



CIROH
Cooperative Institute for Research
to Operations in Hydrology

THE UNIVERSITY OF
ALABAMA | Alabama Water
Institute

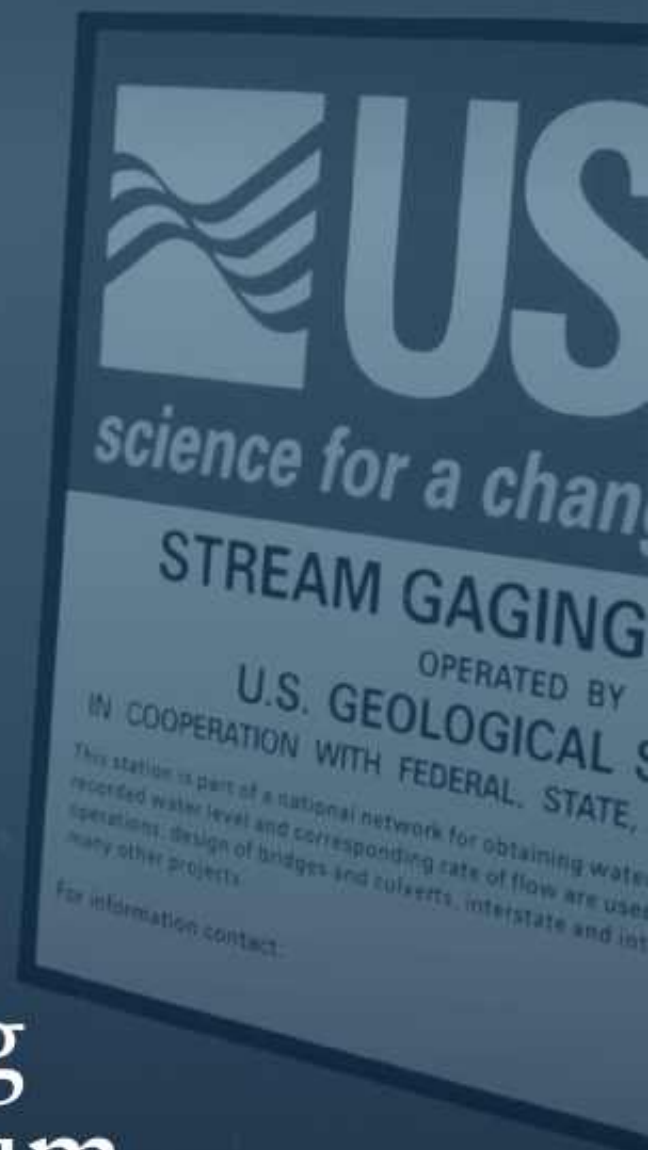
2026 COMPANY LOOKBOOK

Water Observing Technology Forum

July 28–30, 2026

Tuscaloosa, Alabama • USGS HIF

Co-hosted by CIROH and the
U.S. Geological Survey



Where non-contact monitoring and artificial intelligence meet water observing.

The way water is observed is changing. Traditional gauge networks depend on instruments in the water and structures on the bank, which makes them costly to build, costly to maintain, and sparse across the landscape they are asked to describe. Two developments are maturing at the same time: non-contact technologies that measure water level, velocity, and quality from above the surface or from reflected satellite signals, and artificial intelligence that quality-controls, aggregates, and draws prediction from the data those instruments produce. Where the two meet, monitoring becomes possible at sites, scales, and costs the traditional network could not reach.

The 2026 Water Observing Technology Forum takes up that convergence directly. Its theme is the impact of non-contact water monitoring technologies, enhanced with artificial intelligence, on water monitoring operations. The setting matches the subject: two days at the new USGS Hydrologic Instrumentation Facility on the University of Alabama campus, the facility that tests and supports the instruments used across the USGS national monitoring networks. The program brings technology demonstrations, facility tours, a poster session, and breakout sessions – with the companies that build these technologies and the agencies that operate them in the same room.

17

EXHIBITING &
PARTICIPATING
COMPANIES

4

CATEGORIES ACROSS
THE OBSERVING
LANDSCAPE

3

DAYS, JULY 28-30,
2026

2

DAYS AT THE USGS HIF

ABOUT THIS LOOKBOOK

This lookbook introduces the companies exhibiting and participating at the forum, grouped into four categories that reflect the parts of the water-observing landscape they work in. Each profile describes what the company does, how its work relates to water observing, and what the company is doing at the forum.

Profiles and product imagery draw on each company's published materials and websites, and are organized alphabetically within each category. The aim is to help attendees know who is in the room and find the conversations most useful to them.

EXPLORE BY CATEGORY

01

9 companies · p.05

Sensors & Instrumentation

Aquatic Sensors · beadedstream · Bluesonde · CSignum ·
Geolux · Green Stream · JOA Surveys · Simplicity
Integration · Xylem

02

4 companies · p.15

Data & Software

Aquatic Informatics · KISTERS North America · Palaver AI
· Synoptic Data PBC

03

2 companies · p.20

Computing & Connectivity

Ericsson · Sterling

04

2 companies · p.23

Research & Modeling

Lynker Technologies · Stroud Water Research Center

Seventeen organizations, four categories.

COMPANY	FOCUS	AT THE FORUM
01 • SENSORS & INSTRUMENTATION		
Aquatic Sensors	Distributor of water-monitoring instruments	Exhibiting
beadedstream	Temperature-sensing cables & remote loggers	Attending
Bluesonde Technologies	Real-time water-quality buoys	Attending
CSignum	Electromagnetic Field Signaling (EMFS)	Poster & HIF demo
Geolux	Non-contact radar water-level & flow	FX200 radar flow meter & LiDAR demo
Green Stream Technologies	Low-cost flood sensors & telemetry	Attending
JOA Surveys, LLC	Tides, datums, GNSS reflectometry	Poster – GNSS reflectometry
Simplicity Integration	Low-cost flood sensors with AI analytics	AI platform & flood-warning demo
Xylem	YSI · SonTek · WaterLOG monitoring brands	SonTek poster session & HIF tour sponsor
02 • DATA & SOFTWARE		
Aquatic Informatics	Water-data-management software (AQUARIUS)	Exhibiting & USGS strategic client partner
KISTERS North America	Water information systems & sensors	Exhibiting, with a technology demo
Palaver AI	Enterprise generative-AI platform	Attending
Synoptic Data PBC	Real-time environmental observation platform	Demo of online programs, several free to use
03 • COMPUTING & CONNECTIVITY		
Ericsson	5G and wireless connectivity	Exhibiting
Sterling	Global solutions integrator	Presenting with Dell & H2O.ai, including demo
04 • RESEARCH & MODELING		
Lynker Technologies	Hydrologic modeling & forecasting	Attending
Stroud Water Research Center	Research, education, open-source sensing	Exhibiting, poster & forum panel

Full profiles follow, alphabetical within each category.

01

Sensors & Instrumentation

9 COMPANIES

Companies that make or supply the instruments and field hardware used to observe water: radar and acoustic sensors, water-quality instruments, temperature profiling, flood sensors, wireless underwater data transport, and GNSS-based water-level methods.

Aquatic Sensors · beadedstream · Bluesonde ·
CSignum · Geolux · Green Stream · JOA Surveys ·
Simplicity Integration · Xylem



Aquatic Sensors

EXHIBITING SPONSOR



FOUNDED

2005

HEADQUARTERS

Santa Clara, California

ROLE

Distributor of water-monitoring instruments

WEBSITE

www.aquaticsensors.com

Aquatic Sensors supplies water-monitoring instruments from manufacturers around the world to customers in North America, working as a distributor that brings sensing products developed elsewhere into the regional market. Its catalog spans water-quality sensors, water-quality buoys, profilers, wave buoys, and small autonomous underwater vehicles.

Among the products it carries is the Bluesonde real-time water-quality buoy, which is also represented at the forum. A distributor of this kind is a route to a range of emerging instruments, including international technologies, without each manufacturer maintaining its own North American presence.

AT THE FORUM

Exhibiting.



beadedstream

ATTENDING



FOUNDED
2004

HEADQUARTERS
Anchorage, Alaska

FOCUS
Temperature-sensing cables
and remote data loggers

WEBSITE
www.beadedstream.com

beadedstream manufactures digital temperature-sensing cables and solar-powered, satellite-telemetered data loggers built for environmental and infrastructure monitoring in remote and extreme conditions. The sensing cables record vertical temperature profiles, the loggers transmit data directly by satellite from off-grid sites, and the sensors are designed to integrate with major third-party data loggers.

Vertical temperature profiles are used in monitoring of snow, soil, permafrost, and water temperature. The company also offers a machine-learning temperature forecasting tool that combines its sensor measurements with NOAA weather forecasts to project temperatures at monitored sites – an example of analysis applied to data at the point of collection.



Bluesonde Technologies

The logo for Bluesonde Technologies, featuring the word "bluesonde" in a sans-serif font. The "o" is stylized with a blue and orange circular graphic.

ATTENDING

FOUNDED

2024

HEADQUARTERS

Portland, Maine

FOCUS

**Real-time water-quality
buoys**

WEBSITE

www.bluesonde.com

Bluesonde develops compact, solar-powered water-quality monitoring buoys that report in real time over cellular, satellite, or Bluetooth connections. A modular sensor configuration measures parameters such as temperature, dissolved oxygen, conductivity, pH, turbidity, and chlorophyll, with options tailored to aquaculture, harmful algal blooms, stormwater runoff, and dredging. Patent-pending anti-fouling technology extends the interval between maintenance visits. The company was founded in 2024 by hardware engineers whose prior work involved buoy systems for ocean-based carbon removal.

Continuous, real-time water-quality measurement supports tracking of conditions such as dissolved oxygen, temperature, and turbidity across freshwater, marine, and industrial waters. Bluesonde has placed early units with partners in Maine, including a university marine center and an oyster farm, and its buoys have been used by University of New England students studying coastal conditions in the Gulf of Maine.



CSignum

EXHIBITING SPONSOR

DEMO



FOUNDED

2020

HEADQUARTERS

Bathgate, United Kingdom

TECHNOLOGY

**Electromagnetic Field
Signaling (EMFS)**

WEBSITE

www.csignum.com

CSignum produces a wireless communication platform that transmits data from underwater and underground sensors through water, ice, and ground, using patented Electromagnetic Field Signaling. The approach removes the cabling that submerged sensors normally need to reach the surface, and it is not affected by turbidity or biofouling. It is the first commercially deployed system to transmit data through these media.

The platform integrates with widely used sensors and supports water-quality monitoring, smart-buoy networks, coastal monitoring, and subsea infrastructure. It provides a way to recover data from instruments placed below the water surface without a physical connection to a bankside or surface logger – the step that often constrains where submerged sensors can be deployed.

AT THE FORUM

Presenting a poster, "Wireless Water Monitoring," and planning an in-situ demonstration at the HIF that retrieves real-time data transmitted wirelessly through water to the surface.



Geolux

CATERING SPONSOR

DEMO



FOUNDED

2007

HEADQUARTERS

Zagreb, Croatia

REACH

More than 80 countries

WEBSITE

www.geolux-radars.com

Geolux designs and manufactures radar-based instruments that measure water level, surface velocity, and flow without contact with the water. The instruments transmit microwave signals toward the surface and read the returning waves, which allows them to be mounted well above the water – up to thirty to fifty meters – keeping the hardware clear of the flow during high water. The product line includes radar level sensors, surface-velocity and flow meters, data loggers, and a cloud platform, along with a radar snow-depth sensor and rain gauge, and the company has introduced phased-array radar that steers the beam electronically.

Radar measurement of stage and surface velocity produces the water-level and velocity records used to estimate discharge and to support flood monitoring and early warning. Geolux instruments are deployed in hydrological and flood-warning networks internationally, including a Croatian program that modernized more than six hundred monitoring stations.

AT THE FORUM

Demonstrating the FX200 radar flow meter with an integrated LiDAR channel-profile scanner.



Green Stream Technologies

ATTENDING



FOUNDED

2017

HEADQUARTERS

Wake Forest, North Carolina

FOCUS

Water-level sensors and flood alerting

WEBSITE

www.greenstream.com

Green Stream Technologies builds real-time flood-monitoring systems using solar-powered water-level sensors connected over LoRaWAN. The autonomous sensors measure the distance from the unit to the water surface to calculate water height and depth, report at regular intervals to a cloud platform, and feed a web dashboard, threshold alerts, and integrations with emergency-management systems and consumer apps such as Waze. The company began with a flooding problem in Norfolk, Virginia, and also offers rain gauges and is developing predictive flood analytics.

Autonomous, water-level sensors of this kind extend flood observation to roadways, bridges, and neighborhoods that fall outside traditional gauge networks. The company has deployments across coastal and inland communities in Virginia and North Carolina and works with Old Dominion University on where and how densely to place sensors.



JOA Surveys, LLC

ATTENDING

PRESENTING



FOUNDED

2003

HEADQUARTERS

Anchorage, Alaska

FOCUS

Tides, water level, datums,
GNSS reflectometry

WEBSITE

www.joasurveys.com

JOA Surveys is an Alaska-based geodetic and hydrographic surveying firm specializing in tides, water-level measurement, vertical datums, and geodetic networks. Since 2003 it has supported shoreline mapping, hydrographic surveys, bathymetric LIDAR surveys, and datum determination, and it has built tide-gauge benchmark networks for NOAA water-level stations and developed an online tool that computes tidal datums using NOAA methodology.

The firm works with GNSS interferometric reflectometry, which derives water level from satellite signals reflected off the water surface rather than from an instrument in contact with the water. It has deployed GNSS-reflectometry alongside conventional tide stations for comparison — work aimed at filling gaps in water-level observing networks along stretches of Alaskan coastline where stable surfaces for traditional gauges are scarce.

AT THE FORUM

Presenting a poster, “Expanding water level observing networks using GNSS Interferometric Reflectometry.”



Simplicity Integration

EXHIBITING SPONSOR

DEMO



FOUNDED
2020

HEADQUARTERS
Vancouver, Canada

FOCUS
Turnkey flood monitoring
with AI analytics

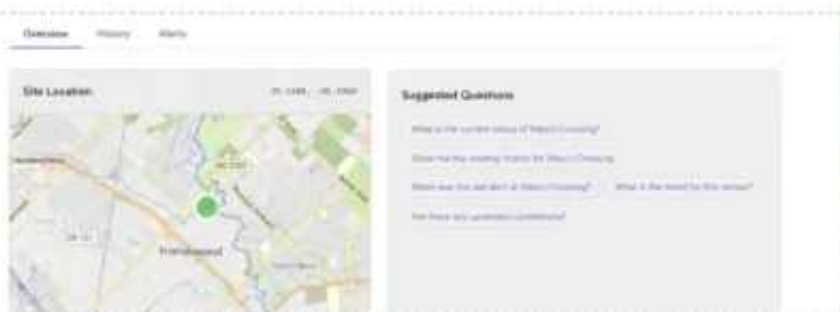
WEBSITE
www.simplicityintegration.com

Simplicity Integration provides a low-cost, turnkey water- and flood-monitoring solution that pairs field sensors with an AI service for historical and predictive analytics. The company, founded in 2020 and a certified women-owned small business, holds a 2023 US patent for rapidly deployable level sensors in high-water and urban environments. Sensor configurations cover bridges, streams, retention ponds, and low-water crossings, report over cellular or satellite, and can drive automated responses such as warning lights, sirens, and gates.

Water-level sensing paired with predictive analytics supports flood monitoring and warning at locations not served by traditional stations. In a recent deployment with a Texas drainage district, a seven-sensor network fed an AI platform that combined the local readings with regional rain gauges, NOAA data, and historical flood records, and identified gaps in the existing monitoring coverage.

AT THE FORUM

Demonstrating its AI platform with real-time sensor data and automated flood warning.



Xylem

YSI • SonTek • WaterLOG

POSTER SESSION & HIF TOUR SPONSOR



FOUNDED

2011

HEADQUARTERS

Washington, D.C.

BRANDS

YSI, SonTek, WaterLOG

FOCUS

Acoustic, water-quality, and
radar sensing

WEBSITE

www.ysi.com

Xylem is a global water-technology company — more than 23,000 employees serving customers in over 150 countries — that has grown from a pump manufacturer into a leading water-solutions partner working with utilities, industry, and communities to protect and optimize water. Its environmental-monitoring brands cover several areas of field hydrology. SonTek, founded in San Diego in 1992 and now deployed in more than one hundred countries, manufactures acoustic Doppler instruments that measure water velocity, flow, and discharge, and introduced the acoustic Doppler velocimeter in 1993. YSI makes multiparameter water-quality sondes and monitoring buoys, including the EXO platform. The WaterLOG line includes non-contact radar water-level sensors.

Acoustic Doppler instruments are a standard tool for measuring streamflow and discharge — the observation that underlies rating curves and surface-water records. The SonTek FlowTracker was designed for wadeable streamflow measurement, and USGS comparison studies at dozens of gaging stations found its discharges statistically indistinguishable from the agency's mechanical-meter standard.

AT THE FORUM

Presenting a SonTek poster. Also, sponsor of the poster session and the HIF tour.



02

Data & Software

4 COMPANIES

Companies whose platforms acquire, quality-control, manage, aggregate, and publish water and environmental data — the step between a field observation and a published, usable record.

Aquatic Informatics · KISTERS North America ·
Palaver AI · Synoptic Data PBC



Aquatic Informatics

EXHIBITING SPONSOR



FOUNDED

2003

HEADQUARTERS

Vancouver, Canada

FOCUS

Hydrologic time-series data management

WEBSITE

www.aquaticinformatics.com

Aquatic Informatics develops water-data-management software. Its AQUARIUS platform acquires, quality-controls, models, and publishes hydrologic time-series data, carrying it from raw sensor input through rating-curve development and quality assurance to publication. The company, founded in 2003 and now part of Xylem, serves more than fifteen hundred customers in sixty countries, including national monitoring agencies.

The USGS uses AQUARIUS to manage water time-series data nationally, across roughly sixteen thousand five hundred stream-gauging, groundwater, water-quality, and precipitation sites, processing more than five hundred thousand incoming data points per hour and publishing them to the National Water Information System. Its HydroCorrect module applies automated validation to detect errors in incoming data — the step between a field observation and a published, usable record.

AT THE FORUM

Exhibiting.



KISTERS North America

EXHIBITING SPONSOR

DEMO


KISTERS
 Empowering decisions of tomorrow

FOUNDED

2004

HEADQUARTERS

Roseville, California

EXPERIENCE

**40+ years; 1,600+ customers
in 35 countries**

FOCUS

**Water information systems
and sensors**

WEBSITE

www.kisters.net

KISTERS develops software, sensors, and IT services for managing water and environmental data, drawing on more than forty years of work in hydrological information systems. Its WISKI platform stores, validates, analyzes, and shares time-series data, with built-in modules for discharge measurement and rating curves and compatibility with acoustic Doppler and other streamflow instruments. The company serves federal, state, and tribal agencies, local governments, utilities, and engineering firms, and a KISTERS group company introduced non-contact discharge radar in the US market.

Time-series data management organizes and standardizes the continuous records that come from monitoring networks, including automated quality control and alerting against thresholds. This is the step that turns raw sensor output into managed data that agencies can store, analyze, report, and share.

AT THE FORUM

Exhibiting, with a technology demonstration.



02 • DATA & SOFTWARE

Palaver AI

ATTENDING



FOUNDED

2026

HEADQUARTERS

Denver, Colorado

FOCUS

Enterprise generative-AI platform

WEBSITE

www.palaverai.com

Palaver AI develops an enterprise generative-AI platform designed to work across an organization's own internal data. The platform is built for regulated industries, where answers need to be traceable to their sources and able to withstand audit, and it is positioned around retaining the context of the underlying material rather than treating it as undifferentiated text.



Synoptic Data PBC

EXHIBITING SPONSOR

DEMO



FOUNDED

2012

HEADQUARTERS

Fairfax, Virginia

ROLE

Weather and environmental
data aggregation

WEBSITE

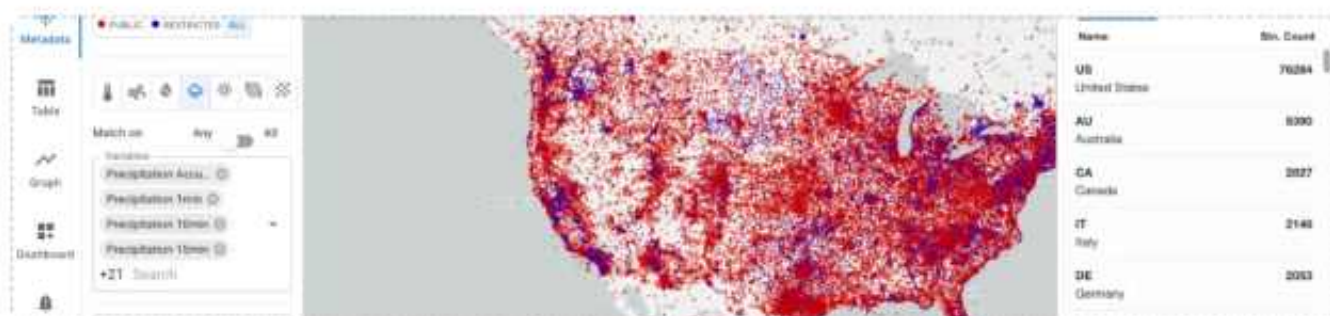
www.synopticdata.com

Synoptic Data operates a real-time environmental observation platform that aggregates and quality-controls data from a very large number of weather and environmental stations across many separate networks. It delivers that data through a Weather API and visualization tools, and many of its programs are available at no cost, which supports research and education use.

Aggregating and quality-controlling observations from many independent networks is how dispersed station data becomes a single usable source for situational awareness and forecasting. Synoptic serves as lead subcontractor for NOAA's National Mesonet Program, which assembles non-federal observing networks into input for national weather operations.

AT THE FORUM

Demonstrating its online programs, several of which are free to use.



03

Computing & Connectivity

2 COMPANIES

Companies providing the computing, machine-learning, and network connectivity that move and process observational data — the path from dispersed field equipment to where data is stored, processed, and models are run.

Ericsson · Sterling



Ericsson Cradlepoint

EXHIBITING SPONSOR



FOUNDED

2006

HEADQUARTERS

Plano, Texas

FOCUS

5G and wireless connectivity

PRODUCTS

Cradlepoint 5G/LTE routers,
cloud, AI management

WEBSITE

www.cradlepoint.ericsson.com

Ericsson's enterprise wireless solutions provide connectivity across private 5G networks, indoor 5G coverage, and Wireless WAN, using Ericsson Cradlepoint 5G and LTE routers together with cloud and AI-based management across public and private networks. The routers include ruggedized models designed for field and industrial deployments, with secure, cloud-managed connectivity for large numbers of distributed devices.

Distributed sensors return their data over a network, and cellular routers of this kind are used for SCADA, remote monitoring, and IoT connectivity at field sites, including locations where a single carrier's coverage is limited. Connectivity of this kind is the path that carries observations from dispersed field equipment to where the data is stored and processed.

AT THE FORUM

Exhibiting.



Sterling with Dell and H2O.ai

PRESENTING SPONSOR

DEMO



FOUNDED

1996

HEADQUARTERS

North Sioux City, South
Dakota

ROLE

Global solutions integrator

WEBSITE

www.sterling.com

PRESENTING WITH

The Dell Technologies logo, consisting of the word "DELL" in blue and "Technologies" in a smaller, lighter blue font.



Sterling is a global solutions integrator, founded in 1996, that designs and delivers technology systems across multiple domains and represents more than eighteen hundred product lines. It works extensively with federal, state, and education customers, and was named Dell Technologies Federal Partner of the Year. At the forum it presents with Dell Technologies, which provides high-performance computing hardware, AI compute, and storage, and H2O.ai, which provides machine-learning and automated-machine-learning platforms.

Large-scale hydrologic models and machine-learning analysis run on high-performance computing infrastructure. The systems this group integrates, of the kind deployed for national laboratories and university research computing, are the layer on which observational data is processed and on which models are trained and run.

AT THE FORUM

Presenting with Dell Technologies and H2O.ai, with a technology demonstration and a Dell poster.



04

Research & Modeling

2 COMPANIES

Organizations that turn observations into prediction and freshwater science through hydrologic modeling and research — where streamflow, water-level, and related measurements become the inputs to national water prediction.

Lynker Technologies • Stroud Water Research Center



Lynker Technologies

ATTENDING



FOUNDED

2007

HEADQUARTERS

Leesburg, Virginia

FOCUS

Hydrologic modeling and forecasting

WEBSITE

www.lynker.com

Lynker is an employee-owned science, engineering, and technology company of more than four hundred staff, supporting national environmental missions in hydrology and water sciences, weather and climate, geospatial analysis, and operational forecasting. In 2024 the company was awarded the NOAA Office of Water Prediction contract for scientific and technical support of National Water Model implementation, under which it works to optimize and maintain National Water Model version 4 and the NextGen modeling framework. Earlier NOAA awards included development work on the NextGen framework prototype.

Hydrologic models and forecasting systems are where observational data is put to use: streamflow, water-level, and related measurements become the inputs to the models that produce national water prediction.



Stroud Water Research Center

EXHIBITING SPONSOR

PANELIST



FOUNDED

1967

HEADQUARTERS

Avondale, Pennsylvania

FOCUS

Research, education, open-source sensing

WEBSITE

www.stroudcenter.org

Stroud Water Research Center is an independent, nonprofit institution dedicated to freshwater research, education, and watershed restoration. Its in-house engineering team developed the open-source EnviroDIY Mayfly Data Logger and the Monitor My Watershed data portal – a low-cost, Arduino-based monitoring system that records parameters such as water level, temperature, conductivity, and turbidity and streams the data online. The portal hosts hundreds of real-time data feeds from researchers, educators, and community scientists.

Open-source, low-cost sensing of this kind broadens who can collect freshwater monitoring data. In the Delaware River Basin, more than fifty organizations have deployed over a hundred of these stations – a network that has been studied alongside the USGS stream-gauge network as a complementary source of watershed data.

AT THE FORUM

Exhibiting, presenting a poster, and participating on the forum panel.



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Tuscaloosa, Alabama · USGS HIF

ciroh.ua.edu/water-observing-technology-forum

THE UNIVERSITY OF
ALABAMA | Alabama Water
Institute



Co-hosted by CIROH, the Cooperative Institute for Research to
Operations in Hydrology, and the U.S. Geological Survey