

BARNES®

FAYETTEVILLE, NC

Application Overview

The Fayetteville Public Works Commission (PWC) proudly serves Fayetteville/ Cumberland County in North Carolina with reliable, award winning electric, water and wastewater services. PWC has the distinction of being the first utility in North Carolina to receive the Partnership For Safe Drinking Water Director's award for outstanding commitment to quality drinking water. PWC serves more than 86,000 wastewater customers, and owns or manages an infrastructure comprising two wastewater treatment plants with a combined capacity of 46 MGD, 1,200+ miles of gravity sewer, 31,000+ sewer manholes and 73 lift stations.

One of the most troublesome pump stations for Fayetteville PWC was the Millstone 14 Theatre pump station. The duplex station was put into service in 2009 to cater the Millstone 14 Theatre, restaurants, nearby residences and light commercial establishments. Sewage from the station is pumped to a gravity manhole which then flows into a treatment plant.

The station's traditional submersible non-clog pumps had been causing problems right from the beginning. The biggest pain point for Mr. Mike Wright, PWC's Senior Project Coordinator who oversees the station maintenance, was pump clogging. The non-clog pumps in the station were clogging at least twice a week due to flushable wipes, hygiene products, mop heads and heavy duty cleaning fabric. The pumps were poorly built and lacked reliability. Impellers wear lasting less than a year and worn impellers aggravated clogging. In some cases, clogs damaged the motors and lead to high repair costs.

Mr. Wright was also frustrated with high overtime and callout costs resulting from clogs at late night hours. Completely dissatisfied with the station's non-clog pumps, Mr. Wright decided to trial submersible chopper pumps in the station.

Installation

Heritage Water Systems, a municipal distributor of Crane Pumps & Systems, worked with Fayetteville PWC to size and install two 4" 5HP Barnes Sithe chopper pumps in the station in Jan 2019. The pumps never clogged even once since installation. Mr. Wright "really likes Sithe chopper pumps" as Sithe choppers "have reduced overtime and call-outs tremendously". "Fascinated by Sithe" and extremely pleased with Heritage Water System's quality of service, Mr. Wright decided to purchase four more Sithe choppers for his problem stations.

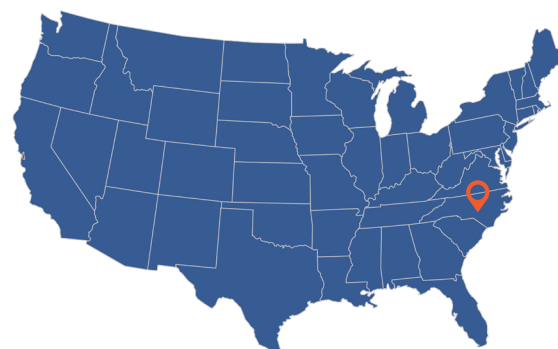
Key Takeaways

Pain Points

- Non-clog pumps in Millstone 14 Theatre pump station were clogging twice every week.
- Flushable wipes, hygiene products, mop heads and heavy duty cleaning fabric were clogging the pumps.
- Impellers were lasting less than a year resulting in very high maintenance costs.
- Untimely clogging lead to frequent overtime and late night callouts.

Solution

- Fayetteville PWC installed two 4" 5HP Sithe chopper pumps in the station in Jan 2019.
- The pumps have not clogged even once since installation.



PUMP

Barnes Sithe Chopper



OPERATIONAL IMPROVEMENT

Eliminated Clogging and Impeller Wear



INSTALL DATE

January 2019



MUNICIPALITY POPULATION

205,383

