



# WAVELET LEVEL SWITCH CSO KIT

Model No. WA2220 - SE00015

## SUMMARY

Wavelet Ultrasonic Combined Sewage Overflow (CSO) Kits are comprised of an ultrasonic sensor, Wavelet data-logging and telemetry platform, and data management system all fused into a single streamlined solution. While level switches are limited to detecting when water levels cross a threshold level, ultrasonic sensors are able to measure distance, level, and volume.

Some cities have a combined sewer system, where wastewater and rainwater are mixed. CSO is the common term used when a significant amount of storm water causes the sewage to overflow, causing pollutants to enter varying water bodies. Real-time awareness of CSO events is critical for public health and safety, and compliance with the EPA CSO Control Policy. Management of these time-sensitive conditions is aided by the Wavelet's automatic SMS and email alerts when an emergency event occurs.

## WAVELET PLATFORM FEATURES

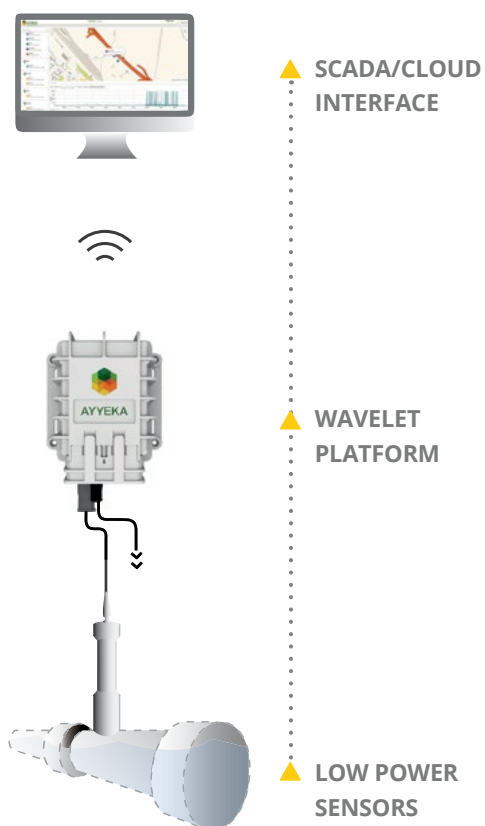
- ▶ PLUG-AND-PLAY
- ▶ BUILT-IN SCADA INTERFACE
- ▶ CYBER-SECURITY
- ▶ USER-FRIENDLY DATA VISUALIZATION
- ▶ CLOUD-BASED DATA STORAGE
- ▶ REMOTE NETWORK MANAGEMENT
- ▶ GLOBAL GSM CELLULAR SERVICE
- ▶ PROGRAMMABLE THRESHOLDS
- ▶ E-MAIL & SMS ALERTS
- ▶ GPS TIME & LOCATION SYNC
- ▶ LOW POWER CONSUMPTION
- ▶ AUTONOMOUS OPERATION



## THE WAVELET PLATFORM

Wavelet brings together end-to-end, turnkey solutions that cover all of your continuous remote monitoring needs. Starting from the smart sensors, across the transmission platform, through data management, we have created unique monitoring kits to measure and monitor a range of water supply, water quality, wastewater and hydrologic parameters. Wavelet Kits are all designed to help facilitate more effective water network management.

Ayyeka's Wavelet Kit features a fully integrated, plug-and-play monitoring solution that fits seamlessly onto any water infrastructure and sends the data securely to you. Our Kits provide you with total visibility of your networks. The Kits are easy to setup and use, and will save valuable time and money.



## SENSOR SPECIFICATIONS

Single outer casing piece in blow molded Polyethylene.

Inner chamber built as a single blow molded piece for the switch and ball seat.

Change over micro-switch.

Stainless steel ball.

Non-hygroscopic closed cell injection of expanded polyurethane in the regulator to eliminate air and to hermetically seal the unit.

Max. working pressure of 10 bar (145 psi).

Max. working temperature of 45°C (113°F).

Level control for filling and emptying tanks or cisterns.

Water resistant to 100 m (328 ft) depth with micro-switch electric contacts / change over.

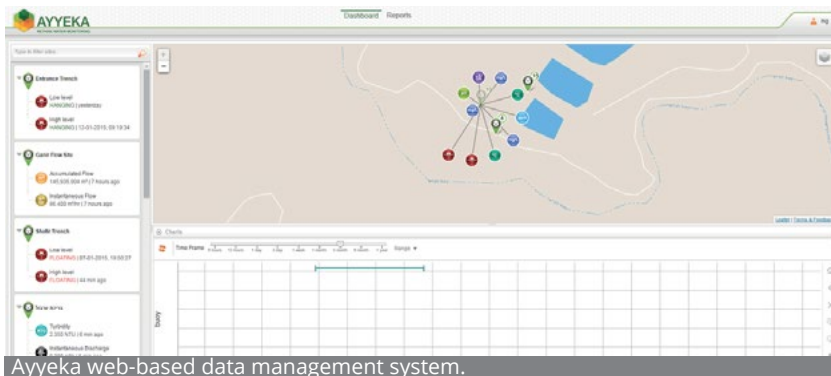
20-ft cable included, customizable in 5-ft increments.

The level switch provides a straightforward approach to combined sewer overflow monitoring.



## CASE STUDY

- ▶ **Client:** Municipality
- ▶ **Application:** Remote Monitoring of Sewage Overflow
- ▶ **Description:** The Municipality's main wastewater treatment plant receives inflow from several locations into centralized inlet sewer pits which are located in the middle of a nature reserve. Due to inadequate pre-filtration there are clogs in the system dozens of times per year which result in toxic overflow into a nearby nature reserve.
- ▶ **Solution:** Installation of Wavelet Level Switch CSO Kits now provide alerts prior to overflow, allowing for preventative cleaning of the pits prior to contamination of the reserve.



## WAVELET PLATFORM SPECIFICATIONS

### ▶ DATA & SOFTWARE

<b>Ayyeka Data Server</b>	Ayyeka Private Cloud and/or Customer On-Premises Server
<b>User Interface</b>	Web-Based, Tablet & Mobile
<b>Data Export Options</b>	Excel, CSV
<b>SCADA &amp; 3rd Party Integration</b>	OPC/DNP3/API
<b>Data Encryption</b>	AES 256
<b>Internal Memory</b>	32 GB

### ▶ CONNECTIVITY & INTERFACE

<b>Cellular Network</b>	Multi-Cellular Carrier: 2G, 3G and CDMA (Verizon)
<b>Data Transmission Profiles</b>	Periodic, Data Dependent
<b>Event Driven Alerts</b>	SMS, E-mail, API
<b>Configuration &amp; Upgrades</b>	Remotely Over-The-Air, USB PC Connection
<b>Antenna</b>	Internal or External
<b>SIM Card</b>	Included

### ▶ POWER

<b>Primary Power Supply</b>	Internal Lithium Battery
<b>Operational Run Time</b>	3,500+ Transmissions per Battery Pack, Field Replaceable Battery
<b>External Power Supply (Optional)</b>	4.5V-28V, Automatic Power Source Switching
<b>Battery Level Notifications</b>	Included

Ayyeka provides cyber-secure, plug-and-play, remote monitoring solutions designed for various markets. Founded in 2011, Ayyeka has an installed base in challenging locations and earned a reputation for excellent customer service. Bringing together a state-of-the-art hardware and cloud-based software package, Ayyeka's solutions are leading the infrastructure monitoring sector into the future.