

2025 Oakland County Water Resources Commissioner's Office Water Quality Sampling Results

Background

Oakland County Water Resources Commissioner's Office (WRC) is required to comply with the Michigan Department of Environment, Great Lakes and Energy's (EGLE) NPDES Municipal Separate Storm Sewer System (MS4) Phase II permit by implementing an Illicit Discharge Elimination Program (IDEP). WRC developed an alternative procedure for ongoing monitoring of all open and enclosed County drains for illicit discharges. This procedure covers all County drains in both MS4 and non-MS4 areas. All County drains and structures are currently inspected on a 5-year rotating cycle under WRC's Construction Drain Maintenance (CDM) Program. The Environmental team follows this same cycle for sampling the outfalls of each County drain to confirm current *E. coli* levels within the system.

A process for prioritizing the drains for illicit discharge investigation was previously developed and approved. The criteria used for evaluating and prioritizing County drains is as follows:

Priority 1 – Evidence of pollutants and/or *E. coli* values $\geq 10,000$ cfu/100 ml

Immediate follow-up to verify illicit discharge. Initiate upstream IDEP investigation to identify pollutant source(s) and coordinate additional activities as needed.

Priority 2 – No evidence of pollutants and *E. coli* values ≥ 1001 and $< 10,000$ cfu/100 ml

Schedule additional dry weather sampling with human marker screening within one (1) year for further evaluation. Schedule upstream dry weather sampling or initiate IDEP investigation to identify pollutant sources(s) as needed.

Priority 3 – No evidence of pollutants and *E. coli* values $\leq 1,000$ cfu/100 ml

Continue dry weather sampling of outfalls and discharge points per 5-year drain maintenance inspection cycle. Review results and re-prioritize as needed.

WRC contracts with Oakland University to perform Microbial Source Tracking (MST) sampling. With MST, human-associated pollution markers are detected by looking for *Bacteroides* HF183. Consecutive results over 10,000 cfu/100 ml will trigger a lab test for HF183 to be conducted. HF183 markers are measured in GC (Gene Copies) / 100 ml with priority designation given to results of 1,000 GC/100ml in enclosed systems and 500 GC/100ml in open water courses or drains with regular flow. HF183 marker results at 95 GC / 100 ml are considered non detect.

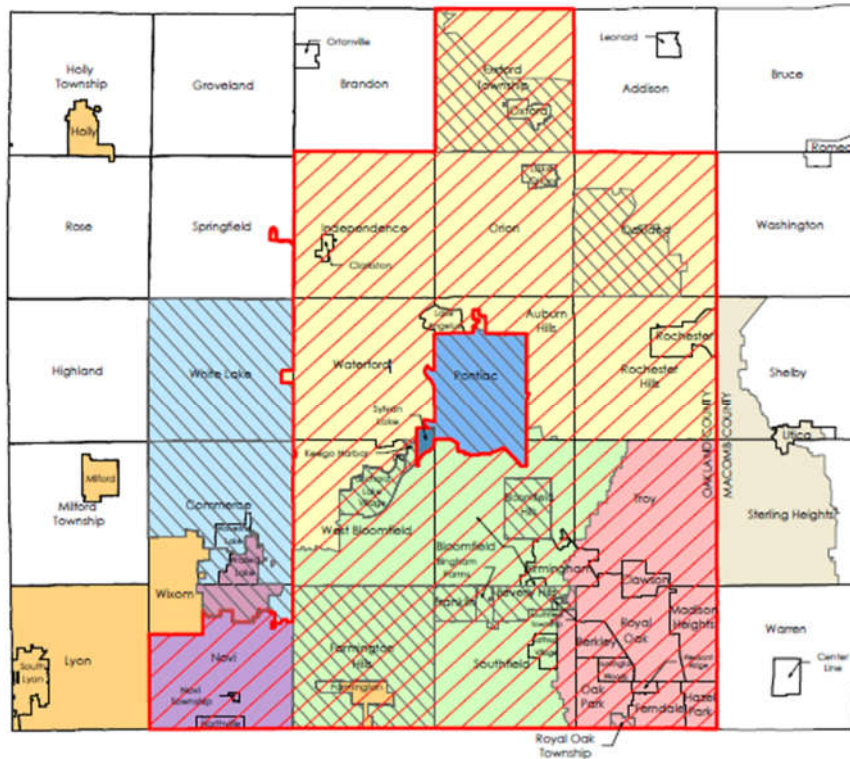
Water quality samples for *E. coli* analysis were completed by either the Walled Lake-Novu Wastewater Treatment Plant or Paragon Laboratories Inc. Samples for HF183 analysis were completed by Oakland University.

A total of 244 samples were taken and analyzed for *E. coli* from these initiatives as follows:

- 6.5% (16 samples) were Priority 1
- 19.7% (48 samples) were Priority 2
- 73.8% (180 samples) were Priority 3

Outfall Sampling Program Results

A new outfall sampling program was initiated in 2023. Drain outfalls will be sampled in accordance with CDM's five-year inspection cycle. This program will ensure that any possible new pollutant sources are identified and investigated in a timely manner. Drains are sorted by sanitary disposal districts and non-sewered areas.



Legend

- Clinton-Oakland Sewage Disposal System
- Commerce-White Lake WWTP Sewage Disposal System
- Evergreen-Farmington Sanitary Drain
- Huron-Rouge Sewage Disposal System
- Oakland-Macomb Sewage Disposal System
- Pontiac Sewage Disposal System
- Southeastern Sewage Disposal System
- Washtenaw-Naval WWTP Sewage Disposal System
- Sylvan Lake SDG
- Municipally Operated Sewage Disposal Systems
- Non-Sewered Areas
- Municipal Lateral Sewer Systems Operated by WRC
- Great Lakes Water Authority (GLWA) Sewer Service Area

Clinton-Oakland Sanitary Disposal System

Drain Name	<u><i>E. coli</i> GEO MEAN</u> cfu/100 ml	Drain Name	<u><i>E. coli</i> GEO MEAN</u> cfu/100 ml
Bartlett Drain	415	Gosling Drain	1,087
Bishop Drain	536	Heights Drain 1	1.424
Century Woods Drain 1	248	Heights Drain 2	423
Century Woods Drain 2	Dry	Heights Drain 3	976
Charles R. Moon Drain	43	High Meadows Drain	1,319
Claremont Drain 1	605	Hills of Kings Pointe Drain 1	331
Claremont Drain 2	1,335	Hills of Kings Pointe Drain 2	12
Cranberry Lake Drain	987	Hills of Kings Pointe Drain 3	19
Cranbrook Ridge Drain 1	480	Hills of Kings Pointe Drain 4	108
Cranbrook Ridge Drain 2	178	McIntyre Drain	62
Deer Point Drain	9	Oakland Knolls Drain 1	6
Dennis Murphy Drain	183	Oakland Knolls Drain 2	28
Five Points Drain	761	Oakland Meadows Drain 1	93
Gabler Drain	403	Oakland Meadows Drain 2	8
Goodison Glen Drain	348	Oakland Meadows Drain 3	68

<u>Drain Name</u>	<u>E. coli GEO MEAN</u> cfu/100 ml	<u>Drain Name</u>	<u>E. coli GEO MEAN</u> cfu/100 ml
Palmer Drain 1	42	Skarrit Drain	730
Palmer Drain 2	442	Van Maele Drain	120
Plum Creek Drain 1	2	Wolf Drain	543
Plum Creek Drain 2	Dry	Wyndgate Drain 1	5,398
Josephine Drain	18,264	Wyndgate Drain 2	214
Rewold Drain	263	Wyndgate Drain 3	Dry
Robert Huber Drain	12		

<u>Drain Name</u>	<u>HF 183 Marker</u> GC/100 ml	<u>Drain Name</u>	<u>HF 183 Marker</u> GC/100 ml
Josephine Drain	200		

Next Steps:

High Meadows Drain: The follow up samples were priority 3

Josephine Drain: Follow up HF183 Sampling was not positive for Human, added to 2026 for follow up sample.

Wyndgate Drain CCTV was inconclusive; follow up sampling will take place in 2026.

All other drains will be resampled in 5 years.

George W. Kuhn Sanitary Disposal System

<u>Drain Name</u>	<u><i>E. coli</i> GEO MEAN cfu/100 ml</u>	<u>Drain Name</u>	<u><i>E. coli</i> GEO MEAN cfu/100 ml</u>
Barnard Drain	2,419	Mastin Drain	697
Dunleavy Drain (Tawas)	2,419	Quinn Drain	232
Henry Graham Drain	816	Roth Drain 1	1,086
Kutchey	2,419	Roth Drain 2	765

<u>Drain Name</u>	<u>HF 183 Marker GC/100 ml</u>	<u>Drain Name</u>	<u>HF 183 Marker GC/100 ml</u>
Barnard Drain	1,049	Henry Grham Drain	200
Dunleavy Drain	200	Kutchey Drain	1,631

Investigation Completed:

Henry Graham Drain: Follow up HF183 sampling was not positive for human. Elevated E.Coli numbers appear to be coming from trash. Forwarded to Madison Heights.

Next Steps:

Barnard Drain: No observational discharges found, will follow up in 2026 with low human markers identified.

Dunleavy Drain: Follow up HF183 sampling was not positive for human, added to 2026 for follow up sample

Kutchey Drain: Elevated E. coli and low human markers continue results continue to be sporadic. Continued follow up in 2026 with coordination with City of Hazel Park and Macomb County Public Works.

All other drains will be resampled in 5 years.

Evergreen-Farmington Sanitary Disposal System

<u>Drain Name</u>	<u><i>E. coli</i> GEO MEAN cfu/100 ml</u>	<u>Drain Name</u>	<u><i>E. coli</i> GEO MEAN cfu/100 ml</u>
Beechmont Drain	1,196	Hayward Drain	86
Bloomfield Highlands Drain	1,209,800	Lueders Drain 1	1,033
Caddell Drain	1,541	Lueders Drain 2	275
Carrington Gardens Drain 1	867	Lynn D. Allen Drain	290
Carrington Gardens Drain 2	534	McKinley Drain	254
Carrington Gardens Drain 3	522	Meadow Ridge Estates Drain 1	26
Carrington Gardens Drain 4	431	Meadow Ridge Estates Drain 2	148
Crown Center Drain	473	Meadow Ridge Estates Drain 3	292
Devonshire Drain	11,689	Meadow Ridge Estates Drain 4	Dry
Eight Mile Drain	673	Meadow Ridge Estates Drain 5	221
Fairfield Estates Drain 1	Dry	Minnow Pond Drain	304
Fairfield Estates Drain 2	38	Murphy Drain	33
Halstead-Pontiac Trail Drain 1	223	Northwoods Forest Drain 1	Dry
Halstead-Pontiac Trail Drain 2	Dry	Northwoods Forest Drain 2	1,063
Halstead-Pontiac Trail Drain 3	3,519	Pembroke Park Drain 1	1,267
Halstead-Pontiac Trail Drain 4	3,682	Pembroke Park Drain 2	1,120
Halstead-Pontiac Trial Drain 5	71	Powers Drain	275
Jilbert Drain	343	Ravines of W. Bloomfield Drain 1	Dry
<u>Drain Name</u>	<u><i>E. coli</i> GEO MEAN cfu/100 ml</u>	<u>Drain Name</u>	<u><i>E. coli</i> GEO MEAN cfu/100 ml</u>

Ravines of W. Bloomfield Drain 2	361	Thornberry Drain 2	Dry
Simsbury Condo Drain 1	1,434	Thornberry Drain 3	104
Simsbury Condo Drain 2	572	Thornberry Drain 4	564
Simsbury Condo Drain 3	1.434	Walnut Hills of W. Bloomfield Drain 1	336
Simsbury Condo Drain 4	62	Walnut Hills of W. Bloomfield Drain 2	902
Simsbury Condo Drain 5	91	Wilcox Drain	90
Simsbury Condo Drain 6	427	Wyndham Pointe Drain 1	567
Simsbury Condo Drain 7	89	Wyndham Pointe Drain 2	740
Simsbury North Drain	52	Wyndham Pointe Drain 3	570
Southfield Road Drain	64	Wyndham Pointe Drain 4	107
Sprague Drain	617	Wyndham Pointe Drain 5	129
Sunken Bridge Drain	652	Wyndham Pointe Drain 6	94
Thornberry Drain 1	1,039		

<u>Drain Name</u>	<u>HF 183 Marker GC/100 ml</u>	<u>Drain Name</u>	<u>HF 183 Marker GC/100 ml</u>
Bloomfield Highlands Drain	157,289	Devonshire Drain	1,422

Next Steps:

Bloomfield Highlands Drain / Devonshire Drain – CCTV is currently being recorded and reviewed with dye testing taking place in 2026.

US-16 Drain - Current CCTV coordination with Farmington. Possible leak in bulkhead(s).