

Meeting Summary

Wet Weather Team Stakeholder Group Meeting

November 29, 2023

The Wet Weather Team (WWT) Stakeholders, chartered by the Louisville and Jefferson County Metropolitan Sewer District (MSD), met on November 29, 2023 at MSD's Central Maintenance Facility (CMF). The objectives of the meeting were to:

- Tour the CMF to provide the Stakeholders a unique perspective into daily MSD operations.
- Provide an overview of MSD's odor control efforts.

Welcome

Clay Kelly of Strand Associates, Inc.[®] opened the meeting by welcoming everyone and then turned the podium over to MSD's Safety Director for a safety briefing. For the first part of the meeting, Brian Bingham, MSD Chief of Operations, along with several other MSD operations staff, led a walking tour of the Central Maintenance Facility. Stakeholders were exposed to the sheer size of the facility, the extensive fleet of vehicles, the materials that are required, the logistical support necessary for effective operations, and the daily practices MSD employs to maximize efficiency and to minimize impacts on the environment.

The Stakeholder group then transitioned to the presentation/discussion portion of the meeting. He shared with the attendees the logistics and ground rules that will be used for this meeting. Clay reminded the Stakeholders that comments would remain anonymous in the meeting minutes. Clay reminded everyone to speak for themselves, and not necessarily for employers or organizations to which they belong.

Unintended Consequences of a Job Well-done Result in Additional System Odor Control Needs

Tony Parrott, MSD Executive Director, opened this topic by discussing how odors are generated in Louisville's sewer system. He shared that MSD's combined system (like many other communities') was designed to be cleaned by high flows generated by wet weather events. Climate change is producing fewer of the storms needed to flush the system (generally about a two-inch rainfall) and water-efficient fixtures are reducing the everyday flows into the sewers.

MSD is responding to odors in several ways:

1. Coordinating with Louisville Water Company to strategically target fire hydrants for flushing in areas that are more prone to odors,
2. Implementing the Clarity program to make it easier for residents to report odors,
3. Conducting public outreach to the community to instruct them on what to do when they smell odors,
4. Adjusting odor-controlling chemicals at pump stations and treatment facilities,
5. Adding water to dry catch basins to block odors from escaping,
6. Repairing or replacing catch basins to allow them to trap odors in the system more effectively, and
7. Advancing capital improvement projects at the Morris Forman Water Quality Treatment Center and Southwestern Pump Station.

A stakeholder commented that there appears to be four ways to report odors, and asked which method is the most used, and which is the most effective. Brian responded by reviewing each of the methods:

1. Dialing 311 or the Metro311 App - this method relies on the City to forward the information to MSD. Due to weekends, holidays, etc., that can sometimes be several days depending on when the complaint was made.
2. Smell My City App - this method is popular but provides MSD limited information. For example, contact information is not required and therefore many people do not provide it. As a result, MSD has no way to communicate or follow up with the person reporting the issue, and in some instances there is

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not enough information submitted to know the location of the odor. MSD is working with the app developers to address these issues.

3. Report through MSD's Website - this method is preferred as it provides MSD with contact information to follow up with residents and asks relevant questions that allow MSD to respond more effectively.
4. Calling MSD - this method is equally as effective as using MSD's website.

Overall, Brian recommended residents use multiple methods to be sure the issue is documented.

Another stakeholder first complimented the tour that was given before the meeting, and then asked if the catch basin designs should be updated to account for climate change. Brian shared that MSD is reviewing their design criteria but that the existing approach is very effective. Brian added that it appears that Louisville has a higher percentage of catch basins that do not trap odors than our peer communities.

One stakeholder commented that if dry weather spells continue or worsen, this may become a regulatory issue with which the State and/or Federal agencies become engaged.

A stakeholder asked Tony what the solution is to address these odors. Tony reminded everyone that there will always be odors associated with sewer systems. The key is to trap them within the system. He said that this will be a constant effort that will require MSD to be more pro-active, especially during periods when odors are or may become more prevalent. The stakeholder followed-up by asking if the dry weather we are experiencing is unusual, or the new normal? Brian answered by saying it is unusual, but that the lack of everyday water use and larger and less frequent storms compound the issues.

A stakeholder inquired on what the average citizen could do to help. Tony recommended that everyone make sure that their drains and traps have water in them to prevent odors from coming up from the system into their homes or businesses. The stakeholder asked if odors could be mitigated by residents using more water during days when odors were more prevalent. Tony said that its very unlikely the amount of water residents could put into the system in a short time would be enough to make a difference.

Another stakeholder asked if there was anything other than big rain events that was effective at controlling odors. Tony answered that there really were no other approaches that were as effective. He added that there are steps MSD can make at their pump stations and water quality treatment centers though. MSD is looking at adjusting their operating budget to allow more resources to go to odor control. Brian noted that colder weather slows the production of odor in sewer systems as well.

One stakeholder asked if there was any legal risk to MSD from odors. Tony said that the Air Pollution Control Board (APCB) is the local regulator. The APCB monitors chemical levels in the air and has not seen any levels that would be a concern. At this point, MSD is not aware of any discussions at the State or Federal level about implementing some form of odor regulations. A different stakeholder added that APCB's regulations do not allow for enforcement unless they believe the levels could cause harm. That led another stakeholder to ask if MSD employees might be exposed to harmful levels. Tony shared that MSD monitors for gases and other hazards and there have been no reports of levels that would be considered unsafe.

A stakeholder observed that during Tony's presentation he said that the cost to replace all of the catch basins necessary to have all of them trapping odors would be approximately \$50 million. They asked if the odor problem would be solved if MSD got \$50 million to do catch basin repairs/replacements. Tony responded by saying that the problem would not be solved, but it would be a lot more manageable. The stakeholder followed up by asking if there was a plan for prioritizing which neighborhoods' catch basins would be addressed. Brian said that MSD is currently working on such a plan.

A stakeholder asked if dry cities like Phoenix have odor issues. Brian said that they do. It is not just a combined sewer community problem. The stakeholder then asked if MSD's design guidelines could be changed to help

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address the issue. David Johnson, MSD Chief Engineer, shared that MSD is in the process of updating their design manual and that it is about a two-year process. He added that the brick interceptor rehabilitations MSD is engaged in will help by eliminating the pools of decaying sewage created by falling bricks. The stakeholder then asked if the tunnel project took away the water MSD needed to flush the system. David said that the water captured by the tunnel would have overflowed out of the system. The tunnel actually adds more net flow to the system by capturing it.

Clay then asked the group what MSD could do to get the word out to the community about their odor control efforts and to encourage residents to report odors. Numerous stakeholders responded with these suggestions:

1. Getting radio and TV to make announcements when odors are likely, warning residents and giving them instructions on what to do similar to “Ozone Action Days”. Ads were also suggested.
2. Increase presence in schools so that future customers understand what is going on and may tell their parents.
3. Setting up booths at community events, especially in the summer and in areas that are more prone to odors.
4. Focus the message so it is short and to the point.
5. Leverage neighborhood groups and employers in those neighborhoods to help spread information.
6. Provide information for Council Members to include in their newsletters.
7. Use very directed communication. Consider going house-to-house.
8. Put your message in waiting rooms. People are bored and captive there.

Observer Comments, Wrap-Up, and Adjournment

Clay closed the meeting by thanking everyone for their participation and wished them a safe and happy holiday season.

Meeting Materials

- Agenda for the November 29, 2023 WWT Stakeholder Group Meeting.
- Copy of the presentation slides – Unintended Consequences of a Job Well-done Result in Additional System Odor Control Needs

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▪ **Meeting Participants**

Wet Weather Team Stakeholders (Present)

Steve Barger, Labor (retired)
Stuart Benson, Louisville Metro Council, District 20
Deborah Bilitski, Waterfront Development Corporation
Mark French, University of Louisville Speed School of Engineering
Arnita Gadson, West Jefferson County Community Task Force
Corinne Greenberg, Carbide Industries
David James, Louisville Metro Council, District 6
Rick Johnstone, Deputy Mayor, Louisville Metro Mayor's Office (retired)
Kurt Mason, USDA Natural Resources Conservation Service (retired)
Jeff O'Brien, Louisville Metro Government, Director of Louisville Forward
Lisa Santos, Irish Hill Neighborhood Association
Tina Ward-Pugh, Louisville Metro Government, Eviction Court Diversion Initiative
Mary Ellen Wiederwohl, Accelerator for America
Nicole Yates, Passport by Molina Healthcare

Wet Weather Team Stakeholders (Not Present)

Susan Barto, Mayor of Lyndon
Billy Doelker, Key Homes
Jody Meiman, Louisville Metro Government, Director of EMA/MetroSafe
Rocky Pusateri, Elite Built Homes (retired)
David Wicks, Get Outdoors Kentucky; Jefferson County Public Schools (retired)

Wet Weather Team MSD Personnel (Present)

Tony Parrott, MSD Executive Director
Angela Akridge, MSD Chief Strategy Officer
Brian Bingham, MSD Chief of Operations
David Johnson, MSD Chief Engineer

Technical Support

Clay Kelly, Strand Associates
Paul Maron, Strand Associates

Meeting Observers

Karina Henson, MSD
Nicole Refolo, MSD
Wesley Sydnor, MSD
Sheryl Lauder, MSD
Scott Recker, MSD

Odor Response Update

Wet Weather Stakeholder Team

November 29, 2023



Agenda

- 💧 How did we get here?
- 💧 How is MSD responding?

How Did We Get Here?

November 29, 2023



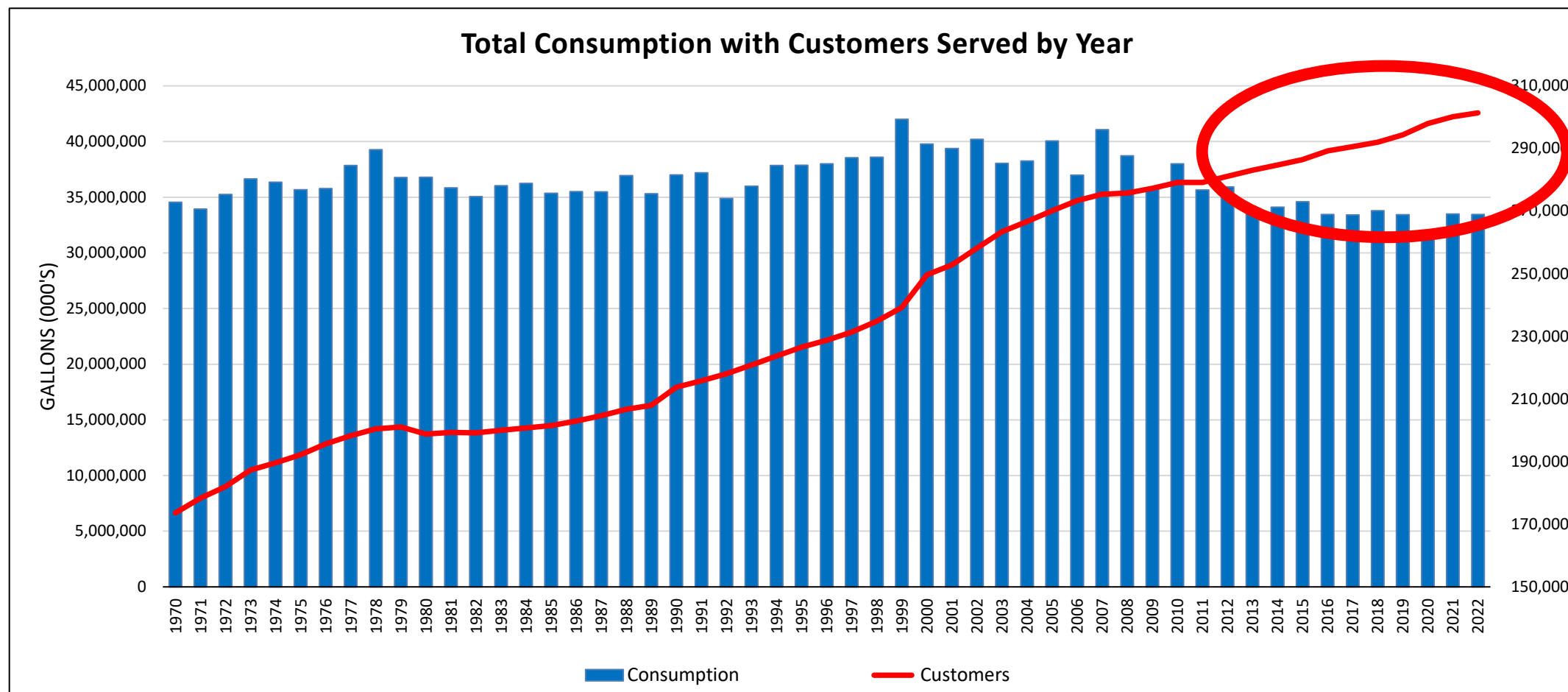
How Did We Get Here?

4 Primary Sources of Sewer Odors

- ◊ Combined Sewer System – oversized system of pipes, manholes and catch basins built to accommodate both rain water and daily sewer flow, designed to be flushed by rain into the rivers/creeks
- ◊ Separate Sanitary Sewer System – inadequate flushing flows from lower daily water use and other water sources
- ◊ Pump Stations and Force Mains – extended flow travel times and warmer temperatures (ground, air and flow increases sewage decay)
- ◊ Treatment Plants – solids handling and process components that are open to the air (not covered systems)

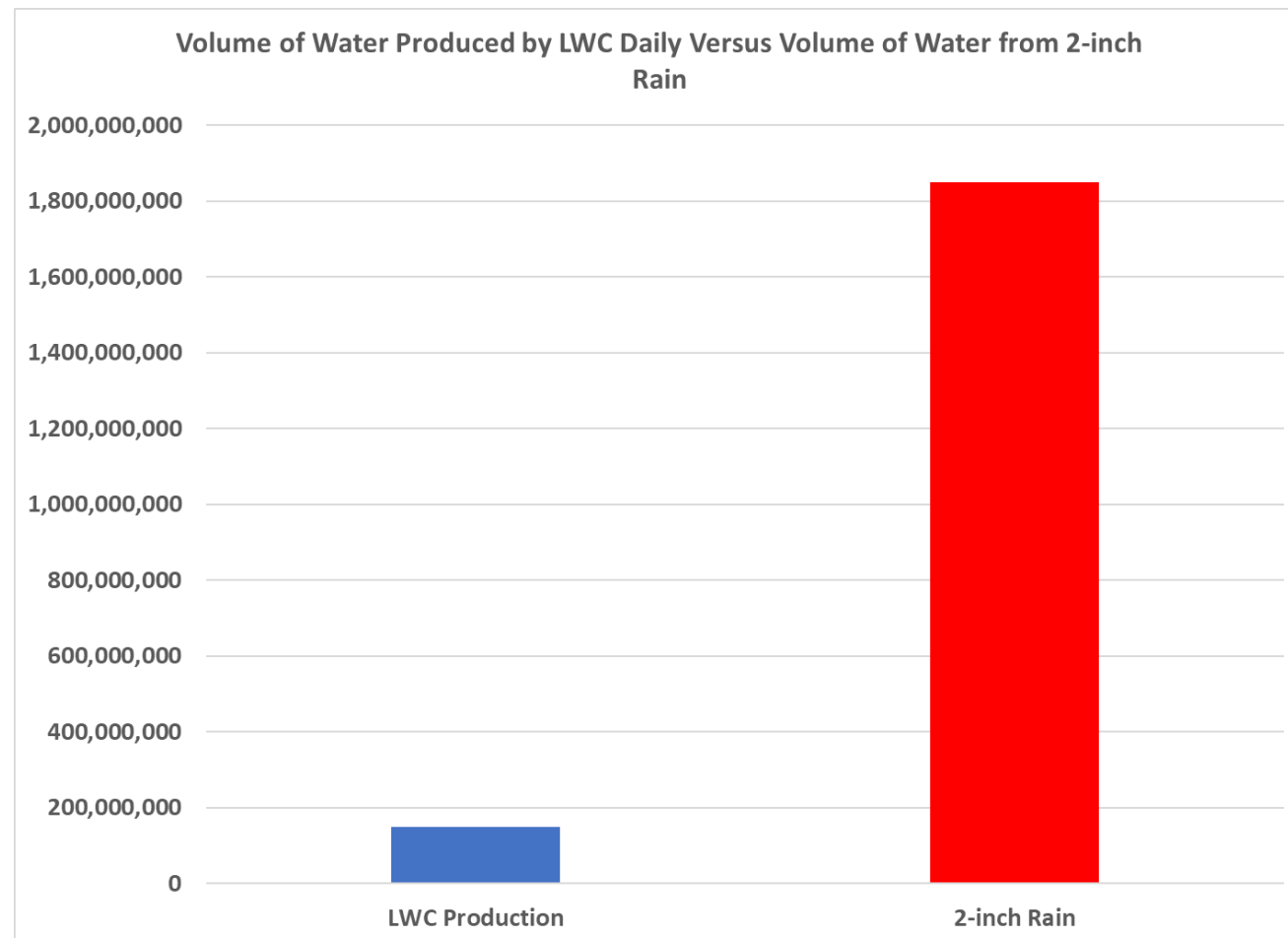
How Did We Get Here?

💧 Population Growth vs Water Use Decline



Perspective on Flushing via Fire Hydrants vs. Rainfall

- Louisville Water produces 150 Million Gallons per day of tap water for 5 counties.
- Period of 135 consecutive days in calendar year 2023 without an inch or more of rain
- The two inches of rain over the weekend of October 28th produced 1.85 **Billion** Gallons of water over Louisville Metro



How is MSD Responding?

November 29, 2023



clAIRity

PROGRAM

Launched in
November 2021

Comprehensive, responsive, and proactive odor mitigation

Far reaching: all MSD assets where odor can be generated

Customer focused: our commitment to being a good neighbor

[Home](#) → [Odor Control](#)

Odor Control

Smell Something. Say Something.

[Report an Odor to MSD →](#)

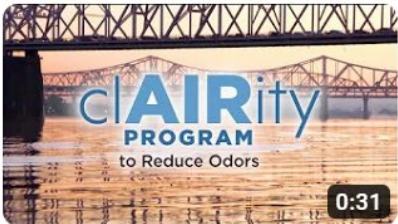



We Can Help

[Report a Problem >](#)[Contact Us >](#)[Pay My Bill >](#)



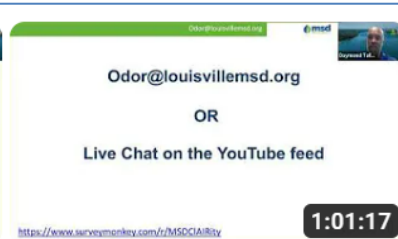
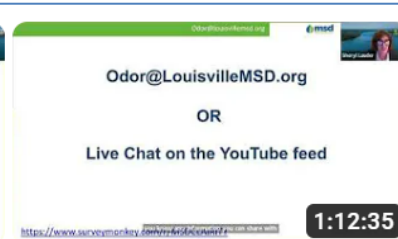
Call us 24/7: (502) 540-6000

On-Going Communications

YouTube Program Videos

 <p>cIAIRity Program Louisville MSD 111 views • 10 months ago</p>	 <p>MSD cIAIRity Video 1 Louisville MSD 408K views • 2 months ago</p>	 <p>MSD cIAIRity Video 2 Louisville MSD 196K views • 2 months ago</p>	 <p>MSD cIAIRity Video 3 Louisville MSD 600K views • 2 months ago</p>
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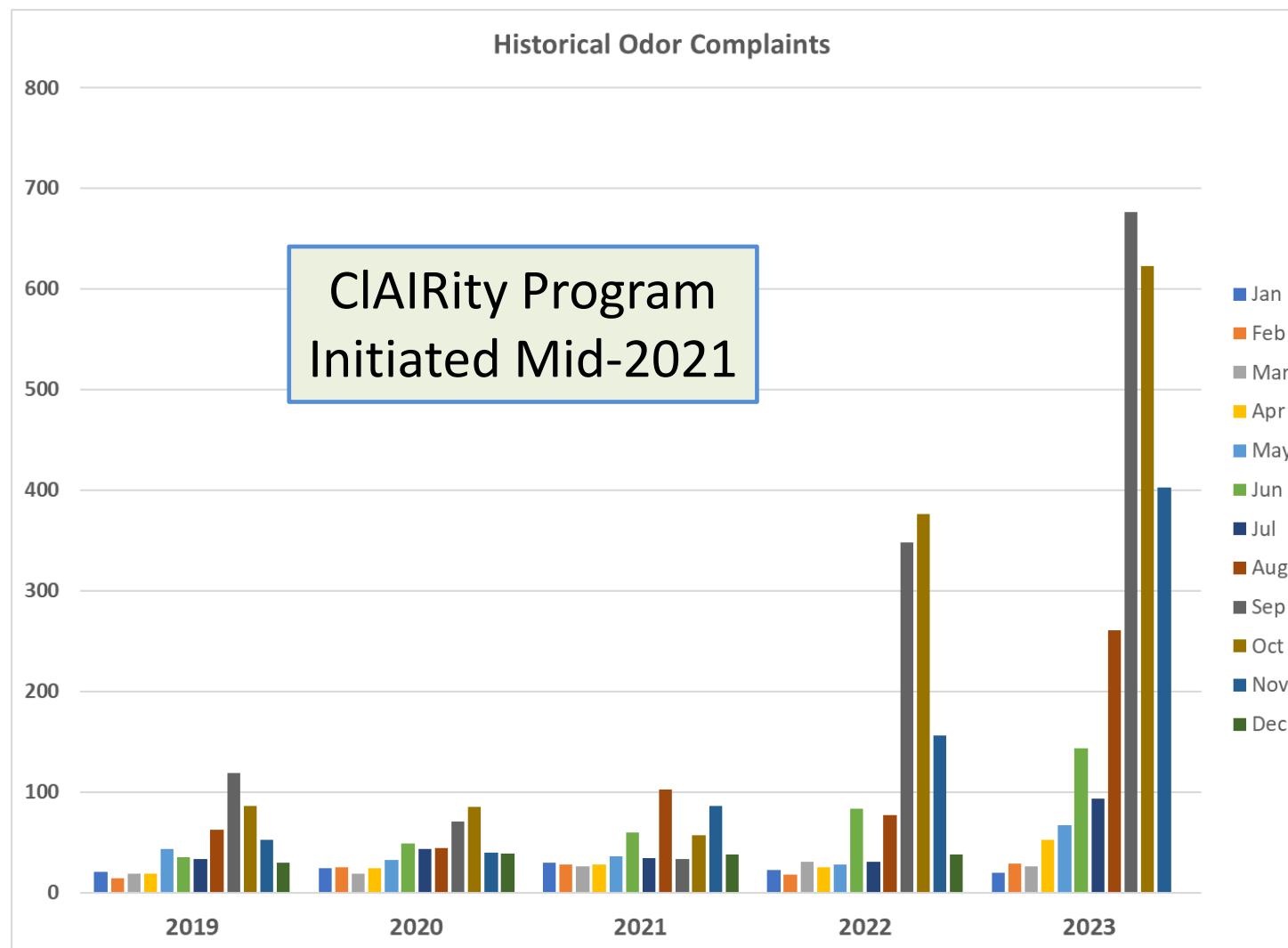
Live Stream Public Meetings

 <p>Southwest Louisville MSD Odor Mitigation Public...</p>	 <p>Cedar Creek MSD Odor Mitigation Public Meeting</p>	 <p>Morris Forman MSD Odor Mitigation Public Meeting</p>	 <p>Downtown MSD Odor Mitigation Public Meeting</p>
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Managed by El Toro Communications

Order Lines	Device Distribution				Domain Distribution
Park DuValle Odors	Device Type	Impressions	Clicks	CTR	
	mobile phones	52,774	45	0.09%	foxnews.com
	desktops & laptops	10,371	9	0.09%	huffpost.com
	tablets	2,951	2	0.07%	newsweek.com
					people.com
					wave3.com
					on3.com
					courier-journal.com
					cnn.com
					cbssports.com
					usatoday.com
Impressions		Clicks		CTR	
66,096		56		0.08%	

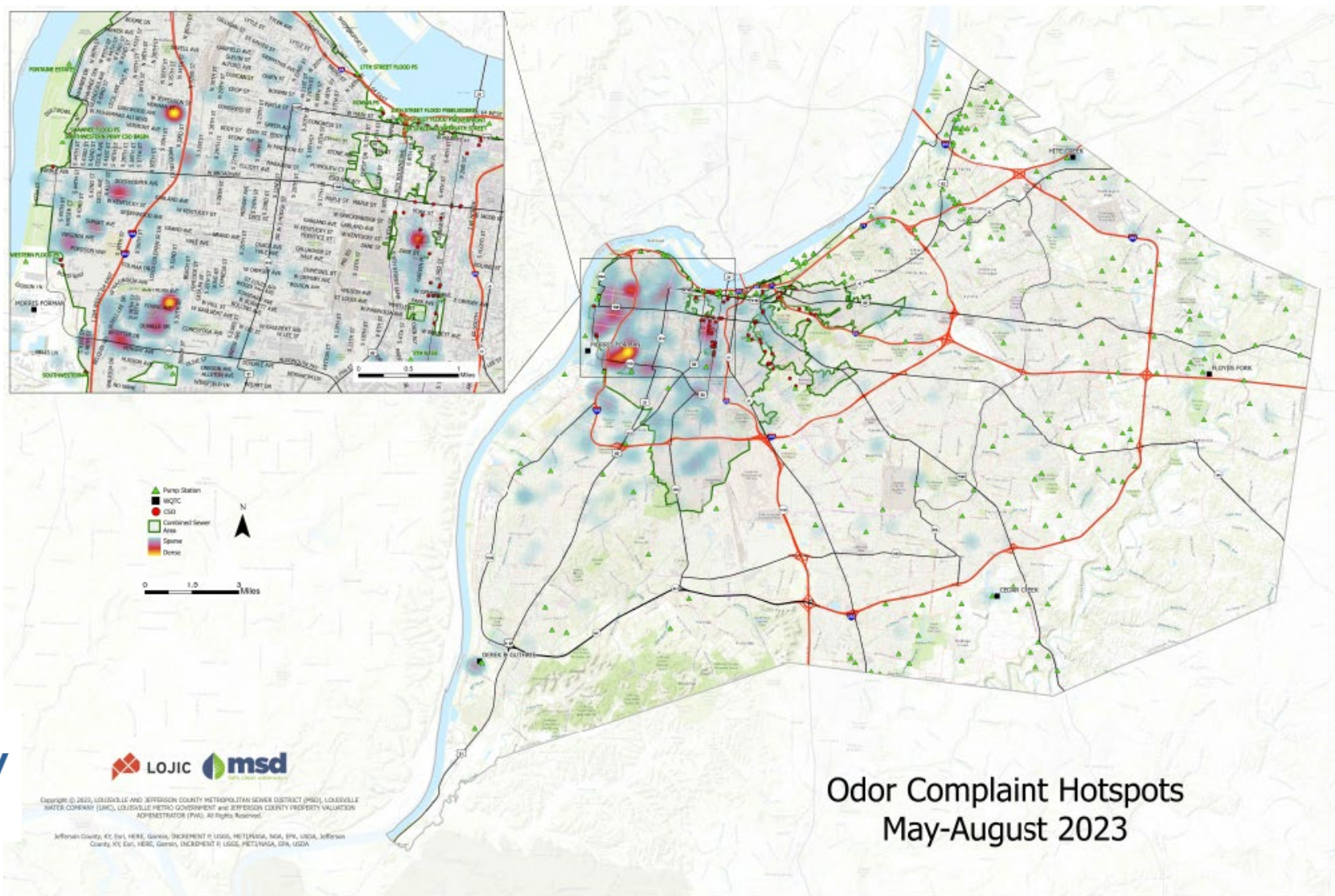
MSD Outreach Efforts Result in Increased Odor Notices



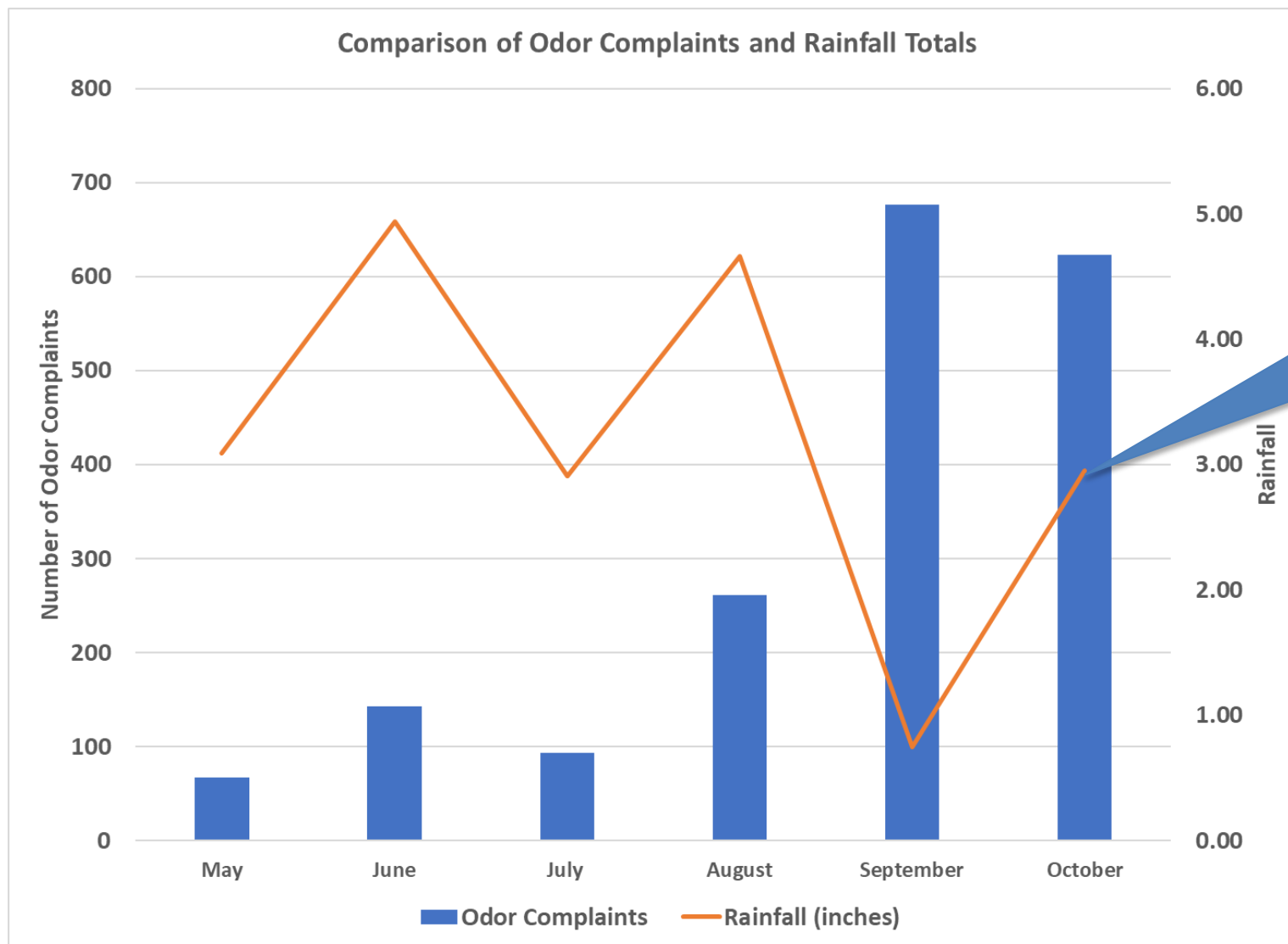
More Recent Odor Complaints Received

- 💧 High Volume of Odor Issues
- 💧 Primarily in the Combined Sewer System
- 💧 Continued increase in number of Odor Issues in the Sanitary Sewer System
- 💧 Each request or complaint is responded to that day
- 💧 Range from less than 5 to more than 50 complaints a day

Odor More Prevalent in West Louisville ... But Sewer Odor Exists Across Louisville Metro



Rainfall Reduces Odor Complaints



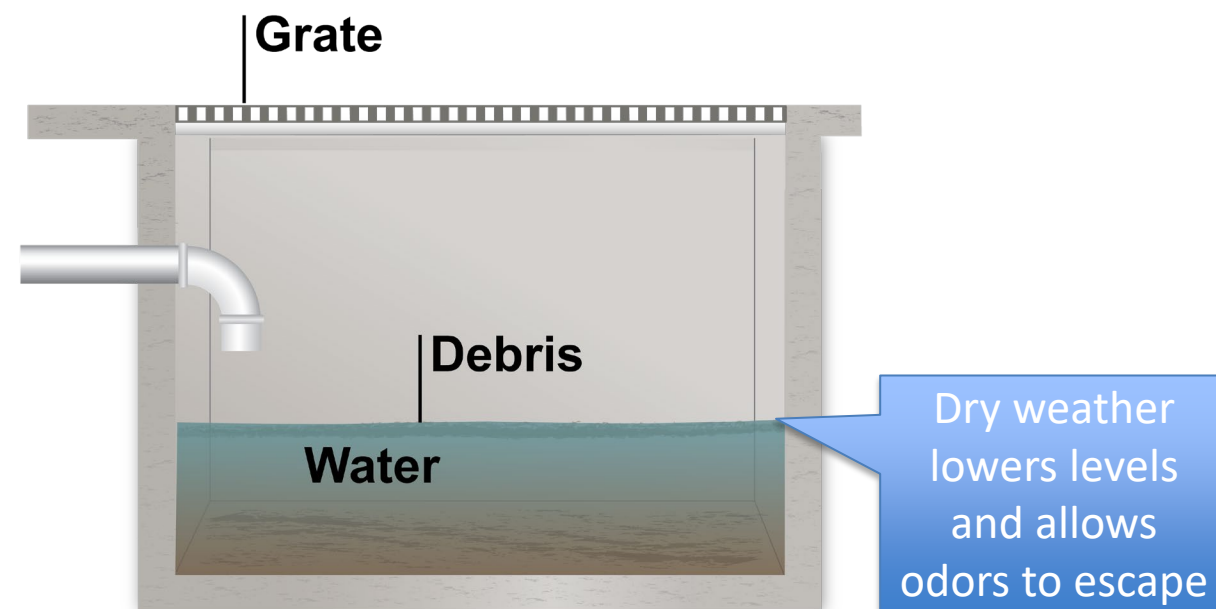
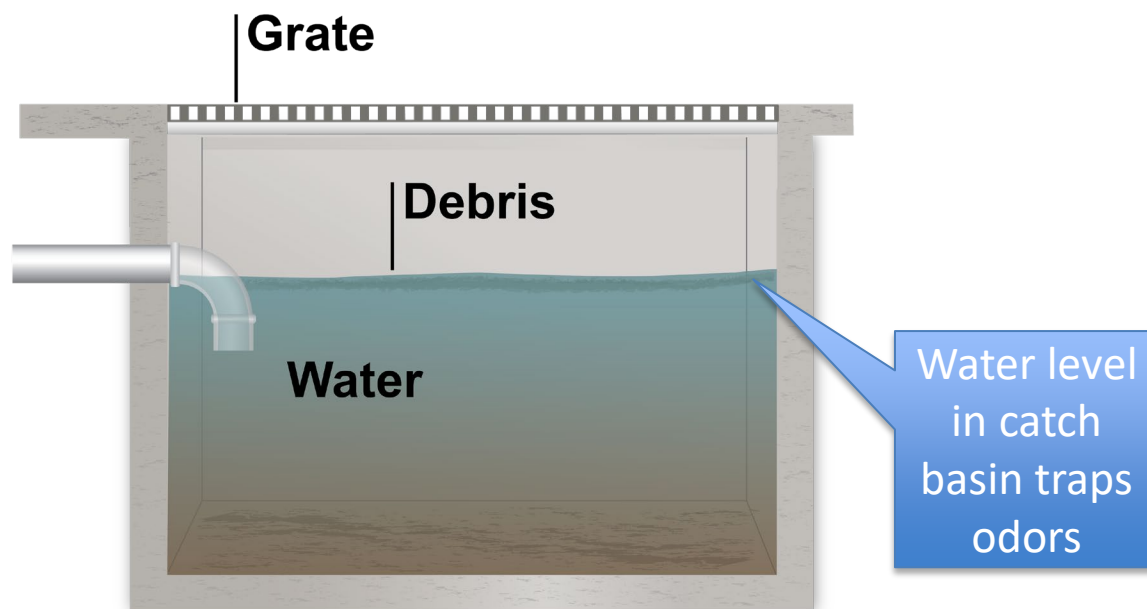
Over half of October's rainfall came in the last four days of the month

Odor Mitigation Activities

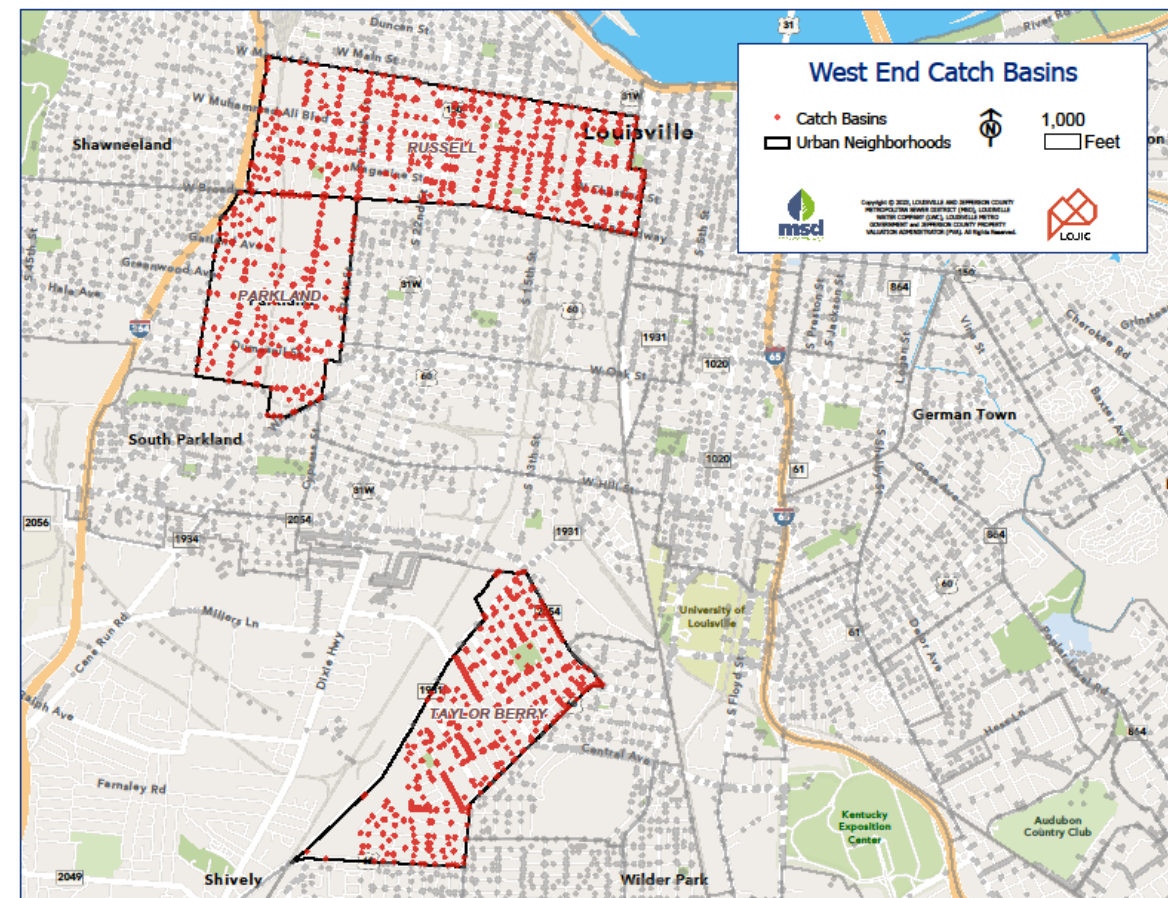
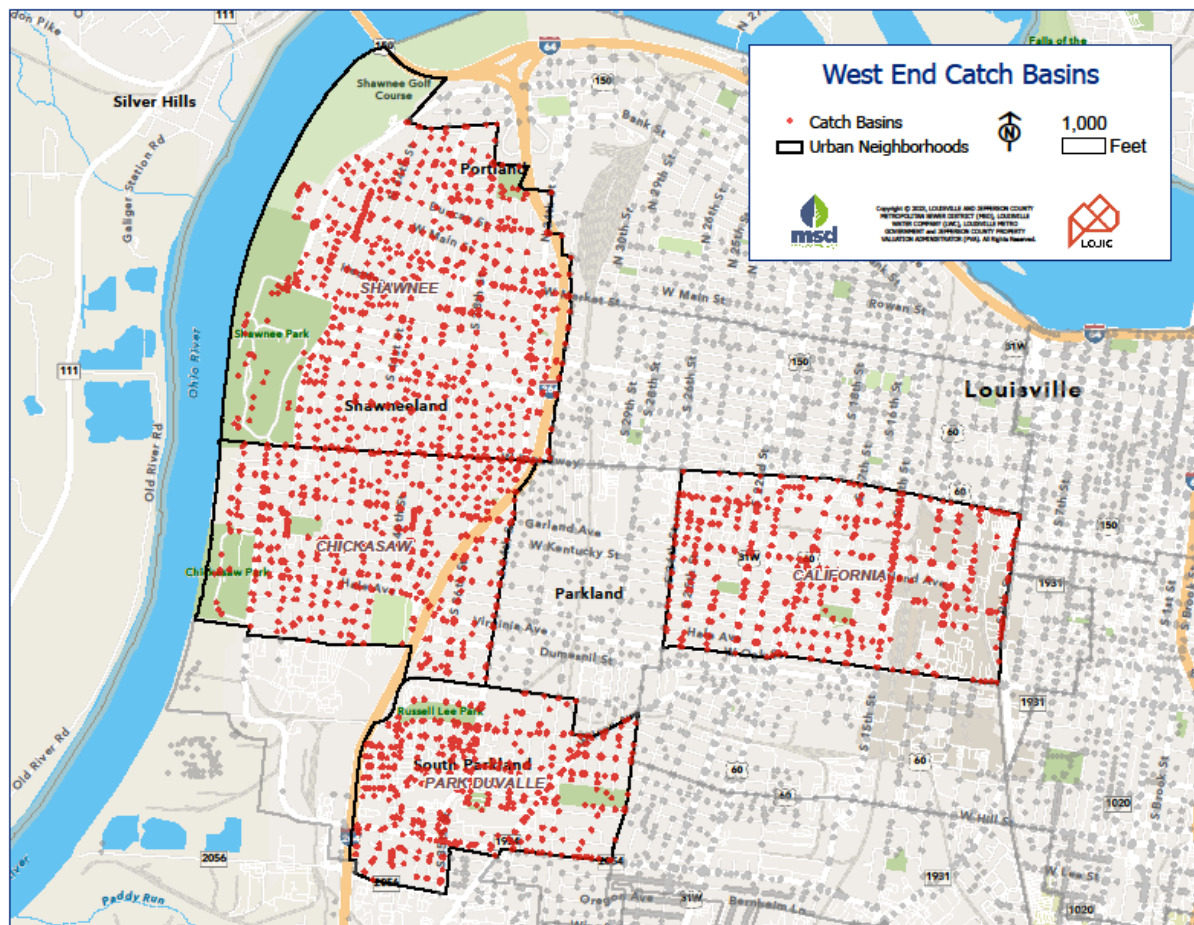
- 💧 Flush and Deodorize Catch Basins
- 💧 Flush Sewer Lines
- 💧 Replace Missing or Damaged Catch Basin Plugs
- 💧 Louisville Water Hydrant Flushing
- 💧 Adjust Chemical Feeds at Pump Stations and Treatment Facilities
- 💧 Adding Water to Trapped Catch Basins— contract with water trucks

Combined Sewer System Trapped Catch Basins

- Approximately 24,000 catch basins within combined sewer system
- Currently inventorying these catch basins, early indications are approximately 90% are trapped
- Current estimate for needed catch basin retrofit related work is \$50M



Combined Sewer System Trapped Catch Basins



Catch Basin Repair and Replacement Work

- 💧 California Neighborhood – 72 catch basins **\$1,043,000**
- 💧 Chickasaw Neighborhood – Inspected 745 catch basins to determine needs (cost to be determined)
- 💧 Park DuValle Neighborhood – 20 catch basins plus 12 odor control devices **\$374,000**
- 💧 Shawnee Neighborhood – 151 catch basins **~\$2,000,000**
- 💧 Taylor-Berry Neighborhood – Inspections ongoing to determine needs
- 💧 Park Hill Neighborhood – Inspections ongoing to determine needs

Ongoing Morris Forman Treatment Center Work

- 💧 THP - \$250 Million project for solids handling
- 💧 Dryer upgrades
- 💧 Sedimentation Tanks
- 💧 Odor control at Southwestern Pump Station

Ongoing Morris Forman Treatment Center Work

Odor Control Master Plan

- 🔹 Completed in 2022
- 🔹 Focus on plant, collection system, and select pump stations
- 🔹 Evaluation / recommendation of improvements for odor mitigation
- 🔹 Phased implementation of recommendations



Discussion