

City of Lima
Allen County, Ohio
Sharetta Smith, Mayor



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March 28, 2022

David Brumbaugh
Ohio EPA
Division of Surface Water
NPDES Permits
50 W. Town St., Suite 700
Columbus, Ohio 43215

**Re: CSO Annual Report
NPDES Permit No. 2PE00000*ND**

David,

Attached please find the City of Lima's CSO Annual Report for 2021.

Please contact this office if you have any questions. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Michael H. Caprella".

Michael H. Caprella
Director of Utilities

Attachment

cc: Peggy Christie, OEPA NWDO
Ryan Gierhart, OEPA NWDO
Eric Bontrager, Environmental Compliance Manager
Kim Furry, WWTP Supervisor
File



Combined
Sewer Overflow
Annual Report

2021

CITY OF LIMA, OHIO



March 28, 2022

Introduction

In response to the new CSO Public Notification rule, the City of Lima is required to post an Annual Report on or prior to May 1st of each year that summarizes the City's CSO activity from the previous year. In addition to the overflow information, this report also summarizes the City's actions taken to meet the Nine Minimum Control measures as defined by the national CSO Control policy.

The following pages illustrate the overflows that occurred in 2021 from Lima's 19 CSO discharge points. The individual CSO charts illustrate the date an overflow occurred, the amount of the overflow discharged in millions of gallons, the duration of the overflow, the rainfall associated with the overflow and analytical results from any sampling done on the overflow.

Following the data pages is a summary update of the Long Term Control Plan.

McDonel Control Structure # 004

| DMR 004 Daily 1/1/2021 - 12/31/2021 | 004 Solids TSS mg/L | 004 Bypass Occurance Number Daily | 004 Flow MGD | 004 BOD Carb 5 mg/L | 004 Duration Hours | Rainfall Inches | Receiving Stream |
|---|---------------------------|--|--------------------|---------------------------|--------------------------|-----------------|------------------|
| 1/1/2021 | | 1 | 0.70 | | 1.32 | 0.00 | Ottawa River |
| 3/18/2021 | 178.30 | 1 | 3.75 | 27.10 | 4.94 | 0.35 | Ottawa River |
| 5/9/2021 | 104.98 | 1 | 20.64 | 19.00 | 15.05 | 0.72 | Ottawa River |
| 5/10/2021 | | 1 | 22.54 | | 9.63 | 1.90 | Ottawa River |
| 5/18/2021 | | 1 | 0.13 | | 0.01 | 0.00 | Ottawa River |
| 7/13/2021 | | 1 | 1.77 | | 1.22 | 1.36 | Ottawa River |
| 7/25/2021 | 239.00 | 1 | 0.28 | 38.20 | 0.64 | 1.31 | Ottawa River |
| 8/25/2021 | | 1 | 3.87 | | 1.90 | 1.50 | Ottawa River |
| 9/21/2021 | | 1 | 1.07 | | 0.35 | 1.50 | Ottawa River |
| 9/22/2021 | 110.00 | 1 | 14.93 | 7.60 | 13.12 | 4.40 | Ottawa River |
| 12/11/2021 | 467.4 | 1 | 1.15 | AE | 2.06 | 0.86 | Ottawa River |
| 12/27/2021 | | 1 | 0.10 | | 0.84 | 0.56 | Ottawa River |
| 12/28/2021 | | 1 | 0.23 | | 1.47 | 0.84 | Ottawa River |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| Sum = | | 13 | 71 | | 53 | | |

Central Control Structure # 005

| DMR 005 Daily 1/1/2021 - 12/31/2021 | 005 Solids TSS mg/L | 005 Bypass Occurance Number Daily | 005 Flow MGD | 005 BOD Carb 5 mg/L | 005 Duration Hours | Rainfall Inches | Receiving Stream |
|---|---------------------------|--|--------------------|---------------------------|--------------------------|-----------------|------------------|
| 1/1/2021 | | 1 | 1.16 | | 1.43 | 0.00 | Ottawa River |
| 3/18/2021 | 170.30 | 1 | 4.32 | 33.20 | 5.07 | 0.35 | Ottawa River |
| 5/9/2021 | | 1 | 11.57 | | 15.16 | 0.72 | Ottawa River |
| 5/10/2021 | | 1 | 3.95 | | 9.46 | 1.90 | Ottawa River |
| 7/13/2021 | | 1 | 2.63 | | 1.07 | 1.36 | Ottawa River |
| 7/25/2021 | 104.80 | 1 | 0.13 | 25.80 | 0.38 | 1.31 | Ottawa River |
| 8/25/2021 | | 1 | 5.22 | | 1.65 | 1.50 | Ottawa River |
| 9/21/2021 | | 1 | 0.41 | | 0.17 | 1.50 | Ottawa River |
| 9/22/2021 | 120.00 | 1 | 16.73 | 15.00 | 9.97 | 4.40 | Ottawa River |
| 9/23/2021 | | 1 | 0.00 | | 0.17 | 0.40 | Ottawa River |
| 12/11/2021 | 192.1 | 1 | 1.36 | AE | 1.63 | 0.86 | Ottawa River |
| 12/27/2021 | | 1 | 0.06 | | 0.57 | 0.56 | Ottawa River |
| 12/28/2021 | | 1 | 0.61 | | 1.65 | 0.84 | Ottawa River |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Sum = | | 13 | 48 | | 48 | | |

| S. Central & Ottawa River - # 007 | | | | | | | |
|--|-----------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
| 1/2/2021 | | 1 | 0.008 | | | 1.11 | Ottawa River |
| 3/19/2021 | | 1 | 0.004 | | | 1.87 | Ottawa River |
| 5/10/2021 | | 1 | 1.87 | | | 1.90 | Ottawa River |
| 7/25/2021 | | 1 | 0.042 | | | 1.31 | Ottawa River |
| 8/22/2021 | | 1 | 0.00 | | | 0.28 | Ottawa River |
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Ottawa River |
| 12/11/2021 | | 1 | 0.032 | | | 0.86 | Ottawa River |
| 12/25/2021 | | 1 | * | | | 0.64 | Ottawa River |
| 12/28/2021 | | 1 | 0.104 | | | 0.84 | Ottawa River |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Totals = | | 9 | 2.115 | | | | |

* The flow for CSO's 7 through 34 is calculated as 2% of the combined overflow for CSO's 2 through 6. Since no overflows occurred for CSO's 2 through 6 on 12/25/21, no overflow volume could be calculated for CSO 7.

| Timberlake & Ottawa River - # 008 | | | | | | | |
|--|-----------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Ottawa River |
| 12/11/2021 | | 1 | 0.032 | | | 0.86 | Ottawa River |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Totals = | | 2 | 0.088 | | | | |

| Oxford & Collett - # 009 | | | | | | | |
|-------------------------------------|-----------------------|--|-------------|--------------------|-------------------|-----------------|------------------|
| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Totals = | | 0 | 0 | | | | |

| Burch & O'Connor - # 011 | | | | | | | |
|-------------------------------------|-----------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
| 12/11/2021 | | 1 | 0.032 | | | 0.86 | Pike Run Ditch |
| | | | | | | | |
| | | | | | | | |
| Totals = | | 1 | 0.032 | | | | |

McDonel & O'Connor - # 012

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|---------------|--------------------|-------------------|-----------------|------------------|
| 3/19/2021 | | 1 | 0.004 | | | 1.87 | Pike Run Ditch |
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Pike Run Ditch |
| 12/11/2021 | | 1 | 0.032 | | | 0.86 | Pike Run Ditch |
| Totals = | | 3 | 0.0914 | | | | |

Metcalf & O'Connor - # 013

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 12/11/2021 | | 1 | 0.032 | | | 0.86 | Pike Run Ditch |
| Totals = | | 1 | 0.032 | | | | |

Metcalf & Tremont - # 014

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 1/19/2020 | | 1 | 0.050 | | | 0.30 | Pike Run Ditch |
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Pike Run Ditch |
| Totals = | | 2 | 0.106 | | | | |

Metcalf & Runyan - # 015

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|-------------|--------------------|-------------------|-----------------|------------------|
| | | | | | | | |
| Totals = | | 0 | 0 | | | | |

Metcalf & Ashton - # 016

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 3/19/2021 | | 1 | 0.004 | | | 1.87 | Pike Run Ditch |
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Pike Run Ditch |
| Totals = | | 2 | 0.059 | | | | |

627 S. Nixon St. - # 033

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 3/29/2020 | | 1 | 0.150 | | | 1.16 | Ottawa River |
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Ottawa River |
| Totals = | | 2 | 0.206 | | | | |

701 Judkins Ave. - # 034

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 8/2/2020 | | 1 | 0.00 | | | 0.46 | Ottawa River |
| 8/30/2021 | | 1 | 0.00 | | | 0.79 | Ottawa River |
| 12/11/2021 | | 1 | 0.032 | | | 0.86 | Ottawa River |
| Totals = | | 3 | 0.032 | | | | |

Lakewood & Charles - # 035

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Ottawa River |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Totals = | | 1 | 0.056 | | | | |

Northshore Drive at Diamond #3 Backstop - # 037

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 3/19/2021 | | 1 | 0.004 | | | 1.87 | Ottawa River |
| 5/10/2021 | | 1 | 1.870 | | | 1.90 | Ottawa River |
| 12/28/2021 | | 1 | 0.104 | | | 0.84 | Ottawa River |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Totals = | | 3 | 1.978 | | | | |

West & O'Connor Ave - # 038

| Daily 1/1/2021 - 12/31/2021 | Solids TSS mg/L | Bypass Occurance Number Daily | Flow MGD | BOD Carb 5 mg/L | Duration Hours | Rainfall Inches | Receiving Stream |
|--------------------------------|--------------------|--|--------------|--------------------|-------------------|-----------------|------------------|
| 8/25/2021 | | 1 | 0.056 | | | 1.50 | Pike Run Ditch |
| | | | | | | | |
| Totals = | | 1 | 0.056 | | | | |

Summary of Nine Minimum Controls Implementation:

1. Proper operation and regular maintenance programs for the sewer system and CSOs.

Lima's Utility Field Services department operates and maintains nearly 252 miles of sanitary sewers. Combined sewers account for 60% of that total, with 40% being separated. In addition, the WWTP maintains 32 lift stations located throughout the service area. The City submitted a CMOM Plan document to OEPA & USEPA on July 31, 2018. On 3/1/2019, Lima received approval of the plan by USEPA/OEPA with a requirement to implement the plan within 30 days. That plan has been implemented and regular progress reports are being submitted.

Lima also submitted a revised CSO Operational Plan on July 31, 2018 to the USEPA and OEPA. Lima received approval of the plan by USEPA/OEPA on 3/1/19 with a requirement to implement the plan immediately. That plan has been implemented and regular progress reports are being submitted.

Full detail of each program can be found in the respective submittals.

2. Review and modification of pretreatment requirements to assure CSO impacts are minimized.

Lima has an approved Pretreatment Program. Agreements are in place with industries that batch discharge to limit their discharges during storm events or when notified by the City of surcharge conditions in the sewer system. The Local Limits were recently re-evaluated as required by the current NPDES permit (2PE00000*ND) and submitted to OEPA on February 1, 2019. The Local Limits were accepted on August 10, 2022.

3. Provide the maximum use of the collection system for storage of wet-weather flow prior to allowing overflows.

Lima continues to rehabilitate large diameter sewers that play a part in the upstream storage strategy employed by the WWTP. The Phase 1 project that started in July of 2019 has run into some issues of contractor performance and material integrity and has been halted after the lining of 1,782 of 54" mainline. A legal resolution is currently being pursued. The project is being redesigned and is expected to be bid in 2022. Construction is expected to commence in 2023. The Phase 2 relining project was completed in June of 2021. The Phase 2 project includes the rehabilitation of an additional 2,570 feet of 78" segmented block mainline.

The City completed construction in 2020 on the 13-million gallon CSO storage tank. The completed cost for this project was \$36.5 million, which is the most expensive capital project ever undertaken by the City of Lima. The CSO tank is currently in commission and is helping to reduce the number of CSOs into the Ottawa River.

Additionally, as part of the CSO storage basin project, new stainless steel gates and stem guides have been installed on the three underground control structures that regulate upstream system storage.

4. Maximize flows to the WWTP for treatment.

Lima's WWTP completed a Headworks project in 2018 that increased the wet-weather capacity of the plant from 53MGD to 70MGD. Data collection and evaluation has been completed in accordance with Section 1.8 of Appendix B and the performance monitoring report has been submitted.

5. Prohibition of CSOs during dry weather.

Lima did not have any dry weather overflows in the reporting period.

6. Control of solid and floatable material in CSOs.

Lima's Public Works Department has the responsibility to maintain catch basins on city streets. All catch basins are scheduled to be cleaned at least once per year. The five main CSO structures located on the Ottawa River, which account for approximately 98% of the annual CSO discharge by volume, are equipped with automatically activated fine screens. The screens are maintained and cleaned by WWTP personnel on an as-needed basis.

7. Pollution prevention.

The City implements a leaf-and-brush pick-up program between the months of October and December. Bagged leaf and yard waste are accepted by resident drop-off year-round. The City also operates street cleaning equipment throughout the city, with areas cleaned, at minimum, once per month.

8. Public Notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.

A record of CSO discharges from Lima's system is available to the public on the City's webpage. A 4-Hour notification is posted immediately upon becoming aware of any such discharge. A more detailed 7-Day Supplemental Notification is also posted as soon as possible after each event. The same reports are also forwarded to the Allen County Health Department. The notification can be found at the following web address:

<http://www.cityhall.lima.oh.us/410/CSO-Activity-Report>

The City has no designated public access sites to the river in the CSO impacted areas. However there is a public bike path that follows the south shore of the river. The bike path has areas which are closed to the public during periods of high water, often associated with heavy rainfall. Those periods usually coincide with discharges from the City's CSO structures. It is possible for the public to access the river bank for fishing or canoeing/kayaking in many undesignated areas, so large CSO identification signs have been installed, visible from the river, warning of the dangers of an active CSO.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

The City continues to monitor and sample its CSOs according to the requirements defined in the permittee's NPDES permit (2PE00000*ND), effective August 1, 2018.

Summary of Long Term Control Plan:

Lima's approved LTCP has three main components related to WWTP improvements, CSO system components and SSO system components to be completed over a 26 year implementation schedule.

The major WWTP improvements were completed in 2018, which put the plant in a position to ramp wet-weather flows up to 70 MGD. The City has optimized the 70 MGD of flow throughout the plant and completed the data acquisition and evaluation.

The SSO system improvements are scheduled to begin after completion and testing of the storage basin, retirement of some existing debt and a possible re-evaluation of the affordability index. SSO improvements will include the upsizing of existing lift stations and force mains, along with site specific retention facilities.

The goal of the LTCP is to reduce the current average of 45 CSOs per year to no more than 5 in a typical year.