Monitoring for the 2021 Environment Act

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Considerations and Next Steps for Strategy, Installation and Management

The passage of the Environment Act (EA) in 2021 set U.K. water companies on the path to creating a vast water quality monitoring network made up of continuous monitoring stations upstream and downstream of combined sewer overflow (CSO) discharge points. The act established an urgent timeline for utilities, with a goal of monitoring 25 percent of CSOs by 2030 and all CSOs nationwide by 2050.

Parameters Required by the EA

- Dissolved Oxygen
- Temperature
- pH
- Turbidity
- Ammonia
- Additional parameters may be required by region

While sources of pollution entering U.K. waterways aren't by any means limited to sewer overflows, the fact remains that EA regulations specific to CSO monitoring are imminent. And with thousands of CSOs nationwide, bringing monitoring practices in accordance with the act will be a massive undertaking. But thoughtful planning can minimize the time, effort and funds needed to establish and maintain an effective CSO monitoring system.

What Comes Next

In assessing their starting point in relation to the act's requirements, water companies will have to navigate how to make the best use of the resources they have.

This process will include

- Identifying priority sites and scheduling installations for critical locations first.
- Planning a monitoring network that allows for flexibility, to make establishing new sites and expanding data collection as seamless as possible.
- Selecting suppliers for monitoring equipment while considering accuracy requirements, new training for staff and budgetary constraints, among other factors.
- Adopting new tools to manage data collected from monitoring sites.
- Navigating land access issues and finding or designing non-invasive installations.

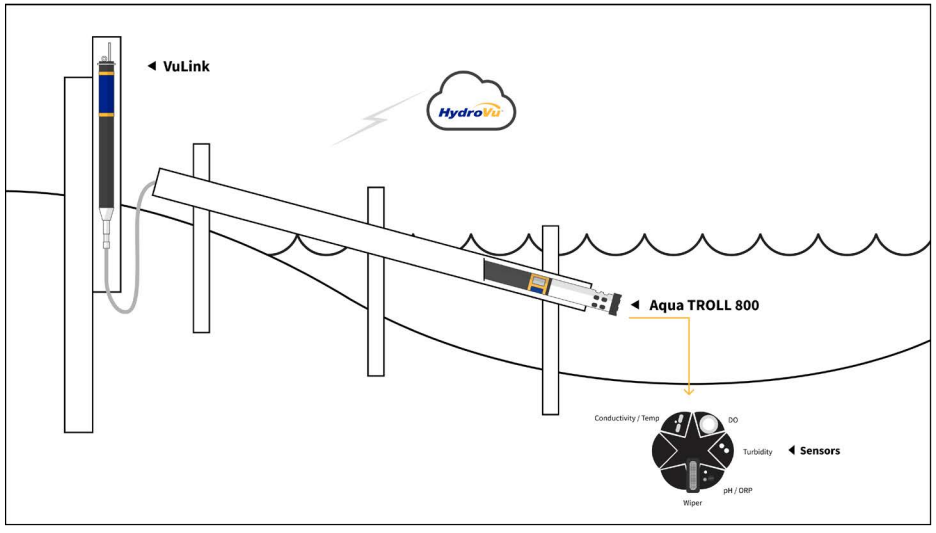
Developing Site-Specific Installation Plans

Ever since the sheer magnitude of the EA's monitoring requirements became known, there's been considerable debate over which equipment is best suited to the task. Both tube deployments and kiosk installations are part of the solution. And several factors affect which option is appropriate for a given site, including

- How much space is available for the installation?
- Is a continuous power supply accessible?
- Does this site require permission to enter private land?
- Which precautions are necessary to safely access the site and install the equipment?
- How much labor will installation and maintenance require?

A kiosk installation is best suited to sites where space is readily available on the bank, land is public and continuous power is easily obtained. This setup can be more time-consuming, expensive and involved to install, but it's helpful where water sources may not be safe to access.

A sonde and tube deployment is the best option for sites that require private land access or are susceptible to vandalism, as this installation is more discrete than a kiosk. Additionally, deployment tubes are quicker and easier to install, requiring less labor, special equipment and training. Battery-powered sondes eliminate the need for external power. And a compact size and ease of installation make this option a cost-effective way to scale a monitoring program for continuous data collection at numerous sites.



A sonde and tube deployment offers a cost-effective, low-maintenance installation option for CSO monitoring.

Finding the Optimal Solution

To make efficient progress toward the EA's monitoring goals, utilities must determine the most prevalent challenges to their installations and which equipment best fits their purposes. In-Situ's Aqua TROLL multiparameter sondes were designed with these challenges in mind, with user-friendly, low-maintenance features to simplify installation and data collection.

What to Consider

- Fast-response sensors, built-in error prevention and active and passive antifouling enhance the reliability of Aqua TROLL sondes.
- In-Situ equipment is easy to use, allowing workers with varying levels of experience to install it quickly, without special training.
- In-Situ's shared ecosystem of instrumentation, communication devices and accessories all work together, simplifying installation and deployment and making it easy to expand or adjust your monitoring network with the equipment you have.
- Our low-maintenance equipment requires fewer field visits, saving time and labor and reducing maintenance trips to sites on private land.
- A powerful software platform like HydroVu secures and displays data from every site in a central location for efficient and effective data analysis and management.
- Our dedicated and knowledgeable customer service teams provide prompt, personalized support for site-specific challenges, equipment questions and more. And our optional In-Situ Care plans offer proactive assistance to take maintenance duties off your plate.

Conclusion

While the timeline is ambitious and the scale of this project is daunting, the value of thoughtful preparation at this stage should not be underestimated. Strategic planning and reliable, easy-to-use technology will better equip utilities to maintain a network of this magnitude.

To get this right, integrators, consultants and water companies need the right partner to not only supply the instrumentation but also provide reliable, accessible support along the way. Customers around the world count on In-Situ's instrumentation, telemetry and software to deliver seamless access to accurate water quality data. Our cost-effective solutions are rugged, reliable and easy to use, and our peerless support teams help simplify data collection, access and management. Contact your regional sales manager for more information.

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