



YSI Systems & Services

CUSTOM MONITORING SOLUTIONS FOR A CHANGING WORLD



Table of Contents

- 02 Custom Monitoring Systems
- 06 Field Deployment Solutions
- 07 Data Delivery
- 08 Open Channel Flow
- 09 Spatial Water Mapping
- 10 Support/Maintenance

Thank you for considering YSI as your partner in water monitoring system design, installation, and maintenance.

We understand that every monitoring site comes with unique challenges. YSI's Integrated Systems and Service (ISS) division is here to help. We pride ourselves in designing professional-grade systems that are customized to your monitoring needs to provide reliable data for decision making.

Our experienced technicians also provide services to ensure your industry-leading instrumentation is installed correctly and maintained properly. With decades of experience in-house, direct product training, and resources from manufacturing, our experts are ready to handle the detailed logistics to ensure your site is functioning correctly for proper data collection. In addition, we also support system design, installation and maintenance for many manufacturers' equipment.

YSI has the experience and the state-of-the-art equipment to provide you with Data as a Service— the ability to conduct your site survey and provide you with the highest quality data.

Thank you for your interest in YSI and for reviewing our catalog. We are ready to partner with you to provide world-class support in service and system requirements.



Tom Goucher | Product Manager, ISS



Let us help you solve your water monitoring challenges.

For more than 10 years, our YSI Integrated Systems and Service team has installed and maintained field monitoring systems of all sizes and complexities. Projects from one site to 300 have been completely managed by our Integrated Systems and Services division. Our services professionals have the expertise to handle the detailed logistics for professional-grade installations, and to ensure your instrumentation is installed correctly for proper data collection.

Support from YSI's Systems Team includes:



Custom Monitoring Systems

Design and implement custom monitoring systems to meet goals and regulatory requirements.



Spatial Water Mapping

Surveys of reservoirs, lakes, streams, or open water study areas.



Field Deployment Solutions

Installation and maintenance in harsh and remote environments.



Open Channel Flow

Installation, deployment, and indexing using Xylem brand acoustic doppler instrumentation.



Data Delivery

Custom data acquisition and data visualization systems using cutting edge technology.



Data as a Service

On-site professionals conduct water quality, bathymetry, side scan sonar, water velocity and discharge measurements / surveys.



Support/Maintenance

On-site contracted and preventive maintenance solutions to fit your needs and budget.



Contact YSI Integrated Systems & Services about your next project!

[YSI.com/SYSTEMS](https://www.ysi.com/SYSTEMS)



Custom Monitoring Systems



▲ Portable aluminum chests allow site flexibility while maintaining a secure monitoring solution for deployment at multiple sites.

Well-designed monitoring networks allow organizations to concentrate on data analysis, modeling, and decision making. We understand unique situations demand custom solutions, that's why our team has design, instrumentation, and control experience in natural resource, environmental, municipal, industrial, compliance and process monitoring.

Choose between custom floating or land-based (fixed or portable) monitoring platforms for your site.

Stay ahead of the game with a fixed or portable monitoring system that is custom designed to your specifications.

Designed for easy lifting, **portable aluminum chests** allow site flexibility while maintaining a secure monitoring solution for deployment at multiple sites. Several portable options for material are available including custom powder coated aluminum, fiberglass or stainless steel. Chests are built to survive in challenging conditions that conventional systems can't handle.

The integrated electronics packages are housed in NEMA 4X rated enclosures to ensure your equipment. This data collection platform (DCP) is also available with submersible pressure cases for deployment locations that face potential flooding.

- Vandal-resistant, flexible conduit provides sensor connection to the box
- Scale-able solar power or A/C systems
- Secure, lockable lid



▲ This example of a custom designed system includes the following instruments: YSI EXO2 Sonde (1), SonTek-SL (2), SonTek RiverSurveyor® (3), YSI Nile Radar (4), and YSI Amazon Bubbler (5).

Fixed mast-mounted, metal walk-in sheds or constructed walkways and platforms offer a secure option for long-term monitoring.

These versatile, advanced systems measure water quality, level, water velocity, total flow/discharge, and meteorological parameters in real-time. Systems are designed to meet almost any compliance criteria and protect public safety.

- Components include: level, precipitation, water quality, velocity and flow sensors and automated samplers
- Data loggers initiate sampling routines based on event criteria
- Deliver real-time data via cellular or radio modems
- Expandable for future needs
- Compatible with all of Xylem's sensor offerings, and many 3rd party sensor offerings



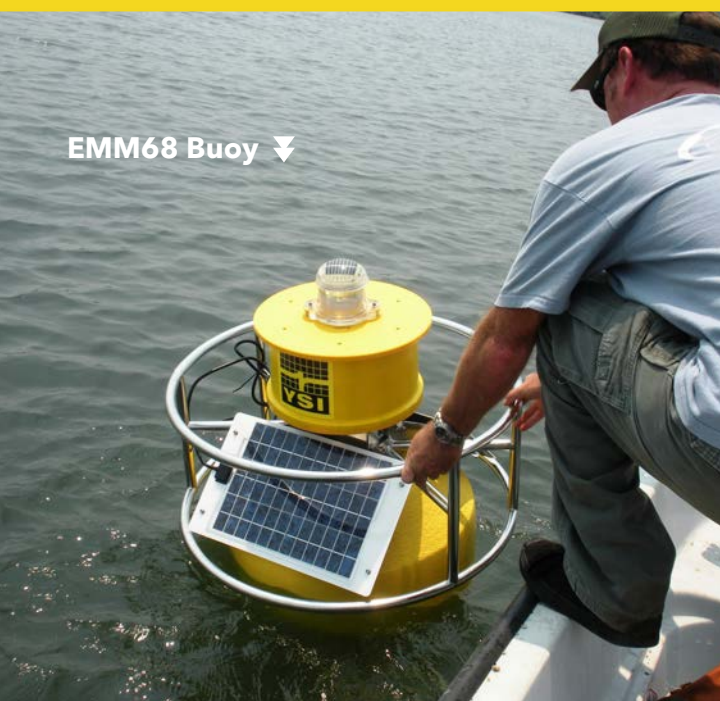
Project Highlight:

Client: City of Kissimmee
 Location: Kissimmee, Florida, USA
 Years of Work: 2005 - Present

YSI designed, constructed, and integrated a network of 20 river adjacent, solar-powered stations with telemetry. Stations monitor stream water quality, flow, and pollutant loading information throughout the city's watershed for compliance with state regulations. This service contract includes site maintenance, instrument calibration and data collection.



▲ Pontoon Vertical Profiling System



EMM68 Buoy ▼



EMM2.0 Coastal Buoy ►►

Custom floating vertical profiler buoys offer quick deployment from the shoreline or small boat. Built with through-hull penetration for monitoring equipment, these buoy platforms make routine servicing simple, fast and secure.

The buoy hull is built to survive impact and the toughest environments. Marine-grade antifouling paint reduces the accumulation of biofouling organisms.

Buoys can be easily customized to maximize instrumentation on a single monitoring platform. Add satellite, radio, or cellular telemetry to provide data to a custom visual display, making it easy for researchers and operators alike to receive critical data on a daily basis. We offer a variety of buoy platforms which can be tailored to fit your needs.



Industrial



Hydropower



Dredging



Drinking Water Reservoirs



General Monitoring



University /Research

There are many options when "building" a monitoring buoy:

- **Meteorological Package** - Additional parameters to complement your monitoring program
- **Wireless Data Transmission** - Several options to wirelessly transmit data
- **Satellite Communications** - Either Iridium or GOES telemetry can be fitted on this system
- **Current Profiling** - Can be combined with a Current Profiler, either bottom mounted or downward looking
- **Wave Sensor** - The buoy is compatible with an Aanderaa MOTUS Wave Sensor. Intended for commercial as well as research use, the MOTUS sensor processes wave data and is configurable to present parameters and wave spectrum directly.

Magnetic on/off switch simplifies on-site maintenance, providing a way to cycle power without opening housing.

Multipurpose beacon adds to overall cost-effective solution.

Locking well caps add security while maintaining ease-of-use.

Sonde tubes can raise to allow reduced storage footprint

Designed to support the **EXO platform**.

*EMM150
Inshore Buoy*





Field Deployment Solutions

Harsh environments, remote locations, weather conditions, wildlife, and sites accessible only by boats, airboats, helicopters, or swamp buggies won't stop our team. YSI technicians have construction and installation experience in the field including: hardware installation, civil engineering work, and complete system implementation.

- Site Selection
- Construction
- Installment/Deployment
- Data Collection Method Assessment



Lagoon Negra, Chile

YSI Services has delivered and installed thousands of hydro-meteorological data delivery solutions that utilize cutting edge telecommunication technology: cellular, satellite, spread spectrum and licensed radio frequencies, as well as fiber-optic and Wi-Fi LAN connections.

- Real-time Data Delivery
- Web-hosted Data Solutions
- Custom, Budget-conscious, Data Acquisition Systems
- Third-party Database Interface and Data Display Solutions



Turn-key monitoring systems are based around our innovative Storm 3 data logger and include a NEMA-4X rated enclosure. Designed with Wi-Fi connection, the Storm 3 allows easy configuration and data collection using the browser-based graphical user interface (GUI), with all standard web browsers on PCs, tablets, and smart phones. These systems include 1 year of our Storm Central web hosted data solution, and where applicable, 1 year of cellular telemetry.

For more complex sites, our DL Series* of high precision Data Loggers is recommended. These low powered instruments feature multiple capabilities including sensor measurement, direct communication and telecommunications, data analysis, ability to control external devices, and onboard nonvolatile storage—just to name a few.

*Only available in a system, not sold as a stand-alone product. DL Series does not include a year of Storm Central.

Data Delivery



Project Highlight:

Client: South Florida Water Management District
Location: Florida, USA
Years of Work: 2002 - Present

Over the last 10 years, the state of Florida has contracted with YSI to establish a network for the purpose of management and protection of water resources for a 16-county area (6 million residents).

YSI technicians constructed and installed over 200 stations in and around the Everglades. 25 major pumping stations and over 2,000 water control structures serve to balance and improve water quality and flow control in 1,800 miles of canals and levees. Supervisory Control and Data Acquisition (SCADA) Systems monitor and control the network of more than 700 operational sites with the support of real-time radio telemetry.

This service contract includes: daily data collection, site and instrument maintenance, emergency repair services, on-going system upgrades and new installations.



Open Channel Flow

To help customers gather accurate flow data, YSI Services' team of engineers, field technicians, and hydrologists install, deploy, and index SonTek ADPs and ADVs. The team also provides custom mounting as well as routine data validation and velocity indexing.

- Professional Installation, Setup, and Calibration
- Custom Permanent Mountings
- Professional Velocity, Flow, and Geometric Surveys
- Data as a Service





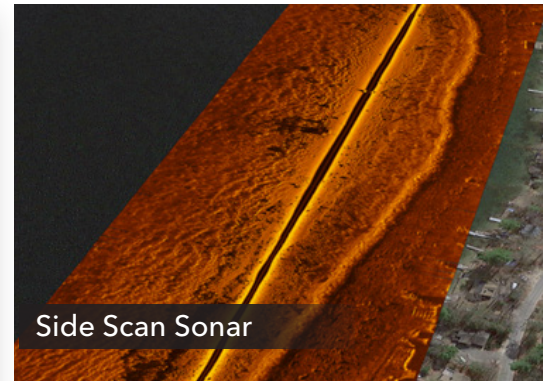
The YSI Services team will configure and deploy an **EcoMapper** Autonomous Underwater Vehicle (AUV) or **HYCAT** Autonomous Surface Vehicle (ASV) to survey reservoirs, lakes, streams, or open water study areas. The study can provide spatial maps of temperature, conductivity, dissolved oxygen, pH, turbidity, blue-green algae, and chlorophyll as well as complete bathymetric surveys. YSI can conduct your site survey and provide you with the highest quality data - Data as a Service.



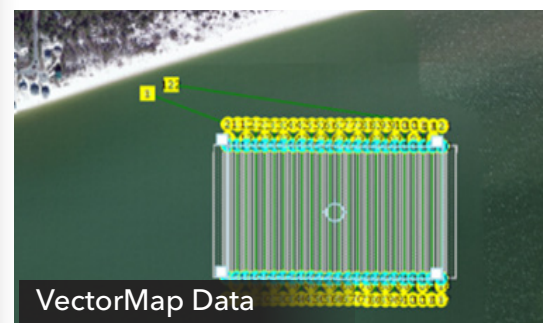
Custom Waypoints



HYCAT



Side Scan Sonar



VectorMap Data



Support / Maintenance



After your project is installed, the hard work begins. Let YSI's Service Specialists Support You!



In addition to selling standard Systems products, YSI is able to complement hardware supply with installation, design, maintenance and customization services. We offer everything from annual checkouts and data monitoring verification to on-site maintenance and management contracts to keep your data collection network running smoothly.

We provide services that will keep you up and running, collecting reliable data for years. Proper maintenance helps monitoring systems provide reliable data. We know longer intervals between maintenance and fewer failures equal significant savings in time and money. Use a cost-effective service level agreement to enhance operational reliability through on-site operational and preventive maintenance solutions.

After project installation services include:

On-Site Contract Services

Complete station maintenance (calibration, site upkeep, communication verifications, system upgrades and data review) and management. This maintenance contract is directed at customers who own a network of monitoring stations and

desire a turn-key supplier.

Preventative Maintenance

Can include scheduled inspections, calibrations, system verification/analysis, personnel training on system and data review service. Directed at customers with field staff that can be utilized to maintain their own networks, simple low upkeep networks where scheduled visits suffice or for customers with limited budgets.

Factory Exchange

This contract is directed at customers who want to amortize equipment obsolescence and failure into their annual budget.

Data verification

Verification of validity of data based on sensor diagnostics, statistical confirmation and experienced staff member review.

Repair Service

YSI has factory repair service centers located throughout the USA. Custom support & maintenance plans to meet specific needs are available.





Project Highlight:

Client: Woolpert Engineering
Location: South Carolina, USA
Years of Work: 2010 - Present

YSI custom designed 15+ stormwater monitoring stations throughout South Carolina for Woolpert Engineering and several of their municipal clients. YSI provided instrumentation, site design, installation, telemetry, integration and programming.



Reliable Service, Dependable Systems

YSI and Xylem Analytics have operations and support in strategic locations on 6 continents, and in over 30 facilities. Specialists in our dedicated Regional Integration Centers (RICs) around the world provide unique services that directly support our manufactured products.

Xylem specialists with in-depth applications knowledge, help to utilize all resources to solve customer problems. We are always looking at new products

and technologies to improve our solutions; striving to provide innovative solutions to address rising energy costs, enhance process efficiency and meet tighter regulations. Xylem brand sensors and equipment are manufactured and designed for the conditions encountered across the globe.

Our environmental instrumentation solutions for water level monitoring and water quality analysis are specifically designed for

unattended remote operation for extended periods. We understand that every site is unique, and also have the ability to integrate 3rd party equipment in order to provide the desired solution for your site.

We are committed to providing the best tools available to solve challenges in the field, laboratory or wherever they may be.



Visit [YSI.com/Regional-Integration-Center](https://www.ysi.com/Regional-Integration-Center) to find support near you.



Find a
**REGIONAL
INTEGRATION
CENTER**
Near You!

TO LEARN MORE ABOUT PARTNERING WITH YSI:

 [YSI.com/Regional-Integration-Center](https://www.YSI.com/Regional-Integration-Center)

xylem
Let's Solve Water

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com

E130-04 0619



Buoy Vertical Profiler



Pontoon Vertical Profiling System



Fixed Vertical Profiler



YSI, a Xylem brand
7100 Business Park Drive, Suite B
Houston, TX 77041
Tel +1.727.565.2201
Fax +1.937.767.9353
www.xylem.com



© 2019 Xylem E130-04 0619

YSI.com/Systems