

RAPID E-MAIL NOTIFICATION OF REAL TIME WATER QUALITY MONITORING RESULTS FOR THE DELAWARE RIVER BASIN

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The increasing availability of real-time monitoring data via the internet improves our ability to manage water quality, and provides a more accurate understanding of the health and processes of our waterways. Raw measurements alone, however, are typically not sufficient to support decision making or understanding. Information must be processed and integrated with regulatory or scientific benchmarks to be meaningful. Similarly, data reporting systems gain usefulness when coupled with automated retrieval systems and alerts, to capture and process measurements and to ensure that stakeholders are informed in a timely manner. The Delaware River Basin Commission (DRBC) and its partners have developed new tools to harvest and utilize real time data for more effective management of basin aquatic resources, including a water quality e-mail notification system. This system compares real time water quality measurements at USGS stations to applicable criteria, and generates and sends an e-mail warning to a list server when observations are outside criteria.

By providing near real-time notification of apparent water quality criteria excursions, this system: (1) links stakeholders more directly to the health of the river; (2) allows water quality managers to investigate, and possibly mitigate, causes of excursions; (3) reduces the occurrence of retracted data by reducing the response times between meter failure and remedial activity; and (4) provides a more meaningful understanding of linkages between different water quality parameters and river reaches.

This presentation will describe DRBC's process for harvesting, assessing, and disseminating real time data, including subsequent evaluations of criteria excursions. The transferability of this technology to other basins will be discussed. The presentation will briefly describe other DRBC tools utilizing similar data harvesting approaches including a flood warning system, and a real time flow and transport model for the Delaware Estuary.

While the existing products are useful individually, they offer the prospect of combining and processing various data sets to generate higher value real time information. As DRBC and its partners strive to link monitoring and management, we seek to enhance our dialogue with stakeholders to determine what real-time derived information would prove most beneficial to the management of estuary aquatic resources.

KEYWORDS

Real-time, automated, notification, e-mail, quality, warning, emergency, drinking water, spill, release, DRBC