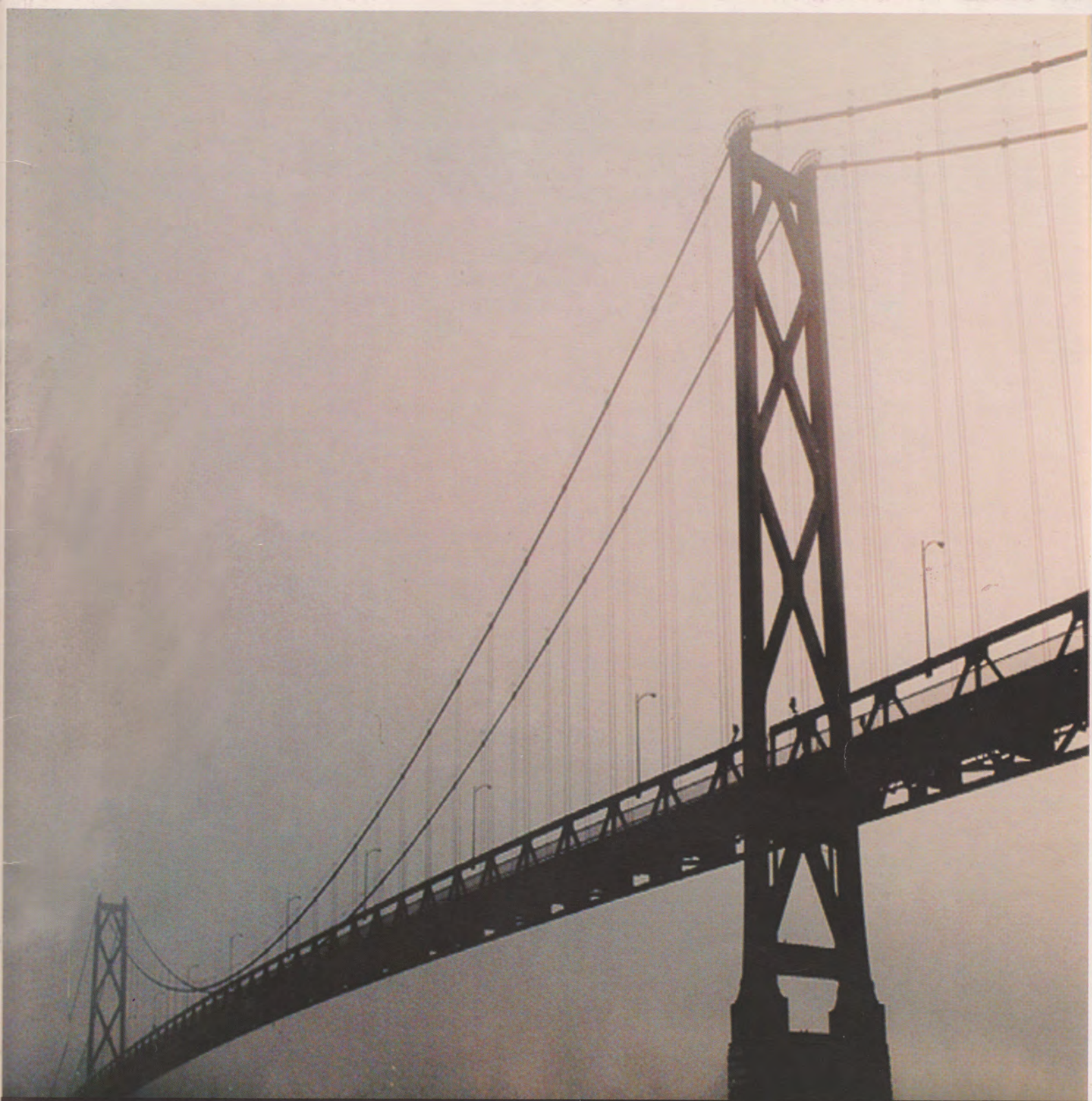




Annual Report 2000



Building Bridges: Entering an Era of River Research

The Ohio River Valley Water Sanitation Commission (ORSANCO) is an interstate water pollution control agency created in 1948 by the State of Illinois, the State of Indiana, the Commonwealth of Kentucky, the State of New York, the State of Ohio, the Commonwealth of Pennsylvania, the Commonwealth of Virginia, and the State of West Virginia with the approval of the Congress of the United States. The Commissioners of ORSANCO respectfully submit the following report of activities for 2000 to:

The Honorable George H. Ryan, Governor of Illinois

The Honorable Frank O'Bannon, Governor of Indiana

The Honorable Paul E. Patton, Governor of Kentucky

The Honorable George Pataki, Governor of New York

The Honorable Robert Taft, Governor of Ohio

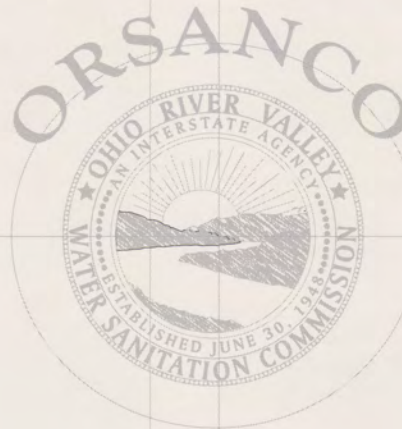
The Honorable Thomas J. Ridge, Governor of Pennsylvania

The Honorable James S. Gilmore III, Governor of Virginia

The Honorable Robert E. Wise, Jr., Governor of West Virginia



The Honorable George Walker Bush, President of the United States



Ohio River Valley Water Sanitation Commission
5735 Kellogg Avenue, Cincinnati, OH 45228
(513) 231-7719
<http://www.orsanco.org/>

Many of the photos displayed in this Annual Report were submitted by amateur photographers who participated in ORSANCO's 1997 Photo Contest. All amateur photographers are credited for their work.

On the cover: Maysville, KY photo by Tom Ross

*Members of the Commission**

Officers

Chairman: Dr. Vasiliki Keramida
Vice-Chairman: Douglas E. Conroe
Secretary/Treasurer: Amy Wright
Executive Director and Chief Engineer: Alan H. Vicory, Jr.

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Phillip C. Morgan, Director, Danville Sanitary District
Thomas Skinner, Director, Illinois Environmental Protection Agency

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Joseph H. Harrison, Sr., Bowers, Harrison, Kent & Miller
Lori F. Kaplan, Commissioner, Indiana Department of Environmental Management
Vasiliki Keramida, Ph.D., President and Chief Executive Officer, Keramida Environmental, Inc.

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Stephen L. Henry, M.D., Lieutenant Governor
John Huber, President, Louisville Water Company

New York

John P. Cahill, Commissioner, New York Department of Environmental Conservation
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Thomas E. Erlandson, Ph.D., Executive Director, Ohio River Basin Consortium for Research and Education

Ohio

Christopher Jones, Director, Ohio Environmental Protection Agency
Richard Miller
Amy Wright, Manager of Environmental Management, Dayton Power & Light

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Melvin E. Hook, R&D Engineering, P.C.
William M. Kudaroski
James M. Seif, Secretary, Pennsylvania Department of Environmental Protection

Virginia

Lance W. High, Virginia State Water Control Board
Thomas V. Van Auken, Virginia State Water Control Board
Karl F. Wenger, Ph.D., Virginia State Water Control Board

West Virginia

Michael Castle, Director, Division of Environmental Protection
David M. Flannery, Jackson & Kelly, PLLC
Ronald R. Potesta, President, Potesta and Associates

Federal

Robin Corathers, Executive Director, Mill Creek Restoration Project
Bradley M. Campbell, Regional Administrator, U.S. EPA Region III
Phillip J. Shepherd, Newberry, Hargrove & Rambicure

**As of December 2000*

Building Bridges: Entering an Era of River Research

Message from the Chairman



While water was at the center of environmental activities in the 1960s and 1970s, other programs, notably waste and air, came into the forefront during the 1980s and 1990s. As we enter a new millennium, the pendulum is swinging back, and water has become central again. As a leader in watershed-based water quality management, ORSANCO has the opportunity to help shape the national agenda in water pollution control and watershed management.

During the last decade, ORSANCO reinvented itself. Our financial resources have tripled. Our public information and public participation programs have exploded: 2000 marked the inauguration of ORSANCO's largest outreach and education initiative, Friends of the Ohio, and River Sweep 2000 celebrated 12 years of cleaning streams in the Ohio River Basin. ORSANCO has become a source of advice on national policy through programs like our Nutrients and Source Water Protection programs. We have assisted local communities with assessments of the Ohio River and their local streams through our Wet Weather Studies in Cincinnati, Wheeling and Louisville. ORSANCO has not just begun to think outside the box, but has jumped outside the box through these efforts and many more highlighted in this Annual Report.

While it is important to continue building upon current programs, I am hopeful that ORSANCO will continue to be proactive in identifying applied research needs in the Ohio River Basin and in seeking resources and partnerships for carrying forward necessary research. I am also hopeful that ORSANCO will increase its presence in technology transfer so that it can better promote its vast knowledge to compact states and the nation. We have already begun to pave the way to this goal through our urban Wet Weather Studies and the innovative ORSANCO/River Users Program.

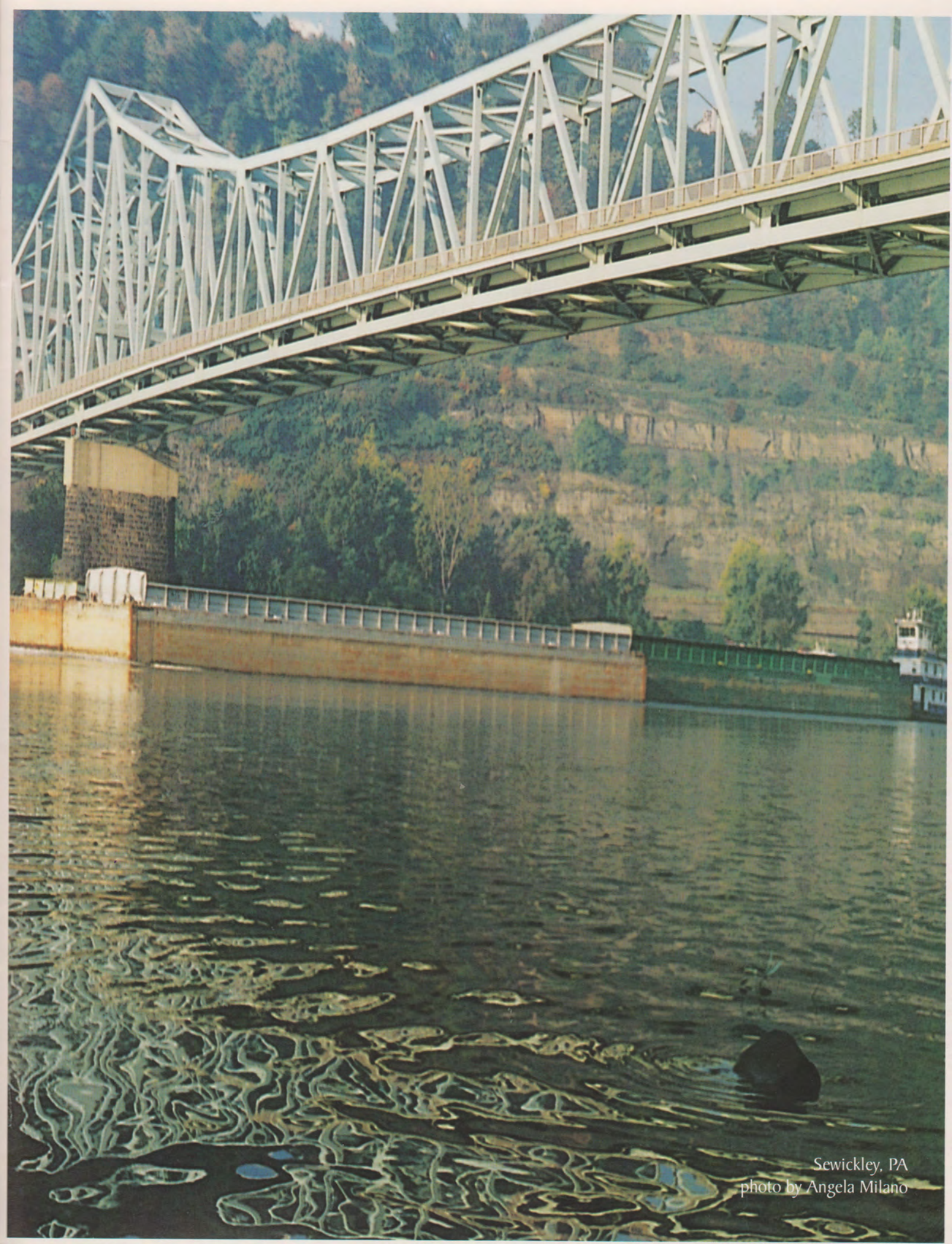
ORSANCO is extraordinarily positioned to be a leader in watershed management and pollution control. As we make our way into the new calendar year, it is my sincere hope that ORSANCO continues to chart new territory, not only improving our well-established public involvement activities and technical programs, but also reaching out and expanding our applied research efforts so that 2001 will truly be a year of bridging gaps.

Sincerely,

Vasiliki Keramida, Ph.D.



ORSANCO staff photo



Sewickley, PA
photo by Angela Milano

POLLUTION ABATEMENT PROGRAMS

Developing Pollution Control Standards

ORSANCO has promulgated Pollution Control Standards for discharges to the Ohio River since 1951. These standards designate specific uses for the river, set water quality criteria to protect those uses, and establish treatment requirements to meet the established criteria. Implementation of these standards is carried out by the member states through the National Pollutant Discharge Elimination System (NPDES) permits program. ORSANCO reviews draft permits for Ohio River discharges to assure that the standards are incorporated.

ORSANCO consults regularly with state and federal agency personnel, advisory committees, and representatives from industry, academia, environmental groups, and the general public to update the standards. Such reviews are conducted every three years, with the most recent review completed in 2000.

Updates for the 2000 revision include: a new criterion for ammonia; a change in the stream criteria for metals from total recoverable to dissolved; and the adoption of a new method for developing water quality criteria to protect aquatic life.

Source Water Assessment Program (SWAP)

Protection of drinking water supplies has always been a high priority for ORSANCO and for federal and state environmental agencies. With the enactment of the Federal Safe Drinking Water Act Amendments of 1996, protection efforts were enhanced with the establishment of Source Water Assessment Programs (SWAPs). Specifically, the Act requires each state to develop a program to delineate source water areas for public water supplies, identify discharges of contaminants within the delineated areas, and determine the susceptibility of each supply to contamination.

On the Ohio River, source water areas for most public water supplies extend into more than one state. It is therefore imperative that states along the river coordinate their respective assessments. Recognizing this need, the states turned to ORSANCO to provide interstate coordination, and in 1997, a work group was established comprised of representatives from state drinking water programs and members of ORSANCO's Water Users Advisory Committee. As a result of the initial work group discussions, ORSANCO developed an approach to delineate and inventory Ohio River source water, known as the Ohio River Source Water Assessment Strategy to supplement the states' individual SWAP plans.

The Ohio River Source Water Assessment Strategy includes a tiered delineation system for protecting source water. During 2000, delineation maps for all 32 Ohio River drinking water intakes were completed.

In 2001, ORSANCO will continue to work with the states to initiate inventories of potential sources of contamination.

Source Water Assessment Program

Potential Sources of Surface Water Contamination

Non-Point Sources

- Agriculture
- Forestry
- Urban runoff
- Mining
- Construction

Miscellaneous Sites

- Bridges
- Pipelines
- Railroads

Underground Storage Tanks

- Hazardous substances
- Petroleum
- Permitted discharges
- Water treatment plants

Superfund Sites

- National Priority List Sites
- State Sites

Barge Transfer Facilities

- River terminals
- Cargo
- Fuel
- Combined sewer overflows

Solid Waste Facilities

- Landfills (active, closed, abandoned)
- Open dumps
- Direct septic discharges

Total Maximum Daily Load (TMDL) Analyses

A total maximum daily load (TMDL) is the maximum amount of a specific pollutant that can be assimilated by a water body without causing impairment or an exceedance of water quality standards. TMDLs are required by the Federal Clean Water Act for all waters in which beneficial uses are impaired.

In 2000, ORSANCO completed an Ohio River TMDL analysis for dioxin along the Ohio-West Virginia border from Racine Lock & Dam to the confluence of the Big Sandy and Ohio Rivers. This TMDL was required by a 1997 Federal Consent Order and is the first Ohio River TMDL to be developed. ORSANCO's TMDL work group (comprised of representatives from states bordering the Ohio River and U.S. EPA Regions 3, 4 & 5) was consulted in the development process because interstate collaboration was critical due to the multi-jurisdictional nature of the Ohio River Basin.

This TMDL analysis confirms the need for large reductions of dioxin discharged from the Kanawha River and relatively smaller reductions from the upper Ohio River in order to meet water quality standards. To achieve this goal, ORSANCO currently is investigating potential sources of dioxin in the upper Ohio River. In addition to dioxin, studies for the completion of TMDL analyses for PCBs and chlordane have been initiated and will be completed in 2002.

Ohio River Watershed Pollutant Reduction Program

In 1995, ORSANCO established the Ohio River Watershed Pollutant Reduction Program to investigate specific pollutants on a watershed basis. The program combines existing data with targeted monitoring activities to identify the sources of these pollutants and develop control strategies. Contaminants investigated through this program were selected on the basis of comments received in a series of public workshops.

During 2000, this program, which also serves to assist states and the U.S. EPA in the development of TMDLs, focused investigations on dioxin, PCBs, and chlordane. Pollutants such as dioxin, chlordane and PCBs can bioaccumulate to unsafe levels in fish tissue, even when their concentrations in water are too low to be detected by normal analytical techniques.

In order to study the occurrence of these contaminants, it has been necessary for ORSANCO to utilize a new monitoring technique known as high volume sampling. Use of this technique allows ORSANCO to locate areas where dioxin is present and identify specific sources. Similar monitoring has been initiated to locate sources of chlordane and PCBs.

In addition to high volume sampling, ORSANCO also initiated air sampling for dioxin that results from atmospheric deposition. Ambient air monitoring also will be used to sample for PCBs.

Maysville, KY
ORSANCO staff photo

Marietta, OH
ORSANCO staff photo



MONITORING PROGRAMS

Year-Round Bimonthly Sampling Program

Year-round bimonthly sampling took place throughout 2000 to measure inorganic and nutrient parameters at 31 locations: 17 on the Ohio River main stem and 14 on tributaries. ORSANCO's Year-Round Bimonthly Sampling Program, established in 1975, provides basic water quality information and demonstrates water quality trends. Sampling results are published semiannually in ORSANCO's Quality Monitor.

Dissolved Metals Sampling Program

ORSANCO's Dissolved Metals Sampling Program incorporates sampling every other month in order to coincide with the Year-Round Bimonthly Sampling Program. This program was initiated in 1998 with monthly analysis at five Ohio River sites over a six-month period. During 2000, the Dissolved Metals Sampling Program was expanded to include nine main stem sites.

Total recoverable metals criteria were replaced with dissolved metals in ORSANCO's Pollution Control Standards because dissolved metals provide better measurements of metals toxic to aquatic life. Dissolved metals samples are collected using innovative, ultra-clean techniques, reducing the chance that metal from sampling equipment will contaminate the sample taken.

Samples collected are analyzed for both total recoverable and dissolved portions of 16 metals. The goal of ORSANCO's Dissolved Metals Sampling Program is to allow for the comparison of dissolved metals results with total recoverable metals.

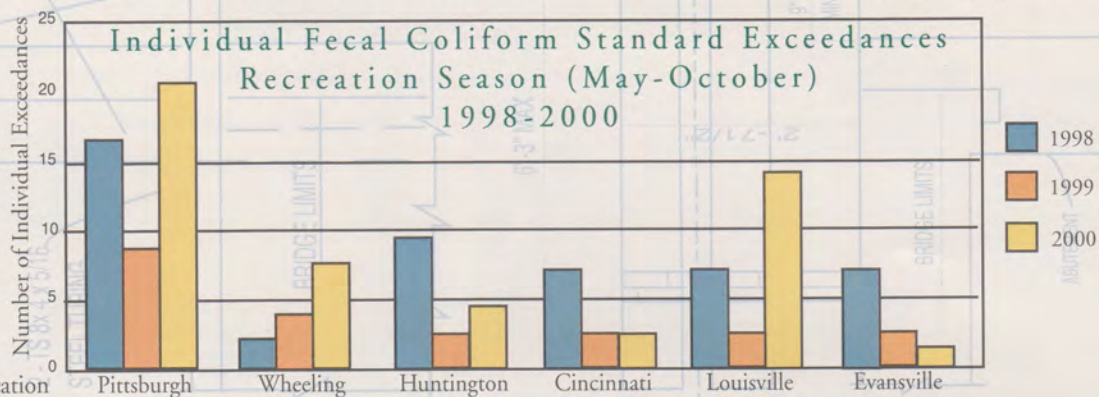
Dissolved Oxygen Monitoring

Minimum levels of oxygen in the water must be maintained in order to support a healthy aquatic community in the Ohio River. From May through October, ORSANCO receives dissolved oxygen (DO) data from electronic monitors at 13 navigational dams operated by the U.S. Army Corps of Engineers (the Corps) or hydropower plants. By acquiring and reviewing dissolved oxygen data, ORSANCO is able to work with the Corps toward operation of their dams at critical times to maximize aeration, or with hydropower operators to assure compliance with the provisions of their Federal Regulatory Commission licenses established to manage loss of oxygenation.

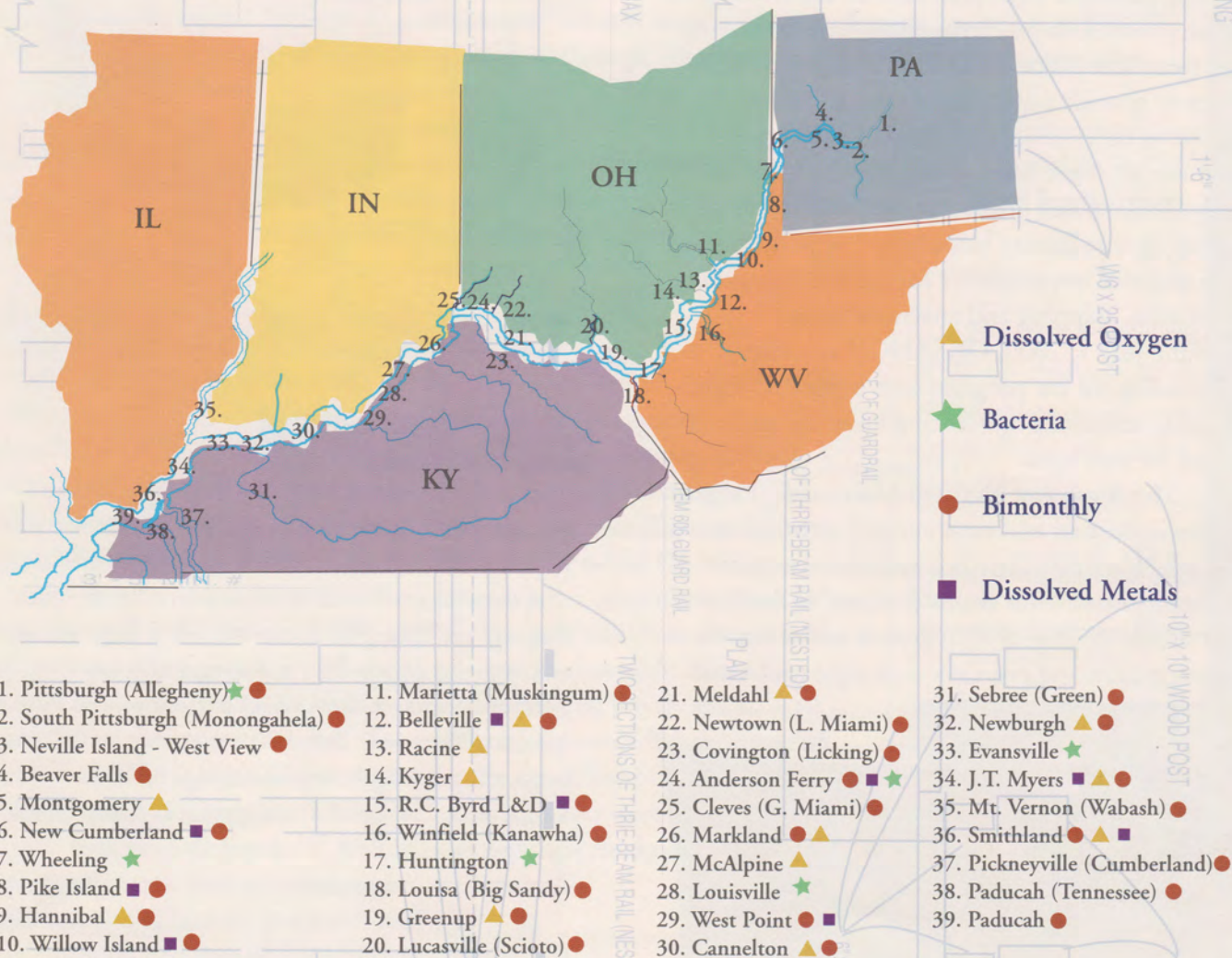
Bacteria Monitoring Program

From May through October, ORSANCO monitors six Ohio River locations five times monthly for the presence of fecal coliform and *E. coli* bacteria. Information from this program is provided to local health departments and the public. Health departments issue public advisories concerning risks to people who engage in recreational activities on the Ohio River.

Sampling locations below the cities of Pittsburgh, Wheeling, Huntington, Cincinnati, Louisville, and Evansville were selected based on the likelihood of elevated bacteria levels due, in part, to the cities' combined sewer systems. During 2000, all six sampling locations recorded exceedances of ORSANCO's bacteria criteria. Pittsburgh, Wheeling, and Louisville experienced increases in fecal coliform and *E. coli* exceedances from 1999 to 2000. This increase may be attributed to the unusually dry weather in 1999 and a more typical year in 2000.



ORSANCO Monitoring Network



ORSANCO staff photo



Louisville, KY, photo by Ken Vogler

MONITORING PROGRAMS

Algae & Nutrient Monitoring Program

In recent years, concerns have arisen regarding potential algae problems on the Ohio River and the effects such problems could have on potable water treatment processes and the ability of water utilities to provide water free of taste and odor. In response to these concerns, ORSANCO began to coordinate an Algae Monitoring Pilot Program in March 1999. Water utilities participated in the pilot program on a voluntary basis, and each participating utility assumed responsibility for sample collection, preservation, shipping and analytical costs. Beginning July 1, 2000, ORSANCO assumed responsibility for the program and expanded efforts to include additional monitoring locations and analyses for nutrients.

The Algae and Nutrient Monitoring Program provides consistent enumeration and identification of algae, which are routinely not monitored at most water treatment plants, and is designed to develop a better understanding of algal growth and allow for the anticipation and prevention of algae problems.

Algae & Nutrient Monitoring Program Participants

West View Water Authority, Pittsburgh, PA

East Liverpool Water Department, East Liverpool, OH

City of Follansbee Water Department, Follansbee, WV

Wheeling Water Treatment Plant, Wheeling, WV

WV-American Water Company, Huntington, WV

Ashland Water Works, Ashland, KY

Maysville Water Works, Maysville, KY

Northern Kentucky Water District, Ft. Thomas, KY

Louisville Water Company, Louisville, KY

EA2 Water Systems, Evansville, IN

Paducah Water Works, Paducah, KY



Gulf of Mexico Program

The Gulf of Mexico, one of the largest commercial fisheries in the nation, is threatened by hypoxia, an area of low dissolved oxygen in the water that may be attributed to excessive nutrient levels. Because the Ohio River contributes a large volume of water to the Mississippi River, and ultimately to the Gulf of Mexico, ORSANCO participates in Gulf of Mexico Watershed Task Force meetings with Task Force member agencies, including the U.S. Department of Agriculture, the U.S. Army Corps of Engineers, U.S. EPA, National Oceanic and Atmospheric Administration, and state representatives.

The Task Force was created in accordance with the federal Harmful Algal Bloom and Hypoxia Research and Control Act of 1998. ORSANCO, acting on behalf of the states in the Ohio River Basin, submitted comments on the "Draft Plan of Action for Reducing, Mitigating and Controlling Hypoxia in the Northern Gulf of Mexico" developed by the task force to guide program efforts in the future.

The plan has been finalized and sets a quantitative goal for reducing the Gulf of Mexico's hypoxic zone by half, through specific strategies to be developed on a watershed basis by states and tribes within two years, and calls for the development of a national strategy to control hypoxia in the northern Gulf of Mexico.

EMERGENCY RESPONSE PROGRAM

Spill Notification and Organics Detection System

For 40 years, ORSANCO has worked to insure that water utilities are sufficiently warned about upstream spills. In 2000, ORSANCO received over 300 reports of spills or unknown discharges to the Ohio River. Due to timely spill notification, none of these incidents posed threats to public water intakes on the Ohio River.

In addition to the spill notification program, ORSANCO also operates an Organics Detection System (ODS) in cooperation with 15 water utilities and industries along the Ohio River. The ODS provides daily analysis of river water for the presence of certain organic compounds. If unusual levels are detected, downstream intakes are notified and efforts are initiated to determine the source.

Coal Slurry Spill in Martin County, Kentucky

In October 2000, ORSANCO responded to a major coal slurry spill from Martin County Coal Company's facility near Inez, Kentucky. Approximately 250 million gallons of waste from the coal cleaning process were released from an impoundment pond into an underground mine. The coal slurry made its way into Coldwater Creek and Tug Fork River and eventually entered into the Big Sandy River, a tributary to the Ohio River.

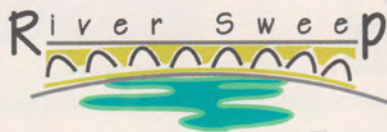
For three weeks, ORSANCO field crews worked around the clock to monitor the spill and track its leading edge as it entered the Ohio River. Spill data, generated in cooperation with the West Virginia-American Water Company in Huntington, were important in determining the chemical composition of the spilled material. These data were provided to downstream states who used the information to determine the suitability of the water for public drinking water supplies. Ohio River water utilities were able to effectively treat the water and did not have to close their intakes as a result of this incident.

Photos courtesy of the staff of the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water

ORSANCO staff photo



PUBLIC INFORMATION PROGRAMS



River Sweep

On June 17, 2000, ORSANCO held the 12th annual River Sweep--a public, private, government partnership campaign to remove litter from river and stream banks in the Ohio River Basin. While heavy rains and high waters forced many cleanup sites to delay the event until later in the summer, over 20,000 volunteers participated.

In conjunction with the Sweep, ORSANCO conducts an annual poster contest, inviting students from throughout the basin to submit original artwork in order to help promote River Sweep. The winning poster adorns brochures and posters announcing the event. Cruz Gellner, a fourth grade student at Sanford Elementary School in Moundsville, West Virginia, received a \$1,000 U.S. Savings Bond for his grand prize winning artwork.

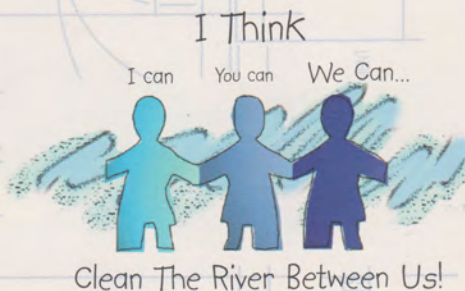
River Sweep 2000 Corporate Sponsors

AK Steel
ALCOSAN
Allegheny Energy
Allegheny Ludlum
American Electric Power
AEP-River Transportation
ATO Fina
ARCH Chemical
Ashland Inc.
BASF
Bayer

C&D Waste Services
Casino Aztar
CH2M Hill
Cinergy
Dayton Power & Light
Dow Corning
DuPont
Duquesne Light
Exxon
First Energy
Gallatin Steel

GE Plastics
Grand Victoria Casino
Louisville Gas & Electric
Louisville Water Company
LTV Steel
Marathon Ashland
Neville Chemical
NOVA Chemical
Nugent Sand
Procter & Gamble
Seagram Americas

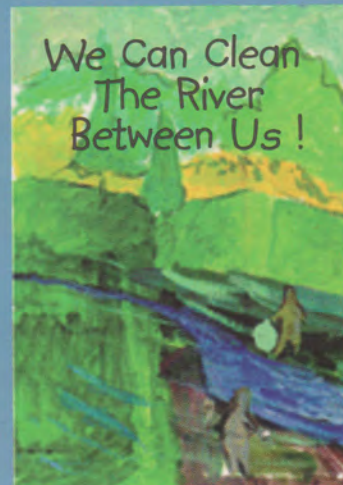
Shell KRATON™ Polymers
SIGECO
Toyota
Tri-State River Products
US Steel
Weirton Steel
Wheeling-Pittsburgh Steel
Whirlpool
White Oak Yacht Club



River Sweep 2001

Illinois•Indiana•Kentucky•Ohio•Pennsylvania•West Virginia

T-shirt design by Jesika Griffin, a third grader
at Daniel Wertz Elementary, Evansville, IN



River Sweep 2001

Saturday, June 16th

To Volunteer Call:
1-800-359-3977

Poster design by Cruz Gellner, a fourth grader at
Sanford Elementary, Moundsville, WV

Friends of the Ohio



Friends of the Ohio is a membership-based program initiated on Earth Day, April 22, 2000. The mission of ORSANCO's Friends of the Ohio initiative is to protect the natural beauty of the river by creating meaningful educational and recreational opportunities, and by inspiring widespread commitment to this magnificent natural resource. As of December 31, 2000, 38 individuals and 15 corporate sponsors have joined Friends of the Ohio. Monies collected from members will be used to enhance river-related education and outreach, including the establishment of a traveling freshwater aquarium and the development of a riverboat-based science classroom and laboratory.

RiverWatchers



The RiverWatchers volunteer monitoring program was established in 1992 to promote the protection of water quality throughout the Ohio River Basin. During 2000, two new tests were introduced to participants. The turbidity test, measuring the clarity of water, and the *E. coli* test, measuring for the presence of *E. coli* bacteria, will be helpful for accurately assessing the health of local waterways. Several RiverWatchers groups also expanded their testing regimens to include benthic macroinvertebrate sampling using Hester-Dendy samplers. Currently, ORSANCO coordinates 25 RiverWatchers groups.

EMPACT



ORSANCO's participation in U.S. EPA's Environmental Monitoring for Public Access and Community Tracking (EMPACT) program continued throughout 2000. The EMPACT program was designed by U.S. EPA so that communities are better able to collect and manage environmental information relevant to their regions.

The Ohio River EMPACT web site (www.orsanco.org/empact) was updated in order to provide residents of the Ohio River Valley with timely water quality information that is easy to use and understand. Information available on the web site includes: weather conditions and bacteria data (May-October) at Pittsburgh, Cincinnati and Louisville; boating and river recreation safety tips; and fish consumption advisory information.

Furthering efforts to increase accessibility of data, ORSANCO installed a weather station and water quality monitoring device at the Thomas More College Biological Field Station in California, Kentucky. This device allows for time-relevant monitoring and easy retrieval of recreation season bacteria data.

Publications

ORSANCO publications provide information on water quality conditions, results of investigations, and ORSANCO activities. Charges are levied for some publications to cover production and mailing costs. These charges are waived for requests from educational institutions, government agencies, and nonprofit organizations.

ORSANCO Publications Released in 2000

- Biennial Assessment of Ohio River Quality (305b Report)
- Biennial Assessment of Ohio River Quality: Executive Summary
- Emergency Response Directory (December 2000)
- ORSANCO Annual Report 1999
- ORSANCO General Information Brochure
- ORSANCO Outlook
- Pollution Control Standards: 2000 Revision
- Quality Monitor
- RiverWatchers Newsletter

Wet Weather Studies

Pollution of the Ohio River from urban areas is a significant problem. Previous ORSANCO studies have pinpointed elevated levels of bacteria from such sources as combined sewer overflows (CSOs) to be the pollution source most in need of attention. Accordingly, ORSANCO is making its expertise available to government agencies seeking to better understand the local impacts of CSOs and the development of effective bacteria reduction strategies. In 2000, ORSANCO continued to spearhead wet weather studies in the areas of Cincinnati, Ohio; Louisville, Kentucky; and Wheeling, West Virginia.

Cincinnati

ORSANCO continued to work toward the conclusion of a multi-year wet weather study in the Cincinnati/Northern Kentucky area. A final wet weather bacteria survey was completed in May 2000, and a final report is in preparation. Results of the Cincinnati Wet Weather Study will be used to develop a model for evaluating alternative controls of wet weather pollution sources. This study is supported by: Metropolitan Sewer District of Greater Cincinnati; Sanitation District No. 1 of Northern Kentucky; and Cincinnati Water Works. Support for the study also has been provided by U.S. EPA because of the significance of this work as a demonstration project for urban wet weather pollution problems on large rivers.

Louisville

During 2000, one wet weather survey was completed at Louisville and two additional wet weather surveys are planned for 2001. The final product of the study, a water quality impacts model, has been initiated. The Louisville Wet Weather Study is carried out with the cooperation of: Louisville Metropolitan Sewer District; Louisville Water Company; the City of Louisville; the cities of Jeffersonville, Clarksville, and New Albany, Indiana; and U.S. EPA.

Hannibal Pool (Wheeling)

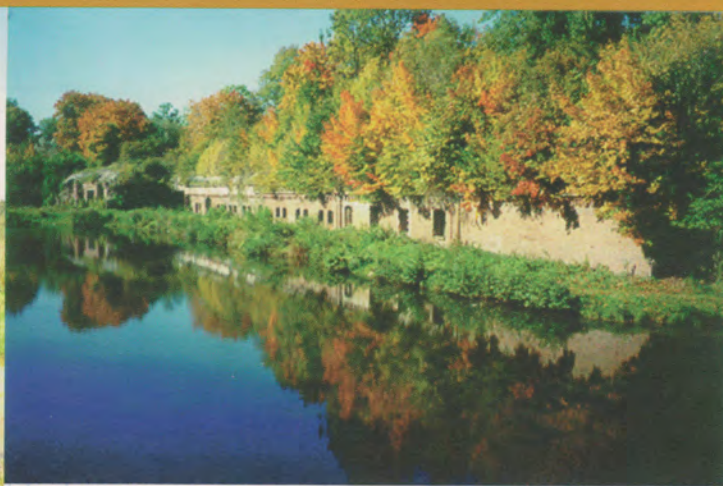
Near Wheeling, West Virginia, the Hannibal Pool Wet Weather Study was expanded to include the Pike Island pool. Dry weather sampling was conducted in 2000. Due to the size of the study area and weather conditions throughout the year, one wet weather survey is still necessary to complete the project in 2001. Study participants include: Wheeling (WV) Water Pollution Control Department; Eastern Ohio Regional Wastewater Authority; the cities of Benwood, Follansbee, McMechen, Moundsville, New Martinsville, and Wellsburg, West Virginia; the Village of Powhatan and the City of Steubenville, Ohio; the West Virginia Division of Environmental Protection; Ohio EPA; and the U.S. EPA Region III, Wheeling (WV) Office. A portion of the funding for this study was provided by the Virginia Environmental Endowment.

ORSANCO staff photos





Sesupe River, Lithuania



ORSANCO staff photos

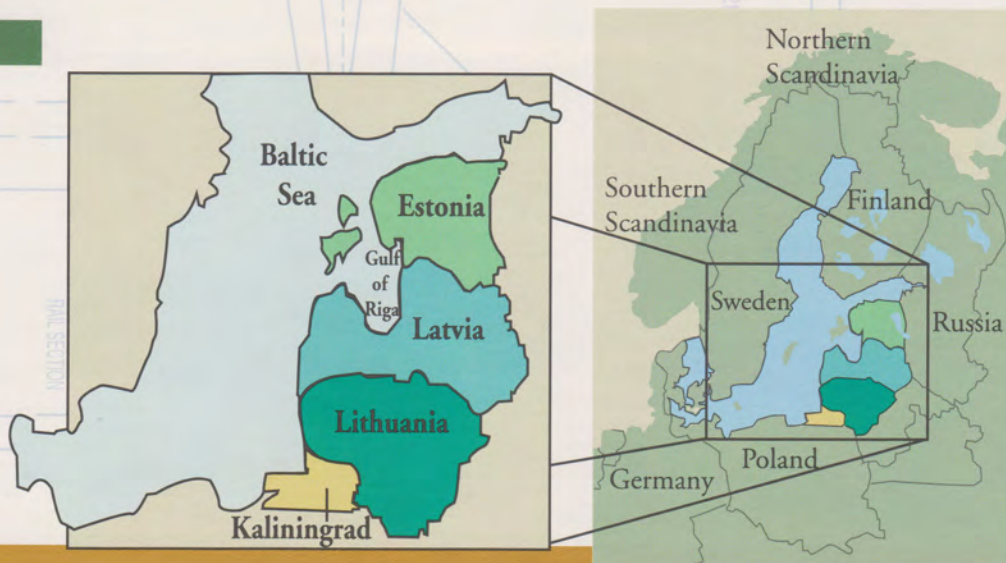
Kaliningrad, Russia

Great Lakes/Baltic Sea Partnership

The Great Lakes/Baltic Sea Partnership was established in 1999 between the United States and several nations forming the eastern shore of the Baltic Sea (Estonia, Latvia, Lithuania) to foster information and resource sharing between the Great Lakes and Baltic Sea regions. The goal of the program is to reduce human health and environmental risks in these regions. ORSANCO is a participant in the program's Watershed Capacity-Building Project in order to assist the Baltic countries with the enhancement of their transboundary watershed management capabilities, a requirement for gaining membership in the European Union.

During 2000, the Kaliningrad Oblast of Russia became a partner in the program. ORSANCO successfully coordinated an international water quality monitoring survey between Lithuania and Russia, marking what is hoped to be the initial step toward long-term cooperation between national neighbors to address the environmental concerns of the Baltic region. ORSANCO also provided training on the use of state-of-the-art monitoring equipment to program participants. In addition, ORSANCO is assisting with two watershed projects, one in Estonia and the other a joint effort between the countries of Latvia and Estonia.

Baltic Region



SPECIAL PROGRAMS

ORSANCO/Ohio River Users Program

The ORSANCO/Ohio River Users program was established in 1993 as a cooperative effort between ORSANCO and Ohio River industries, utilities and municipalities. The program funds scientific studies designed to improve the basis for management decisions about the Ohio River.

Trend Analysis of Ohio River Fish, a study initiated in 1999, continued throughout 2000. This research marks one of the first efforts to combine long-term environmental data sets to identify cause and effect relationships between water quality conditions and fish populations. The study will assess fish population dynamics as well as individual species dynamics, drawing upon water quality and hydrologic data to explain increases or decreases in these populations.

A second study, titled Comparison of State/Federal Water Quality Regulations Affecting the Towing Industry on the Ohio River, was authorized in 2000. This study is designed to provide a comprehensive review and compilation of state and federal water quality regulations and procedures affecting the towing industry, and to identify opportunities to enhance regulatory coordination. This study is scheduled for completion in 2001.

BIOLOGICAL PROGRAMS

Fish & Macroinvertebrate Population Studies

Fish are important indicators of river health, providing direct evidence of water quality conditions. ORSANCO currently is developing an Ohio River Fish Index (ORFI_n) that combines 13 fish community measurements into one index. In conjunction with the index, ORSANCO is working to establish biological criteria (biocriteria) to provide a numerical reference of the overall ecological condition of the river. This numerical reference will be used to evaluate the river's health and will provide information on improvements to the biological community as the water quality of the Ohio River continues to improve over time.

As part of the index development process, ORSANCO's 2000 biological field surveys focused on three areas of the river, including Belleville and Meldahl pools, and the extreme lower river (from Smithland Pool to the open water area below Lock and Dam 53). Intensive fish population surveys were conducted at each location. The 2000 sampling effort resulted in the collection of 112 samples, including 75 species of fish and over 24,000 individuals.

ORSANCO also collected macroinvertebrate samples to further provide an indication of water quality and biotic integrity. In 2000, sampling took place near industrial outfalls as part of a study designed to determine the ways various outfall types effect the Ohio River macroinvertebrate community.

ORSANCO staff photos





Cincinnati, OH
photo by Arthur Averbeck

FINANCIAL STATEMENT

Ohio River Valley Water Sanitation Commission Combined Balance Sheet * All Fund Types and Account Groups June 30, 2000

	Governmental Fund Types		Fiduciary Fund Type	Account Groups		Total (Memorandum Only)
	General Fund	Special Revenue Funds	Pension Trust Fund	General Fixed Assets	General Long-Term Debt	
Assets						
Cash	\$249,529	\$ 294,043	\$ 9,787	\$	\$	\$ 553,359
Restricted investments			1,891,003			1,891,003
Accounts receivable:						
Due from the Federal Government		674,953				674,953
Due from state and local governments	100	4,569				4,669
Other receivables	3,350		12,003			15,353
Due from other funds	449,890		62,000			511,890
Prepaid expenditures	684					684
Property and equipment				1,810,789		1,810,789
Amount to be provided for retirement of long-term debt in future years					1,003,287	1,003,287
	<u>\$703,553</u>	<u>\$ 973,565</u>	<u>\$ 1,974,793</u>	<u>\$ 1,810,789</u>	<u>\$ 1,003,287</u>	<u>\$ 6,465,987</u>
Liabilities						
Accounts payable	\$ 80,405	\$ 274,914	\$	\$	\$	\$ 355,319
Accrued expenses:						
Annual Leave	38,645					38,645
Due to other funds	62,00	449,890				511,890
General long-term debt					1,003,287	1,003,287
	<u>181,050</u>	<u>724,804</u>			<u>1,003,287</u>	<u>1,909,141</u>
Fund Equity						
Investment in general fixed assets				1,810,789		1,810,789
Fund balances:						
Reserved for prepaid expenditures	684					684
Reserved for employee retirement benefits			1,974,793			1,974,793
Unreserved:						
Designated for specific fund purposes	521,819					521,819
Undesignated		248,761				248,761
Total fund equity	<u>522,503</u>	<u>248,761</u>	<u>1,974,793</u>	<u>1,810,789</u>	<u>-</u>	<u>4,556,846</u>
	<u>\$703,553</u>	<u>\$ 973,565</u>	<u>\$ 1,974,793</u>	<u>\$ 1,810,789</u>	<u>\$ 1,003,287</u>	<u>\$ 6,465,987</u>

*Complete audit report is available for examination at ORSANCO's office.

Combined Statement of Revenues, Expenditures, and Changes in Fund Balances

All Governmental Fund Types

Year Ended June 30, 2000

	Governmental Fund Types		Total
	General Fund	Special Revenue Funds	(Memorandum Only)
Revenues			
Federal, State and Local grants		\$ 1,451,470	\$ 1,451,470
State assistance	\$ 1,176,000		1,176,000
Contributions		241,387	241,387
Other	107,887		107,887
	<u>1,283,887</u>	<u>1,692,857</u>	<u>2,976,744</u>
Expenditures			
Programs:			
Water Pollution Control and Abatement	985,516	568,674	1,554,190
EMPACT		41,804	41,804
Wet Weather Study of the Hannibal Pool		32,438	32,438
Genalert AMI	2,111	11,970	14,081
Cincinnati Area Wet Weather Impacts Study	344,355		344,335
Louisville Area Wet Weather Impacts Study		176,505	176,505
Upper River Recreational Aquatic Habitat Study (PA Study)	2,027		2,027
Ohio River Sweep		211,110	211,110
Biological Trend Assessment	26,432		26,432
ORSANCO/Ohio River Users Program		6,131	6,131
Watershed Pollutant Reduction		424,775	424,775
Nutrients	22,565	31,706	54,271
Developing Biological Criteria for the Ohio River	5,636	55,747	61,383
Great Lakes/Baltic Seas Partnership	22,847	82,433	105,280
Great Lakes/Baltic Seas Partnership, Kaliningrad, Oblast Participation		13,639	13,639
SWAP on Interstate Waters		6,329	6,329
Source Water Monitoring System	2,157		2,157
Capital Outlay	114,055		114,055
	<u>1,527,681</u>	<u>1,663,261</u>	<u>3,190,942</u>
Excess of revenues over expenditures (expenditures over revenues)	(243,794)	29,596	(214,198)
Other financing sources			
Operating transfers in	97,001		97,001
Operating transfers out		(97,001)	(97,001)
Excess of revenues and other sources over expenditures (expenditures over revenues and other sources)	(146,793)	(67,405)	(214,198)
Fund equity, beginning of year	669,296	316,166	985,462
Fund equity, end of year	\$ <u>522,503</u>	\$ <u>248,761</u>	\$ <u>771,264</u>

WOOD	10" x 10"	8" x 8"	6" x 8"
STEEL	W8x24	W8x25	W8x9

POST ALTERNATES

SINGLE W-BEAM
RAIL SECTION

SINGLE THREE-BEAM
RAIL SECTION

RAIL

STANDARD
GUARDRAIL

ADMINISTRATIVE ISSUES

ORSANCO Staff*

David R. Bailey, Human Resources Manager
Rhonda L. Barnes-Kloth, Communications Coordinator
Donna M. Beatsch, Data Processing Specialist
Samuel A. Dinkins, Environmental Specialist
Tracey A. Edmonds, Public Information Programs Secretary
Erich B. Emery, Senior Biologist
Constance R. Gabbard, Administrative Assistant
Mindy K. Garrison, Environmental Specialist
Joseph T. Gilligan, Comptroller
Jason P. Heath, Water Quality Monitoring & Assessment Programs Manager
T. Eben Hobbins, Environmental Specialist
Barbara A. Horton, Technical Programs Secretary
Jeanne J. Ison, Public Information Programs Manager
A. Herb Judd, Building Maintenance
Kimberly A. Mays, Environmental Engineer
Nathan G. Mertz, Information Systems Specialist
Carrie E. Morano, Environmental Specialist
Deborah M. Olszowka, Environmental Specialist
Jay D. Patel, Data Systems Administrator
Crystal G. Richardson, Environmental Specialist
Jerry G. Schulte, Biological and Emergency Response Programs Manager
Jeffrey A. Thomas, Biologist
Elizabeth M. Thornton, Public Information Specialist
Peter A. Tennant, P.E., Deputy Executive Director
Alan H. Vicory, Jr., P.E., DEE, Executive Director & Chief Engineer
Matthew S. Wooten, Biologist
Cindy J. Rafferty Williams, Graphic Designer
* As of December 31, 2000

Elected Officers

In 2000, Dr. Vasiliki Keramida of Indiana was elected Commission Chairman. Douglas Conroe of New York was elected Vice Chairman, and Amy Wright of Ohio was elected Secretary/Treasurer.

New Commissioners

During 2000, the following representatives were appointed to the Commission:

Kentucky: John Huber, Louisville Water Company
West Virginia: David Flannery, Jackson & Kelly, PLLC
Federal Government: Bradley Campbell, U.S. EPA

Years of Service

The following ORSANCO staff members were recognized in January 2000 for their years of service to ORSANCO:

Samuel A. Dinkins 5 years
Barbara A. Horton 15 years
Jeanne J. Ison 15 years

Regulatory Agencies of the Member States

ILLINOIS

Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

INDIANA

Department of Environmental Management
Office of Water Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

KENTUCKY

Natural Resources &
Environmental Protection Cabinet
Division of Water
14 Reilly Road
Frankfort, KY 40601

NEW YORK

Department of Environmental Conservation
Division of Water
50 Wolf Road
Albany, NY 12233-3500

OHIO

Environmental Protection Agency
Division of Water Pollution Control
P.O. Box 1049
Columbus, OH 43215-1049

PENNSYLVANIA

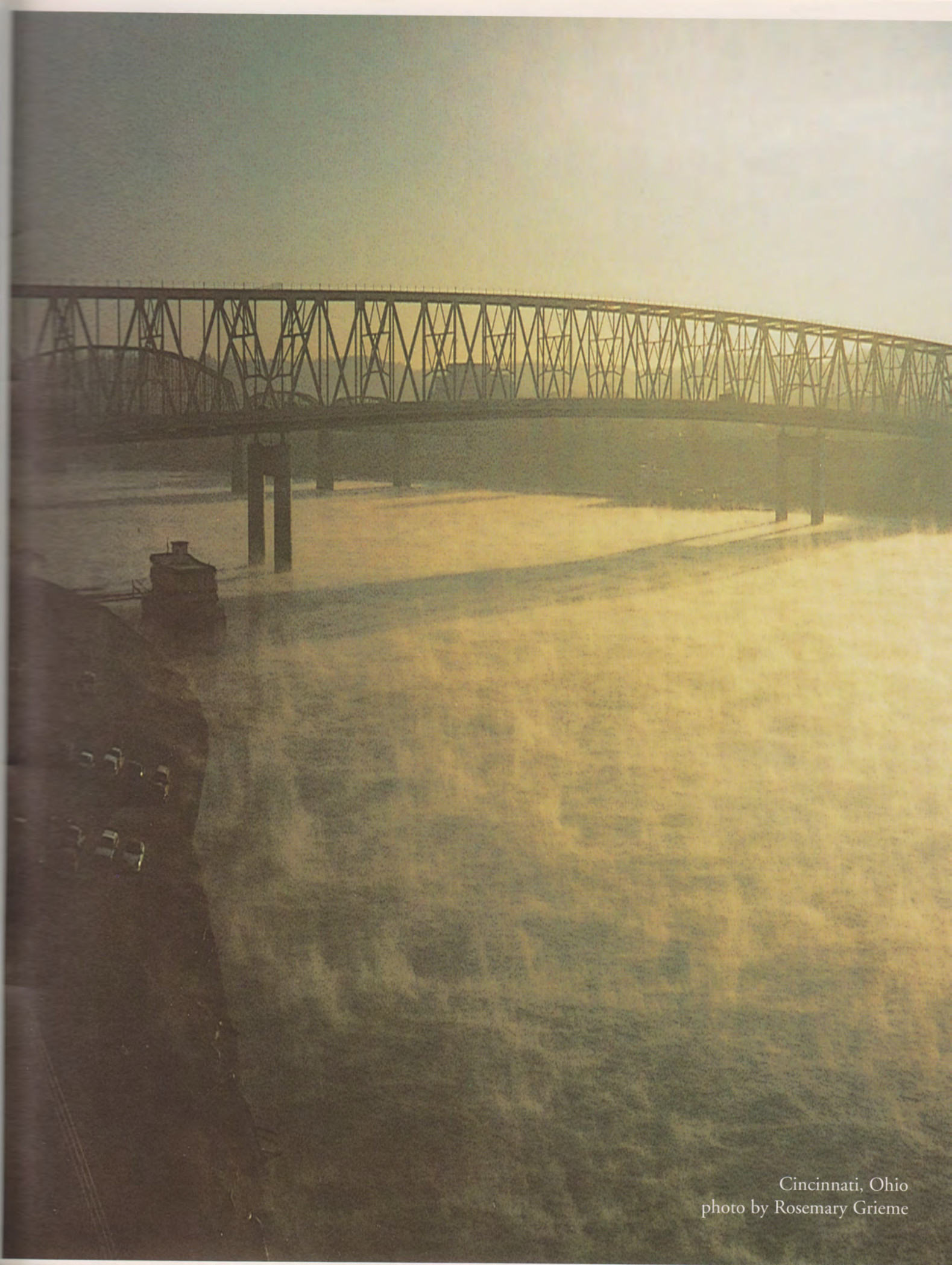
Department of Environmental Protection
Bureau of Water Quality Management
P.O. Box 8465
Harrisburg, PA 17150-8465

VIRGINIA

Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240

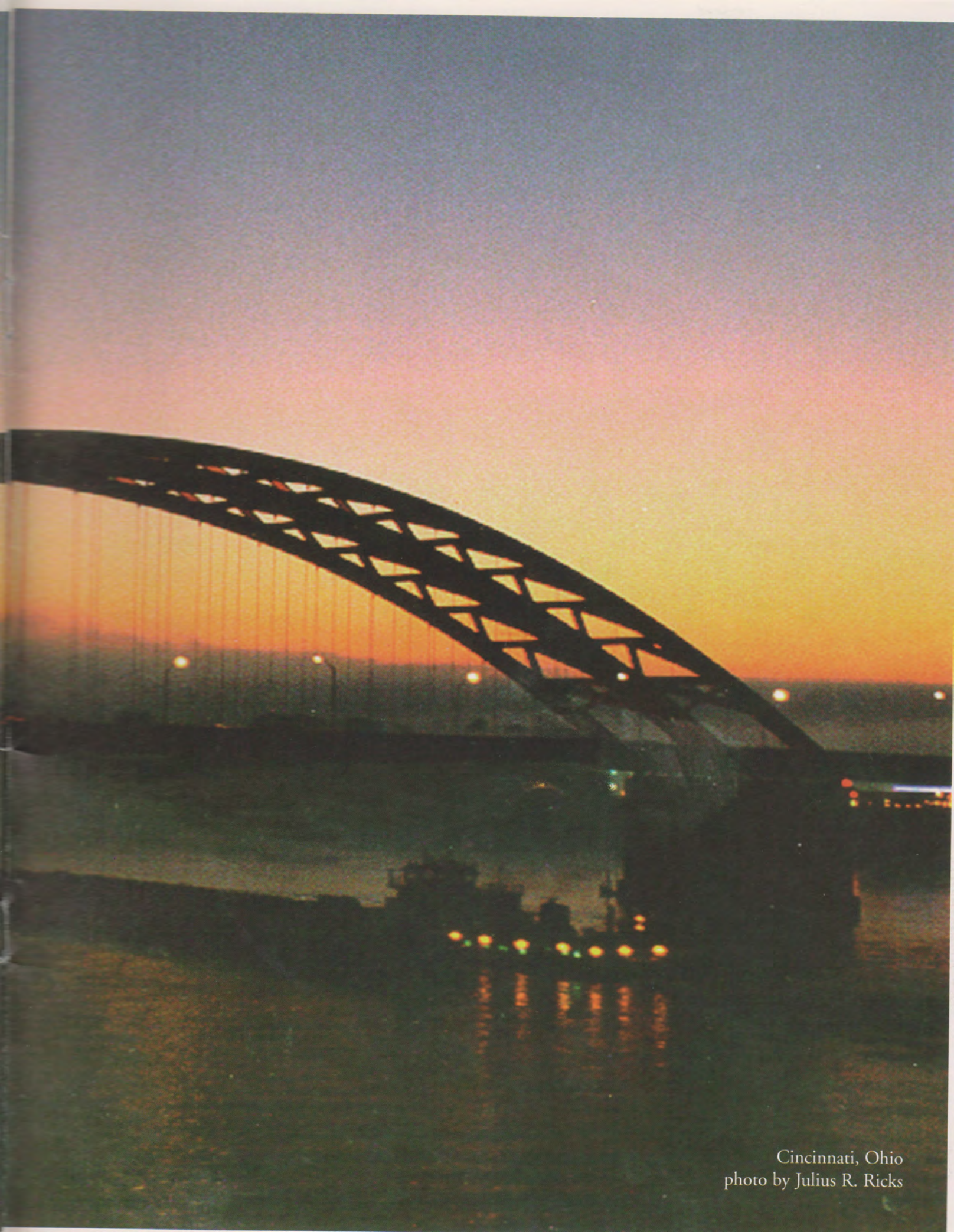
WEST VIRGINIA

Division of Environmental Protection
Office of Water Resources
1201 Greenbrier Street
Charleston, WV 24311



Cincinnati, Ohio
photo by Rosemary Grieme





Cincinnati, Ohio
photo by Julius R. Ricks