

**Oakland County Phase II Stormwater Biennial Progress Report
Summary for Community Use
Prepared by the Oakland County Water Resources Commissioner's Office
October 1, 2021 – September 30, 2023**

The Oakland County Water Resources Commissioner's Office (WRC) has prepared this summary to assist Oakland County communities in preparing their Phase II Stormwater Biennial Progress Report. The following activities were implemented by Oakland County during fiscal years 2022 and 2023 (FY 2022/2023) to protect and restore water resources throughout Oakland County. A complete copy of Oakland County's 2022-2023 Stormwater Biennial Progress Report will be available on the Oakland County Web site at <https://www.oakgov.com/government/water-resources-commissioner/stormwater/phase-ii-stormwater-reports> on or before April 1, 2024. For additional information on the programs listed below or other environmental programs offered by the WRC, please contact our Environmental Team at 248-858-0958 or envreq@oakgov.com.

Environmental Program Highlights

Household Hazardous Waste Recycling

The Oakland County Waste Resource Management Division sponsored eight (8) household hazardous waste disposal days in FY 2022/2023:

- April 30, 2022, September 24, 2022 and September 16, 2023 at the Oakland County Service Center Campus in Pontiac
- June 4, 2022 and June 3, 2023 at Oxford Middle School in Oxford
- July 23, 2022 and July 22, 2023 at Kensington Church in Orion Township
- April 29, 2023 at Pine Knob Music Theatre in Independence Township

A total of 1,149,121 pounds of waste was collected during the eight collection events. Over the past nineteen years, residents of nearly 69,000 households have disposed of more than 9 million pounds of hazardous materials which have been recycled or disposed of properly.

There were 35,755 website hits in FY 2022 and 29,327 website hits in FY 2023 to the County's Household Hazardous Waste Recycling Information.

Information on household hazardous waste disposal in Oakland County is available online at: www.nohaz.com.

Michigan Green Schools Program

The Michigan Green Schools program assists all Michigan schools – public and private – in achieving environmental goals. These goals include protecting the air, land, water and animals of our state along

with world outreach through good ecological practices and the teaching of educational stewardship. Students from pre-kindergarten through high school seniors are targeted. In FY 2022, 91 Oakland County schools have earned the Michigan Green School designation. Twenty-two (22) of the schools also received the special designation of Emerald Schools and 46 schools earned the Evergreen Schools status.

In FY 2023, 86 Oakland County schools earned the Michigan Green School designation. Thirteen (13) of the schools also received the special designation of Emerald Schools and 51 schools earned the Evergreen Schools status. Fifteen (15) of the 28 public school districts were represented in the program this year.

Information on the program for Oakland County is available on Oakland Schools' [website](#).

Native Plant Initiative

In the summer of 2020, the Oakland County Board of Commissioners launched the Native Plant Initiative. The program is designed to educate residents about the ecological benefits of cultivating native plants. Native plants help prevent the spread of invasive species which can crowd out other local species, contribute to erosion, promote the use of toxic pesticides and cause other problems for natural habitats.

In FY 2022 and 2023, more than 1,200 native plant kits each containing dozens of native plants were distributed to residents from many cities, villages and townships across Oakland County. Participants signed an environmental stewardship pledge and received kits with native flora along with information on how to plant and care for these beneficial species in their own gardens.

Details about the initiative and additional native plant resources are available [here](#).

Norton Street Innovation Project

The Norton Street Innovation Project is a green stormwater infrastructure project located in Pontiac (Clinton River Watershed) that is set to break ground in FY 2024. The project is located on the Augusta Drain property owned by the Augusta Drain Drainage District and maintained by the Water Resources Commissioner's Office. Goals for the project include the installation of bioretention cells to beautify the space and temporarily capture stormwater runoff before it enters the Augusta Drain, plant native trees and wildflowers to absorb and filter stormwater, reduce pollutants from entering the Clinton River, and create a gathering space for the local community to enjoy. An interactive storymap is available to learn more about the project and discover more about the timeline, goals and history of the space: <https://storymaps.arcgis.com/stories/829aafa6473f491e9f15ae638794736e>.

The project is funded with a \$1.3 million grant from EGLE's Clean Water State Revolving Fund program with 100% loan forgiveness.

Operation Medicine Cabinet (OMC) Program

There are currently 36 drop-off sites throughout Oakland County where unused pharmaceuticals can be properly disposed of. Locations include local Departments of Public Safety, 13 Oakland County Sheriff's offices and 23 additional law enforcement locations throughout Oakland County within the following communities: Addison Twp, Auburn Hills, Beverly Hills Village, Brandon Twp, Birmingham, Bloomfield

Hills, Bloomfield Twp, Clawson, Commerce Twp, Farmington Hills, Ferndale, Franklin, Hazel Park, Highland Twp, Holly, Huntington Woods, Independence Twp, Keego Harbor, Lyon Twp, Madison Heights, Oakland Twp, Oak Park, Orchard Lake, Orion Twp, Oxford Twp, Village of Oxford, Pontiac, Rochester, Rochester Hills, Royal Oak, South Lyon, Springfield Twp, Troy, West Bloomfield, White Lake and Wixom. Additional information can be found online [here](#).

New in FY 2017, a GIS-based online application is available for the public to see drop-off sites throughout the county and is available [here](#).

There were a total of 1,613 hits to the OMC website in FY 2022 and 1,232 hits in FY 2023.

Stormwater Utility Legislation

Since 2014, the WRC has continued to lead a workgroup of stakeholders to develop language for a bill that would help clarify how communities can establish dedicated funding sources for managing their stormwater systems. On November 9, 2023, Senator Rosemary Bayer introduced SB-660'23, a bill to enact new law known as the "Stormwater Management Utility Act". Although similar legislation has been introduced in Lansing many times over the past several years, this refined bill is gaining regional and statewide support with enough momentum to be addressed by the full Legislature in calendar year 2024. The WRC continues to monitor court cases that are trending in manner favorable to support the passage of a stormwater management utility bill. Since FY 2021, the WRC hosted a regional community forum to review material revisions to prior draft bills, educate community leaders, and solicit feedback from a cross-section of professionals to ensure all aspects of creating and maintaining a stormwater management utility are considered and incorporated into the new proposed law.

Oakland County Street Tree Enhancement Match Grant Program (OAKSTEM)

In FY 2021, the Oakland County Street Tree Enhancement Match Grant Program (OAKSTEM) was started as a pilot program by Oakland County Planning & Local Business Development to decrease impervious surface area and increase the tree canopy in communities that make up the George W. Kuhn (GWK) Drainage District. In FY 2022, 11 of the 12 communities who submitted applications to the program completed street tree planting projects. In total, 1,260 trees were planted in public right-of-ways within the District. In FY 2023, 89 trees were planted.

Preserve Mi Waters: Stormwater Manhole Cover Art Contest

In FY 2022, the WRC coordinated a contest to highlight the importance of awareness that stormwater runoff enters our lakes, streams and rivers without treatment. The initiative was meant to highlight the importance of protecting our waterways from pollution from nonpoint sources. The winner was Troy Athens high school student, Mandy Chu. The contest received a total of 74 entries. Mandy received a \$1,000 scholarship in honor of her achievement from Pure Oakland Water. Details on the initiative were shared in an Oakland County Blog post on April 21, 2022 and is available online at:

<https://oaklandcountyblog.com/2022/04/21/oakland-county-spreads-awareness-around-stormwater/#more-51100>.

In FY 2023, CDM staff installed 48 cast iron storm drains covers featuring Mandy's artwork in walkable locations throughout Oakland County. The covers were installed in the following communities: Rochester Hills (2), Auburn Hills (1), Bloomfield Hills (1), Bloomfield Twp (2), Wixom (2), Walled Lake (2), Farmington Hills (6), Highland Twp (1), Holly (2), Independence Twp (1), South Lyon (1), Lyon Twp (1), Oakland Twp (3), Orion Twp (1), Northville (1), Pontiac (5), Madison Heights (4), Beverly Hills (1), Lathrup Village (1), Southfield (1), Troy (4), Waterford (2) and West Bloomfield (3).



Oakland County Sustainability Plan

In FY 2021, Oakland County hired its first Environmental Sustainability Officer. The County has prepared a Sustainability Plan that addresses five focus areas: Sustainable Governance, Health & Wellness, Facility and Fleet Decarbonization, High-Performance Buildings, Waste Reduction and Diversion, and Open Space, Ecosystems and Connectivity. More information about Oakland County's Sustainability Plan and initiatives are available online [here](#). An interactive storymap of the County's sustainability plan is available at: <https://storymaps.arcgis.com/stories/b4a34afb87714feda4ce2bafabad2a47/>.

Wildlife Habitats of Oakland (WHO) Certification

Wildlife Habitats of Oakland (WHO) is a collaborative effort among leading conservation groups, county government and nonprofit agencies in Oakland County. WHO is working in conjunction with the National Wildlife Federation to accomplish the following goals:

- Create a network of wildlife-friendly habitats in residential yards, businesses, parks, trails and other publicly owned lands
- Raise awareness about the importance of pollinators and other indicator species
- Recognize the significant role that native plants have in fostering a healthy environment
- Certify all of Oakland County as a National Wildlife Federation Community Wildlife Habitat

More information is available on the WHO [website](#).

WRC Storm Drain and Sanitary Sewer Projects Under Development, Under Construction and Recently Completed

A summary report of WRC drain, sanitary sewer, drinking water systems, and retention treatment basin projects under design, under construction and completed is available [here](#) for FY 2022. The FY 2023 report will be available on the WRC's website in the near future [here](#) under the "WRC Annual Drain Projects Report" section.

Public Education Program Highlights

Art-Fish-Fun Festival

The WRC, in partnership with The Art Experience in Pontiac, Pure Oakland Water, the City of Pontiac and the Clinton River Watershed Council, has hosted the annual Art-Fish-Fun Festival in Beaudette Park in Pontiac in June of each year. The event is aimed to educate and engage the public in environmental education in a fun-filled way.

In FY 2022, the event saw approximately 250 attendees; in FY 2023, the event saw about 400 attendees. The 2023 event also included a park clean-up with 18 volunteers that helped to remove 18 bags of garbage from the park (approximately 1.08 cubic yards).

Clinton River Water Festival

In FY 2022, the 16th annual festival was held on May 20, 2022 at Oakland University in Rochester Hills. A total of 36 classes from 16 schools attended – a total of nearly 800 students and 153 teachers and chaperones were educated about the importance of water in their daily lives in the Clinton River watershed. A total of 37 different stations were visited by the classes represented by a variety of public and private water resource professional organizations. A video featuring highlights of the 2022 event is available [here](#).

In FY 2023, the 17th annual festival was held on May 19, 2023 at Oakland University. A total of 40 classes from 16 schools attended – reaching a total of just over 900 students and 169 teachers and chaperones. A total of 40 different stations were visited by the classes represented by a variety of public and private water resource professional organizations. A video featuring highlights of the 2023 event is available [here](#).

Planning partners for the annual Clinton River Water Festival include the WRC, City of Auburn Hills, Clinton River Watershed Council, Cranbrook Institute of Science, and Oakland University's department of Pre-College Programs with sponsorship funding provided by Pure Oakland Water and WM.

Contractor Training Related to Stormwater Management Activities

In FY 2013, the WRC added stormwater pollution prevention language to the “Notes” section on its soil erosion and sedimentation control details sheet (available online [here](#)) as part of the WRC's Soil Erosion and Sedimentation Control Program to address the contractor training requirements of the Phase II Stormwater permit. The stormwater pollution prevention language states:

“While performing work involving grounds maintenance and/or the construction/maintenance of any infrastructure, including roads, water mains, sanitary sewers, storm drains and stormwater best management practices (BMPs), contractors shall minimize pollution from stormwater runoff that can affect water quality related to work activities. Pollutants that could impair water quality may include fuel, grease and oil, nutrients, bacteria and pathogens, litter and debris, and soil erosion and sedimentation. Applicable BMPs shall be implemented by the contractor to the maximum extent practicable to protect water quality and wildlife habitat.”

For those communities that utilize WRC to administer its SESC program (which includes 21 cities, 18 townships and nine villages in Oakland County – see map of community coverage [here](#)), you would be covered by WRC’s SESC program for these requirements.

Kids’ Clean Water Calendar Contest

The WRC received more than 1,300 entries from fourth and fifth grade students throughout Oakland County for the 2022 and 2023 Calendar Contests. Winning entries were included in 11,000 calendars that were distributed to homeowners, municipalities, businesses and schools throughout Oakland County and beyond.

A new [website](#) was developed with details on the contest and an online gallery of the 2022 and 2023 calendar winning entries is accessible from the website. In FY 2022, the website received 1,689 hits and 1,508 hits in FY 2023.



Oakland County Dirt Doctors Program

The Dirt Doctors program is designed to teach children how individual actions affect our waterways. It explains the connections between vegetation, soil erosion and water quality in a fun-filled, interactive way. During FY 2022/2023, the WRC Dirt Doctors educated more than 6,000 students, adults and teachers through nearly 1,000 presentations at 26 events located in Ann Arbor, Bloomfield Hills, Detroit, Farmington, Macomb, Pontiac, Rochester Hills, Royal Oak, Walled Lake and West Bloomfield.

A pre-recorded version of the Dirt Doctors program was developed in September 2020 and is available online [here](#). As of September 30, 2023, the video has been viewed 221 times.

Oakland County Drain Detectives Program

The Drain Detectives program is designed to teach children about watersheds, the various types of pollution that can impact water quality and the tools that are used to detect pollution and the methods used to track down pollution sources. In FY 2023, the program reached approximately 208 fourth and fifth grade students through 8 presentations at the Detroit River Water Festival on Belle Isle in Detroit.

Oakland County Environmental/Natural Resource-Related Web Sites

The WRC continues to enhance and maintain its website: www.oakgov.com/water with county residents in mind. A separate e-mail address is used for handling environmental questions, requests for services and materials at: envreq@oakgov.com. The WRC also maintains a website on riparian education information at www.oakgov.com/riparian (713 hits to the website in FY 2022 and 832 hits in FY 2023). The County’s 24-Hour Pollution Hotline is available [here](#) (745 hits to the website in FY 2022 and 464 hits in FY 2023). WRC also has a main page to its Environmental Education resources [here](#) and that site had 246 hits in FY 2022 and 188 hits in FY 2023.

In FY 2018, Oakland County Information Technology developed a Seven Simple Steps to Clean Water Story Map and that is available [here](#); a link to the Story Map is on WRC’s "Seven Simple Steps to Clean

Water" website [here](#). The page also promotes the 24-Hour Pollution Hotline and viewers can explore land use changes from 1940 vs. 2017 imagery within Oakland County. There were 280 hits to the Seven Simple Steps to Clean Water website in FY 2022 and 184 hits in FY 2023. The Storymap received 129 hits in FY 2022 and 100 hits in FY 2023. In FY 2021, WRC developed a "Find Your Watershed" feature available in ARC GIS and is accessible [here](#).

The Oakland County Planning and Economic Development department continues to host and update the Oakland County Environmental Stewardship [website](#). There were 700 hits to this website in FY 2022 and 606 hits in FY 2023.

The Oakland County Parks and Recreation Commission also hosts a comprehensive [website](#) which features a calendar of events, stewardship opportunities, links to countywide parks and trails and other natural resource-related information for Oakland County. There were 746 hits to this website in FY 2022 and 992 hits in FY 2023. OC Parks' trail network site [here](#) had 6,395 hits in FY 2022 and 2,996 hits in FY 2023.

Oakland County *Enviroscape*™ Watershed Model Program

The WRC *Enviroscape*™ Watershed Model program teaches students about watersheds and how individual actions affect our waterways, as well as how pollution moves throughout a watershed. Students are taught how to prevent pollution through everyday actions. A pre-recorded version of the Watershed Model program was developed in September 2020 and is available online [here](#). As of September 30, 2023, it had 448 views. The video was shared on the WRC's Facebook page [here](#). The video was also featured on the *Enviroscape* watershed model developer's YouTube "Favorites" channel [here](#).

During FY 2022, approximately 34 students, teachers and Girl Scout leaders in two (2) different presentations at two (2) different events in Novi and Oxford were reached with in-person instruction. In addition, the Rouge River Water Festival was held virtually for 47 classrooms and 1,062 students and the virtual Watershed Model Demonstration link was shared with teachers.

In FY 2023, the program reached more than 1,064 students, teachers and parents in more than 118 presentations at four different events in Bloomfield Hills, Rochester Hills and Walled Lake.

Lakefront Lifestyles Magazine Advertisements and Articles

Lakefront Lifestyles magazine is published monthly and reaches approximately 15,600 homeowners on any of 226 lakes within the west and central areas of Oakland County annually. Public education messages were placed in the April to September issues of *Lakefront Lifestyles* magazine in FY 2022 and 2023. The messages included pet care, fertilizers, household hazardous waste disposal, earth-friendly landscaping, septic system maintenance and storm drain awareness.

One Water Education Campaign

In a partnership between SEMCOG, the Great Lakes Water Authority and the Cranbrook Institute of Science, a regional public education campaign was unveiled in FY 2019 called "One Water". The goal of the campaign is to bring greater awareness of the connection between our drinking water, wastewater

and stormwater systems and how it is all "One Water" and a resource that must be cared for with a shared responsibility. The tools of that campaign include: educational videos, Public Service Announcements on television and radio, billboard advertisements, tip cards, a blog series (one article on each topic of stormwater, wastewater and drinking water), an online resource center and giveaways including FOG disposal bags, reusable water bottles and pet waste baggies. The resource materials are available online at: mionewater.com. A report on the reach of the 2023 MiOneWater campaign is available online [here](#).

Commissioner Nash was featured in a One Water video highlighting programs and best practices in Oakland County and is available online [here](#). As of September 30, 2023, the video has received 398 views.

Master Rain Gardener Certification Program

The Master Rain Gardener Certification program was instituted by Washtenaw County many years ago in an effort to educate homeowners on how to build rain gardens to manage stormwater runoff, improve water quality and create wildlife habitat. Beginning in FY 2022, a collaboration including representatives from local watershed groups, including the Clinton River Watershed Council, Huron River Watershed Council, Friends of the Rouge, Friends of the Detroit River, and Raisin River Watershed Council, as well as the Huron-Clinton Metroparks and Oakland County WRC, joined in Washtenaw County's effort to bring the program to the Southeast Michigan region. The program is taught virtually with optional in-person tours of local rain garden installations.

In FY 2022, the program was held from March 3 – April 7, 2022 with 82 participants from the following watersheds: Rouge: 29; Huron: 18; Clinton: 10; Raisin: 2; Detroit: 6; Other: 17. Nineteen (19) of the participants resided in Oakland County.

In FY 2023, the program was held virtually from Feb. 23 - March 23, 2023 with 70 participants from the following watersheds: Rouge: 16; Huron: 24; Clinton: 9; Raisin: 3; Detroit: 9; Other: 9. Thirteen (13) of the participants resided in Oakland County.



A GIS-based mapping application created by Washtenaw County where those who have installed rain gardens and other types of green infrastructure (rain barrels, native plantings, etc.) in Southeast Michigan are encouraged to map their projects is available [here](#).

More information about the program can be found online at: www.MasterRainGardener.org.

Onsite Sewage Disposal (Septic System) Maintenance Education

The WRC published an ad on proper septic system maintenance in the *Oakland Lakefront Lifestyles* magazine in its September 2022 issue which reaches 15,600 riparian homeowners annually. Proper septic system operation and maintenance education is also provided in the [Waterfront Wisdom booklet](#).

Additionally, the Oakland County Health Department offers a septic system installer education class that instructs on the Oakland County Sanitary Code and policies related to onsite wastewater treatment systems. The class is open to contractors wishing to complete installations in Oakland County as well as

private homeowners wishing to install their own septic system. There were 11 classes with 70 attendees in FY 2022 and 11 classes with 54 attendees in FY 2023.

MSU-Extension has a website on Septic System Education available [here](#).

Regional Stormwater Summit

The 8th annual Regional Stormwater Summit was held virtually on October 9, 2021. Speakers included representatives from WRC, SEMCOG, OHM Advisors, Drummond Carpenter, the City of Royal Oak, EGLE and the City of Grand Rapids.

The 9th annual Summit was held on October 21, 2022 at Lawrence Technological University with approximately 170 people in attendance. The event is held in partnership with LTU, Pure Oakland Water and the WRC. The Summit's purpose is to bring together regional stakeholders to learn more about and share ideas on the latest and greatest information related to stormwater management. All of the presentations and taped video of the event are available on the Pure Oakland Water website [here](#).

Riparian Education

In June 2008, the WRC completed the development of riparian education materials entitled, "[Waterfront Wisdom-Healthy Habits for Clean Water](#)." The materials consist of a comprehensive booklet, as well as individual pamphlets on each of the seven "Healthy Habits for Clean Water." These materials can be viewed and downloaded at: www.oakgov.com/riparian. As of September 30, 2023, more than 17,000 booklets have been distributed throughout southeast Michigan. There are still copies available free of charge upon request.

Rouge River Water Festival

In FY 2022, the festival was held both virtually and in person. The virtual session was held on October 12-15, 2021. A total of 1,062 students and 4 teachers participated. WRC, OCPRC and MSU-Extension Oakland County provided virtual programming to virtual attendees. MSU-Extension provided a video of their groundwater model (located [here](#)). WRC provided a link to its virtual Dirt Doctors and Enviroscape Watershed Model programs.

The festival was held in person from Sept. 13-16, 2022 at the Cranbrook Institute of Science. Approximately 1,142 students from 40 classes and 17 different schools in 10 different communities attended (Beverly Hills, Bingham Farms, Birmingham, Bloomfield Hills, Bloomfield Twp, Commerce, Farmington Hills, Southfield, Troy and Walled Lake). Twenty-eight (28) organizations presented during this year's Water Festival.

In FY 2023, the festival was held from Sept. 19-22, 2023 at the Cranbrook Institute of Science. Approximately 1,135 students from 49 classes and 20 different schools in 10 different communities attended (Bingham Farms, Birmingham, Bloomfield Hills, Bloomfield Twp, Commerce, Farmington Hills, Novi, Plymouth, Troy and Walled Lake). Twenty-eight (28) organizations presented during this year's Water Festival.

Water by the Quarter Program

Water Resources Commissioner, Jim Nash, hosts an online program produced by CMNtv that airs quarterly featuring environmental and water resource professionals that are interviewed about a variety of topics in an effort to increase the public's awareness and understanding on a host of topics related to our natural environment. During FY 2022 and 2023, there were five (5) programs with a total of 451 views. A link to the online program and archived interviews can be accessed [here](#).

Illicit Discharge Elimination Program (IDEP) Summary

Oakland County 24-Hour Pollution Hotline

The WRC continues to staff the 24-hour Pollution Hotline (248-858-0931) where residents, municipalities and others can call to report surface water pollution in Oakland County.

Oakland County created this Pollution Hotline to address Phase II Stormwater Permit requirements and because individuals and municipalities wanting to report surface water pollution often were unclear about how to do so. This Hotline provides a clearinghouse for surface water pollution complaints resulting in consistent 24-hour response, or referral. Complaints are logged in a database and referred to the appropriate agency for action.

Oakland County received 53 complaints throughout 26 communities in FY 2022 and 2023. Investigation of these complaints resulted in the identification of 31 illicit discharge sources and elimination of 30 of those sources. An illicit discharge is pollution draining to surface water or the dumping of polluting material that can impact surface water.

The Oakland County Health Dept. acted on 53 septic-related customer complaints in FY 2022 and 86 septic-related complaints in FY 2023. The Health Department also completed 461 septic system failure evaluations in FY 2022 and 441 failure evaluations in FY 2023.

A detailed summary of WRC complaint investigations is provided in **Tables 1 and 2** at the end of this document.

Outfall/Discharge Point Surveys and Illicit Discharge Investigations

WRC continues to conduct stormwater outfall/discharge point surveys, stormwater structure inspections and follow-up investigations to locate and eliminate pollution from our waterways. An outfall/discharge point survey consists of GPS point location and illicit discharge screening, which includes visual inspection and sampling.

In FY 2022, WRC performed 5,140 inspections on structures located along 109 County Drains in 29 communities within the Clinton, Flint, Huron, Rouge and Shiawassee River watersheds. A total of eight (8) drains were identified with suspect discharges. All 8 drains were investigated and one (1) illicit discharge was discovered. The source of this discharge was found to be an illicit sanitary lead connection to the Owens Relief Drain in Southfield (Rouge River watershed) and correction is pending. This drain

will continue to be investigated for additional non-point sources. The other suspect drains will also continue to be investigated into FY 2023.

In FY 2023, WRC performed 5,173 inspections on structures located along 116 County Drains in 27 communities in the Clinton, Flint, Huron, Rouge and Shiawassee River watersheds. A total of 19 drains were identified with suspect discharges. All 19 drains were investigated and two (2) illicit discharges were discovered. The source of the first discharge was found to be an illicit sanitary lead connection to the Austin Drain in Southfield (Rouge River watershed) that was corrected in FY 2023. The other misconnected residential sanitary lead to the Owens Relief Drain in Southfield still has not been corrected because the homeowner sold the house in 2023 and it is currently sitting vacant. Upon future purchase, the City of Southfield will ensure the illicit connection is fixed before a Certificate of Occupancy is issued. The other suspect drains will also continue to be investigated into FY 2024.

A detailed summary of dry weather screening and IDEP investigations is provided in **Tables 3 and 4** at the end of this document.

Illicit Connection and Discharge Elimination

In summary, during FY 2022/2023, 34 illicit discharges were discovered by WRC during complaint investigations, outfall/discharge point surveys, stormwater structure inspections and follow-up investigations. Of these, a total of 33 illicit discharges were corrected with the identified sources being eliminated. The remaining illicit discharge source has been identified and was referred to EGLE for follow-up enforcement (horse farm runoff).

Pollutant Removal Summary for FY 2022 and 2023

The following pollutants were removed through the County's IDEP in FY 2022 and FY 2023:

- 9,234,113 gallons of sewage
- 3,620 gallons of fuel, oil and grease
- 116,480 pounds of sediment
- 255 gallons of hydraulic fluid
- 50 pounds of pet waste
- 50 gallons of chromium
- 20 gallons of algaecide

A detailed summary of pollutants removed for each watershed is provided in **Tables 5 and 6** at the end of this document.

TABLE 1

FY 2022 Pollution Hotline Complaint Summary Table

Community	Number of Complaints	Illicit Discharges	Illicit Discharges Corrected	Complaint - Pollutant - Source of Discharge
Auburn Hills	1	1	1	(1) Spill - Gasoline - Fuel Tanker Accident
Beverly Hills	1	0	0	Stream Discoloration
Bloomfield Hills	1	1	1	(2) Illicit Connection - Sewage -Municipal Complex
Clarkston	1	0	0	Soil Erosion - Commercial Construction Site
Farmington Hills	1	1	1	(3) Diesel Fuel in County Drain - Gas Station LUST
Franklin Village	1	1	1	(4) Soil Erosion - Sediment - Residential Construction Project
Holly Village	2	1	1	(5) Soil Erosion - Sediment - Subdivision Development; Trash Complaint - Residential
Independence Twp	1	0	0	Suspect Pipe Discharge to Lake - Residential Property
Lyon Twp	1	0	0	Illicit Discharge - Concrete Washout - Residential Contactor
Oakland Twp	1	0	0	Soil Erosion - Sediment - Residential Construction site
Pontiac	3	3	3	(6), (7) Spill - Hydraulic Fluid - Industrial Facility - local storm and pond impacted; (8) Illicit Discharge -Sewage to Ground and Storm CB at Condominium Complex
Rochester Hills	1	0	0	Drain Discoloration - SESC - Road Ditch Cleanout
W. Bloomfield	2	2	2	(9) Oil Sheen - Lower Straits Lake Dam - Unknown Source; (10) Spill - Hydraulic Fluid, Residential Garbage Truck
Waterford	1	1	1	(11) Spill - Hydraulic Fluid, Garbage Truck at County Complex
Totals: 14 Communities	18	11	11	

(1) Auburn Hills FD and MDOT Emergency Response and Cleanup

(2) Illicit Connection, misconnected sanitary sewer at Bloomfield Twp DPS Building. Facility dye tested by Bloomfield Twp in 2021. Corrected by WRC in 2022

(3) Diesel fuel discharge to Pebble Creek from a local Storm Drain. Source is ongoing; Gas Station LUST remediation site with EGLE

(4), (5) EGLE SESC Site Violations and Enforcement Actions issued.

(6), (7) Industrial Hydraulic Fluid Spill from Holding Tank cleaned up by facility. Impacted local storm drain, pond and wetland. Under remediation with EGLE

(8) Violation Notices issued to building owner by OCHD and City of Pontiac Bldg Dept. in 2021. Corrected in 2022.

(9) WRC collected and disposed of misting oil at Upper Straits Lake Dam. No upstream sources were found

(10), (11) Hydraulic Fluid Leak from garbage collection truck cleaned up by waste hauling contractors

TABLE 2

FY 2023 Pollution Hotline Complaint Summary Table

Community	Number of Complaints	Illicit Discharges	Illicit Discharges Corrected	Complaint - Pollutant - Source of Discharge
Addison Twp	1	1	0	(1) Horse Farm Animal Waste Runoff
Auburn Hills	1	1	1	(2) Commercial Detention Pond Discharge
Bloomfield Twp	3	1	1	Construction Site SESC; Sewage Odor, Residential (3) Misconnected Sanitary House Lead
Commerce Twp	1	1	1	(4) Canal Dredging Residential
Farmington Hills	2	2	2	(5) Turpentine Spill - Residential, (6) Trailer Park - unit broken sanitary
Franklin Village	1	0	0	Sanitary MH Surcharge
Madison Heights	4	4	4	(7), (8) 2 Sanitary Interceptor Overflow events; (9) Nickel Waste Spill - Industrial; (10) Oil Spill -Commercial Property
Oxford Twp	1	0	0	Road Tar Coal Patch
Pontiac	7	4	4	(11) Oil Spill - Industrial Facility; Sodium Hypochlorite Spill- WWTF; Plugged residential Storm Drain; Stream Discoloration - Clinton River; (12), (13), (14) 3 SSO events - Pontiac WWTF
South Lyon	1	0	0	Phragmites chemical treatment concern
Southfield	2	0	0	2 Odor Complaints - Sanitary Interceptor, Commercial Facility
Troy	1	1	1	(15) Granite Cutting Slurry Waste Discharge - Commercial Facility
Milford Village	1	0	0	Sanitary Sewer Complaint
W. Bloomfield	2	2	2	(16) Algaecide - Residential Detention Pond; (17) SSO to Residential Detention Pond
Warren	4	2	2	Oil Spills - (18) Red Run, (19) Schoenherr Drain; 2 Discoloration Complaints - Red Run
Waterford Twp	1	0	0	Discoloration Complaint - Clinton River
White Lake Twp	2	1	1	(20) Gasoline Spill - Gas Station
Totals: 18 Communities	35	20	19	

- (1) Horse farm runoff referred to EGLE for enforcement
- (2) Retention pond for Tech Park / landfill site discharged to wetland and tributary. Permit violation and enforcement action issued by EGLE
- (3) Misconnected residential sanitary house lead. Corrected by homeowner. Permit issued by WRC / Bloomfield Twp
- (4) Residential construction project involving canal crossing- SESC permit and enforcement action by Commerce Twp & EGLE
- (5) Turpentine spill from local storm drain, responded to by local FD, Investigated by EGLE & Farmington Hills. No source found.
- (6) Sewage discharge to ground and storm at MHP trailer unit. Repaired by Facility Management, OCHD and Farmington Hills enforcement action.
- (7),(8) Sanitary interceptor sewer surcharge and overflow to GWK and Red Run Drains from heavy rain events. Reported to EGLE.
- (9) Nickel waste drum spill to parking lot storm. Responded to by Mason Hts. FD & DPW. Contained and cleaned up by facility contactor.
- (10) Oil spill to Red Run. Collected and disposed of by WRC / MPC. Source was food processing company waste oil dumped to storm CB. Referred to Madison Heights for Code Enforcement
- (11) Oil spill at Heat Treating Facility to Road and County Drains. Spill response, containment cleanup up by WRC, MDOT and facility contactor, Reported to EGLE
- (12),(13),(14) Sanitary Sewer Overflow events at the Pontiac WWTF due to heavy rains. Reported to EGLE
- (15) Illicit connection discharge of waste water from a Granite Table Top processing facility. Referred to City of Troy Bldg Dept. Corrected by facility owner
- (16) Discharge of algal treatment additive in overflow from sub-division Pond. Referred to W. Bloomfield & EGLE Aquatic Nuisance Control Program for permit enforcement with HOA
- (17) Sewage discharge from plugged sanitary sewer to residential detention pond. Corrected and cleaned up By WRC. Reported to EGLE
- (18), (19) Oil Spills from Henry Graham and Schoenherr Drains to the Red Run. Contained and deposed of by WRC and MCDPW contractors. Reported to EGLE. Sources not found
- (20) Fuel Spill at Gas station to Storm CB. White Lake FD, MDO, EGLE Response. Spill contained and cleaned up facility contactor.

TABLE 3

FY 2022 Dry Weather Screening and IDEP Investigations Summary Table

WRC Drain Name	Stormwater Structure DWS Inspections	Community	Watershed	Suspected Discharges	IDEP Investigations	Discharges Discovered	Discharges Corrected	Source
A J Taylor Drain (1)	38	Brandon Township	Clinton	No	No	0	0	
Allen Drain (1)	29	Independence Township	Clinton	No	No	0	0	
Austin Drain (3)	15	Southfield	Rouge	Yes	Yes	0	0	Ongoing Investigation
Bare Drain (1)	14	Holly Township	Clinton	No	No	0	0	
Bishop Drain (1)	17	Rochester Hills	Clinton	No	No	0	0	
Bloomfield Highlands Drain (1) (2)	14	Bloomfield Township	Rouge	No	No	0	0	
Bloomfield Pines Drain (1)	138	West Bloomfield	Rouge	No	No	0	0	
Borden Drain (1)	12	Rochester Hills	Clinton	No	No	0	0	
Brandon Oxford Drain (1)	79	Brandon Township	Clinton	No	No	0	0	
Brown Drain (1)	44	Orion Township	Clinton	No	No	0	0	
Caddell Drain (1) (2)	135	Farmington Hills	Rouge	No	No	0	0	
Claude H Stevens Drain (2) (3)	4	Bloomfield Township	Rouge	Yes	Yes	0	0	Ongoing Investigation
Clarenceville Drain (2)	1	Farmington Hills	Rouge	No	No	0	0	
Chamberlin Farms Drain (1)	8	Oakland Township	Clinton	No	No	0	0	
Chelsea Park Drain (1)	405	Oakland Township	Clinton	No	No	0	0	
Courter Drain (1)	16	Novi	Rouge	No	No	0	0	
Daly Drain (1)	25	Bloomfield Township	Rouge	No	No	0	0	
Davis Drain (1) (2)	24	Novi	Rouge	No	No	0	0	
Devonshire Drain (2)	1	Bloomfield Township	Rouge	No	No	0	0	
Dorothy Webb Drain (1)	38	West Bloomfield	Rouge	No	No	0	0	
Drakeshire Condo Drain	12	West Bloomfield	Rouge	No	No	0	0	
Dunleavy Drain (3)	2	Madison Heights	Clinton	No	No	0	0	Ongoing Investigation
Eight Mile Drain (2)	2	Southfield	Rouge	Yes	Yes	0	0	
Emily Drain (1)	31	Southfield	Rouge	No	No	0	0	
Flannery Drain (3)	1	Southfield	Rouge	Yes	Yes	0	0	Ongoing Investigation
Fracassi Drain (3)	5	Southfield	Rouge	Yes	Yes	0	0	Ongoing Investigation
Frost Drain (1)	6	Oakland Township	Clinton	No	No	0	0	
Four Towns Drain (1)	22	Waterford	Clinton	No	No	0	0	
Gabler Drain (1)	1	Rochester Hills	Clinton	No	No	0	0	
Galloway Drain (1)	1	Auburn Hills	Clinton	No	No	0	0	
Galloway Lake Farms Drain (1)	39	Auburn Hills	Clinton	No	No	0	0	
Gosling Drain (1)	1	Oakland Township	Clinton	No	No	0	0	
Greenaway Drain (1)	17	Wolverine Lake Village	Huron	No	No	0	0	
Greenpointe Condo County Drain (1)	93	West Bloomfield	Huron	No	No	0	0	
Greenpointe North Drain (1)	88	West Bloomfield	Huron	No	No	0	0	
Hayes Drain (1)	1	Commerce Township	Huron	No	No	0	0	
Henry Graham Drain (1) (3)	11	Madison Heights	Clinton	Yes	Yes	0	0	Ongoing Investigation
Hawthorne Drain (1)	12	Troy	Clinton	No	No	0	0	
Hills of Oakland Drain (1)	144	Oakland Township	Clinton	No	No	0	0	
Holden Drain (1)	10	Commerce Township	Huron	No	No	0	0	
Holland Drain (1)	66	Pontiac	Clinton	No	No	0	0	
Honeywell Drain (1)	7	Rochester Hills	Clinton	No	No	0	0	
Huntwood Meadows Drain (1)	92	West Bloomfield	Rouge	No	No	0	0	
Jackson Drain (1)	1	Troy	Clinton	No	No	0	0	
Jacobs Drain (1)	22	West Bloomfield	Rouge	No	No	0	0	
Johnson Drain (1)	52	Auburn Hills	Clinton	No	No	0	0	
Joslyn Drain (1)	13	Pontiac	Clinton	No	No	0	0	
Kasper Drain (1)	178	Auburn Hills	Clinton	No	No	0	0	
Kings Ridge Drain (1)	93	Oakland Township	Clinton	No	No	0	0	
Knollwood Commons Drain (1)	85	Oakland Township	Clinton	No	No	0	0	
Kaczmar Drain (2)	1	Madison Heights	Clinton	No	No	0	0	
Kollar Drain (1)	23	West Bloomfield	Rouge	No	No	0	0	
Korozone Drain (1)	43	Bloomfield Township	Rouge	No	No	0	0	
Krohn Drain (1)	40	Addison Township	Flint	No	No	0	0	
Kutchev Drain (3)	5	Hazel Park	Clinton	No	No	0	0	Ongoing Investigation
Lagoons of W. Bloomfield Drain (1)	95	West Bloomfield	Huron	No	No	0	0	
Luaders Drain (1)	6	Rochester Hills	Clinton	No	No	0	0	
Lochaven Drain (1)	5	Waterford Township	Clinton	No	No	0	0	
Lynn D. Allen Drain (1)	10	Bloomfield Township	Rouge	No	No	0	0	
Maple Place Condo Drain (1)	29	West Bloomfield	Rouge	No	No	0	0	
Maple Ridge Condo Drain (1)	29	West Bloomfield	Rouge	No	No	0	0	
Maple Place Villas Drain (1)	171	West Bloomfield	Rouge	No	No	0	0	
Maple Place Woods Drain (1)	36	West Bloomfield	Rouge	No	No	0	0	
Maplewoods North Subdivision Drain (1)	81	West Bloomfield	Rouge	No	No	0	0	
McIntyre Drain (1)	26	Rochester Hills	Clinton	No	No	0	0	
Minnow Pond Drain (1) (2)	46	Farmington Hills	Rouge	No	No	0	0	
Montante Drain (1) (2)	22	West Bloomfield	Huron	No	No	0	0	
Moore Drain (1)	20	Pontiac	Clinton	No	No	0	0	
Mullen Drain (1)	56	West Bloomfield	Rouge	No	No	0	0	
Norton Creek Drain (2)	1	Wixom	Huron	No	No	0	0	
Northwestern Hwy Drain (2)	1	Southfield	Rouge	No	No	0	0	
Oak Brooke Condo Drain (1)	29	West Bloomfield	Huron	No	No	0	0	
Orchard Lake Woods Drain (1)	156	West Bloomfield	Huron	No	No	0	0	
Orchard Ridge Drain (1)	101	Oakland Township	Clinton	No	No	0	0	
Osgood Drain (1)	9	Orion Township	Clinton	No	No	0	0	
Owens Relief Drain (1) (3)	103	Southfield	Rouge	Yes	Yes	1	0	Residential Sanitary Illicit Connection found in FY2022; Ongoing Investigation of Additional Non-Point Sources
Paddison Drain (1)	29	Groveland Township	Flint	No	No	0	0	
Paint Creek Drain (1)	177	Orion Township	Clinton	No	No	0	0	
Perrytown Estates Drain (1)	21	West Bloomfield	Rouge	No	No	0	0	
Pontiac Creek Ext Drain (1)	48	Waterford	Clinton	No	No	0	0	
Quail Ridge Drain (1)	5	Novi	Rouge	No	No	0	0	
Randolph St. Drain (1)	49	Northville	Rouge	No	No	0	0	
Reid and Branch Drain (1)	40	Orion Township	Clinton	No	No	0	0	
Renshaw Drain (1)	11	Troy	Clinton	No	No	0	0	
Royal View Drain (1)	27	Oakland Township	Clinton	No	No	0	0	
Schmid Drain (1)	30	Keego Harbor	Clinton	No	No	0	0	
Sharkey Drain (3)	5	Madison Heights	Clinton	Yes	Yes	0	0	Ongoing Investigation
Silvercrest Drain (1)	21	Waterford Township	Clinton	No	No	0	0	
Skae Drain (1)	13	Pontiac	Clinton	No	No	0	0	
Stewart Relief Drain (1)	57	Southfield	Rouge	No	No	0	0	
Sturgis Drain (1)	31	Troy	Clinton	No	No	0	0	
Swartz Creek Drain (1)	8	Holly Township	Flint	No	No	0	0	
Swartz Creek No 2 Drain (1)	4	Holly Township	Flint	No	No	0	0	
The Crossings Drain (1)	422	Oakland Township	Clinton	No	No	0	0	
Tiffany Smith Drain (1)	15	Holly Township	Shiawassee	No	No	0	0	
Tribute Drain (1) (2)	68	Wixom	Huron	No	No	0	0	
Twin Lakes Drain (1)	250	Oakland Township	Clinton	No	No	0	0	
Underhill Drain (2)	1	South Lyon	Huron	No	No	0	0	
US 16 Drain (3)	7	Farmington	Rouge	Yes	Yes	0	0	Ongoing Investigation
Vinewood Drain (1)	51	Auburn Hills	Clinton	No	No	0	0	
W. Bloomfield Oaks Drain (1)	142	West Bloomfield	Huron	No	No	0	0	
Walnut Hill of W Bloomfield Drain	20	West Bloomfield	Huron	No	No	0	0	
Wellington Drain (1)	95	Oakland Township	Clinton	No	No	0	0	

WRC Drain Name	Stormwater Structure DWS Inspections	Community	Watershed	Suspected Discharges	IDEP Investigations	Discharges Discovered	Discharges Corrected	Source
Wellington Woods Drain (1)	49	West Bloomfield	Clinton	No	No	0	0	
Westwood Park Drain (1)	8	West Bloomfield	Huron	No	No	0	0	
White and Duck Lake Drain (1)	15	Highland Township	Huron	No	No	0	0	
Windridge Hills Drain (1)	49	West Bloomfield	Huron	No	No	0	0	
Woolman Wells Drain (1)	46	Brandon	Flint	No	No	0	0	
Yerkes Drain (1) (2)	17	Lyon Township	Huron	No	No	0	0	
Drains	DWS Inspections	Communities	Watersheds	Suspect Drains	Drains Investigated	Illicit Discharges Discovered	Illicit Discharges Corrected	
109	5140	29	5	8	8	1	0	

(1) DWS Stormwater Structure Inspections conducted during FY 2022

(2) IDEP Investigations, WW-DW *E. coli*, DNA sampling conducted during FY 2022. No additional investigation planned for FY 2023

(3) IDEP Investigations, WW-DW *E. coli*, DNA sampling conducted during FY 2022. Ongoing evaluation, investigations planned for FY2023

DWS = Dry Weather Screening

WW = Wet Weather

DW = Dry Weather

TABLE 4

FY 2023 Dry Weather Screening and IDEP Investigations Summary Table

WRC Drain Name	Stormwater Structure DWS Inspections	Community	Watershed	Suspected Discharges	IDEP Investigations	Discharges Discovered	Discharges Corrected	Source
Alpine Academy Drain (1)	14	Oakland Township	Clinton	0	0	0	0	
Augusta Drain (1) (2) (3)	3	Pontiac	Clinton	0	0	0	0	
Austin Drain (1) (4) (5)	17	Southfield	Rouge	1	1	1	1	Misconnected Sanitary-Dental Office
Barnard Drain (1) (4)	47	Troy	Clinton	1	0	0	0	
Bear Creek (Local Storm) (1) (4)	1	Hazel Park	Clinton	1	0	0	0	
Bingham Farms Ext. Drain (1)	22	Bingham Farms	Rouge	0	0	0	0	
Birchwood Park Drain (1)	192	West Bloomfield Township	Rouge	0	0	0	0	
Birdsland Drain (1)	26	Pontiac	Clinton	0	0	0	0	
Bloomfield Glens Health Drain (1)	24	West Bloomfield Township	Rouge	0	0	0	0	
Brewer Drain (1)	52	Pontiac	Clinton	0	0	0	0	
Brooklyn Relief Drain (1) (2)	12	Pontiac	Clinton	0	0	0	0	
Clarenceville Drain (1) (3)	1	Livonia	Rouge	1	0	0	0	
Clark Drain (1)	1	Leonard Village	Clinton	0	0	0	0	
Clinton River (1) (2)	4	Independence Twp, Waterford Twp, Rochester Hills	Clinton	0	0	0	0	
Cloisters Drain (1)	15	Oakland Township	Clinton	0	0	0	0	
Country Creek Drain (1)	264	Oakland Township	Clinton	0	0	0	0	
Coy Drain (1)	36	Farmington Hills	Rouge	0	0	0	0	
Craft Drain (1)	11	Brandon Township	Flint	0	0	0	0	
Dan Devine Drain (1)	54	Bloomfield Township	Rouge	0	0	0	0	
Douglas Drain (1)	24	Troy	Clinton	0	0	0	0	
Doyon Drain (1)	60	West Bloomfield Township	Huron	0	0	0	0	
Dry Run Drain (1)	24	Independence Township	Clinton	0	0	0	0	
Dunleavy Drain (1) (4)	264	Madison Heights	Clinton	1	0	0	0	
Dutton Drain (1) (2) (3)	54	Rochester Hills	Clinton	0	0	0	0	
Eagle Creek Drain (1)	21	Oakland Township	Clinton	0	0	0	0	
Evergreen Rd Drain (1)	23	Southfield	Rouge	0	0	0	0	
Ferry Drain (1) (2)	17	Rochester Hills	Clinton	0	0	0	0	
Fessler Drain (1)	84	Rochester Hills	Clinton	0	0	0	0	
Flannery Drain (1) (4)	1	Southfield	Rouge	1	0	0	0	
Fetterly Drain (1)	16	Troy	Clinton	0	0	0	0	
Fracassi Drain (1) (4)	4	Southfield	Rouge	1	0	0	0	
Francis Drain (1)	24	Novi	Rouge	0	0	0	0	
Galloway Drain (1) (2) (3)	1	Auburn Hills	Clinton	0	0	0	0	
Graves Drain (1)	16	Bloomfield Township	Rouge	0	0	0	0	
Green Lake Crossing Drain (1)	56	West Bloomfield Township	Huron	0	0	0	0	
Greenacre Drain (1)	4	Rochester Hills	Clinton	0	0	0	0	
GWK North Drain (1) (4)	1	Madison Heights	Clinton	1	0	0	0	
GWK South Drain (1) (4)	1	Madison Heights	Clinton	1	0	0	0	
Hazel Drain (1) (4)	2	Farmington Hills	Rouge	1	0	0	0	
Hamlin Drain (1)	38	Pontiac	Clinton	0	0	0	0	
Helaine Zack Drain (1) (2) (3)	101	Auburn Hills	Clinton	0	0	0	0	
Henry Graham Drain (1) (4)	20	Madison Heights	Clinton	1	0	0	0	
Hobart Drain (1)	38	Auburn Hills	Clinton	0	0	0	0	
Hoot Drain (1)	10	Rochester Hills	Clinton	0	0	0	0	
Houghten Drain (1)	90	Troy	Clinton	0	0	0	0	
Ireland Drain (1) (2) (3)	1	Rochester Hills	Clinton	0	0	0	0	
Jamian Drain (1)	12	West Bloomfield Township	Rouge	0	0	0	0	
Jewell Drain (1)	2	Pontiac	Clinton	0	0	0	0	
Joachim Drain (1)	62	Auburn Hills	Clinton	0	0	0	0	
Kaczmar Drain (1) (4)	1	Madison Heights	Clinton	1	0	0	0	
Karas Drain (1) (2)	107	Rochester Hills	Clinton	0	0	0	0	
Kirklands Drain (1)	76	Oakland Township	Clinton	0	0	0	0	
Kutchev Drain (1) (4)	58	Warren / Hazel Park	Clinton	1	0	0	0	
Ladd Drain (1) (2) (4)	1	Rochester Hills	Clinton	1	0	0	0	
Mainland Drain (1)	14	Pontiac	Clinton	0	0	0	0	
Maynard Drain (1)	15	Commerce Township	Huron	0	0	0	0	
McClure Drain (1) (2) (3)	13	Oakland Township	Clinton	0	0	0	0	
McDonald Drain (1) (3)	1	Troy	Clinton	0	0	0	0	
McIvor Drain (1)	6	Waterford Township	Clinton	0	0	0	0	
Mission Springs Drain (1)	91	West Bloomfield Township	Huron	0	0	0	0	
Nelson Drain (1) (2) (4)	2	Troy	Clinton	1	0	0	0	
Nichols Drain (1)	266	Bloomfield Township	Rouge	0	0	0	0	
Norton Drain (1)	18	Milford	Huron	0	0	0	0	
Oak Farm Drain (1)	108	Oakland Township	Clinton	0	0	0	0	
Oak Knob Drain (1)	7	Bloomfield Hills	Rouge	0	0	0	0	
Oakland Farm Drain (1)	99	Oakland Township	Clinton	0	0	0	0	
Oakland Hills Drain (1)	14	Farmington Hills	Rouge	0	0	0	0	
Oakland Hunt Drain (1)	200	Oakland Township	Clinton	0	0	0	0	
Oakland Knolls Drain (1)	62	Oakland Township	Clinton	0	0	0	0	
Otter Drain (1) (3)	35	Waterford Township	Clinton	0	0	0	0	
Owens Drain (1) (4) (6)	7	Southfield	Rouge	1	1	1	1*	Residential Sanitary Lead house connection
Paint Creek Drain (1) (2) (3)	5	Clarkston, Oakland Twp, Oxford Twp, Rochester	Clinton	0	0	0	0	

WRC Drain Name	Stormwater Structure DWS Inspections	Community	Watershed	Suspected Discharges	IDEP Investigations	Discharges Discovered	Discharges Corrected	Source
Patterson Holly Drain (1)	143	Holly Village	Shiawassee	0	0	0	0	
Pearl Drain (1)	1	Farmington Hills	Rouge	0	0	0	0	
Pebble Creek Drain (1)	125	Farmington Hills	Rouge	0	0	0	0	
Perry Drain (1)	10	Brandon Township	Clinton	0	0	0	0	
Pilgrim Hills Estates Drain (1)	17	West Bloomfield Township	Huron	0	0	0	0	
Pilgrim Hills of West Bloomfield Drain (1)	104	West Bloomfield Township	Huron	0	0	0	0	
Pleasant Lake Drain (1)	22	West Bloomfield Township	Huron	0	0	0	0	
Prince Drain (1)	31	Oxford Township	Clinton	0	0	0	0	
Professional Village of West Bloomfield Drain (1)	23	West Bloomfield Township	Rouge	0	0	0	0	
Reserve of Beverly Crest Drain (1)	30	West Bloomfield Township	Rouge	0	0	0	0	
Rewold Drain (1) (2) (4)	1	Rochester Hills	Clinton	1	0	0	0	
Richton Drain (1)	35	Pontiac	Clinton	0	0	0	0	
Sashabaw Creek (1) (2) (3)	2	Orion township, Independence Twp	Clinton	0	0	0	0	
Sayres Drain (1)	19	South Lyon	Huron	0	0	0	0	
Seely Drain (1)	44	Novi	Rouge	0	0	0	0	
Sharkey Drain (1) (4)	2	Madison Heights	Clinton	1	0	0	0	
Sherman Drain (1)	40	Southfield	Rouge	0	0	0	0	
Sherwood Creek Cluster Homes Drain (1)	35	West Bloomfield Township	Rouge	0	0	0	0	
Sibley Drain (1)	22	Wixom	Huron	0	0	0	0	
Simsbury Plaza Drain (1)	21	West Bloomfield Township	Rouge	0	0	0	0	
Sinclair Drain (1)	4	Lyon Township	Huron	0	0	0	0	
Sinking Bridge Drain (1)	7	Pontiac	Clinton	0	0	0	0	
Six Points Drain (1)	16	Lyon Township	Huron	0	0	0	0	
Stonebridge Drain (1)	109	West Bloomfield Township	Huron	0	0	0	0	
Sturgis Drain (1) (3)	2	Troy	Clinton	1	0	0	0	
Swan Drain (1)	14	Troy	Clinton	0	0	0	0	
Tilden Drain (1)	74	Pontiac	Clinton	0	0	0	0	
Twin Lakes Drain (1)	14	Oakland Township	Clinton	0	0	0	0	
Varner Relief Drain (1) (2) (3)	71	Rochester Hills	Clinton	0	0	0	0	
Village Square North Drain (1)	91	West Bloomfield Township	Huron	0	0	0	0	
Walnut Wood Drain (1)	25	West Bloomfield Township	Huron	0	0	0	0	
Weir Drain (1)	23	Brandon Township	Clinton	0	0	0	0	
Wessinger Drain (1)	3	Milford Township	Huron	0	0	0	0	
West Bloomfield Pines Drain (1)	15	West Bloomfield Township	Rouge	0	0	0	0	
Westbrooke Condominium Drain (1)	33	West Bloomfield Township	Rouge	0	0	0	0	
West End Drain (1) (2) (3)	1	Waterford Township	Clinton	0	0	0	0	
Whispering Springs Drain (1)	36	West Bloomfield Township	Rouge	0	0	0	0	
Wilmont Drain (1)	32	Waterford Township	Clinton	0	0	0	0	
Wilmont Relief Drain (1)	46	Waterford Township	Clinton	0	0	0	0	
Wolf Drain (1)	109	Rochester Hills	Clinton	0	0	0	0	
Woodlands Drain (1)	150	West Bloomfield Township	Huron	0	0	0	0	
Wynstone Drain (1)	453	Oakland Township	Clinton	0	0	0	0	
Yerkes Drain (1)	45	South Lyon	Huron	0	0	0	0	
Drains	DWS Inspections	Communities	Watersheds	Suspect Drains	Drains Investigated	Illicit Discharges Discovered	Illicit Discharges Corrected	
116	5173	27	5	19	19	2	2	

(1) DWS Stormwater Structure Inspections conducted during FY 2023

(2) DW *E. coli*, TSS, N, & TP sampling conducted during FY 2023 for IDEP & TMDL evaluation

(3) IDEP investigation, DW *E. coli*, DNA sampling conducted during FY 2023. No additional investigation planned for FY 2024

(4) IDEP Investigations, WW-DW *E. coli*, DNA sampling conducted during FY 2023, Ongoing evaluation, investigations planned for FY2024

(5) Illicit Discharge & Discharge sources identified & Corrective Actions Completed in FY 2023

(6) Illicit Discharge & Discharge Source Identified in FY 2022, Corrective Action Pending

(*) Home with illicit connection is currently sitting vacant (homeowner moved out prior to the correction of the illicit connection of the sanitary to the storm system; when the house is sold in the future, the City will ensure the connection is fixed prior to issuing a Certificate of Occupancy

DWS = Dry Weather Screening

WW = Wet Weather

TSS= Total Suspended Solids

N = Nitrogen

TP= Total Phosphorous

TABLE 5

FY 2022 Pollutant Removal Summary Table

Pollutant	Source	Rouge		Clinton		Shiawassee		Total
		No.	Estimated amt.	No.	Estimated amt.	No.	Estimated amt.	
Sewage	Illicit Connections	2	87,640 gal					161,758 gal / yr
	Illicit Discharges			2	67,650 gal			
	SSOs	1	100	4	6,368 gal			
Fuel / Oil & Grease	Accidents Spills / Leaks			2	220 gal			420 gal
	LUST	1	200 gal					
Sediment	Construction Sites	1	Not Estimated			1	Not Estimated	Not Estimated
Hydraulic Fluid	Leaks	1	5 gal					255 gal
	Spills			2	250 gal			
Pet Waste				1	50 lbs			50 Lbs

*** No illicit discharges were found in the Huron or Flint River Watersheds

FY 2022 Illicit Discharges

Type	Source	Pollutant	Watershed	Estimated Amount
Illicit Discharge	Vactor Truck	Sewage	Clinton	150 gal
Spill	Fuel Tanker Accident	Gasoline	Clinton	200 gal
Spill Release	Industrial Site	Hydraulic Fluid	Clinton	200 gal
Spill Release	Industrial Site	Hydraulic Fluid	Clinton	50 gal
Spill	Unknown	Oil	Clinton	20 gal
Illegal Dumping	Residential	Pet Waste	Clinton	50 lbs
Illicit Discharge	Comodo Complex, Sanitary	Sewage	Clinton	67,500 gal
SSO	Plugged Sanitary Sewer	Sewage	Clinton	18 gal
SSO	Plugged Sanitary Manhole	Sewage	Clinton	350 gal
SSO	Broken Wasting Pipe at WWTP	Sewage	Clinton	6000 gal
SSO	Failed ARV on Sanitary Force Main	Sewage	Clinton	45 gal
LUST	Gas Station	Diesel Fuel	Rouge	200 gal
Leak	Garbage Truck	Hydraulic Fluid	Rouge	< 5 gal
SESC	Construction Site, Residential	Sediment	Rouge	Not estimated
Illicit Connection	Municipal Complex	Sewage	Rouge	2,040 gal
SSO	Plugged Sanitary Manhole	Sewage	Rouge	100 gal
Illicit Connection	Residential House Lead	Sewage	Rouge	87,600 gal
SESC	Construction Site, Commercial	Sediment	Shiawassee	Not Estimated

TABLE 6

FY 2023 Pollutant Removal Summary Table

Pollutant	Source	Rouge		Clinton		Huron		Total
		No.	Estimated amt.	No.	Estimated amt.	No.	Estimated amt.	
Sewage	Illicit Connections	3	276,500 gal					8,307,800 gal / yr
	Illicit Discharges	1	50 gal					
	SSO / CSO			5	8,031,250 gal			
Fuel / Oil & Grease	Spills /Illegal dumping	1	Not Estimated	4	3,200 gal			3,200 gal
Sediment	Construction Sites					1	Not Estimated	116,480 lbs
	Illicit Discharges			2	116,480 lbs			
Chromium	Spills			1	50			50 gal
Algaecide	Illicit Discharge					1	20	20 gal
Animal Waste	Runoff			1	Not Estimated			Not Estimated

*** No illicit discharges were found in the Shiawassee or Flint River Watersheds

FY 2023 Illicit Discharges

Type	Source	Pollutant	Watershed	Estimated Amount
Spill Release	Plating Facility	Chromium Waste	Clinton	50 gal
Spill Release	Gas Station	Gasoline	Clinton	2,000 gal
Stormwater Runoff	Horse Farm	Manure	Clinton	Not Estimated
Spill Release	Heat Treating Facility	Oil	Clinton	1,000 gal
Spill Release	Unknown	Oil	Clinton	200 gal
Spill Release	Unknown	Oil	Clinton	Not Estimated
Illicit Discharge	Tech Park Retention Pond	Sediment	Clinton	Not Estimated
Illicit Connection	Granite Cutting Facility	Sediment/ Slurry	Clinton	116,480 lbs
SSO	Residential Sanitary	Sewage	Clinton	250 gal
SSO	WWTF	Sewage	Clinton	1.68 million gallons
SSO	Sanitary Interceptor	Sewage	Clinton	1,000 gal
SSO	Sanitary Interceptor	Sewage	Clinton	2.4 million gallons
CSO	WWTF	Sewage	Clinton	3.95 million gallons
Illicit Discharge	Residential Retention Pond	Algaecide	Huron	20 gal
SESC	Residential Construction Site	Sediment	Huron	Not Estimated
Illicit Connection	Residential Sanitary	Sewage	Rouge	86,400 gal
Illicit Discharge	Trailer Park	Sewage	Rouge	50 gallons
Illicit Connection	Dental Facility	Sewage	Rouge	80,600 gal
Illicit Connection	Residential Sanitary	Sewage	Rouge	109,500 gal
Illegal Dumping	Unknown	Turpentine	Rouge	Not Estimated