



## **2015 WASTEWATER DEPARTMENT YEAR END REPORT**

- The wastewater plant treated a total of 421 million gallons this year. This averages out to 1.152 million gallons per day and represents an increase of 56,000 gallons per day from the previous year. The percent capacity of the plant used for the year was 58%. We recorded 51.69 inches of precipitation this last year compared to 43.4 inches for 2014. The wettest two months of the year were June and July where we recorded over 9 inches for each. Also notable were April and December, which had over 6 inches for each including a late December event where we recorded 4.31 inches on December 27-29<sup>th</sup>.
- The yearly average removal efficiency of the treatment plant in regards to Total Suspended Solids remained steady at 98%, while BOD dropped slightly from 98% to 97%. Ammonia removal also remained steady at 99% and the removal of phosphorous decreased slightly from 91.5% to 89.2%. Our phosphorus discharge average for the year was 0.59 mg/L and ammonia was 0.29 mg/L.
- The wastewater department had three violations of our operating permit this past year compared to two in 2014 and three in 2013. All three were sewer overflows caused by rain events in June and July. We recorded a total of 19.06 inches of rain during this time. Two of the three violations were overflows at the same manhole 16-3 located by the Main lift station (one occurred 6/19 and the other on 7/13). This manhole was, later in the year, rehabbed and treated with spectrashield which fills cracks and helps prevent future leaks. The other one occurred at the old Boone Village lift station located at the plant.
- Since establishing the yearly sewer rehabilitation program back in 2002, we have repaired and/or replaced 60,460 lineal feet of sanitary sewers. This year's project was the lining of 3,327 LF of 8" sewer main and 3,337 LF of 10" sewer main by Insituform in Raintree subdivision. Next year's rehabilitation project involves the lining of segments of sewer main in Irongate and Hunter's Point.

- Started a lift station rehabilitation program in 2015 with the replacement of a Usemco control panel and two new pumps at Raintree subdivision by BBC Pump and Equipment Co Inc. Next year, we will be replacing the pumps and control panel at Cedar Bend subdivision.
- Completed the Irishman's Run Lift Station upgrade project and treatment plant improvements. The lift station upgrades included additional power, bigger pumps and emergency generator, and a new automatic transfer switch and control panel. The treatment plant improvements included new piping and valving at the headworks as well as two new channel mounted slide gates.
- Added 2 new controllers (brains) for the emergency generators at the treatment plant and the main lift station. We could not get parts anymore and it was time to make the upgrade before they failed. This was the first step in a two-step process to upgrade the emergency backup systems for the treatment plant and main lift station. In 2016, we will be replacing the transfer switches for the treatment plant and main lift station. This should get us through the next 20 years.
- Improvements to the collection system: Repaired 3 manholes within the collection system with spectrashield (seals cracks and prevents infiltration and leaks). Also replaced or repaired 16 pumps at lift stations this year. Eight were new pumps and eight were repairs. Added signal wiring at the Main lift station that provides us with individual seal fail and pump overtemp alarms. For the first time, had a force main plug and it occurred at Raintree subdivision in September. Fluid waste jetted the force main over by Lion's Park and freed up the blockage. Maddox Industrial Group replaced a plug valve at the Main Lift Station on a 100 HP storm pump.
- Added 2 new pieces of technology in 2015. A handheld Trimble GIS unit for locating and recording manholes and other infrastructure. Also a lateral camera unit, for 6 inch pipe and larger, for videoing our own sanitary and storm sewers within the Town. These were both technologies that were needed for the utility and will ultimately save the Town money.
- Improvements to the treatment plant: Added new belts for filter belt press, replaced seals, 4 new gears, 2 new tracking sensors, a new air cylinder and replaced a belt press pump. Replaced EQ pump #1 of 3. Replaced rotary drum screen at headworks. Replaced furnace and air conditioner in Administration building with a 96% efficient one.
- Costs for the Wastewater Department have been monitored and contained within the approved operating budget for 2015.