

Xylem's quick response restores critical water supply to North Carolina community during COVID-19 outbreak

Temporary replacement addresses catastrophic water system failure

There is never a good time for a municipality to encounter problems with its water supply. But during the 2020 COVID-19 outbreak - when handwashing and sanitation are essential to maintaining public health - a reduction in water supply to residents quickly becomes critical.

Unfortunately, a city nestled in the foothills of North Carolina, found itself facing that exact crisis. After undergoing maintenance, a vertical turbine pump at the city's water treatment plant failed on Friday, March 27, reducing the plant's ability to pump water out into the city's water system.

Although the city had several backup plans to address such emergencies, it was a perfect storm as several issues occurred at one time. Among those was a shelter in place order issued by the state of North Carolina to help prevent the spread and exposure to COVID-19, which contributed to an increase in water use.

"Normally, peak flow occurs between 5 and 9 p.m. after work hours, but because people are home all day now, you're seeing water demand triple or quadruple very quickly," said Randy Adams, a branch manager for Xylem.

To ensure everyone had water for basic needs, city officials asked residents and businesses to temporarily limit their use of water. Voluntary water restrictions issued on March 28 included refraining from watering shrubs and lawns, washing vehicles, hosing down patios, sidewalks and driveways, and doing unnecessary laundry.

When city officials learned its regular supplier could not fulfill the need for an emergency replacement pump, the water plant superintendent turned to his local Xylem branch for help. The Xylem team quickly assembled to find a suitable rental pump. Based on duty conditions, a temporary solution called for a pump that could handle 110 pounds per square inch (PSI) at 2,100 gallons per minute (GPM).



Xylem helped a North Carolina community restore water service quickly during the COVID-19 outbreak with a temporary replacement.

CUSTOMER: City in central North Carolina

CHALLENGE: Install a rental pump to supply city residents with potable water after permanent pump failed.

PRODUCTS: Flygt 3231 submersible pump

Solution

Based on the pump requirements provided, The Xylem team identified a 335-horsepower (hp) Flygt 3231 electric submersible pump as the best model for the rental job.

Xylem offers a wide horsepower range in their Flygt 3000 series of pumps in their rental fleet - from 2 to 470 hp - that can handle flow rates up to 16,000 GPM and up to 400 feet of head. The broad parameters of the Flygt 3000 series enabled Xylem to select the proper pump for this application.

After placing a call to Xylem's national rental bank in Bridgeport, New Jersey, the Flygt 3231 pump was on its way to the water treatment plant. When the pump arrived on Tuesday, March 31, a crew from Xylem arrived on site to complete the installation. Lowering the submersible pump into the vertical turbine pump wet well proved to be a tight fit. With just inches to spare, the crew dropped the pump into the opening and then turned it 45 degrees. Once the rental pump was in place and operational, the city lifted the water usage restrictions.

Restoring the normal volume of water service as quickly as possible was important to the city's commitment to its residents. Xylem's Flygt 3231 rental option enabled the water treatment plant to quickly replace its failed pump without incurring a significant capital investment - and without sacrificing any of the performance required for the job.

The incident highlighted close cooperation between the city and Xylem to resolve an urgent problem in a swift manner. Xylem proved itself as a trusted partner to help the city resume critical water service to its community members during the COVID-19 outbreak.



The Flygt 3231 submersible pump is lowered into the pump wet well.