

# Wastewater Treatment Plant Reduces Maintenance Costs with Non-Contacting Radar

## RESULTS

- Reduced maintenance costs
- Increased safety of plant personnel
- Reduced environment risk of nearby residential area



## APPLICATION

Level control in sewage lift stations

## CUSTOMER

Wastewater Treatment Plant in USA

## CHALLENGE

A city wastewater treatment plant had difficulty controlling the level in their 30-ft deep lift stations. This facility maintains 17 remote sewage lift stations and controls level through a telemetry system. Low levels risked pump cavitation and high levels risked overflowing the lift tower.

This plant previously used submersible pressure transducers to control the level in the lift stations combined with backup low and high alarm float switches. Low levels required pumps to be shut off. High levels turned on pumps to send sewage into the treatment plant. Foam and debris built up on the cable of the pressure transducers and on the float switches resulting in frequent maintenance and unreliable level measurement.

High maintenance and unreliable level control lead to several negative business impacts. In order to keep the pressure transducer and float switches working properly, the facility maintenance crew scheduled preventative maintenance once a week. The cleaning and maintenance of the float switches was a safety risk for personnel as they had to descend into the lift station. Additionally, the unreliable level control risked costly pump repair or overflowing sewage into nearby neighborhoods.

***Wastewater treatment plant no longer sends personnel into well to make repairs or perform preventative maintenance.***

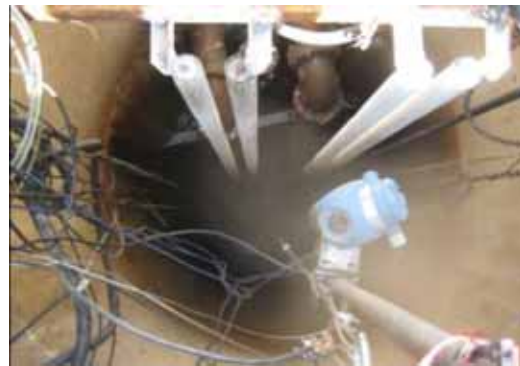


*30-ft sewage lift station*

## SOLUTION

This wastewater treatment plant installed a Rosemount 5402 Non-contacting Radar Transmitter to solve their maintenance issues on one of their lift stations. Unlike the previous technology, the 5402 provided reliable non-contacting level detection with no moving parts and easy maintenance. The top-mount installation and user-friendly configuration software made it easy to commission the 5402 in the lift station.

By improving the reliability of level control with the Rosemount 5402, this customer experienced several positive results. They significantly reduced maintenance costs and lowered safety risks by eliminating the need for weekly cleaning. Additionally, the reliable level measurement reduced risk of pump damage and risk of environmental impact from overfills. They plan to install more 5402 units to control other lift stations in the city.



*Rosemount 5402 bracket mount in lift station*

## RESOURCES

### Emerson Process Management Water & Wastewater Industry

<http://www.emersonprocess.com/solutions/water/index.asp>

### Rosemount 5400 Series Two-wire Radar Level Transmitters

<http://www.emersonprocess.com/rosemount/products/level/m5400b.html>

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