2018 ANNUAL

NINE MINIMUM CONTROLS REPORT

CITY OF BOWLING GREEN

NPDES PERMIT #2PD00009*RD

PREPARED FOR:

OHIO ENVIRONMENTAL PROTECTION AGENCY

NORTHWEST DISTRICT OFFICE

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Nine Minimum Controls Annual Report 2018

The City of Bowling Green has one combined sewer overflow (CSO) structure, located near the raw wastewater pumping station at Poe and Mercer Roads. This annual report is submitted to keep the Ohio Environmental Protection Agency apprised of the City of Bowling Green's continued efforts in reducing both the frequency and volume of CSO events through implementation of the nine minimum controls.

Listed below are the nine minimum controls and the City of Bowling Green's efforts to implement them.

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

The City of Bowling Green operates and maintains a wastewater treatment plant and collection system. There is only one (1) CSO structure on the entire system, located at the corner of Poe and Mercer Roads. This CSO structure, associated 4.0 million gallon (MG) flow equalization basin, and raw wastewater pumping station are all inspected three (3) times daily for proper operation by Water Pollution Control (WPC) Division personnel. Along with physical checks, these facilities are continuously monitored by a telemetry / SCADA system. The City's Wastewater Collection Division has a regular sewer televising, flow monitoring and cleaning program to identify and resolve maintenance issues, including infiltration and inflow. In 2018 the Sewer Collection Division cleaned a total of 14,464 feet of combination and sanitary sewers and televised 16,802 feet of combination and sanitary sewer. Records of all maintenance, inspections, repairs and televising are maintained by the Bowling Green Wastewater Collection Division personnel. Records of sewer relining / replacement are maintained by the Bowling Green City Engineer's office.

2. Maximum use of the collection system for storage.

The City of Bowling Green's CSO structure has a hydraulically activated flap gate that

prevents the receiving water (Poe Ditch) from entering the municipal collection system. To help maximize storage in the collection system and equalization basin, WPC staff monitors and maintains liquid levels at the Mercer Road pumping station as low as practical. When a wet-weather event occurs, flow to the WPC facility is increased to its highest rate (30 MGD) to convey and treat the first flush of combined wastewater and stormwater. After the pumping station reaches its maximum transfer capacity, all excess flow enters the equalization basin; only after the 4.0 MG equalization basin is full and flow continues to exceed the Mercer Road pumping station's capacity does a CSO event occur. The City believes the recent lack of wet basement reports is attributable to maximizing WWTP throughput, continued efforts to reduce Infiltration and Inflow , detaining or eliminating storm water flow into the Combined Sewer System, and the cleaning Poe Ditch which occurred in 2008. In October of 2009, the City completed what is referred to as "The South Maple Street Project". This project diverts over 1 MGD of storm water from the combined sewer system into a natural wetlands area, reducing the volume delivered to the WWTP for treatment.

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

The City implemented its Industrial Pretreatment Program in 2006 and has received cooperation from the four permitted industrial users in making needed improvements to reduce operational impacts. The City has approved pretreatment detailed engineering plans for Lubrizol's Bowling Green facility. Additional treatment, which also was pilot tested, was constructed in October of 2009, according to the compliance schedule in Lubrizol's Indirect Discharge Permit. Surfactant loadings to the WWTP plant and any potential CSO discharge have been significantly reduced by this improvement. In 2012, the Wood County Landfill began discharging leachate to the WPC through the collection system instead of being hauled in by tanker truck. To ensure that no leachate is discharged through the Combined Sewer Overflow, when an event appears to be impending, it is included in the operator's standard operating procedure to call the Northwest Water Sewer District to shut down the landfill's pump station until advised otherwise.

4. Maximize flow to the WWTP for treatment.

The City's wastewater treatment plant (WWTP) is designed for 10 million gallons per day (MGD) average daily flow with a sustained peak flow capacity of 20 MGD. The WWTP staff takes great pride in their efforts to continually increase the facility's treated throughput by way of changing operational procedures to ensure maximum flows reach the WWTP before the 4.0 MGD equalization basin begins to fill. In May 0f 2009, the WWTP completed the installation of a 30 MGD Aqua Aerobics cloth media filtration system which allows the WWTP to treat higher flows more effectively, thereby reducing the overall loadings to the receiving stream. With this project, the 24" influent flow meter was replaced with a 30" flow meter eliminating a flow restriction on the 30" force main from the Mercer Road pump station to the WWTP. Increasing the meter size to 30" reduced overall head loss, allowing the Mercer Road pumping station to pump more flow to the WWTP, thereby reducing the volume and frequency of Combined Sewer Overflows and further reducing the impact to the receiving stream. In March of 2010 the WWTP completed the ultraviolet disinfection upgrade. This upgrade allows full treatment of flows up to 30 MGD, allowing us to fully disinfect flows coming into the WWTP. In December of 2012, necessary upgrades to increase pumping capacity of the Poe / Mercer Rd. pumping station to 30 MGD were completed. With the final completion of this project, the WPC has reached its goal of pumping 30 MGD rate during wet weather events and monitoring of the positive impact has begun.

5. Prohibition of CSOs during dry weather.

The City has no history of CSO events during dry weather. Average daily flows are 5-6 MGD with a peak plant capacity of 30 MGD. However, WPC Division personnel check the CSO structure, equalization basin and Mercer Road pumping station three (3) times daily to ensure a dry weather CSO event does not occur. In addition, the Mercer Road pump station is continually monitored by the SCADA system which alerts operators of any problems that may occur.

6. Control of solid and floatable materials in CSOs.

The Wastewater Collection Division cleans catch basins on a regular basis in known problem areas, and on an as needed basis in other areas of the collection system. In addition, by pumping and treating the first flush following a precipitation event and then filling the 4.0 MGD equalization basin, solids and floatables are less problematic. In 2018, 600 catch basins were cleaned which resulted in 25.2 ton of debris being removed from the collection system.

7. Pollution prevention.

To help control pollution impacts, the City of Bowling Green ensures that streets are swept regularly with street cleaning equipment. The City also has a system-wide leaf and brush collection program. In 2018, the City of Bowling Green sweeping program resulted in over 233 tons of debris being removed from the streets and disposed at the Wood County Landfill that otherwise would have gone into the collection system.

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

Proper signage is posted at the CSO outfall and also the final outfall located at the Water Pollution Control facility. Additionally, the City posts all Combined Sewer Overflows on its webpage and has emails sent directly to persons wanting to know, within 4 hours of the beginning of an event.

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

WPC Division staff monitors the community's single CSO structure and any discharges in accordance with the terms of the City's NPDES permit. On September 1, 2015, new CSO monitoring equipment was installed and calibrated as our old monitoring equipment was not functioning.