Level Monitoring System
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
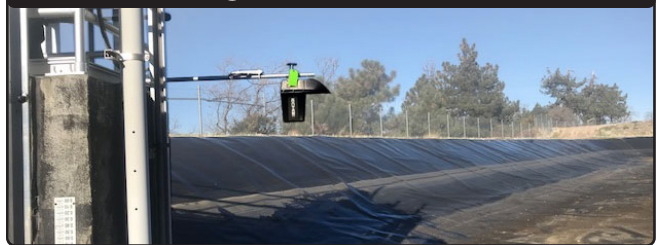
Sanitary Sewers

Combined Sewers

Wastewater Treatment Plants

Lagoons and Ponds
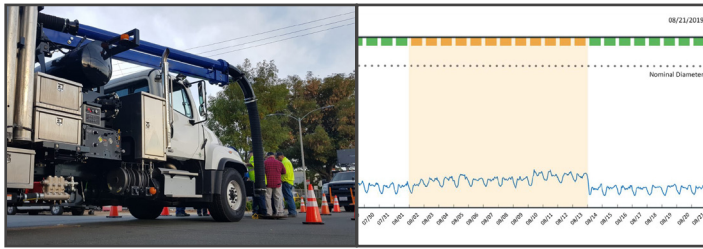
Rivers and Streams

Canals

The Wide Range of ECHO Applications Gives You Flexibility

Operations, Engineering, Planning, Modeling, and Contractor Professionals

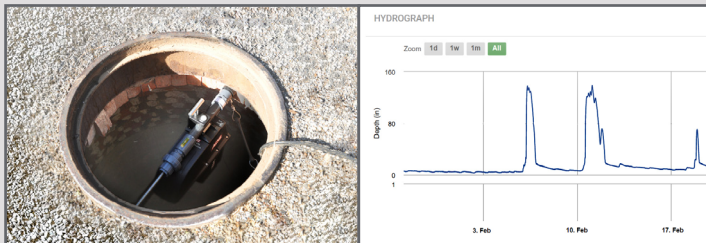### Efficient Cleaning Process

Reduce cleaning frequency and mitigate Sanitary Sewer Overflows (SSOs) with continuous monitoring and blockage prediction software.
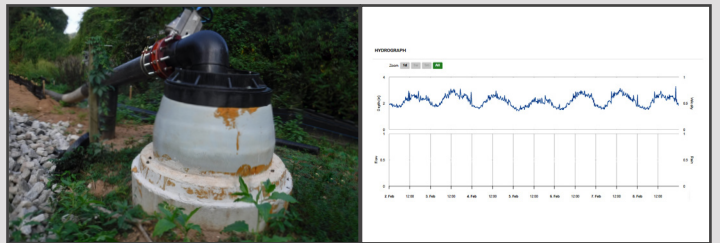
CSO Data and Reporting

Monitor Combined Sewer Overflows (CSO) activation and de-activation in real-time. Calculate overflows, prepare reports.
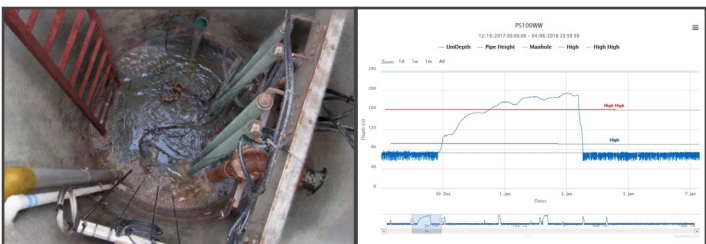
Hydraulic Model Validation

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

Bypass Monitoring

Secure 24/7 protection from overflows with bypass monitoring.

Wastewater Pump Station Back-up

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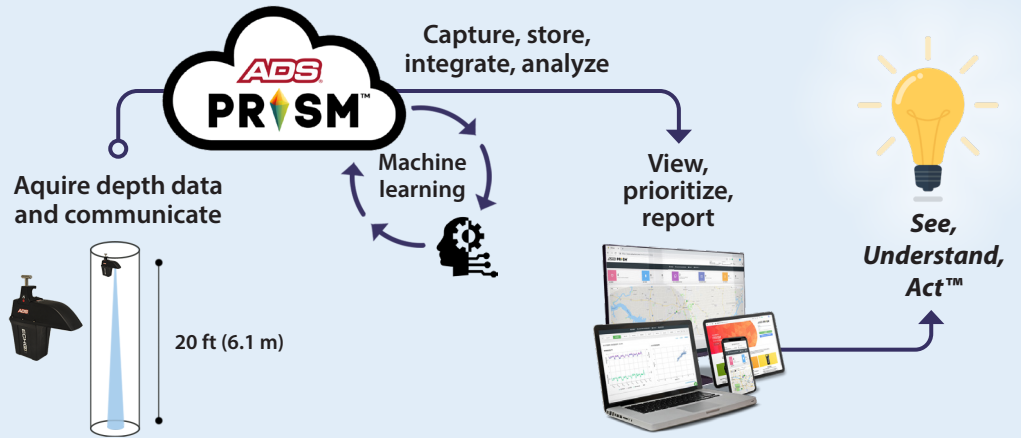
SSO Mitigation

ECHO is the latest generation level monitor. This means you get:
- Predictive, early-stage notices of developing blockages
- Precise, long range ultrasonic measurements
- Multiple high and low flow alarms
- Fast, easy installation
- Stabilized mounting with integral sensor that avoids false alarms
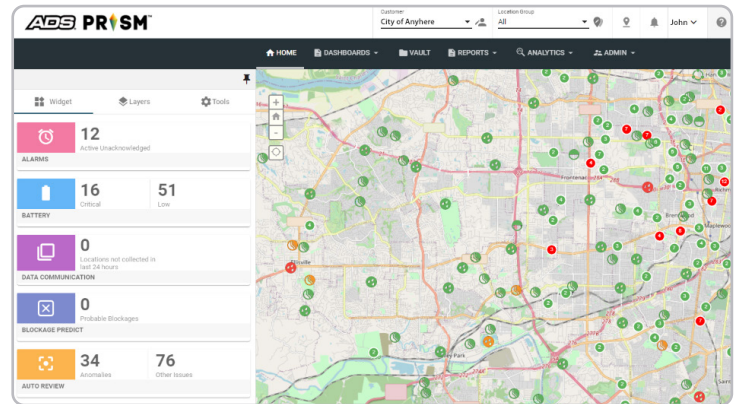

www.adsenv.com/echo

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.

ADS PRISM™

Capture, store, integrate, analyze

Aquire depth data and communicate

Machine learning

View, prioritize, report

20 ft (6.1 m)

See, Understand, Act™

ADS PR◆SM™ 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 **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.

ADS PRISM™

Customer: City of Anyhere   Location Group: All   John ▾

🏠 HOME   📊 DASHBOARDS ▾   📦 VAULT   📄 REPORTS ▾   🔍 ANALYTICS ▾   👥 ADMIN ▾

Widget   Layers   Tools

⏰ **12** Active Unacknowledged
ALARMS

🔋 **16** Critical   **51** Low
BATTERY

🔲 **0** Locations not collected in last 24 hours
DATA COMMUNICATION

⊠ **0** Probable Blockages
BLOCKAGE PREDICT

✳ **34** Anomalies   **76** Other Issues
AUTO REVIEW

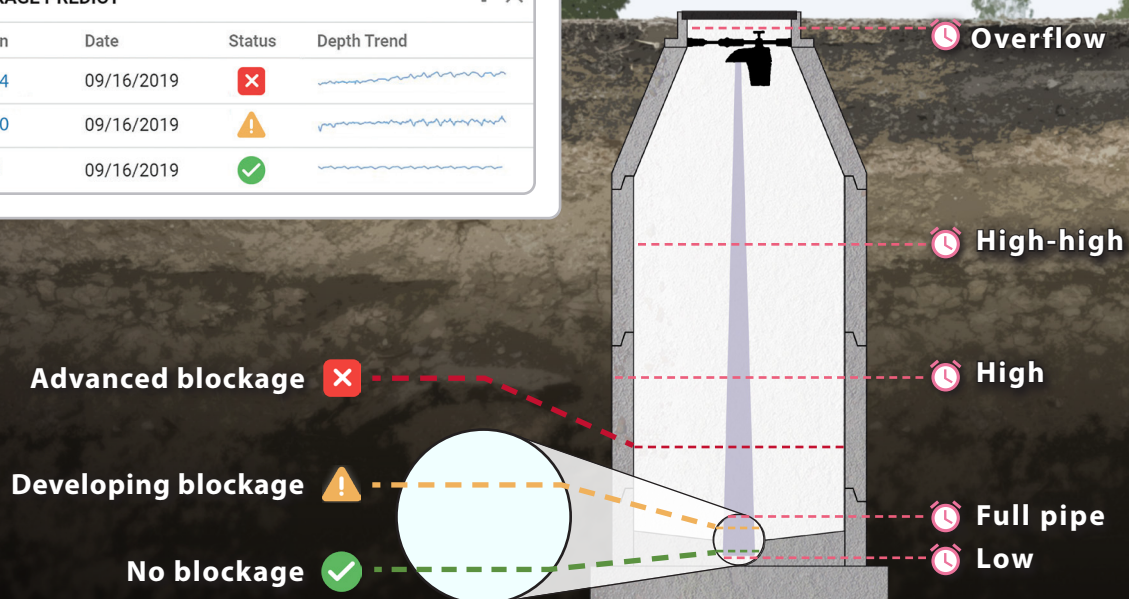## Dashboard Reveals Prioritized List

⊠ **2** Probable Blockages
BLOCKAGE PREDICT

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

BLOCKAGE PREDICT

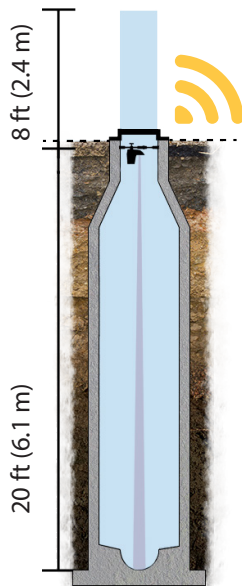| Location	Date	Status	Depth Trend
AN_204	09/16/2019	❌	〰️
AN_110	09/16/2019	⚠️	〰️
AN_96	09/16/2019	✅	〰️

Real-Time Alarms

⏰ **5** Active Unacknowledged
ALARMS

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

⏰ **Overflow**

⏰ **High-high**

⏰ **High**

Advanced blockage ❌

Developing blockage ⚠️

⏰ **Full pipe**

No blockage ✅

⏰ **Low**

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ADS

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
ECHO's unique narrow beam technology provides up to a 20 ft (6.1 m) range and its pressure sensor can read up to 8 ft (2.4 m) above the **ECHO**.

8 ft (2.4 m)

20 ft (6.1 m)
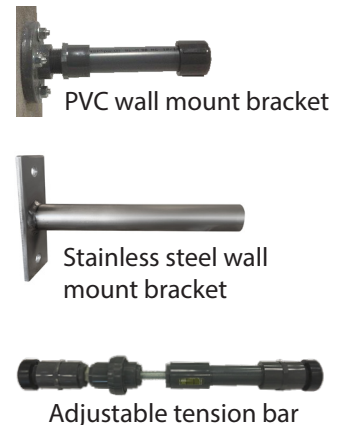
ECHO System Components:

Antenna connector
T-handle
Parabolic beam-focusing head
Ultrasonic transducer
Pressure sensor
Battery pack

"Bullseye" level located on top assures alignment in seconds

Installation Options:

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

PVC wall mount bracket

Stainless steel wall mount bracket

ECHO with tension bar installation

Adjustable tension bar

SPECIFICATIONS

System	Dual-measurement sensor (ultrasonic and pressure), tilt alarm for sensor alignment, battery powered, wireless communication
Software	**PRISM**, cloud-based with data storage, dashboard, analytics, and reports
Communications	Third-party, FCC/IC/EC- and carrier-approved wireless modem
	Compatible with all 4G LTE-M networks worldwide with 2G fallback
	Automatically detects installed SIM upon boot up to determine correct network
	Modem FCCID: R17ME910C1WW
Battery Life	Up to 2 years depending on operating temperature, modem power management, and frequency/type of communications
Submersible	Meets IP68
Manufacturing Standard	ISO-9001
Intrinsically Safe	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.

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.

WARRANTY 2 YEAR WARRANTY

Learn more about ECHO:
www.adsenv.com/echo

Access PRISM:
https://www.adsprism.com

Call: 800.633.7246
Email: adssales@idexcorp.com

Specifications subject to change without notice.