

## CASE STUDY

# Enhancing Sewer System Monitoring with Remote Radar Level Sensor

### Industry

Water and Wastewater

### Application

Manhole Sewer System  
Monitoring

### Product

ABM Non-Contact Radar Level  
Sensor and Cellular Gateway



**Figure 1:** ABM non-contact radar level sensor and cellular gateway installed in a manhole.

## BACKGROUND

A utility company identified the need for real-time remote monitoring of water levels in their sewer system to prevent overflow incidents, optimize maintenance efforts and enhance the overall efficiency of their sewer system management.

## PROBLEM

Traditional methods of monitoring sewer water levels are cumbersome and lack real-time capabilities. Alternative real-time solutions tested proved unreliable and unable to handle the harsh conditions.

## SOLUTION

The company decided to implement ABM's non-contact radar level sensor with cellular gateway (Fig. 1). The sensor provides accurate and reliable data without direct contact with the water, reducing the risk of damage and eliminating maintenance requirements. The cellular gateway ensures seamless communication, allowing data to be transmitted in real-time to a centralized monitoring system (Fig. 2).



**Figure 2:** Historical level measurements from ABM’s radar sensor in a manhole tracking water levels in the sewer system.

## BENEFITS

ABM’s non-contact radar level sensors with cellular gateways have numerous benefits:

- The radar level sensors automatically adapt to any shape and depth of manholes
- The sensors automatically push all false echoes under the noise level, eliminating interference from ladders, walls or other minor obstructions in the manholes
- Installation is simple and operation stable with fixed mounting at the top of the manhole, no ropes, submersion, flooding, or cleaning
- Remote sensor control, no need for site visits (i.e. traffic disruption), saving time and costs
- Compatible with solar panels and battery power for wireless monitoring
- Optional explosion-proof sensor enclosure and gateway enclosure for hazardous environments (i.e. sewer gases)

## CONCLUSION

The utility company can access real-time data remotely, enabling quick response to changing water levels and potential issues. Site visits are not required as the system is maintenance free, and the remote communication allows for full sensor control, optimization and troubleshooting if needed.

Continuous monitoring will allow the utility to implement proactive maintenance strategies, preventing potential system failures. The collected data also facilitates in-depth analysis, aiding in future optimization of sewer system operations.

### ABM SENSOR TECHNOLOGY

Order from: **C A Briggs Company**

622 Mary Street; Suite 101; Warminster, PA 18974

Phone: 267-673-8117 - Fax: 267-673-8118

[Sales@cabriggs.com](mailto:Sales@cabriggs.com) - [www.cabriggs.com](http://www.cabriggs.com)

