Resources for Interstate

Source Water Protection Programs

Submitted to: United States Environmental Protection Agency,
Headquarters, Washington, DC

Submitted by: The Ohio River Valley Water Sanitation Commission

Cincinnati, OH

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Table of Contents

Executive Summary

The 1996 Safe Drinking Water Act (SDWA) Amendments included a requirement that states establish source water assessment programs (SWAP) to protect all public drinking water supplies. As part of this requirement states need to delineate source waters, inventory potential sources of contamination, and determine a public water supply's susceptibility to contamination on an interstate basis. States are also required to describe how they will make the maximum practical effort to coordinate with other states, tribes, or nations in completing assessments on interstate water systems. On a nation-wide scale, relatively few organizations provide coordination among states regarding water quality issues on interstate waterways. Therefore, there is a great need to identify sources of information on how states are conducting source water protection activities on interstate waters.

The purpose of this document is to identify some of the interstate source water protection programs being implemented in the United States. This information is intended to be

used a reference document by state drinking water agencies and other organizations for completing interstate SWAP activities. With each program summary, contact information is provided for acquiring additional details.

New England States

Source Water Assessment Program Data and Methodology Forum

In June 1999, the New England Interstate Water Pollution Control Commission (NEIWPCC) held a forum to promote communication and sharing of resources for the benefit of New England states' Source Water Assessment Programs (SWAP). The objectives of the forum were to identify sources of data to supplement state databases, determine existing methodologies or modeling efforts, which could be used to conduct assessments, and to establish accessibility to such data and methods. In order to accomplish these objectives, NEIWPCC staff worked with appropriate state contacts to determine the information needs for each New England State. In addition, NEIWPCC contacted various agency personnel to request participation, developed the forum agenda, conducted preliminary conference calls between key participants, organized and facilitated the event, and summarized accomplishments of the forum. (Contact: Denise Springborg, NEIWPCC)

New England Interstate Coordination of Data Gathering for Assessments

Beginning in 1998, NEIWPCC began facilitating coordination of data gathering and assessment methods for New England states. NEIWPCC staff worked with contacts from each New England state to determine information needs, gather data, and develop a database of the interstate waters which could be assessed by all six states to facilitate completing their assessments. For states which share interstate source water protection areas, NEIWPCC gathered information on their existing source water protection programs and wellhead protection programs to provide states with documentation of similar traits and differences between existing programs. (Contact: Denise Springborg, NEIWPCC)

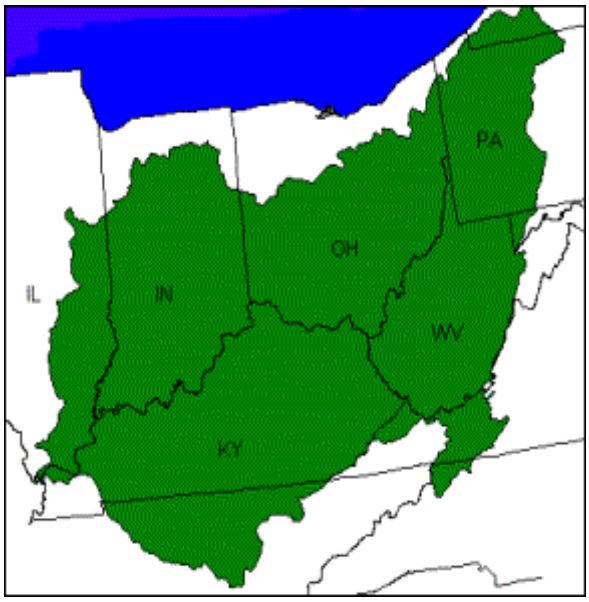
Geographic Information Systems (GIS) Coverage Index

In November 1998, NEIWPCC began to coordinate information sharing among the states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, and New York. The majority of this work involved developing a reference guide titled, " *New England States' and New York's GIS Coverages Index: A Guide to States' SWAP Related GIS Coverages",* to identify available GIS coverages that exist in each state. This guide includes states' public water supply sources, land uses, and potential sources of contamination. (Contact: Denise Springborg, NEIWPCC)

Connecticut River Basin

The Connecticut River Watershed encompasses approximately two-thirds of New England, with the mainstem river providing 70% of the fresh water to Long Island Sound. In 1999, an agreement was signed between multiple federal, state, and local agencies and organizations to support community-based efforts to restore and protect the environmental resources of the Connecticut River. With strong support from over 250 communities and institutions, the Connecticut River was nominated and chosen for the American Heritage River Initiative (AHRI). As part of this program, projects are being developed to inventory and restore riverbank erosion sites, establish conservation easements, and to control Combined Sewer Overflows (CSOs) using watershed-based source reduction controls for storm water. (Contact: Whitty Sanford, Connecticut River Watershed Council, Inc)

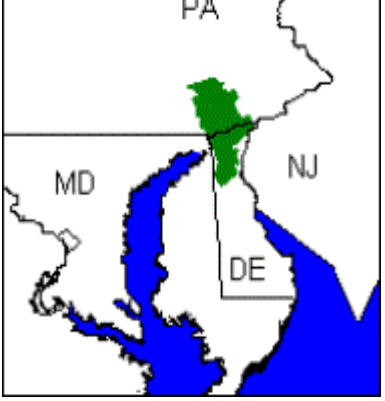
Ohio River Basin



Ohio River Source Water

Assessment Strategy

In 1997, the Ohio River Valley Water Sanitation Commission (ORSANCO) began coordinating source water assessment approaches on the Ohio River for the states of Kentucky, Illinois, Indiana, Ohio, Pennsylvania, and West Virginia. A workgroup, consisting of representatives from each Ohio River state drinking water agency, U.S. EPA Regions 3, 4, and 5, and water treatment operators, was developed to identify the role that ORSANCO would have in helping states' with their SWAPs. Through the work group, ORSANCO developed a strategy for developing Ohio River source water assessments titled "*Source Water Assessment Strategy for the Ohio River"*. The strategy outlined protocols for delineating surface water protection areas, developing contaminate



inventories, and information sharing. As part of this strategy, ORSANCO is responsible for generating GIS delineations of protection areas for surface water intakes on the Ohio River. (Contact: Deborah Olszowka, ORSANCO)

Spill Notification and Response

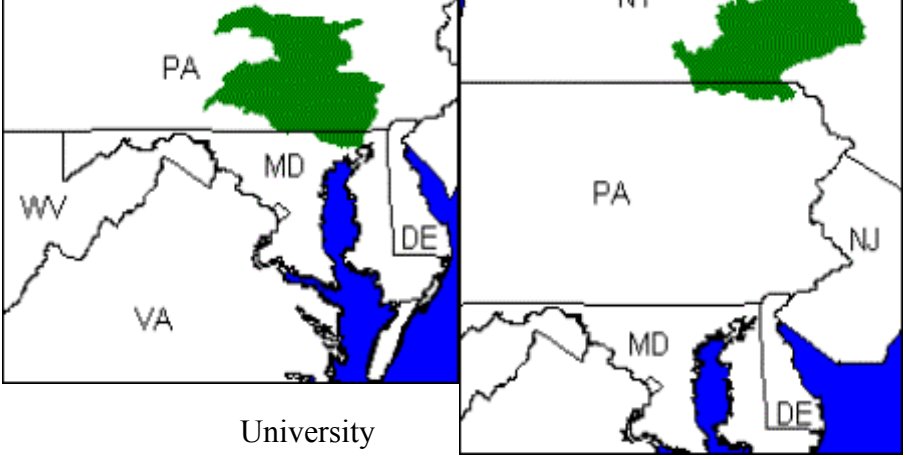
ORSANCO helps support state environmental agencies, U.S. EPA, and the U.S. Coast Guard carry out programs for spill prevention and response through assistance in communication to insure that interstate notification takes place, and coordination of river monitoring to insure water utilities downstream of a spill are notified and protected. In order to carry out these functions ORSANCO has developed 24-hour spill coverage to receive spill reports; receives daily receipts of river flow forecasts from the National Oceanic and Atmospheric Administration (NOAA); developed a directory of emergency response agencies telephone numbers; established an electronic Bulletin Board System (BBS) to post spill information; on-river monitoring capability that included boats, sampling equipment, and field testing equipment; and an Organics Detection System which is capable of detecting unreported spills and provides data on the effects of reported spills through regular monitoring of selected organic chemicals. (Contact: Jerry Schulte, ORSANCO)

Potomac River Basin

In 1982, the Section for Cooperative Water Supply Operations on the Potomac (CO-OP) was established, as part of the Interstate Commission on the Potomac River Basin (ICPRB), to coordinate water supply operation of the Potomac River resource and the off-Potomac reservoir resources during times of drought. The CO-OP provides water utilities within the regional area of Maryland, Virginia, and the District of Columbia with operating rules that balance water supply and ensure that minimum environmental flow requirements in the Potomac River are met. Other functions of the CO-OP are to coordinate emergency contact and communication among Potomac River water utilities, and to maintain spill model capability that provides estimated time of travel for contaminants in the Potomac River and its tributaries. (Contact: Erik Kagen, ICPRB)

Christina River Basin

The Christina River Basin is an interstate watershed that is made up of four streams which drain portions of Delaware, Pennsylvania, and Maryland. In the mid 1990's, the States of Delaware and Pennsylvania joined together to form an interstate watershed management group, the Christina Basin Committee, to resolves disagreements on how to implement water quality standards in the Christina River Basin. One project of the Christina Basin Committee is to develop a Water Quality Management Strategy. The goal of this jointly coordinated strategy is to identify point and non-point sources of pollution and to develop an approach to protect and maintain the water quality in the Christina Basin, which is ultimately used as a large source of regional drinking water. As part of this program, the Christina Basin Committee is taking the lead in delineating



University

surface water protection areas and developing an inventory of potential sources of contamination in northern Delaware and Pennsylvania. (Contact: Gerald Kauffman, of Delaware)

Susquehanna River Basin

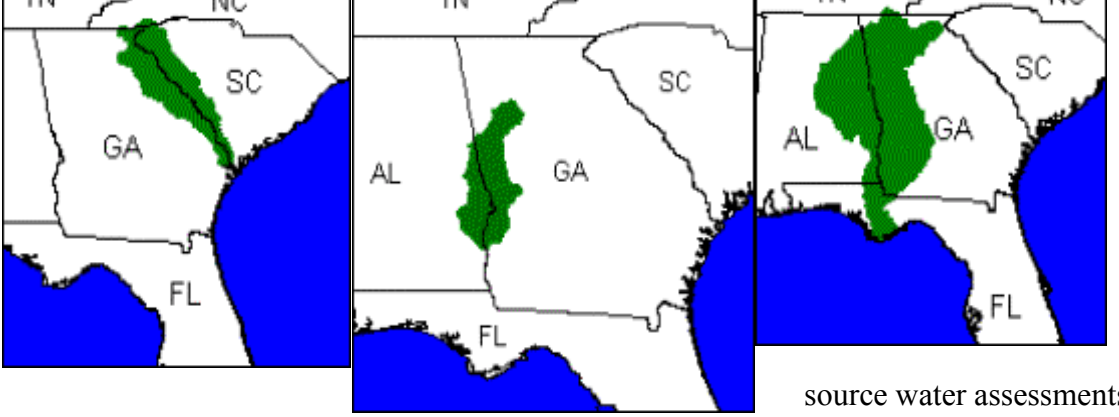
The Susquehanna River Basin Commission (SRBC) has initiated a program to monitor interstate spills for its member states of New York, Pennsylvania, and Maryland. As part of this program, SRBC will coordinate with member jurisdictions and complete the development of an interstate spill monitoring and reporting system in the Susquehanna River Basin. Spill information reported to SRBC will be assessed and transmitted to downstream water users. Plans are also being developed to establish a pollutant-loading model to track the downstream progress of spills in the Susquehanna River. (Contact: Susquehanna River Basin Commission)

Lower Susquehanna River Basin

The Lower Susquehanna River Basin encompasses a 5,800 square-mile drainage area within the states of Pennsylvania and Maryland. In 2000, the Susquehanna River Basin Commission began taking the lead in developing an interstate approach for conducting surface water source water assessments for the Lower Susquehanna Basin. As part of this program, the SRBC will generate source water assessments for 30 dinking water intakes over a three-year period based on the developed regional approach. In addition, the SRBC will facilitate an information exchange among states in the entire Susquehanna Basin to provide data needed for source inventories. (Contact: Wendy Dapsis, SRBC)

Upper Susquehanna River Basin

The Upper Susquehanna River Coalition, in conjunction with the Water Resources Institute of Cornell University, initiated a pilot project in the Upper Susquehanna River Basin to conduct source water assessments of several public drinking water systems. The Upper Susquehanna Coalition (USC) is an organization of 14 counties, eleven in New York and three in Pennsylvania, that cover the headwaters of the Susquehanna River. The Coalition is a grass roots, multi-county, multi-state approach to water quality issues. As part of the pilot project source water assessments were completed in four study areas within New York and Pennsylvania. The goal of the project was to implement an integrated watershed management program for the Upper Susquehanna River Basin based on New York's Source Water Assessment Program. The outcome of the project included a one-day workshop that incorporated presentations on the results of the source water



assessment efforts along with federal, state, and local perspectives to conducting source water assessments. (Contact: Jim Curatolo, Coalition Coordinator)

Savannah River Basin

In 1992, U.S. EPA initiated a joint project with the water quality agencies of Georgia and South Carolina to comprehensively manage the Savannah River Basin. The goal of this program is to cooperatively manage the resources of the basin to conserve, enhance, and protect the ecosystem in a way that allows the balancing of multiple uses. As part of this program, a multi-agency/organization meeting was held with stakeholders in the basin to plan and organize a watershed project. Draft Baseline Assessments in 6 basin resource areas have been developed and are being compiled into an overall basin assessment. Major environmental problems to be addressed by this project include impaired fisheries, low dissolved oxygen in the Savannah River and estuary, nonpoint source impacts from forestry, agriculture, and urban land use, and point source discharges. (Contact: Lloyd Wise, U.S. EPA Region IV)

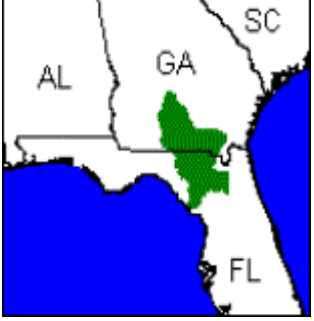
Middle Chattahoochee River Basin

Since 1999, the Cities of Columbus, Georgia and Phenix City, Alabama have been cooperating on a regional source water protection effort for seven surface water intakes along the Middle Chattahoochee River. Funded primarily through local business and industry, Columbus Water Works oversees a wet-weather monitoring program that will provide source water protection data. Water quality data from dry and wet weather sampling events is being incorporated into a pollutant-loading model for management purposes. The ultimate goal of this program is to establish an early-warning notification program for water treatment plants through a combination of permanent monitoring stations, a communication network between water operators and industries, and planned water treatment operating strategies for various river conditions. (Contact: Mark Bonar, WWETCO)

Alabama-Coosa-Tallapoosa River/Apalachicola-

Chattahoochee-Flint River Systems

In 1992, Alabama, Florida, Georgia, and the U.S. Army Corps of Engineers became cooperating partners in an interstate water resources management study. The study objectives include projection of water resources demands through years 2050, estimation of water availability to meet projected demands, and development of basin-wide water



management options that might maximize the potential to meet expected demands. (Contact: Steve Payne, Georgia Environmental Protection Division)

Suwannee River Basin

The Suwannee River Basin comprises a 10,000 square-mile drainage basin that stretches from Cordele, Georgia, to the Gulf of Mexico near Cedar Key, Florida. Through volunteer participation between the states of Florida and Georgia an interagency alliance was formed to increase communication and cooperation for safeguarding the water quality and natural resources of the entire Suwannee River Basin. Beginning in 1989, members of the alliance began efforts to reduce the duplication of water resource activities to stretch the limited funds each agency had available. As part of this work an ambient water quality monitoring network was established to provide an early warning system in identifying changing conditions in surface water quality. The network provides water quality analysis based on water chemistry and aquatic biological samples. The information collected is used to identify seasonal variations and long-term trends in water quality, and to help determine the impacts of Best Management Practices (BMPs) being implemented within the basin. (Contact: Kirk Webster, Suwannee River Water Management District)

Upper Floridian Aquifer

Since 1997, the states of Florida, Georgia, and South Carolina have been cooperating partners in an interstate groundwater information and policy development exchange for the Upper Floridian Aquifer. On an annual basis, the states update each other on policy developments and available data that may affect interstate salt water quality and water supply measures. (Contact: Steve Payne, Georgia Environmental Protection Division)

Lower Mississippi Basin

The Lower Mississippi Valley Ecosystem Restoration Initiative is a joint venture among federal and state regulatory agencies, universities, and private industry to protect and restore the ecosystem of the Lower Mississippi River Valley (LMV). The LMV begins in Cairo, Illinois and flows approximately 700 miles along seven states borders to the Gulf of Mexico. Key objectives of the basin-wide initiative include protecting and restoring wetlands, riparian zones, and floodplains, reducing nonpoint source discharges, reducing nutrient loadings into the Gulf of Mexico, identifying and reducing significant point source discharges, and improving water quality standards and monitoring. To date as part of the initiative, the states of Mississippi, Tennessee, and Kentucky have

established Wetland Restoration Specialist positions to provide assistance to landowners interested in reforestation of wetland areas. In addition, several ongoing projects are involved in developing Geographic Information System (GIS) products and coordinating a multi-agency GIS database. (Contact: Jennifer Derby, U.S. EPA Region 4)

Upper White River Basin

The Upper White River Basin is an interstate watershed that comprises portions of the states of Missouri and Arkansas. Beginning in 1997, representatives from the Missouri Department of Natural Resources and the Arkansas Department of Health began voluntarily notifying each other of chemical spills and other emergency incidents that may adversely affect water supplies within the Upper White River Basin. (Contact: Arkansas Department of Health)

Great Lakes Basin

Since 1987, the Great Lakes Commission has been working on a collaborative effort with air regulatory agencies in the eight Great lakes states, and the province of Ontario, to reduce airborne deposition of persistent toxic chemicals to the Great Lakes. The objective of this initiative is to present researchers and policy makers with detailed, basin wide data on the source and emission levels of toxic contaminants. Once a quality controlled/quality assured data inventory has been established, the states/province and the U.S. Environmental Protection Agency can begin work to define and regulate sources; evaluate control technology; establish guidelines for siting new facilities; and reduce airborne deposition of persistent toxic chemicals to the Great Lakes. (Contact: Great Lakes Commission)

Nationwide Programs

Source Water Assessment Program Support and Technical Assistance

This program involves a collaborative effort between NEIWPCC, Ground Water Protection Council (GWPC), Association of State Drinking Water Administrators (ASDWA), U.S. EPA, and the States on national source water protection issues. As part of this program, ASDWA will develop and distribute a newsletter to inform states and interested stakeholders about critical issues and the status of state programs related to development and implementation of state source water assessment and protection programs. The GWPC will take the lead in maintaining a web site containing information on state SWAPs, and the NEIWPCC will be responsible for developing technical assistance documents related to pertinent SWAP development and implementation issues. (Contact: Susan Sullivan, NEIWPCC)

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