HIGHFILL, AR MUNICIPAL WASTEWATER TREATMENT PLANT

Ground Water Protection Community System Removes Ammonia

October 6, 2016

DESIGN CHARACTERISTICS

|	Influent	Effluent
DESIGN FLOW (MGD)	0.2	0.2
PHASE # 1 FLOW (MGD)	0.1	0.1
DESIGN TEMP (C)	13	–
BOD5 (mg/l)	250	< 15
TSS (mg/l)	250	< 15
TKN (mg/l)	65	–
AMMONIA-N (mg/l)	50	< 2

OVERVIEW

Tucked away in the northwest corner of Arkansas, the headquarters of three corporate giants are within 20 miles of one another: Wal-Mart in Bentonville, Tyson Foods in Springdale and JB Hunt in Lowell.

Spurred by Wal-Mart's rise and the continued success of the other two, this region has become one of the fastest growing residential areas in the United States. Because it is minutes from the Northwest Arkansas Regional Airport and within easy commuting distance to all of those cities, Highfill, AR became one of several small towns in the region to experience rapid growth.

In 2008, Highfill qualified for Rural Utility Services (RUS) funding allowing the town to design and install a new collection, treatment and disposal system to provide municipal sewer to roughly 200 existing homes and a small downtown area previously on septic systems. The treatment facility was designed for 0.2 million gallons per day (MGD) to be constructed in two 0.1 MGD phases. AquaPoint's AquaCELL™ moving bed biofilm reactor (MBBR) technology was selected for its ease of operation, expandability and proven nitrification performance.

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Advanced Wastewater Treatment Systems & Services

PERFORMANCE DATA
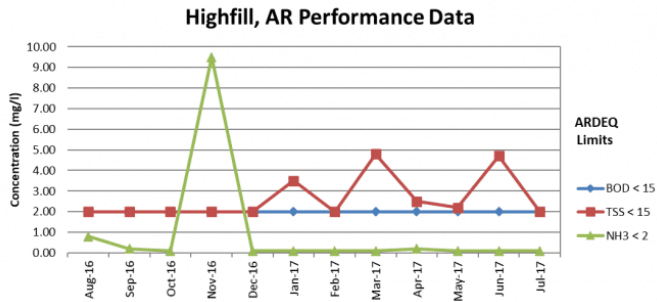
- System Commissioned: August 2008
- Detectable Limit for BOD & TSS: 2, 2 and 0.1 mg/l respectively
- Data Source: Arkansas DEQ Records

DATE	BOD5 (mg/l)	TSS (mg/l)	NH3 (mg/l)
AUG. 2016	2.00	2.00	0.80
SEP. 2016	2.00	2.00	0.20
OCT. 2016	2.00	2.00	0.10
NOV. 2016	2.00	2.00	9.50
DEC. 2016	2.00	2.00	0.10
JAN. 2017	2.00	3.50	0.10
FEB. 2017	2.00	2.00	0.10
MAR. 2017	2.00	4.80	0.10
APR. 2017	2.00	2.50	0.20
MAY 2017	2.00	2.20	0.10
JUN. 2017	2.00	4.70	0.10
JUL. 2017	2.00	2.00	0.10
AVG.	**2.00**	**2.64**	**0.96**

SYSTEM DIAGRAM