

## WASTEWATER DEPARTMENT



*Purchased New F-550 Service Truck*

We treated 849 million gallons of residential, commercial and industrial wastewater with an average flow of 2.33 million gallons per day (MGD). Removal rates of 96.9% for carbonaceous biochemical oxygen demand, 95.7% for total suspended solids, and 94.4% for ammonia have been achieved consistently through the treatment plant.

Our National Pollutant Discharge Elimination System (NPDES) permit expired July 31, 2014. This permit is issued by the Ohio Environmental Protection Agency (OEPA) and gives permission to discharge from the City of Wilmington's wastewater treatment plant (WWTP) into Lytle Creek. The OEPA is in the process of renewing our permit. The permits are usually issued every four years.

This year we spent a lot of time doing point repairs, televising and cleaning the sanitary sewer lines. These lines will be rehabilitated by inserting a flexible PVC liner that will be molded into the existing pipe. We will be rehabbing approximately 7,700 feet of sanitary sewers in 2015. Through rehabilitation we are removing inflow and infiltration (I/I), which can put a strain on our sewer system during wet weather. This process also reinforces the structural integrity of the line.

233.73 total dry tons of sludge was removed from the Wastewater Treatment Plant between March 1, and December 15, 2014. This is an average of 19.5 dry tons per month. This sludge was applied to farm ground as fertilizer.

The operation of the pretreatment program continues to be successful. The occurrence of upset, interference or pass-through violations is almost nonexistent. Multiple industrial wastewater effluent samplings and facility inspections are conducted each year.

The City of Wilmington's Storm Water Management Program has finished up the first permit cycle. The City is covered under the General Permit which has expired. A Notice of Intent (NOI) has been submitted by the City for coverage under the new General Permit, when it becomes effective.

We reconstructed on Ledex Drive 1,300 feet and 850 feet along Park Drive of roadside ditch and installed a new catch basin. This flow discharges into 600 feet of open channel that also was reconstructed and conveys the storm water to a tributary of Lytle Creek.

The Wastewater Department continues to take the proactive approach to safety by conducting periodic safety meetings and enforcing the policies already in place. We believe the City's greatest assets are its employees and the citizens they serve and do not wish to jeopardize the health and well-being of either.

## **LABORATORY**

The Wastewater Laboratory is a comprehensive environmental testing facility that utilizes state-of-the-art equipment to provide the city with a wide range of analytical services to affirm compliance with our National Pollutant Discharge Elimination System permit, the Clean Water Act, and State of Ohio regulations. The lab personnel are highly trained and have extensive experience in the environmental sciences.

Through a stringent Quality Control/Quality Assurance program, it is our goal to ensure the accuracy and integrity of data generated by our wastewater lab to protect the environment.

## **MAINTENANCE**

The maintenance and sewer crew employees were busy maintaining the operation and management of the sanitary and storm water collection systems, which consist of 76.8 miles of sanitary and over 100 miles of storm sewers, thirteen lift stations, over 2,000 manholes, over 2,400 catch basins, driveway approaches, sidewalks, and curb replacements, and the following:

- 40 inspections of sanitary and storm line completed
- 700 OUPS tickets processed
- 320 ft. of 15-in. storm line replaced
- 240 ft. of 12-in. storm line replaced
- 40 ft. of 10-in. storm line replaced
- 8,117 ft. of sanitary line televised
- 27,071 ft. of sanitary line cleaned
- 600 ft. of ditch line cleaned

- Purchased new F-550 service truck
- Replaced 12 catch basins
- Replaced 2 drive approaches
- Replace 60 ft. of sidewalk
- Replaced 71 ft. of curb
- Replaced grit piping from the grit pump to the cyclone degritter.
- Replaced various wear items on Gorman Rupp pumps in plant and throughout City lift stations including: mechanical seals, impellers, wear plates, etcí
- Replaced U.V. bypass valve (dig up).
- Replaced water hydrant (dig up).
- Glued and sealed all seam pockets and resealed all ventilation windows on both trickling filters.
- Installed new thermometer on the autoclave in the lab.
- Replaced 2 stabilizing cables on trickling filters distribution arms.
- Replaced discharge check valve on primary effluent pump #3.
- Removed and cleaned all valves and spray nozzles on the digester odor control system.
- Sludge transfer pumps #1 and #2 were welded to repair worn areas in their volutes.
- Replaced all wear strips on storm flow #4.
- Replaced all wear strips, paddles, and flights on the cross collector of storm flow #3.
- Rebuilt U.V. System: 160 new lamps, 940 O-rings, 6 ballasts, 2 cooling fans.
- Installed new mini CAS leak and temperature sensor system on the effluent sample pump and replaced the pump with a new 2hp Flyght pump.
- New drive tires and deck guide wheels on Grasshopper mower.
- Installed new brake pads and rotors on truck 415.
- Rebuilt lab air compressor pump.
- Replaced water heater in the administration building.
- Replaced Variable Frequency Drive (VFD) for Return Activated Sludge (RAS) pump #2 (25 HP).
- Replaced VFD for primary effluent pump #3 (100 HP).
- Replaced drive motor on the thickener.



***Installing Lift Station Basin at  
McMahan's Mobile Home Park***

- Replaced 100 feet of wiring from screen and grit MCC to primary #2 drive motor.
- 6,779 ft. of sanitary line root treated
- 410 ft. of 4-in. sanitary line replaced
- 13 ft. of 6-in. sanitary line replaced
- 190 ft. of 8-in. sanitary line replaced

*Submitted by:*

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