

## Trusted Solutions for Level Monitoring

# ECHO™



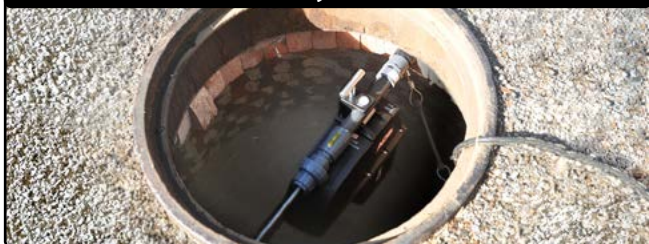
### Level Monitoring for Open Channel Flows

The ADS® **ECHO™** is an all-new generation level monitor. It gives users up to 10X more monitoring range and uses machine learning software to predict overflows long before they occur.

Coupled with its wide range of uses and low cost, **ECHO** is the leading solution for level monitoring applications.

## Collection Systems, Plants, Surface and Storm Water Structures

Sanitary Sewers



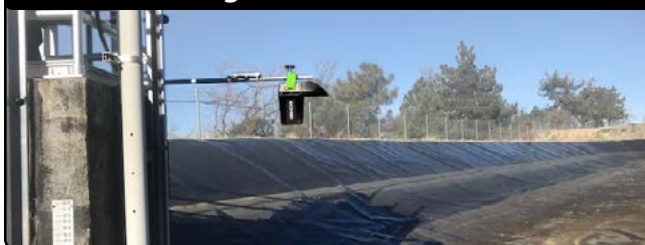
Combined Sewers



Wastewater Treatment Plants



Lagoons and Ponds



Rivers and Streams



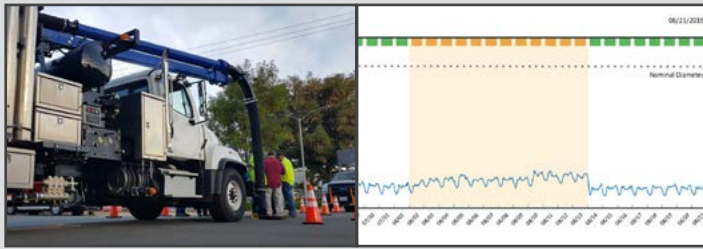
Canals



# The Wide Range of ECHO Applications Gives You Flexibility

Operations, Engineering, Planning, Modeling, and Contractor Professionals

## Efficient Cleaning Process



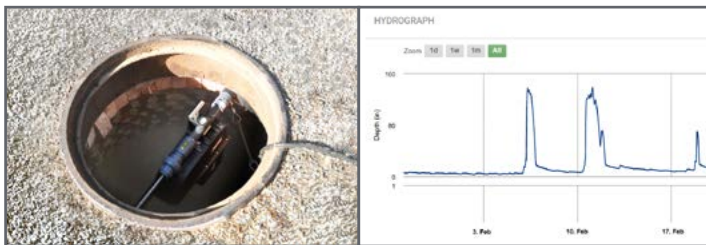
Reduce cleaning frequency and mitigate SSOs with continuous monitoring and blockage prediction software.

## CSO Data and Reporting



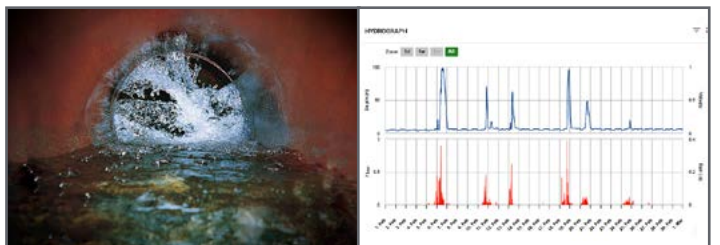
Monitor CSO activation and de-activation in real-time. Calculate overflows, prepare reports.

## Hydraulic Model Validation



Acquire data for updating and validating hydraulic models. Low cost means higher sensor density.

## I/I Scouting



**TRITON+**® flow monitor, **PRISM**™ software and field services coupled with **ECHO** comprise a comprehensive I/I assessment solution.

## Wastewater Pump Station Back-up



Avoid pump station overflows from power failures, partial pump blockages or failed alarms with ECHO back-up.

## Bypass Monitoring



Secure 24/7 protection from overflows with bypass monitoring.

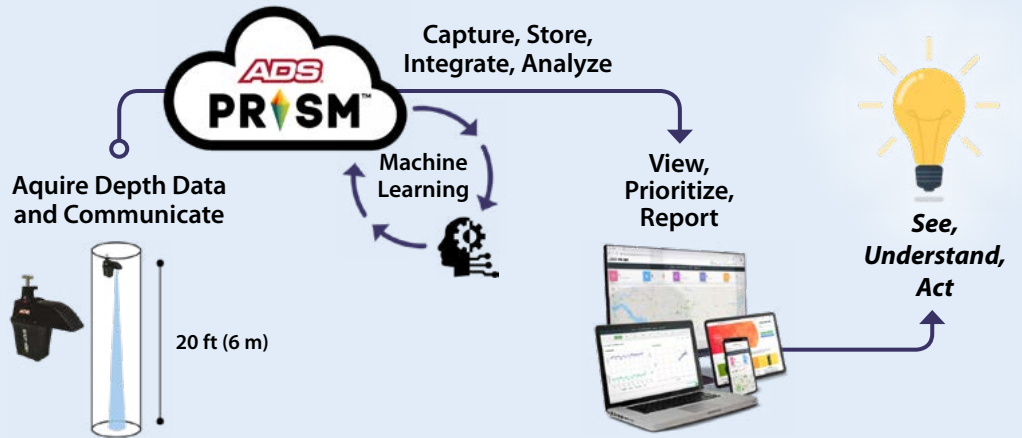
## New SSO Mitigation Advancements Give You More Assurance



- ECHO is more advanced, less expensive
- Superior redundancy - five water-level alarms
- Simultaneous up/downstream monitoring
- Total Manhole Visibility™ 20 ft (6 m) below, 8 ft (2.5 m) above **ECHO**
- True readings with sensor alignment alarm, stable mount

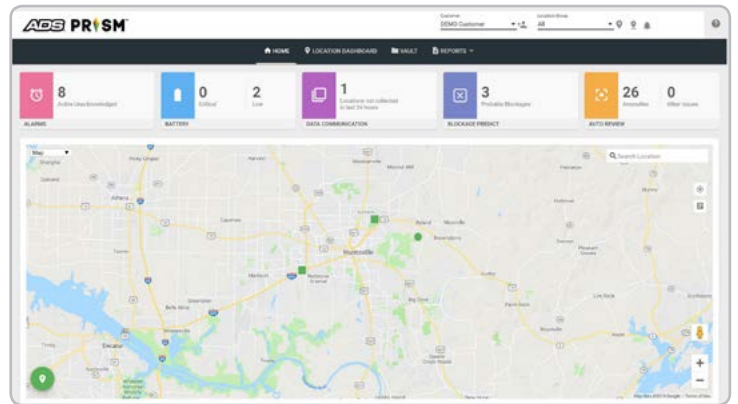
# Continuous Monitoring Drives Informed Actions

Real-time depth data is collected and communicated to the cloud-based **PRISM** software and analytics. With continuous user access, informed actions are enabled.



## ABS PRISM™ Software Enhances Understanding

**PRISM** is a cloud-based, secure software system that acquires, stores and presents data with ongoing user access. Its home page (right) provides a map view and a dashboard for quick access to essential parameters. Individual site details, hydrographs and remote site system settings are all accessible. **PRISM** APIs enable third party data exchange.



**PRISM's** new **blockage PREDICT™** app (below) uses machine learning and will predictively detect blockages, with days' or weeks' worth of warning. When detected, blockages are presented in the dashboard.

### Dashboard Reveals Prioritized List

**2**  
Probable Blockages  
BLOCKAGE PREDICT

**blockage PREDICT** lists prioritized, colored-coded symbols and access to details for sites of interest (below).

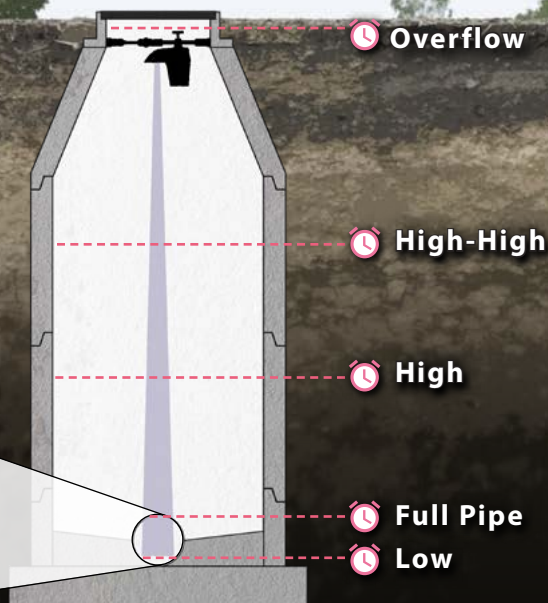
Location	Date	Status	Depth Trend
AN_204	09/16/2019	✘	
AN_110	09/16/2019	⚠	
AN_96	09/16/2019	✔	

### Real-Time Alarms

**5**  
Active Unacknowledged  
ALARMS

Dashboard summarizes Alarms and gives access details. Five redundant SSO alarms (below) guard against fast developing events.

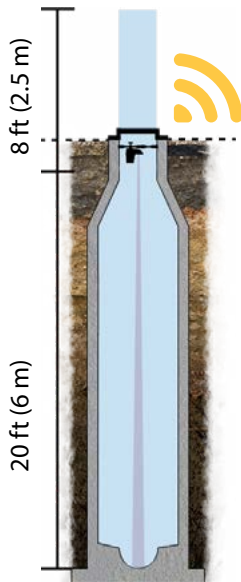
- Advanced Blockage ✘
- Developing Blockage ⚠
- No Blockage ✔



## The ECHO Difference Means New Standards in Performance:

**New LTE-M communications**  
 LTE-M communications provide improved reliability often allowing the antenna to be installed in the manhole, eliminating drilling. Set-up is fast and easy, taking just minutes.

**Total manhole visibility**  
 Typical ultrasonic sensors' measurement range is 2 ft (60 cm) into an 8 in (20 cm) pipe. **ECHO's** unique narrow beam technology provides 20 ft (6 m). Its pressure sensor provides 8 ft (2.5 m) measurement range above **ECHO**.



## ECHO System Components:



## Installation Options:

### ECHO with Tension Bar Installation



Wall Mount Bracket and Bar



The ADS **ECHO** installs quickly making it easy to move from one location to another.

Adjustable Tension Bar



## SPECIFICATIONS

<b>System</b>	dual-measurement sensor (ultrasonic and pressure), tilt alarm for sensor alignment, battery powered, wireless communication
<b>Software</b>	<b>PRISM</b> , cloud-based with data storage, dashboard, analytics and reports
<b>Modem</b>	universal for all SIM cards
<b>Communications</b>	LTE-M, 3G/4G / Worldwide MODEM
<b>Battery Life</b>	2-years (average)
<b>Submersible</b>	meets IP68
<b>Manufacturing Standard</b>	ISO-9001
<b>Intrinsically Safe</b>	CE, CSA, ATEX and IECEx certifications  Multiple intrinsic safety certifications set the ADS ECHO apart with an intense focus on safety

## Tailored, Affordable Purchase Programs

### Purchase

The ADS **ECHO** can be purchased bundled with communications and software. Every **ECHO** comes with a two-year product warranty.

### D-Site Turn-Key Service

ADS takes care of your monitoring network including equipment, software, and onsite maintenance through one low monthly fee.



### 2 Year Warranty

Our two-year warranty gives you added assurance of its quality and reliability.