



Somers, New York requires accurate and reliable flow measurement and Pulsar Measurement delivers the right solution

Overview

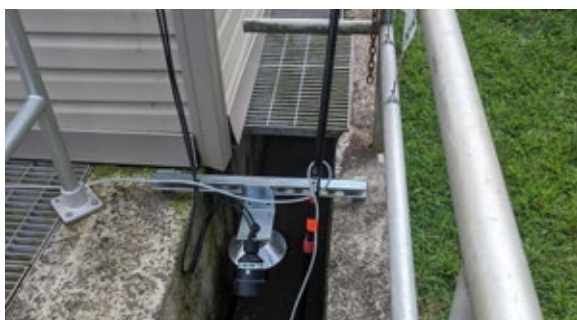
The town of Somers, New York, in the northern end of Westchester County, is home to three water districts and one sewer district that provides water services to over 21,000 residents. In the wastewater industry, it is crucial to know that the influent wastewater (raw, untreated wastewater that flows into the plant) and effluent wastewater (treated wastewater flowing out of the plant) are flowing at the same rate to ensure the wastewater treatment system is working to full capacity.

In the case of Somers, the current flow meter readings were not matching up, so they knew there was a

problem somewhere. Previously installed on-site was the Pulsar Measurement FlowCERT along with the MicroFlow and dBMACH3. This provided them with a complete non-contacting area-velocity influent flow meter, with the MicroFlow sensor reading velocity from the surface of the water, and the dBMACH3 providing the level reading. The FlowCERT controller does the Area \times Velocity calculation to give the flow rate.

Verifying the existing equipment

The non-contacting area-velocity equipment has been installed for about 3 years and was doing a fantastic job, but a few plant readings started showing some discrepancies. The municipality reached out to Pulsar Measurement's local representative, Cyclops Process Equipment, to help find a solution. John Waters at Cyclops Process Equipment, along with Rob Davis, Pulsar Measurement's Regional Sales Manager, decided that it would be appropriate to conduct a flow survey with one of Pulsar Measurement's portable instruments, to compare readings and test the existing equipment.



After three years, readings on the Pulsar Measurement equipment were still accurate and able to provide the all-important influent flow readings to ensure the plant is working to its full capacity.

The team at the Somers Plant wanted to keep things quick, easy, and simple – without any major interruptions to the process. The MantaRay Portable Area-Velocity Flow Meter was an ideal solution. The unit is specially designed for flow surveys in open channels.

Why the MantaRay?

The MantaRay displays and logs flow rate and total volume using a submerged ultrasonic sensor that has no moving parts or orifices and is designed for reliable operation in sewage, stormwater, and environmental flow applications. The backlit LCD display is ideal for getting an indication of flow rate – without the need to plug in a laptop or wait for data to be collected. The installation of the unit was simple and gave the team an instant indication of the flow rate.

The flow reading from the MantaRay was compared with the flow reading from the FlowCERT, and the results showed the MantaRay closely matched the the FlowCERT. It proved that the existing non-contacting area-velocity system was giving accurate and repeatable flow measurements. John Waters said, "I wasn't sure how we were going to verify the existing influent meter. The MantaRay made this job very easy."

This provided verification that the issues that the Somers Plant were caused by inaccuracies with the effluent meter provided by an alternative manufacturer. The effluent meter readings were not accurate and the meter needed to be replaced.

Success with an ultrasonic flow measurement solution

After three years, readings on the Pulsar Measurement equipment were still accurate and able to provide the all-important influent flow readings to ensure the plant is working to its full capacity. Both the contacting and non-contacting area-velocity solutions worked well, and the Somers Plant was able to pinpoint the problem.

More Information

dBMACH3: <https://pulsarmeasurement.com/dbmach3-db3-with-sun-shield>

FlowCERT: <https://pulsarmeasurement.com/flowcert>

MantaRay: <https://pulsarmeasurement.com/mantaray>

MicroFlow: <https://pulsarmeasurement.com/microflow>

Somers, NY Municipality: <https://www.somersny.com/departments/water-and-sewer-department>



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