



2024 CSO Annual Report
And
CSO Public Notification

City of Defiance WWTP

NPDES Permit 2PD00013

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Table of Contents

1. Executive Summary
2. Summary of Annual Frequency, Volume, and Loading of CSOs
- 3.1 Nine Minimum Controls
 - 3.1.1 Operation and Maintenance
 - 3.1.2 Maximization of Collection System Storage
 - 3.1.3 Modifications to the Industrial Pretreatment Program
 - 3.1.5 Elimination of Dry Weather Overflows
 - 3.1.6 Control of Solid and Floatable Materials in CSO Discharges
 - 3.1.7 Pollution Prevention Programs to Reduce Contaminants in CSOs
 - 3.1.8 Public Notification of CSO Discharges and Impacts
 - 3.1.9 Monitoring and Reporting of CSOs
4. Integrated Watershed Improvement Plan (IWIP) and CSO Long Term Control Plan (LTCP)
 - 4.1 Capital Projects in IWIP and CSO LTCP
 - 4.2 Compliance and Monitoring
 - 4.2.1 Post-Construction Compliance and Monitoring
 - 4.2.2 River Water Intrusion
 - 4.2.3 CSO Annual Report

Appendix A – Rainfall Data Table

Appendix B – Daily Stormwater Regulator Inspection Log

1. Executive Summary

On September 21, 2023 the Ohio Environmental Protection Agency (EPA), Division of Surface Water, reviewed the City of Defiance's Integrated Watershed Improvement plant (IWIP), which includes a CSO Long Term Control Plan. The Plan was dated March 2023, which was received by Ohio EPA on March 20, 2023. The IWIP outlines the recommended improvements to the wastewater treatment plant and combined sewer collection system for reduction of sewer overflows.

The Ohio EPA found that the IWIP meets the applicable state and federal requirements and is approved as adequate and complete.

The Ohio EPA issued NPDES Permit 2PD00013*VD with an effective date of March 1, 2024 and an Expiration Date of February 28, 2029.

Part II; F-4 – Annual Report:

On or prior to May 1st of each year, the permittee shall make available to the public an Annual Report describing the CSO discharges from its discharge point(s) that occurred in the previous calendar year, in accordance with 40 CFR 122.38(b). Upon public availability of the Annual Report, the permittee shall submit instructions on how to access the Annual Report to Ohio EPA Northwest District Office and U.S. EPA. Such notice to US EPA shall be in the form of an email to NPDES_CSO@epa.gov

At a minimum the annual report shall include:

- A. A description of the location and receiving water for each CSO discharge point, and, if applicable, any treatment provided;
- B. The date, location, approximate duration, measured or estimated volume, and cause (e.g. rainfall, snowmelt) of each wet weather CSO discharge that occurred during the past calendar year;
- C. The date, location, duration, volume, and cause of each dry weather CSO discharge that occurred during the past calendar year;

- D. A summary of available monitoring data for CSO discharges from the past calendar year;
- E. A description of any public access areas potentially impacted by each CSO discharge;
- F. Representative precipitation data in total inches to the nearest 0.1 inch that resulted in a CSO discharge, if precipitation was the cause of the discharge;
- G. Permittee contact information; and
- H. A concise summary of implementation of the nine minimum controls and the status of implementation of the CSO long-term control plan (of other plans to reduce or prevent CSO discharges), including:
 - (i) A description of key milestones remaining to complete implementation of the plan; and
 - (ii) A description of the average annual number of CSO discharges anticipated after implementation of the long-term control plan (or other plan relevant to reduction of CSO overflows) is completed.

2. Summary of Annual Frequency, Volume, and Loading of CSOs From Model

2024 CSO Overflow Volume and Activation Summary

Data generated by updated collection system hydraulic model
(2023 KBPS RG Data, 6.0 MGD for KB PS)

CSO Location	CSO Volume (MG/yr)	Total Activations	5-Day CBOD Loadings (lbs/yr)	Total Suspended Solids (lbs/yr)
A01- Sunday St.	0.28	12	188	227
A02- Lincoln Dr.	0.40	21	268	327
A03- Wayne Ave.	0.00	2	1.0	1.0
A04- Jefferson Ave.	0.0	0	0.0	0.0
A05- Riverside Ave.	0.14	5	94	113
A06- Riverside Ave.	0.04	6	27	32
A09- Summit St. (S)	0.25	18	168	202
A10- Hopkins St.	0.77	20	516	623
A11- Auglaize St.	1.97	12	1321	1594
A12- E. Second St.	0.34	6	228	275
A13- St. Paul St.	0.00	3	1.0	1.0
A14- Minneapolis St.	0.49	7	329	396
A15- E. Front St.	0.00	3	1.0	1.0
A16- Summit St. (N)	18.13	28	12157	14667
A17- Bassard Dr.	0.83	14	557	671
A18- Glenwood Dr.	0.07	6	47	57
A19- Huron Dr.	0.24	20	161	194
M06- Perry St.	0.78	6	523	631
M07- Clinton St.	9.14	29	6129	7394
NE1- N. Clinton St.	3.43	35	2300	2775
NE3- E. River Drive	0.56	7	376	4530
NE4- Carpenter Rd.	0.70	14	469	566
MH-1115- Ayersville Ave.	0.01	4	7	8
MH-1516- E. River Dr.	0.0	0	0	0
MH-1587- Ralston Ave.	0.05	6	34	40
MH-1639- W. River Dr.	0.0	0	0	0
MH-720- S. Clinton St.	0.0	0	0	0
Total	38.62		25,902	35,325

3.1 Combined Sewer System Operational Plan and Nine Minimum Controls

3.1.1 Operation and Maintenance

In 2024 the city hired a contractor to perform spray lining of the interior of two sanitary manholes.

Unscheduled repairs of the sewer system cost the city \$142,020.25 in 2024. The cost for these sewer repairs comes out of a line item in our annual operating budget. Most of these unscheduled repairs are sewer issues we find when televising our sewer system for preventative maintenance.

3.1.2 Maximization of Collection System Storage

One method of increasing collection system storage volume is to keep the interceptor sewer and local sewers clean from debris. Storage will be maximized when the system is operating without obstacles or debris in the lines. This can be accomplished with proper maintenance of the collection system.

At the end of 2024 the city raised the weir height at five CSO locations. In addition to the increase of weir height the orifice size between the collector sewer and the interceptor sewer was increase at three of the locations. Weir optimization represents a cost-effective strategy to reduce CSO activity and in some instances can eliminate low volume, infrequent CSOs. Since these modifications were done at the end of 2024 the impact of the changes has yet to be realized.

In 2024 the city Sewer Collection Department Accomplished the following:

<i>26,715 feet of sewer line cleaning</i>	<i>349 feet of storm line cleaning</i>	<i>4,968 feet of Root Cutting</i>
<i>50,603 feet of sewer line televising</i>	<i>1,785 feet of storm line televising</i>	<i>159 private lateral televising</i>
<i>16 private tap locates</i>	<i>79 times assisted at lift stations</i>	<i>2,091 manhole inspections</i>
<i>6 catch basins cleaned out</i>	<i>41 confined space entries</i>	<i>13 sewers balled off</i>

The city continues to operate the CSO regulators in the open position to allow the most amount of sanitary wastewater to be collected prior to overflowing during periods of high flows.

3.1.3 Modifications to the Industrial Pretreatment Program

In 2024 all our Industrial Users were inspected as part of our approved Pretreatment Program. The inspector again expressed the importance to not have any batch discharges that are not part of the routine operation of the facility. Batch discharge is prohibited during wet weather and is outlined in each industrial users permit.

3.1.4 Maximization of Flow to the WWTP

In 2024 we placed an order for a new pump to be installed at the Kingsbury Pumping Station. This pump has been on order since June of 2024 and has yet to be delivered.

At the end of 2024 we modified five of the CSO weirs to allow more sewage to stay in the collection system prior to bypassing during wet weather. These modifications were done at the very end of 2024 so the sewer system model run in this report does not reflect these changes.

3.1.5 Elimination of Dry Weather Overflows

The city continues to observe the sewer system for River Water Intrusion in areas of the CSO overflows. Inline check valves and “Duckbills” are used on the CSO outfall pipes to prevent river water from entering the sewer system. The inline check valves and the duckbills are inspected twice per year for proper operation and debris build-up.

3.1.6 Control of Solids and Floatable Materials in CSO Discharges

The City Street Department performs routine cleaning of storm sewer catch basins and inlets, routine street sweeping activities, and leaf pickup services to reduce the amount of solid and floatable materials discharged during CSO activity. The city operates a compost site at the Water Pollution Control Facility. The leaves, grass clippings and branches are ground up and hauled away by a contractor. The compost site is open to all citizens of Defiance to bring their yard waste for disposal.

In 2024 the city purchased a new street sweeper for \$279,0079.00. The use of the street sweeper keeps leaves and other debris out of the catch basins which in turn keeps grit and leaves out of our combined sewers.

In 2021 the City Street Department purchased two new leaf collection vehicles that perform the leaf collection task quicker and more efficiently.

3.1.7 Pollution Prevention Programs to Reduce Contaminants in CSO's

Hazardous material discharges to the sewer system are prohibited, and industrial discharges are monitored and regulated through the Industrial Pretreatment Program by the Assistant Superintendent. This has been helpful in reducing the level of contaminants in the CSOs.

3.1.8 Public Notification of CSO Discharges and Impacts

In accordance to the cities NPDES an annual report is required for the Public Notification Plan.

On or prior to May 1st of each year, the permittee shall make available to the public an Annual Report describing the CSO discharges from its discharge point(s) that occurred in the previous calendar year, in accordance with 40 CFR 122.38(b). Upon public availability of the Annual Report, the permittee shall submit instruction on how to access the Annual report to Ohio EPA Northwest District Office and U.S. EPA. Such notice to US EPA shall be in the form of an email to NPDES_CSO@epa.gov.

At a minimum, the Annual Report shall include:

- a. A description of the location and receiving water for each CSO discharge point, and, if applicable, and treatment provided;

<u>CSO Name</u>	<u>CSO Location</u>	<u>CSO Treatment</u>	<u>CSO Discharge Receiving Water</u>
A-1	Sunday St.	N/A	Auglaize River
A-2	Lincoln Dr.	N/A	Auglaize River

A-3	Wayne Ave.	N/A	Auglaize River
A-4	Jefferson Ave.	N/A	Auglaize River
A-5	Riverside Ave.	N/A	Auglaize River
A-6	Riverside Ave.	N/A	Auglaize River
A-9	Summitt St. (S)	N/A	Auglaize River
A-10	Hopkins St.	N/A	Auglaize River
A-11	Auglaize St.	N/A	Auglaize River
A-12	E. Second St.	N/A	Auglaize River
A-13	St. Paul St.	N/A	Preston Run Creek > Maumee River
A-14	Minneapolis St.	N/A	Preston Run Creek > Maumee River
A-15	E. Front St.	N/A	Preston Run Creek > Maumee River
A-16	Summitt St. (N)	N/A	Maumee River
A-17	Bassard Dr.	N/A	Auglaize River
A-18	Glenwood Dr.	N/A	Auglaize River
A-19	Huron Dr.	N/A	Auglaize River
M-6	Perry St.	N/A	Maumee River
M-7	Clinton St.	N/A	Maumee River
NE-1	N. Clinton St.	N/A	Maumee River
NE-3	East River Dr.	N/A	Maumee River
NE-4	Carpenter Rd.	N/A	Maumee River
MH-1115	Ayersville Ave.	N/A	Preston Run Creek > Maumee River
MH-1516	East River Dr.	N/A	Maumee River
MH-1639	West River Dr.	N/A	Maumee River
MH-720	S. Clinton St.	N/A	Un-named Trib > Auglaize River
MH-1587	Ralston Ave.	N/A	Un-named Trib > Maumee River

Semi-annually Public Notification:

Combined Sewer Overflows

United States and Ohio Environmental Protection Agencies require the City of Defiance to semi-annually publish this notice regarding its Combined Sewer Overflows. These notifications are published in the legal section of the “Crescent News”, the local newspaper and can also be found on the City of Defiance website.

The City of Defiance operates and maintains a combined sewer system, originally built in the 1950's, which collects wastewater as well as storm water associated with rainfall events. This combined sewer system has 27 overflow locations to the Auglaize and Maumee Rivers and tributary streams, all of which are permitted by the Ohio Environmental Protection Agency.

The City of Defiance has signs posted in public areas notifying residents that during periods of rainfall, combined sewer overflows may discharge diluted, untreated sewage into the Auglaize and Maumee Rivers and tributary streams. During these wet weather periods, you are advised to refrain from contact with the rivers and streams, as direct body contact may result in adverse health effects. For more information, contact the Defiance County Health Department at (419)784-3818 or the Water Pollution Control Division at (419)782-0841. This information can also be found on the City of Defiance website at cityofdefiance.com under the division heading for Water Pollution Control.

- b. The date, location, approximate duration, measured or estimated volume, and cause (e.g., rainfall, snowmelt) or each wet weather CSO discharge that occurred during the past calendar year;

The following table shows all CSO's and the date of discharge, the volume of discharge and the duration of rainfall. In Calendar Year 2024 all overflows discharged from the CSO's were attributed to rainfall, there were no overflows due to snowmelt.

[illegible]

- c. The date, location, duration, volume, and cause of each dry weather CSO discharge that occurred during the past calendar year;

April 21, 2024; CSO NPDES 2PD00013010; 24 hours; 100,000 gallons, Roots stuck in orifice between collector sewer and interceptor.

October 22, 2024; CSO NPDES 2PD00013017; 1.0 hours; 10,000 gallons, Fire hydrant flushing caused high flows

December 10, 2024; CSO NPDES 2PD00013017; 0.67 hours; 7,000 gallons, debris stuck in orifice between collector sewer and interceptor

- d. A summary of available monitoring data for CSO discharges from the past calendar year;

The predictive model for the Defiance sewer system shows that there were thirty-eight overflow events. Of these thirty-eight events there were four CSO's that did not overflow at all. The summary for each CSO can be found in section 2, under "Summary of Annual Frequency, Volume, and Loading of CSOs from Model.

- e. A description of any public access areas potentially impacted by each CSO discharge;

Kingsbury Park – Park at river confluence – Maumee River

Independence Dam – Boat ramp on north bank at state park on St. Rt. 424 – Maumee River

Pontiac Park – Boat ramp on north bank at East River Drive – Maumee River

Riverside Park – West bank at Riverside Park – Auglaize River

- f. Representative precipitation data in total inches to the nearest 0.1 inch that resulted in a CSO discharge, if precipitation was the cause of the discharge;

Rainfall data for the entire 2024 calendar year can be found in Appendix A Rainfall Data and again in the table found in paragraph b above.

- g. Permittee contact information; and

The Ohio EPA issues the NPDES permit for Wastewater Treatment Plants to the Mayor and Council of the City of Defiance. The responsibility to implement, oversee and follow the NPDES requirements is given to the Superintendent of the Wastewater Treatment Plant and his designees. Currently the Superintendent contact information is as follows: Mark Lehnert (WW3-1013838-99), Superintendent WPC (419)782-0841 Extension 1

- h. A concise summary of implementation of the nine minimum controls and the status of implementation of the CSO long-term control plan (or other plans to reduce or prevent CSO discharges), including;

Section 3.1 explains in detail what the city is doing to maximize the capacity of the sewer system as well as prevent or limit the amount of flow that is discharged through our CSO's during storm events.

- i. A description of key milestones remaining to complete implementation of the IWIP / CSO plan:

***Starting in 2024 and continuing for the next 20-years the IWIP implementation projects are as follows:
Wier optimization (2024) - Complete***

Summit Street Separation - Complete
Plant Improvements, Screens and Septage Receiving (2025 – 2027)-Currently working on
CSO Storage Basin (2030 – 2032)
Hopkins Street Separation (2032 – 2034)
Kingsbury Force Main (2035 – 2038)
Residual CSO Storage at Overflow Numbers A16, M7, NE4 (2039 – 2041)
Kingsbury Pump Station (2041 – 2044)

- j. A description of the average annual number of CSO discharges anticipated after implementation of the long-term control plan (or other plan relevant to reduction of CSO overflows) is completed.

According to our Model using the rainfall for the entire year, in 2024 the city experienced 35 CSO events. Once the IWIP is completed there will be 6 CSO events in a typical year.

The city has signage warning of potential contamination into the river or stream in the event of an overflow at all CSO locations. These CSO signs are printed on both sides so it can be read from the water and from land. In addition to having signs at all CSO locations there is also a sign located at the boat launch at Independence Dam and one near the boat launch at Pontiac Park.

We have a work order that comes out twice per year to check all CSO signs for damage, missing letters, and to clear shrubs or trees from obscuring the signs.

To access the yearly CSO Annual Report on the City of Defiance website you must do the following:

- a) Go to cityofdefiance.com,
- b) click on “Services,”
- c) scroll down to “Water Pollution Control” and click on it
- d) Click on “Combined Sewer Overflows (CSO) found on the left side of the page
- e) Scroll down to “Quick Links” Located on the right-hand side of the page and click on “2024 CSO Annual Report and CSO Public Notification” At this point the 2024 CSO Annual Report will populate the screen.

The City had no issues with implementing the “CSO Great Lakes Basin Public Notification Plan” in 2023. On a routine basis we check the “Public Notification” signs installed near the boat docks in the city as well as the notification sign installed at Independence State Park boat launch. In addition to checking these specialty signs we also check our CSO outfall signs for any damage caused by river ice or vandalism. The city has a few spare CSO warning signs in the event one is damaged or missing.

3.1.9 Monitoring and Reporting of CSOs

The city has eight real time flow meters installed at CSO bypass locations. These monitors send data to a “Dashboard” that shows water level in the sewers at these locations. ***Any overflow events at one of these eight locations are reported monthly on our Discharge Monitoring Report.*** In the event of an overflow, an alert is sent to cell phones to notify of the occurrence. The CSO warning map is available for the public to view. To access this warning map, you must do the following:

- a) Go to the City of Defiance website at cityofdefiance.com;
- b) Click on "Services"
- c) Click on "Water Pollution Control"
- d) Click on "Combined Sewer Overflows (CSO) – Located on the left side of the page;
- e) Scroll down to "Quick Links" Located on the right-hand side of the page and click on "Combined Sewer Overflow Warning Map" A real time map of the sewer system will pop up showing color coded CSO locations.

4. CSO Long Term Control Plan and Second Amended Consent Order

In 2020 a Second Amended Consent Order was filed in Defiance County Court of Common Pleas on February 28, 2020.

The City of Defiance submitted an updated Integrated Watershed Improvement Plan in March of 2023. The plan was received by Ohio EPA on March 20, 2023. On September 21, 2023 the IWIP was approved by the Director of Ohio EPA.

4.1 Capital Projects in New IWIP Approved September 21, 2023

The City of Defiance is working on the capital improvements outlined in the IWIP. In 2024 the Engineering for the Headworks and Septage Receiving Station was implemented. Advertisement for bids, bid approval, Council approval of an ordinance accepting the winning bidder and construction start-up will all take place in 2025 with a completion date in 2027.

Headworks Improvements:

No later than March 1, 2025, the permittee shall submit to Ohio EPA a complete permit to install (PTI) application and detailed plans for the construction of the proposed headworks improvements project. (Event Code 01799)

As of the writing of this report we are preparing our advertisement for bidders for the Headworks Improvements.

4.2 Compliance and Monitoring

The city's Sewer Maintenance Crew checks all regulators after any significant rainfall and every Monday or Tuesday if Monday is a Holiday. If there is a wet weather bypass then the crews will return and check the bypass until the overflow subsides. A copy of the CSO inspection forms can be found at the end of this report.

In accordance to our NPDES permit we are required to sample specific CSO's when they are discharging for a minimum of two separate storm events. These samples are analyzed for CBOD and TSS. All CSO's must have the volume and number of occurrences recorded.

4.2.1 Post-Construction Compliance and Monitoring

The city has eight real time flow meters installed at CSO bypass locations. These monitors send data to a “Dashboard” that shows water level in the sewers at these locations. In the event of an overflow an alert is sent to cell phones to notify of the occurrence.

4.2.2 River Water Intrusion

At a minimum the city crews check the regulators for any signs of debris, malfunctions, and river water intrusion after every rainfall and once per week during dry weather. All manholes in areas where river water intrusion becomes a problem have gasketed bolt down lids.

4.2.3 CSO Annual Report

Submission of this 2023 CSO Annual Report follows the requirements of our IWIP approved September 21, 2023. The Overflow Volume and Activation Summary listed in section 2 above is comprised from our Sewer system predictive model last updated in January 2022. No updates of the predictive model were done in calendar year 2023.

Appendix A – 2023 Rainfall Data Table

[illegible]

B – Daily Stormwater Regulator Inspection Logs

City of Defiance, WPC									
Daily Storm Water Regulator Inspection Log									
Date:									
Location		Normal	72 Hrs.	Debris in	Debris in	Gate	Mechanical	SI - River	SI - River not
		Ops.	Precip. (Y/N)	Weir	Gate	Stuck	Problem	Over MH's	Over MH's
M-6	Perry St.								
M-7	Clinton St.								
NE-1	Clinton St.								
NE-3	East River Dr.								
NE-4	Carpenter Rd.								
A-1	Sunday St.								
A-2	Lincoln Dr.								
A-3	Wayne Ave.								
A-4	Jefferson Ave.								
A-5	Riverside Ave.								
A-6	Riverside Ave.								
A-9	Summit St. S.								
A-10	Hopkins St.								
A-11	Auglaize St.								
A-12	Second St.								
A-13	St. Paul St.								
A-14	Minneapolis St.								
A-15	Front St.								
A-16	Summit St. N.								
A-17	Bassard Dr.								
A-18	Glenwood Dr.								
A-19	Huron Dr.								
ND =	Not Discharging		DO =	Dry Weather Overflow			FD =	Fixed DO	
SI =	Surcharged Interceptor		WO =	Wet Weather Overflow			FW =	Fixed WO	
CITY OF DEFIANCE, WPC									
* SAMPLING POINTS REQUIRED TWICE / YEAR / NPDES DISCHARGE PERMIT # 2PD00013*TD									
Location:						Permit ID#:		Note on Bottle:	
Regulator A-6 (Riverside Ave. by Bus Barn)						2PD00013007		Location	
Regulator A-11 (Auglaize St. South of Third St.)						2PD00013012		Date	
Regulator A-16 (North end of Summit St.)						2PD00013017		Time	
Regulator A-17 (Bassard Dr.)						2PD00013018			
Regulator NE-3 (East River Dr. Across from Pontiac Park)						2PD00013032			
Operator of Record Signature:									
Checked BY:									

CITY OF DEFIANCE						
WATER POLLUTION CONTROL DIVISION						
DATE:		Combined Sewer Overflow Checklist				
<u>CSO #</u>		<u>SECTION #</u>		<u>LOCATION</u>		<u>CONDITION</u>
720		10		South Clinton St.		
1115		7		Ayersville Ave.		
1516		3		East River Dr.		
1587		3		Ralston Ave.		
1639		3		Northwest Lift Station		
		CONDITION FOUND CODE				
ND =	Not Discharging			WO =	Wet Weather Overflow	
SI =	Surcharged Interceptor			FD =	Fixed DO	
DO =	Dry Weather Overflow			FW =	Fixed WO	
Operator of Record Signature:						
Checked By:						
						csochecklistrevised12-14-20