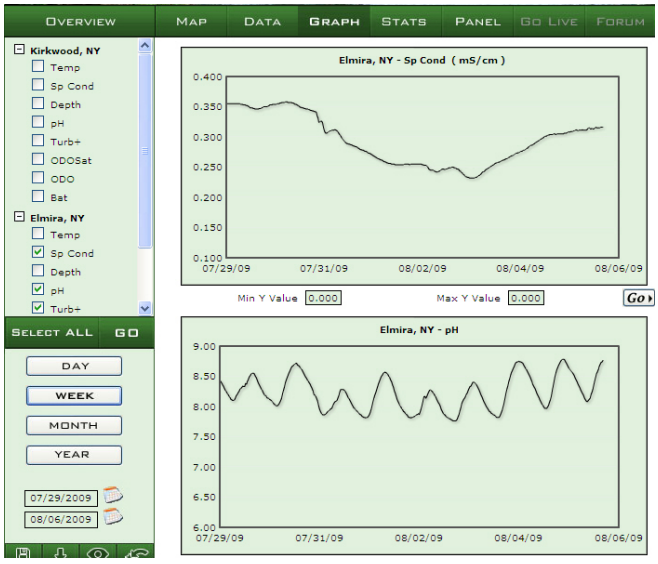
Susquehanna River Basin Commission
Information Sheet

Remote Water Quality Monitoring Network Proposal

Proposed Network – The Susquehanna River Basin Commission (SRBC) proposes to implement a network designed to remotely monitor water quality conditions to maintain and protect surface waters in select portions of the Susquehanna basin. The monitoring network will utilize state-of-the-art monitoring and communication technology to collect and transmit real-time water quality data. Increasing demands throughout the basin, coupled with increasing wastewater flows, require the application of this advanced technology to effectively monitor rapid changes in water quality conditions. At present, SRBC operates and maintains such a system only on the mainstem of the Susquehanna River for the purpose of monitoring drinking water sources; however, there exists a need to track water quality conditions within smaller rivers and streams throughout the basin where existing/proposed demands are increasing. This effort would greatly expand the existing system to meet a greater need.



Internet-accessible data provided by the monitoring network.

Network Design – A total of thirty (30) stations will be established in the Pennsylvania and New York portions of the Susquehanna basin. The stations will measure the following parameters continuously: temperature, pH, conductance, dissolved oxygen, and turbidity. In addition, water depths will be recorded to establish a relationship with stream flows. These data will enable water resource agencies, water users, and the public to make informed decisions regarding management and use of the resource.

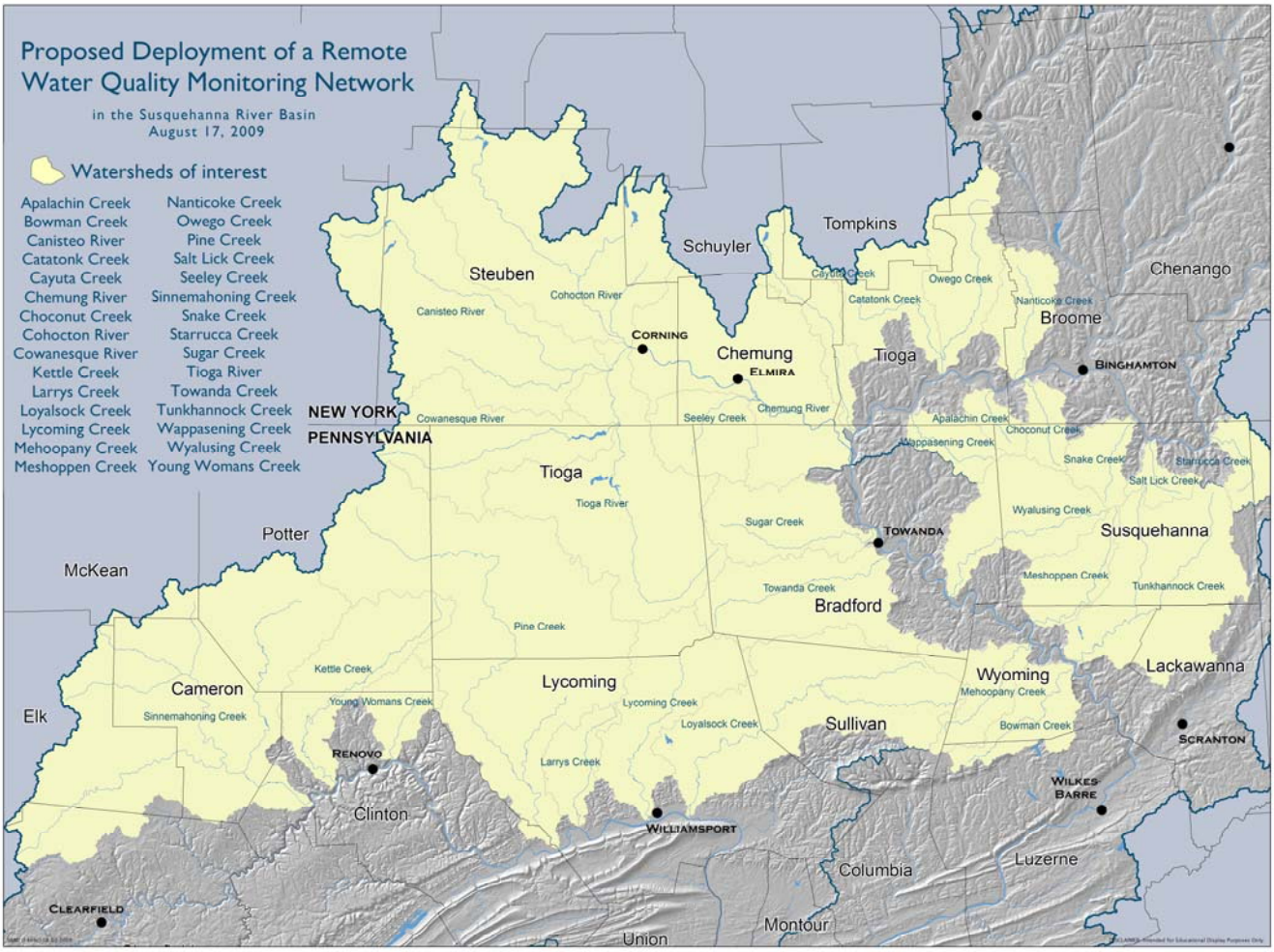
Each monitoring station will be equipped with a datasonde and data platform, powered by a solar panel. Observations may be made as frequently as one-minute intervals, with transmission to a web site at predetermined intervals. The web site interface also provides user-friendly access to other critical information and tools, such as tables, graphs, maps, and statistics.

Network Implementation – SRBC staff will:

- Determine optimal locations for monitoring stations and obtain access approval;
- Install and maintain 30 monitoring stations;
- Establish a data management system for the monitoring network; and
- Provide a framework for data sharing among partners.

Susquehanna River Basin Commission, 1721 North Front Street, Harrisburg, PA 17102
Phone: 717-238-0423 Web Site: www.srbc.net E-mail: srbc@srbc.net

(over)



Network Coverage – The area of interest for implementing the network mostly spans the northwestern portion of the Susquehanna basin, with additional focus along the Pennsylvania–New York border. The terrain is predominantly forested, and lacks ready/easy access for routine monitoring. A remote water quality monitoring network that uses instrumentation sensitive enough to detect subtle changes, at frequent intervals, is required to effectively manage the water resources of this area. SRBC has demonstrated expertise for siting and operating these networks.

The network will provide an enhanced capability for maintaining and protecting the quality and reliability of water resources in the basin, and will foster communication and data sharing among partners. These goals represent those supported by SRBC's Comprehensive Plan, with respect to the *Priority Management Areas* related to water quality, water supply, ecosystems, and coordination.

Cost – The total cost for implementing the monitoring network is approximately $750,000. These costs include the purchase and installation of equipment, as well as other coordination/implementation activities. Annual operation and maintenance costs for the system are estimated to be $115,000, which includes equipment servicing, data transmission, and management fees. After establishing the network, the unit cost for an additional station is approximately $22,000.

Contact – For more information on the proposed network, please contact **Michael G. Brownell**, Chief, Water Resources Management, at (717) 238-0425 or mbrownell@srbc.net.