



Finding the right level measurement solution for wastewater pump stations in Skaneateles, New York.

Overview

The Village for Skaneateles, New York, is home to about 2,450 people and has an area of about one and a half square miles. In a small residential area such as this, it is crucial that wastewater treatment is running smoothly and requires little maintenance.

What did they need?

The municipal team in Skaneateles has a duplex pump station, otherwise known as a lift station with two pumps, with two 10-horsepower submersible pumps and floats for detecting when the wastewater had reached the level necessary before being pumped to the next stage of the wastewater treatment process. These floats were unreliable as the Skaneateles team was making frequent service visits to the pump station to ensure the system would continue to operate as it should. These frequent service efforts take a lot

of time, and there is never true certainty on how much time can be taken in-between visits before the floats need to be reviewed again.

The team knew they needed a more reliable level measurement solution for their duplex pump station. The Skaneateles team decided to reach out to one of Pulsar Measurement's municipal representatives in New York, Cyclops Process Equipment, to find the ideal solution.

Why choose the dBi6 loop-powered sensor for this application?

Pulsar Measurement offers a range of level measurement solutions that can be used in wastewater treatment, but the Skaneateles team needed one that would be able to shoot through the narrow opening with multiple obstructions in that station's collection basin. The solution also needed to be able to accurately track the level with the turbulent flows that would come from the influent line in the previous phase of the treatment process being close to the pump station. This turbulence is a challenge as the flows are frequently changing, and the level measurement solution would need to be able to capture those changes so the team can identify any inconsistencies. Understanding the main specifications of the facility, Ron Wakefield with Cyclops recommended Pulsar Measurement's dBi6 Loop Powered Sensor.



"I knew it would be easy to set up and work with only a few basic parameter changes."

Ron Wakefield
Cyclops Process Equipment

The dBi6 is available in a Profibus or HART format, and the perfect version for this solution used HART. The HART sensors are loop powered (3.8–22mA), have IP68 ingress protection for outdoor applications, and are temperature compensated for increased accuracy. Set up was easy as there weren't any special programming requirements for the application and the narrow beam angle of the sensor (<10°) was ideal. The dBi sensors have measurement ranges from 125 mm (4.9 in) to 15 m (49.2 ft), and the dBi6 offers a range of 300 mm (11.8 in) to 6 m (19.7 ft), which is just what the Skaneateles team needed. The world-leading DATEM technology (Digital Adaptive Tracking of Echo Movements) allows the sensors to zero in on the true echo while ignoring all other elements in the measurement path. This technology allowed the team to gain more accurate and reliable level measurements of their duplex pump station so that they would no longer have to make frequent service checks of the system.

Accurate and reliable level measurement achieved with the dBi6

Having a reliable sensor was exactly what the wastewater treatment team had been looking for, and the dBi6 proved to be the right solution. The Skaneateles team said, "looks like we have a reliable level sensor." They finally have a solution in place that they can count on, and Ron Wakefield with Cyclops made sure they had that. Ron Wakefield said, "I knew it would be easy to set up and work with only a few basic parameter changes." Ron made sure that this solution met their specifications and would be a significant upgrade to the original one.

More Information

dBi HART: <https://pulsarmeasurement.com/dbi-hart>

Cyclops Process Equipment: <https://www.cyclopsprocessequipment.com/>

Skaneateles, New York: <https://www.villageofskaneateles.com/sewer>



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