EDEN PRAIRIE WATER PLANT INCREASES PROCESS EFFICIENCY WITH THE ROSEMOUNT 1208 LEVEL AND FLOW RADAR TRANSMITTER

Customer

Drinking Water Treatment Plant in Eden Prairie, Minnesota

Application

Wet well in a Drinking Water Treatment Plant

Challenge

The Drinking Water Treatment Plant in Eden Prairie serves a community of over 60,000 people, as well as the industries from the area. The plant can pump a maximum of 28 million gallons of water per day and, in 2022, the city treated 2.7 billion gallons for an average of 7.4 million gallons per day.

The plant has several wet wells, which receive and store water used in pumping stations that pump out wastewater. The wastewater is the by-product of water treatment and lime softening process. The water plant had been using a submersible hydrostatic pressure level sensor to measure the level in the wet well but it was problematic as it didn't provide reliable measurement. The submersible level sensor was giving inaccurate level readings due to buildup/caking on the diaphragm. This was restricting pump operations from operating effectively, as pump starts/stops were configured to certain levels causing either pumps to dry-run or overflow.

Results

- Significant reduction of maintenance costs and manual rounds within the plant
- Accurate and reliable level measurements through non-contact radar technology
- Higher protection against pump dry-running and overflows compared to legacy technologies, such as hydrostatic level sensors

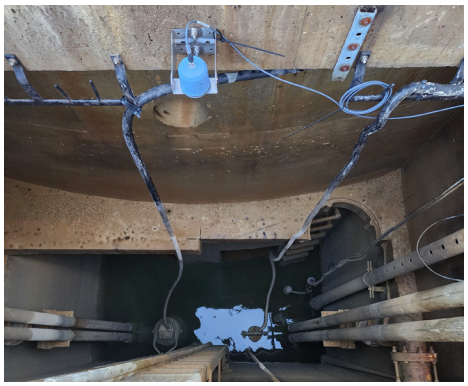

Image #1. *The Rosemount™ 1208 Level and Flow Transmitter is installed in a wet well with a mounting bracket.*

EMERSON™

EDEN PRAIRIE WATER PLANT INCREASES PROCESS EFFICIENCY WITH THE ROSEMOUNT 1208 LEVEL AND FLOW RADAR TRANSMITTER

Solution

The customer installed a Rosemount 1208 Non-Contacting Radar Level and Flow Transmitter on the side wall of their wet well. The radar transmitter proved to be easy to install with a mounting bracket. Its surface-tracking algorithm enabled the reliable tracking of water surface. By simply setting the reference height, the Rosemount 1208 was able to deliver reliable measurements and disregard the echoes from the cement floor cutout at the bottom of the wet well without the need for echo-tuning. The Rosemount 1208 features a compact and robust housing that is fully submersible and holds drinking water approvals, so it met all the requirements for this application.

Unlike other legacy devices, non-contacting radar technology is unaffected by environmental or process conditions. The sensor also features 80GHz FMCW Fast Sweep Technology that delivers accurate and reliable level measurements in applications that fill fast, such as wet wells and other seasonal-dependent pumping stations. This advanced and cost-effective technology allows water plants, such as the Eden Prairie Plant, to optimize process efficiency by reducing manual rounds and eliminating maintenance tasks.

This precise radar technology helps water plants achieve their sustainability goals by avoiding overflow situations and by protecting their equipment against pump dry-run situations. The Rosemount 1208 has a low environmental footprint and, because of the M12 connector technology, is a cost-effective replacement of both the sensor and cable.

> *Thanks to the Rosemount 1208 Level and Flow Transmitter, we are now confident in our wet well level measurement*
>
> ***Joe Dusek***
> *Water Plant Supervisor, Eden Prairie Water Treatment Plant*

Resources

Emerson Water & Wastewater
Emerson.com/en-us/industries/automation/water-wastewater

Rosemount 1208 Non-Contacting Level and Flow Transmitter
Emerson.com/Rosemount1208

For more information,visit
Emerson.com/Rosemount1208

00830-6100-7062 Rev BA

ROSEMOUNT™

EMERSON™