



BENTON UTILITIES

BENTON, ARKANSAS

January 14, 2016

Miles Johnson, Enforcement Analyst
Water Division / Enforcement Branch
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

RE: NPDES Permit No. AR0036498, AFIN 63-00063
CAO LIS 11-069 / SSES Review

Dear Mr. Johnson:

This letter comprises the 2015 annual report for the City of Benton's wastewater collection system. It declares our efforts towards the goal of eliminating sanitary sewer overflows as well as infiltration and inflows. As in the past, we have pursued this goal by (1) gravity line repair, (2) manhole rehabilitation and repair, (3) addition of equipment, (4) upgrades and rehabilitation of lift stations, (5) proactive and preventative maintenance, and (6) strategic planning.

This past year, some 1,815 feet of gravity sewer was pipe-burst. This work was done in the vicinity of South and Conway Streets in Basin #4. By renewing and resizing the line from 8-inch to 12-inch diameter pipe, a significant improvement in flow capacity was noted. Moreover, a notable decrease in inflow and infiltration was likewise accomplished.

Another project that has greatly improved flow, reduced inflow and infiltration, and has safeguarded the environment was the installation of 1007 feet of 12-inch, gravity sewer main adjacent to McNeil Creek. Through an engineering study it was determined that two, badly deteriorated lines on the north side of the creek could be consolidated into one new main on the south side. Consequently, about 2030 feet of degraded pipe was taken offline, including 4 aerial crossings over the creek and 12 aged manholes.

It is always a good thing to replace a lift station with a gravity main. This past year, the Pilot Lift Station off North Alcoa Road was taken offline and a new 12-inch gravity extension was routed some 1600 feet to the Hurricane Lake Estates main lift station. This was needed to support the development of the Hurricane Creek Village Shopping Center and provide access and capacity for other commercial and residential development. This same line will convey wastewater from the south side of Interstate 30 along Alcoa Road where some 1500 feet of new 10-inch main was installed in the Alcoa Road Relocation Project. This will afford many residents and businesses with public sewer and support development in this area.

This department also made 17 point repairs to the City sewer mains: 3 were in Basin #2, 1 was in Basin #3, 1 was in Basin #4, 3 were in Basin #5, 1 was in Basin #6, 1 was in Basin #7, 6 were in

Basin #10, and 1 was in Basin #11. Though these point repairs were not identified in the SSES, they were either emergency repairs or problems that were discovered and addressed in 2015.

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An important component of our plan to reduce sanitary sewer overflows is manhole rehabilitation and repair. In Benton's Sewer System Evaluation Study (SSES), 336 manholes were identified as needing repairs and rehabilitation work. In 2015, 125 manholes were repaired and/or rehabilitated by the use of the Quadex rehab equipment that was purchased in July of 2010. Some of the worst were addressed last year. We are confident that the remaining 81, targeted manholes will be completed before the end of 2016 besides others. Out of the 125 manholes that were repaired and rehabilitated last year, 72 were in Basin #10, 51 were in Basin #5, and 2 were in Basin #7.

In 2015 there were a total 39 sanitary sewer overflows. There were 32 from manholes and 7 occurred at lift stations. This reflects an average of slightly over 3 per month. This is a good indicator that the system improvements that have been made are indeed making a difference.

The Willow Street Lift Station is one of our larger units. This station received a major upgrade in 2015. Two aged, 40-hp, shaft-driven pumps were replaced with new 40-hp, dry pit pumps. New plumbing was installed, including isolation and check valves. A new aluminum staircase with handrails was installed in the place of a narrow, vertical ladder for safety. The old 100 kW standby generator was replaced with a new diesel, 175 kW unit. The station was painted inside and aesthetic improvements were made otherwise. This upgrade will help to ensure the reliable flow of wastewater on the east side of the City.

Several equipment additions are noted. A new 55-hp tractor with mower was purchased for line maintenance. Two 20-foot trailers were bought to haul our 2 tractor mowers for line maintenance and to transport other equipment and supplies. Two new pickups were purchased to replace aged ones with high mileage. A number of power tools, mechanic tools, safety equipment, etc. was bought to ensure the safety and productivity of the utility crew.

Our administrative/shop/storage facilities were expanded and upgraded this year, including partial work on a 40 ft. by 50 ft. materials and supply building. On October 15th, these facilities were named in memory of a great public servant who headed the collection system department for many years. It is now called "The Leon Wilson Complex".

From a preventative or proactive standpoint, much work was accomplished to reduce infiltration and prevent overflows. Please note the following:

- 76,960 feet of sewer line was cleaned.
- 5,826 inspections were made of the City's lift stations
- 374 cleanings were performed on lift stations with the jet-vac truck.
- 468 inspections were made of grease traps within the City.
- 6,037 feet of line was evaluated through video sewer camera.
- 76 sewer main blockages were cleared.
- 194 repairs to the City's lift stations were performed
- 55 manholes were treated with chemical degreasers and root killer.
- Again, 125 manholes were repaired and rehabilitated
- And 8,524 feet of sewer main was replaced.

Engineering was prepared for a new gravity sewer trunk line that will reach from the Longhills Subdivision to our main pump station at Hurricane Lake Estates, or some 7800 feet. Most of this line will be 15-inch diameter pipe but about 25% will be 12-inch. The installation of this new line will provide
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public sewer to the area, support development, and take a significant load off our Military trunk line. Consequently, however, 5 lift stations will be taken offline. They are Rivendell #1 and #2, Dogwood Lakes Apartments, Oak Forest Mobile Home Court, and the Longhills Subdivision. This will allow operating funds to be redirected for other needs and expenses. Construction is set to begin on this project sometime in February with completion in approximately 4 months.

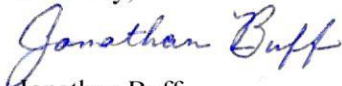
The development and implementation of Benton Utilities "Master Specifications for Design and Construction of Water and Sewer Utilities" was an important achievement in 2015. Moreover, a seminar/workshop was hosted by Benton Utilities for plumbers working in Benton. The purpose of this two-session class was to improve understanding of City Ordinances, specifications and construction methods.

Personnel development was also achieved through a wide-range of technical training. As a result, one crewman received his Class III, Wastewater Treatment Operator's license and two more their Class II. In addition one operator in treatment plant received his Class IV Wastewater Operator's license.

As you can see, this department is working diligently through many avenues to significantly reduce both system overflows and infiltration and inflow. We will continue to give due priority to the basins that have been cited in the Sanitary Sewer Evaluation Study. Moreover, we will strive to constantly improve the integrity and efficiency of Benton's sanitary sewer collection system.

Please feel free to contact me at 501-776-5984, or you may email me at jwbuff@bentonar.org with any questions or comments you may have.

Sincerely,



Jonathan Buff
Wastewater Manager

Cc: Terry McKinney, General Manager of Benton Utilities
Charles Best, P.E. and Chairman of the Benton Utilities Public Utilities Commission
Byron Hicks, P.E. and C.E.O. of McClelland Consulting Engineers