

WAVELET SEWER OVERFLOW (CSO/SSO) KIT

SUMMARY

Wavelet Sewer Overflow Kits are comprised of a level sensor, the **Wavelet data-logging** and telemetry platform, and a data management system all fused into a single streamlined solution. Level can be measured using a level switch, a **submersible hydrostatic level sensor**, an ultrasonic non-contact level sensor, or a radar level sensor. Each installation location is unique and requires the level-monitoring method best suited to it.

Some cities have a **combined sewer system**, where wastewater and rainwater are mixed in one system. **Combined Sewer Overflow (CSO)** and **Sanitary Sewer Overflow events (SSO)** occur when a significant amount of storm water causes sewage to overflow, polluting surrounding public right-of-way and water bodies. **Real-time awareness of CSO events** is critical for public health and safety and for compliance with **EPA CSO Control Policy**. Management of these time-sensitive conditions is aided by the Wavelet's automatic SMS and email alerts which trigger whenever an emergency event occurs.



A



B



C



FEATURES

- Real-Time Water Volume Data
- Continuous Flow Monitoring
- Portable Clamp-On Ultrasonic
- Flow Sensor

APPLICATIONS

- Identify Water Leakage
- Report NRW Accurately
- Simplify Flow Measurement
- Inform Water Management Strategy

SENSOR SPECIFICATIONS

A. Level Switch

Control Differential	3.8 cm (1.5 in.) above or below horizontal
Housing	High impact, corrosion resistant polypropylene
Max. Water Depth	9 m (30 ft)
Max. Liquid Temperature	60°C (140°F)

B. Non-Contact Ultrasonic Level Sensor

Range	3.8 cm (1.5 in.) above or below horizontal ft/s)
Accuracy	0.25% of measurement range. Internal temperature compensation included.
Beam Pattern	9° off axis
Frequency	43 kHz or 69 kHz (depending on model)
Body Material	PC/PBT blend upper housing; ceramic, PVDF faced transducer.
Operating Temperature	-34°C to 60°C (-30°F to 140°F)

C. Submersible Hydrostatic Level Sensor

Range	0 – 1 bar (0 – 15 psi) included. Ranges of 0 – 0.34/0.69/1.38 bar (0 – 5/10/20 psi) available.
Max. Depth	140 m (450 ft)
Accuracy	≤ 0.5% of full span
Temperature Compensation	-17°C to 54°C (0°F to 130°F)
Housing	316L SS
Certification	CSA Intrinsically Safe, Class 1, Division 1

D. Radar Level Sensor

Operation	Pulse Radar
Range	15 m (49 ft) included
Accuracy	±2 mm (±0.08 in.) of max. range)
Frequency	26 GHz
Max. Pressure	-1 – 2 bar (-14.5 psi – 29 psi)
Operating Temperature	-40°C to 80°C (-40°F to 176°F)

E. Dual-Axis Inclinometer

Range	±90° (±25° and ±45° measurement ranges also available)
Accuracy	0.15° at 25°C; 0.5° at -40°C to 80°C is typical
Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Wake-Up Time	< 1 s

All Wavelet CSO/SSO Kits include the following, along with the specified level sensor and/or inclinometer:

- Wavelet Device & Activator
- 4G (LTE), 3G, 2G, Global SIM Card
- Internal Lithium Battery
- Installation Hardware
- External Power Connector
- WA00129 External Cellular Antenna

Model No. WA1111-SE00015-WA00129

Wavelet Level Switch CSO/SSO Kit:

- A. SE00015 Float Level Switch, 15 m (50-ft) Cable

Model No. WA1111-SE00011-WA00117- WA00129

Wavelet Ultrasonic Level Switch CSO/SSO Kit:

- B. SE00011 Non-Contact Ultrasonic Level Sensor, 0.3-7.5 m (1-25 ft) Range, 10.7 m (35-ft) Cable
- B1. WA00117 Non-Contact Ultrasonic Level Sensor Installation Hardware

Model No. WA1111-SE00012-WA00129

Wavelet Hydrostatic Level CSO/SSO Kit:

- C. SE00012 Submersible Hydrostatic Level Sensor, 0-1 bar (0-15 psi), 10.7 m (35-ft) Cable.

Model No. WA1111-SE00095-WA00129

Wavelet Radar Level CSO/SSO Kit:

- D. E00095 Non-Contact Radar Level Sensor, 15 m (49-ft) Range, Mounting Bracket, 12 m (39-ft) Cable

Model No. WA1111-SE00075-WA00129

Wavelet Inclinometer CSO/SSO Kit:

- E. SE00075 Dual-Axis Inclinometer (+/-90°), 10.7 m (35-ft) Cable

