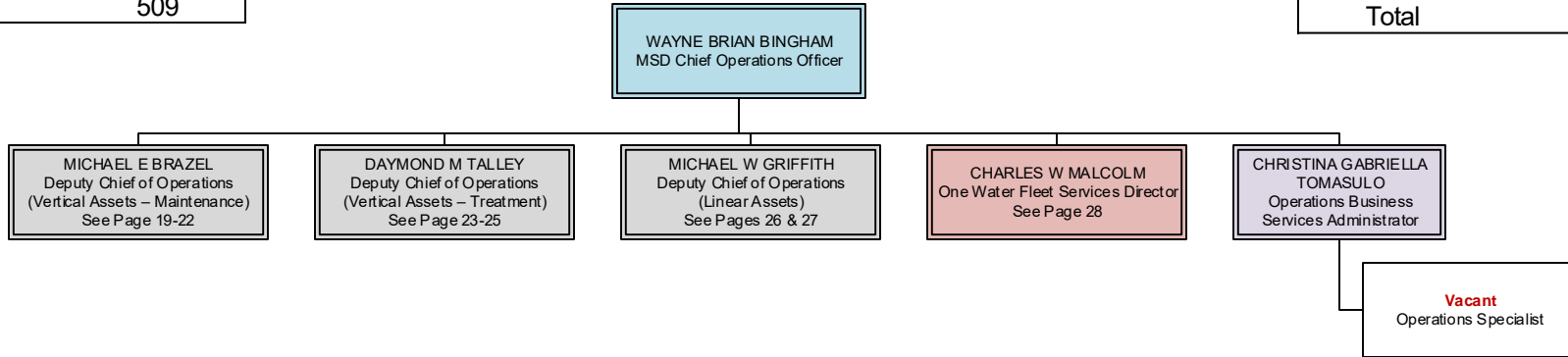
BUDGET STATUS	
Actual	28.0
Vacant	<u>5.0</u>
Authorized	33.0
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— Exempt	20.0
— Non-Exempt	13.0
Unit	<u>0.0</u>
Total	33.0



Operations Division Administration

DIVISION BUDGET STATUS	
Actual	452
Vacant	<u>57</u>
Authorized	509
█ Exempt	95
— Non-Exempt	78
Unit	<u>336</u>
Total	509

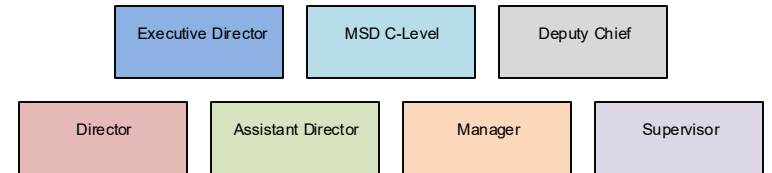
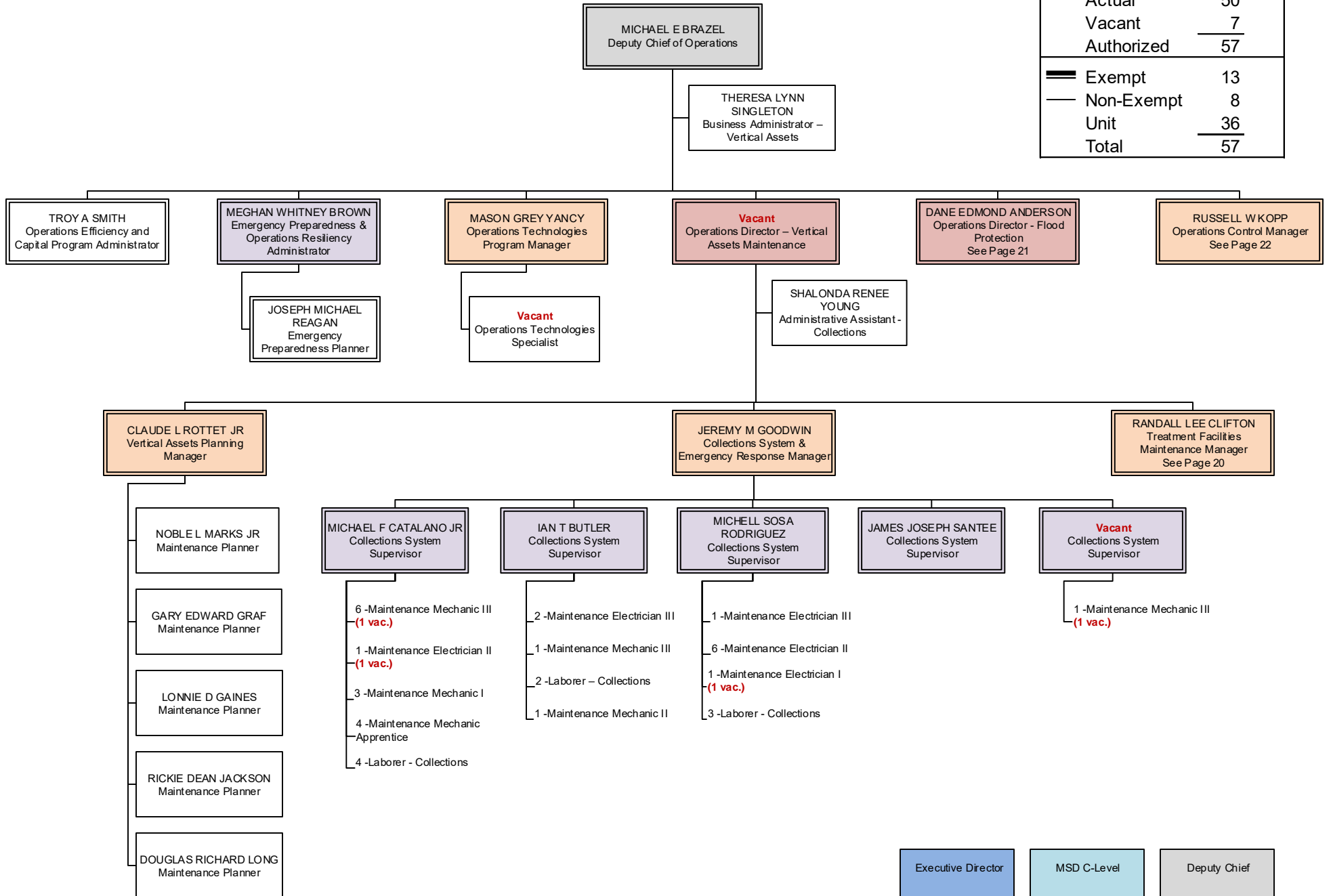
BUDGET STATUS	
Actual	2
Vacant	<u>1</u>
Authorized	3
█ Exempt	2
— Non-Exempt	1
Unit	<u>0</u>
Total	3



Operations Division (Vertical Assets - Maintenance)

Collections System & Emergency Response

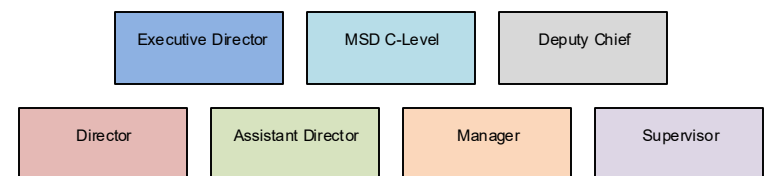
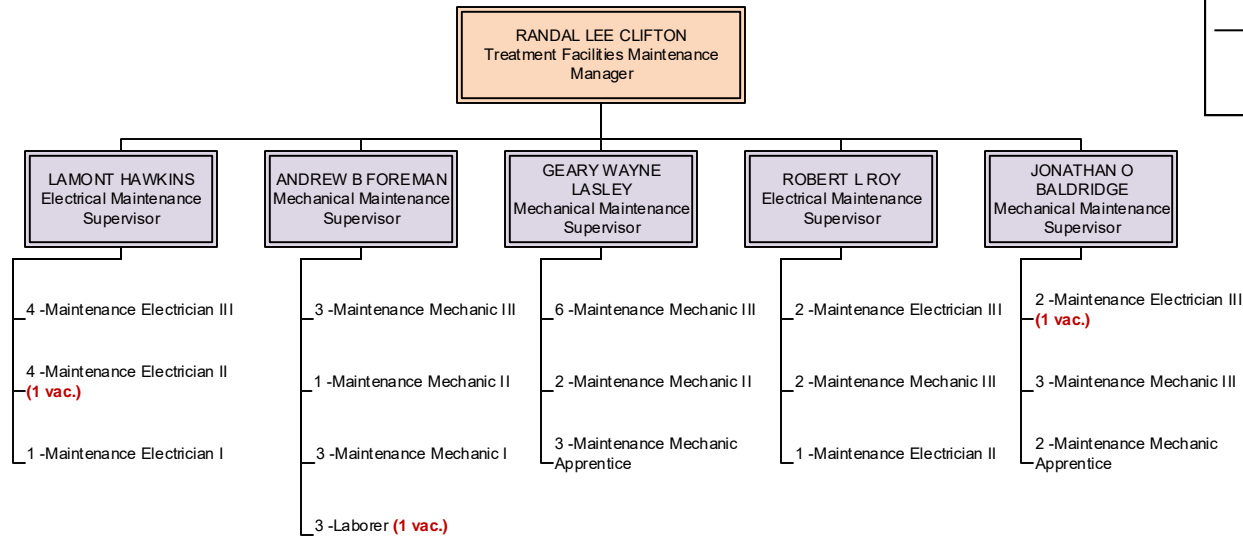
BUDGET STATUS	
Actual	50
Vacant	<u>7</u>
Authorized	57
█ Exempt	13
— Non-Exempt	8
Unit	<u>36</u>
Total	57



Operations Division (Vertical Assets - Maintenance)

Treatment Facilities Maintenance

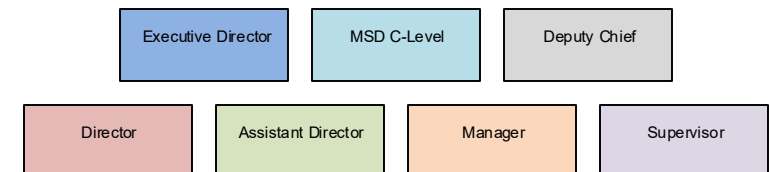
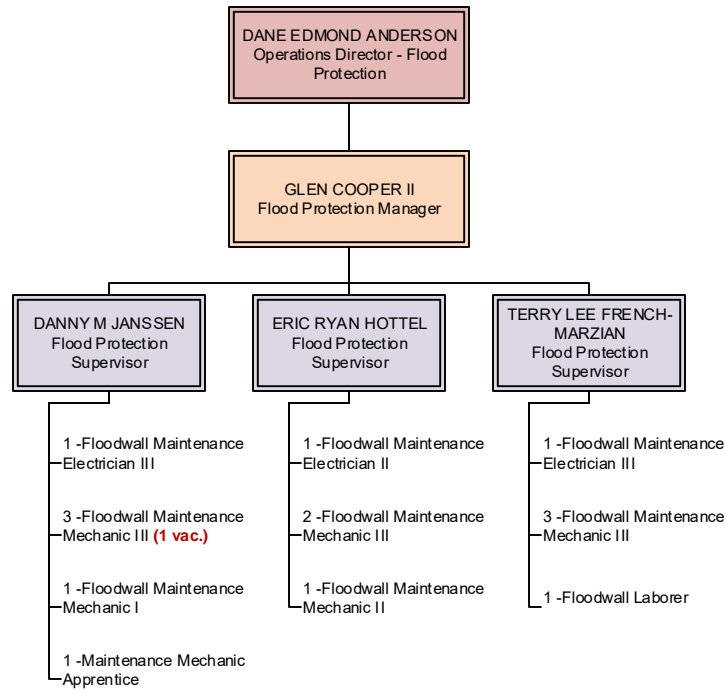
BUDGET STATUS	
Actual	45
Vacant	<u>3</u>
Authorized	48
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■ Exempt	6
— Non-Exempt	0
Unit	<u>42</u>
Total	48



Operations Division (Vertical Assets - Maintenance)

Flood Protection

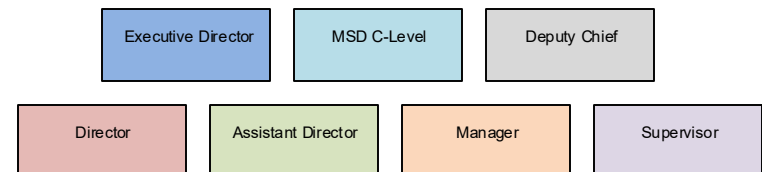
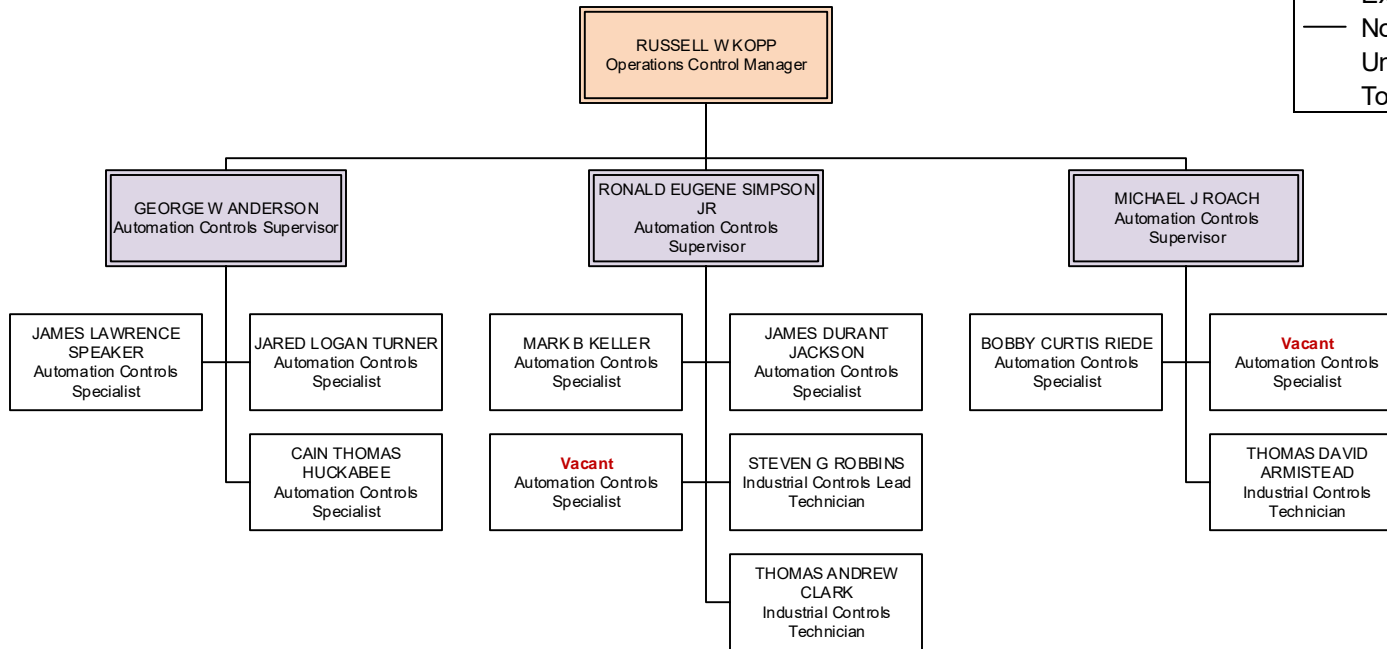
BUDGET STATUS	
Actual	19
Vacant	1
Authorized	<u>20</u>
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█ Exempt	5
— Non-Exempt	0
Unit	<u>15</u>
Total	<u>20</u>



Operations Division (Vertical Assets - Maintenance)

Operations Control

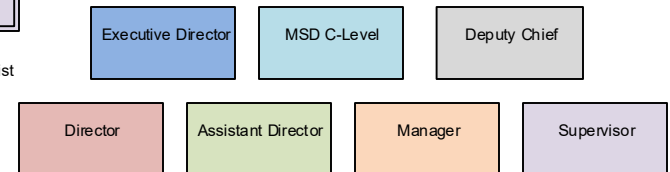
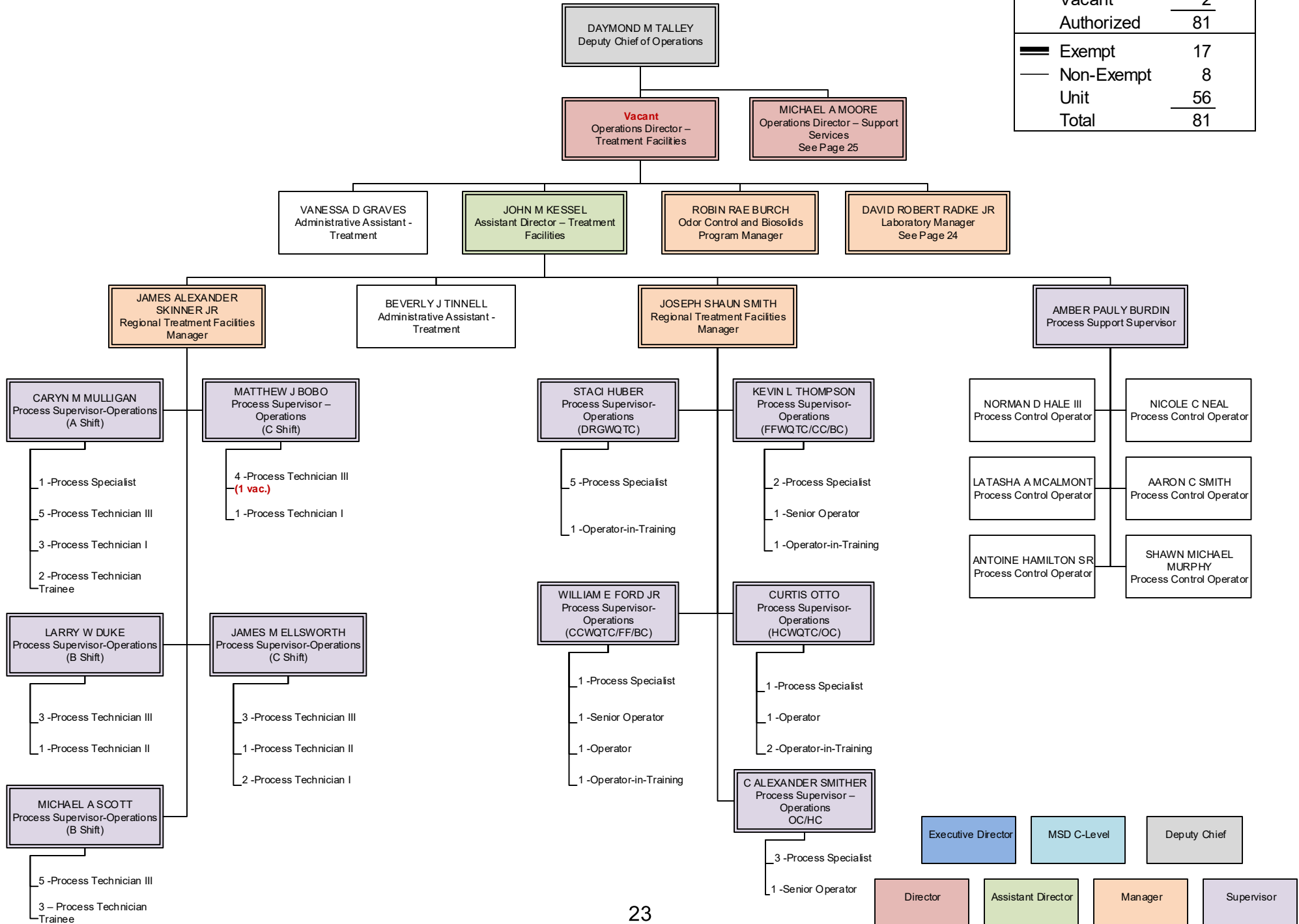
BUDGET STATUS	
Actual	13
Vacant	<u>2</u>
Authorized	15
█ Exempt	4
— Non-Exempt	11
Unit	<u>0</u>
Total	15



Operations Division (Vertical Assets - Treatment)

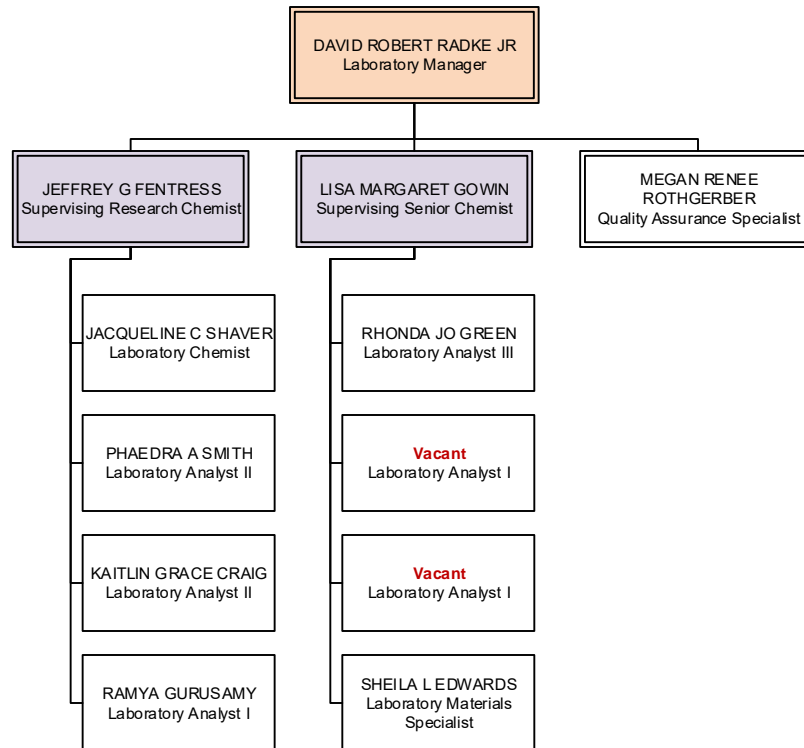
Treatment Facilities

BUDGET STATUS	
Actual	79
Vacant	<u>2</u>
Authorized	81
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█ Exempt	17
— Non-Exempt	8
Unit	<u>56</u>
Total	81

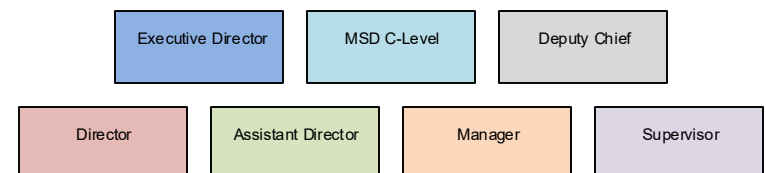


Operations Division (Vertical Assets - Treatment)

Laboratory Services



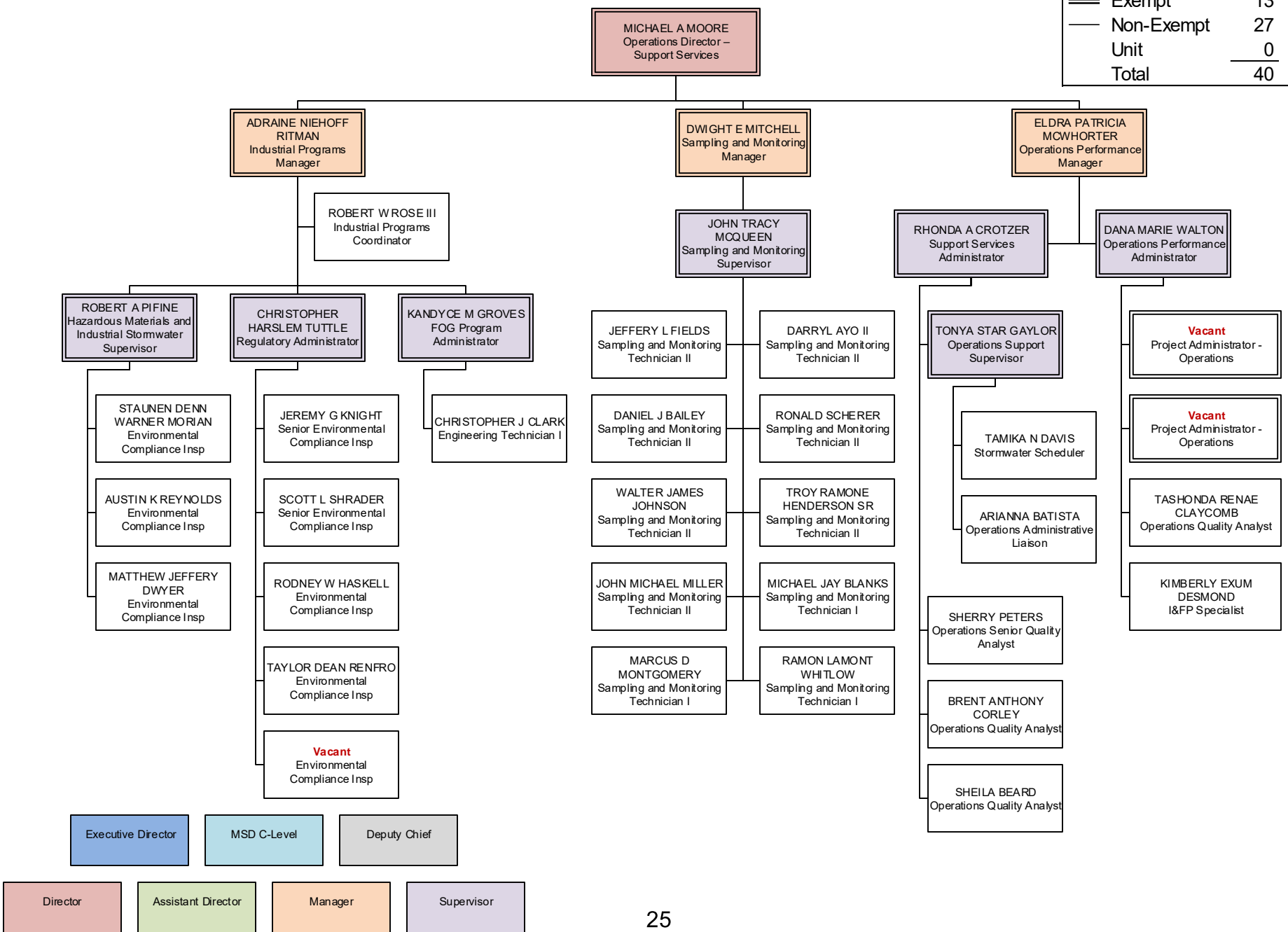
BUDGET STATUS	
Actual	10
Vacant	2
Authorized	12
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█ Exempt	4
— Non-Exempt	8
Unit	0
Total	12



Operations Division (Vertical Assets - Treatment)

Support Services

BUDGET STATUS	
Actual	37
Vacant	3
Authorized	40
█ Exempt	13
— Non-Exempt	27
Unit	0
Total	40

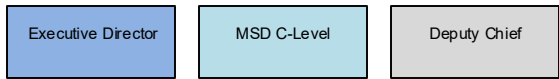
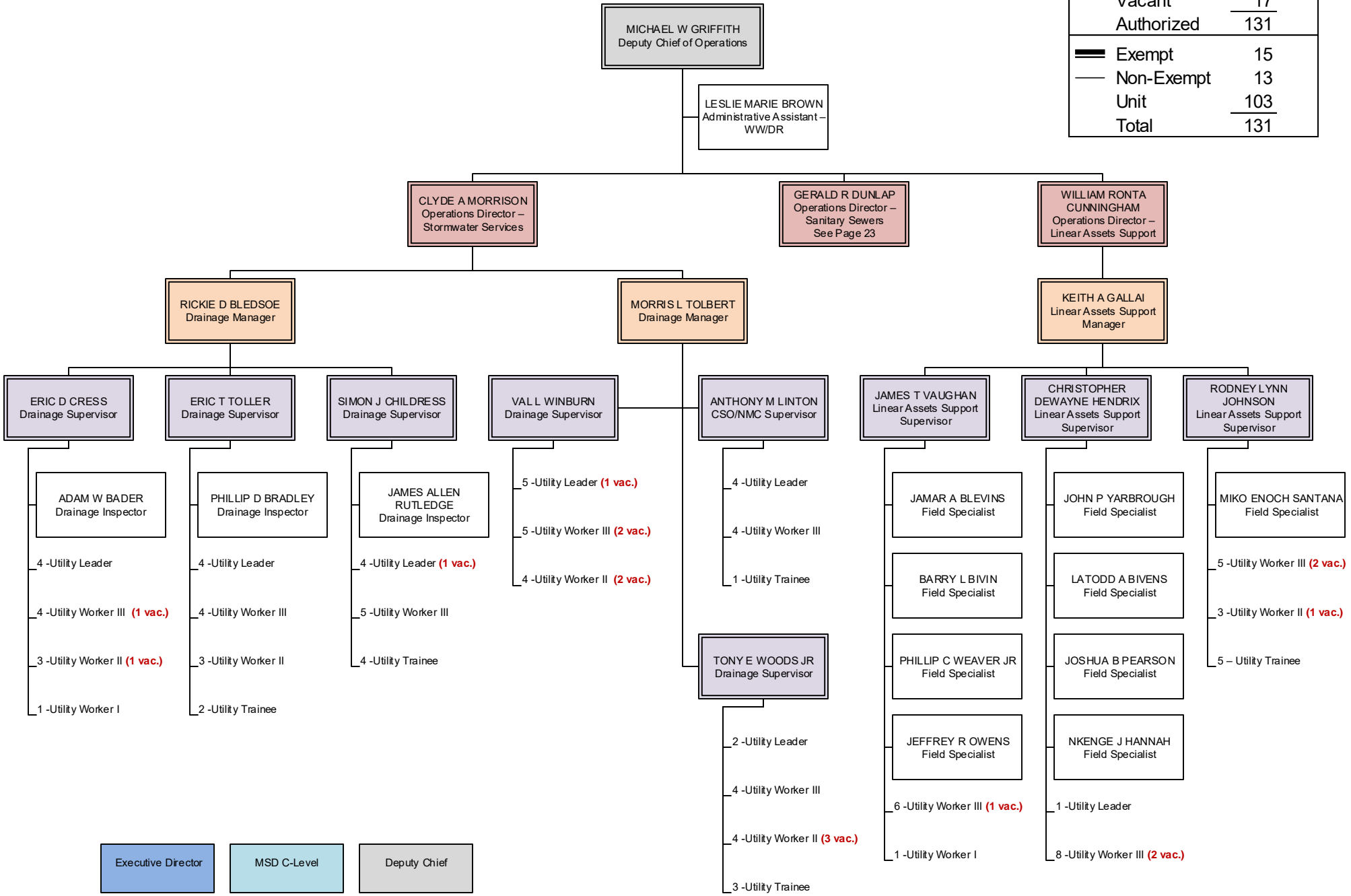


Executive Director MSD C-Level Deputy Chief

Director Assistant Director Manager Supervisor

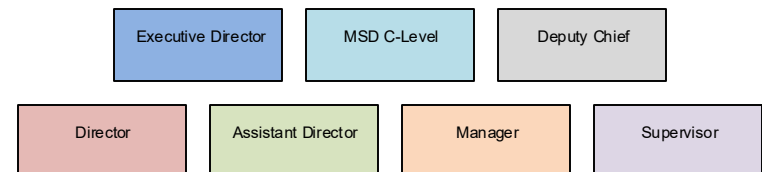
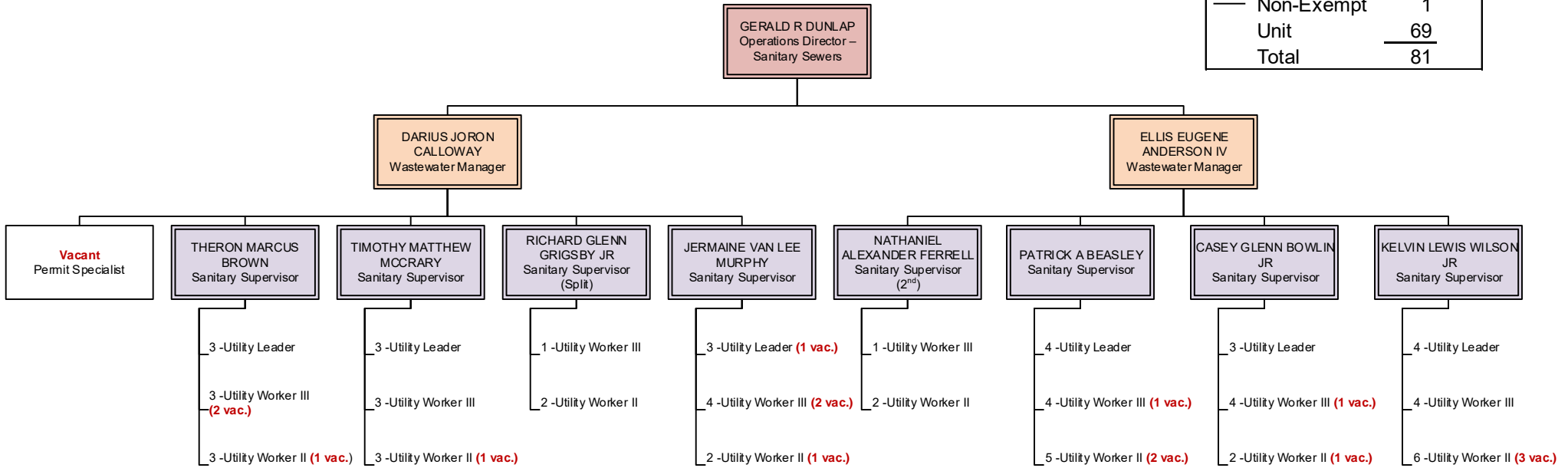
Operations Division (Linear Assets) Wastewater and Drainage

BUDGET STATUS	
Actual	114
Vacant	<u>17</u>
Authorized	131
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█ Exempt	15
— Non-Exempt	13
Unit	<u>103</u>
Total	131

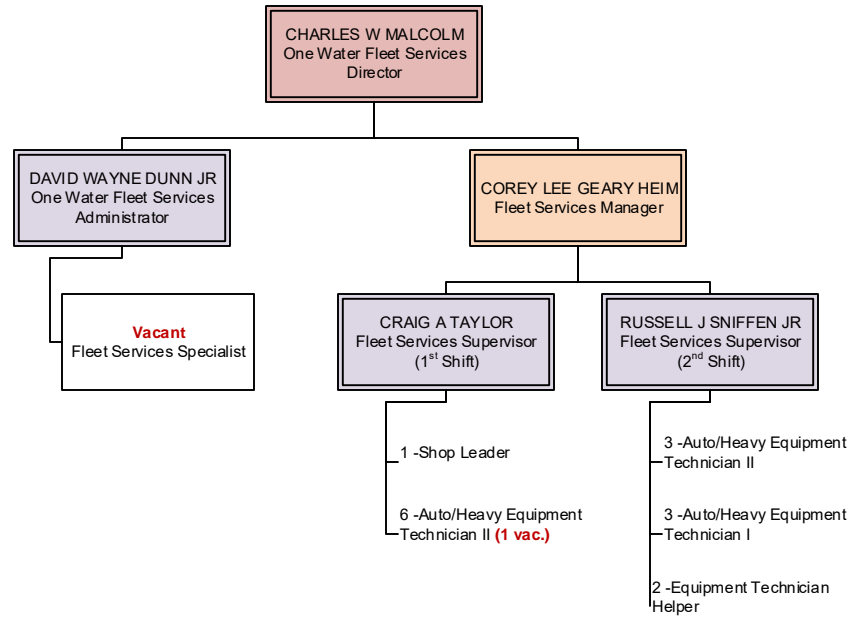


Operations Division (Linear Assets) Wastewater and Drainage (Sanitary)

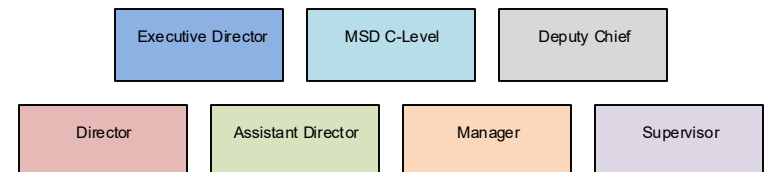
BUDGET STATUS	
Actual	64
Vacant	17
Authorized	81
█ Exempt	11
— Non-Exempt	1
Unit	69
Total	81



Operations Division Fleet Services



BUDGET STATUS	
Actual	19
Vacant	<u>2</u>
Authorized	21
█ Exempt	5
— Non-Exempt	1
Unit	<u>15</u>
Total	21





APPENDIX 2.1.1 MASS MEDIA INTEGRATION

July 2022

October 2022

MAKING A DIFFERENCE IN OUR WATERWAYS

When it rains or snows, water makes its way into our drainage systems that flow to our streams and the Ohio River.

Along the way, stormwater accumulates soil and pollutants —like lawn chemicals, pet waste and oil—which can harm our waterways.

To help our waterways be safe and clean, MSD monitors for pollutants and removes illegal non-stormwater discharges.

It's a big task that covers most of Jefferson County.*

For more information visit LouisvilleMSD.org/WaterQuality



Customer Relations
502.540.6000

CustomerRelations@LouisvilleMSD.org



* Anchorage, Jeffersontown, St. Matthew and Shively provide residents and businesses in those municipalities with stormwater/drainage services.

Pope.Lick

MAKING A DIFFERENCE IN OUR WATERWAYS

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* Anchorage, Jeffersontown, St. Matthew and Shively provide residents and businesses in those municipalities with stormwater/drainage services.

February 2023



**MAKING A
DIFFERENCE
IN OUR
WATERWAYS**

When it rains or snows, water makes its way into our drainage systems that flow to our streams and the Ohio River.

Along the way, stormwater accumulates soil and pollutants —like lawn chemicals, road salt, pet waste and oil—which can harm our waterways.

To help our waterways be safe and clean, please limit the use of salt and lawn chemicals and dispose of pet waste in the trash.

For more information visit LouisvilleMSD.org/WaterQuality



Customer Relations
502.540.6000
CustomerRelations@LouisvilleMSD.org



* Anchorage, Jeffersonton, St. Matthew and Shively provide residents and businesses in those municipalities with stormwater/drainage services.

Floyd Fork

A MESSAGE TO THE COMMUNITY

August/September 2022



MSD remains solid and steadfast in delivering top-quality wastewater, stormwater and flood protection services to our customers.



Tony Perrott
MSD Executive
Director

However, we must balance repairing aging infrastructure—in some cases built more than 100 years ago—with the mandated requirements of our Consent Decree with the U.S. Environmental Protection Agency to significantly reduce sewer overflows during periods of heavy rains.

We are leveraging grants and innovative loans for the critical work of replacing outdated biosolids processing at our Morris Forman Water Quality Treatment Center and updating and expanding our Paddy's Run Flood Pumping Station, both of which were built in the 1950s. Additionally, frequent sewer cave-ins and failures are examples of the challenges MSD faces across the service area with outdated infrastructure that is long past its useful life.

Much-needed upgrades and refurbishments across our service area will move forward under MSD's Board-approved Fiscal Year 2023 rate proposal and budget plan. MSD will invest more than \$195 million to support 190 projects while tripling EWRAP—Emergency Wastewater Assistance Program, to help those experiencing financial hardships.

The fiscal year 2023 rate proposal adds \$3.35 to the average monthly residential bill for Jefferson County customers beginning August 1, 2022.



Need help paying your bill?

Drops of Kindness is an effort by MSD and Louisville Water to help customers with unpaid bills. Whether you are a resident or a business owner, Drops of Kindness offers a customizable approach to managing through difficult times and reducing future financial obligations.

Emergency Wastewater Rate Assistance Program

The Emergency Wastewater Rate Assistance Program discount increases to 30 percent, up from the current 10 percent, effective October 1, 2022. Households qualify for the discount if their total income is 150 percent or less of the official poverty guideline. The discount is available in all MSD service areas.

Senior Citizen Discount

Seniors with household incomes of \$35,000 or less qualify for the discount.

More information about the rate assistance programs, visit:
LouisvilleMSD.org/PayMyBill
or call 502.540.6000

MSD Rates on August 1, 2022

The MSD Board approved a final rate resolution for MSD Jefferson County customers effective August 1, 2022.* The average monthly residential wastewater bill—based on 4,000 gallons per month of water usage—increases \$2.76. The monthly stormwater/drainage service charge increases 59 cents.

* Rate increase does not apply to former Bullitt County Sanitation District or Oldham County Environmental Authority customers, or Glen Oaks and Moser Farms residents.

Average Monthly Residential Customer Bill

Based on 4,000 gallons of monthly usage

	08/01/21	08/01/22
Wastewater	\$ 54.99	\$ 57.75
Stormwater/Drainage	\$ 11.88	\$ 12.47
Total	\$ 66.87	\$ 70.22

Sample Monthly Residential Customer Bill

Based on 4,000 gallons of monthly usage

Wastewater	
Monthly Service Charge	\$ 19.85
Monthly Volume Charge (\$5.42 per 1,000 gallons)	\$ 21.68
Consent Decree Surcharge	\$ 16.22
Wastewater Charges	\$ 57.75
Stormwater/Drainage Service Charge	\$ 12.47
Total Wastewater and Drainage Charges	\$ 70.22

As of August 1, 2022

Commercial and Industrial Customers

Wastewater, drainage volume, and service charges, as well as optional and quality charge rates, increase 5-percent beginning August 1, 2022, for MSD Commercial and Industrial customers. For a complete schedule of Rates, Rentals and Charges visit LouisvilleMSD.org/Rates.

For an explanation of the charges on your bill, visit:
LouisvilleMSD.org/PayMyBill



OUR VISION

The innovative, regional utility for safe, clean waterways.

CUSTOMER RELATIONS

502.540.6000 · CustomerRelations@LouisvilleMSD.org



Photo: Pope Lick

A FRIENDLY PUBLIC SERVICE ANNOUNCEMENT BROUGHT TO YOU BY



MSD BOWL PATROL

THE THREE P's OF WHAT'S OK TO FLUSH:



EVERYTHING ELSE GOES IN THE TRASH CAN!

clAIRity PROGRAM

Clearing the Air: The MSD clAIRity Program

The MSD clAIRity Program is our proactive odor control initiative designed to reduce sewer and wastewater treatment odors now and into the future.

Smell something... say something!

Let's face it: Sewer and wastewater treatment is an "odorous" endeavor.

If you experience sewer odors, call **502.540.6000** or fill out our Report an Odor form at **LouisvilleMSD.org/odor**.

The sooner we hear from you, the better the chance of identifying the source and addressing the problem.



Stopping the rain is impossible



Protect yourself with flood insurance

MSD has earned Louisville Metro a Class 3 status—allowing our residents to automatically receive a 35 percent discount on flood insurance premiums through the National Flood Insurance Program's Community Rating System.

To find out if a property is located in a floodplain, visit: <http://apps.lojic.org/msdflooddetermination/>

You can make a difference in the health of our streams.

Clean up after your pet

Dispose of pet waste in the trash so that it isn't washed into our streams. Dogs in Jefferson County produce four dump-truck loads of waste every day.



OUR VISION
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CUSTOMER RELATIONS
502.540.6000
CustomerRelations@LouisvilleMSD.org



Are you in or are you out? Know Your Home's Flood Risk

To check your property's floodplain status, please visit: apps.lojic.org/msdflooddetermination/. If you would like to view flood mapping, visit www.lojic.org/lojic-online, enter your address in the search box, select Layers on the right side and check the Floodplain tab to turn on Floodplain layers.

Most homeowner and renter insurance policies do not cover flood damage. Anywhere it rains, it can flood. MSD recommends homeowners consider buying flood insurance. Check with your insurance agent to determine the right amount of flood coverage for your property. Note that your lender still retains the right to require flood insurance.

Anyone in Louisville Metro can purchase flood insurance. Without flood insurance, owners must pay to repair flood damages using loans and minimal federal assistance. Don't delay. NFIP flood insurance policies can take up to 30 days to go into effect. Just a few inches of water can cause thousands of dollars in damage.

The Louisville Metro Floodplain Ordinance states that homes in the floodplain that experience substantial damage (damages costing more than 50% of the structure's market value to repair in a one year rolling period) will be required to come into compliance with the Louisville Metro floodplain ordinance when repairing damage (i.e. the first floor and mechanicals are elevated to the freeboard requirements defined by the current floodplain ordinance). Substantially damaged homes covered by flood insurance may be eligible for Increased Cost of Compliance coverage, which is up to \$30,000, to help with measures to reduce flood risk.

You can protect yourself and your home by contacting your insurance agent, visiting www.floodsmart.gov or calling **877.336.2627** to learn more about flood insurance. MSD Floodplain staff can answer your questions about floodplain mapping. You may contact them at **502.540.6000** or floodpermits@louisvillemsd.org.

Basement flooding

If you have experienced a rain-related sewer backup through a basement-plumbing fixture—floor drain, shower, toilet or sink—or live in an area of documented wet-weather backups, MSD's **Plumbing Modification Program** can help. To date, backflow prevention devices have helped more than 17,200 customers protect their basements from sewer backups.

If approved, MSD will pay a licensed plumbing contractor to install the backflow prevention devices to your plumbing layout. Go to LouisvilleMSD.org to learn more or call **502.540.6000**.

FLOODPLAIN NEWS

November 2022



OUR VISION

The innovative regional utility for safe, clean waterways



**An elevation certificate
may save you money
on flood insurance.**

(See back page)

Safety tips during flooding

- Move vehicles, furniture, and valuables to higher ground if possible.
- Do not drive through flooded areas.
Turn around, don't drown!
- Stay out of the floodwater, inside and outside of your home. Six inches of flowing water can knock a person down. Water can also conduct electric current, which can be fatal.

Drainage problems

To solve a small drainage problem, look to see if removing obstructions or grading your yard can resolve the drainage issue. Also, check to see if a clogged ditch could be the source of any flooding problems. Clogged ditches, creeks, and channels can cause water to overflow or divert into yards and onto roads.

Never dump grass clippings or yard waste into a stream or ditch. Dumping anything in our streams is illegal and can cause flooding or water quality problems. To report obstructions or illegal dumping, contact MSD 24/7 at **502.540.6000**.

Floodplain regulations

Properties in a flood hazard area have special requirements regarding land use and construction. Regulations require a floodplain permit before you start any repair, renovation, development, improvement, or construction. MSD staff will explain the floodplain requirements to you or you can visit MSD's website for more information. If you see illegal construction in the floodplain, contact MSD immediately.

For more information about floodplain permitting, visit LouisvilleMSD.org/floodplain.



If you see a leaking sewer pipe or a clogged storm drain/catch basin, please report it by calling **502.540.6000**.

Help keep our streams clean

- **Decrease your use of fertilizer and pesticides.** Stormwater runoff containing these chemicals can enter our waterways and cause increased algae, which depletes oxygen in the water.
- **Put pet waste in the trash.** When left on the ground, it too can cause depleted oxygen in streams.
- **Plant a tree or rain garden**—they are great filters for stormwater runoff.
- **Dechlorinate your swimming pool water before draining it.**

Elevation certificates

Having an elevation certificate for your home can save you money on flood insurance if your property is in the Special Flood Hazard Area. MSD has elevation certificates available for some properties in Louisville Metro. To check and see if an elevation certificate is on file, go to our Floodplain Website: LouisvilleMSD.org/floodplain. Under the Insurance tab is a list of all the elevation certificates on file.

If the property is on the list, we can send you a copy.

If a property is not on the list, a licensed surveyor must be hired to complete the elevation certificate. If you have an elevation certificate completed for your home, please send us a copy at floodplainpermits@LouisvilleMSD.org so that we can add it to the database.

Know when to evacuate

The Ohio River rises relatively gradually, giving several days warning before reaching flood stage. However, as we know, heavy rainstorms can cause local flooding in less than an hour. Flood watches and warnings are broadcast on NOAA weather radios, and television and local radio stations. When warning sirens are heard, tune a battery-operated radio to a local radio station and listen for weather reports and possible evacuation orders. In order to receive emergency warnings on your phone, sign up for LensALERT, Louisville's local emergency notification system. For this free service, visit smart911.com.

About MSD

Learn more about our Floodplain Program and other ways MSD is helping protect our community and its waterways.

LouisvilleMSD.org/floodplain.



OUR VISION

The innovative regional utility for safe, clean waterways

24/7/365

502.587.0603 · CustomerRelations@LouisvilleMSD.org





August 2022

REGULARLY CHECK DRAINS

It is the responsibility of the property owner to keep driveway culverts open and free-flowing, and to replace collapsed driveway drainage culverts. Summer storms can cause twigs and other debris to collect quickly in natural and man-made channels, and clog pipes and culverts. Check and clear them regularly to avoid water backups and flooding problems. When channels are properly cleaned and maintained, the water keeps moving and prevents flooding of Anchorage roads and property.



September 2022

BEAUTIFUL DRAINAGE SOLUTION

Rain gardens reduce storm water runoff, showcase plants and flowers, and provide wildlife habitat. They capture rainwater then slowly release it into the soil. Drop by City Hall and pick up a free MSD rain garden handbook or visit MSD's website at <https://louisvillemsd.org/> and search "rain gardens" to learn the six simple steps for creating and maintaining a rain garden.



POOL DRAINING SAFETY

Be kind to the environment and neighbors when you drain your pool. Warm pool water full of chemicals is toxic and will kill aquatic life and plants if drained to a stream or drainage channel. Protect our watershed! Follow these simple steps to avoid flooding, water back-up, or harming the environment when you drain your pool this fall:

- Test pool water and allow chlorine to drop below 0.1 ppm
- Ensure the pH level is between 6 and 8 (normal range)
- Do not drain your pool during or up to 48 hours after a rain.
- Slowly drain the pool to a grassy area on your property, and allow water to soak into the ground. It should not flow directly into a street, stream, catch basin, or your neighbor's property.

For more information, visit <https://louisvillemsd.org/sites/default/files/inline-files/MSD%20Media%20Release--Safe%20Pool%20Closings.pdf> or call MSD Customer Relations at (502) 540-6000 with your pool draining questions.



January 2023

WINTER ADVISORY

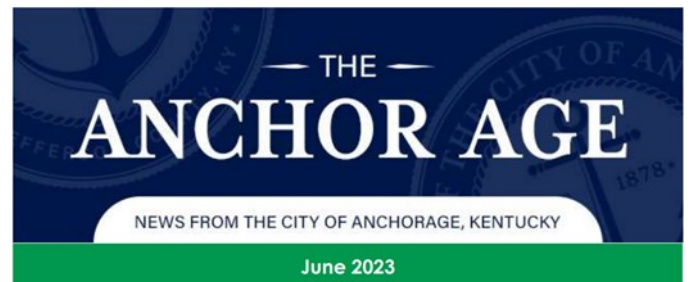
A blanket of snow covering the ground and trees can be a beautiful scene in the wintertime. Winter weather can also bring ice and the danger of slipping or falling. Salt and ice-melting products can be used to clear sidewalks, driveways, and roads to improve safety. But did you know that they are considered water pollutants? Excessive use of salts and other products can harm ecosystems and potentially impact safe drinking water. Be sure to read and follow the directions for safe use and disposal.



February 2023

FREE WATER!

Rain barrels are a great way to collect and store rainwater runoff for later use. Rain barrels come in all shapes and sizes and are easy to install and maintain. They can cut costs on water bills, keep water away from foundations, prevent flooding and soil erosion, and conserve water during droughts. A free MSD rain barrel brochure is available for pick up at City Hall.



Be Kind - Pick Up After Your Pet

Please pick up after your pet and dispose of their waste in the trash so that it isn't washed into streams or storm drains or left where other people and pets encounter it. Bags and trash receptacles are conveniently located in the park in front of City Hall, Wagner Park, and the island at Glenbrook Road/Woodland Road.

(Facebook, Twitter/X, Instagram, YouTube)



Louisville MSD
1.8K likes • 2.2K followers



LouisvilleMSD
@louisvillemSD

For billing, hours are 7 a.m. to 7 p.m. For emergency calls, MSD is 24/7/365 at 502.540.6000 or CustomerRelations@louisvillemSD.org. RTs aren't endorsement.

📍 Louisville, KY louisvillemSD.org 📅 Joined May 2015

708 Following 2,204 Followers



[louisville.msD](#) Follow Message

343 posts 770 followers 54 following


Louisville MSD

m.signupgenius.com/%231/showSignUp/10C0E4f



Louisville MSD
@LouisvilleMSD 312 subscribers 201 videos


For more information about Louisville MSD and facebook.com/louisvillemSD and 3 more links

 **Louisville MSD** ...
Posted by Sprout Social
Jul 27, 2022 · 🌐



Want to be in your Rain Garden era?


There are many benefits to starting a rain garden such as flood prevention, filtering runoff pollution, and reducing landscaping and lawn maintenance, but where do you start?

Get some tips from the MSD team as they helped plant a rain garden in Portland.



[See insights and ads](#) [Boost post](#)

  6 2 shares 99 views

 **Louisville MSD**
Posted by Sprout Social
Jul 21, 2022 · 🌐




IDENTIFY THE INVASIVE PLANT!


Plants play a major role in the quality of our waterways. Native plants help to retain and infiltrate water while invasive plants are capable of harming other native plants, animals, and even people. That is why it is important to know what is native, and what is invasive.

So, which one is the invasive plant?

Honeysuckle VS Poison Ivy

1 comment


 Like  Comment  Share



Louisville MSD
August 8, 2022 · 🌐

Thinking about starting a rain garden? Here are 3 #LouisvilleMSD tips to get you #growing:

- 🌱 Plant in an area free of heavy soils with no filtration
- 🌱 Adding mulch keeps soil moist and adds nutrients... See more



5 🌟 1 ➦

👍 Like 💬 Comment

Louisville MSD
August 9, 2022 · 🌐

Are you looking for a way to get your students more involved in water conservation, or just an individual looking to start a rain garden?
Visit here to apply: <https://bit.ly/nativeplantsrock>

Are you interested in starting a Native Plant Garden or expanding an existing one?

Apply Here: 

NEW! <https://bit.ly/nativeplantsrock>

Native Landscaping Cost-Share Program

APPLICATION DEADLINE: SEPTEMBER 15th

Schools | Community Centers | Community Gardens
Individuals | Non-Profits | Anyone can apply!



This program offers reimbursement cost-share funding at 80% up to \$100!

Landscape design assistance available for approved applications.



Jefferson County
Soil and Water
Conservation District

Cost-share funding will only cover purchases of native plants and seeds for gardens, rain gardens and containers when in-ground access is not available.

4 🌟 1 🗨️ 1 ➦


Louisville MSD ***
Posted by Sprout Social
Aug 22, 2022 · 🌐

IDENTIFY THE INVASIVE PLANT! 🌿

It is important to know the difference between native and invasive plants to keep your gardens, animals and the ones you love safe!

Do you know which of these is the invasive plant? Lady Fern or English Ivy?

Tell us in the comments!



[See insights and ads](#) [Boost post](#)

3 comments

Louisville MSD
September 17, 2022 · 🌐

Responsible Dog Owner 🐾 Scooping Poo

We know you're a responsible dog owner and always [#ScoopThePoo](#) to reduce contaminating waterways, so help us celebrate [#ResponsibleDogOwnerDay](#) by sharing a pic of your pup in the comments!



👍 2

👍 Like 💬 Comment



Louisville MSD

September 23, 2022 · 🌐

When raking your leaves, make sure you are disposing of them properly, and not in our waterways.

Where can you dispose of your fall leaves?

Composting is a great way to dispose of leaves and yard debris, and [Louisville Metro Public Works](#) offers a free leaf-drop service seasonally! ... See more



👍 6

👉 2

👍 Like

💬 Comment



Louisville MSD

September 28, 2022 · 🌐

As much as we love the changing leaves in the fall, they can prevent proper drainage of our waterways.

Keep your sewer grates and catch basins free of fall leaves this season by composting or leaf-drop services.

Want more information on public works leaf drops? Visit here for more: <https://bit.ly/3U4Hx5t>



👍 2

👍 Like

💬 Comment



Louisville MSD
October 2, 2022 · 🌐

Get involved during #WorldHabitatAwarenessMonth by getting in on our Beargrass Creek Cleanup!

Join us Saturday, October 15, for our Mini Ohio River Sweep Event at Karen Lynch Park from 8am-11am.

Together, we can achieve #safecleanwaterways!

Register here: <https://bit.ly/3R7vpyM>

Volunteer and make a difference! Beargrass Creek Cleanup

Saturday, October 15 · 8 AM to 11 AM
FREE EVENT! Supplies provided.



Mini Ohio River Sweep Event
Saturday, October 15 · 8 a.m. - 11 a.m.
Karen Lynch Park, 1709 Story Avenue

Join others as we work together to achieve safe, clean waterways for our community and receive a **FREE t-shirt!**

Gloves and trash bags will be provided.



To register, visit <https://bit.ly/3R7vpyM> or scan the QR code.

Questions?
Contact Sarah.Duker@LouisvilleMSD.org

To learn more about water quality, visit LouisvilleMSD.org/WaterQuality



Together, we can achieve safe, clean waterways

Customer Relations 502.540.6000 · CustomerRelations@LouisvilleMSD.org

4

1



Louisville MSD
October 25, 2022 · 🌐

Don't let the changing leaves "fall" off your radar.

Learn to keep your sewer grates and catch basins free of fall leaves this season with these helpful tricks for easier leaf removal:

- 🌟 Move backward as you rake to avoid spreading more leaves
- 🌟 Using a tarp to collect leaves makes an easier cleanup
- 🌟 Compost your leaves, they have great nutrients for your garden next year!



7

2

Like

Comment

 **Louisville MSD**
October 31, 2022 · 🌐

Happy Halloween, Louisville! As you're getting all dressed up, remember some simple tricks (and treats) when out and about this evening!


- 🐕 Dogs love trick-or-treating too! Be sure to grab some extra doggy bags for the trip
- 🥤 Bring water to stay hydrated
- 👮 Be safe, and have fun!

[#safecleanwaterways](#) [#scoopthepoo](#) [#halloween](#)



👍 4

👍 Like 💬 Comment

 **Louisville MSD**
November 7, 2022 · 🌐

Us when the leaves change: 🍂
Us when we see leaves clogging catch basins: 🤢

Keep your sewer grates and catch basins clear of leaves this fall by:

- 🌿 using chopped leaves as mulch
- 🗑️ tossing them in a compost bin
- 🌱 plowing leaves into your garden's soil for more nutrients

Have another way to dispose of fall leaves? Let us know in the comments! [#safecleanwaterways](#)



👍 1

👍 Like 💬 Comment

 **Louisville MSD**
December 16, 2022 · 🌐

#DYK that rainwater and snowmelt can overwhelm sewer systems and cause overflows into waterways?

Be sure to minimize contact with waterways and stream buffers during storms and up to 48 hours after to mitigate the disruption of wildlife and to keep you safe.

Learn more about the importance of floodplains and stream buffers here: <https://bit.ly/3YkQ1Ym>

#safecleanwaterways



👍 1

👍 Like 💬 Comment

 **Louisville MSD**
January 15 · 🌐

#DYK stream buffer zones protect natural areas by filtering runoff and reducing erosion?

If you live along a stream, keep your buffer zone mower free to help stabilize stream banks and provide safe habitats for wildlife!

You can learn more about preserving Kentucky's streams here: <https://bit.ly/3XczunW>



👍 3

Posts About Videos More ▾

Posted by Hootsuite
Feb 13 · 🌐

#DYK dogs in Jefferson County produce FOUR dump-truck loads of waste every day?

Pet waste left behind on sidewalks, parks and yards finds its way to our local waterways when it rains and increases bacteria and nitrogen levels in the water.

Do your part to **#ScoopThePoo** and dispose of your pet's waste in the trash.

[#safecleanwaterways](#)



See insights and ads [Boost post](#)

👍 3 1 share

Posts About Videos More ▾

See insights and ads [Boost post](#)


👍 4 1 share 62 views

👍 Like 💬 Comment ➦ Share

Louisville MSD ...

Posted by Hootsuite
Mar 13 · 🌐


Get ahead of the season and start planning for your spring rain garden!
... See more



See insights and ads [Boost post](#)

👍 3

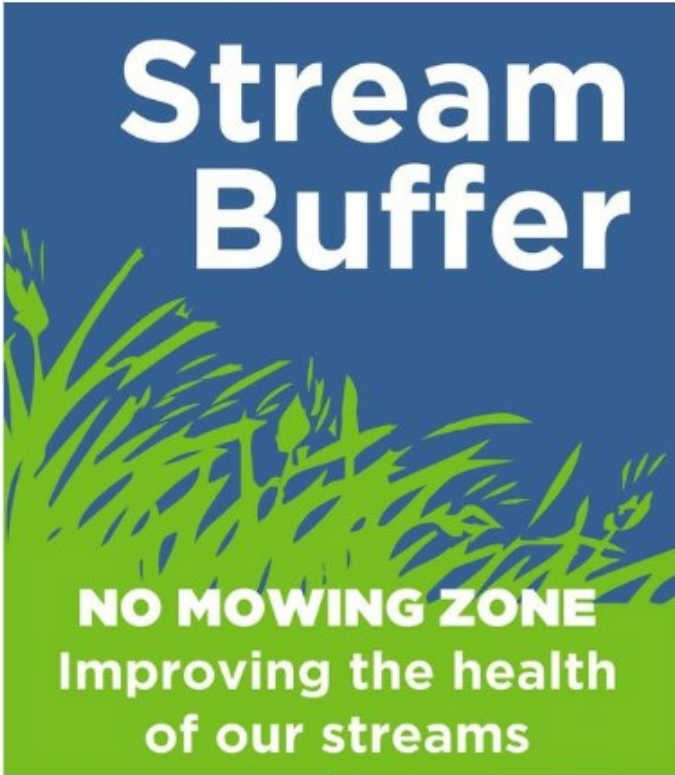
👍 Like 💬 Comment ➦ Share

 **Louisville MSD**
March 15 · 🌐

#DYK stream buffer zones protect natural areas by filtering runoff and reducing erosion?

If you live along a stream, keep your buffer zone mower free to help stabilize stream banks and provide safe habitats for wildlife!


You can learn more about preserving Kentucky's streams here: <http://ow.ly/OGSX50N40mq>



Stream Buffer

NO MOWING ZONE
Improving the health of our streams

502.587.0603
louisvilleMSD.org



msd
Safe, clean waterways

👍 1

Posts About Videos More ▾

 **Louisville MSD** ...
Posted by Hootsuite
Apr 5 · 🌐

#DYK that rainwater can overwhelm sewer systems and cause overflows into waterways?

Be sure to minimize contact with waterways and stream buffers during storms and up to 48 hours after to keep you safe.

Learn more about the importance of floodplains and stream buffers here: <https://bit.ly/3YkQ1Ym>

#safecleanwaterways



WARNING ADVERTENCIA
DURING AND AFTER RAIN EVENTS
This notice is posted in areas with high runoff concentrations and is subject to change without notice. A sign posted with caution. Due to increased runoff, no mowing, no dumping, no parking. For more information, call the number on the back of the sign.

DURANTE Y DESPUES DE LLUVIA
Este aviso se coloca en áreas con altas concentraciones de escorrentía y está sujeto a cambios sin previo aviso. Debido a la lluvia, no se permite cortar césped, no se permite tirar basura y no se permite estacionarse. Para más información, llame al número que aparece en la parte posterior de la señal.

SONSINA | 502.587.0603 | 

See insights and ads Boost post

👍 6 1 share

👍 Like Comment Share

Louisville MSD Posted by Hootsuite Apr 13 · 🌐

A rain garden is a beautiful way to ensure [#safecleanwaterways](#) by capturing and infiltrating rainwater during heavy rain events.

Learn more about rain gardens and maintenance below, and check out our website for additional info: <http://ow.ly/Wmrt50NxnHP>



youtube.com
Louisville MSD Rain Garden FINAL

[See insights and ads](#) [Boost post](#)

 11

Posts **About** **Videos** **More** ▾

Louisville MSD Posted by Hootsuite Apr 20 · 🌐

Come celebrate [#EarthDay](#) this Saturday, April 22, cleaning up Beargrass Creek!

... See more



[See insights and ads](#) [Boost post](#)

 10

Louisville MSD
Posted by Lou Msd
Apr 22 · 🌐

Celebrating Earth Day with a Beargrass Creek cleanup. Every little bit helps! [Beargrass Creek Alliance Louisville Olmsted Parks Conserv...](#) See more



See insights and ads Boost post

👍❤️ 7

Louisville MSD
Posted by Hootsuite
Apr 22 · 🌐

Posts About Videos More ▾

Make #EarthDay a day not just to do something for the environment but to make positive change year-round! 🌱🌻

When you compost grass clippings and use less yard fertilizer, you cut down potential harm to waterways. Learn more: <http://ow.ly/fg4850NxoJZ>

#safecleanwaterways



See insights and ads Boost post

👍 Like 💬 Comment ➦ Share

Posts About Videos More ▾

Posted by Hootsuite
Apr 24 · 🌐

Dogs deserve #safecleanwaterways too!

Picking up after your pup ensures waste doesn't end up in a waterway (or on the bottom of someone's shoe.) 🐾

Be sure to carry doggie bags around and 🦴 treat 🦴 every week like National #ScoopThePoo week!



See insights and ads Boost post

👍 2 3 shares

👍 Like 💬 Comment ➦ Share

Posted by Hootsuite
May 7 · 🌐


Thinking about starting a rain garden? Here are 3 #LouisvilleMSD tips to get you growing:


- 🌱 Plant in an area free of heavy soils with no filtration
- 🌱 Adding mulch keeps soil moist and adds nutrients
- 🌱 Native plants are great pollinators, be sure to include them in your garden!

Check out our native plant guide here for more info:
<http://ow.ly/zOig50OeSTv>


👍 2

👍 Like 💬 Comment ➦ Share



 **Louisville MSD** Posted by Hootsuite
May 10 · 🌐

In April, we helped with downtown beautification and planted 33 trees as part of the Mayor's Give A Day, a monthlong service event that encourages giving back to the community.




[About this website](#)

youtube.com
Mayor's Give A Day 2023

[See insights and ads](#) [Boost post](#)

8


Like Comment Share

 **Louisville MSD**
May 11 · 🌐

During storms, high winds can cause trees, limbs, and other debris to fall or otherwise make their way into catch basins.

The city's 67,000 basins are vital in [#floodprotection](#) and maintaining [#safecleanwaterways](#), so be sure to check that basins in front of your home are clear!

Can't safely clear a catch basin? Give us a call at 502-540-6000.
[#3UtilitiesInOne](#)



1

Posts About Videos More ▾

Posted by Hootsuite
Jun 12 · 🌐

Join us at Shawnee Park for a trash cleanup event this Sunday! It's on Father's Day, so bring your dad and make him work for his gift 😊 [Louisville Olmsted Parks Conservancy](#) [Louisville Parks and Recreation](#) [Origin Park](#)



Volunteer and make a difference!
Ohio River Sweep
Sunday, June 18 - 9 AM to Noon
FREE EVENT! Supplies provided.



Trash Cleanup Event
Sunday, June 18 - 9 AM - 12 PM
Shawnee Park Boat Ramp

Join others as we work together to achieve safe, clean waterways for our community and receive a **FREE t-shirt!** Gloves and trash bags will be provided.



To register, visit <https://grcs.ils/MSDohiosweep> or scan the QR code.



To learn more about water quality, visit LouisvilleMSD.org/WaterQuality

Meet Mandy the Salamander at LouisvilleMSD.org/Mandy



OLMSTED PARKS CONSERVANCY

Together, we can achieve safe, clean waterways

Customer Relations 502.240.8200 - CustomerRelations@LouisvilleMSD.org


See insights and ads Boost post

👍❤️ 5

Posts About Videos More ▾

Louisville MSD
Posted by Hootsuite
Jun 26 · 🌐

Please avoid contact with water in the Ohio River, streams, drainage ditches and standing water for 48 hours after the rain has stopped.



Alert

Recent rainfall has created the risk of sewer overflows in the Louisville Metro area.

Close Got it

See insights and ads Boost post

👍 3



[View insights](#)

[Boost post](#)



7 likes

louisville.msd How can you help Louisville MSD maintain stormwater run off at home?

Stormwater can quickly wash away chemicals and bacteria that build up on pavement into the streams. Having a rain barrel can help you contain stormwater and provide water for your yard.

July 18, 2022



July 18, 2022 at 4:22 PM

7 0 0 0

Overview ⓘ

Accounts reached	87
Accounts engaged	8
Profile activity	0

Reach ⓘ

87

Accounts reached

louisville.msd



[View insights](#)

[Boost post](#)



3 likes

louisville.msd Thinking about starting a rain garden? Here are 3 #LouisvilleMSD tips to get you #growing:

- 🌱 Plant in an area free of heavy soils with no filtration
- 🌱 Adding mulch keeps soil moist and adds nutrients
- 🌱 Native plants are great pollinators, be sure to include them in your garden!

August 9, 2022



August 9, 2022 at 9:11 AM

3 0 0 0

Overview ⓘ

Accounts reached	75
Accounts engaged	4
Profile activity	0

Reach ⓘ

75

Accounts reached

Posts



[View insights](#) [Boost post](#)

♥️ 💬 📍 📌

Liked by loumetroTV and 8 others


louisville.msd IDENTIFY THE INVASIVE PLANT! 🌿

It is important to know the difference between native and invasive plants to keep your gardens, animals and the ones you love safe!

Do you know which of these is the invasive plant? Lady Fern or English Ivy?

Tell us in the comments!

August 22, 2022



August 22, 2022 at 9:37 AM

♥️ 9 💬 0 📍 0 📌 0

Overview ⓘ

Accounts reached	79
Accounts engaged	10
Profile activity	1

Reach ⓘ

79

Accounts reached

 louisville.msd ...



[View insights](#) [Boost post](#)


♥️ 💬 📍 📌

5 likes

louisville.msd Responsible Dog Owner 🐾 Scooping Poop

We know you're a responsible dog owner and always [#ScoopThePoo](#) to reduce contaminating waterways, so help us celebrate [#ResponsibleDogOwnerDay](#) by sharing a pic of your pup in the comments!

September 17, 2022



September 17, 2022 at 11:40 AM

♥️ 5 💬 0 📍 0 📌 0


Overview ⓘ


Accounts reached	79
Accounts engaged	5
Profile activity	1

Reach ⓘ





79

Accounts reached





 louisville.ms...



September 28, 2022 at 8:13 AM

 3  0  0  0

[View insights](#) [Boost post](#)

3 likes

louisville.ms As much as we love the changing leaves in the fall, they can prevent proper drainage of our waterways.

Keep your sewer grates and catch basins free of fall leaves this season by composting or leaf-drop services.

Want more information on public works leaf drops? Visit here for more: <https://bit.ly/3U4Hx5t>

September 28, 2022


Overview ⓘ


Accounts reached	80
Accounts engaged	4
Profile activity	2

Reach ⓘ





80

Accounts reached





 louisville.ms



October 20, 2022 at 8:09 AM

 4  0  0  0

[View insights](#) [Boost post](#)

4 likes

louisville.ms Don't let the changing leaves "fall" off your radar.

Learn to keep your sewer grates and catch basins free of fall leaves this season with these helpful tricks for easier leaf removal:

- 🌟 Move backward as you rake to avoid spreading more leaves
- 🌟 Using a tarp to collect leaves makes an easier cleanup
- 🌟 Compost your leaves, they have great nutrients for your garden next year!

October 20, 2022

Overview ⓘ

Accounts reached	88
Accounts engaged	5
Profile activity	0

Reach ⓘ

88

Accounts reached



[View insights](#)

[Boost post](#)



8 likes

louisville.msd Get ahead of the season and start planning for your spring rain garden!

Here are 3 #LouisvilleMSD tips to get you #growing:

- Plant in an area free of heavy soils with no filtration
- Adding mulch keeps soil moist and adds nutrients
- Native plants are great pollinators, be sure to include them in your garden!

March 13

...has been switched to online only.
April 11



[View insights](#)

[Boost post](#)



13 likes

louisville.msd #DYK that rainwater can overwhelm sewer systems and cause overflows into waterways?

Be sure to minimize contact with waterways and stream buffers during storms and up to 48 hours to keep you safe.

Learn more about the importance of floodplains and stream buffers at the link in our bio. #safecleanwaterways

April 8



March 13 at 10:02 AM



Overview ⓘ

Accounts reached	83
Accounts engaged	9
Profile activity	0

Reach ⓘ

83

Accounts reached



April 8 at 8:55 AM




Overview ⓘ


Accounts reached	184
Accounts engaged	14
Profile activity	0

Reach ⓘ

184

Accounts reached

 louisville.msdc ⋮




[View insights](#) [Boost post](#)

♡ 💬 📌 📌

🌐 Liked by kentuckianaaireducation and 11 others

louisville.msdc A rain garden is a beautiful way to ensure #safecleanwaterways by capturing and infiltrating rainwater during heavy rain events... [more](#)

April 17



April 17 at 9:02 AM

♡ 12 💬 0 📌 0 📌 0

Overview ⓘ

Accounts reached	104
Accounts engaged	13
Profile activity	2

Reach ⓘ

104

Accounts reached



1/9

[View insights](#) [Boost post](#)


♡ 💬 📌 📌

🌐 Liked by kentuckianaaireducation and 13 others

louisville.msdc MSD 🌱 trees. Trees help with the uptake of stormwater, which helps with water treatment and quality and reduces how much... [more](#)

louisvillegrows We were so happy and grateful for your partnership! 🌱🌱

May 10



May 10 at 8:14 AM

♡ 14 💬 1 📌 0 📌 0


Overview ⓘ


Accounts reached	109
Accounts engaged	15
Profile activity	1

Reach ⓘ

109






Accounts reached


 louisville.msd ...



1/2

[View insights](#) [Boost post](#)

 Liked by youthbuild_louisville and 4 others

louisville.msd Thinking about starting a rain garden? Here are 3 #LouisvilleMSD tips to get you growing...
[more](#)

May 17



May 17 at 12:25 PM


5


0


0


0

Overview ⓘ

Accounts reached	74
Accounts engaged	6
Profile activity	0

Reach ⓘ

74
Accounts reached



LouisvilleMSD @louisvillemSD · 7/1/22 ...
he's a 9 but he doesn't pick up his dog's poo

#ScoopThePoo



LouisvilleMSD @louisvillemSD · 7/2/22 ...
How can YOU maintain stormwater run off?

Stormwater washes chemicals & bacteria build up from pavement into streams. Planting a rain garden or a rain barrel can filter it before reentering our waterways.

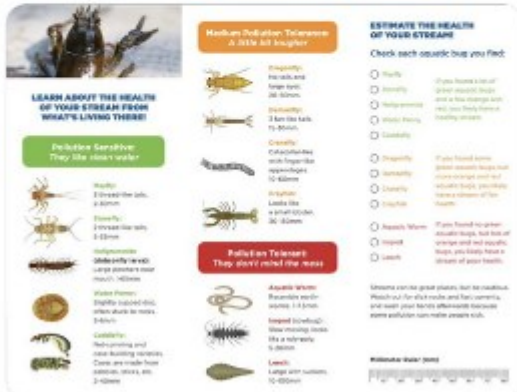
Check out some tips for starting your own:
bit.ly/3ubaOLY



LouisvilleMSD @louisvillemSD · 7/14/22 ...
How clean is your stream?

Runoff pollution from rain can affect the health of our streams. How can you tell if your backyard stream is healthy? Aquatic bugs!

Check out this handy aquatic bug guide from Louisville MSD's Watershed Watch so you can collect your own.



LouisvilleMSD @louisvillemisd · 7/21/22 ...

Want to be in your Rain Garden era?

There are many benefits to starting a rain garden such as flood prevention, filtering runoff pollution, and reducing lawn maintenance, but where do you start?

Get some tips from the MSD team as they helped plant a rain garden in Portland.

Portland Basin Rain Garden

1 2

LouisvilleMSD @louisvillemisd · 7/23/22 ...

How can you help Louisville MSD maintain stormwater run off at home?

Stormwater can quickly wash away chemicals and bacteria that build up on pavement into the streams. Having a rain barrel can help you contain stormwater and provide water for your yard.



2 4

LouisvilleMSD @louisvillemisd · 7/25/22 ...

IDENTIFY THE INVASIVE PLANT! 🗳️

1 1

LouisvilleMSD @louisvillemisd · 7/25/22 ...

Plants play a major role in the quality of our waterways. Native plants help to retain and infiltrate water while invasive plants are capable of harming other native plants, animals, and even people. That is why it is important to know what is native, and what is invasive.

1

LouisvilleMSD @louisvillemisd · 7/25/22 ...

So, which one is the invasive plant?

Honeysuckle	100%
Poison Ivy	0%

9 votes · Final results

LouisvilleMSD @louisvillemisd · 8/8/22 ...

Are you looking for a way to get your students more involved in water conservation, or just an individual looking to start a rain garden?

Visit here to apply: bit.ly/nativeplantsrock

Are you interested in starting a Native Plant Garden or expanding an existing one?

NEW!

Apply Here: <https://bit.ly/nativeplantsrock>

Native Landscaping Cost-Share Program

APPLICATION DEADLINE: SEPTEMBER 15th

Schools | Community Centers | Community Gardens
Individuals | Non-Profits | Anyone can apply!

This program offers reimbursement cost-share funding at 80% up to \$100!

Landscape design assistance available for approved applications.

Jefferson County Soil and Water Conservation District

Cost share funding will only cover purchases of native plants and seeds for gardens, rain gardens and containers when in-ground access is not available.

2 1

LouisvilleMSD @louisvillemsd · 8/6/22 ...
Thinking about starting a rain garden? Here are 3 #LouisvilleMSD tips to get you #growing:

🌱 Plant in an area free of heavy soils with no filtration

🌱 Adding mulch keeps soil moist & adds nutrients

🌱 Native plants are great pollinators, so include them in your garden!



🗨️ 2 🍷 4 📊 📤

LouisvilleMSD @louisvillemsd · 9/28/22 ...
As much as we love the changing leaves in the fall, they can prevent proper drainage of our waterways.

Keep your sewer grates & catch basins free of fall leaves this season by composting or leaf-drop services.

Visit here for more information: bit.ly/3U4Hx5t



🗨️ 🔄 3 📊 📤

LouisvilleMSD @louisvillemsd · 8/18/22 ...
Roses are red.
Violets are blue.
Scoop up your dog's smelly poo 🐕💩

#ScoopThePoo #BadPoetryDay



🗨️ 🔄 6 📊 📤

LouisvilleMSD @louisvillemsd · 10/15/22 ...
There is still time to "sweep" Beargrass Creek, we are at Karen Lynch Park until 11 today!
[#safecleanwaterways](#)



🗨️ 🔄 1 🍷 5 📊 📤



LouisvilleMSD @louisvillemsd · 10/15/22
Thanks @louisville mayor for helping “sweep” Beargrass Creek on this beautiful morning. Still time to join us at Karen Lynch Park #safecleanwaterways



3 replies 7 likes



LouisvilleMSD @louisvillemsd · 12/19/22
#DYK that rainwater and snowmelt can overwhelm sewer systems and cause overflows into waterways?

Learn more about the importance of floodplains and stream buffers: bit.ly/3YkQ1Ym

#safecleanwaterways



1 like 101 views



LouisvilleMSD @louisvillemsd · 10/15/22
Stream cleanup is a family affair. We are at Karen Lynch Park until 11. Plenty of trash for all!@louisville mayor #safecleanwaterways



2 replies 2 retweets 12 likes



LouisvilleMSD @louisvillemsd · 3/13/23
Get ahead of the season & start planning for your rain garden! Here are 3 #LouisvilleMSD tips to get you #growing:

- Plant in an area free of heavy soils w/ no filtration
- Add mulch to keep soil moist & add nutrients
- Include native plants - they are great pollinators!



3 replies 2 likes 222 views

LouisvilleMSD @louisvillemSD · 3/16/23 ...
 If you live along a stream, keep your buffer zone mower free to help stabilize stream banks and provide safe habitats for wildlife!

Learn more about preserving Kentucky's streams here: ow.ly/wmf350N40ur



🗨️ 🔄 ❤️ 3 📊 142 📌

LouisvilleMSD @louisvillemSD · 5/13/23 ...
 During storms, high winds can cause limbs and other debris to fall or otherwise make their way into catch basins.

The city's 67,000 basins are vital in [#floodprotection](#) and maintaining [#safecleanwaterways](#).

See a clogged basin? Give us a call at 502-540-6000

[#3UtilitiesInOne](#)



🗨️ 🔄 ❤️ 📊 88 📌

LouisvilleMSD @louisvillemSD · 3/17/23 ...
 Get your green thumb fix this weekend!

Louisville MSD will be planting trees alongside Brightside and Louisville Grows in the Southend this Saturday, March 18, and VOLUNTEERS ARE NEEDED!

Want to get involved? Get details and sign up: ow.ly/CngF50NjvOE



🗨️ 🔄 1 ❤️ 2 📊 132 📌

LouisvilleMSD @louisvillemSD · 5/30/23 ...
 Mark your calendars 📅

Saturday, June 10, we will be teaming up with Louisville Metro Parks Natural Areas for a Sylvania Park Sweep!

Want to get in on the fun? Join us from 9am-Noon at 6650 Sylvania Road.

[#safecleanwaterways](#)



🗨️ 🔄 1 ❤️ 2 📊 128 📌



LouisvilleMSD @louisvillemsd · 6/12/23

Join us at Shawnee Park for a trash cleanup event this Sunday! It's on Father's Day, so bring your dad and make him work for his gift 🤗 @OlmstedParks502 @loukyparks @OriginParkUS

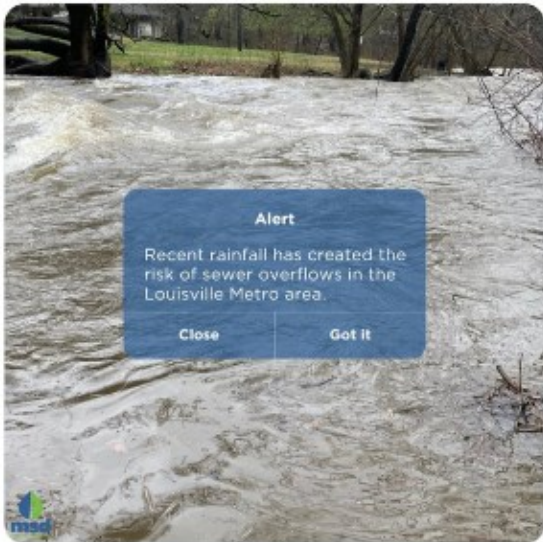


1 4 134



LouisvilleMSD @louisvillemsd · 6/26/23

Please avoid contact with water in the Ohio River, streams, drainage ditches and standing water for 48 hours after the rain has stopped.



2 4 470



Middle Fork Beargrass Creek Urban Watershed Plan

 **Louisville MSD**
313 subscribers [Subscribe](#)

 0  [Share](#) [Download](#) [Clip](#) [Save](#) 

67 views Aug 16, 2022
The future for Middle Fork Beargrass Creek looks a bit brighter with the U.S. Environmental Protection Agency (EPA) approval of a watershed plan to improve water quality in Middle Fork Beargrass Creek and create opportunities for community members to become involved in improvement efforts and solutions.

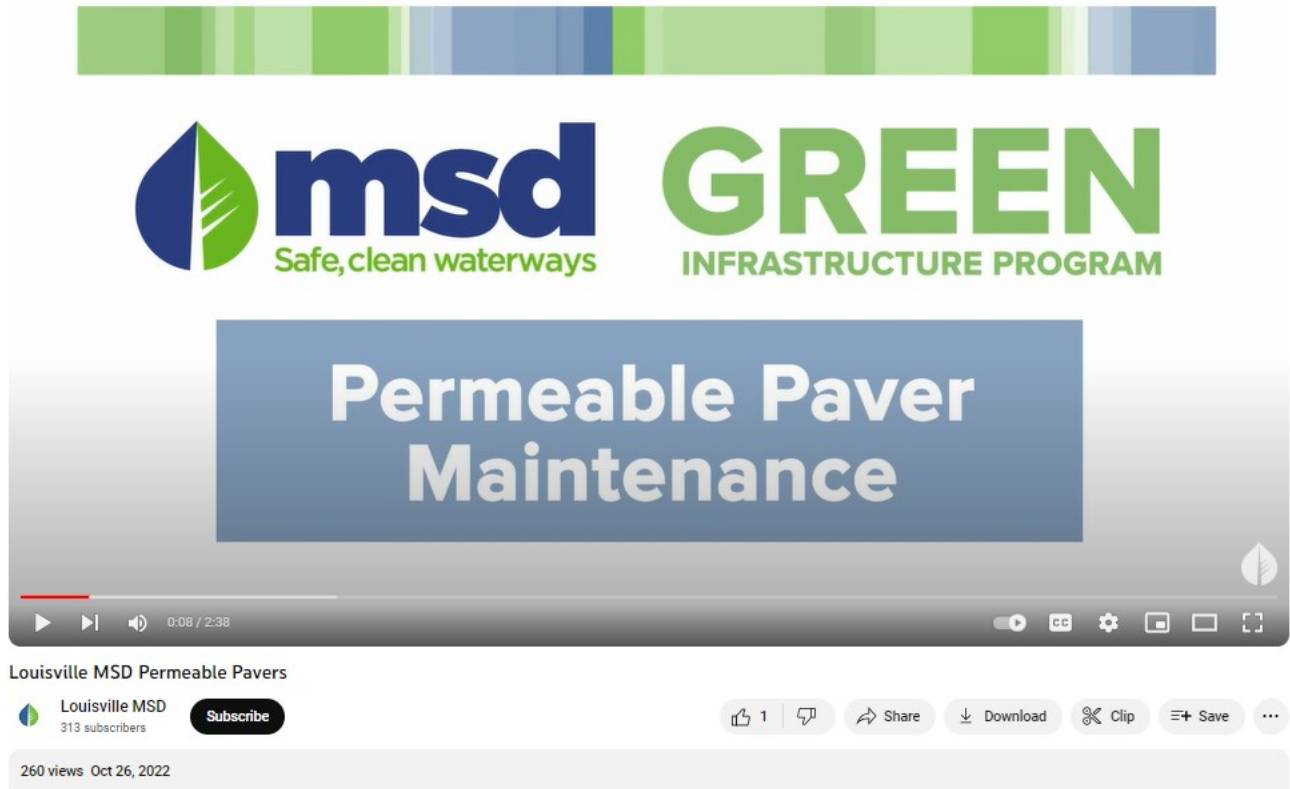


Stormwater Drainage- MSD Core Service

 **Louisville MSD**
313 subscribers [Subscribe](#)

 5  [Share](#) [Download](#) [Clip](#) [Save](#) 

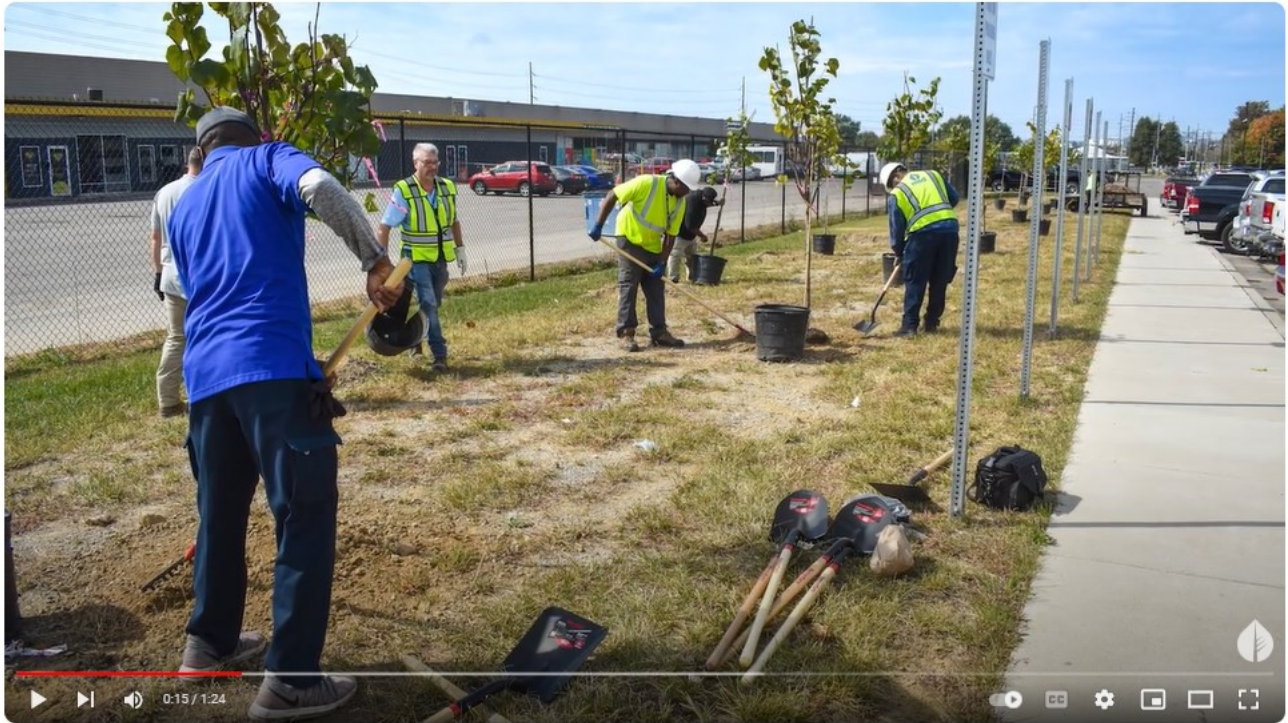
890 views Aug 26, 2022
Learn how MSD helps prevent flooding by getting stormwater out of the city.



The video player features a decorative header with a series of green and blue vertical bars. Below this, the MSD logo (a blue and green leaf) is followed by the text "msd Safe, clean waterways" in blue and green. To the right, the word "GREEN" is written in large green letters, with "INFRASTRUCTURE PROGRAM" in smaller green letters underneath. A large blue box in the center of the video frame contains the white text "Permeable Paver Maintenance". The video player interface includes a progress bar at 0:08 / 2:38, a play button, and various control icons like volume, closed captions, settings, and full screen. Below the video, the channel name "Louisville MSD Permeable Pavers" is shown, along with the "Louisville MSD" channel profile (313 subscribers) and a "Subscribe" button. Interaction buttons for "Like" (1), "Share", "Download", "Clip", and "Save" are visible, along with a view count of "260 views" and a date of "Oct 26, 2022".



The video player shows a blue and yellow striped salamander mascot named Mandy standing on a rocky bank next to a stream. The text "MANDY" is written in large white letters, with "EASTERN TIGER SALAMANDER" in smaller white letters below it. The video player interface includes a progress bar at 0:15 / 2:21, a play button, and various control icons like volume, closed captions, settings, and full screen. Below the video, the channel name "Mandy the Salamander" is shown, along with the "Louisville MSD" channel profile (313 subscribers) and a "Subscribe" button. Interaction buttons for "Like" (1), "Share", "Download", "Clip", and "Save" are visible, along with a view count of "137 views" and a date of "Dec 8, 2022". A description below the video reads: "Meet Mandy! She's an Eastern Tiger Salamander and loves talking to people about MSD's mission of Safe, Clean Waterways!".



Louisville Tree Week 2022

 **Louisville MSD**
313 subscribers [Subscribe](#)

 0  [Share](#) [Download](#) [Save](#) 

24 views Feb 1, 2023
MSD participated in the first celebration of Louisville's Annual Tree Week. Volunteers from MSD's Operations and MS4 divisions planted trees along the parking lot at MSD's Central Maintenance Facility.



Mayor's Give A Day 2023

 **Louisville MSD**
313 subscribers [Subscribe](#)

 0  [Share](#) [Download](#) [Save](#) 

36 views May 9, 2023
MSD Employees helped with downtown beautification and planted trees as part of the Mayor's Give A Day Event-a now month long event encouraging residents to volunteer as a way to give back to the community.



Urban Lifestylez- 'World Water Day and Water Testing' - April 2023

 **Louisville MSD**
313 subscribers

[Subscribe](#)

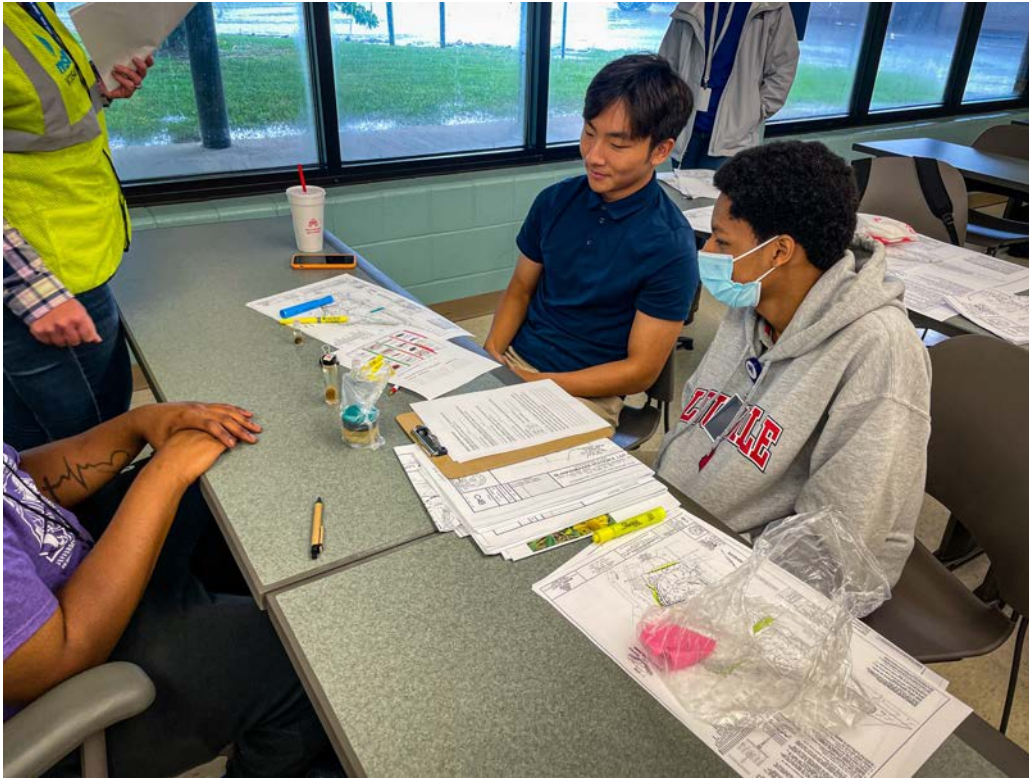
 0  [Share](#) [Download](#) [Clip](#) [Save](#) 

36 views Jul 12, 2023

On World Water Day 2023, Urban Lifestylez learns how MSD monitors and tests the water quality of Jefferson County waterways to help ensure Safe, Clean Waterways.



APPENDIX 2.1.2 DIRECT INTERACTION



Waterfront Park 4th of July Celebration

(July 4, 2022)





**Louisville Free Public Library Summer Reading Program
(July 11 and 22, 2022)**

2.1.2.C

Louisville Free Public Library added a new photo. June 28

Ages 4-9
 Friendly Louisville MSD staff will introduce you to Mandy the Salamander and her nuggets of wisdom on how to keep her home—and our streams—safe and clean. Where does water go after flushing? Where do storm drains go? Small things can cause big problems and small actions from adventurers can make a big difference! Mandy the Salamander books will be provided to participants while supplies last.

Mandy
THE SALAMANDER
 presented by *MSD*
WEDNESDAY, JUNE 29, 11 A.M.

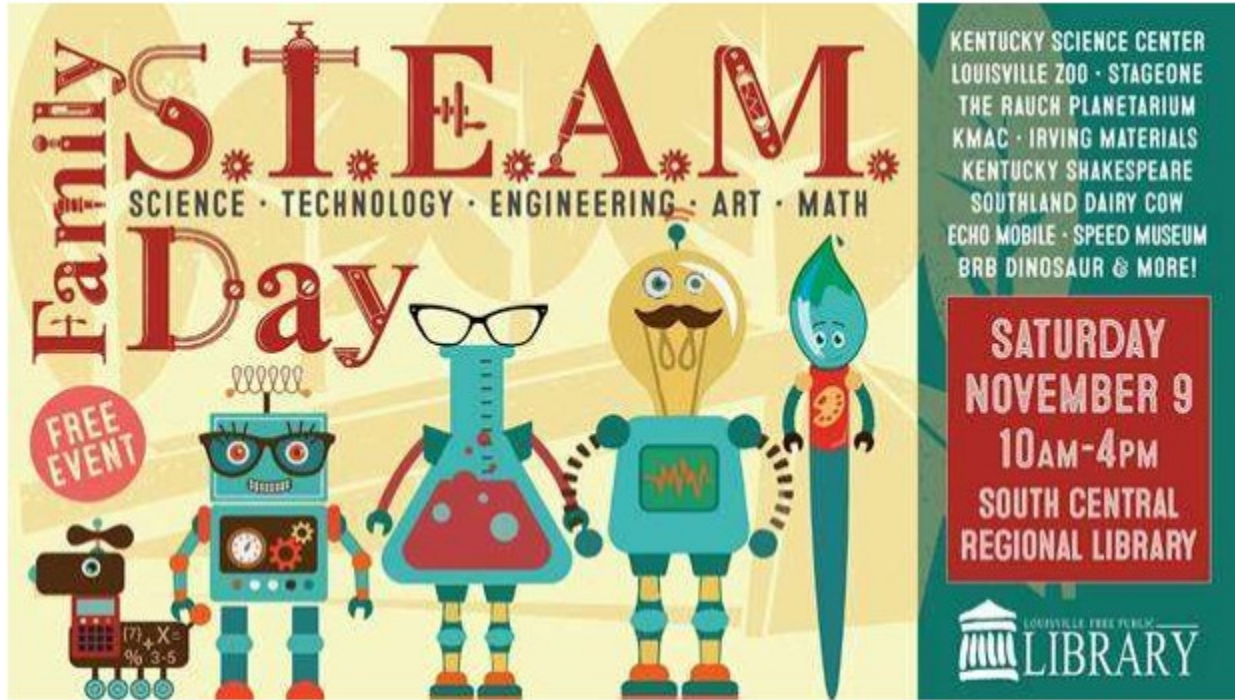
LOUISVILLE FREE PUBLIC LIBRARY
 msd
 Portland Library
 Call (502) 574-1744 for more info.
 3305 Northwestern Parkway

2 1 Comment



Jeffersontown Gas Light Event — Touch a Truck
(September 17, 2022)







APPENDIX 2.1.3 MEETING TOPIC INTEGRATION

MSD Clarity (Odor Control) Meetings

(July 12, September 13, and November 29, 2022 and March 28, 2023)

2.1.3.A

Online public meeting hosted by MSD to discuss odor control program. Slide 30 of the presentation included information to remove leaves and debris from catch basins and to put leaves and sticks in compost or yard waste.



West-end Morris Forman Odor meeting

Louisville MSD
313 subscribers [Subscribe](#)

[1](#) [Share](#) [Download](#) [Clip](#) [...](#)

55 views Streamed live on Mar 28, 2023



Cedar Creek MSD Odor Mitigation Public Meeting

Louisville MSD
313 subscribers [Subscribe](#)

[3](#) [Share](#) [Download](#) [Clip](#) [...](#)

137 views Streamed live on Jul 12, 2022
[Fill out the survey here!](#)



Doing Business with MSD— for construction and other contracts



Louisville MSD's Procurement, Supplier Diversity and Community Benefits offices cordially invite you to learn about upcoming capital construction projects and other contract opportunities for MSD in 2023.

Thursday, January 19, 2023 • 9 AM - Noon
Kentucky Center for African American Heritage
1701 W Muhammad Ali Blvd, Louisville, KY 40203

- Featuring:**
- 2023 Program of Work
 - How to register for bid notifications
 - About MSD's Community Benefits Program
 - About MSD's Supplier Diversity Program
 - Networking opportunities

Because of COVID-19 protocols, attendance is limited.

Register: <https://bit.ly/3O2Cxfk>



Louisville Floodplain Management Plan – Assess the Problem



February 1, 2023



Stream, Wetland & Stream Buffer Benefits - Pollution Reduction

- Retain sediments and excess nutrients, such as nitrogen and phosphorus, and prevent these pollutants from traveling further downstream where they could cause algal blooms or dead zones.







APPENDIX 2.1.4 VOLUNTEER PARTICIPATION AND PROMOTION



Volunteer and make a difference! Beargrass Creek Cleanup



Saturday, October 15 - 8 AM to 11 AM
FREE EVENT! Supplies provided.



Mini Ohio River Sweep Event

Saturday, October 15 - 8 a.m. - 11 a.m.

Karen Lynch Park, 1709 Story Avenue

Join others as we work together to achieve safe, clean waterways for our community and receive a **FREE t-shirt!**

Gloves and trash bags will be provided.



To register, visit <https://bit.ly/3R7vpyM> or scan the QR code.



Questions?

Contact Sarah.Duker@LouisvilleMSD.org

To learn more about water quality, visit LouisvilleMSD.org/WaterQuality

Together, we can achieve safe, clean waterways



Customer Relations 502.540.6000 - CustomerRelations@LouisvilleMSD.org





Southend Beautification Campaign Tree Planting
(March 18, 2023)





**Downtown Louisville
Cleanup**

April 27th, 2023
1:30pm - 4:30pm

Join Louisville
Downtown Partnership
(LDP) to help clean up
Downtown Alley Gallery
doors, put a fresh coat
of paint on our garbage
cans, and litter pick- up,
before Derby.

Contact: **Sharise Horne**
Phone Ext. 6155
sharise.horne@louisvillemisd.org

Join us for an
EARTH DAY
Beargrass Creek Clean Sweep
Saturday, April 22, 2023

Register Here: 

Sponsored by:

-  Metro Council District 9, Andrew Owen; Metro Council District 8, Ben Reno-Weber
-  KWA
-  Beargrass creek alliance
-  One Bright City Brightside
-  msd
-  OLMSTED PARKS CONSERVANCY
-  MOUNTAIN RIVER SYSTEMS
-  CLEAN COLLABORATIVE



Krashey Way Tree Planting

(April 26, 2023)

2.1.4.G



Volunteer and make a difference! Mill Creek Cleanup

Saturday, June 10 · 8 AM to 11 AM
FREE EVENT! Supplies provided.



Trash Cleanup Event

Saturday, June 10 · 8 AM - 11 AM
Sylvania Park, 6650 Sylvania Road

Join others as we work together to achieve safe, clean waterways for our community and receive a **FREE t-shirt!** Gloves and trash bags will be provided.



To register, visit
<https://bit.ly/41mhLwT>
or scan the QR code.

To learn more about water quality, visit
LouisvilleMSD.org/WaterQuality

Meet Mandy the Salamander at
LouisvilleMSD.org/Mandy



METRO PARKS AND RECREATION
Escape. Explore. Connect.

Together, we can achieve safe, clean waterways



Customer Relations 502.540.6000 · CustomerRelations@LouisvilleMSD.org



Volunteer and make a difference! Ohio River Sweep



Sunday, June 18 · 9 AM to Noon
FREE EVENT! Supplies provided.



Trash Cleanup Event Sunday, June 18 · 9 AM - 12 PM Shawnee Park Boat Ramp

Join others as we work together to achieve safe, clean waterways for our community and receive a **FREE t-shirt!** Gloves and trash bags will be provided.



To register, visit
<https://qrco.de/MSDohiosweep>
or scan the QR code.

To learn more about water quality, visit
LouisvilleMSD.org/WaterQuality

Meet Mandy the Salamander at
LouisvilleMSD.org/Mandy



Together, we can achieve safe, clean waterways

Customer Relations 502.540.6000 · CustomerRelations@LouisvilleMSD.org





APPENDIX 2.1.6 MAYOR AND METRO COUNCIL MEETINGS

District 12 Dialogue

(August 23, 2022)

2.1.6.A

Sw Louisville meeting



Wesley Sydnor

✓ Accept

? Tentative

✗ Decline

🕒

📧

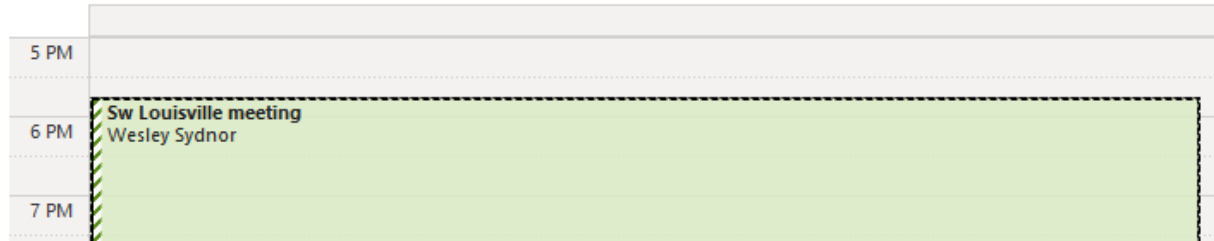
⋮

Required ● Joseph Exely; ● Brian Bingham; ○ Harold Adams; ○ Christina Tomasulo;
○ Kevin Gibson; ● Sheryl Lauder; ● Isabella Altier; ● Brett Clark

Wed 10/18/2023 2:17 PM

📄 Follow up. Completed on Wednesday, October 18, 2023.

🕒 Tuesday, August 23, 2022 5:45 PM-8:15 PM 📍



Good morning. We have scheduled the next quarterly District 12 Dialogue for **Tuesday, August 23 at 6:00 pm at the Southwest Government Center – 7219 Dixie Hwy.** For this event, we are inviting constituents from all of the Southwest Districts (12, 13, 14 and 25). We will have Councilmembers Blackwell, Fox, Fowler and Holton Stewart on hand to provide updates on their districts and answer questions. We appreciate your agency's past participation in these Dialogues, and we hope that you are willing to join us again. We request that you please send a representative to this upcoming meeting. Please let me know if you have any questions or concerns.

Thank you,
Heather

District 19 Meeting

(September 20, 2022)

2.1.6.B

19 district meeting



Wesley Sydnor

✓ Accept

? Tentative

✗ Decline

🕒

📧

⋮

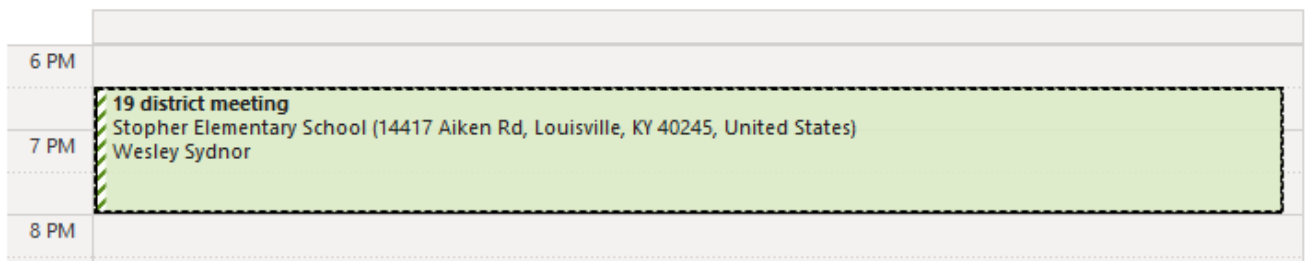
Required ○ Christina Tomasulo; ● Sheryl Lauder; ● Joseph Exely; ○ Harold Adams;
● Isabella Altier; ● Brett Clark

Wed 10/18/2023 2:18 PM

📄 Follow up. Completed on Wednesday, October 18, 2023.

🕒 Tuesday, September 20, 2022 6:30 PM-8:00 PM

📍 Stopher Elementary School (14417 Aiken Rd, Louisville, KY 40245, United States)



Good Afternoon,

I am emailing to invite you to join me and the Councilman for our annual District 19 Public Town Hall meeting on Tuesday, September 20, at 6:30pm at Stopher Elementary School, [14417 Aiken Rd, Louisville, KY 40245, Louisville, KY 40223.](https://www.google.com/maps/place/14417+Aiken+Rd,+Louisville,+KY+40245)

District 5 Meeting



Wesley Sydnor

Accept Tentative Decline

Required Kevin Gibson; Christina Tomasulo; Sheryl Lauder; Joseph Exely;
 Harold Adams; Isabella Altier; Brett Clark

Wed 10/18/2023 2:18 PM

Follow up. Completed on Wednesday, October 18, 2023.

Wednesday, September 21, 2022 6:00 PM-8:00 PM Shawnee Golf Course Club House

	Holy Cross Day of Service
6 PM	District 5 Meeting Shawnee Golf Course Club House Wesley Sydnor
7 PM	

Shawnee Golf Course

Sent from my iPhone

> On Aug 25, 2022, at 11:55 AM, Purvis, Donna L. <Donna.Purvis@louisvilleky.gov> wrote:

>
> Good Morning,
>
> I have scheduled a town hall meeting for September 21st at 6:00 p.m. and would like your presence to answer any questions that the constituent may have relating to your area.

>
> Thanks,
>
> Councilwoman Purvis
>
> Sent from my iPhone

District 12 Dialogue
(November 15, 2022)

2.1.6.D

District 12 Meeting



Wesley Sydnor

Accept Tentative Decline

Required Yvonne Austin-Cornish; Kevin Gibson; Kimberly Reed; Sheryl Lauder;
 Christina Tomasulo; Harold Adams; Joseph Exely; Isabella Altier; **+1 other**

Wed 10/18/2023 2:20 PM

Follow up. Completed on Wednesday, October 18, 2023.

Tuesday, November 15, 2022 6:00 PM-8:00 PM

319 Letter of Intent Due

6 PM **District 12 Meeting**
Wesley Sydnor

7 PM

FYI - We can determine the staffing needs as the event gets closer. Thanks

Good morning, Wes. Councilman Blackwell has scheduled the next quarterly District 12 Dialogue for **Tuesday, November 15, 6:00 pm at the Southwest Government Center**. We appreciate your past participation in these Dialogues, and we hope that you are willing to join us again. We have invited the other Southwest Districts to join us, but unsure at this time if they will. Please let me know if you have any questions or concerns.

District 12 Community Conversation

(February 7, 2023)

2.1.6.E

Community conversation district 12



Wesley Sydnor

Accept Tentative Decline

Required Sheryl Lauder; Kevin Gibson; Harold Adams; Joseph Exely; Isabella Altier;
 Brett Clark

Wed 10/18/2023 2:22 PM

Follow up. Completed on Wednesday, October 18, 2023.

Tuesday, February 7, 2023 6:00 PM-7:00 PM

6 PM **Community conversation district 12**
Wesley Sydnor

7 PM

Good morning, and Happy New Year! Councilman Blackwell has scheduled the next quarterly District 12 Dialogue for **Tuesday, February 7, 6:00 pm at the Southwest Government Center**. We appreciate your past participation in these Dialogues, and we hope that you are willing to join us again. Please let me know if you have any questions or concerns.

Thank you,
Heather

Mayor's Night Out

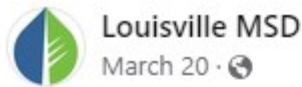
(March 15, 2023)

2.1.6.F

Please join me and our Deputy Mayors for our first **Mayor's Night Out** at the Northeast YMCA (9400 Mill Brook Rd) on Wednesday, March 15th from 5:30–7:30 PM. Over the course of this year, we'll be inviting the public to come engage with Metro leadership – to ask questions, voice concerns, or otherwise discuss issues important to them – in a series of town hall-style gatherings out in the community.

For our first Mayor's Night Out, we've identified the following departments/agencies as key participants:

1. Louisville Water Company
2. MSD
3. LG&E
4. LMPD
5. Human Relations Commission
6. Office of Equity
7. Office for Immigrant Affairs
8. Office for Women
9. OMB
10. Metro Revenue Commission
11. Louisville Fire Department
12. Metro Animal Services
13. OSHN
14. Emergency Services & EMS
15. Public Health & Wellness
16. Resilience and Community Services
17. Public Works
18. Parks & Recreation
19. APCD



We had a great time last week joining dozens of Louisville agencies and city departments answering questions from residents during Mayor's Night Out at the Northeast Y. Looking forward to doing it again on May 18 at the South Louisville Community Center.

<https://www.facebook.com/events/1448119115594928/1448120645594775/?>

[acontext=%7B%22event_action_history%22%3A\[%7B%22surface%22%3A%22external%22%7D%2C%7B%22mechanism%22%3A%22surface%22%2C%22surface%22%3A%22permalink%22%7D\]%2C%2...](#) See more



Fowler Forum (District 14)

(March 21, 2023)

2.1.6.G

Fowler Forum



Wesley Sydnor

Required Harold Adams; Kevin Gibson; Brett Clark; Isabella Altier

Optional Christina Tomasulo; Joseph Exely

✓ Accept

? Tentative

✗ Decline

🕒 Propose New Time



Wed 10/18/2023 2:24 PM

📅 Follow up. Completed on Wednesday, October 18, 2023.

🕒 Tuesday, March 21, 2023 6:00 PM-8:00 PM 📍 Valley High School (10200 Dixie Hwy, Louisville, KY 40272)

6 PM	Fowler Forum Valley High School (10200 Dixie Hwy, Louisville, KY 40272) Wesley Sydnor
7 PM	

From: Thieneman, Cindy <Cindy.Thieneman@louisvilleky.gov>

Sent: Thursday, March 16, 2023 5:13:48 PM

To: Wesley Sydnor (<wesley.sydnor@louisvillemsd.org> <wesley.sydnor@louisvillemsd.org>); Lush, Robert (<Robert.Lush@louisvilleky.gov>); Ashley E. Tinius (<atinius@jeffersonpva.ky.gov>); Colleen Younger (<cyounger@jeffersonpva.ky.gov>); Austin, Jerimy (<Jerimy.Austin@louisvilleky.gov>); Gavilinski, Frank (<Frank.Gavilinski@louisvilleky.gov>); Spaulding, Stephanie (<Stephanie.Spaulding@Louisvilleky.gov>); Jason Meiman (<jmeiman@prpfire.org>); Robinson, Corey (<Corey.Robinson@louisvilleky.gov>); Nolan, Michael (<Mike.Nolan@louisvilleky.gov>); Bodner, Steven (<Steven.Bodner@louisvilleky.gov>); Vince Guenther (<vguentner@louisvillewater.com>)

Cc: Fowler, Cindi (<Cindi.Fowler@louisvilleky.gov>); Stewart, Amy (<amy.stewart@louisvilleky.gov>)

Subject: Fowler Forum - March 21st - 6:00 PM - Valley High School Auditorium

Hello All,

Wanted to make sure you have the Fowler Forum on your calendars. Everyone has confirmed they are coming. However, if you are unable to attend please let me know.

Thank you,



Cindy Thieneman | **Legislative Assistant**

Office of Councilwoman Cindi Fowler

Louisville Metro Council | District 14

CW Hawkins and Purvis Meeting

(April 25, 2023)

2.1.6.H

CW Hawkins and Purvis Meeting



Wesley Sydnor

Required Christina Tomasulo; Kevin Gibson; Harold Adams; Isabella Altier; Brett Clark

✓ Accept

? Tentative

✗ Decline

🕒 Propose New Time



Wed 10/18/2023 2:25 PM

📅 Follow up. Completed on Wednesday, October 18, 2023.

🕒 Tuesday, April 25, 2023 6:00 PM-8:00 PM 📍 3621 Southern Avenue

6 PM	CW Hawkins and Purvis Meeting 3621 Southern Avenue Wesley Sydnor
7 PM	

Good Afternoon,

Councilwoman Hawkins and I are planning a town hall meeting scheduled for Tuesday April 25th at 6:0 p.m. at the Southwick Community Center located at 3621 Southern Ave.

Please plan to attend or send a representative to be available to respond to constituents concerns.

Thanks

Councilwoman Purvis

Sent from my iPhone

MAYOR'S NIGHT OUT

LOUISVILLE

June 27th, 5:30 - 7:30
p.m.

Kentucky Center for
African American
Heritage

1701 W. Muhammad Ali
Blvd., Louisville, KY
40203





APPENDIX 2.1.7 PUBLIC SPEAKERS

Louisville MSD

***MS4 Water Quality
Monitoring Program***

July 13, 2022

*Colette Easter, MSD, MS4 Program Administrator
Lara Freeman, Stantec, Water Practice Lead*

msd
Safe, clean waterways

**Post-Construction Inspection
Field Observations Drive
Louisville MSD Design Manual
Updates**

July 14, 2022

msd
Safe, clean waterways

https://louisvillegrows.org/calendar/sprouting-gardeners-club-2/



Drug List Selection | MSD Organizationa... | MSD Server | MSDDevReview | MSDnet - Home | Web Interface Log In



ABOUT ▾ | EVENTS | GET INVOLVED ▾ | TREES ▾ | GARDENS ▾ | PLANT 5K | THE GIVING GROVE | HEALTHY HOUSE ▾ | CONTACT US



DATE
Aug 04 2022

TIME
10:00 am - 12:00 pm

LOCATION
1641 Portland Ave, Louisville, KY 40203-1459, United States
1641 Portland Ave, Louisville, KY 40203-1459, United States

Sprouting Gardeners Club

Thursdays* – July 14, 21, 28 and August 4
10:00-12:00pm

Suggested age: 8-11 years old (3rd through 5th grade)

Register at tinyurl.com/SproutingGardeners22

SHARE THIS EVENT



https://louisvillegrows.org/calendar/sprouting-gardeners-club-2/

way to pay | Drug List Selection | MSD Organizationa... | MSD Server | MSDDevReview | MSDn



ABOUT ▾ | EVENTS | GET INVOLVED ▾ | TREES ▾ | GARDENS ▾ | PLANT 5K | THE GIVING

Week 3: July 28 – Water Conservation

Thirsty of knowledge? Louisville MSD visits with a special presentation to talk with kids about a very important natural resource — water! Kids will learn why water conservation is a smart idea, how the ecosystem benefits from conserving water, and see a rain garden in action.

In addition, kids will explore Louisville Grows' garden and eat a freshly prepared snack made from the vegetables grown in the garden. We end the morning planting seeds that each child will take home to start their own garden.

CERTIFICATE OF ATTENDANCE

PRESENTED BY
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS
THROUGH
The Louisville Chapter of NSPE-KY
TO

in recognition of your attendance at:

September NSPE-KY Luncheon Meeting

MSD Watershed Planning in Jefferson County

Colette Easter, Louisville MSD

1.0 Contact Hours

Presented on September 21, 2022

at

Broad Run Park, Woodland Pavilion



Joey Bentley, PE
2022-2023 Chapter President



Louisville MSD's Green Infrastructure Program



Lori Rafferty, PE, CFM
Brett Clark

January 2023



St. Margaret & Mary Mandy Meet and Greet (March 21, 2023)





Mill Creek Final Concept Plan Release Presentation

(April 19, 2023)

Mill Creek
Greenway
Concept
Plan
Unveiling!

MILL CREEK
GREENWAY

Public Meeting 4/19
6:00-7:30 pm
@Southwest Library





APPENDIX 2.1.8 NEWS MEDIA - PRESS RELEASES



700 West Liberty Street | Louisville, KY 40203-1911
Phone: 502.540.6000 | LouisvilleMSD.org

MEDIA RELEASE

September 13, 2022

CONTACT:

Sheryl Lauder
Sheryl.Lauder@LouisvilleMSD.org
502.919.0325

Safe Swimming Pool Draining Tips Offered as Summer Closes

MSD encourages residents to drain pools in a safe, environmentally friendly way

DO NOT DRAIN YOUR POOL DURING OR UP TO 48 HOURS AFTER A RAIN EVENT

Homeowners may soon begin to drain their pools as summer days come to a close. Proper draining of swimming pools is essential to the health of our local waterways and good relations with your neighbor.

“Water containing chlorine can kill fish and other aquatic life in creeks and streams,” states MSD Development and Stormwater Services Director Tony Marconi. The average pool has a chlorine concentration that is 10 times higher than some aquatic life can withstand. MSD recommends that a pool sit for at least 10 days after chemical treatment before draining any water.

Improper draining can also become a nuisance for residents and their neighbors by causing basement flooding, a backup, or flooding of yards. Homeowners may *slowly* drain chlorine-free water to a grassy area in their yard if it is large enough to absorb the water. Or, they can drain into a sanitary sewer cleanout, if one is available on their property.

Please follow these guidelines when draining a swimming pool:

- Do not drain your pool during or up to 48 hours after a rain event.
- Dechlorinate your swimming pool water before draining it. The pool should sit at least 10 days after chemical treatment before draining any water.
- Test the pool water to ensure that it is essentially chlorine-free before draining (about 0.1 parts per million total chlorine). Bubbling, cascading, or other forms of aeration will help to remove chlorine from water.
- The pool’s pH should be in a normal range of 6 to 8 before draining.
- Drain to a grassy area of the yard if it is large enough to absorb the water, or into a sanitary sewer cleanout, if one is available on the property.

- Discharge water slowly, at no more than 30 gallons per minute, to prevent soil erosion, flooding, or damage to adjacent properties, including backups into homes and businesses.

For more information, visit LouisvilleMSD.org/WaterQuality or call MSD Customer Relations at 502.540.6000 with your pool draining questions.

###



About MSD

The Louisville/Jefferson County Metropolitan Sewer District (MSD) works to achieve and maintain clean, environmentally safe waterways for a healthy and vibrant community. The organization's more than 670 employees provide wastewater management, drainage and flood protection services across the 376 square miles of Louisville Metro, and wastewater service in portions of Bullitt and Oldham counties. In addition to operating and maintaining Louisville Metro's sewer system, floodwall system, water quality treatment centers and flood pumping stations, MSD invests in hundreds of infrastructure improvement projects each year, plants more than 1,000 trees and other vegetation annually to enhance water filtration and reduce runoff, and provides numerous outreach programs to inform and educate the community about protecting our waterways.



700 West Liberty Street | Louisville, KY 40203-1911
Phone: 502.540.6000 | LouisvilleMSD.org

MEDIA RELEASE

October 11, 2022

CONTACT:

Sheryl Lauder
Sheryl.Lauder@LouisvilleMSD.org
502.919.0325

Volunteers needed for Beargrass Creek cleanup

Mini Ohio River Sweep event planned for October 15

LOUISVILLE, KY—Picking up trash along our waterways is a little thing that can make a big difference for our streams. Louisville MSD, in partnership with the Ohio River Valley Water Sanitation Commission (ORSANCO) and the Foundation for Ohio River Education (FORE), is hosting a volunteer cleanup effort to improve water quality in the Beargrass Creek and Ohio River watersheds.

Beargrass Creek watershed cleanup

- Saturday, October 15
- 8 AM to 11 AM
- Karen Lynch Park, 1709 Story Avenue

This Mini Ohio River Sweep is an opportunity for people to remove litter from the stream and river banks. MSD will provide trash bags, gloves, a sanitizing station, trash grabbers, and a **free commemorative t-shirt!** Volunteers will gather supplies and sweep out along Beargrass Creek to the confluence with the Ohio River.

Background

When it rains or snows, the precipitation lands on impervious surfaces, such as roofs and pavement—collecting toxins, pollutants, and sediments as it makes its way to the creek. “Everyone benefits when we work together by picking up trash in and around the area, reducing pollution in our waterways,” states MS4 Program Administrator Colette Easter.

This event is part of MSD’s Municipal Separate Storm Sewer System outreach efforts.

For more information, please visit LouisvilleMSD.org/WaterQuality.



###

About MSD

The Louisville/Jefferson County Metropolitan Sewer District (MSD) works to achieve and maintain clean, environmentally safe waterways for a healthy and vibrant community. The organization's more than 670 employees provide wastewater management, drainage and flood protection services across the 376 square miles of Louisville Metro, and wastewater service in portions of Bullitt and Oldham counties. In addition to operating and maintaining Louisville Metro's sewer system, floodwall system, water quality treatment centers and flood pumping stations, MSD invests in hundreds of infrastructure improvement projects each year, plants more than 1,000 trees and other vegetation annually to enhance water filtration and reduce runoff, and provides numerous outreach programs to inform and educate the community about protecting our waterways.



APPENDIX 2.1.11 BIA LAND DEVELOPMENT MEETINGS



LAND DEVELOPMENT COMMITTEE

July 6, 2022

10:00 AM

AGENDA

Billy Doelker, presiding

1. Call to Order – 10:00 a.m.

2. Louisville Forward/ Develop Louisville	New Form Districts LDC Reform Department Updates	Mike King, Associate Planner Joel Dock, Planning Coordinator Emily Liu, Director, Louisville Metro Planning and Design Services
----------------------------------------------	--------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------

3. Agency Reports:

AT&T

LG&E – Derek Nix, Team Leader

LWC

MSD – Fee Recovery

Oldham County Planning and Development Services – Jim Silliman, Engineer

Bullitt County Planning and Zoning

Shelby County

Public Works

Spectrum – Amy Williams, Business Development

4. Old Business

5. New Business

6. Adjourn



LAND DEVELOPMENT COMMITTEE

August 3, 2022

10:00 AM

AGENDA

Billy Doelker, presiding

1. Call to Order – 10:00 a.m.
2. New Proposed Form Districts Mike King, Director, Office of
Advanced Planning and
Sustainability
3. Develop Louisville Update Marilyn Harris, Director,
Develop Louisville
4. Agency Reports:
 AT&T
 LG&E – Derek Nix, Team Leader
 LWC
 MSD
 Oldham County Planning and Development Services - No Report
 Bullitt County Planning and Zoning
 Shelby County
 Public Works
 Spectrum
5. Old Business
6. New Business
7. Adjourn



LAND DEVELOPMENT COMMITTEE
September 7, 2022
10:00 AM

AGENDA

Billy Doelker, presiding

1. Call to Order – 10:00 a.m.
2. MSD Updates David Johnson, Chief Engineer
3. Louisville Metro Council – Proposed Ordinances
 - Councilperson Flood/Councilperson George – Metro Liens
 - Councilperson Armstrong – Lead Ordinances
 - Councilperson Armstrong – Rental Registry
4. Louisville Metro Council- Passed Ordinances
 - Councilperson Piagentini – Floyds Fork Floodplain compensation
 - Councilperson Armstrong – Changes to Floyds Fork DRO
4. Agency Reports:
 - LWC
 - LG&E
 - Louisville Forward/Develop Louisville
 - Oldham County Planning and Development Services
 - Bullitt County Planning and Zoning
 - Shelby County
 - AT&T
 - Spectrum
5. Old Business
6. New Business
7. Adjourn



LAND DEVELOPMENT COMMITTEE

October 5, 2022

10:00 AM

AGENDA

Billy Doelker, presiding

1. Call to Order – 10:00 a.m.

2. PDS Updates

Chris French, PDS

*Marilyn Harris, Director,
Develop Louisville*

3. Conservation Form Update

4. Agency Reports:

AT&T

LG&E

LWC

MSD

Oldham County Planning and Development Services

Bullitt County Planning and Zoning

Shelby County

Spectrum

5. Old Business

6. New Business

7. Adjourn



LAND DEVELOPMENT COMMITTEE

November 2, 2022

10:00 AM

AGENDA

Billy Doelker, presiding

1. Call to Order – 10:00 a.m.
2. Introduction - Brian Davis Assistant Director fo Planning & Design Services
3. Updates on Proposed Metro Ordinances:
 - a. Councilperson Armstrong: Lead Ordinance
 - b. Councilmembers George/Hollander: Net Zero Greenhouse Gas Emissions by 2040
 - c. Councilman Hollander: Lobbyist Ordinance
4. Agency Reports:
 - AT&T
 - LG&E
 - LWC
 - MSD
 - Oldham County Planning and Development Services
 - Bullitt County Planning and Zoning
 - Shelby County
 - Spectrum
5. Old Business
6. New Business
7. Adjourn



LAND DEVELOPMENT COMMITTEE

December 7, 2022

10:00 AM

AGENDA

Billy Doelker, presiding

1. Call to Order – 10:00 a.m.
2. Louisville Water Company Update LWC Team
3. LGE Update Bill Harper
4. Louisville Metro Updates Brian Davis
5. Agency Reports:
 - AT&T
 - MSD
 - Oldham County Planning and Development Services
 - Bullitt County Planning and Zoning
 - Shelby County
 - Spectrum
5. Old Business
6. New Business
7. Adjourn



LAND DEVELOPMENT COMMITTEE

January 4, 2023

10:00 AM

AGENDA

Billy Doelker, presiding

1. Call to Order – 10:00 a.m.
2. Louisville Metro Updates Marilyn Harris and Brian Davis
3. LGE Update Derek Nix, LGE Team Leader
4. WOTUS update Ron Thomas, RES
5. Agency Reports:
 - AT&T
 - MSD
 - Oldham County Planning and Development Services
 - Bullitt County Planning and Zoning
 - Shelby County
 - Spectrum
6. Old Business
7. New Business
8. Adjourn



LAND DEVELOPMENT COMMITTEE

March 1, 2023

10:00 AM

TENTATIVE AGENDA

Billy Doelker, presiding

Call to Order – 10:00 a.m.

PDS Annual Report Brian Davis, Assistant Director, Planning and Design Services

Conservation Form Update Mike King, Director, Office of Advanced Planning & Sustainability

HBAK Legislative Update Anetha Sanford, HBAK Executive Director

Agency Reports:

AT&T

LWC

MSD

Oldham County Planning and Development Services

Bullitt County Planning and Zoning

Shelby County

Spectrum

Old Business

New Business

Adjourn



LAND DEVELOPMENT COMMITTEE

April 12, 2023

10:00 AM

AGENDA

Billy Doelker, presiding

Call to Order – 10:00 a.m.

AGENCY REPORTS AND UPDATES

AT&T

Bullitt County Planning and Zoning

LGE

Louisville Metro Planning and Design Services

Louisville Water Company

MSD

Oldham County Planning and Development Services

Shelby County

Spectrum

Other Business

Adjourn



LAND DEVELOPMENT COMMITTEE

June 14, 2023

10:00 AM

TENTATIVE AGENDA

Billy Doelker, presiding

Call to Order – 10:00 a.m.

Louisville Metro/Develop Louisville

Emily Liu, Director

Proposed DRO Amendments

Review process at PDS for building/remodeling permits

Oldham County Meeting

Jim Urban, Oldham County

AGENCY REPORTS AND UPDATES

AT&T

Bullitt County Planning and Zoning

LGE

Louisville Water Company

MSD

Shelby County

Spectrum

Other Business

Adjourn



APPENDIX 2.1.12 GREATER LOUISVILLE EEC COMMITTEE MEETINGS

Next GLI EEC Mtg - Sept 14th at 8:30 am



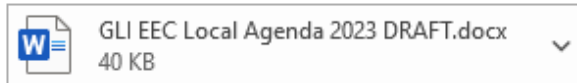
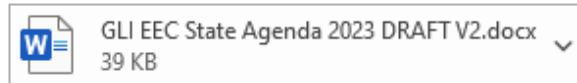
Tim Corrigan <tim@therotundagroup.com>

To [Jennifer Cave](#); [Bryan Slade](#); [Greg Dutton](#); [Liz McQuillen](#); [Shelby Williams](#); [Stewart McCollam](#); [Tim Corrigan](#)

9/12/2022



This sender tim@therotundagroup.com is from outside your organization.

Find your local number: <https://us02web.zoom.us/j/94011200000>

The agenda is as follows:

1. Call to Order
2. Guest Presentation (Virtual) - Tammi Hudson, Director, KY Division of Waste Management, KDEP - Overview and Update
3. Local and State Agenda Review and Finalize (Attached are the docs)
4. Subcommittee Reports
5. Old/New Business - LM APCD Public Notice Provisions
6. Adjourn

Thank you, and hope to see many of you in 3-D on Wednesday.

Tim Corrigan, J.D., MEng.

Next GLI EEC - In person and Virtual



Tim Corrigan <tim@therotundagroup.com>

To [Jennifer Cave](#); [Bryan Slade](#); [Greg Dutton](#); [Liz McQuillen](#); [Shelby Williams](#); [Stewart McCollam](#)

10/11/2022



This sender tim@therotundagroup.com is from outside your organization.

Find your local number: <https://us02web.zoom.us/j/94011200000>

The Agenda is as follows:

1. Call to Order
2. Special Guest Presentation - Dr Ted Smith, Director of the Center for Healthy Air, Water, and Soil at the U of L Envirome Institute.
3. Subcommittee Reports - Air, Water, Waste
4. Local/State Update
5. Old/New Business
6. Adjourn

Thank you,

Tim Corrigan, J.D., MEng.

GLI EEC Mtg - Wednesday November 9th - In Person and Virtual



Tim Corrigan <tim@therotundagroup.com>

To [Jennifer Cave](#); [Bryan Slade](#); [Greg Dutton](#); [Liz McQuillen](#); [Shelby Williams](#); [Stewart McCollam](#)

11/4/2022



i This sender tim@therotundagroup.com is from outside your organization.

i You forwarded this message on 11/4/2022 1:54 PM.
We removed extra line breaks from this message.

GLI EEC Member,

Please take note that the next GLI EEC meeting will be on Wednesday November 9th at 8:30 am. It is in person and virtual. The agenda is as follows:

1. Call to Order
2. Special Guest Presentation - Larry Taylor, Energy and Environment Cabinet, Office of Legislative and Intergovernmental Affairs - Preview of Upcoming Session and Cabinet Priorities
3. Subcommittee Reports
4. Old/New Business
5. Adjourn

Thank you,

Tim Corrigan, J.D., MEng.

GLI EEC Mtg - This Wednesday Feb 8th at 8:30 - IN PERSON



Tim Corrigan <tim@therotundagroup.com>

To [Jennifer Cave](#); [Liz McQuillen](#); [Shelby Somervell](#); [Stewart McCollam](#); [Greg Dutton](#); [Bryan Slade](#)
Cc [Tim Corrigan](#)

2/6/2023



i This sender tim@therotundagroup.com is from outside your organization.

Agenda is as follows:

1. Call to Order/Introductions
2. Guest Speaker - Deputy Mayor Nicole George, Louisville Metro Mayor Craig Greenberg Office; Sumhedha Rao, Exec. Dir. New Mayor's Office of Sustainability
3. Local Update
4. State Update - General Assembly
5. Subcommittee Reports - Air Water Waste
6. Old/New Business
7. Adjourn

Thank you,

Tim Corrigan, J.D., MEng.

GLI EEC Mtg - Wednesday March 8th at 8:30 VIRTUAL ONLY



Tim Corrigan <tim@therotundagroup.com>

To Jennifer Cave; Liz McQuillen; Shelby Somervell; Stewart McCollam; Greg Dutton; Bryan Slade 3/6/2023



This sender tim@therotundagroup.com is from outside your organization.

We removed extra line breaks from this message.

Agenda is as follows:

1. Call to Order
2. Update on PFOA/PFOS - Louisville Water Company, Vince Guenthner, Peter Goodmann; MSD, Wes Sydnor
3. General Assembly Update
4. Local Update
5. Subcommittee Reports:
Air - Mtg held on USEPA Proposed Rulemaking on PM2.5 - Comments and suggestions for GLI Draft Comment Letter due at COB today Monday March 6th.
Water
Waste
6. Old/New Business
7. Adjourn

Thank you,

Tim Corrigan, J.D., MEng.

GLI EEC Mtg - Wednesday April 12th



Tim Corrigan <tim@therotundagroup.com>

To Jennifer Cave; Bryan Slade; Greg Dutton; Liz McQuillen; Shelby Somervell; Stewart McCollam 4/10/2023



This sender tim@therotundagroup.com is from outside your organization.

+13126266799,,2996593001# US (Chicago)

Agenda is as follows:

1. Call to Order
2. Special Presentation - John Horne, Executive Director of the Office of Rate Intervention, KY Attorney General's Office - Update on Multistate Clean Air Act Issues including PM2.5 Proposed Rule and the "Good Neighbor Rule" SIP.
3. Federal Agenda Review
4. Local/General Assembly Update
5. Subcommittee Reports
6. Old/New Business
7. Adjourn

Thank you,

GLI EEC Meeting this Wednesday at 8:30 am



Tim Corrigan <tim@therotundagroup.com>

To Jennifer Cave; Bryan Slade; Greg Dutton; Liz McQuillen; Shelby Somervell;
 Stewart McCollam



5/8/2023

This sender tim@therotundagroup.com is from outside your organization.

You forwarded this message on 5/8/2023 10:32 AM.

Agenda:

1. Call to Order
2. Guest Presentation - LM APCD Director Rachael Hamilton, Update on Federal Rule Makings, NAAQS, and Environmental Justice.
3. Local Update
4. Subcommittee Reports - Air, Water, Waste
5. Old/New Business
6. Adjourn

Thank you,

Tim Corrigan, J.D., MEng.



APPENDIX 2.1.13 CONSTRUCTION INDUSTRY EDUCATIONAL MATERIALS

In order to educate contractors and homebuilders about erosion prevention and sediment control (EPSC) requirements and to meet the EPSC ordinance, MSD teaches classes for both contractors and homebuilders. These classes are administered by Jefferson County Public Schools. During 2020, no classes were able to be offered due to the COVID-19 pandemic. This in person class format was transitioned to an online self-paced class as of January 2021 and is available in both English and Spanish in the hope to educate a larger customer base.

Website Link: <https://apps.jefferson.kyschools.us/AdultEdMSD/home/>



METROPOLITAN SEWER DISTRICT (MSD)

Certification Classes

[Home](#) [EPSC](#) [Certification Assessment Tips](#) [Check Your Certification](#) [Certification Data](#)

[Register Online](#)

Click on the "reload" or "refresh" button on your browser to ensure you are viewing the latest version.

Due to the adoption of the Louisville and Jefferson County EPSC Ordinance, area Home Builders (Single-Lot Residential Construction or Demolition), Contractors, Inspectors, and Certified Plan Reviewers are required to participate in training courses and as a result, receive certification in compliance with the ordinance.

Erosion Prevention and Sediment Control (EPSC) Certification courses are prepared by MSD and offered online in cooperation with JCPD Adult & Continuing Education. EPSC courses listed are currently held online and access is granted after the student has been registered and then entered as a participant within the online course. Pre-registration with Adult & Continuing Education/Louisville Learns is required.

A Stormwater Prevention Resource Training video is also available for anyone to view. Please note that the Resource Training Videos do not result in an EPSC certification.

[Online EPSC Courses:](#)

- **Home Builder (Single-Lot Residential Construction or Demolition)** - Course fee: \$95
- **Contractor** - Course fee \$95

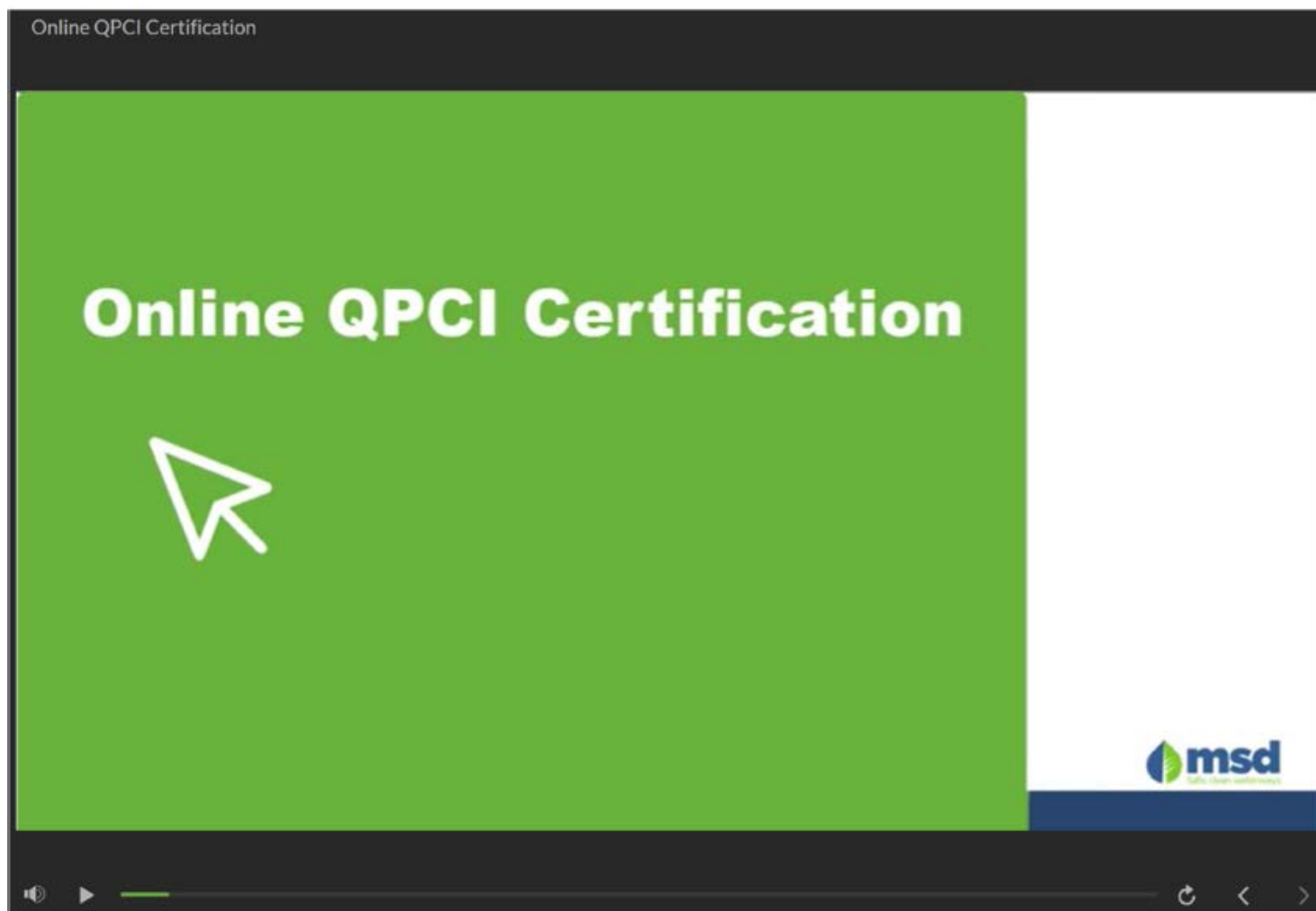
MSD Qualified Post-Construction Inspector Training (QCPI)

(On-Going)

2.1.13.B

Required annual inspections of post-construction best management practices must be completed by a Qualified Post-Construction Inspector (QCPI) per the Long Term Maintenance and Operation Agreement (LTMOA). The training, Qualified Post-Construction Inspector page, is provided free of charge. An 80% or better on the follow up quiz is required to receive the QCPI certification.

Website Link: <http://oit.louisvillemsd.org/>





APPENDIX 2.1.14 RAIN GARDEN HANDBOOK

Website Link: https://louisvillemad.org/sites/default/files/file_repository/MSD%20Rain%20Garden%20Handbook%202021.pdf



RAIN GARDEN HANDBOOK



Website Link: https://louisvillemad.org/sites/default/files/inline-files/Rain%20Garden%20Plant%20Guide_1.pdf



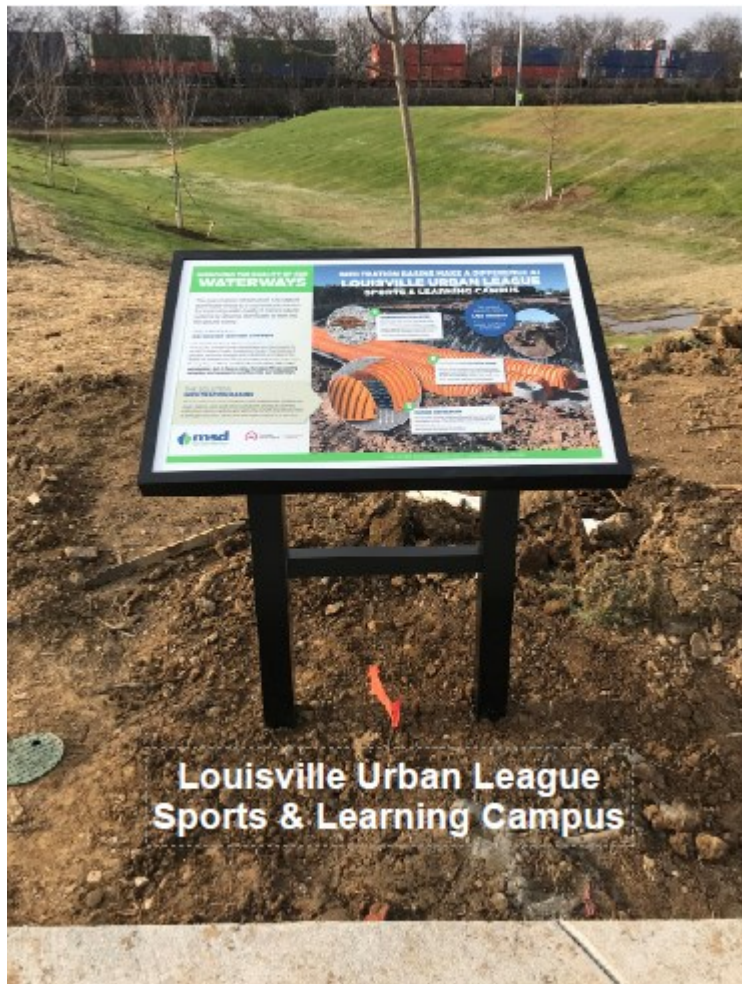
RAIN GARDEN PLANT GUIDE



APPENDIX 2.1.15 GREEN INFRASTRUCTURE DEMONSTRATION PROJECTS



Kentucky Career Center Rain Garden Rehab



Louisville Urban League Sports & Learning Campus



APPENDIX 2.1.16 WEBSITE PUBLIC ANNOUNCEMENTS



Home → MSD News

Keyword Search

Apply

Volunteers Needed for Stream Cleanups

October 18, 2023

Volunteers needed for multiple stream cleanups

[Read More](#)

Swimming Pool Draining Tips

September 12, 2023



Safe Swimming Pool Draining Tips Offered as Summer Closes

[Read More](#)

We Can Help



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Call us 24/7: (502) 540-6000

Quick Links



APPENDIX 2.1.17 CO-PERMITTEE MEETINGS

Louisville MS4 Co-permittee Meeting
Anchorage, KY
February 28, 2023

Agenda:

1. Introductions/Co-permittee updates
2. Review Outreach Survey and Discussion – Colette Easter, MSD
 - EPA Storm Smart - <https://www.epa.gov/npdes/stormwater-smart-outreach-tools>
3. IWD Spill Response Case Studies – Bob Pifine, MSD
4. IWD FY23 1st Half Spill Responses – Bob Pifine
5. SWPPP Assistance Volunteer
6. Next Meeting Topics Discussion
7. Open Discussion/Questions
8. Schedule Next Meeting

LOUISVILLE/JEFFERSON COUNTY MS4 CO-PERMITTEE MEETING	
Title: MS4 Bi-Annual Co-Permittee Meeting (PY23 Meeting #1)	Meeting Date: 2/28/2023
Facilitator: Metropolitan Sewer District	Place/Room: 1306 Evergreen Road, Anchorage

Name	Company or Agency
Brett Clark	MSD
MATI Meunier	Jtown
Stawen Moenan	MSD
Ben Davidson	MSD
Gary Burkhead	City of Anchorage
Laura Witt	Louisville Zoo
Renee Major	Anchorage
John Kern	metro facilities
JASON T. CAHILL	LOUISVILLE PARKS + RECREATION
Loi Rafferty	MSD
GREG SMITH	Anchorage
Abaine Niehoff	MSD

Louisville MS4 Co-permittee Meeting
Downtown Louisville, KY
June 13, 2023

Agenda:

1. Introductions/Co-permittee updates
2. IWD FY23 Spill Responses Update
3. Internal Field Day Briefing – Colette Easter
4. FY23 MS4 Reporting – Brett Clark
5. Kentucky Career Center and Main Office Green Infrastructure Rehab
6. Next Meeting Topics Discussion
7. Open Discussion/Questions
8. Schedule Next Meeting

LOUISVILLE/JEFFERSON COUNTY MS4 CO-PERMITTEE MEETING			
Title:	MS4 Bi-Annual Co-Permittee Meeting (PY23 Meeting #2)	Meeting Date:	6/13/2023
Facilitator:	Metropolitan Sewer District	Place/Room:	700 W Liberty St, Louisville, KY

Name	Company or Agency
<i>Matt Meunier</i>	<i>JTowns</i>
<i>Colette Easter</i>	<i>MSD</i>
<i>Adraime Niehoff</i>	<i>MSD</i>
<i>BOB PIFINE</i>	<i>MSD</i>
<i>Ben Davidson</i>	<i>MSD</i>
<i>Treat Wmlock</i>	<i>MSD</i>
<i>Lori Rafferty</i>	<i>MSD</i>

2. Participants

Name
CR_MO/1st_East/Rm1098/BoardRm
Lori Rafferty
James Birch
Steve Lingerfelt Shively
Kenan Stratman
cecil (Guest)
Laura Witt (Guest)
Renee Major
Kern, John
Mike Moore
Kane, Jessica



APPENDIX 2.1.18 LOUISVILLE METRO OFFICE OF SUSTAINABILITY



Mill Creek Greenway

FINAL MILL CREEK CONCEPT PLAN

The Mill Creek Greenway project will transform approximately eight miles of waterway and publicly-owned land located between Sylvania Park in the Pleasure Ridge Park neighborhood and the Mill Creek power plant south of Valley Station. Through a grant from The Nature Conservancy, landscape architects and planners from Human Nature will work with residents and other stakeholders to create a plan to bring new life to this urban waterway. The result will be a roadmap for a new public greenway with connectivity to other greenspaces.

Given its scope, this project has the potential to be one of the nation's largest and most comprehensive urban stream mitigation efforts. The city owns about 1,000 acres of land along Mill Creek purchased by the Jefferson County Fiscal Court for flood mitigation and preservation purposes about 30 years ago—collectively known as Community Improvement District (CID) parcels. However, much of the land has eroded and the creek has been “channelized” with concrete berms, causing the deterioration of wildlife habitat and a stagnant stream unsuitable for fishing and canoeing.

The long-term goal of this project, led by Louisville Parks and Recreation and its Natural Areas Division, is to turn the long-neglected creek into a winding recreational corridor along the water. The conceptual master planning process should be completed by Spring 2023, dovetailing with two long-term initiatives:

- Louisville MSD watershed plan for Mill Creek
- The Kentucky Department of Fish and Wildlife Resources (KDFWR) stream restoration of Mill Creek

Kalmer Beach Reserve

Fairmount Falls

MILL CREEK GREENWAY INTEREST FORM

COMMUNITY INPUT RESULTS

Resources

- > Louisville Loop Master Plan
- > Southwest Greenways Master Plan
- > Jefferson Memorial Forest Master Plan
- > MSD State of the Streams Report 2021
- > Mill Creek Project Map
- > UL Resilience Justice Project
- > MSD Watershed Planning
- US Fish & Wildlife Stream Restoration

Plans to turn stagnant stream in southwest Louisville into greenway in the works

Share



Updated: 11:15 PM EDT Apr 19, 2023

Infinite Scroll Enabled



Randall Kamm f

Reporter





APPENDIX 2.2.3 IDDE SUMMARY

APPENDIX 2.2.3 IDDE SUMMARY

Service Request #	Request Date	Address	Resolved Date
5429363	7/4/2022 12:25	2510 WYETH CT LOUISVILLE KY 40220-0000	7/14/2022 10:49
5429433	7/5/2022 11:39	3700 NORBOURNE BLVD ST MATTHEWS KY 40207-0000	7/5/2022 16:30
5429475	7/5/2022 15:01	9200 LINN STATION RD 101 HURSTBOURNE KY 40222-0000	7/6/2022 9:32
5429610	7/6/2022 15:07	6909 SUNNY VALE WAY LOUISVILLE KY 40272-0000	7/6/2022 21:56
5429701	7/7/2022 7:45	3042 ROSELAWN BLVD LOUISVILLE KY 40220-0000	7/7/2022 9:10
5429725	7/7/2022 10:25	2000 FERN VALLEY RD LOUISVILLE KY 40213-0000	7/7/2022 13:00
5430060	7/11/2022 11:08	2127 MCCLOSKEY AVE LOUISVILLE KY 40210-0000	7/12/2022 11:27
5430086	7/11/2022 14:26	5609 SPRIGWOOD LN LOUISVILLE KY 40291-0000	7/11/2022 18:07
5430213	7/12/2022 12:13	3406 CALAIS DR JEFFERSONTOWN KY 40299-0000	7/13/2022 14:00
5430214	7/12/2022 12:16	1829 S 3RD ST 1 LOUISVILLE KY 40208-0000	7/14/2022 16:00
5430272	7/12/2022 18:01	655 S 38TH ST LOUISVILLE KY 40211-0000	7/12/2022 21:30
5430695	7/16/2022 13:56	14608 WOODSTREAM PL LOUISVILLE KY 40245-0000	7/16/2022 14:39
5430787	7/18/2022 10:25	551 BARBERRY LN LOUISVILLE KY 40206-0000	7/18/2022 13:30
5430967	7/19/2022 13:41	3615 RALPH AVE LOUISVILLE KY 40211-0000	7/20/2022 15:15
5430997	7/19/2022 16:02	3506 JANELL RD SHIVELY KY 40216-0000	7/21/2022 12:00
5431130	7/20/2022 15:38	5531 FOREST LAKE DR LOUISVILLE KY 40059-0000	7/21/2022 12:04
5431259	7/21/2022 13:15	4160 WESTPORT RD ST MATTHEWS KY 40207-0000	7/21/2022 15:45
5431377	7/22/2022 10:57	718 S 15TH ST LOUISVILLE KY 40210-0000	7/22/2022 12:05
5431422	7/24/2022 9:47	200 HEMINGWAY RD ST MATTHEWS KY 40207-0000	7/24/2022 10:54
5431547	7/25/2022 14:53	727 E BRECKINRIDGE ST LOUISVILLE KY 40203-0000	7/26/2022 13:03
5431660	7/26/2022 10:02	8604 GLASER LN LOUISVILLE KY 40291-0000	7/26/2022 13:00
5431720	7/26/2022 14:23	1543 DUMESNIL ST LOUISVILLE KY 40210-0000	7/26/2022 16:51
5431826	7/27/2022 10:16	1017 S 12TH ST LOUISVILLE KY 40210-0000	7/27/2022 11:36
5431845	7/27/2022 13:03	506 WOODVIEW CIR MIDDLETOWN KY 40243-0000	7/27/2022 14:04
5431850	7/27/2022 13:37	3009 S 4TH ST 1 LOUISVILLE KY 40208-0000	7/27/2022 14:44
5431854	7/27/2022 13:46	1501 STORY AVE LOUISVILLE KY 40206-0000	7/27/2022 15:16
5431963	7/28/2022 11:53	15720 SHADOWWALK DR LOUISVILLE KY 40245-0000	7/28/2022 12:00
5431965	7/28/2022 12:21	10728 HITE CREEK RD LOUISVILLE KY 40241-0000	7/28/2022 13:11
5431973	7/28/2022 12:48	1320 WINTER AVE LOUISVILLE KY 40204-0000	7/28/2022 17:00
5432623	8/2/2022 12:36	4041 GLENHURST AVE SHIVELY KY 40216-0000	8/3/2022 10:47
5432634	8/2/2022 13:59	916 BAXTER AVE LOUISVILLE KY 40204-0000	8/4/2022 0:00
5432763	8/3/2022 10:17	5412 ST GABRIEL LN LOUISVILLE KY 40291-0000	8/3/2022 14:00
5432837	8/3/2022 15:54	7706 NEW LA GRANGE RD NORWOOD KY 40222-0000	8/26/2022 6:34
5432990	8/4/2022 23:37	9643 LAMBORNE BLVD LOUISVILLE KY 40272-0000	8/5/2022 0:35
5433143	8/5/2022 18:11	10108 MCNEELY LAKE DR LOUISVILLE KY 40229-0000	8/5/2022 22:00
5433144	8/5/2022 18:14	3765 STANTON BLVD LOUISVILLE KY 40220-0000	8/5/2022 20:50
5433270	8/8/2022 10:13	10705 GORDON FARM TRCE LOUISVILLE KY 40291-0000	8/8/2022 11:39
5433273	8/8/2022 10:21	10708 GORDON FARM TRCE LOUISVILLE KY 40291-0000	8/8/2022 11:51
5433275	8/8/2022 10:23	903 AHLAND RD WOODLAWN PARK KY 40207-0000	8/9/2022 13:13
5433276	8/8/2022 10:27	3520 BROCKTON LN 1 LOUISVILLE KY 40220-0000	8/9/2022 10:46
5433281	8/8/2022 11:02	1027 ASH ST LOUISVILLE KY 40217-0000	8/9/2022 11:08
5433396	8/9/2022 14:01	1828 WINDSOR PL LOUISVILLE KY 40204-0000	9/9/2022 16:00
5433422	8/9/2022 16:15	4103 BISHOP LN LOUISVILLE KY 40218-0000	8/9/2022 19:00
5433549	8/10/2022 8:27	4608 OUTER LOOP LOUISVILLE KY 40219-0000	8/10/2022 9:40
5433578	8/10/2022 11:51	1325 THORNBERRY AVE LOUISVILLE KY 40215-0000	8/11/2022 17:12
5433579	8/10/2022 11:55	1101 W OAK ST LOUISVILLE KY 40210-0000	8/11/2022 11:19
5433599	8/10/2022 14:03	4811 BEECH DR LOUISVILLE KY 40216-0000	8/10/2022 17:18
5433610	8/10/2022 14:51	13321 FORGE CIR LOUISVILLE KY 40272-0000	8/10/2022 21:58
5433626	8/10/2022 15:39	7735 WOODBRIDGE HILL LN LOUISVILLE KY 40059-0000	8/25/2022 10:01
5433744	8/11/2022 11:55	2619 THOMAS AVE LOUISVILLE KY 40216-0000	8/11/2022 14:16
5433754	8/11/2022 12:41	3504 GATEVIEW PL LOUISVILLE KY 40272-0000	8/11/2022 15:43
5433903	8/12/2022 9:31	6008 RODES CT NORTHFIELD KY 40222-0000	8/13/2022 15:00
5433907	8/12/2022 9:47	2932 BRECKENRIDGE LN MEADOWVIEW ESTATES KY 40220-0000	
5433984	8/12/2022 22:39	2255 FRANKFORT AVE LOUISVILLE KY 40206-0000	8/13/2022 0:00
5434082	8/15/2022 7:24	944 BURNING SPRINGS CIR JEFFERSONTOWN KY 40223-0000	8/20/2022 15:45
5434191	8/15/2022 16:14	4020 CARBINE LN LOUISVILLE KY 40229-0000	8/17/2022 15:28
5434307	8/16/2022 10:15	5611 MOSSWOOD LN LOUISVILLE KY 40291-0000	8/17/2022 8:13
5434334	8/16/2022 12:02	6723 GUNSTON LN PROSPECT KY 40059-0000	8/17/2022 10:40
5434377	8/16/2022 15:26	611 INDUSTRY RD LOUISVILLE KY 40208-0000	8/23/2022 10:00
5434749	8/19/2022 1:04	1801 PAYNE ST LOUISVILLE KY 40206-0000	5/18/2023 9:53
5434887	8/20/2022 10:29	4012 OUTER LOOP LOUISVILLE KY 40219	8/22/2022 8:46
5434901	8/21/2022 11:50	3701 HILLCREEK RD LOUISVILLE KY 40220-0000	8/21/2022 18:00

Service Request #	Request Date	Address	Resolved Date
5435011	8/22/2022 9:32	3302 WILLOW WAY LOUISVILLE KY 40218-0000	5/18/2023 9:54
5435162	8/22/2022 21:21	10904 MEETING ST LOUISVILLE KY 40059-0000	8/22/2022 22:45
5435260	8/23/2022 9:05	1204 S 1ST ST 1 LOUISVILLE KY 40203-0000	8/23/2022 11:04
5435286	8/23/2022 11:01	6201 STRAWBERRY LN LOUISVILLE KY 40214-0000	8/23/2022 10:30
5435426	8/24/2022 10:29	720 S 15TH ST LOUISVILLE KY 40210-0000	8/24/2022 12:03
5435451	8/24/2022 12:42	2317 W MADISON ST LOUISVILLE KY 40211-0000	8/24/2022 16:33
5435462	8/24/2022 14:27	6617 STRAWBERRY LN 4 LOUISVILLE KY 40214-0000	8/24/2022 20:05
5435569	8/25/2022 8:49	3831 POPLAR LEVEL RD LOUISVILLE KY 40213-0000	8/25/2022 10:01
5435620	8/25/2022 13:10	1120 HERR LN A ST MATTHEWS KY 40222-0000	3/9/2023 13:35
5435622	8/25/2022 13:23	600 TERMINAL DR LOUISVILLE KY 40209-0000	8/25/2022 15:53
5435753	8/26/2022 11:51	1529 S 4TH ST LOUISVILLE KY 40208-0000	8/26/2022 17:00
5435824	8/28/2022 12:13	2827 S 4TH ST LOUISVILLE KY 40208-0000	8/29/2022 19:00
5435926	8/29/2022 6:36	13159 MIDDLETOWN INDUSTRIAL BLVD MIDDLETOWN KY 40223-0	5/18/2023 9:58
5436010	8/29/2022 16:23	2308 HIKES LN 1 LOUISVILLE KY 40218-0000	8/29/2022 18:30
5436200	8/30/2022 18:31	1605 S 4TH ST 1 LOUISVILLE KY 40208-0000	8/30/2022 21:52
5436298	8/31/2022 12:17	3611 HILLCREEK RD LOUISVILLE KY 40220-0000	9/1/2022 8:02
5436306	8/31/2022 13:28	5109 INVICTA DR LOUISVILLE KY 40216-0000	8/31/2022 18:30
5436336	8/31/2022 15:58	3612 CANE RUN RD LOUISVILLE KY 40211-0000	9/1/2022 9:45
5436350	8/31/2022 19:53	3700 OLD OUTER LOOP LOUISVILLE KY 40219-0000	8/31/2022 21:50
5436429	9/1/2022 9:49	15500 BECKLEY CROSSING DR LOUISVILLE KY 40245-0000	9/1/2022 14:46
5436458	9/1/2022 11:53	4200 GINGERWOOD DR LOUISVILLE KY 40220-0000	9/1/2022 13:30
5436714	9/4/2022 20:16	424 MAC BRAE RD LOUISVILLE KY 40214-0000	9/5/2022 8:33
5436874	9/6/2022 13:31	4608 E INDIAN TRL LOUISVILLE KY 40213-0000	9/6/2022 16:51
5436928	9/6/2022 16:53	1907 GRIFFITHS AVE LOUISVILLE KY 40203-0000	9/6/2022 18:45
5437051	9/7/2022 12:20	416 PINE ST LOUISVILLE KY 40204-0000	9/7/2022 12:33
5437053	9/7/2022 12:41	416 PINE ST LOUISVILLE KY 40204-0000	9/7/2022 14:35
5437061	9/7/2022 13:12	3715 DIXIE HWY SHIVELY KY 40216-0000	9/7/2022 22:33
5437350	9/9/2022 11:02	1542 W ST CATHERINE ST LOUISVILLE KY 40210-0000	9/9/2022 12:36
5437362	9/9/2022 12:08	2305 CARLTON TER LOUISVILLE KY 40205-0000	9/9/2022 14:40
5437411	9/10/2022 11:32	5321 ILEX AVE LOUISVILLE KY 40213-0000	9/10/2022 17:13
5437416	9/10/2022 14:01	960 BRECKENRIDGE LN ST MATTHEWS KY 40207-0000	9/11/2022 14:18
5437580	9/12/2022 13:12	8207 CORTLAND DR LOUISVILLE KY 40228-0000	9/12/2022 14:56
5437600	9/12/2022 15:05	6709 S WATTERSON TRL LOUISVILLE KY 40291-0000	9/12/2022 17:20
5437725	9/13/2022 10:05	6600 OUTER LOOP 1 LOUISVILLE KY 40228-0000	9/13/2022 12:07
5437932	9/14/2022 12:37	3509 GEORGETOWN PL LOUISVILLE KY 40215-0000	9/14/2022 13:32
5437944	9/14/2022 13:28	3114 SHADY SPRINGS DR LOUISVILLE KY 40299-0000	9/14/2022 14:53
5438148	9/16/2022 9:39	2940 GAREY LN SHIVELY KY 40216-0000	10/21/2022 10:11
5438163	9/16/2022 11:45	1309 N STHY 1793 PROSPECT KY 40059-0000	9/16/2022 12:26
5438415	9/19/2022 16:37	12005 WOODEN TRACE DR LOUISVILLE KY 40229-0000	9/19/2022 20:09
5438714	9/21/2022 10:50	4220 WILLOWVIEW BLVD LOUISVILLE KY 40299-0000	9/21/2022 19:00
5438836	9/22/2022 7:13	2514 PENNACOOK RD 1 LOUISVILLE KY 40214-0000	9/23/2022 13:08
5438904	9/22/2022 16:38	117 E KINGSTON AVE 1 LOUISVILLE KY 40214-0000	9/22/2022 18:00
5439216	9/26/2022 12:50	5016 VOLNEY CT LOUISVILLE KY 40291-0000	9/26/2022 23:18
5439241	9/26/2022 14:48	2113 BASHFORD MANOR LN LOUISVILLE KY 40218-0000	9/26/2022 17:40
5439461	9/27/2022 15:23	620 S 15TH ST LOUISVILLE KY 40203-0000	9/30/2022 12:00
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5439928	9/30/2022 11:12	7104 DUNKIRK LN LOUISVILLE KY 40272-0000	9/30/2022 12:35
5440114	10/3/2022 11:18	4915 VALLEY STATION RD LOUISVILLE KY 40272-0000	10/3/2022 13:35
5440313	10/4/2022 14:56	1800 FLEMING RD LOUISVILLE KY 40205-0000	10/20/2022 8:30
5440441	10/5/2022 8:24	2129 W HILL ST LOUISVILLE KY 40210-0000	10/5/2022 9:05
5440523	10/5/2022 14:11	6902 BARDSTOWN RD LOUISVILLE KY 40291-0000	10/5/2022 15:39
5440657	10/6/2022 10:57	6121 DOBSON CT LOUISVILLE KY 40229-0000	10/6/2022 12:04
5440664	10/6/2022 11:24	9339 PONDER LN LOUISVILLE KY 40272-0000	10/6/2022 13:33
5440804	10/7/2022 10:02	2318 DEVERON DR SHIVELY KY 40216-0000	10/7/2022 11:02
5440915	10/9/2022 20:15	712 LONGFIELD AVE LOUISVILLE KY 40215-0000	10/9/2022 21:20
5441757	10/17/2022 8:34	3750 BANK ST LOUISVILLE KY 40212-0000	10/17/2022 9:23
5441877	10/17/2022 18:48	7808 FEGENBUSH LN LOUISVILLE KY 40228-0000	10/17/2022 19:55
5441878	10/17/2022 19:15	10954 OLD HARRODS WOODS CIR LOUISVILLE KY 40223-0000	10/18/2022 12:33
5441921	10/18/2022 8:40	1739 MODEL RD SHIVELY KY 40216-0000	10/19/2022 10:14
5441934	10/18/2022 10:33	7924 FEGENBUSH LN LOUISVILLE KY 40228-0000	10/18/2022 11:47
5441956	10/18/2022 12:25	3807 LELAND RD ST MATTHEWS KY 40207-0000	10/19/2022 8:53
5442005	10/18/2022 18:42	10605 PARK AVE JEFFERSONTOWN KY 40299-0000	10/20/2022 14:00

Service Request #	Request Date	Address	Resolved Date
5442072	10/19/2022 9:23	1004 BARDSTOWN RD LOUISVILLE KY 40204-0000	10/19/2022 13:04
5442136	10/19/2022 16:59	9614 CEDAR LAKE DR LOUISVILLE KY 40291-0000	10/19/2022 19:00
5442141	10/19/2022 18:20	9610 GATEWAY DR JEFFERSONTOWN KY 40299-0000	10/19/2022 21:25
5442144	10/19/2022 23:12	903 FENLEY AVE ST MATTHEWS KY 40222-0000	10/19/2022 23:49
5442240	10/20/2022 13:32	100 SAGE RD 1 BEECHWOOD VILLAGE KY 40207-0000	7/31/2023 13:20
5442253	10/20/2022 14:57	7505 NANCY LN LOUISVILLE KY 40258-0000	10/20/2022 15:30
5442350	10/21/2022 12:52	7614 BUENA VISTA CT LOUISVILLE KY 40219-0000	10/25/2022 11:15
5442387	10/22/2022 18:40	4545 TAYLORSVILLE RD HURSTBOURNE ACRES KY 40220-0000	10/22/2022 20:00
5442391	10/23/2022 9:43	8022 ROLAND AVE LYNDON KY 40222-0000	10/23/2022 11:35
5442392	10/23/2022 15:07	4438 CHARLOTTE ANN DR LOUISVILLE KY 40216-0000	10/23/2022 17:20
5442395	10/23/2022 19:03	4402 MOUNT VERNON RD ST REGIS PARK KY 40220-0000	10/23/2022 19:50
5442524	10/24/2022 15:36	9000 LYNDON LAKES PL LYNDON KY 40242-0000	9/20/2023 14:10
5442605	10/25/2022 8:41	10954 OLD HARRODS WOODS CIR LOUISVILLE KY 40223-0000	12/7/2022 14:24
5442929	10/28/2022 9:20	3750 BANK ST LOUISVILLE KY 40212-0000	10/28/2022 9:51
5442940	10/28/2022 10:46	4801 TEANECK LN 1 LOUISVILLE KY 40216-0000	10/29/2022 15:52
5442950	10/28/2022 11:37	2900 FLAIR KNOLL CT LOUISVILLE KY 40216-0000	10/28/2022 12:42
5443004	10/29/2022 10:23	500 E MAIN ST LOUISVILLE KY 40202-0000	10/29/2022 10:23
5443109	10/31/2022 12:18	10001 CEDAR CREEK RD HERITAGE CREEK KY 40229-0000	10/31/2022 16:00
5443249	11/1/2022 12:01	1652 ALGONQUIN PKY LOUISVILLE KY 40210-0000	11/1/2022 14:23
5443374	11/2/2022 11:45	5927 SIX MILE LN LOUISVILLE KY 40218-0000	11/2/2022 16:30
5443513	11/3/2022 15:24	2100 PORTLAND AVE LOUISVILLE KY 40212-0000	11/3/2022 16:45
5443566	11/4/2022 7:21	13911 PETWOOD BLVD LOUISVILLE KY 40272-0000	11/4/2022 9:54
5443604	11/4/2022 13:09	4401 SPRINGDALE RD LOUISVILLE KY 40241-0000	11/7/2022 10:51
5443630	11/4/2022 21:12	5306 VISTA JOHN DR LOUISVILLE KY 40214-0000	11/4/2022 22:40
5443634	11/5/2022 10:41	7115 ETHAN ALLEN WAY LOUISVILLE KY 40272-0000	11/5/2022 11:40
5443981	11/9/2022 9:19	9801 GATEWAY DR JEFFERSONTOWN KY 40299-0000	5/19/2023 10:30
5444122	11/10/2022 9:57	4406 MOUNT VERNON RD ST REGIS PARK KY 40220-0000	5/19/2023 10:32
5444152	11/10/2022 13:10	7721 SIERRA TRL LOUISVILLE KY 40214-0000	11/10/2022 19:13
5444250	11/11/2022 8:42	2027 LAKESIDE DR LOUISVILLE KY 40205-0000	11/11/2022 10:27
5444341	11/11/2022 19:22	520 W ST CATHERINE ST LOUISVILLE KY 40203-0000	11/11/2022 22:00
5444428	11/14/2022 7:52	4805 EDGE RIDGE RD LOUISVILLE KY 40258-0000	1/9/2023 14:00
5444438	11/14/2022 9:43	3001 HILO CT JEFFERSONTOWN KY 40220-0000	11/14/2022 17:00
5444632	11/15/2022 16:41	2534 ST XAVIER ST LOUISVILLE KY 40212-0000	11/15/2022 23:30
5444973	11/18/2022 11:22	9205 BURLWOOD CT LOUISVILLE KY 40229-0000	11/18/2022 12:26
5444983	11/18/2022 13:04	10705 BLUE LICK RD LOUISVILLE KY 40229-0000	11/21/2022 9:16
5445051	11/20/2022 16:07	1306 GILMORE LN LOUISVILLE KY 40213-0000	12/16/2022 11:37
5445203	11/21/2022 13:41	8510 BLUE LICK RD LOUISVILLE KY 40219-0000	11/21/2022 22:11
5445229	11/21/2022 16:47	8905 LETHBOROUGH DR JEFFERSONTOWN KY 40299-0000	11/21/2022 18:50
5445234	11/21/2022 20:01	6606 NORWAY DR LOUISVILLE KY 40214-0000	11/22/2022 10:45
5445278	11/22/2022 8:03	4936 DETERMINE LN LOUISVILLE KY 40216-0000	11/22/2022 10:13
5445300	11/22/2022 11:18	9208 TRENTA LN LOUISVILLE KY 40291-0000	11/28/2022 12:31
5445503	11/28/2022 9:32	10507 FOREST GARDEN LN LYNDON KY 40223-0000	11/28/2022 13:31
5445575	11/28/2022 16:09	1337 BERRY BLVD LOUISVILLE KY 40215-0000	11/28/2022 17:05
5445724	11/29/2022 16:15	4846 JENNINGS LN WATTERSON PARK KY 40218-0000	11/25/2022 14:00
5445797	11/30/2022 11:39	300 DELMONT AVE LOUISVILLE KY 40206-0000	12/1/2022 12:10
5445888	12/1/2022 10:21	3612 HYCLIFFE AVE ST MATTHEWS KY 40207-0000	2/23/2023 8:39
5445917	12/1/2022 12:44	1920 GOLDSMITH LN LOUISVILLE KY 40218-0000	12/1/2022 20:24
5445929	12/1/2022 14:35	1839 OLEND AVE SHIVELY KY 40216-0000	12/1/2022 15:37
5445948	12/1/2022 21:54	5805 SPICEWOOD LN LOUISVILLE KY 40219-0000	12/2/2022 0:40
5446235	12/5/2022 15:55	3526 NORTHWESTERN PKY LOUISVILLE KY 40212-0000	12/6/2022 18:39
5446338	12/6/2022 13:54	9521 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000	12/6/2022 15:30
5446340	12/6/2022 14:14	7402 GATE WOOD DR CRESTWOOD KY 40014-0000	5/19/2023 10:43
5446345	12/6/2022 14:48	811 E BROADWAY LOUISVILLE KY 40204-0000	5/19/2023 10:43
5446449	12/7/2022 13:49	8007 CORTLAND DR LOUISVILLE KY 40228-0000	12/7/2022 16:27
5446452	12/7/2022 14:26	5510 FERN VALLEY RD 101 LOUISVILLE KY 40228-0000	12/7/2022 16:30
5446517	12/8/2022 9:42	4309 SOUTH RIDGE DR LOUISVILLE KY 40272-0000	12/9/2022 13:21
5446551	12/8/2022 13:43	317 BRENTFORD CT DOUGLASS HILLS KY 40243-0000	12/8/2022 16:40
5446616	12/9/2022 9:56	7315 REGIMENT RD LOUISVILLE KY 40229-0000	12/12/2022 12:29
5446678	12/9/2022 20:51	7101 CEDAR SPRINGS BLVD LOUISVILLE KY 40291-0000	
5446699	12/11/2022 14:39	2936 GRINSTEAD DR LOUISVILLE KY 40206-0000	12/11/2022 15:40
5446767	12/12/2022 9:22	1130 ROSTREVOR CIR LOUISVILLE KY 40205-0000	12/13/2022 8:30
5446926	12/13/2022 11:35	2625 W CHESTNUT ST LOUISVILLE KY 40211-0000	12/13/2022 13:47
5446945	12/13/2022 14:08	206 N HITE AVE LOUISVILLE KY 40206-0000	1/4/2023 14:07

Service Request #	Request Date	Address	Resolved Date
5447045	12/14/2022 10:47	11111 EAGLES COVE DR LOUISVILLE KY 40241-0000	12/14/2022 10:47
5447152	12/15/2022 12:01	5000 OAKBROOK DR LOUISVILLE KY 40245-0000	12/16/2022 11:58
5447390	12/19/2022 10:10	3306 NOE WAY LOUISVILLE KY 40220-0000	1/24/2023 15:00
5447458	12/19/2022 16:20	3611 FOUNTAIN DR 1 WEST BUECHEL KY 40218-0000	12/19/2022 19:33
5447467	12/19/2022 17:42	277 N STEEDLAND DR Louisville KY 40229	12/20/2022 9:58
5447530	12/20/2022 10:41	2077 SHERWOOD AVE LOUISVILLE KY 40205-0000	8/7/2023 12:41
5447572	12/20/2022 14:52	6508 LANTANA CT LOUISVILLE KY 40229-0000	12/20/2022 16:51
5447573	12/20/2022 14:58	5406 RIATA DR LOUISVILLE KY 40218-0000	12/28/2022 10:33
5447582	12/20/2022 15:31	4115 FERN VALLEY RD LOUISVILLE KY 40219-0000	12/20/2022 15:49
5447583	12/20/2022 15:39	4115 FERN VALLEY RD LOUISVILLE KY 40219-0000	12/21/2022 13:47
5447586	12/20/2022 15:58	4735 CANE RUN RD LOUISVILLE KY 40216-0000	12/29/2022 16:35
5447756	12/22/2022 12:46	2659 ROWAN ST LOUISVILLE KY 40212-0000	12/22/2022 16:00
5447757	12/22/2022 12:47	1743 BELMAR DR LOUISVILLE KY 40213-0000	12/22/2022 15:38
5447869	12/25/2022 16:17	4000 MASSIE AVE ST MATTHEWS KY 40207-0000	12/25/2022 17:15
5447893	12/26/2022 12:03	2310 W JEFFERSON ST LOUISVILLE KY 40212-0000	12/26/2022 15:29
5447995	12/27/2022 18:30	6503 EL RANCHO RD LOUISVILLE KY 40291-0000	12/27/2022 19:55
5447999	12/27/2022 21:12	1400 STORY AVE LOUISVILLE KY 40206-0000	12/27/2022 10:30
5448044	12/28/2022 10:40	4623 PRESTON HWY LOUISVILLE KY 40213-0000	12/28/2022 11:53
5448074	12/28/2022 14:07	501 MOCKINGBIRD VALLEY RD LOUISVILLE KY 40207-0000	12/29/2022 7:36
5448170	12/29/2022 11:49	9502 DEER TRAIL PL LOUISVILLE KY 40228-0000	12/29/2022 13:08
5448171	12/29/2022 11:59	11604 SUMMER GLEN WAY LOUISVILLE KY 40299-0000	5/6/2023 15:00
5448185	12/29/2022 14:25	1714 W KENTUCKY ST LOUISVILLE KY 40210-0000	12/30/2022 12:32
5448276	12/30/2022 13:56	3304 W KENTUCKY ST LOUISVILLE KY 40211-0000	12/31/2022 14:11
5448364	1/2/2023 9:23	2615 GARLAND AVE LOUISVILLE KY 40211-0000	1/2/2023 10:20
5448369	1/2/2023 10:42	2809 SUMMERFIELD DR LOUISVILLE KY 40220-0000	1/2/2023 10:55
5448481	1/3/2023 9:16	8009 JUDGE BLVD LOUISVILLE KY 40219-0000	1/3/2023 16:45
5448525	1/3/2023 10:10	9613 MARY DELL LN LOUISVILLE KY 40291-0000	1/3/2023 21:45
5448540	1/3/2023 10:40	121 N SKYLINE DR Louisville KY 40229	1/3/2023 11:56
5448586	1/3/2023 11:45	14909 BIRCHAM RD LOUISVILLE KY 40245-0000	1/9/2023 7:16
5448710	1/3/2023 15:30	8008 JUDGE BLVD LOUISVILLE KY 40219-0000	1/4/2023 16:27
5448842	1/4/2023 9:31	8203 JENNY LIND DR LOUISVILLE KY 40219-0000	1/4/2023 17:43
5448907	1/4/2023 13:21	5340 BARDSTOWN RD LOUISVILLE KY 40291-0000	1/4/2023 14:50
5448916	1/4/2023 14:04	9909 ROUNDSTONE TRCE JEFFERSONTOWN KY 40223-0000	
5448925	1/4/2023 14:41	4403 RONDEAN DR LOUISVILLE KY 40216-0000	2/24/2023 13:00
5448941	1/4/2023 15:28	2108 BARINGER AVE LOUISVILLE KY 40204-0000	1/4/2023 18:50
5449043	1/5/2023 9:44	9703 CEDAR LAKE DR LOUISVILLE KY 40291-0000	1/5/2023 12:53
5449061	1/5/2023 10:55	6306 POWDER HORN DR LOUISVILLE KY 40216-0000	1/9/2023 14:30
5449062	1/5/2023 10:59	604 WILLOW BROOK RD WOODLAND HILLS KY 40243-0000	1/7/2023 10:57
5449063	1/5/2023 11:00	1100 E BROADWAY LOUISVILLE KY 40204-0000	
5449087	1/5/2023 12:10	9212 MAPLE RD LOUISVILLE KY 40229-0000	1/5/2023 14:20
5449123	1/5/2023 14:13	2724 W MADISON ST LOUISVILLE KY 40211-0000	1/5/2023 18:36
5449133	1/5/2023 15:13	4519 SANDHILL RD LOUISVILLE KY 40219-0000	1/5/2023 17:00
5449145	1/5/2023 16:14	7804 MARY SUE DR LOUISVILLE KY 40291-0000	1/5/2023 18:40
5449169	1/5/2023 10:15	1905 DUBOURG AVE SHIVELY KY 40216-0000	1/6/2023 10:42
5449193	1/6/2023 13:04	1145 EVERETT AVE LOUISVILLE KY 40204-0000	1/6/2023 16:10
5449227	1/6/2023 15:29	2731 GREENWOOD AVE LOUISVILLE KY 40211-0000	1/23/2023 10:00
5449491	1/9/2023 14:19	4014 SIRATE LN LOUISVILLE KY 40229-0000	1/9/2023 19:13
5449604	1/10/2023 9:10	1005 W JEFFERSON ST LOUISVILLE KY 40203-0000	1/10/2023 11:12
5449696	1/10/2023 17:29	3302 BENT CREEK CT 1 LOUISVILLE KY 40218-0000	1/10/2023 18:27
5449838	1/11/2023 17:59	3610 WOODRUFF AVE LOUISVILLE KY 40215-0000	1/12/2023 10:24
5449964	1/12/2023 14:41	120 N 10TH ST LOUISVILLE KY 40202-0000	1/12/2023 17:00
5449982	1/12/2023 16:07	1 QUALITY PL BUCKNER KY 40010-0000	2/15/2023 7:08
5450110	1/13/2023 15:44	2713 GRINSTEAD DR 1 LOUISVILLE KY 40206-0000	2/1/2023 10:15
5450116	1/13/2023 16:56	442 BIG VALLEY DR Shepherdsville KY 40165	1/31/2023 12:06
5450217	1/16/2023 12:42	13301 DATA VAULT DR MIDDLETOWN KY 40223-0000	
5450237	1/16/2023 16:28	1108 FENLEY AVE ST MATTHEWS KY 40222-0000	1/16/2023 18:12
5450270	1/17/2023 7:06	13159 MIDDLETOWN INDUSTRIAL BLVD MIDDLETOWN KY 40223-0000	
5450285	1/17/2023 9:38	600 N BECKLEY STATION RD LOUISVILLE KY 40245-0000	
5450380	1/17/2023 15:58	2515 MONTGOMERY ST LOUISVILLE KY 40212-0000	1/18/2023 10:46
5450473	1/18/2023 9:35	1005 W JEFFERSON ST LOUISVILLE KY 40203-0000	1/18/2023 11:54
5450540	1/18/2023 15:30	2012 STARMONT RD RIVERWOOD KY 40207-0000	1/18/2023 16:50
5450611	1/19/2023 9:23	8933 LA COSTA RD JEFFERSONTOWN KY 40299-0000	
5450619	1/19/2023 10:39	1410 S 28TH ST LOUISVILLE KY 40211-0000	3/3/2023 9:42

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5450622	1/19/2023 10:45	3123 MAYWOOD PL LOUISVILLE KY 40220-0000	1/20/2023 11:29
5450645	1/19/2023 12:46	1157 S 1ST ST 1 LOUISVILLE KY 40203-0000	1/30/2023 8:24
5450822	1/20/2023 16:08	2202 THURMAN DR SHIVELY KY 40216-0000	1/20/2023 17:45
5450830	1/20/2023 18:06	424 MAC BRAE RD LOUISVILLE KY 40214-0000	1/22/2023 15:29
5450842	1/21/2023 11:20	2607 STONY BROOK DR JEFFERSONTOWN KY 40220-0000	1/22/2023 12:00
5451129	1/24/2023 14:36	3616 RUDD AVE LOUISVILLE KY 40212-0000	1/24/2023 15:51
5451138	1/24/2023 15:41	5121 COMMERCE CROSSINGS DR LOUISVILLE KY 40229-0000	1/25/2023 16:16
5451220	1/25/2023 9:32	12605 BERNAY PL MIDDLETOWN KY 40243-0000	1/25/2023 11:25
5451283	1/25/2023 17:18	432 E ORMSBY AVE LOUISVILLE KY 40203-0000	
5451474	1/27/2023 10:14	1733 BARDSTOWN RD LOUISVILLE KY 40205-0000	1/27/2023 11:50
5451526	1/27/2023 15:33	5201 COMMERCE CROSSINGS DR LOUISVILLE KY 40229-0000	1/31/2023 15:25
5451553	1/28/2023 9:06	7418 E ORCHARD GRASS BLVD CRESTWOOD KY 40014-0000	6/6/2023 12:00
5451566	1/28/2023 20:28	2418 ELMHURST AVE LOUISVILLE KY 40216-0000	1/29/2023 12:35
5451579	1/29/2023 16:28	2190 S HURSTBOURNE PKY HURSTBOURNE ACRES KY 40220-0000	2/2/2023 18:39
5451712	1/30/2023 13:47	13820 OLD HENRY RD LOUISVILLE KY 40245-0000	1/30/2023 15:00
5451733	1/30/2023 16:22	2639 GARLAND AVE LOUISVILLE KY 40211-0000	1/30/2023 17:43
5451831	1/31/2023 13:35	731 E JACOB ST LOUISVILLE KY 40203-0000	
5451962	2/1/2023 13:13	2947 7TH STREET RD LOUISVILLE KY 40216-0000	2/2/2023 11:55
5451966	2/1/2023 13:51	2233 S PRESTON ST 201 LOUISVILLE KY 40217-0000	3/16/2023 14:15
5451971	2/1/2023 14:42	6309 HACKBERRY WAY LOUISVILLE KY 40229-0000	2/21/2023 15:00
5452172	2/3/2023 11:15	3700 LONGVIEW RD JEFFERSONTOWN KY 40299-0000	3/2/2023 22:41
5452180	2/3/2023 12:13	717 COLORADO AVE LOUISVILLE KY 40208-0000	2/3/2023 19:15
5452218	2/4/2023 8:24	4111 VALLEY STATION RD LOUISVILLE KY 40272-0000	2/4/2023 9:24
5452385	2/6/2023 14:44	5418 NAVAJO RD INDIAN HILLS KY 40207-0000	2/10/2023 15:00
5452391	2/6/2023 15:33	3001 WHITEWAY AVE LOUISVILLE KY 40205-0000	2/7/2023 11:57
5452402	2/6/2023 16:12	9 BAYSIDE CT SHIVELY KY 40216-0000	2/7/2023 17:25
5452481	2/7/2023 7:11	9105 WILLOWCREEK DR LOUISVILLE KY 40219-0000	2/7/2023 10:08
5452567	2/7/2023 15:39	2112 CANTERBROOK DR FOREST HILLS KY 40299-0000	2/7/2023 17:46
5452818	2/9/2023 13:35	122 S CRESTMOOR AVE LOUISVILLE KY 40206-0000	2/9/2023 14:35
5452911	2/10/2023 9:15	3115 REDBUD LN LOUISVILLE KY 40220-0000	2/10/2023 9:40
5452927	2/10/2023 11:55	4019 NORBOURNE BLVD NORBOURNE ESTATES KY 40207-0000	2/10/2023 12:47
5452961	2/11/2023 10:20	2310 W JEFFERSON ST LOUISVILLE KY 40212-0000	
5453087	2/13/2023 14:49	2900 BLANKENBAKER PKY 110 JEFFERSONTOWN KY 40299-0000	2/16/2023 15:05
5453115	2/13/2023 17:56	5001 RAMONA LN LOUISVILLE KY 40272-0000	2/24/2023 15:00
5453174	2/14/2023 9:14	7309 WATSON LN LOUISVILLE KY 40272-0000	2/15/2023 16:13
5453300	2/15/2023 7:31	1519 CRUMS LN 1 LOUISVILLE KY 40216-0000	2/15/2023 10:10
5453308	2/15/2023 9:21	261 HALDEMAN AVE LOUISVILLE KY 40206-0000	2/15/2023 10:00
5453333	2/15/2023 12:10	612 ORCHARD HILL DR LOUISVILLE KY 40214-0000	2/15/2023 14:14
5453375	2/15/2023 17:50	1204 EASTERN PKY LOUISVILLE KY 40204-0000	2/15/2023 19:45
5453496	2/16/2023 10:14	1015 MAGAZINE ST LOUISVILLE KY 40203-0000	2/16/2023 14:45
5453528	2/16/2023 12:06	8800 ADMIRAL DR LOUISVILLE KY 40229-0000	2/16/2023 12:47
5453532	2/16/2023 12:25	9123 GAYLE DR LOUISVILLE KY 40272-0000	2/16/2023 13:55
5453541	2/16/2023 12:56	5205 RONWOOD DR LOUISVILLE KY 40219-0000	2/21/2023 15:36
5453596	2/16/2023 14:37	6903 YUMA WAY LOUISVILLE KY 40258-0000	2/16/2023 17:23
5453616	2/16/2023 15:50	4528 W BROADWAY 1 LOUISVILLE KY 40211-0000	7/6/2023 10:00
5453623	2/16/2023 16:06	721 W BRECKINRIDGE ST LOUISVILLE KY 40203-0000	2/16/2023 17:40
5453723	2/17/2023 12:05	2816 MILBURN AVE ST REGIS PARK KY 40220-0000	2/17/2023 13:31
5453735	2/17/2023 13:04	201 MARSHALL DR BEECHWOOD VILLAGE KY 40207-0000	2/17/2023 14:06
5453792	2/18/2023 12:13	5919 BLUESTONE RD LOUISVILLE KY 40219-0000	2/19/2023 13:56
5454050	2/21/2023 8:49	1015 MAGAZINE ST LOUISVILLE KY 40203-0000	
5454090	2/21/2023 13:05	2719 GRINSTEAD DR 1 LOUISVILLE KY 40206-0000	2/22/2023 10:49
5454092	2/21/2023 13:26	5607 BRISCOE LN LOUISVILLE KY 40219-0000	2/22/2023 15:54
5454095	2/21/2023 13:47	1900 STRATHMOOR BLVD LOUISVILLE KY 40205-0000	2/21/2023 13:30
5454113	2/21/2023 14:40	524 WARNOCK ST LOUISVILLE KY 40217-0000	9/29/2023 14:00
5454209	2/22/2023 9:57	1633 W OAK ST LOUISVILLE KY 40210-0000	2/22/2023 10:10
5454224	2/22/2023 11:06	1325 TENNESSEE AVE LOUISVILLE KY 40208-0000	2/22/2023 12:13
5454263	2/22/2023 14:43	3318 ENDEAVOR WAY LOUISVILLE KY 40219-0000	2/22/2023 16:16
5454293	2/22/2023 16:16	6601 STRAWBERRY LN 1 LOUISVILLE KY 40214-0000	2/22/2023 17:00
5454491	2/24/2023 9:01	9211 WILDWOOD LN LOUISVILLE KY 40272-0000	2/28/2023 16:22
5454512	2/24/2023 12:48	206 W GAULBERT AVE LOUISVILLE KY 40208-0000	2/24/2023 14:30
5454528	2/24/2023 14:45	110 N RASTETTER AVE LOUISVILLE KY 40206-0000	3/9/2023 14:30
5454543	2/25/2023 12:18	2825 YORKSHIRE BLVD LOUISVILLE KY 40220-0000	2/28/2023 7:56
5454558	2/26/2023 15:07	1538 BERRY BLVD LOUISVILLE KY 40215-0000	2/26/2023 17:20

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5454564	2/26/2023 19:14	223 W WOODLAWN AVE LOUISVILLE KY 40214-0000	2/27/2023 12:03
5454697	2/27/2023 13:20	7816 WHIPPERWILL RD LOUISVILLE KY 40214-0000	2/28/2023 12:07
5454704	2/27/2023 13:54	731 W WHITNEY AVE LOUISVILLE KY 40215-0000	2/27/2023 14:50
5454815	2/28/2023 9:24	1326 S PRESTON ST LOUISVILLE KY 40208-0000	2/28/2023 13:41
5454818	2/28/2023 9:34		2/28/2023 8:20
5454824	2/28/2023 10:05	232 S 41ST ST LOUISVILLE KY 40212-0000	2/28/2023 16:25
5454846	2/28/2023 12:04	4410 SHASTA TRL LOUISVILLE KY 40213-0000	2/28/2023 17:20
5454870	2/28/2023 14:58	6617 GABRIEL DR LOUISVILLE KY 40258-0000	3/1/2023 8:37
5455013	3/1/2023 15:39	3924 KENNISON AVE ST MATTHEWS KY 40207-0000	3/1/2023 16:43
5455015	3/1/2023 15:50	502 HILLSIDE LN ST MATTHEWS KY 40207-0000	3/1/2023 18:45
5455016	3/1/2023 15:52	9843 3RD STREET RD LOUISVILLE KY 40272-0000	3/2/2023 14:36
5455079	3/2/2023 9:56	2960 RIO RITA AVE LOUISVILLE KY 40220-0000	3/2/2023 11:50
5455188	3/3/2023 8:06	8414 PEGGY DR LOUISVILLE KY 40219-0000	3/3/2023 10:25
5455222	3/3/2023 8:56	3423 FOUNTAIN DR 1 WEST BUECHEL KY 40218-0000	3/4/2023 12:00
5455346	3/3/2023 11:04	4739 DIXIE HWY LOUISVILLE KY 40216-0000	3/3/2023 16:56
5455396	3/3/2023 13:25	300 SHORT RD BEECHWOOD VILLAGE KY 40207-0000	3/3/2023 17:00
5455397	3/3/2023 13:28	4601 BEAVER RD BEECHWOOD VILLAGE KY 40207-0000	3/3/2023 17:00
5455446	3/3/2023 14:58	131 SPRINGWOOD DR Louisville KY 40229	3/3/2023 16:24
5455464	3/3/2023 15:44	9001 ELI DR LOUISVILLE KY 40291-0000	3/3/2023 23:10
5455466	3/3/2023 15:48	9613 MARY DELL LN LOUISVILLE KY 40291-0000	3/3/2023 23:15
5455530	3/3/2023 23:17	14500 ASHMONT PL LOUISVILLE KY 40245-0000	3/4/2023 0:54
5455532	3/4/2023 0:04	10632 GLEN EAGLE PL LOUISVILLE KY 40223-0000	3/4/2023 3:10
5455539	3/4/2023 11:03	2416 LAMBORNE BLVD LOUISVILLE KY 40272-0000	3/4/2023 15:14
5455553	3/4/2023 12:25	9708 HUNTING GROUND CT LOUISVILLE KY 40228-0000	3/4/2023 13:51
5455602	3/5/2023 14:23	814 ECHO BRIDGE RD MIDDLETOWN KY 40243-0000	3/14/2023 18:51
5455604	3/5/2023 14:50	3701 MODESTO RD JEFFERSONTOWN KY 40299-0000	3/8/2023 11:16
5455606	3/5/2023 15:32	1728 HAROLD AVE LOUISVILLE KY 40210-0000	3/5/2023 17:00
5455740	3/6/2023 12:38	4500 CHURCHMAN AVE LOUISVILLE KY 40215-0000	3/6/2023 14:30
5455763	3/6/2023 13:53	2217 GRINSTEAD DR 1 LOUISVILLE KY 40204-0000	3/6/2023 20:17
5455765	3/6/2023 13:54	1011 E OAK ST LOUISVILLE KY 40204-0000	4/21/2023 14:00
5455796	3/6/2023 16:07	4424 DANNYWOOD RD ST REGIS PARK KY 40220-0000	3/6/2023 18:25
5455927	3/7/2023 15:58	1107 LEHIGH AVE LOUISVILLE KY 40215-0000	3/7/2023 16:43
5455993	3/8/2023 7:41	1120 BLACKTHORN RD MIDDLETOWN KY 40299-0000	3/10/2023 14:23
5456001	3/8/2023 9:47	4208 BILTOWN RD JEFFERSONTOWN KY 40299-0000	3/8/2023 15:29
5456005	3/8/2023 10:13	121 WILLIAM ST LOUISVILLE KY 40206-0000	3/8/2023 12:30
5456321	3/10/2023 17:06	7005 PENFIELD PL PROSPECT KY 40059-0000	3/10/2023 20:00
5456335	3/11/2023 11:58	707 DANESHALL DR LOUISVILLE KY 40206-0000	3/13/2023 13:26
5456341	3/11/2023 16:51	3115 MARLIN RD HOUSTON ACRES KY 40220-0000	3/14/2023 14:52
5456357	3/12/2023 20:59	8300 ADAMS RUN RD LOUISVILLE KY 40228-0000	3/13/2023 14:15
5456464	3/13/2023 11:15	10601 TORRINGTON RD LOUISVILLE KY 40272-0000	3/30/2023 23:33
5456510	3/13/2023 14:19	1101 E WASHINGTON ST LOUISVILLE KY 40206-0000	3/15/2023 13:35
5456748	3/15/2023 8:04	911 GRADE LN LOUISVILLE KY 40213-0000	3/15/2023 9:38
5456825	3/15/2023 16:45	3122 KINGSWOOD WAY SHIVELY KY 40216-0000	3/15/2023 17:35
5456882	3/16/2023 9:31	4419 CAMPOBELLO ST LOUISVILLE KY 40213-0000	3/17/2023 9:00
5456896	3/16/2023 11:19	118 S HITE AVE LOUISVILLE KY 40206-0000	3/16/2023 12:02
5456901	3/16/2023 11:46	9510 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000	7/5/2023 9:04
5456930	3/16/2023 14:54	1330 HULL ST LOUISVILLE KY 40204-0000	3/17/2023 11:00
5456943	3/16/2023 15:58	1429 S 32ND ST LOUISVILLE KY 40211-0000	3/16/2023 17:10
5456949	3/16/2023 17:47	4665 CLIFF AVE LOUISVILLE KY 40215-0000	3/16/2023 18:25
5456950	3/16/2023 17:49	8518 HUNTING STOCK PL LOUISVILLE KY 40291-0000	3/20/2023 10:45
5457002	3/17/2023 9:02	1900 RAMSER CT 1 SHIVELY KY 40216-0000	3/17/2023 12:23
5457046	3/17/2023 12:36	1255 DIXIE HWY LOUISVILLE KY 40210-0000	3/17/2023 15:14
5457093	3/17/2023 16:16	8202 THORNWOOD RD LOUISVILLE KY 40220-0000	3/19/2023 18:01
5457182	3/20/2023 11:01	212 W GAULBERT AVE LOUISVILLE KY 40208-0000	3/20/2023 14:00
5457348	3/21/2023 9:45	1900 RAMSER CT 1 SHIVELY KY 40216-0000	3/21/2023 11:13
5457425	3/21/2023 17:05	1719 SONNE AVE SHIVELY KY 40216-0000	3/22/2023 10:15
5457668	3/23/2023 13:38	4080 TAYLORSVILLE RD LOUISVILLE KY 40220-0000	3/23/2023 15:48
5457770	3/24/2023 10:44	1540 ESKRIDGE LN LOUISVILLE KY 40216-0000	3/24/2023 14:31
5457850	3/25/2023 3:35	8414 PEGGY DR LOUISVILLE KY 40219-0000	3/25/2023 4:20
5457896	3/25/2023 15:59	3252 CROSS BILL RD AUDUBON PARK KY 40213-0000	3/25/2023 20:20
5457915	3/26/2023 16:50	2702 KENNELSLEY DR LANGDON PLACE KY 40242-0000	3/27/2023 9:36
5457917	3/26/2023 17:48	5414 RAYMARY DR LOUISVILLE KY 40272-0000	3/26/2023 19:45
5457989	3/27/2023 8:06	6511 MOUNT WASHINGTON RD LOUISVILLE KY 40229-0000	3/27/2023 9:12

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5458049	3/27/2023 11:42	8704 WOODED TRAIL CT JEFFERSONTOWN KY 40220-0000	3/27/2023 15:12
5458105	3/27/2023 15:54	701 WATERFORD RD WINDY HILLS KY 40207-0000	
5458129	3/27/2023 17:26	12509 GEMINI WAY MIDDLETOWN KY 40243-0000	3/27/2023 18:45
5458218	3/28/2023 10:12	5720 BARDSTOWN RD LOUISVILLE KY 40291-0000	3/28/2023 14:20
5458265	3/28/2023 13:40	122 S CRESTMOOR AVE LOUISVILLE KY 40206-0000	3/29/2023 15:23
5458366	3/29/2023 7:43	3508 W BROADWAY LOUISVILLE KY 40211-0000	3/29/2023 10:40
5458385	3/29/2023 10:36	1620 HALE AVE LOUISVILLE KY 40210-0000	3/29/2023 12:45
5458388	3/29/2023 10:49	1218 S 3RD ST LOUISVILLE KY 40203-0000	3/29/2023 13:10
5458494	3/30/2023 9:21	6502 MISSIONARY RIDGE DR PEWEE VALLEY KY 40056-0000	3/30/2023 10:30
5458495	3/30/2023 9:23	1806 ABERDEEN DR LOUISVILLE KY 40205-0000	4/3/2023 0:00
5458506	3/30/2023 10:46	3010 ZORN AVE LOUISVILLE KY 40206-0000	3/30/2023 13:37
5458543	3/30/2023 15:41	1717 SONNE AVE SHIVELY KY 40216-0000	3/30/2023 16:50
5458615	3/31/2023 8:15	6701 TAMARIND CT LOUISVILLE KY 40219-0000	3/31/2023 12:15
5458688	4/1/2023 11:08	901 W JEFFERSON ST LOUISVILLE KY 40202-0000	
5458709	4/2/2023 14:23	14103 WATERSIDE CT LOUISVILLE KY 40245-0000	4/24/2023 14:56
5458854	4/3/2023 13:47	2719 GRINSTEAD DR 1 LOUISVILLE KY 40206-0000	4/3/2023 16:42
5458881	4/3/2023 15:34	2530 AUTUMN LAKE DR LOUISVILLE KY 40272-0000	4/4/2023 7:27
5459023	4/4/2023 13:41	421 S 2ND ST LOUISVILLE KY 40202-0000	4/4/2023 16:34
5459026	4/4/2023 13:49	1213 S 1ST ST LOUISVILLE KY 40203-0000	4/5/2023 10:00
5459286	4/6/2023 12:09	3966 CANE RUN RD LOUISVILLE KY 40211-0000	4/6/2023 12:50
5459365	4/7/2023 11:50	1524 S 31ST ST LOUISVILLE KY 40211-0000	4/7/2023 20:01
5459405	4/7/2023 16:31	2028 BRUCE AVE LOUISVILLE KY 40218-0000	
5459424	4/8/2023 14:07	5006 S 4TH ST LOUISVILLE KY 40214-0000	4/8/2023 14:45
5459429	4/8/2023 16:58	350 W CHESTNUT ST LOUISVILLE KY 40202-0000	4/8/2023 18:03
5459433	4/9/2023 12:12	700 COMPTON ST LOUISVILLE KY 40208-0000	
5459544	4/10/2023 10:58	219 RIDGEWAY AVE ST MATTHEWS KY 40207-0000	4/10/2023 12:20
5459572	4/10/2023 13:40	1038 ELLISON AVE LOUISVILLE KY 40204-0000	4/10/2023 14:28
5459739	4/11/2023 16:36	11330 MAIN ST DOUGLASS HILLS KY 40243-0000	4/17/2023 11:30
5459744	4/11/2023 19:27	1112 HERR LN ST MATTHEWS KY 40222-0000	4/11/2023 20:30
5459877	4/12/2023 14:00	12525 SHELBYVILLE RD MIDDLETOWN KY 40243-0000	4/12/2023 17:07
5459879	4/12/2023 14:33	4238 WESTPORT RD ST MATTHEWS KY 40207-0000	4/12/2023 20:41
5459952	4/13/2023 10:51	1524 S 31ST ST LOUISVILLE KY 40211-0000	
5460061	4/14/2023 9:46	2737 ALFORD AVE LOUISVILLE KY 40212-0000	4/14/2023 10:45
5460093	4/14/2023 12:01	3104 MAYWOOD PL LOUISVILLE KY 40220-0000	4/21/2023 10:29
5460265	4/17/2023 11:37	11612 KINGS LN MIDDLETOWN KY 40243-0000	
5460317	4/17/2023 20:24	1433 TYLER PARK DR LOUISVILLE KY 40204-0000	4/17/2023 22:15
5460394	4/18/2023 9:47	10400 MONTICELLO FOREST CIR JEFFERSONTOWN KY 40299-0000	4/18/2023 10:52
5460400	4/18/2023 10:32	127 N HUBBARDS LN RICHLAWN KY 40207-0000	4/18/2023 13:21
5460408	4/18/2023 11:24	2101 CARDINAL WOODS DR 1 LOUISVILLE KY 40214-0000	4/18/2023 14:23
5460409	4/18/2023 11:48	3105 KIPLING WAY LOUISVILLE KY 40205-0000	9/28/2023 9:06
5460544	4/19/2023 12:26	8506 JAN WAY LOUISVILLE KY 40219-0000	4/21/2023 13:00
5460564	4/19/2023 13:44	3602 PINECROFT DR LOUISVILLE KY 40219-0000	4/19/2023 15:30
5460590	4/19/2023 21:54	121 SOUTHVIEW TER LOUISVILLE KY 40214-0000	5/15/2023 16:22
5460664	4/20/2023 10:12	1942 BEECH ST LOUISVILLE KY 40210-0000	4/20/2023 12:30
5460700	4/20/2023 16:18	9614 LANCEWOOD RD LOUISVILLE KY 40229-0000	5/10/2023 15:00
5460767	4/21/2023 11:04	11704 KINGS LN MIDDLETOWN KY 40243-0000	4/21/2023 13:06
5460788	4/21/2023 15:13	12400 TYLER WOODS CT LOUISVILLE KY 40299-0000	4/24/2023 12:40
5460789	4/21/2023 15:19	828 W EVELYN AVE LOUISVILLE KY 40215-0000	4/21/2023 17:31
5460932	4/24/2023 11:31	3726 LUKEN DR SHIVELY KY 40216-0000	4/27/2023 14:15
5461045	4/25/2023 8:40	434 W MARKET ST LOUISVILLE KY 40202-0000	5/2/2023 8:53
5461193	4/26/2023 11:06	2921 DIXIE HWY SHIVELY KY 40216-0000	4/27/2023 15:52
5461310	4/27/2023 14:02	6029 COOPER CHAPEL RD LOUISVILLE KY 40229-0000	4/27/2023 19:02
5461329	4/27/2023 15:59	1261 BASSETT AVE LOUISVILLE KY 40204-0000	4/28/2023 17:30
5461416	4/28/2023 14:44	8515 COCO CT LOUISVILLE KY 40219-0000	4/29/2023 15:46
5461417	4/28/2023 14:57	10101 JOHN ASHLEY CT JEFFERSONTOWN KY 40299-0000	5/8/2023 7:18
5461436	4/29/2023 9:57	1220 S 3RD ST 1 LOUISVILLE KY 40203-0000	4/29/2023 11:45
5461447	4/30/2023 13:43	3524 GLADDEN DR LOUISVILLE KY 40218-0000	
5461549	5/1/2023 10:32	4108 BANK ST LOUISVILLE KY 40212-0000	5/1/2023 14:56
5461579	5/1/2023 13:52	12311 ST CLAIR DR MIDDLETOWN KY 40243-0000	5/1/2023 14:53
5461590	5/1/2023 14:32	7505 MARIE ANNA DR LOUISVILLE KY 40258-0000	5/31/2023 7:26
5461599	5/1/2023 15:36	135 E WELLINGTON AVE LOUISVILLE KY 40214-0000	5/1/2023 16:35
5461608	5/1/2023 18:58	5503 WESTHALL AVE LOUISVILLE KY 40214-0000	5/1/2023 20:40
5461716	5/2/2023 14:42	215 NORBOURNE BLVD ST MATTHEWS KY 40207-0000	5/2/2023 16:18

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5461737	5/2/2023 16:26	6008 COOPER CHAPEL RD LOUISVILLE KY 40229-0000	5/2/2023 17:30
5461821	5/3/2023 13:52	2619 W MADISON ST LOUISVILLE KY 40211-0000	5/4/2023 15:00
5461841	5/3/2023 17:13	908 EXMOOR AVE LOUISVILLE KY 40223-0000	5/23/2023 5:46
5461846	5/3/2023 18:20	7206 GRAY LN LOUISVILLE KY 40258-0000	5/4/2023 0:00
5461905	5/4/2023 11:05	9216 BLUE LICK RD LOUISVILLE KY 40229-0000	5/4/2023 14:15
5461997	5/5/2023 13:04	1515 CYPRESS ST LOUISVILLE KY 40210-0000	5/6/2023 9:54
5462007	5/5/2023 14:28	12016 SHELBYVILLE RD MIDDLETOWN KY 40243-0000	5/5/2023 18:00
5462017	5/5/2023 16:44	537 DR W J HODGE ST LOUISVILLE KY 40203-0000	5/31/2023 15:15
5462019	5/5/2023 18:07	1601 STORY AVE LOUISVILLE KY 40206-0000	5/8/2023 13:08
5462165	5/8/2023 13:59	13405 HORNCastle WAY LOUISVILLE KY 40272-0000	5/9/2023 21:57
5462186	5/8/2023 16:01	4114 BOLLING BROOK DR LOUISVILLE KY 40299-0000	5/8/2023 18:55
5462208	5/8/2023 21:45	10111 GRAND AVE JEFFERSONTOWN KY 40299-0000	5/22/2023 18:50
5462285	5/9/2023 10:51	4623 DOVER RD LOUISVILLE KY 40216-0000	5/9/2023 13:00
5462305	5/9/2023 12:20	501 W MUHAMMAD ALI BLVD LOUISVILLE KY 40202-0000	5/10/2023 17:19
5462412	5/10/2023 11:10	3903 SERENE WAY LOUISVILLE KY 40219-0000	5/10/2023 13:49
5462473	5/10/2023 19:15	2414 TRADITION CIR LOUISVILLE KY 40245-0000	
5462683	5/12/2023 13:35	720 S 15TH ST LOUISVILLE KY 40210-0000	5/12/2023 14:47
5462693	5/12/2023 15:33	501 W MUHAMMAD ALI BLVD LOUISVILLE KY 40202-0000	5/12/2023 16:07
5462727	5/14/2023 19:33	6000 ROCKY MOUNTAIN DR LOUISVILLE KY 40219-0000	5/14/2023 20:50
5462841	5/15/2023 11:03	6607 MONTY LN LOUISVILLE KY 40291-0000	
5462874	5/15/2023 15:22	5300 ALICANTE LN LOUISVILLE KY 40272-0000	5/16/2023 9:55
5462906	5/15/2023 18:02	2349 VALLETTA LN LOUISVILLE KY 40205-0000	5/31/2023 14:00
5463092	5/16/2023 18:42	1101 E BURNETT AVE LOUISVILLE KY 40217-0000	5/17/2023 8:25
5463187	5/17/2023 11:52	5123 COOL BROOK RD LOUISVILLE KY 40291-0000	5/19/2023 10:17
5463218	5/17/2023 15:35	300 E WITHERSPOON ST LOUISVILLE KY 40202-0000	5/18/2023 10:32
5463290	5/18/2023 9:20	8909 ZABEL WAY LOUISVILLE KY 40291-0000	10/11/2023 15:21
5463293	5/18/2023 9:31	6601 ANGUS CT CRESTWOOD KY 40014-0000	6/8/2023 14:32
5463300	5/18/2023 10:49	2701 ALGONQUIN PKY LOUISVILLE KY 40210-0000	5/18/2023 12:31
5463416	5/19/2023 10:01	506 HILL RIDGE RD LOUISVILLE KY 40214-0000	5/19/2023 15:00
5463425	5/19/2023 11:32	3910 LELAND RD BELLEWOOD KY 40207-0000	5/19/2023 13:36
5463447	5/19/2023 15:30	2619 GARLAND AVE LOUISVILLE KY 40211-0000	5/19/2023 16:50
5463466	5/20/2023 11:52	4808 NOTTINGHAMSHIRE DR JEFFERSONTOWN KY 40299-0000	5/20/2023 13:37
5463467	5/20/2023 13:03	607 N ARBOR DR ANCHORAGE KY 40223-0000	6/15/2023 10:34
5463479	5/20/2023 20:51	3610 GREEN MEADOWS DR A1 LOUISVILLE KY 40218-0000	5/20/2023 23:20
5463616	5/22/2023 13:35	2409 VINEDALE AVE LOUISVILLE KY 40220-0000	5/26/2023 5:45
5463639	5/22/2023 16:16	1400 HUNTOON AVE LOUISVILLE KY 40215-0000	5/25/2023 15:00
5463770	5/23/2023 15:15	6804 COVE CT LOUISVILLE KY 40291-0000	5/25/2023 11:18
5463792	5/23/2023 18:30	2645 SEMINARY DR LOUISVILLE KY 40241-0000	5/23/2023 22:35
5463847	5/24/2023 9:40	2210 ARNOLD PALMER BLVD LOUISVILLE KY 40245-0000	5/26/2023 15:55
5463859	5/24/2023 11:52	4625 KIEFER RD SHIVELY KY 40216-0000	5/25/2023 10:20
5463895	5/24/2023 15:27	3117 MONTANA AVE LOUISVILLE KY 40208-0000	5/24/2023 17:15
5463899	5/24/2023 15:54	2902 WINTERHAVEN RD LOUISVILLE KY 40220-0000	
5463909	5/24/2023 17:36	7895 DIXIE HWY LOUISVILLE KY 40258-0000	5/24/2023 19:30
5463986	5/25/2023 14:34	310 CAPLE AVE LOUISVILLE KY 40118-0000	5/25/2023 15:50
5464079	5/26/2023 10:14	1419 MILL RACE RD LYNDON KY 40242-0000	5/26/2023 11:46
5464080	5/26/2023 10:17	9806 LINN STATION RD JEFFERSONTOWN KY 40223-0000	5/30/2023 12:15
5464098	5/26/2023 13:17	10101 DIXIE HWY LOUISVILLE KY 40272-0000	5/27/2023 8:34
5464101	5/26/2023 13:54	1461 S 4TH ST LOUISVILLE KY 40208-0000	5/26/2023 16:17
5464121	5/27/2023 19:03	1804 DIXIE HWY LOUISVILLE KY 40210-0000	5/27/2023 19:45
5464139	5/28/2023 18:15	4300 CAMP GROUND RD LOUISVILLE KY 40216-0000	5/31/2023 7:00
5464204	5/29/2023 19:57	911 EASTWOOD FISHERVILLE RD LOUISVILLE KY 40023-0000	5/30/2023 9:09
5464264	5/30/2023 12:59	3926 GRAF DR LOUISVILLE KY 40220-0000	5/30/2023 14:55
5464266	5/30/2023 13:10	3116 BRECKENRIDGE LN LOUISVILLE KY 40220-0000	5/30/2023 16:40
5464287	5/30/2023 15:18	7332 W ORCHARD GRASS BLVD CRESTWOOD KY 40014-0000	5/30/2023 17:11
5464294	5/30/2023 16:50	1110 HERR LN ST MATTHEWS KY 40222-0000	5/30/2023 18:38
5464433	5/31/2023 15:22	501 W MUHAMMAD ALI BLVD LOUISVILLE KY 40202-0000	5/31/2023 16:41
5464503	6/1/2023 9:08	6813 WALLER LN LOUISVILLE KY 40258-0000	6/1/2023 17:27
5464522	6/1/2023 13:15	2512 GARDINER LN LOUISVILLE KY 40205-0000	6/1/2023 18:35
5464527	6/1/2023 14:26	3101 CHURCHILL PL 101 LOUISVILLE KY 40220-0000	6/2/2023 10:09
5464552	6/1/2023 21:16	4705 FRANK AVE LOUISVILLE KY 40213-0000	6/1/2023 22:15
5464628	6/2/2023 10:20	2900 N HURSTBOURNE PKY MEADOW VALE KY 40241-0000	7/17/2023 9:26
5464629	6/2/2023 10:25	14008 DIXIE HWY LOUISVILLE KY 40272-0000	6/2/2023 13:05
5464664	6/3/2023 11:26	4404 LEEDS RD SHIVELY KY 40216-0000	6/3/2023 13:18

Service Request #	Request Date	Address	Resolved Date
5464680	6/4/2023 15:49	125 STEEDLAND CT Louisville KY 40229	6/12/2023 15:55
5464796	6/5/2023 15:43	5433 BRUCE AVE LOUISVILLE KY 40214-0000	6/5/2023 17:48
5464930	6/6/2023 13:43	3710 WHEELER AVE LOUISVILLE KY 40215-0000	6/7/2023 11:34
5464931	6/6/2023 13:50	811 E BROADWAY LOUISVILLE KY 40204-0000	6/6/2023 13:58
5465041	6/7/2023 10:24	3114 TARA GALE DR LOUISVILLE KY 40216-0000	6/8/2023 16:13
5465046	6/7/2023 10:44	1406 HIGHLAND AVE LOUISVILLE KY 40204-0000	6/8/2023 10:37
5465099	6/8/2023 5:52	501 MOCKINGBIRD VALLEY RD LOUISVILLE KY 40207-0000	6/8/2023 8:09
5465169	6/8/2023 9:16	4706 SUNNY MEADOW CT LOUISVILLE KY 40241-0000	6/8/2023 10:40
5465174	6/8/2023 10:18	1703 S PRESTON ST LOUISVILLE KY 40217-0000	6/9/2023 12:30
5465200	6/8/2023 13:24	1608 WILSON AVE LOUISVILLE KY 40210-0000	9/29/2023 9:14
5465201	6/8/2023 13:42	7807 WESTOVER DR PROSPECT KY 40059-0000	6/9/2023 14:18
5465300	6/9/2023 8:11	2334 STANDARD AVE LOUISVILLE KY 40210-0000	6/9/2023 9:55
5465338	6/9/2023 13:52	1376 DIXIE HWY LOUISVILLE KY 40210-0000	6/10/2023 10:30
5465367	6/10/2023 8:08	2410 MAMMOTH WAY JEFFERSONTOWN KY 40299-0000	6/10/2023 9:14
5465371	6/10/2023 10:33	520 WARNOCK ST LOUISVILLE KY 40217-0000	6/12/2023 11:26
5465375	6/10/2023 14:27	7016 BETSY ROSS DR LOUISVILLE KY 40272-0000	6/10/2023 15:53
5465457	6/12/2023 9:50	7104 RIDGE FARM CT LOUISVILLE KY 40291-0000	6/13/2023 15:12
5465486	6/12/2023 12:24	4161 LA SALLE AVE LOUISVILLE KY 40215-0000	6/13/2023 16:19
5465505	6/12/2023 15:06	661 N 25TH ST LOUISVILLE KY 40212-0000	6/16/2023 15:00
5465745	6/14/2023 13:03	2614 GARDINER LN LOUISVILLE KY 40205-0000	8/24/2023 13:45
5465768	6/14/2023 21:54	906 S SHELBY ST LOUISVILLE KY 40203-0000	6/14/2023 23:00
5465930	6/16/2023 11:02	4315 LINCOLN RD ST REGIS PARK KY 40220-0000	9/1/2023 11:00
5465944	6/16/2023 14:22	5409 MONACO DR LOUISVILLE KY 40219-0000	6/16/2023 19:24
5466177	6/20/2023 7:45	500 E MAIN ST LOUISVILLE KY 40202-0000	6/20/2023 9:00
5466357	6/21/2023 12:47	3800 HYCLIFFE AVE ST MATTHEWS KY 40207-0000	6/21/2023 16:40
5466429	6/22/2023 9:11	12522 FARMBROOK DR MIDDLETOWN KY 40243-0000	6/22/2023 12:30
5466595	6/23/2023 19:42	500 W MUHAMMAD ALI BLVD LOUISVILLE KY 40202-0000	6/23/2023 21:41
5466599	6/24/2023 7:39	3603 W MUHAMMAD ALI BLVD LOUISVILLE KY 40212-0000	6/24/2023 9:06
5466660	6/25/2023 19:43	8304 CLOVERPORT DR LOUISVILLE KY 40228-0000	6/28/2023 14:37
5466740	6/26/2023 8:06	6901 CEDAR LAKE CT LOUISVILLE KY 40291-0000	6/26/2023 9:14
5466807	6/26/2023 13:43	2105 ALTA AVE LOUISVILLE KY 40205-0000	6/27/2023 10:10
5466941	6/27/2023 11:34	8207 PANDOREA DR LOUISVILLE KY 40258-0000	6/27/2023 14:23
5466950	6/27/2023 13:00	2029 BANK ST LOUISVILLE KY 40203-0000	7/24/2023 13:53
5466958	6/27/2023 14:08	811 E BROADWAY LOUISVILLE KY 40204-0000	6/27/2023 18:48
5466962	6/27/2023 14:41	11704 KINGS LN MIDDLETOWN KY 40243-0000	6/30/2023 9:00
5466990	6/27/2023 21:45	3617 GLENCREEK LN LOUISVILLE KY 40218-0000	6/27/2023 23:53
5467086	6/28/2023 12:23	12203 SARATOGA ESTATES RD LOUISVILLE KY 40299-0000	6/29/2023 10:45
5467090	6/28/2023 12:56	9401 BROWN AUSTIN RD LOUISVILLE KY 40118-0000	6/28/2023 15:30



APPENDIX 2.2.7 ERI REFERRALS

APPENDIX 2.2.7 ERI REFERRALS

CUSTOMER SERVICE REQUESTS REFERED TO OTHER AGENCY

5441956	3807 Leland Rd (Private Residence)	Lou. Metro Health & Wellness
5444983	10705 Blue Lick (JCPS Bus compound)	Lou. Metro Health & Wellness
5458522	10247 Dodge lane (Private Residence)	Lou. Metro Health & Wellness
5460788	12400 Tyler Woods Ct. (Private Residence)	KY. Energy & Environment Cabinet

INCIDENTS REFERRED TO OTHER AGENCY

MSD responded to 206 incidents if FY23. 63 of these cases impacted the MS4. Three incidents were referred to another agency.

22ER1096	2000 Fern Valley Rd. (Ford Motor Company)	Kentucky Division of Water
23ER1041	4400 Bells Lane (Carbide Industries)	Ky. Energy & Environment Cabinet
23ER1063	4000 Lees Lane (Private Residence)	Ky. Division of Water, Lou. Metro Health & Wellness



APPENDIX 2.3.6 SUMMARY OF HIGH AND MODERATE RISK FACILITY INSPECTIONS

APPENDIX 2.6.3 SUMMARY OF HIGH AND MODERATE RISK FACILITY INSPECTIONS

HRIF FACILITIES INSPECTED IN FY23

Clariant Corp. Warehouse	7665 National Turnpike	2-22-23
Mission Machine & Tool	5604 Fern Valley Rd.	6-12-23
Jack Cooper Transport	6709 Grade Lane	12-5-22
Kelvin Cooperage	1103 Outer Loop	1-5-23
Vacuum Depositing, Inc	1294 Old Fern Valley Rd.	6-28-23
Louisville Dryer	1100 Industrial Blvd.	2-21-23
P J Food Service	2002 Papa John Blvd.	5-24-23
Yamamoto FB Engineering	7331 Global Drive	3-14-23
Papercone Corp.	3200 Fern Valley Rd.	12-13-22
Exel Logistics	6400 Ladd Avenue	12-7-22
Rusty Rooster Recycling	7400 Grade Lane	2-9-23
Deltech Industries	3910 Oaklawn Dr.	11-23-22
Paradise Tomato Kitchen	1600 Crums Lane	6-8-23
Coral Graphics	4700 Commerce Drive	1-10-23
HD Supply Solutions	4829 Jennings Lane	9-21-22
Hafendorfer Machine, Inc.	550 Obyrne Ave.	10-19-22
Viking Plastic	4601 Commerce Drive	11-7-22
UPS – Centennial Hub	8100 Air Commerce Drive	7-28-22

MRIF FACILITIES INSPECTED IN FY23

Eckart America	4101 Campground Road	2-9-23
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APPENDIX 2.3.10 IP OUTREACH



IWD



MSD's Board approved the ERP on March 27, 2023.

Enforcement Response Plan Update

MSD's Enforcement Response Plan (ERP) is federally mandated and provides the control authority, which is MSD, a set of rules and guidelines for initiating and escalating enforcement actions. The State of Kentucky and MSD's Legal Department have reviewed the revised plan.

MSD's Board approved the ERP on March 27, 2023. The revised document contains minor revisions to initial and escalating enforcement actions and gives MSD a broader range of enforcement actions when escalation of enforcement is required.



**MSD is available 24/7
at 502.540.6000**

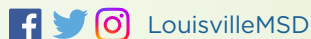
Report a sanitary sewer backup before contacting a plumber. Determining if the problem is located on the public side of the system will help to avoid unnecessary plumber expense.

OUR VISION

The innovative regional utility for safe, clean waterways

CUSTOMER RELATIONS

502.540.6000 · CustomerRelations@LouisvilleMSD.org



MS4

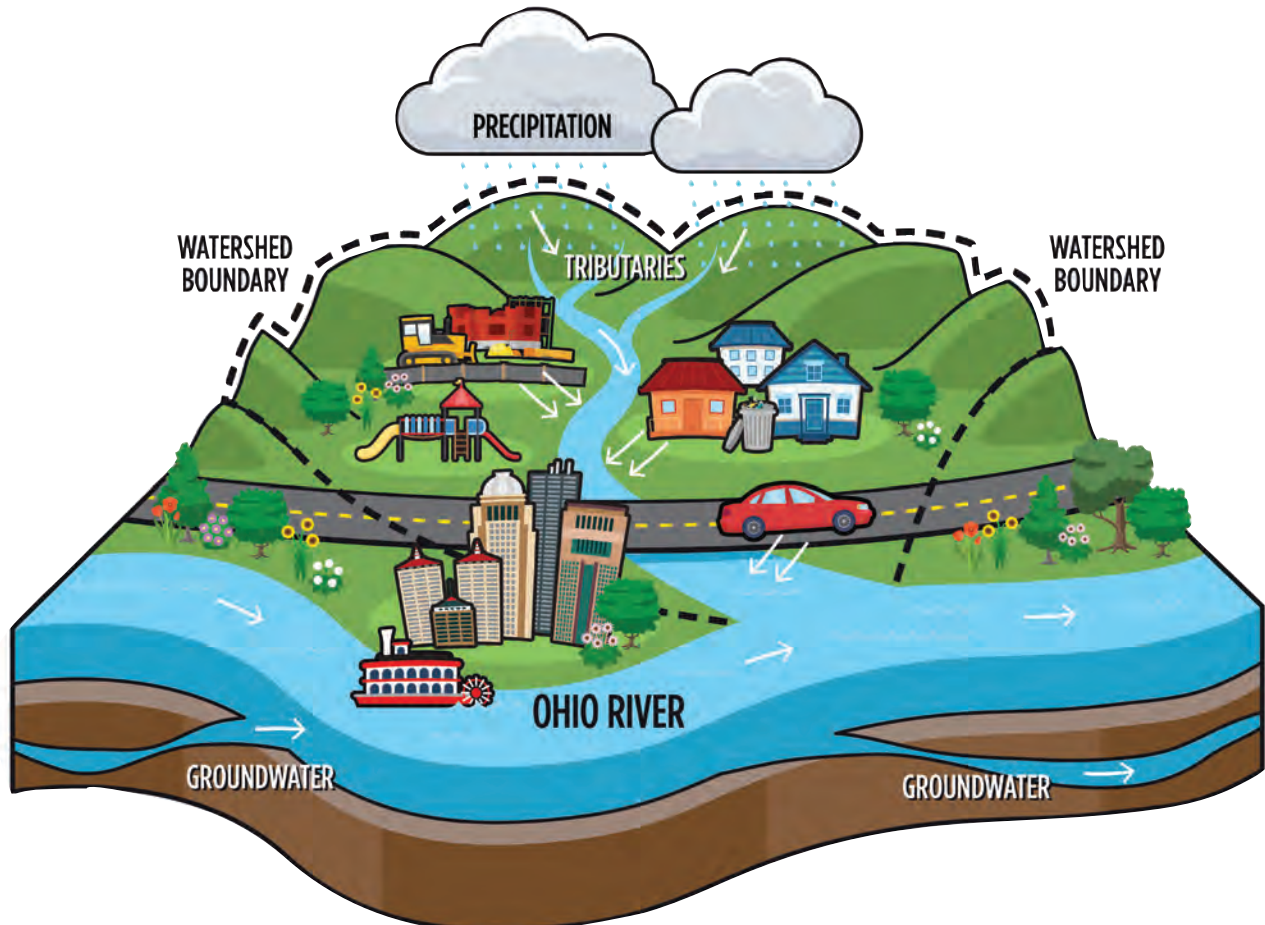
MSD's Municipal Separate Storm Sewer System, known as our MS4 Program, continues to work toward improving water quality through efforts to reduce impacts from non-point source pollution through our watershed planning efforts. MSD is currently monitoring the Mill Creek Watershed and developing a watershed plan to address concerns related to non-point source pollution. If you are interested in finding out more or participating in these events, please visit our website louisvillemsd.org/healthy-watershed-initiative to learn more.



What is a Watershed?

The Environmental Protection Agency (EPA) defines a watershed as the land area that drains to a common waterway. Rivers, lakes, estuaries, wetlands, streams, and oceans are catch basins for the land adjacent to

them. Ground water aquifers are replenished by water flowing through the land area above them. Protecting our watersheds – and the waterways they feed into – is a responsibility we all share.



HMPC Inspections

MSD's Industrial Waste Department (IWD) conducts Hazardous Material Use and Spill Prevention Control (HMPC) inspections at industrial facilities. All facilities must submit an updated HMPC plan application if any hazardous materials locations or if the use of chemicals has changed. Once you update the HMPC plan, please send this to your inspector so they can perform a comprehensive inspection in 2023. Please find the HMPC application on our website LouisvilleMSD.org/programs/industrial-waste-programs/hazardous-materials.



MSD Odor Initiative CIAIRity Program

The MSD cIAIRity Program is MSD's proactive odor control initiative designed to reduce sewer and wastewater treatment odors now and into the future. Every year, MSD invests millions of dollars in odor control measures including chemical, biological and thermal oxidation technologies. The CIAIRity Program features public outreach and education. You can find more information at LouisvilleMSD.org/odor. Many chemical odors are as associated with an industrial source. MSD Environmental Compliance Inspectors investigate any chemical odor complaints to determine the source and possible resolution.

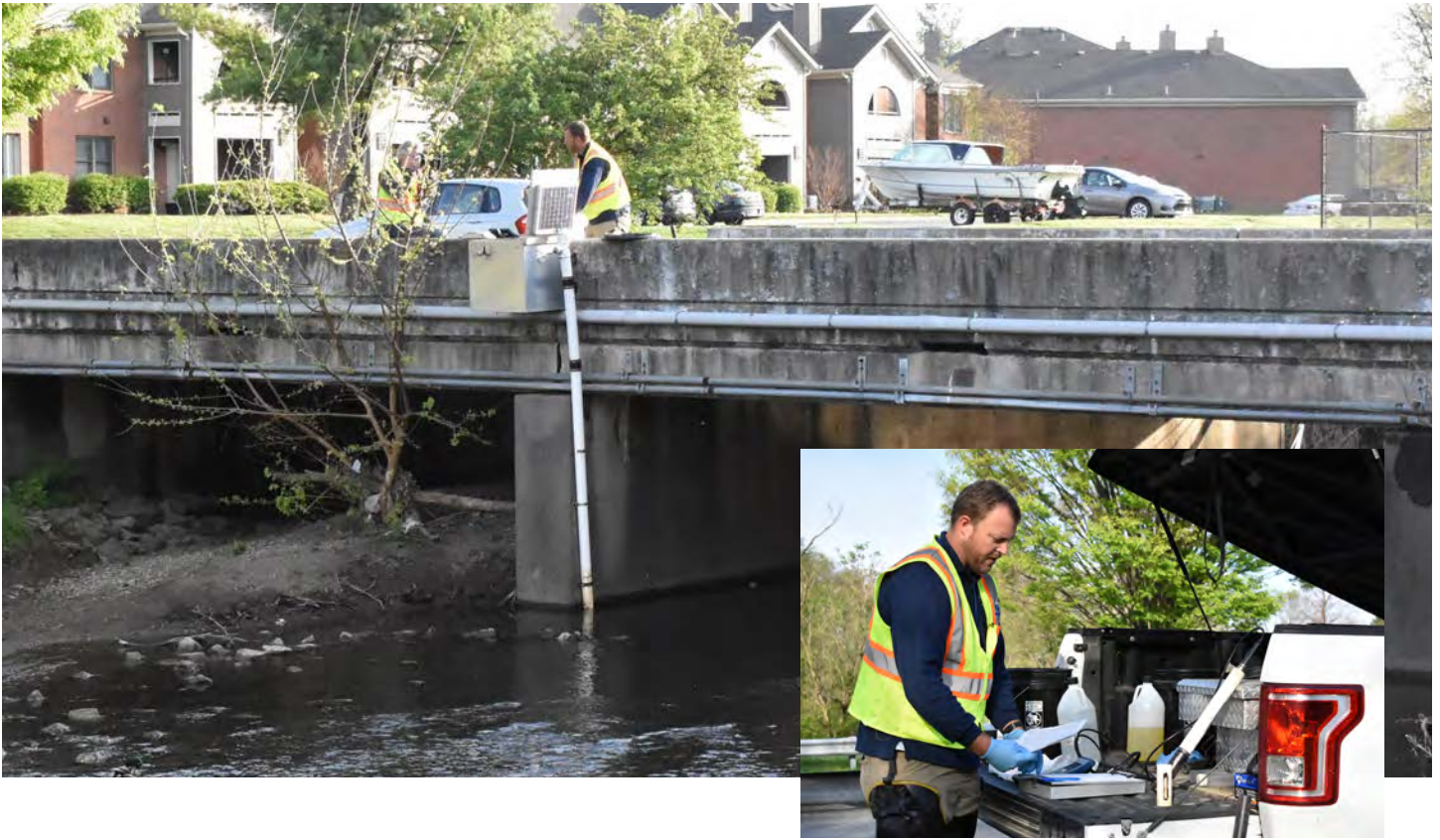


cIAIRity
PROGRAM

Electronic submissions

Electronic Self-Monitoring Reports (SMR) submissions still require a signed hard copy. As required, our application to request Cross-Media Electronic Reporting Rule or Cross-Media Electronic Reporting Rule (CROMERR) approval has been submitted to U.S. Environmental Protection Agency (EPA) Region IV. MSD is awaiting final approval from EPA Region IV. If approved, we will eliminate the need for a signed hard copy.





PFAS/PFOA

The EPA is currently developing a framework for regulating PFAS/PFOA (Per and Polyfluoroalkyl Substances/Perfluorooctanoic Acid) in wastewater in the U.S. They have published a “road-map” with suggestions for local regulators/municipalities to begin preparation for the new regulations. The first effort includes surveying potential sources of PFAS/PFOA.

In 2021 and 2022, MSD’s IWD contacted industries for information on the use of PFAS/PFOA in processes and storage of materials for ancillary operations, such as fire suppression systems. For example, asking if they had materials containing PFAS/PFOA used in their processes or if any materials were stored on-site for ancillary operations (e.g., fire suppression material).

The next step requires local industrial users to test for 40 PFAS/PFOA compounds using the approved sampling method under EPA Draft Method 1633. Most industrial users in the MSD service area will likely require sampling and analysis at least once.

The EPA recommends quarterly monitoring of potential and confirmed dischargers of the compounds. Publicly Owned Treatment Works (POTWs) in Louisville and acquired counties will also perform sampling.

At least two labs that service the Louisville/Jefferson County Area provide PFAS testing for the 40 Compounds approved by the EPA 1633 method. These sampling results will be used as part of MSD’s resources to regulate the discharge of PFAS/PFOA pollutants. The EPA recommends the implementation of Best Management Practices (BMP) for indirect dischargers, including product substitution, reduction, or elimination of PFAS/PFOA. They also suggest the implementation BMPs for the use of fire suppression foams that contain PFAS. The full memo, dated December 5, 2022, subject line: “Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs,” is available at [EPA.gov](https://www.epa.gov).


Unusual Discharge Request (UDR) Fees

MSD implemented fees for processing Unusual Discharge Requests (UDR) on August 1, 2022. You can complete the application and pay any fees on MSDs eService Portal.

Unpermitted wastewater discharges to MSD’s collection system and non-stormwater system require UDRs. Therefore, even if you have a KPDES Pollutant Discharge Elimination System Permit for a one-time discharge or

a Kentucky Division of Water discharge approval letter, you must complete a UDR Permit application. Additional information regarding UDRs and access to the eService portal can found at LouisvilleMSD.org/industrial-waste-programs/udr.

Questions? Please contact Bob Pifine at bob.pifine@louisvillemsd.org or Adraine.Niehoff@louisvillemsd.org.



UNUSUAL DISCHARGE REQUEST RATES AND CHARGES
Effective June 30, 2022

Description	Charge	Comments
Application Processing	\$200 each	Required for all requests to cover processing costs
Expedited Application Processing	\$200 each	Request to expedite required within 72 hours of submitting application
Pool Discharges and Hydrostatic Testing of Tanks	\$200 each	Application processing charge required only
Wastewater Volume	\$8.77	Minimum charge of \$100 for volume charges totaling less than \$100
<i>Combined and Separate Sanitary Sewer Systems</i>	<i>per 1,000 gallons</i>	
Excess Quality Charges - BOD	\$0.004921	
	<i>per mg/L in excess of 250 mg/L per 1,000 gallons</i>	
Excess Quality Charges - TSS	\$0.00198840	
	<i>per mg/L in excess of 270 mg/L per 1,000 gallons</i>	

MSD reserves the right to charge and recover costs for extenuating circumstances/exceptions



700 W Liberty Street
Louisville, KY 40203-1911



Questions?

Visit our website at LouisvilleMSD.org/programs/industrial-waste-programs for more information concerning general information and permits.

Industrial Waste Newsletter is a publication of Louisville MSD.
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The public is welcome to attend MSD Board meetings. For MSD Board information and meeting schedule visit: LouisvilleMSD.org/About-Us/MSD-Board



APPENDIX 2.4.2 CONSTRUCTION INSPECTION SUMMARY

2.4.2 Construction Inspection Summary

July 1, 2022 – June 30, 2023 Data from EPSC Enforcement Application	Approximate Number of Inspections
Residential Inspection	23,830
Demolition	10
Capital	874
Lateral Extension	2,888
Floodplain	16
Emergency	226
Enforcement Request	25
Subdivision Inspection	4,682
Subdivision Inspection - Clearing and Grading	132
Site Construction	4,859
Site Construction - Clearing and Grading	304
Total	37,846



APPENDIX 2.4.3 REVIEWED CONSTRUCTION PLANS

APPENDIX 2.5.3 REVIEWED POST-CONSTRUCTION BMP REQUIRED PROJECTS

LICENSE	PROJECT NAME	TYPE	APPROVED DATE	ADDRESS
SDP-22-1094	CHICK FILA	SITE	7/1/2022	10501 WESTPORT RD LOUISVILLE KY 40241-0000
SDP-22-1051	REPUBLIC BANK FOUNDATION YMCA	SITE	7/7/2022	755 DIXIE HWY LOUISVILLE KY 40210-0000
SDP-22-1112	VILLATORO GRADING PLAN	SITECLRGRD	7/7/2022	6120 BEULAH CHURCH RD LOUISVILLE KY 40228-0000
SDP-22-1049	BROWN FORMAN EXPANSION PH 3	SITE	7/11/2022	2921 DIXIE HWY SHIVELY KY 40216-0000
SDP-22-1145	CITY BBQ POPLAR LEVEL RD	SITE	7/12/2022	4025 POPLAR LEVEL RD 101 LOUISVILLE KY 40213-0000
SDP-22-1152	Michters Distillery Site Improvements	SITE	7/15/2022	2351 NEW MILLENNIUM DR SHIVELY KY 40216-0000
SDP-22-1088	ELECTRON DR OFFICE BLDG	SITE	7/18/2022	11801 ELECTRON DR LOUISVILLE KY 40299-0000
SDP-22-1167	CLARIANT CORP DUMESNIL DRAINAGE PLAN	SITE	7/18/2022	1026 DUMESNIL ST LOUISVILLE KY 40210-0000
SDP-22-1044	TERRA CROSSING DEVELOPMENT	SITE	7/20/2022	2500 TERRA CROSSING BLVD LOUISVILLE KY 40245-0000
SDP-22-1155	Overlook at Eastwood Sec 4 - 6 Clearing and Gradin	SUBDCLRGRD	7/21/2022	1313 JOHNSON RD LOUISVILLE KY 40245-0000
SDP-22-1122	Windcrest Farms Subd	SITE	7/29/2022	9300 OLD BARDSTOWN RD LOUISVILLE KY 40291-0000
SDP-22-1125	Blankenbaker Station II Lot 31	SITE	7/29/2022	13150 PLANTSIDE DR LOUISVILLE KY 40299-0000
SDP-22-1022	The Meadows at McNeely Lake	SITE	8/2/2022	6600 COOPER CHAPEL RD LOUISVILLE KY 40229-0000
SDP-22-1103	SUNSHINE CONCRETE	SITE	8/2/2022	13905 AIKEN RD LOUISVILLE KY 40245-0000
SDP-22-1117	Louisville Industrial Ctr Bldg H	SITE	8/3/2022	7777 NATIONAL TPKE LOUISVILLE KY 40214-0000
SDP-22-1025	Taco Bell	SITE	8/5/2022	6212 SHEPHERDSVILLE RD LOUISVILLE KY 40228-0000
SDP-22-1118	Hidden Forest Sec 4	SUBDIVIS	8/5/2022	6304 MOUNT WASHINGTON RD LOUISVILLE KY 40229-0000
SDP-22-1165	MIDDLETOWN SHOPS 6	SITE	8/5/2022	12939 SHELBYVILLE RD MIDDLETOWN KY 40243-0000
SDP-22-1173	GE AP3 Building Addition	SITE	8/8/2022	5900 GLOBAL DISTRIBUTION WAY LOUISVILLE KY 40225-0000
SDP-22-1108	BOHANNON PROPERTY TRACT 1	SITE	8/9/2022	14201 BOHANNON AVE LOUISVILLE KY 40272-0000
SDP-22-1028	OVEC St. Elizabeth	SITE	8/10/2022	1000 E BURNETT AVE LOUISVILLE KY 40217-0000
SDP-22-1102	HURSTBOURNE COMMONS WATTERSON TRL ROADS AND DRAIN	SITE	8/11/2022	8127 WATTERSON TRL LOUISVILLE KY 40299-0000
SDP-22-1120	Bosse Construction Office	SITE	8/16/2022	11101 PLANTSIDE DR JEFFERSONTOWN KY 40299-0000
SDP-22-1050	TIMBER CREEK SEC 3	SUBDIVIS	8/17/2022	10505 BLUE LICK RD LOUISVILLE KY 40229-0000
SDP-22-1213	SANTA FE CROSSING SUB	SUBDIVIS	8/19/2022	6501 HACKEL DR LOUISVILLE KY 40258-0000
SDP-22-1007	CEDAR CREEK RD APTS	SITE	8/22/2022	7703 CEDAR CREEK RD LOUISVILLE KY 40291-0000
SDP-22-1143	Indian Springs Entrance	SITE	8/23/2022	11000 INDIAN LEGENDS DR LOUISVILLE KY 40241-0000
SDP-21-1271	SPEEDWASH CAR WASH	SITE	8/24/2022	4124 SHELBYVILLE RD ST MATTHEWS KY 40207-0000
SDP-22-1124	Ford Motor Company Chiller Plant & Electrical Bldg	SITE	8/24/2022	3001 CHAMBERLAIN LN LOUISVILLE KY 40241-0000
SDP-22-1178	Stronghold Utility Metals Addition	SITE	8/24/2022	6333 STRAWBERRY LN R LOUISVILLE KY 40214-0000
SDP-22-1199	Proposed Remedial Action Cintas Corp	SITE	8/24/2022	1200 MAPLE ST LOUISVILLE KY 40210-0000
SDP-22-1201	TEMPO BY HILTON HOTEL	SITE	8/24/2022	320 S SHELBY ST LOUISVILLE KY 40202-0000
SDP-22-1021	Cedar Creek Rd Apts Road Improvements	SITE	8/26/2022	7703 CEDAR CREEK RD LOUISVILLE KY 40291-0000
SDP-22-1069	PEPTIDES INTERNATIONAL LLC	SITE	8/26/2022	11621 ELECTRON DR JEFFERSONTOWN KY 40299-0000
SDP-22-1188	Brownwood Clearing and Grading	SITECLRGRD	8/26/2022	6201 CAMP GROUND RD LOUISVILLE KY 40216-0000
SDP-22-1214	NULU GARAGE	SITE	8/31/2022	730 E JEFFERSON ST LOUISVILLE KY 40202-0000
SDP-22-1220	MORRIS FORMAN ENTRANCE ENHANCEMENTS	SITE	9/6/2022	4522 ALGONQUIN PKY LOUISVILLE KY 40211-0000
SDP-22-1195	LOUISVILLE COUNTRY CLUB PARKING EXP	SITE	9/7/2022	25 MOCKINGBIRD VALLEY TRL LOUISVILLE KY 40207-0000
SDP-22-1219	THORNTONS DEMO	SITE	9/9/2022	3909 TAYLORSVILLE RD LOUISVILLE KY 40220-0000
SDP-21-1140	ERNSPIKER ETAWAH AVE SUBD	SUBDIVIS	9/12/2022	1330 ETAWAH AVE LYNDON KY 40222-0000
SDP-22-1182	ST ANTHONY CHURCH RD SIDEWALK PH 1, 2, & 3	SITE	9/12/2022	7101 ST ANTHONY CHURCH RD LOUISVILLE KY 40214-0000
SDP-22-1098	6101 FEGBENBUSH LN CONVENIENCE STORE	SITE	9/13/2022	6101 FEGBENBUSH LN LOUISVILLE KY 40228-0000
SDP-22-1150	Speedwash Car Wash	SITE	9/14/2022	9506 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
SDP-22-1200	MIKES CARWASH WESTPORT RD PH 2	SITE	9/14/2022	9710 WESTPORT RD LOUISVILLE KY 40241-0000
SDP-22-1072	CEDAR BROOK SUBD SEC 5B	SUBDIVIS	9/19/2022	9604 CEDAR CREEK RD LOUISVILLE KY 40228-0000
SDP-22-1113	PARKS AND REC INDIGENT CEMETERY	SITE	9/20/2022	
SDP-22-1246	1000 E BROADWAY DEMO	SITE	9/20/2022	1000 E BROADWAY LOUISVILLE KY 40204-0000
SDP-22-1176	DELCOUR RIVERPORT INDUSTRIAL PH 5	SITE	9/21/2022	6675 RANDY COE LN LOUISVILLE KY 40272-0000
SDP-22-1087	LIV SPRINGDALE APARTMENTS	SITE	9/23/2022	5217 SPRINGDALE RD LOUISVILLE KY 40241-0000
SDP-22-1234	HUMANA CENTERWELL SENIOR PRIMARY CARE	SITE	9/26/2022	3029 W MUHAMMAD ALI BLVD LOUISVILLE KY 40212-0000
SDP-22-1091	PARKSIDE AT MOUNT WASHINGTON SEC 3	SUBDIVIS	9/27/2022	12100 SENTIMENTAL LN LOUISVILLE KY 40229-0000
SDP-21-1279	BROWN PARK IMPROVEMENTS PROJECT	SITE	9/29/2022	1000 BROWNS LN ST MATTHEWS KY 40207-0000
SDP-22-1110	BLEVINS GAP RD BRIDGE REPLACEMENT	SITE	9/29/2022	2700 BLEVINS GAP RD LOUISVILLE KY 40272-0000
SDP-22-1153	Sams Club Fueling Station Improvements	SITE	10/3/2022	6622 PRESTON HWY LOUISVILLE KY 40219-0000
SDP-22-1231	Mill Creek - ELG Building Lift Station Addition	SITE	10/3/2022	14660 DIXIE HWY LOUISVILLE KY 40272-0000
SDP-22-1275	LOUISVILLE LOGISTICS PARK C & G AND UTILITY RELOC	SITECLRGRD	10/3/2022	1400 CECIL AVE 1 LOUISVILLE KY 40211-0000
SDP-22-1104	BRIDLE RUN SEC 3 ROADS AND DRAINAGE	SUBDIVIS	10/4/2022	1312 FLAT ROCK RD LOUISVILLE KY 40245-0000
SDP-22-1083	SOUTHPOINTE COMMONS	SITE	10/5/2022	10501 SOUTHPOINTE BLVD LOUISVILLE KY 40291-0000
SDP-21-1102	CHICKASAW PARK IMPROVEMENTS	SITE	10/6/2022	1200 SOUTHWESTERN PKY LOUISVILLE KY 40211-0000
SDP-21-1166	SHAWNEE APARTMENTS	SITE	10/6/2022	4137 W BROADWAY LOUISVILLE KY 40211-0000
SDP-22-1053	CORCORAN 9418 PIROUETTE AVE	SITE	10/6/2022	9418 PIROUETTE AVE LOUISVILLE KY 40118-0000
SDP-22-1185	Stone Lakes Community Park Improvements	SITE	10/6/2022	4320 LAKELET WAY LOUISVILLE KY 40299-0000
SDP-22-1228	MCDONALDS REMODEL 2500 DIXIE HWY	SITE	10/6/2022	2500 DIXIE HWY SHIVELY KY 40216-0000
SDP-22-1061	LOGISTICS AIR PARK II C & G	SITECLRGRD	10/7/2022	5400 MINOR LN LOUISVILLE KY 40219-0000
SDP-21-1164	401 MOCKINGBIRD VALLEY RD BRIDGE REPAIR	SITE	10/10/2022	401 MOCKINGBIRD VALLEY RD LOUISVILLE KY 40207-0000
SDP-22-1229	THE TRAILS AT BELMOND SEC 2	SITECLRGRD	10/10/2022	6106 S WATTERSON TRL LOUISVILLE KY 40291-0000
SDP-22-1238	CHAMBERLAIN PARKING	SITE	10/11/2022	12415 OLD LA GRANGE RD LOUISVILLE KY 40245-0000
SDP-22-1127	MOE's Coffeehouse	SITE	10/12/2022	1500 W JEFFERSON ST LOUISVILLE KY 40203-0000
SDP-22-1294	Echo Trail Force Main - Phase 2	SITE	10/12/2022	2615 ECHO TRL LOUISVILLE KY 40245-0000
SDP-22-1198	THOMPSON BROTHERS PLUMBING	SITE	10/14/2022	436 ROBERTS AVE LOUISVILLE KY 40214-0000
SDP-22-1209	VILLAGES AT HERITAGE CREEK PH 2 SEC 5-7	SUBDCLRGRD	10/14/2022	10001 CEDAR CREEK RD HERITAGE CREEK KY 40229-0000
SDP-22-1197	SCOOTERS COFFEE PRESTON HWY #1192	SITE	10/19/2022	3410 PRESTON HWY LOUISVILLE KY 40213-0000
SDP-22-1154	ALTISSIMA PLACE APTS	SITE	10/20/2022	9118 W MANSLICK RD LOUISVILLE KY 40272-0000
SDP-22-1221	CMF ENTRANCE ENHANCEMENTS	SITE	10/24/2022	3050 COMMERCE CENTER PL LOUISVILLE KY 40211-0000
SDP-22-1240	1215 HEAFER RD DRAINAGE IMPROVEMENTS	SITE	10/25/2022	1215 HEAFER RD 1 LOUISVILLE KY 40223-0000
SDP-22-1254	OAKLAND HILLS SEC 2	SUBDCLRGRD	10/25/2022	11705 WATERFORD RD LOUISVILLE KY 40291-0000
SDP-22-1079	SANCTUARY FALLS SUBD SEC 3	SUBDIVIS	10/26/2022	5550 SCHULER LN LOUISVILLE KY 40059-0000
SDP-22-1237	BLANKENBAKER STATION II LOT 8 QUADRANT EXPANSION	SITE	10/26/2022	12600 PLANTSIDE DR LOUISVILLE KY 40299-0000
SDP-22-1136	Middletown Christian Church Playground	SITE	10/27/2022	500 N WATTERSON TRL DOUGLASS HILLS KY 40243-0000
SDP-22-1181	CHENOWETH RUN STORAGE	SITE	10/27/2022	3106 CHENOWETH RUN RD LOUISVILLE KY 40299-0000
SDP-22-1281	AKINS GLASS COMPANY	SITE	10/28/2022	1987 SOUTH PARK RD LOUISVILLE KY 40219-0000

LICENSE	PROJECT NAME	TYPE	APPROVED DATE	ADDRESS
SDP-22-1311	Rosa Terrace Pump Station Elimination	CPCOL	10/28/2022	3706 NOBEL CT SHIVELY KY 40216-0000
SDP-22-1169	Preston Street Complex	SITE	10/31/2022	1919 S PRESTON ST 2F LOUISVILLE KY 40217-0000
SDP-21-1001	EAST MAIN MIXED USE DEVELOPMENT DEMO	SITE	11/1/2022	835 E MAIN ST 105 LOUISVILLE KY 40206-0000
SDP-21-1039	MCDONALDS TIMBER RIDGE DR	SITE	11/1/2022	5905 TIMBER RIDGE DR PROSPECT KY 40059-0000
SDP-21-1094	LEWIS RD EXT AND WEAVER RUN CROSSING	SITE	11/1/2022	14045 DIXIE HWY LOUISVILLE KY 40272-0000
SDP-21-1117	DOVE POINT ESTATES SEC 3	SUBDIVIS	11/1/2022	4002 THOMAS FARM DR LOUISVILLE KY 40299-0000
SDP-21-1124	ADAMOV SWIMMING POOL	SITE	11/1/2022	17036 ASHBURTON DR LOUISVILLE KY 40245-0000
SDP-21-1125	KY Louisville Campground	SITECLRGRD	11/1/2022	6001 CAMP GROUND RD LOUISVILLE KY 40216-0000
SDP-21-1137	JDG 1849 MEDICAL OFFICE	SITE	11/1/2022	13508 FACTORY LN LOUISVILLE KY 40245-0000
SDP-22-1285	SECOND STREET HOTEL C & G	SITECLRGRD	11/1/2022	133 W MARKET ST LOUISVILLE KY 40202-0000
SDP-22-1068	WATTERSON TRAIL STREETScape	SITE	11/2/2022	10416 WATTERSON TRL JEFFERSONTOWN KY 40299-0000
SDP-22-1084	CROSSINGS AT SOUTH PARK	SITE	11/2/2022	10511 W MANSLICK RD LOUISVILLE KY 40118-0000
SDP-22-1043	THORNTONS P2106	SITE	11/3/2022	10501 PRESTON HWY LOUISVILLE KY 40229-0000
SDP-22-1149	U OF L HOSPITAL WEST TOWER EXP	SITE	11/3/2022	545 S JACKSON ST LOUISVILLE KY 40202-0000
SDP-22-1161	1600 W LEE ST SITE IMPROVEMENTS RUMPKE WASTE	SITE	11/3/2022	1600 W LEE ST LOUISVILLE KY 40210-0000
SDP-22-1193	JEFFERSONTOWN FIRE AND EMS STATION 4	SITE	11/3/2022	12602 TAYLORSVILLE RD LOUISVILLE KY 40299-0000
SDP-22-1259	BLAZE PIZZA	SITE	11/3/2022	4848 SHELBYVILLE RD ST MATTHEWS KY 40207-0000
SDP-22-1310	PATTI LANE IMPROVEMENTS	SITE	11/3/2022	2803 PATTI LN JEFFERSONTOWN KY 40299-0000
SDP-22-1262	GE APPLIANCE PARK BIRD PROPERTY CLEANUP	SITE	11/4/2022	6200 FERN VALLEY RD LOUISVILLE KY 40228-0000
SDP-21-1280	BRADLEY STATION APARTMENTS	SITE	11/8/2022	530 ATWOOD ST A LOUISVILLE KY 40217-0000
SDP-22-1303	Sonne Avenue Pump Station Elimination	SITE	11/8/2022	1701 SONNE AVE SHIVELY KY 40216-0000
SDP-22-1038	FAIRDALE HS PEDESTRIAN BRIDGE REPLACEMENT	SITE	11/9/2022	1001 FAIRDALE RD LOUISVILLE KY 40118-0000
SDP-22-1062	HYUNDAI FACILITY RENO & EXP	SITE	11/9/2022	6633 DIXIE HWY LOUISVILLE KY 40258-0000
SDP-22-1307	TONYS WRECKER	SITE	11/9/2022	3311 COLLINS LN LOUISVILLE KY 40245-0000
SDP-21-1153	IDLEWOOD INLINE STORAGE	CPCOL	11/11/2022	9516 PLUMWOOD RD LOUISVILLE KY 40291-0000
SDP-22-1092	DOW LOUISVILLE RIVER WATER FILTER STRUCTURE	SITE	11/11/2022	4300 CAMP GROUND RD LOUISVILLE KY 40216-0000
SDP-22-1186	BLANKENBAKER STATION II LOT 30	SITE	11/11/2022	13150 PLANTSIDE DR LOUISVILLE KY 40299-0000
SDP-22-1202	EUROFINS GENOMICS	SITE	11/11/2022	12621 PLANTSIDE DR LOUISVILLE KY 40299-0000
SDP-22-1308	ENHANCED GROUNDWATER MONITORING AT B E PAYNE PH 2	SITE	11/11/2022	7400 RIVER RD LOUISVILLE KY 40059-0000
SDP-22-1264	WATERFRONT BOTANICAL GARDEN PH 2	SITE	11/14/2022	1432 FRANKFORT AVE LOUISVILLE KY 40206-0000
SDP-21-1231	TARC TRAINING LOT	SITE	11/15/2022	651 S 30TH ST LOUISVILLE KY 40211-0000
SDP-22-1300	VETERANS MEMORIAL PARK TRI-AN MONUMENT	SITE	11/15/2022	10707 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
SDP-22-1082	SNEADS BRANCH PS ELIMINATION	SITE	11/16/2022	989 LOGAN ST LOUISVILLE KY 40204-0000
SDP-22-1222	DELTECH ADDITION	SITE	11/18/2022	3910 OAKLAWN DR LOUISVILLE KY 40219-0000
SDP-21-1243	HURSTBOURNE COMMONS SUBD	SUBDIVIS	11/21/2022	8127 WATTERSON TRL LOUISVILLE KY 40299-0000
SDP-21-1283	WARREN ELECTRIC	SITE	11/21/2022	930 S PRESTON ST LOUISVILLE KY 40203-0000
SDP-22-1268	GARRETT 400 SHELBY STATION DR C & G	SUBDCLRGRD	11/21/2022	400 SHELBY STATION DR LOUISVILLE KY 40245-0000
SDP-22-1289	WATHEN LANE PS REHAB	SITE	11/21/2022	2700 7TH STREET RD SHIVELY KY 40215-0000
SDP-22-1217	AXIS ST ANDREWS CHURCH RD	SITE	11/28/2022	7746 ST ANDREWS CHURCH RD LOUISVILLE KY 40214-0000
SDP-22-1236	UPS GATE EXPANSION	SITE	11/29/2022	819 LOTUS AVE LOUISVILLE KY 40213-0000
SDP-22-1295	WATERFRONT PICKLEBALL COURTS	SITE	11/30/2022	1555 RIVER RD LOUISVILLE KY 40206-0000
SDP-22-1306	2100 W JEFFERSON	SITE	11/30/2022	2100 W JEFFERSON ST LOUISVILLE KY 40212-0000
SDP-22-1171	SOUTH PARK RD IMPROVEMENTS EAST	SITE	12/2/2022	1987 SOUTH PARK RD LOUISVILLE KY 40219-0000
SDP-22-1287	DATA VAULT OFFICE WAREHOUSE	SITE	12/2/2022	211 N ENGLISH STATION RD MIDDLETOWN KY 40223-0000
SDP-22-1116	INGLESIA BAUTISTA COOPER CHAPEL INC	SITE	12/6/2022	232 CAREY AVE LOUISVILLE KY 40218-0000
SDP-22-1298	LV RIVER ROAD	SITE	12/6/2022	1031 ZORN AVE LOUISVILLE KY 40207-0000
SDP-22-1128	Sunshine Blankerton Old Heady Development	SITECLRGRD	12/7/2022	5117 OLD HEADY RD LOUISVILLE KY 40299-0000
SDP-22-1320	JIM PATTERSON STADIUM	SITE	12/7/2022	3001 S 3RD ST LOUISVILLE KY 40208-0000
SDP-22-1340	EASTVIEW AVE DRAINAGE REPAIR	SITE	12/12/2022	10416 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
SDP-22-1207	ALSTON TRACE SUBD	SUBDIVIS	12/13/2022	5043 TERRY RD LOUISVILLE KY 40216-0000
SDP-22-1227	BELLINGHAM PARK PH 3A & 3B	SUBDIVIS	12/13/2022	13605 FACTORY LN LOUISVILLE KY 40245-0000
SDP-22-1290	ASRC GAS BOILER PROJECT	SITE	12/13/2022	4500 CAMP GROUND RD LOUISVILLE KY 40216-0000
SDP-22-1350	FLATS AT BARDSTOWN C & G	SUBDCLRGRD	12/14/2022	2100 BUECHEL BANK RD LOUISVILLE KY 40218-0000
SDP-22-1160	Glengrove Apartments	SITE	12/15/2022	6605 W ORELL RD LOUISVILLE KY 40272-0000
SDP-21-1161	LOUISVILLE LOGISTICS PARK ROADWAY	SITE	12/19/2022	1400 CECIL AVE 1 LOUISVILLE KY 40211-0000
SDP-22-1204	FARMER BLANKENBAKER PKWY	SITE	12/20/2022	2125 BLANKENBAKER PKY JEFFERSONTOWN KY 40299-0000
SDP-22-1263	PLANTSIDE DRIVE OPEN SPACE TRAIL SEC 1	SITE	12/22/2022	1651 TUCKER STATION RD LOUISVILLE KY 40299-0000
SDP-22-1157	JEFFERSONTOWN POLICE DISPATCH	SITE	12/28/2022	10410 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
SDP-22-1265	CENTRAL PARK PLAYGROUND AND SPRAYGROUND	SITE	12/28/2022	1340 S 4TH ST LOUISVILLE KY 40208-0000
SDP-22-1270	BLANKENBAKER STATION III LOT 7 KINETRICS	SITE	12/28/2022	2701 CONSTANT COMMENT PL LOUISVILLE KY 40299-0000
SDP-22-1250	Ivybrook Academy LaGrange Rd	SITE	12/29/2022	13550 LA GRANGE RD LOUISVILLE KY 40245-0000
SDP-22-1319	VALHALLA GOLF CLUB MAINTENANCE FACILITY	SITE	12/29/2022	15503 SHELBYVILLE RD LOUISVILLE KY 40245-0000
SDP-22-1273	McCawley Rd Sidewalk and Box Culvert Extension	SITE	1/4/2023	741 MCCAWLEY RD LOUISVILLE KY 40219-0000
SDP-22-1305	TOTAL TRUCK PARTS	SITE	1/4/2023	4525 POPLAR LEVEL RD LOUISVILLE KY 40213-0000
SDP-22-1315	OLD NEW CUT RD APTS	SITE	1/4/2023	6451 NEW CUT RD LOUISVILLE KY 40118-0000
SDP-22-1267	KIDDIE ACADEMY	SITE	1/5/2023	8013 BROWNSBORO RD BARBOURMEADE KY 40241-0000
SDP-22-1302	JAGGERS MIDDLETOWN	SITE	1/5/2023	13712 SHELBYVILLE RD MIDDLETOWN KY 40245-0000
SDP-21-1216	NETHERWOOD PATIO HOMES	SITE	1/6/2023	5009 NETHERWOOD RIDGE DR LOUISVILLE KY 40241-0000
SDP-22-1312	LOGISTICS AIR PARK II	SITE	1/10/2023	5400 MINOR LN LOUISVILLE KY 40219-0000
SDP-22-1271	FLATS AT BARDSTOWN	SUBDIVIS	1/17/2023	2100 BUECHEL BANK RD LOUISVILLE KY 40218-0000
SDP-22-1314	MORTENSON DENTAL	SITE	1/17/2023	911 PALATKA RD LOUISVILLE KY 40214-0000
SDP-22-1342	PREFAB BATTERY STORAGE BLDG	SITE	1/17/2023	4660 SHELBYVILLE RD 8 ST MATTHEWS KY 40207-0000
SDP-22-1317	THE YARD COMMERCIAL	SITE	1/18/2023	320 S SHELBY ST LOUISVILLE KY 40202-0000
SDP-21-1233	JAGGERS ADDITION	SITE	1/20/2023	6221 DUTCHMANS LN ST MATTHEWS KY 40205-0000
SDP-22-1280	SOUTH WATTERSON TRAIL CULVERT REPLACEMENT	SITE	1/20/2023	5901 STANSBURY LN LOUISVILLE KY 40291-0000
SDP-23-1005	CHASE BANK BLDG DEMO	SITE	1/20/2023	9491 WESTPORT RD MEADOW VALE KY 40241-0000
SDP-23-1006	UOFL MEDICAL OFFICE BLDG DEMO	SITE	1/20/2023	9403 WESTPORT RD MEADOW VALE KY 40241-0000
SDP-22-1331	IDI	SITE	1/23/2023	11300 MIDWAY DR JEFFERSONTOWN KY 40299-0000
SDP-23-1009	LIC WATER TANK SITE CLEAR AND GRADE	SITE	1/24/2023	7777 NATIONAL TPKE LOUISVILLE KY 40214-0000
SDP-22-1251	MODESTO PUMP STATION ELIMINATION	SITE	1/27/2023	3701 MODESTO RD JEFFERSONTOWN KY 40299-0000
SDP-22-1309	805 S ENGLISH STATION RD	SITE	1/27/2023	805 S ENGLISH STATION RD LOUISVILLE KY 40299-0000

LICENSE	PROJECT NAME	TYPE	APPROVED DATE	ADDRESS
SDP-22-1288	HURSTBOURNE POINTE APTS	SITE	1/30/2023	8300 HURSTBOURNE POINTE DR 101 LOUISVILLE KY 40299-0000
SDP-22-1316	THE YARD RESIDENTIAL	SITE	1/30/2023	320 S SHELBY ST LOUISVILLE KY 40202-0000
SDP-22-1174	Nicklies - Enterprise Drive	SITE	1/31/2023	6701 ENTERPRISE DR LOUISVILLE KY 40214-0000
SDP-22-1377	E. Oak Street Development	SITE	2/2/2023	1037 E OAK ST 101 LOUISVILLE KY 40204-0000
SDP-22-1346	SECOND STREET HOTEL ROADWAY AND DRAINAGE	SITE	2/6/2023	133 W MARKET ST LOUISVILLE KY 40202-0000
SDP-22-1353	NORTON COMMONS NORTH VILLAGE PH 13	SITE	2/8/2023	6101 CHAMBERLAIN LN LOUISVILLE KY 40059-0000
SDP-23-1008	MANSLUICK LG&E SUBSTATION PROPOSED DITCH	SITE	2/10/2023	8701 W MANSLUICK RD LOUISVILLE KY 40272-0000
SDP-22-1123	Miki Express LLC	SITECLGRD	2/14/2023	6412 BLEVINS GAP RD LOUISVILLE KY 40272-0000
SDP-22-1162	CHICK FIL A #5066 OKALONA	SITE	2/14/2023	10501 PRESTON HWY LOUISVILLE KY 40229-0000
SDP-22-1341	DERBY CITY MOTORCYCLE	SITE	2/17/2023	10203 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
SDP-22-1352	Fischer SIPS Expansion	SITE	2/17/2023	1844 NORTHWESTERN PKY LOUISVILLE KY 40203-0000
SDP-22-1351	Rueff Signs	SITE	2/21/2023	1530 E WASHINGTON ST LOUISVILLE KY 40206-0000
SDP-23-1038	Rock Water Drive Redline	SUBDIVIS	2/21/2023	5127 ROCK WATER DR LOUISVILLE KY 40241-0000
SDP-22-1156	PORTLAND CHRISTIAN LITTLE SCHOOL	SITE	2/22/2023	4575 SPRINGDALE RD LOUISVILLE KY 40241-0000
SDP-22-1375	GERMANTOWN MILL LOFTS	SITE	2/22/2023	1318 MCHENRY ST LOUISVILLE KY 40217-0000
SDP-22-1283	JACK IN THE BOX #J5003	SITE	2/24/2023	10700 DIXIE HWY LOUISVILLE KY 40272-0000
SDP-22-1284	JACK IN THE BOX # J5007	SITE	2/24/2023	3232 BARDSTOWN RD LOUISVILLE KY 40205-0000
SDP-22-1105	LA LOMA RESTAURANT	SITE	2/28/2023	7319 PRESTON HWY LOUISVILLE KY 40219-0000
SDP-22-1335	COTTAGE OF SILVER BELL SUBD	SUBDIVIS	2/28/2023	8310 SILVER BELL AVE LOUISVILLE KY 40228-0000
SDP-22-1328	TANK STORAGE ADDITION ULTRA PURE	SITE	3/3/2023	6800 ENTERPRISE DR LOUISVILLE KY 40214-0000
SDP-23-1020	MATERIAL HANDLER PAD AND ROADWAY REGRADING	SITE	3/6/2023	2611 BUDDEKE DR LOUISVILLE KY 40206-0000
SDP-21-1251	STUART AVE EXT	SITE	3/8/2023	7600 STUART AVE LOUISVILLE KY 40258-0000
SDP-22-1064	BAXTER COMMUNITY CENTER	SITE	3/8/2023	1125 W LIBERTY ST LOUISVILLE KY 40203-0000
SDP-22-1151	Encompass Rehabilitation Hospital of Louisville	SITE	3/9/2023	11800 BLUEGRASS PKY JEFFERSONTOWN KY 40299-0000
SDP-23-1017	DEMO QUADRANT ZORN RETAIL CENTER DEMO PHASE	SITE	3/9/2023	1041 ZORN AVE LOUISVILLE KY 40207-0000
SDP-23-1035	DENNYS DEMO	SITE	3/9/2023	4030 DUTCHMANS LN ST MATTHEWS KY 40207-0000
SDP-23-1001	COMMERCE CROSSING TWO C & G	SITECLGRD	3/13/2023	9701 COOPER CHURCH DR LOUISVILLE KY 40229-0000
SDP-23-1036	NORTON WEST LOUISVILLE HOSPITAL	SITE	3/13/2023	850 S 28TH ST LOUISVILLE KY 40211-0000
SDP-23-1048	CATALPA FARMS SEC 10 C & G	SITECLGRD	3/13/2023	3208 OLD CLARK STATION RD LOUISVILLE KY 40023-0000
SDP-23-1053	Wind Dance Farm Trunk Sewer SWPPP	SITE	3/13/2023	2500 CLARK STATION RD LOUISVILLE KY 40023-0000
SDP-23-1064	Wind Dance Farm Phase 1	SUBDCLGRD	3/13/2023	2500 CLARK STATION RD LOUISVILLE KY 40023-0000
SDP-23-1065	Wind Dance Farm Phase 1B	SUBDCLGRD	3/13/2023	2500 CLARK STATION RD LOUISVILLE KY 40023-0000
SDP-23-1066	Wind Dance Farm Phase 1C	SUBDCLGRD	3/13/2023	2500 CLARK STATION RD LOUISVILLE KY 40023-0000
SDP-23-1044	DEMO U OF L DENTAL APTS	SITE	3/14/2023	627 S PRESTON ST LOUISVILLE KY 40202-0000
SDP-22-1036	PATRIOT CROSSINGS CLUBHOUSE AND POOL	SITE	3/17/2023	7101 YORKTOWN RD 1 LOUISVILLE KY 40214-0000
SDP-22-1225	SCOOTERS WESTPORT RD	SITE	3/22/2023	9224 WESTPORT RD ROLLING HILLS KY 40242-0000
SDP-23-1013	VILLAGES AT HERITAGE CREEK OFFSITE SEWERS	SITECLGRD	3/22/2023	10001 CEDAR CREEK RD HERITAGE CREEK KY 40229-0000
SDP-22-1019	AAK FIRST AID BLDG DEMO	SITE	3/23/2023	1625 WATHEN LN SHIVELY KY 40216-0000
SDP-22-1269	SPECKMAN RETAIL	SITE	3/23/2023	719 SPECKMAN RD MIDDLETOWN KY 40243-0000
SDP-23-1057	SCOOTERS COFFEE 10515 TAYLORSVILLE RD	SITE	3/23/2023	10515 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
SDP-22-1326	ST XAVIER RYKEN HOUSE IMPROVEMENTS	SITE	3/28/2023	1609 POPLAR LEVEL RD LOUISVILLE KY 40217-0000
SDP-23-1047	LDG MOTOR WORKS DEMO	SITE	3/28/2023	717 S 5TH ST LOUISVILLE KY 40203-0000
SDP-22-1276	FARMER INDUSTRIAL BLVD	SITE	3/29/2023	2001 INDUSTRIAL BLVD LOUISVILLE KY 40219-0000
SDP-23-1085	Villages at Heritage Creek - Offsite Sewer Phase 2	SITECLGRD	3/30/2023	10001 CEDAR CREEK RD HERITAGE CREEK KY 40229-0000
SDP-22-1212	GUSTAVOS MEXICAN GRILL	SITE	3/31/2023	7603 RIVER RD LOUISVILLE KY 40059-0000
SDP-23-1050	VALHALLA CLUBHOUSE LANDSCAPE C & G	SITECLGRD	3/31/2023	15503 SHELBYVILLE RD LOUISVILLE KY 40245-0000
SDP-23-1042	WOODLAND HILLS MULTI SIDEWALK IMPROVEMENTS	SITE	4/4/2023	201 MARENGO DR WOODLAND HILLS KY 40243-0000
SDP-21-1053	BEECHER TERRACE PH 4	SITE	4/5/2023	1200 W JEFFERSON ST LOUISVILLE KY 40203-0000
SDP-23-1074	NORTON COMMONS N11 PARK	SITE	4/11/2023	6030 ST BERNADETTE AVE LOUISVILLE KY 40059-0000
SDP-23-1032	MAPLE STREET GREENSPACE PH 1	SITE	4/12/2023	2311 MAPLE ST LOUISVILLE KY 40211-0000
SDP-23-1003	FERNDALE CENTER RENOVATIONS	SITE	4/13/2023	6300 BARDSTOWN RD LOUISVILLE KY 40291-0000
SDP-23-1078	CARRINGTON APARTMENTS	SITE	4/13/2023	9301 STONESTREET RD 201 LOUISVILLE KY 40272-0000
SDP-22-1196	KENTUCKY EXPO CTR GATE 1 FENCING	SITE	4/14/2023	937 PHILLIPS LN LOUISVILLE KY 40209-0000
SDP-22-1266	NICOLAS FARMS LEISURE LANE SUBD	SUBDIVIS	4/14/2023	6406 LEISURE LN LOUISVILLE KY 40229-0000
SDP-22-1332	OLD HENRY FRANCO LIMA	SITE	4/14/2023	13112 OLD HENRY RD LOUISVILLE KY 40223-0000
SDP-23-1073	BLANKENBAKER STATION III LOT 1 PARKING LOT	SITE	4/19/2023	2700 CHESTNUT STATION CT LOUISVILLE KY 40299-0000
SDP-23-1018	GLENMARY FARMS SUB C & G	SITECLGRD	4/20/2023	8000 DOBSON LN LOUISVILLE KY 40291-0000
SDP-23-1054	CHAPEL IN THE WOODS	SITE	4/20/2023	1304 WATTERSON TRL MIDDLETOWN KY 40299-0000
SDP-23-1105	12525 SHELBYVILLE RD PIZZA HUT DEMO	SITE	4/20/2023	12525 SHELBYVILLE RD MIDDLETOWN KY 40243-0000
SDP-22-1180	SAMS CLUB #8111-238 FUEL STATION EXPANSION	SITE	4/25/2023	1401 ALLIANT AVE JEFFERSONTOWN KY 40299-0000
SDP-23-1031	VALHALLA ENTRY LANDSCAPE	SITE	4/25/2023	15503 SHELBYVILLE RD LOUISVILLE KY 40245-0000
SDP-23-1002	VALHALLA CLUBHOUSE LANDSCAPE	SITE	4/26/2023	15503 SHELBYVILLE RD LOUISVILLE KY 40245-0000
SDP-23-1069	JCTC PARKING LOT	SITE	4/26/2023	106 E BROADWAY LOUISVILLE KY 40202-0000
SDP-22-1133	LMPD Bldg DEMO	SITE	4/28/2023	225 S 7TH ST LOUISVILLE KY 40202-0000
SDP-22-1282	3915 BUECHEL BANK RD	SITECLGRD	5/1/2023	3915 BUECHEL BANK RD LOUISVILLE KY 40218-0000
SDP-23-1103	INTERPOLYMER PARKING LOT	SITE	5/1/2023	7501 DISTRIBUTION DR LOUISVILLE KY 40258-0000
SDP-23-1041	MIKES CARWASH SHELBYVILLE RD	SITE	5/2/2023	4800 SHELBYVILLE RD ST MATTHEWS KY 40207-0000
SDP-23-1087	SCOOTERS COFFEE 1594	SITE	5/2/2023	3200 KRISTIN WAY LOUISVILLE KY 40216-0000
SDP-23-1093	BETH HAVEN MEMORIAL GARDENS	SITE	5/2/2023	9020 STONESTREET RD LOUISVILLE KY 40272-0000
SDP-23-1086	DIXIE MANOR PARKING REVISIONS DEMO	SITE	5/3/2023	6801 DIXIE HWY 100 LOUISVILLE KY 40258-0000
SDP-22-1324	BRENTLINGER LN PH 2 ROADWAY IMPROVEMENTS	SITE	5/4/2023	9913 BRENTLINGER LN LOUISVILLE KY 40291-0000
SDP-22-1099	LOUISVILLE ZOO METAZOO RENO AND NEW OFFICE BUNGALO	SITE	5/8/2023	1100 TREVILIAN WAY LOUISVILLE KY 40213-0000
SDP-23-1029	RETAIL AND RESIDENTIAL ADDITION	SITE	5/9/2023	2703 PRESTON HWY PARKWAY VILLAGE KY 40217-0000
SDP-23-1004	BLANKENBAKER STATION II LOT 27 EXP	SITE	5/10/2023	13001 PLANTSIDE DR LOUISVILLE KY 40299-0000
SDP-22-1339	BUBBAS SOUTHPOINTE COMMONS TRACT 6	SITE	5/11/2023	10501 SOUTHPOINTE BLVD LOUISVILLE KY 40291-0000
SDP-23-1030	BOYD CAT WASH AND MAINT. EARTH MOVING SHOP TRACT 2	SITE	5/11/2023	1400 CECIL AVE 1 LOUISVILLE KY 40211-0000
SDP-23-1081	KYFI PARKING LOT EXPAN	SITE	5/11/2023	4400 FERN VALLEY RD LOUISVILLE KY 40219-0000
SDP-23-1104	HOSPARUS LOUISVILLE DEMO	SITE	5/11/2023	3532 EPHRAIM MCDOWELL DR LOUISVILLE KY 40205-0000
SDP-23-1089	DIYANNI HOMES KY MODEL	SITE	5/12/2023	114 URTON LN MIDDLETOWN KY 40223-0000
SDP-23-1112	CHALLENGER LIFTS	SITE	5/15/2023	2311 SOUTH PARK RD SOUTH PARK VIEW KY 40219-0000
SDP-22-1218	UAW LOCAL UNION HALL	SITE	5/16/2023	3200 COLLINS LN LOUISVILLE KY 40245-0000

LICENSE	PROJECT NAME	TYPE	APPROVED DATE	ADDRESS
SDP-23-1051	GORDON ELECTRON	SITE	5/16/2023	11751 ELECTRON DR JEFFERSONTOWN KY 40299-0000
SDP-23-1100	PAULS FRUIT MARKET	SITE	5/16/2023	4966 U S HIGHWAY 42 NORTHFIELD KY 40222-0000
SDP-22-1247	CHICKASAW PARK POND RENOVATIONS	SITE	5/22/2023	1200 SOUTHWESTERN PKY LOUISVILLE KY 40211-0000
SDP-23-1014	The Speed Art Museum Ph III	SITE	5/22/2023	2035 S 3RD ST LOUISVILLE KY 40208-0000
SDP-23-1144	Pandher / 6804 Shepherdsville Road	SITE	5/22/2023	6804 SHEPHERDSVILLE RD LOUISVILLE KY 40219-0000
SDP-22-1327	ZAXBYS OFFICE BLDG	SITE	5/23/2023	12407 REHL RD LOUISVILLE KY 40299-0000



APPENDIX 2.4.9 EPSC ENFORCEMENT PROGRAM REVIEW



MEMORANDUM

TO:	Colette Easter/Louisville MSD Ben Davidson/Louisville MSD Bob Stauble/Louisville MSD	FROM:	John Ricketts/Freedom Engineers
CC:	Bethany Shain/AECOM	DATE:	June 27, 2023
SUBJECT:	Observations and Recommendations for EPSC Implementation		

This memorandum has been prepared based on observations made and discussions held during the time that John Ricketts was performing EPSC enforcement responsibilities while Ben Davidson was out on leave from mid-October 2022 through early January 2023. In general, Freedom Engineers believes MSD is implementing a quality EPSC program that is aimed at compliance with Chapter 159 of the Louisville/Jefferson County Metro Government Code of Ordinances. Freedom Engineers is providing this memorandum to offer suggestions for enhancing the program in the spirit of continuous improvement.

The observations and accompanying recommendations provided below are divided into the following three categories:

1. **MSD Process Improvements:** These items are associated with how the program has been implemented and challenges that have been observed and reported associated with the implementation.
2. **Ordinance Enhancements:** These items are related to the language and interpretation of Ordinance 186-07.
3. **Inspection Improvements:** These items are related specifically to observed inspection procedures.

MSD Process Improvements

1. Ms. Kahlia appears to be overloaded with her responsibilities, and there does not appear to be a clear path for how other's (Kim Robinson) cover for her when she is out. Recommendation: hire another person, cross-train staff, and develop a protocol for notification when back-up personnel are needed.
2. The fine schedule determination does not include a category for administrative violations of the ordinance, such as co-permittee acknowledgement forms, Contractor inspection forms, and the latest version of the EPSC Plan being kept on-site. Recommendation: develop a new category for administrative violations and determine the fine amounts.
3. There appears to be confusion relative to who is supposed to inspect a site while a site is under enforcement. Recommendation: develop a protocol for whether the inspector or enforcement personnel will inspect sites while a site is under enforcement and then train inspectors and enforcement personnel on the protocol.
4. Inspectors follow different protocol when notifying a permittee about deficiencies they have identified during an inspection. Recommendation: develop a protocol and train inspectors on the protocol. The protocol that has been discussed is the inspector communicate with the



permittee through e-mail or text if they are not present on-site and as long as the permittee responds back with photos and details within the 48 hours, then an FCN would not be issued. If the permittee does not communicate well or lies or the work is not performed within 48 hours, then future protocol will be the immediate issuance of an FCN.

5. On several projects there has been confusion about who is the latest permittee and contact information for that person. Recommendation: develop a protocol and train Contractors and MSD personnel on that protocol. The Contractor should be held responsible for making any updates per the Ordinance.
6. Response to Service Requests (SRs): On several occasions a SR was assigned to enforcement personnel before vetting the project through an inspector. Recommendation: develop a clear protocol for confirming whether a site has received a permit. If a permit has been obtained, then SR should be routed to the assigned inspector. If an inspector has not been assigned, then the SR should be routed to the geographical area's supervisor for assigning the project to an inspector. If a permit has not been obtained, enforcement personnel should visit the site and issue a NOV/SWO, as appropriate. Train inspectors and enforcement personnel to enter updated information in IPS for assigned SRs and how to close out an SR.
7. On several occasions the permittee, or responsible person, removed staked NOVs/SWOs. These postings are important for all site personnel to understand what the status of the project is. Recommendation: develop a protocol, including fines and ordinance modifications, to discourage the removal of NOVs/SWOs and train MSD personnel and Contractors on proposed changes.
8. Some of the inspectors commented that the permittee receives a copy of the approved EPSC Plan long before they do. Recommendation: modify the process so the inspector receives the approved EPSC Plan at least at the same time as the permittee.
9. The inspectors and supervisors have indicated they do not always receive copies of NOC's when they are sent out. Recommendation: develop a protocol so inspectors and supervisors receive NOCs when they are sent to the permittee. Coordinate this effort with Item 3 above.
10. Enforcement has specific information that is needed from the inspector should a situation be escalated to enforcement. Recommendation: enforcement personnel develop a list of information they need prior to a site being referred to them for not complying with an FCN.
11. Communication: Clear and open communication is critical to the successful implementation of the MSD EPSC program. Recommendation: provide regular opportunities for MSD personnel involved in the EPSC program to meet, discuss challenges, and propose solutions.
12. General Permits: At times there appeared to be differences in level of care between MSD and other public utilities MSD has a general permit with. Recommendation: Review the general permits for possible changes and train other public utilities on permit requirements.

Ordinance Enhancements

1. Definitions: Waterways, used on page 35; solid and intermittent blue line streams, used on page 6; drainageway, used on page 8; are not defined. Recommendation: use only one word (maybe drainageways) and define it. This may help the EPSC Plan reviewers better determine whether temporary stream crossings are required.



2. Qualified Plan Preparer: As discussed, not all Professional Engineers or Landscape Architects are well versed in erosion prevention and sediment control. Recommendation: develop a qualification program like the one required for inspectors.
3. The Ordinance refers to the Design Manual, Standard Drawings, and Standard Specifications. The EPSC portions of these documents are 5-14 years old. Recommendation: review and update, as needed.
4. Most of the time, detailed EPSC Plans only include one site plan drawing. Recommendation: require phased drawings with a minimum of two drawings.
5. Paragraph 4 on page 48 states the inspector provides the Notice of Compliance to the Permittee. Recommendation: change this to MSD, since typically Ms. Kahlia performs this function.
6. Paragraph (4) authorizes MSD to enact certain protocol should a permittee have two or more NOVs causing adverse impact or off-site degradation within a two-year period. Recommendation: develop a protocol for tracking and assign this effort to an MSD person.

Inspection Improvements

1. The inspectors are very busy and do not always have time to inspect sites between three and four days following a 0.5 inch or greater rain event. Recommendation: provide inspectors with a prioritization criteria to assist with at least inspecting prioritized sites within the time following a rain event.
2. The inspectors do not appear to look for administrative type compliances contained within the Ordinance, such as co-permittee acknowledgement forms, Contractor inspection forms, and having the latest copy of the EPSC Plan on-site. Recommendation: determine ways to have this information reviewed for compliance with the Ordinance.
3. The inspectors do not appear to track when a site has ceased land disturbing activity on a portion of a site to determine when 14 days have transpired and temporary or final stabilization is required. Recommendation: train inspectors to track this time for each site.
4. There appears to be a varying length of time after an FCN is issued until the inspector follows up. Recommendation: train the inspectors to schedule site inspections 48 hours after the FCN has been issued, and if the FCN has not been addressed, to immediately notify enforcement for follow-up.
5. Inspectors often have a challenge maintaining a working relationship with Contractors and not becoming “buddies”, thus potentially leading to differential treatment. Recommendation: provide training to inspectors reminding them it is MSD’s goal and the Contractor’s responsibility to protect the waterways within Jefferson County.
6. The inspectors have implemented the various Ordinance requirements in slightly different manners, leading to Contractor complaints of inconsistency within the inspection group. Recommendation: have the inspectors shadowed or their process reviewed by their supervisors or a third party on a regular basis, such as a few times a year, to try to develop more implementation consistency.
7. Some inspectors seem to feel they need to be able to recommend improvements when an EPSC Plan is not working as intended. Recommendation: inspectors need to be reminded



during regular training that any deficiencies in the EPSC Plan need to go back to the EPSC Plan preparer for edits.



APPENDIX 2.4.10 EPSC TRAINING SUMMARY

2.4.10 EPSC Training Summary

Certification Title	Certificates Awarded
EPSC Certified Plan Reviewer/Preparer	16
EPSC Home Builder	1
EPSC Home Builder BIAGL	5
EPSC Online Home Builder	23
EPSC Online Contractor	328
Total Participants	373



**APPENDIX 2.5.2 POST-CONSTRUCTION INSPECTION AND ENFORCEMENT
TRACKING MAP**

APPENDIX 2.5.2 POST-CONSTRUCTION INSPECTION AND ENFORCEMENT TRACKING MAP





APPENDIX 2.5.3 REVIEWED POST-CONSTRUCTION BMP REQUIRED PROJECTS

APPENDIX 2.5.3 REVIEWED POST-CONSTRUCTION BMP REQUIRED PROJECTS

License #	Business Name	Address
GI939914	Preston Highway Apartments	8925 PRESTON HWY 101 LOUISVILLE KY 40219-0000
GI940087	V SOFT EASTPOINT OFFICE BLDG	2500 EASTPOINT PKY LOUISVILLE KY 40223-0000
GI940269	GOODWILL OPPORTUNITY CAMPUS	2820 W BROADWAY LOUISVILLE KY 40211-0000
GI940318	Bosse Construction Office	11101 PLANTSIDE DR JEFFERSONTOWN KY 40299-0000
GI940331	Testing	1100 BLUE HERON RD LOUISVILLE KY 40245-0000
GI940332	HURSTBOURNE COMMONS SUBD	8127 WATTERSON TRL LOUISVILLE KY 40299-0000
GI940334	CEDAR BROOK SUBD SEC 5B	9604 CEDAR CREEK RD LOUISVILLE KY 40228-0000
GI940335	Speedwash Car Wash	9506 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
GI940340	TARC TRAINING LOT	651 S 30TH ST LOUISVILLE KY 40211-0000
GI940341	BAXTER COMMUNITY CENTER	1125 W LIBERTY ST LOUISVILLE KY 40203-0000
GI940342	LOUISVILLE COUNTRY CLUB PARKING EXP	25 MOCKINGBIRD VALLEY TRL LOUISVILLE KY 40207-0000
GI940346	1600 W LEE ST SITE IMPROVEMENTS RUMPKE WASTE	1600 W LEE ST LOUISVILLE KY 40210-0000
GI940358	Testing	1100 BLUE HERON RD LOUISVILLE KY 40245-0000
GI940367	6101 FEGENBUSH LN CONVENIENCE STORE	6101 FEGENBUSH LN LOUISVILLE KY 40228-0000
GI940369	CROSSINGS AT SOUTH PARK	10511 W MANSLICK RD LOUISVILLE KY 40118-0000
GI940371	LIV SPRINGDALE APARTMENTS	5217 SPRINGDALE RD LOUISVILLE KY 40241-0000
GI940372	Nicklies - Enterprise Drive	6701 ENTERPRISE DR LOUISVILLE KY 40214-0000
GI940374	AXIS ST ANDREWS CHURCH RD	7746 ST ANDREWS CHURCH RD LOUISVILLE KY 40214-0000
GI940375	EUROFINS GENOMICS	12621 PLANTSIDE DR LOUISVILLE KY 40299-0000
GI940376	CHAMBERLAIN PARKING	12415 OLD LA GRANGE RD LOUISVILLE KY 40245-0000
GI940378	Casualwood Subd	8314 CASUALWOOD WAY LOUISVILLE KY 40291-0000
GI940383	BRIDLE RUN SEC 3 ROADS AND DRAINAGE	1312 FLAT ROCK RD LOUISVILLE KY 40245-0000
GI940385	ALTISSIMA PLACE APTS	9118 W MANSLICK RD LOUISVILLE KY 40272-0000
GI940389	THORNTONS P2106	10501 PRESTON HWY LOUISVILLE KY 40229-0000
GI940392	CORCORAN 9418 PIROUETTE AVE	9418 PIROUETTE AVE LOUISVILLE KY 40118-0000
GI940393	SOUTHPOINTE COMMONS	10501 SOUTHPOINTE BLVD LOUISVILLE KY 40291-0000
GI940400	BELLINGHAM PARK PH 3A & 3B	13605 FACTORY LN LOUISVILLE KY 40245-0000
GI940402	SANCTUARY FALLS SUBD SEC 3	5550 SCHULER LN LOUISVILLE KY 40059-0000
GI940403	JAGGERS ADDITION	6221 DUTCHMANS LN ST MATTHEWS KY 40205-0000
GI940406	BLANKENBAKER STATION II LOT 8 QUADRANT EXPANSION	12600 PLANTSIDE DR LOUISVILLE KY 40299-0000
GI940412	Glengrove Apartments	6605 W ORELL RD LOUISVILLE KY 40272-0000
GI940413	WATERFRONT BOTANICAL GARDEN PH 2	1432 FRANKFORT AVE LOUISVILLE KY 40206-0000
GI940422	CHENOWETH RUN STORAGE	3106 CHENOWETH RUN RD LOUISVILLE KY 40299-0000
GI940426	JEFFERSONTOWN FIRE AND EMS STATION 4	12602 TAYLORSVILLE RD LOUISVILLE KY 40299-0000
GI940433	U OF L HOSPITAL WEST TOWER EXP	545 S JACKSON ST LOUISVILLE KY 40202-0000
GI940434	TONYS WRECKER	3311 COLLINS LN LOUISVILLE KY 40245-0000
GI940435	The Path Off Cane Run	4524 CANE RUN RD LOUISVILLE KY 40216-0000
GI940439	DELTECH ADDITION	3910 OAKLAWN DR LOUISVILLE KY 40219-0000
GI940444	Blankenbaker Logistics Center	13051 PLANTSIDE DR LOUISVILLE KY 40299-0000
GI940445	HICKORY TRACE APARTMENTS	4328 HICKORY TRACE DR LOUISVILLE KY 40219-0000
GI940446	FARMER BLANKENBAKER PKWY	2125 BLANKENBAKER PKY JEFFERSONTOWN KY 40299-0000
GI940450	NETHERWOOD PATIO HOMES	5009 NETHERWOOD RIDGE DR LOUISVILLE KY 40241-0000
GI940451	BLANKENBAKER STATION III LOT 7 KINECTRICS	2701 CONSTANT COMMENT PL LOUISVILLE KY 40299-0000
GI940452	DATA VAULT OFFICE WAREHOUSE	211 N ENGLISH STATION RD MIDDLETOWN KY 40223-0000
GI940458	ALSTON TRACE SUBD	5043 TERRY RD LOUISVILLE KY 40216-0000
GI940461	HURSTBOURNE POINTE APTS	
GI940467	KIDDIE ACADEMY	8013 BROWNSBORO RD BARBOURMEADE KY 40241-0000
GI940468	JEFFERSONTOWN POLICE DISPATCH	10410 TAYLORSVILLE RD JEFFERSONTOWN KY 40299-0000
GI940469	Ivybrook Academy LaGrange Rd	13550 LA GRANGE RD LOUISVILLE KY 40245-0000
GI940470	VALHALLA GOLF CLUB MAINTENANCE FACILITY	15503 SHELBYVILLE RD LOUISVILLE KY 40245-0000
GI940471	LOUISVILLE LOGISTICS PARK ROADWAY	1400 CECIL AVE 1 LOUISVILLE KY 40211-0000
GI940478	Logistics Air Park II	5400 MINOR LN LOUISVILLE KY 40219-0000
GI940479	Etawah Woods	1330 ETAWAH AVE LYNDON KY 40222-0000
GI940486	FLATS AT BARDSTOWN	2100 BUECHEL BANK RD LOUISVILLE KY 40218-0000
GI940490	CHICKASAW PARK POND RENOVATIONS	1200 SOUTHWESTERN PKY LOUISVILLE KY 40211-0000
GI940508	Encompass Rehabilitation Hospital of Louisville	11800 BLUEGRASS PKY JEFFERSONTOWN KY 40299-0000
GI940516	805 S ENGLISH STATION RD	805 S ENGLISH STATION RD LOUISVILLE KY 40299-0000
GI940520	ELLIOT PARK	630 S 28TH ST LOUISVILLE KY 40211-0000
GI940521	SECOND STREET HOTEL ROADWAY AND DRAINAGE	133 W MARKET ST LOUISVILLE KY 40202-0000
GI940536	GUSTAVOS MEXICAN GRILL	7603 RIVER RD LOUISVILLE KY 40059-0000
GI940537	CIRCLE K E MANSLICK RD AND SMYRNA PKWY	6305 E MANSLICK RD LOUISVILLE KY 40228-0000

License #	Business Name	Address
GI940553	NORTON WEST LOUISVILLE HOSPITAL	850 S 28TH ST LOUISVILLE KY 40211-0000
GI940556	OLD HENRY FRANCO LIMA	13112 OLD HENRY RD LOUISVILLE KY 40223-0000
GI940557	FARMER INDUSTRIAL BLVD	2001 INDUSTRIAL BLVD LOUISVILLE KY 40219-0000
GI940558	STUART AVE EXT	7600 STUART AVE LOUISVILLE KY 40258-0000
GI940559	LWC ROADWAY ENTRANCE PROJECT	3005 RIVER RD LOUISVILLE KY 40207-0000
GI940577	CHICK FIL A #5068 SPRING STATION	962 BRECKENRIDGE LN ST MATTHEWS KY 40207-0000
GI940579	METRO HOUSING AUTHORIT	1200 W JEFFERSON ST LOUISVILLE KY 40203-0000
GI940585	MAPLE STREET GREENSPACE PH 1	2311 MAPLE ST LOUISVILLE KY 40211-0000
GI940587	SMYRNA VILLAGE	8912 SMYRNA PKY LOUISVILLE KY 40228-0000
GI940589	LEISURE LANE SUBD	6406 LEISURE LN LOUISVILLE KY 40229-0000
GI940603	MIKES CARWASH SHELBYVILLE RD	4800 SHELBYVILLE RD ST MATTHEWS KY 40207-0000
GI940605	LOUISVILLE ZOO METAZOO RENO AND NEW OFFICE BUNGALO	1100 TREVILIAN WAY LOUISVILLE KY 40213-0000
GI940607	Storage Facility	11661 BLANKENBAKER ACCESS DR LOUISVILLE KY 40299-0000
GI940609	BOYD CAT WASH AND EARTH MOVING SHOP TRACT 2	1400 CECIL AVE 1 LOUISVILLE KY 40211-0000
GI940612	FARM CREDIT MID AMERICA	12501 LAKEFRONT PL LOUISVILLE KY 40299-0000
GI940613	DIXIE MANOR WATER QUALITY UNIT	6801 DIXIE HWY 100 LOUISVILLE KY 40258-0000
GI940614	GORDON ELECTRON	11751 ELECTRON DR JEFFERSONTOWN KY 40299-0000
GI940615	UAW LOCAL UNION HALL	3200 COLLINS LN LOUISVILLE KY 40245-0000
GI940623	TRINITY HIGH SCHOOL TENNIS SEARS AVE	150 SEARS AVE ST MATTHEWS KY 40207-0000
GI940624	MORRIS 7203 E MANSLICK RD	7203 E MANSLICK RD LOUISVILLE KY 40228-0000
GI940628	VALHALLA GOLF CLUB HORSE BARN	15503 SHELBYVILLE RD LOUISVILLE KY 40245-0000
GI940630	BULL RUN TOWNHOMES	1922 HERR LN GRAYMOOR/DEVONDALE KY 40222-0000
GI940635	WDC PHASE IV PLAYWORKS EVENT BLDG & RR	1101 ROWAN ST LOUISVILLE KY 40203-0000
GI940644	AMERICAN PRINTING HOUSE FOR THE BLIND	1839 FRANKFORT AVE LOUISVILLE KY 40206-0000







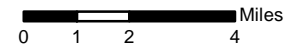
APPENDIX 2.5.19 MAP OF MSD MOWING BOUNDARIES

MSD MOWING BOUNDARIES

APPENDIX 2.5.19

Legend

-  Jefferson County Boundary
-  MSD Maintained Areas
-  Restoration (No Mow) Areas
-  Other Agency Responsibility



1 inch equals 3.64 miles



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APPENDIX 2.5.20 URBAN REFORESTATION GRANT SUMMARY

APPENDIX 2.5.20 LIST OF TREE PROJECTS

Applicant or Project Name	Phase 1	Trees Requested
Trees Louisville, Inc.	\$ 40,000.00	170
Tyler Park	\$ 6,000.00	50
District 8	\$ 12,000.00	53
District 4	\$ 12,000.00	53
Riverwood	\$ 6,000.00	26
Upper Highlands Neighborhood	\$ 3,600.00	28
Westwood Trees	\$ 4,200.00	18
Windwood HOA	\$ 5,960.00	31
Friends of Bardstown Rd	\$ 6,000.00	25
Original Highlands	\$ 6,000.00	26
Bashford Place Condominiums	\$ 1,680.00	7
Louisville Grows	\$ 40,000.00	170
District 21	\$ 40,080.00	170
Belknap Neighborhood	\$ 12,000.00	58
Dudley Square Re-treeing Project	\$ 6,000.00	16
Deer Park	\$ 5,400.00	45
Brownsboro Village	\$ 2,880.00	13
Highlands Douglas	\$ 6,000.00	53
Bonnycastle	\$ 3,000.00	30
Sara Ceresa	\$ 4,800.00	20
Old Louisville	\$ 12,000.00	56
Second Street Neighborhood Association	\$ 6,000.00	26
Dove Point HOA		16
	\$241,600	1144



APPENDIX 2.6.3 MS4 RELATED TRAINING

APPENDIX 2.6.3 MS4 RELATED TRAINING SUMMARY

Course #	Course Name	Date	Hours
65560	CONSTRUCTION BLUEPRINTS AND PLANS	9/21/2022, 3/22/2023	24
65540	EROSION CONTROL	2/21/2023	16
12225	GHS - HazComm Standard NEO	7/28/2022, 10/12/2022, 1/25/2023, 4/19/2023	46
57249	HazMat Refresher Training (8 Hour)	12/19/2022-5/4/2023	1112
57247	Hazmat Training 40 Hour	9/19/2022, 4/21/2023	800
59016	Infrastructure Asset Management Training	3/7/2023-6/28/2023	657
10615	Morris Forman Emergency Spill Response Training	2/12/2023-6/6/2023	89
73047	MS4 Sampling Training	2/24/2023	16
73021	MS4-Post Construction BMP Inspection Training	9/20/2022	38
39598	MSD 101 - Core Services - Consent Decree - One Water	8/1/2022-6/5/2023	63
60172	MSD Recycling Reuse and Repurposing Procedures Training	6/21/2023	15
35049	Sampling and Monitoring - Initial Training	12/16/2022	4
70031	SORP - Annual Reporting and Follow-Up Training	8/1/2022-5/15/2023	24
70027	SORP - First Quarter Field Training - Preparing Monitoring and Responses	9/20/2022-6/30/2023	288
70028	SORP - Second Quarter Field Training - Overflow Assessment	10-5/2022-6/29/2023	296
70029	SORP - Third Quarter Field Training - Public Notification and Cleanup	8/23/2022-6/30/2023	263
70026	SORP Annual Overview Training	7/2/2022-6/26/2023	399
70014	SORP- Documentation	5/30/2023-6/2/2023	20
57367	SWPPP Overview Training (StormWater Pollution Prevention Plan)	7/1/2022-6/27/2023	232
			4402



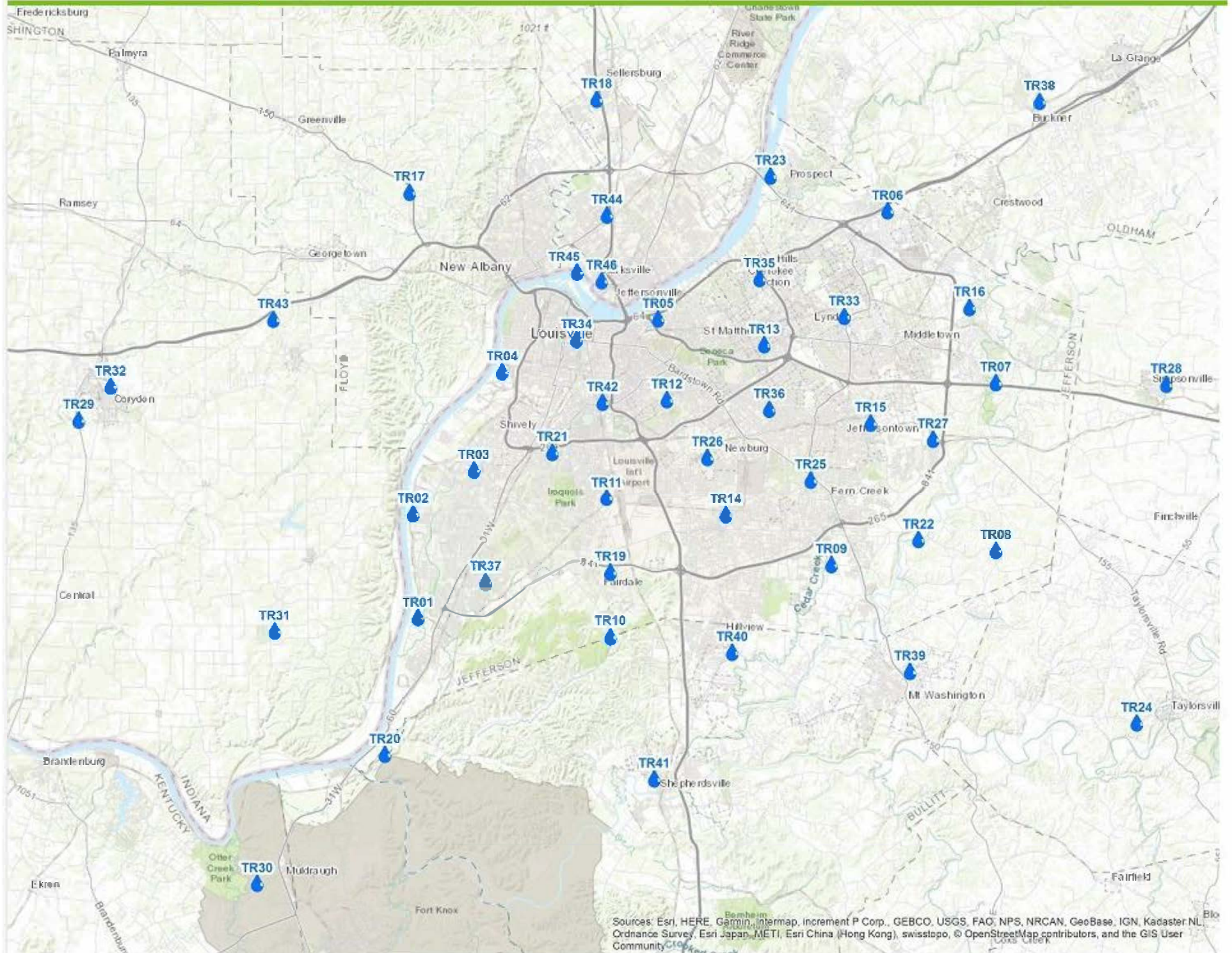
APPENDIX 2.6.8 STORM SEWER MAINTENANCE SUMMARY

APPENDIX 2.6.8 Summar of Storm Sewer System Maintenance

	Outside CSSA		Inside CSSA				Total Cost	Total Footage	Total Work Orders
Row Labels	Cost	Footage	Work Orders	Cost	Footage	Work Orders			
Catch Basin & Storm Sewer Cleaning Activity	\$2,017	11,523	4,740	\$1,386	2,298	20,044	\$3,403	13,821	24,784
Catch Basin Cleaning	\$2,017	50	4,546	\$1,386	0	19,706	\$3,403	50	24,252
CATCH BASIN CLEANING	\$807	0	4,295	\$731	0	18,519	\$1,537	0	22,814
CATCH BASIN CLEANING FROM A SERVICE REQUEST	\$1,210	50	251	\$655	0	1,187	\$1,866	50	1,438
Storm Sewer Cleaning	\$0	11,473	194	\$0	2,298	338	\$0	13,771	532
FLUSH ASSET	\$0	8,730	125	\$0	2,153	56	\$0	10,883	181
ROOT CUTTING	\$0	420	3	\$0	115	4	\$0	535	7
ROUTINE (PM) SEWER FLUSHING	\$0	1,125	11				\$0	1,125	11
VACTOR	\$0	1,198	55	\$0	30	278	\$0	1,228	333
Channel Maintenance Activity	\$301,839	24,783,173	6,698	\$4,254	21,889,983	4,469	\$306,093	46,673,156	11,167
Channel Maintenance Activity	\$301,839	24,783,173	6,698	\$4,254	21,889,983	4,469	\$306,093	46,673,156	11,167
DEBRIS REMOVAL	\$4,568	1,572	33	\$807	600	3	\$5,374	2,172	36
DITCH CLEANING	\$124,163	173,659	510	\$2,017	9,300	16	\$126,180	182,959	526
DITCH REGRADING	\$18,899	15,762	209	\$624	520	8	\$19,523	16,282	217
DRAINAGE OBSTRUCTION	\$21,559	305	501	\$807	1	8	\$22,365	306	509
DRIVEWAY APRON RESTORE	\$19,654	0	42				\$19,654	0	42
EROSION REPAIR	\$23,805	200	140	\$0	0	3	\$23,805	200	143
HEADWALL INSTALLATION/REPAIR	\$198	0	7				\$198	0	7
INSTALL CONCRETE CHANNEL	\$3,482	381	16	\$0	1	1	\$3,482	382	17
PIPE INSTALLATION	\$11,311	455	26	\$0	120	1	\$11,311	575	27
RECURRING DITCH CLEANING	\$53,578	121,878	99	\$0	300	1	\$53,578	122,178	100
ROUTINE MOWING	\$0	24,468,911	5,024	\$0	21,879,141	4,426	\$0	46,348,052	9,450
STORM LINE REPAIR	\$0	20	1				\$0	20	1
TREE REMOVAL	\$20,622	30	90	\$0	0	2	\$20,622	30	92
Storm Events	\$0	0	2,097	\$0	0	241	\$0	0	2,338
Storm Events	\$0	0	2,097	\$0	0	241	\$0	0	2,338
PRE-RAIN EVENT INSPECTION	\$0	0	2,097	\$0	0	240	\$0	0	2,337
STORM EVENTS-RAIN/SNOW, ETC.				\$0	0	1	\$0	0	1
Grand Total	\$303,856	24,794,696	13,535	\$5,640	21,892,281	24,754	\$309,496	46,686,977	38,289



APPENDIX 2.7.6 RAIN GAUGE MAP



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



APPENDIX 2.7.8 MONITORING STATIONS MAP

APPENDIX 2.7.8 MONITORING STATIONS MAP

Map Key

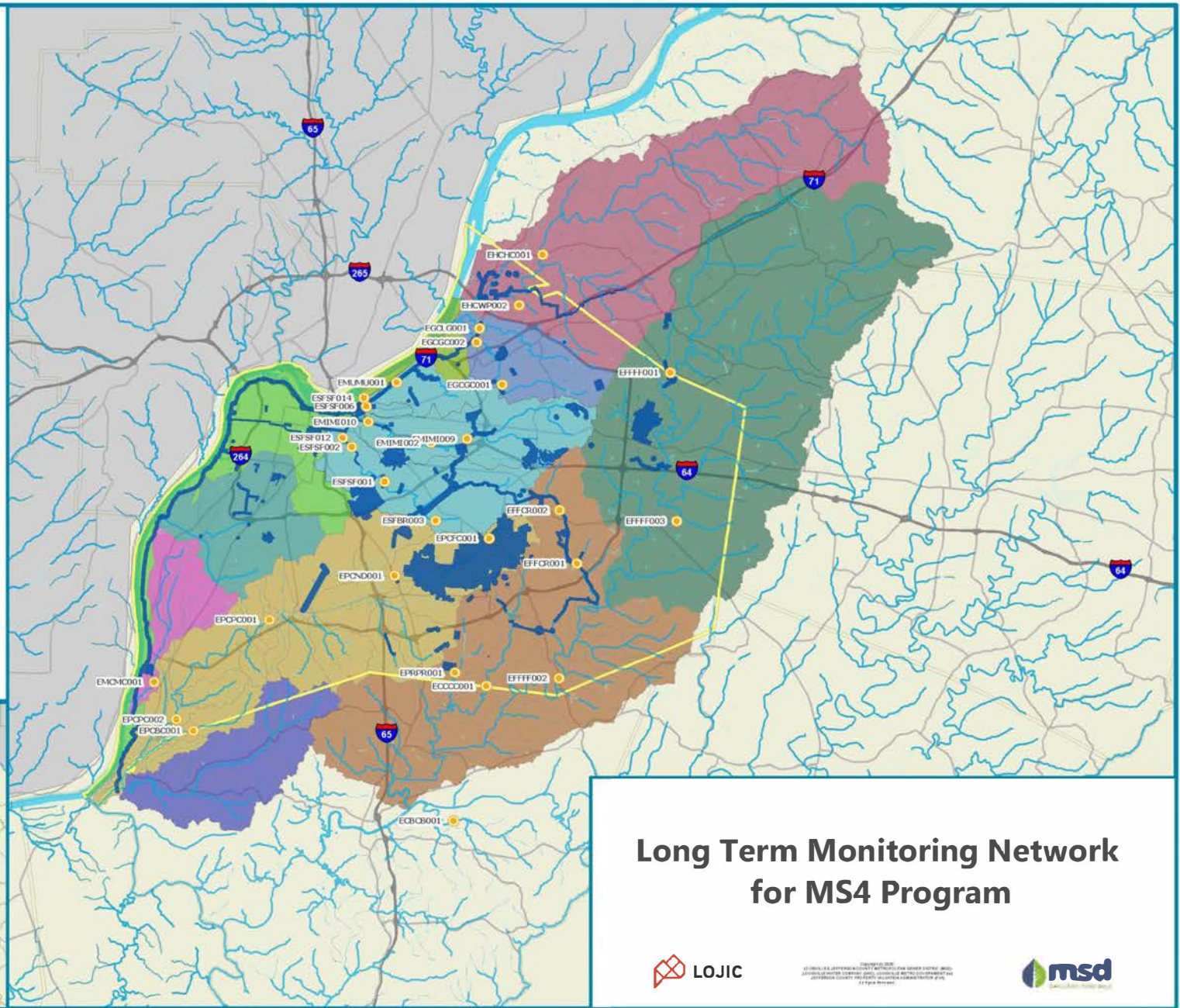
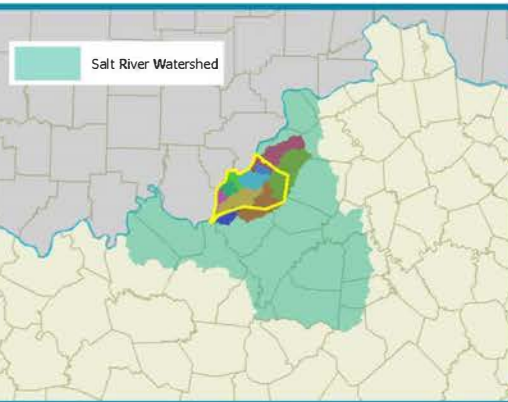
- IOAP Projects
- Stream Meter
- Jefferson County Boundary
- County Boundaries

Hydrology

- Stream
- Ditch or Canal
- Intermittent Stream
- Lake or Pond
- Dam

Watersheds, 11 Digit HUC

- Ohio River
- City/Ohio River
- Harrods Creek
- Goose Creek
- Beargrass Creek
- Mill Creek
- Lower Mill Creek
- Upper Floyds Fork
- Lower Floyds Fork
- Pond Creek
- Pond Creek/Knob Creek



Long Term Monitoring Network for MS4 Program



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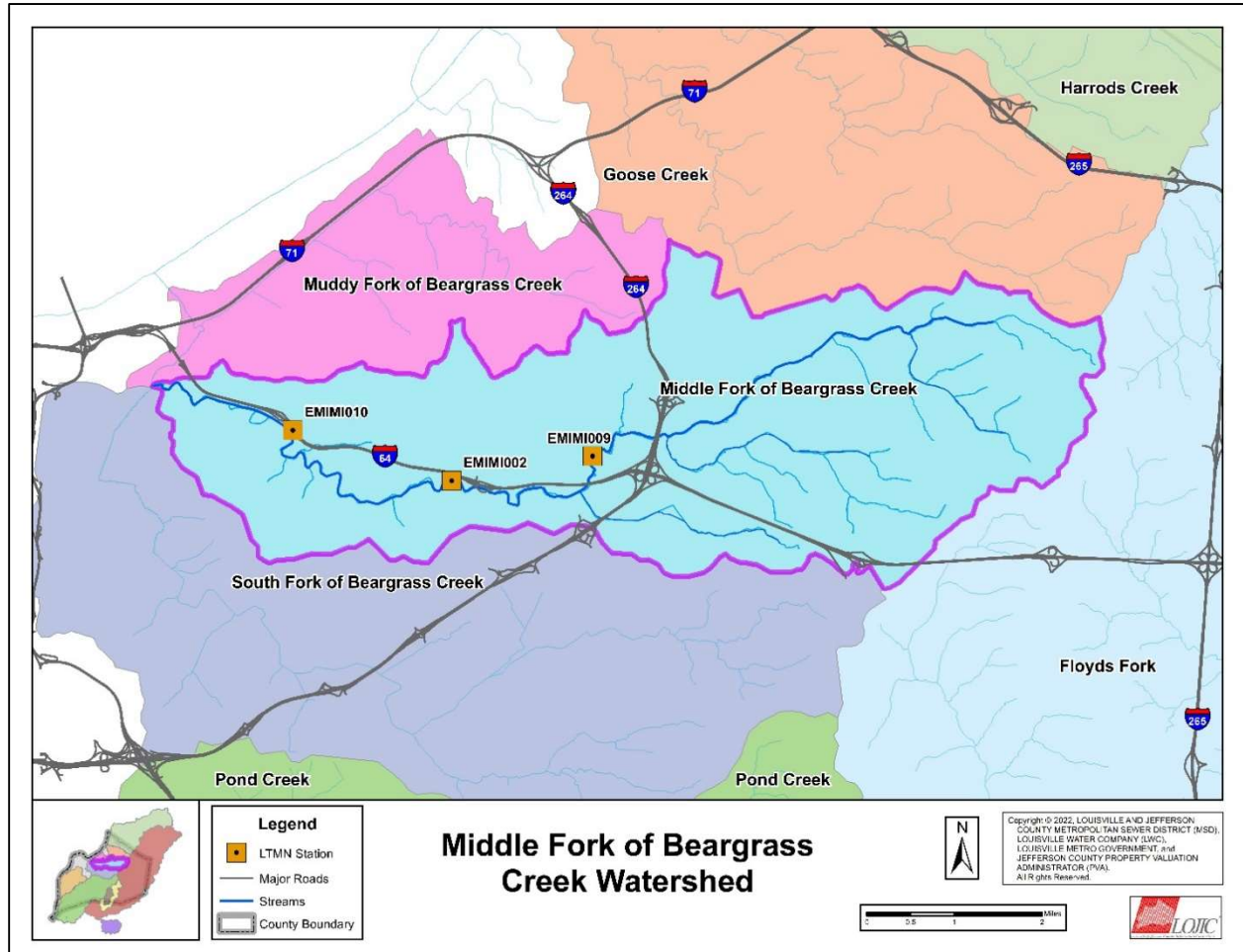


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APPENDIX 5.1 WATERSHED DESCRIPTION SUMMARIES

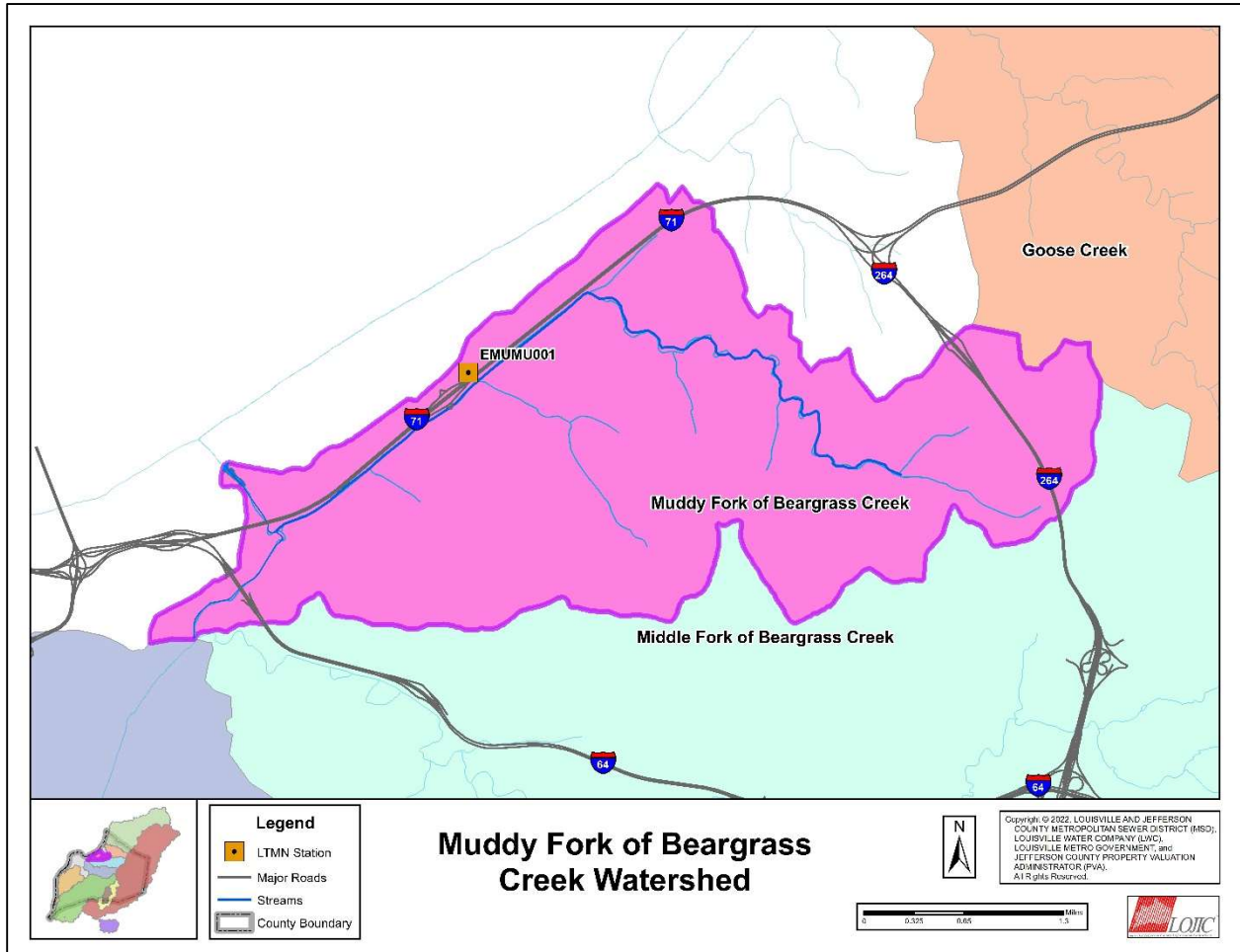
Appendix 5.1: Watershed Description Summaries



Watershed Description: The Middle Fork of Beargrass Creek is one of three streams that join to form the larger Beargrass Creek watershed. The small streams that eventually form the Middle Fork of Beargrass Creek originate in Middletown and Douglas Hills. The Middle Fork of Beargrass Creek flows west across St. Matthews before joining the South Fork of Beargrass Creek near Irish Hill. There are just over 25 square miles of land in the Middle Fork of Beargrass Creek. Prominent features of this watershed include Cherokee Park, Seneca Park and Cave Hill Cemetery. Land use in the Middle Fork Beargrass Creek Watershed is mostly residential and commercial, with many of the commercial properties located along Shelbyville Road and Hurstbourne Lane. An area of agricultural land is also located in this watershed behind the Oxmoor Mall. Agricultural areas comprise approximately 2.65% of the land use in the watershed. Based on an MSD analysis of land use data from the Louisville/Jefferson County Information Consortium (LOJIC), impervious surfaces such as roads, rooftops and driveways cover about 37% of this watershed. Combined sewers currently serve a portion of this part of Louisville.

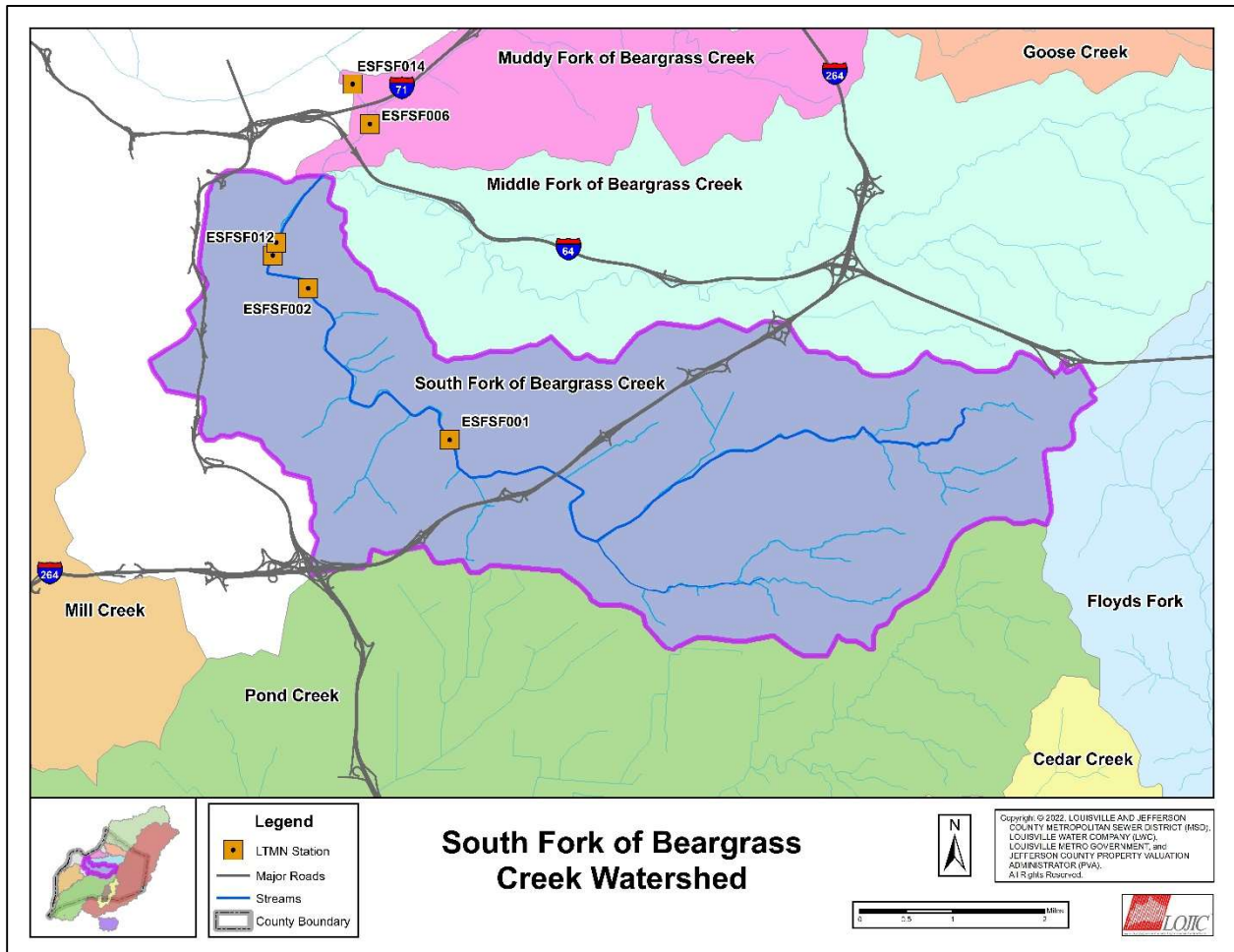
MSD's MS4 Permit includes the collection of water quality data at three locations in this watershed, listed from upstream to downstream: Browns Lane (EMIMI009), Old Cannons Lane (EMIMI002) and Lexington Road (EMIMI010). There are 15.2 square miles of land draining to

the Browns Lane site, 18.9 square miles to the Old Cannons Lane site and 24.8 square miles to the Lexington Road site. Continuous monitoring data are collected at Old Cannons Lane and Lexington Road.



Watershed Description: The Muddy Fork is one of three streams that join to form the larger Beargrass Creek watershed. The Muddy Fork flows west from Windy Hills toward the Ohio River, then southwest along Interstate 71 before joining with the South Fork to become Beargrass Creek near Mellwood Avenue and Story Avenue. The Muddy Fork of Beargrass Creek drains nine square miles.

MSD has been monitoring water quality since 2002 in this watershed. The MSD monitoring station located at Muddy Fork at Mockingbird Valley Road (EMUMU001) drains 6.2 square miles. Approximately 9% of this watershed is covered by impervious surfaces.

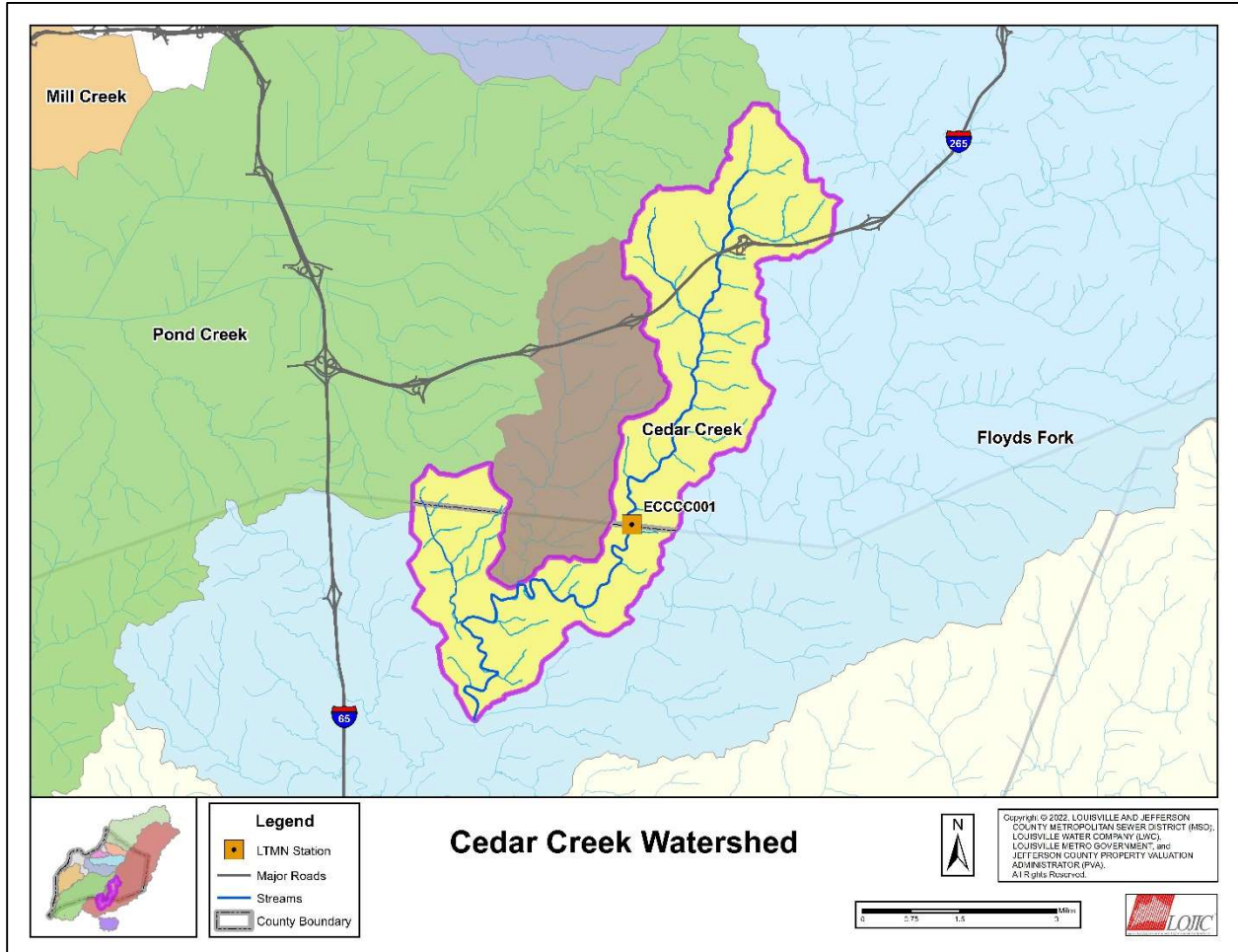


Watershed Description: The South Fork of Beargrass Creek is one of three streams that join to form the Beargrass Creek watershed. The small streams that eventually form the South Fork of Beargrass Creek originate in Jeffersontown and Hurstbourne Acres. The South Fork of Beargrass Creek flows west across Buechel before joining the Middle Fork of Beargrass Creek near Irish Hill. The South Fork then joins the Muddy Fork to become Beargrass Creek near the intersection of Interstates 71 and 64. There are about 25 square miles of land in the South Fork of Beargrass Creek watershed. Some streams in this watershed were straightened and several miles were enclosed in concrete channels in the past to reduce flooding.

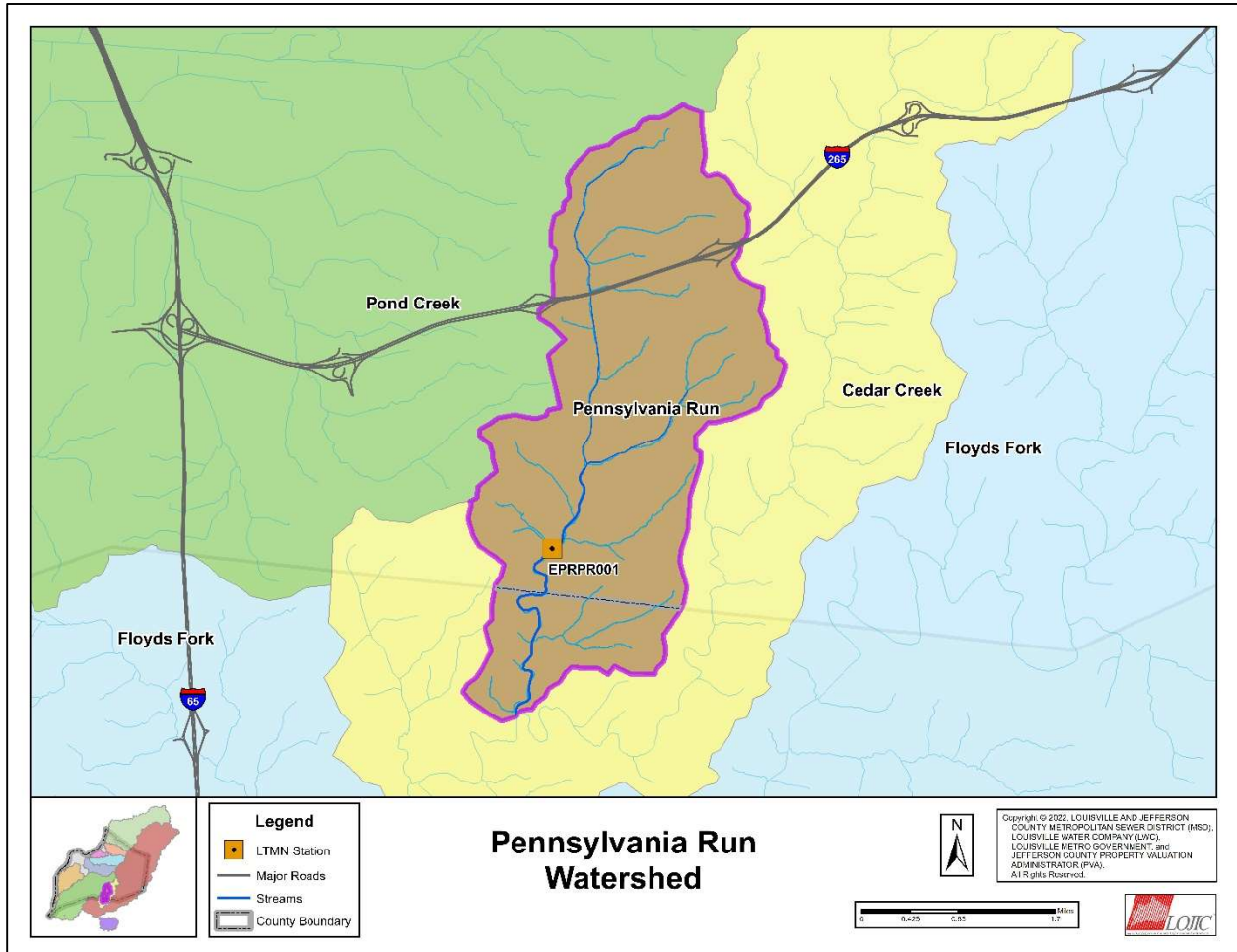
MSD monitors water quality at four locations in this watershed, listed from upstream to downstream: South Fork Beargrass Creek at Louisville (ESFSF001), South Fork Beargrass Creek at East Breckinridge Street (ESFSF012), Beargrass Creek at Brownsboro Road (ESFSF006), and Beargrass Creek at River Road (ESFSF014).

There are 17.2 square miles of land draining to the South Fork Beargrass Creek at Louisville site. Further downstream, 22.8 square miles of land drain to the East Breckinridge Street site. There are 51.5 square miles of land draining to the Brownsboro Road site, which is below the confluence

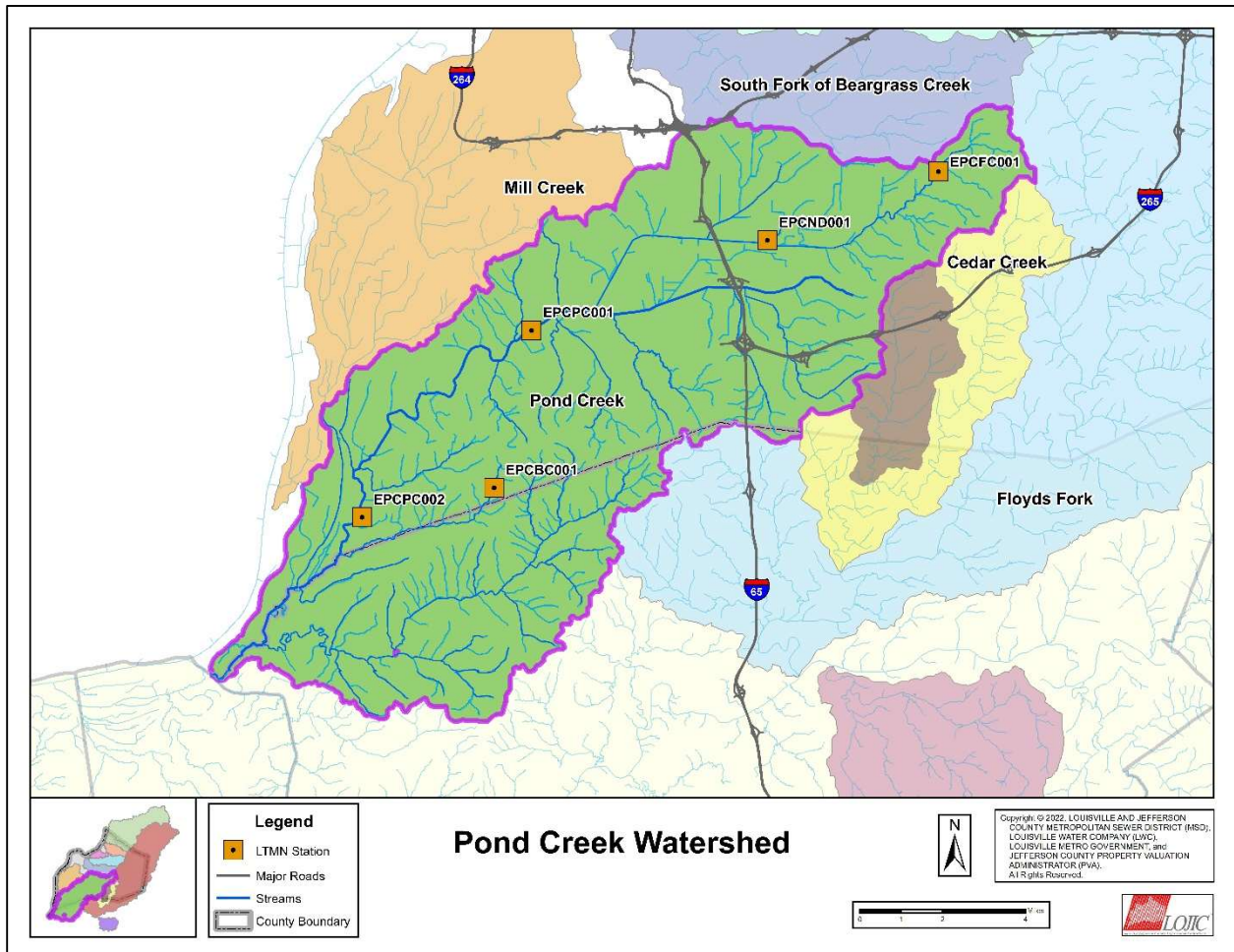
with the Middle Fork of Beargrass Creek. Furthest downstream, 60.1 square miles of land drain to the site at River Road. Impervious surfaces range from 28% to 32% at these monitoring sites.



Watershed Description: The small streams that eventually form Cedar Creek in Jefferson County originate in the Fern Creek area and flow south. Cedar Creek empties into Floyds Fork in Bullitt County east of Shepherdsville. There are 11.1 square miles of land draining to the Cedar Creek monitoring site at Thixton Road (ECCCC001). About 10% of this watershed is covered by impervious surfaces. This monitoring site is located downstream of the Cedar Creek WQTC.



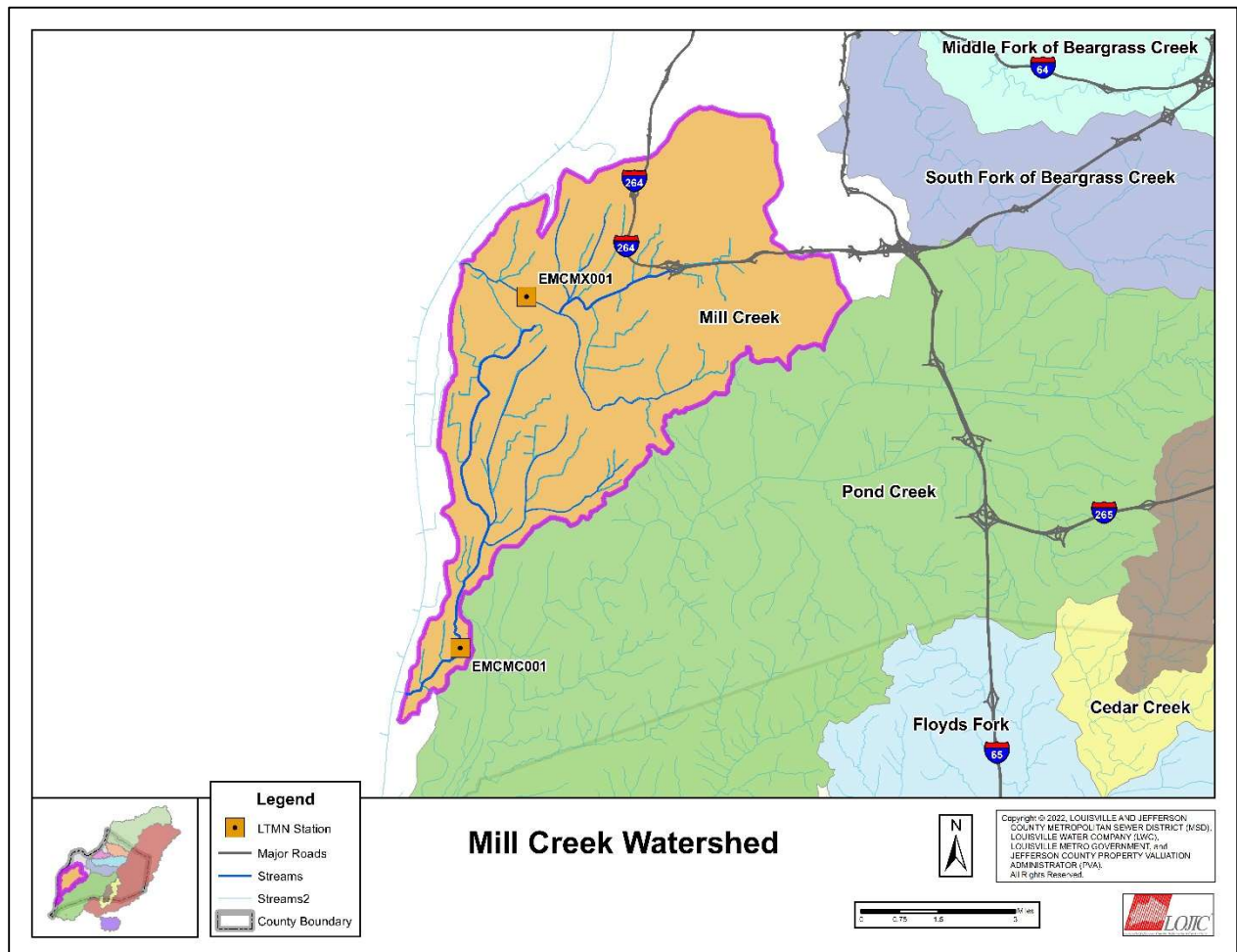
Watershed Description: The small streams that eventually form Pennsylvania Run originate in the Highview area and flow south into McNeely Lake. Pennsylvania Run empties into Cedar Creek in Bullitt County east of Zoneton. MSD monitors water quality in Pennsylvania Run at Mount Washington Road (EPRPR001). This site drains 6.4 square miles of land and is located below McNeely Lake. Almost 9% of this watershed is covered by impervious surfaces.



Watershed Description: The Pond Creek watershed drains about 126 square miles in southwestern Louisville, where it flows into the Salt River near West Point. Approximately 89 square miles are located in Jefferson County and 37 square miles are located in Bullitt County. Small streams in Jeffersontown and Fern Creek join to form Northern Ditch and small streams in Highview and Okolona join to form Southern Ditch. Northern Ditch and Southern Ditch join to form Pond Creek near Outer Loop. The Louisville International Airport, the Outer Loop Landfill, large industrial complexes, and Jefferson Memorial Forest are prominent features in this watershed.

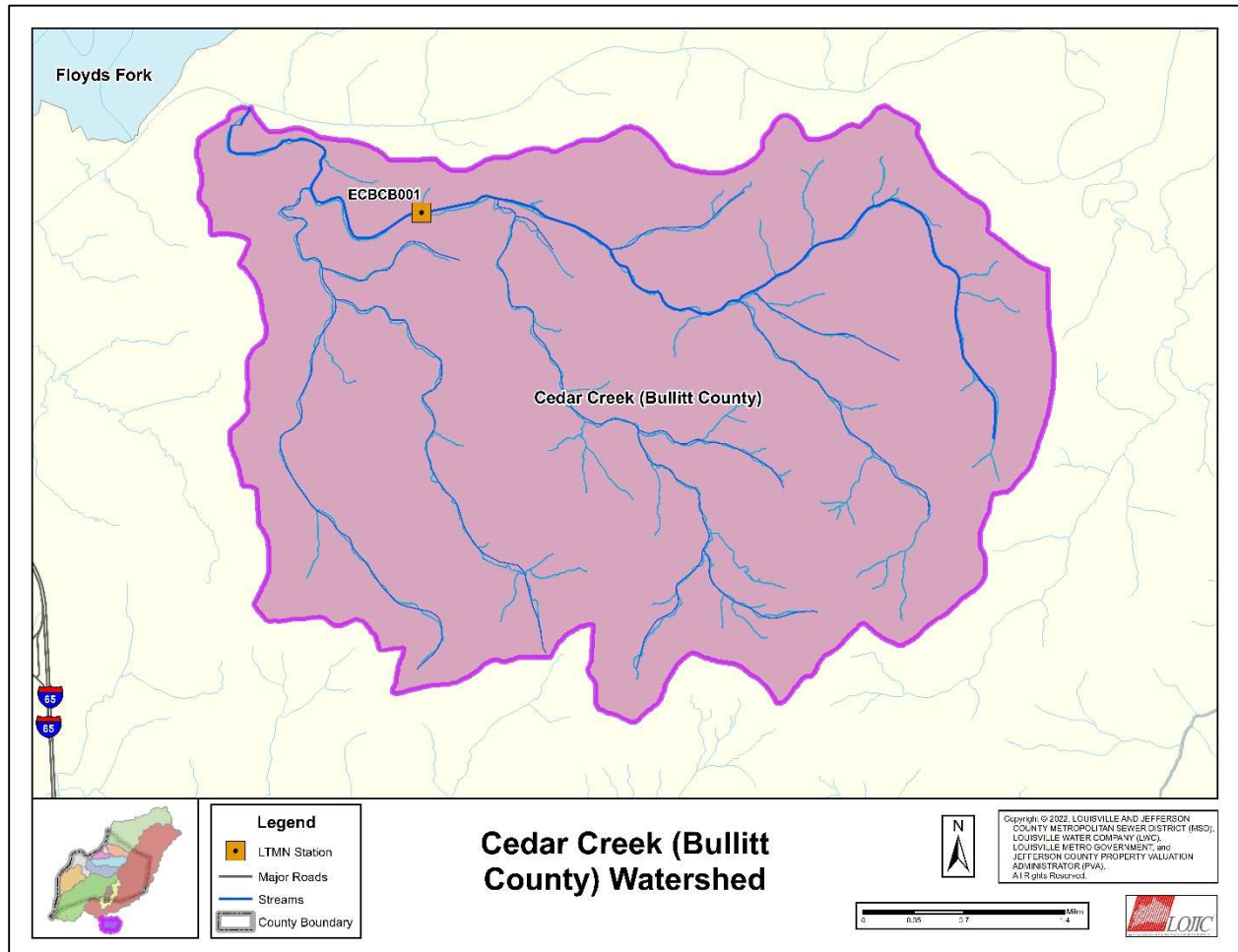
The relatively flat portion of the Pond Creek watershed was once a pond, which gradually filled with silt and debris to form a flat plain with standing water and dense swamp vegetation. Parts of this area were known as “wet woods” in the past. Starting in the 1850s, a system of man-made ditches was developed to reduce flooding and to increase the amount of land suitable for development, which continued to expand rapidly before and after World War II. Many of the streams in Pond Creek watershed have been extensively channelized, and large flat areas are now drained by Northern Ditch and Southern Ditch.

MSD monitors water quality in this large watershed at five locations, listed from upstream to downstream: Fern Creek at Old Bardstown Road (EPCFC001), Northern Ditch at Okolona (EPCND001), Pond Creek near Louisville (EPCPC001), Pond Creek at Pendleton Road (EPCPC002) and Brier Creek at Pendleton Road (EPCBC001). The amount of land draining to each site in square miles, respectively, is 3.5, 11.1, 64.0, 80.3 and 4.1. The amount of land area draining to the monitoring sites on Fern Creek, Northern Ditch and Pond Creek that is covered by impervious surfaces ranges from 16% to 24%. The land draining to Brier Creek at Pendleton Road is quite different from the other four sites. This small tributary drains through steep, wooded areas southwest of Jefferson Memorial Forest, and land use consists mostly of forest and agriculture, and less than 1% is impervious surfaces.



Watershed Description: The Mill Creek watershed drains about 34 square miles in western Louisville, near the Ohio River. The northern part of the watershed includes streams that drain to the Mill Creek Cutoff, which flows directly into the Ohio River near Shively. The southern part of the watershed flows south through Pleasure Ridge Park and then into the Ohio River near Watson Lane. Many of the streams in this watershed have been straightened or channelized in the past to reduce flooding and to increase the amount of land suitable for development.

MSD collects quarterly and biological samples in Mill Creek Cutoff (EMCMX001) and Mill Creek at Orell Road (EMCMC001). MSD monitors water quality continuously in Mill Creek at Orell Road; Mill Creek Cutoff has a flow gage but not a water quality sonde. There are 24.4 square miles draining to Mill Creek Cutoff and about 38% of the land in this subwatershed is covered by impervious surfaces. There are 13.5 square miles draining to Mill Creek at Orell Road and about 21% of the land in this subwatershed is covered by impervious surfaces.



Watershed Description: The small streams that eventually form Cedar Creek originate in the Cedar Grove area in Bullitt County. Cedar Creek flows north and empties into the Salt River east of Shepherdsville.

MSD monitors water quality in Cedar Creek at Highway 1442 (ECBCB001). This site drains 12.1 square miles of land. This watershed is mostly forested and impervious area covers only 0.2% of the watershed.



APPENDIX 5.2 ANALYZED DATA

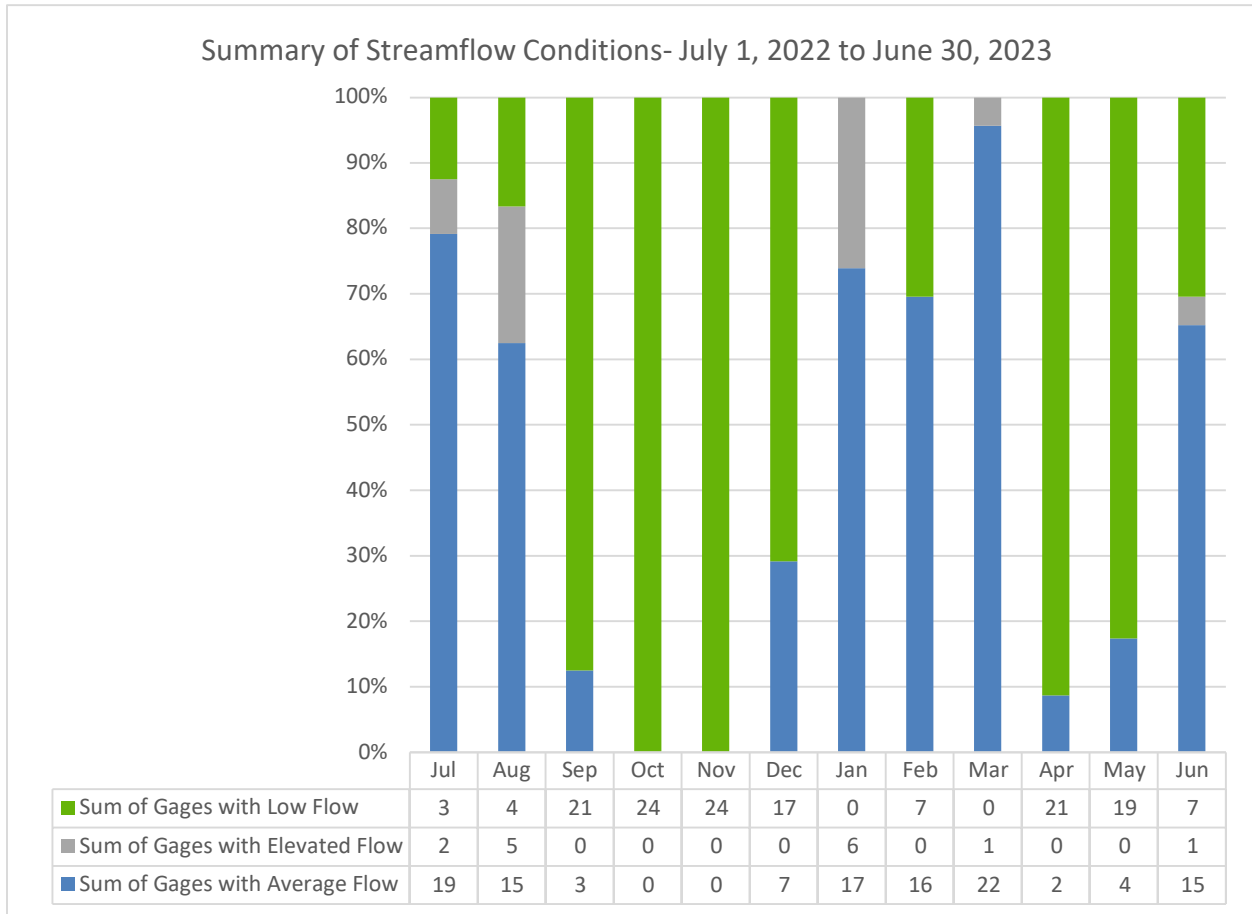
Appendix 5.2 Analyzed Data

Appendix 5.2.1: Streamflow

Monthly stream flow was characterized to provide an overview of stream flow conditions for the report period. For 24 sites with sufficient flow data, the number of months during which stream flow was classified as low, average, and elevated was characterized by comparing average monthly stream flows during the report year with the long term monthly average stream flow. Stream flow was classified as “low” for months in which average stream flow was more than 50% below average monthly stream flow. Stream flow was characterized as “elevated” for months in which average stream flow was more than 50% higher than average monthly stream flow. Remaining stream flows were characterized as “average”. Results shown on **Figure 5.2.1** highlight the drier conditions that occurred during this Annual Reporting period, especially during the months of September through December. July, August, April, and May were relatively average months, and only a few sites during the year reported “elevated” flow in what was over all a relatively drier year.

Note: Starting in January, there are only a total of 23 sites due to the removal of South Fork of Beargrass Creek at East Breckinridge Street.

Appendix Figure 5.2.1 – Summary of Streamflow



Appendix 5.2.2: Sonde Site Data Summary

Appendix Table 5.2.2 – Sonde Site Data Summary

Site Name	Parameter	% Complete Record	% Criteria Met	Min Value	Avg Value	Max Value
HARRODS CREEK AT HIGHWAY 329 NR GOSHEN, KY.	Dissolved Oxygen	93.4	100.0	4.4	9.8	16.4
	pH	98.0	100.0	7.7	8.3	8.9
	Temperature	98.2	100.0	0.0	15.8	30.2
	Conductivity	96.7	N/A	168.0	479.8	758.0
WOLF PEN BR AB POND DISCHARGE NR PROSPECT, KY	Dissolved Oxygen	96.5	100.0	7.2	10.1	18.4
	pH	100.0	96.1	7.8	8.4	9.1
	Temperature	100.0	100.0	0.1	14.7	26.4
	Conductivity	94.1	N/A	114.0	742.3	2320.0



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Site Name	Parameter	% Complete Record	% Criteria Met	Min Value	Avg Value	Max Value
GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY	Dissolved Oxygen	95.6	95.2	0.1	8.5	16.6
	pH	97.4	100.0	7.4	8.1	9.0
	Temperature	98.9	100.0	0.1	15.0	26.3
	Conductivity	97.1	N/A	104.0	554.3	4350.0
GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	Dissolved Oxygen	80.7	99.7	3.2	9.4	18.0
	pH	91.9	99.0	7.6	8.3	9.1
	Temperature	99.1	100.0	0.1	14.7	26.9
	Conductivity	94.7	N/A	147.0	556.5	976.0
LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	Dissolved Oxygen	96.3	100.0	4.7	9.3	15.6
	pH	96.3	100.0	7.7	8.3	9.0
	Temperature	98.9	100.0	-0.1	14.6	27.0
	Conductivity	98.7	N/A	122.0	682.1	1520.0
MUDDY FK AT MOCKINGBIRD VALLEY RD AT LOUISVILLE, KY	Dissolved Oxygen	98.0	95.7	2.7	8.2	17.0
	pH	98.0	100.0	7.2	7.9	8.5
	Temperature	99.3	100.0	0.0	15.3	30.8
	Conductivity	97.8	N/A	77.0	688.3	1480.0
M FK BEARGRASS CR AT BROWNS LN AT LOUISVILLE, KY	Dissolved Oxygen	98.9	99.8	4.1	8.7	16.6
	pH	99.3	100.0	7.2	7.8	8.8
	Temperature	99.6	100.0	2.4	16.0	27.3
	Conductivity	91.4	N/A	36.0	654.7	1770.0
M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE,	Dissolved Oxygen	98.2	92.2	2.1	8.7	19.1
	pH	98.0	100.0	7.4	8.0	9.0
	Temperature	98.2	100.0	0.0	16.4	29.5
	Conductivity	96.9	N/A	94.0	659.1	2360.0
M FK BEARGRASS CR AT LEXINGTON RD AT LOUISVILLE, KY	Dissolved Oxygen	99.6	66.3	0.1	7.8	20.6
	pH	99.3	100.0	7.3	7.9	8.8
	Temperature	99.8	100.0	0.0	16.1	30.9
	Conductivity	98.7	N/A	102.0	622.7	1830.0
SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	Dissolved Oxygen	95.2	100.0	4.2	8.4	13.6
	pH	94.7	100.0	7.0	7.8	8.4
	Temperature	95.2	100.0	0.8	16.9	28.8
	Conductivity	95.2	N/A	87.0	547.1	2160.0
S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE	Dissolved Oxygen	71.8	88.8	2.5	8.3	20.4
	pH	70.6	99.5	7.1	7.6	9.1
	Temperature	80.5	100.0	1.9	18.7	30.2
	Conductivity	74.8	N/A	64.0	542.4	817.0



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Site Name	Parameter	% Complete Record	% Criteria Met	Min Value	Avg Value	Max Value
BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE	Dissolved Oxygen	86.2	83.0	0.4	8.0	17.3
	pH	97.4	100.0	7.3	7.8	8.6
	Temperature	99.3	100.0	0.0	16.3	29.0
	Conductivity	96.9	N/A	102.0	654.0	1770.0
BEARGRASS CREEK AT RIVER ROAD AT LOUISVILLE, KY	Dissolved Oxygen	93.9	59.8	0.2	6.5	14.5
	pH	93.0	100.0	7.0	7.7	8.4
	Temperature	93.9	100.0	0.2	16.5	28.1
	Conductivity	92.5	N/A	118.0	648.3	1620.0
FLOYDS FORK NEAR PEWEE VALLEY, KY	Dissolved Oxygen	77.6	93.8	0.4	9.1	15.8
	pH	97.6	100.0	7.3	7.9	8.6
	Temperature	98.7	100.0	0.1	15.3	29.8
	Conductivity	97.8	N/A	150.0	502.5	943.0
FLOYDS FORK AT FISHERVILLE, KY	Dissolved Oxygen	99.6	100.0	4.4	9.7	18.6
	pH	98.2	100.0	7.5	8.1	8.9
	Temperature	99.6	100.0	0.0	16.3	31.6
	Conductivity	95.2	N/A	110.0	569.5	828.0
FLOYDS FORK NEAR MT WASHINGTON, KY	Dissolved Oxygen	99.3	100.0	4.0	9.4	16.6
	pH	98.9	100.0	7.2	8.1	8.8
	Temperature	99.8	99.8	-0.1	16.4	32.0
	Conductivity	98.7	N/A	154.0	540.8	812.0
CHENOWETH RUN AT RUCKRIEGEL PARKWAY, KY	Dissolved Oxygen	96.7	100.0	4.1	9.6	15.9
	pH	97.8	100.0	7.5	8.1	8.7
	Temperature	98.2	100.0	-0.1	15.5	27.4
	Conductivity	96.1	N/A	83.0	704.3	3260.0
CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY	Dissolved Oxygen	87.3	100.0	4.3	9.4	17.2
	pH	69.3	100.0	7.5	8.2	8.9
	Temperature	100.0	99.1	-0.1	15.9	32.4
	Conductivity	98.7	N/A	104.0	629.2	2110.0
CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY	Dissolved Oxygen	83.3	93.9	1.6	9.1	23.5
	pH	93.2	94.4	7.4	8.0	9.3
	Temperature	97.1	100.0	0.3	15.7	27.3
	Conductivity	85.5	N/A	119.0	652.6	925.0
PENNSYLVANIA RUN AT MT WASHINGTON RD NR LOUISVILLE	Dissolved Oxygen	95.6	91.5	0.0	8.6	18.7
	pH	92.8	97.2	7.3	8.1	9.3
	Temperature	98.9	100.0	0.1	15.6	28.5
	Conductivity	91.7	N/A	69.0	471.6	1020.0



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Site Name	Parameter	% Complete Record	% Criteria Met	Min Value	Avg Value	Max Value
FERN CREEK AT OLD BARDSTOWN RD AT LOUISVILLE, KY	Dissolved Oxygen	99.3	99.8	3.4	9.1	18.0
	pH	98.7	99.6	7.5	8.0	9.2
	Temperature	99.8	100.0	0.1	15.0	26.3
	Conductivity	96.1	N/A	79.0	658.5	1670.0
NORTHERN DITCH AT OKOLONA, KY	Dissolved Oxygen	81.4	90.3	0.7	9.4	19.1
	pH	81.6	100.0	7.2	8.1	9.0
	Temperature	90.4	97.8	-0.1	16.8	33.5
	Conductivity	88.2	N/A	132.0	579.2	1080.0
POND CREEK NEAR LOUISVILLE, KY	Dissolved Oxygen	81.6	93.0	1.4	8.1	14.6
	pH	82.5	100.0	7.1	7.9	8.8
	Temperature	86.0	99.0	0.0	17.3	32.5
	Conductivity	85.5	N/A	133.0	569.9	1530.0
POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY	Dissolved Oxygen	98.7	98.9	3.6	8.3	15.5
	pH	91.2	100.0	7.1	7.8	8.7
	Temperature	99.3	100.0	-0.1	16.4	30.8
	Conductivity	99.1	N/A	95.0	529.0	1400.0
BRIER CREEK AT PENDELTON ROAD NEAR LOUISVILLE, KY	Dissolved Oxygen	99.3	84.5	2.3	7.9	14.4
	pH	96.7	100.0	6.7	7.2	7.6
	Temperature	99.6	100.0	0.7	15.1	29.0
	Conductivity	95.0	N/A	58.0	273.0	376.0
MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	Dissolved Oxygen	63.6	93.4	0.0	8.1	18.5
	pH	42.3	95.3	6.9	7.5	9.3
	Temperature	69.3	100.0	-0.3	14.7	29.4
	Conductivity	68.4	N/A	18.0	209.6	935.0
CEDAR CREEK AT HWY 1442 NEAR SHEPHERDSVILLE, KY	Dissolved Oxygen	84.2	98.2	2.2	9.5	15.2
	pH	89.3	100.0	7.7	8.3	8.8
	Temperature	90.4	100.0	0.0	15.0	28.8
	Conductivity	90.4	N/A	118.0	477.3	672.0

Appendix 5.2.3: Quarterly LIMS Parameters W/O Water Quality Criteria

Notes from the laboratory: Two nitrate samples in the third quarter of 2022 were reported above the calibration curve (“W” Qualifier). The samples were not able to be diluted and re-analyzed within hold time. The samples were included in the analysis below.

In the first quarter of 2023, some of the nitrate and nitrite data was qualified with qualifier “G” for the calibration curve verification for being outside of acceptable limits. The samples were still included in the analysis below.

Appendix Table 5.2.3.1: LIMS Parameters W/O Water Quality Criteria Table

Parameter	Sample Count	Minimum Concentration (mg/l)	Average Concentration (mg/l)	Maximum Concentration (mg/l)
Oil and Grease (Total)	108	2.50	2.52	5.00
Total Nitrogen	108	0.39	1.57	12.27
Total Suspended Solids	108	1.50	8.00	120.00

Appendix Table 5.2.3.2 - LIMS Parameters W/O Water Quality Criteria Statistics per Site Table

Site Name	Parameter	Min Value (mg/l)	Average Value (mg/l)	Max Value (mg/l)
HARRODS CREEK AT HIGHWAY 329 NR GOSHEN, KY.	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.69	1.41	2.14
	TSS	1.50	4.88	15.00
WOLF PEN BR AB POND DISCHARGE NR PROSPECT, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.92	1.48	1.97
	TSS	1.50	2.13	4.00
GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.50	1.33	2.02
	TSS	1.50	3.88	7.50
GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.77	1.67	2.25
	TSS	1.50	10.50	34.00



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Site Name	Parameter	Min Value (mg/l)	Average Value (mg/l)	Max Value (mg/l)
LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.77	1.52	2.04
	TSS	1.50	2.50	4.00
MUDDY FK AT MOCKINGBIRD VALLEY RD AT LOUISVILLE, KY	Oil and Grease Total	2.50	3.13	5.00
	Total Nitrogen	0.99	1.65	2.40
	TSS	1.50	6.13	12.00
M FK BEARGRASS CR AT BROWNS LN AT LOUISVILLE, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.99	1.65	2.16
	TSS	1.50	12.75	42.00
M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE,	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.54	1.35	1.81
	TSS	1.50	5.75	10.50
M FK BEARGRASS CR AT LEXINGTON RD AT LOUISVILLE, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.80	1.49	2.31
	TSS	1.50	5.13	16.00
SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.84	1.51	2.03
	TSS	1.50	4.50	10.00
S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	1.60	1.84	2.16
	TSS	1.50	24.25	82.00
BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE	Oil and Grease Total	2.50	3.56	6.75
	Total Nitrogen	1.81	1.95	2.30
	TSS	1.50	5.13	16.00
FLOYDS FORK NEAR PEWEE VALLEY, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	1.40	2.60	5.22
	TSS	1.50	9.88	27.00
FLOYDS FORK AT FISHERVILLE, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	1.74	2.83	5.91
	TSS	1.50	8.44	26.00



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Site Name	Parameter	Min Value (mg/l)	Average Value (mg/l)	Max Value (mg/l)
<i>FLOYDS FORK NEAR MT WASHINGTON, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	1.10	1.69	2.72
	TSS	1.50	10.88	28.00
<i>CHENOWETH RUN AT RUCKRIEGEL PARKWAY, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.65	1.31	1.77
	TSS	1.50	3.13	8.00
<i>CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.68	1.58	3.27
	TSS	1.50	4.38	7.00
<i>CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	1.12	5.17	12.26
	TSS	1.50	4.25	12.50
<i>PENNSLYVANIA RUN AT MT WASHINGTON RD NR LOUISVILLE</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.83	1.59	3.17
	TSS	1.50	2.13	4.00
<i>FERN CREEK AT OLD BARDSTOWN RD AT LOUISVILLE, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.69	1.42	2.04
	TSS	1.50	9.88	25.00
<i>NORTHERN DITCH AT OKOLONA, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.62	0.94	1.49
	TSS	1.50	1.69	2.25
<i>POND CREEK NEAR LOUISVILLE, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.69	0.89	1.11
	TSS	9.00	25.25	42.00
<i>POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.82	1.03	1.34
	TSS	1.50	4.63	6.00
<i>BRIER CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.39	0.57	1.11
	TSS	1.50	2.38	5.00
<i>MILL CREEK CUTOFF NEAR LOUISVILLE, KY</i>	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.39	0.59	0.71
	TSS	1.50	4.50	10.00



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Site Name	Parameter	Min Value (mg/l)	Average Value (mg/l)	Max Value (mg/l)
MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.88	1.10	1.43
	TSS	3.00	33.50	120.00
CEDAR CREEK AT HWY 1442 NEAR SHEPHERDSVILLE, KY	Oil and Grease Total	2.50	2.50	2.50
	Total Nitrogen	0.39	0.67	1.24
	TSS	1.50	3.75	6.00



Appendix 5.2.4: Quarterly LIMS Copper

Appendix Table 5.2.4 – Copper 5 Year Running Compliance Exceedance Summary

LOCCODE	Site Name	Watershed	Date	Result (ug/l)	Acute Limit (ug/l)	Chronic Limit (ug/l)
EGCLG001	LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	Goose Creek	4/8/2019	46	30.7	19.0
EGCGC002	GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	Goose Creek	7/8/2019	32	31.8	19.6
EFFCR001	CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY	Floyds Fork	10/22/2019	25	35.3	21.6
EMCMX001	MILL CREEK CUTOFF NEAR LOUISVILLE, KY	Mill Creek	10/23/2019	58	53.4	31.4
EMCMC001	MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	Mill Creek	10/28/2019	13	14.5	9.6
ESFSF012	S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE	South Fork of Beargrass Creek	7/13/2020	11	10.0	6.9
EMIMI002	M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE	Middle Fork of Beargrass Creek	7/7/2021	15	15.3	10.1
ESFSF001	SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	South Fork of Beargrass Creek	10/12/2022	28	23.7	15.0



Appendix 5.2.5: *E. Coli*

Appendix Table 5.2.5 – *E. coli* Compliance Summary

Site Name	Loccode	# Months w/≥ 5 samples	# Months Geomean Compliance Met	# Months Single Sample Compliance Met	# Months All Compliance Met
HARRODS CREEK AT HIGHWAY 329 NR GOSHEN, KY.	EHCHC001	6	2	1	1
WOLF PEN BR AB POND DISCHARGE NR PROSPECT, KY	EHCWP002	6	0	0	0
GOOSE CREEK AT OLD WESTPORT RD NR ST MATTHEWS, KY	EGCGC001	6	0	0	0
GOOSE CREEK AT US HWY 42 NEAR GLENVIEW ACRES, KY	EGCGC002	6	0	0	0
LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY	EGCLG001	6	2	0	0
MUDDY FK AT MOCKINGBIRD VALLEY RD AT LOUISVILLE, KY	EMUMU001	6	1	1	1
M FK BEARGRASS CR AT BROWNS LN AT LOUISVILLE, KY	EMIMI009	6	1	1	1
M FK BEARGRASS CR AT OLD CANNONS LN AT LOUISVILLE,	EMIMI002	6	2	1	1
M FK BEARGRASS CR AT LEXINGTON RD AT LOUISVILLE, KY	EMIMI010	6	1	0	0
SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY	ESFSF001	6	2	1	1
S FK BEARGRASS CR @ E BRECKINRIDGE ST @ LOUISVILLE	ESFSF012	6	1	0	0
BEARGRASS CREEK AT BROWNSBORO RD NR LOUISVILLE	ESFSF006	6	1	0	0
FLOYDS FORK NEAR PEWEE VALLEY, KY	EFFFF001	6	1	2	1
FLOYDS FORK AT FISHERVILLE, KY	EFFFF003	6	0	0	0
FLOYDS FORK NEAR MT WASHINGTON, KY	EFFFF002	6	1	2	1
CHENOWETH RUN AT RUCKRIEGEL PARKWAY, KY	EFFCR002	6	1	0	0
CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY	EFFCR001	6	1	0	0



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Site Name	Loccode	# Months w/ >= 5 samples	# Months Geomean Compliance Met	# Months Single Sample Compliance Met	# Months All Compliance Met
CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY	ECCCC001	6	0	0	0
PENNSLYVANIA RUN AT MT WASHINGTON RD NR LOUISVILLE	EPRPR001	6	0	0	0
FERN CREEK AT OLD BARDSTOWN RD AT LOUISVILLE, KY	EPCFC001	6	0	0	0
NORTHERN DITCH AT OKOLONA, KY	EPCND001	6	2	2	1
POND CREEK NEAR LOUISVILLE, KY	EPCPC001	6	1	0	0
POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY	EPCPC002	6	2	1	1
BRIER CREEK AT PENDELTON ROAD NEAR LOUISVILLE, KY	EPCBC001	6	1	1	1
MILL CREEK CUTOFF NEAR LOUISVILLE, KY	EMCMX001	6	1	1	1
MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY	EMCMC001	5	0	0	0
CEDAR CREEK AT HWY 1442 NEAR SHEPHERDSVILLE, KY	ECBCB001	6	1	0	0



Appendix 5.2.6: Biological

Appendix Table 5.2.6 – Biological Parameter Narrative Rating Lookup Table

Parameter	Region	Narrative Rating				
		Very Poor	Poor	Fair	Good	Excellent
Algae (DBI Score)	Bluegrass	N/A	<= 39	40-46	47-53	> 53
	Pennyroyal	N/A	<= 50	51-55	55-67	> 67
Fish (IBI Score)	Bluegrass	<= 15	16-30	31-46	47-51	>= 52
	Pennyroyal	<= 16	17-34	35-52	53-66	>= 67
Habitat (Fish Sampling - RBP)	Bluegrass > 5.0 mi ²	N/A	<= 113	114-129	>= 130	N/A
	Bluegrass < 5.0 mi ²	N/A	<= 141	142-155	>= 156	N/A
	Pennyroyal > 5.0 mi ²	N/A	<= 131	132-145	>= 146	N/A
	Pennyroyal < 5.0 mi ²	N/A	<= 131	132-145	>= 146	N/A
Habitat (Macro Sampling - RBP)	Bluegrass > 5.0 mi ²	N/A	<= 113	114-129	>= 130	N/A
	Bluegrass < 5.0 mi ²	N/A	<= 141	142-155	>= 156	N/A
	Pennyroyal > 5.0 mi ²	N/A	<= 131	132-145	>= 146	N/A
	Pennyroyal < 5.0 mi ²	N/A	<= 131	132-145	>= 146	N/A
Macroinvertebrates (MBI)	Bluegrass > 5.0 mi ²	<= 20	21-40	41-60	61-69	>= 70
	Bluegrass < 5.0 mi ²	<= 18	19-38	39-50	51-57	>= 58
	Pennyroyal > 5.0 mi ²	<= 24	25-48	49-71	72-80	>= 81
	Pennyroyal < 5.0 mi ²	<= 21	22-42	43-64	65-71	>= 72

Note: All LTMN sites are located within the Bluegrass Region except for Pond Creek near Louisville and Brier Creek at Pendleton Road which are in the Pennyroyal Region.



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