

Susquehanna River Basin Commission Information Sheet

Susquehanna Basin Early Warning System Enhancing Protection of PA and NY Public Water Supplies



Project Background

The federal government places a high priority on the protection of our nation's drinking water supply, with the Safe Drinking Water Act among its primary vehicles. From 2000 to 2003, the Susquehanna River Basin Commission (SRBC) collected information and data on contaminant threats and determined the susceptibility of public water suppliers to those threats in the Pennsylvania and Maryland portions of the Susquehanna River Basin. Then in 2003, SRBC established the Early Warning System (EWS) program for public water suppliers in Pennsylvania with intakes in the Susquehanna River, and expanded the system into the New York portion of the basin in 2006.

Project Overview

The EWS provides a framework for innovative partnerships and protocols for fostering communication and data sharing among water suppliers, state/local agency personnel, and the emergency response community for the purpose of enhancing drinking water protection efforts.

The current EWS enhances protections for public drinking water supplies serving about 700,000 people, providing a monitoring network that helps minimize the impact from contaminant spills and provides data for improving day-to-day treatment operations, further ensuring a continuous and safe supply of drinking water. Furthermore, with heightened national security concerns, SRBC's EWS has become an important tool for participating water suppliers and emergency management officials.

Primary Project Activities

Advisory Committee – Guiding the System Function

The advisory committee is a mix of participating public water suppliers and representatives from environmental protection and emergency response agencies. SRBC is responsible for the overall system function, and implementing committee recommendations.

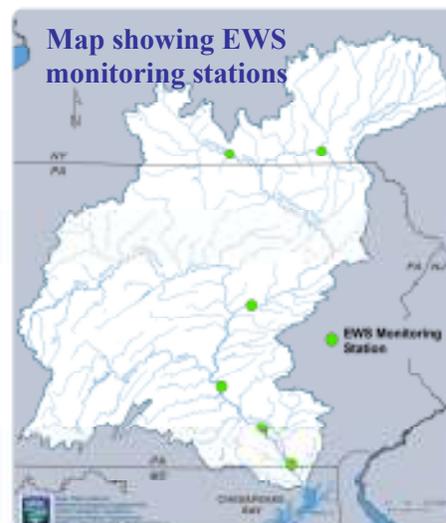
Monitoring Network – Expanding Existing Capabilities

Threats and challenges to treatment plants include:

- Harmful substances from fuel spills and other toxic releases entering the treatment plant—these incidents have the potential for shutting down water treatment operations for extended periods of time.
- Daily fluctuations in river water chemistry, not related to spills, can pose challenges to treating source water.

Current EWS monitoring capabilities include:

- Five stations monitoring pH, temperature, and turbidity at intake locations using online analyzers, and transmitting the data in real-time to the associated treatment plant.
- One station has a Total Organic Carbon (TOC) Analyzer installed to provide enhanced monitoring for organic contaminant detection.



Monitoring Network – Expanding Existing Capabilities *(continued)*

By the end of 2007, two additional stations will be established in New York. These stations will monitor water quality both at the intake locations, and at remote locations upstream.

SRBC staff continually assesses the need for monitoring enhancements and assists facilities to obtain and install necessary equipment, where possible.



Inspecting data collection and transmission equipment at an intake (TOC analyzer on left).

Database and Web Site Interface – Enhancing Communications

A secure EWS database and web site interface contain information associated with the project, as well as provide tools for evaluating, or responding to, contamination events. The web site interface provides user-friendly access to the information and tools enabling downstream users to respond to adverse changes in water quality.

Emergency Response Community – Ensuring Proper Interface

The system is designed to use several modes of communication, which could include:

- Automated phone/cell/fax system;
- E-mail alert list; and
- Web-based bulletin board.

Currently, there is a web-based bulletin board for participating partners to exchange information among themselves (water suppliers and emergency response community) on an informal basis. With funding, future efforts could include the development of standard protocols for reporting incidents critical to protecting public water supplies. To avoid duplication of efforts and encumbering any pre-existing system, SRBC coordinates with state efforts to develop/upgrade their respective emergency management systems. Currently, all information regarding spill events is distributed immediately using the pre-established network.



Website access to “real-time” water quality data.

Contaminant Tracking – Developing a Model

SRBC partnered with the U.S. Geological Survey (USGS) in Pennsylvania to work towards developing a time-of-travel and hydrodynamic water-quality model for tracking contaminants in the Susquehanna River. The USGS and SRBC completed the initial data collection to begin development and calibration of such a model. Additional funding is needed to complete the necessary studies.

Monitoring Programs – Assisting Water Suppliers and Local Interest to Set Up New Programs



Photo courtesy of City of Lancaster, Public Works

SRBC assists water suppliers such as the City of Lancaster (see photo) to form partnerships with other agencies and citizen groups active in areas critical to their water supply, to enhance and sustain monitoring and protection activities.

Susquehanna River Basin Commission Background

The Susquehanna River Basin Commission (SRBC) was created as an independent agency by a federal-interstate compact, signed on December 24, 1970, among the states of Maryland, New York, Commonwealth of Pennsylvania, and the federal government. For more information on the EWS program, contact Andrew J. Gavin, Chief, Restoration and Protection Section, phone 717-238-0423 ext. 107, fax 717-238-2436, e-mail agavin@srbc.net.