

BARNES envie³

BLUEFIELD SANITARY BOARD

City of Bluefield, WV

Application Overview

The City of Bluefield is one of the core cities that sits on the West Virginia/Virginia border. Serving a population of about 22,000 people, the Bluefield Sanitary Board is comprised of approximately 350 miles of sanitary sewer lines all leading back to two treatment plants. About 9.5 million gallons of sewer run through the two plants every day, with the Westside Treatment Plant treating 8.3 million gallons and the Ada Treatment Plant treating 1.2 million gallons.

Pump Station Details

Bluefield has 7 pump stations, all of which have had consistent problems with clogging issues, mechanical failures, and constant maintenance. The pump issues had become daily occurrences, frequently hair and plastic would get stuck in the existing pumps. Each time a pump would clog or fail, it resulted in costly downtime for the treatment plant. Surrounded by mountains, the City of Bluefield prides itself on a community oriented and safe atmosphere. With these daily issues, the Bluefield Sanitary Board knew that they needed to upgrade their equipment to live up to these promises to the community.

Installation

This was the perfect opportunity for Buchanan Pump Service & Supply Co, a local Barnes distributor, to step in and test a new solution for Bluefield. In February 2021, they installed an envie³ Non-clog Barnes pump in a triplex dry-pit station at the treatment facility. The pump is a 4" ESH 15HP non-clog with a maximum flow of 800GPM. With the help of the 4x6 base elbow, the envie³ was easily installed with minor piping changes from the original competitor. Since installation, the pump's average daily run time has been 7 hours, starting approximately 8-12 times each day. The Bluefield team has noticed a significant reduction in surface temperature of this new pump in comparison to the other units in the station due to the envie³'s glycol cooling system. The max temperature that it has reach has been 90°F due to the pumping volume doubling on that specific occasion. Since installation, Bluefield has not experienced any issues with the envie³ pump. Due to the cooler surface temperature, reduced clogging issues with no occurrences since installation, and the easy installation, the Bluefield Sanitary Board is considering replacing the other units in the triplex station with the Barnes envie³. They are also planning to outfit the sister station with a Barnes solution as well.

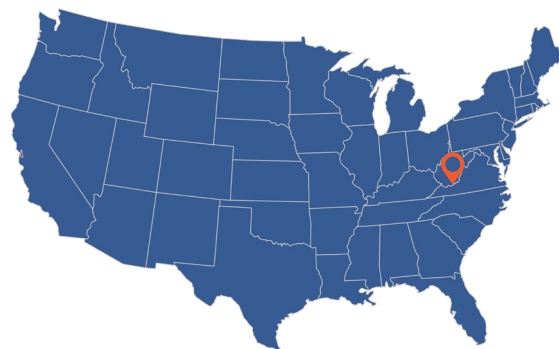
Key Takeaways

Pain Points

- Costly time and maintenance to unclog debris from pumps on a daily basis
- Pumps running really hot, causing safety concerns for those servicing the units

Benefits

- The Barnes envie³ Non-clog pump's impellers are designed for clogging resistance and optimal pumping efficiency
- The low surface temperature of the envie³ is cool to the touch allowing for a safer environment for all



PUMP

Barnes envie³ Non-Clog (4ESHDI)



OPERATIONAL IMPROVEMENT

Reduced Maintenance Costs



MUNICIPALITY POPULATION

22,000



INSTALL DATE

February 2021



Before installation of new pump



After installation of envie³ pump