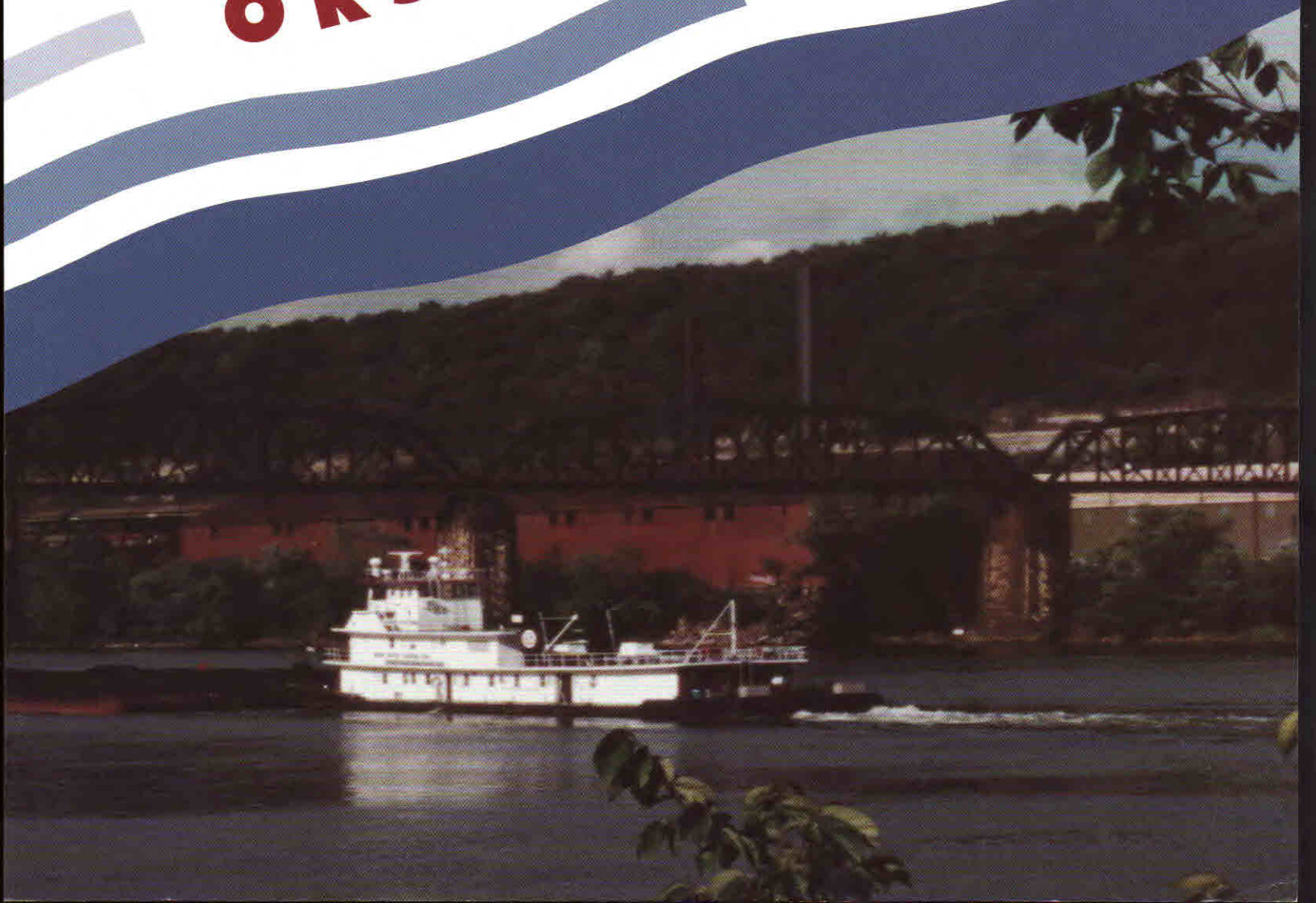
ORSANCO

Annual Report '97



The Commissioners of the Ohio River Valley Water Sanitation Commission (ORSANCO)—an interstate water pollution control agency created jointly 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 approval of the Congress of the United States—respectfully submit the following report of the Commission's activities for 1997 to:

The Honorable Jim Edgar
Governor of Illinois

The Honorable Frank L. O'Bannon
Governor of Indiana

The Honorable Paul E. Patton
Governor of Kentucky

The Honorable George E. Pataki
Governor of New York

The Honorable George V. Voinovich
Governor of Ohio

The Honorable Thomas J. Ridge
Governor of Pennsylvania

The Honorable James S. Gilmore III
Governor of Virginia

The Honorable Cecil H. Underwood
Governor of West Virginia

and

The Honorable William J. Clinton
President of the United States

Ohio River Valley Water Sanitation Commission
5735 Kellogg Avenue, Cincinnati, Ohio 45228-1112
513/231-7719 or visit ORSANCO on the World Wide Web at www.orsanco.org

Cover Photograph by Anita Luellen of Shadyside, Ohio

Members of the Commission *

Illinois

Mary A. Gade, Director, Illinois Environmental Protection Agency
Constance Humphrey, Director of Inter-Government Affairs and Office Manager, The Association Group
Phillip C. Morgan, Director, Danville Sanitary District

Indiana

Joseph H. Harrison, Sr., Bowers, Harrison, Kent & Miller
Vasiliki Keramida, President & Chief Executive Officer, Keramida Environmental, Inc.
John Hamilton, Commissioner, Department of Environmental Management

Kentucky

James E. Bickford, Secretary, Natural Resources & Environmental Protection Cabinet
Stephen L. Henry, M.D., Lieutenant Governor
Roy W. Mundy, Vice President & Manager, Kentucky-American Water Company

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Thomas A. Erlandson, Ph.D., Professor of Biology & Geology, Jamestown Community College
John P. Cahill, Commissioner, Department of Environmental Conservation

Ohio

Keith Harshman, Manager, Environment, Health & Safety, GE Aircraft Engines
Richard Miller
Donald R. Schregardus, Director, Ohio Environmental Protection Agency

Pennsylvania

Melvin E. Hook, R & D Engineering, P.C.
William M. Kudaroski, Operations Manager/Production, Pennsylvania-American Water Company
James M. Seif, Secretary, Department of Environmental Protection

Virginia

Archie Bailey, State Water Control Board
Filbert Tobias, State Water Control Board

West Virginia

Paul L. Hill, Ph.D., Chemical Safety Board
John E. Caffrey, Director, Department of Commerce, Labor & Environmental Resources
Division of Environmental Protection
Ronald R. Potesta, President, Potesta and Associates

Federal

Robin Corathers, Executive Director, Rivers Unlimited Mill Creek Restoration Project
Phillip J. Shepherd, Newberry, Hargrove & Rambicure

Officers

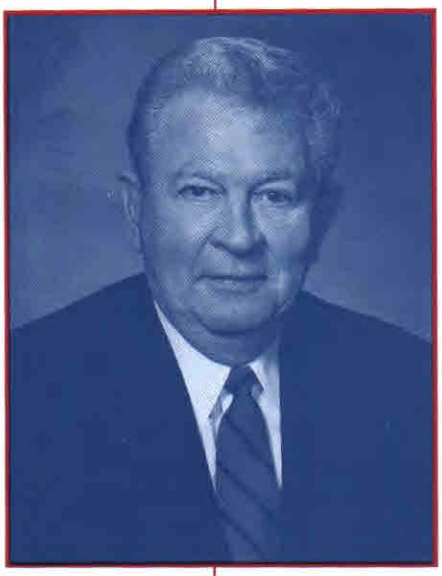
William M. Kudaroski, Chairman
Phillip C. Morgan, Vice Chairman
Roy W. Mundy, Secretary/Treasurer
Alan H. Vicory, Jr., Executive Director and Chief Engineer

* As of December 31, 1997

Message From the Chairman

Protecting the River's Heritage

Heritage is described as something transmitted to or acquired from a predecessor. There can be no doubt that the objective of the governors of the states signing the Ohio River Valley Water Sanitation Compact was to bequeath a River to future generations that would meet all of their expected uses. These uses would include a reliable drinking water source, water for industrial processing and cooling, a transportation mode for goods and supplies, and a dependable body of water for recreational activities.



The first step toward providing a cleaner river was to reduce or eliminate all harmful pollutants from discharges to the River. This was initiated by the adoption of ORSANCO's Pollution Control Standards for the Ohio River. These discharge Standards have served as a guide to the Compact states in issuing National Pollutant Discharge Elimination System permits. It has been through the cooperation of the states, federal agencies, local governments, and private industry that Ohio River water quality improvements have occurred. The Standards are revised periodically, with the most recent revisions in 1997. The next step will be to locate and address nonpoint sources of pollution entering the rivers and streams in the Ohio Valley. These sources are a result of past and present land uses. Water quality in the Ohio River will continue to improve as these sources are identified and then more efficiently controlled or eliminated.

Although the Pollution Control Standards have served as the foundation for improving water quality, there are many other ongoing programs or specific projects that have contributed to the success of ORSANCO's efforts. These include the Organics Detection System for the identification of spills, the Wet Weather Demonstration Study, Watershed Pollutant Reduction Program, Fish Tissue Contaminants Program, and Bacteria Monitoring, just to name a few. Further details on these and other Commission programs are addressed later in this Annual Report.

Perhaps the most recognized Commission program continues to be the nationally-awarded River Sweep, a shoreline cleanup that encompasses the Ohio River and many of its tributaries. Due to its extreme success and community participation, the Sweep is being copied in other river basins.

Two new programs established in 1997 are the Assessment of Nutrient Loadings and Source Water Assessment and Protection. Both projects will continue into 1998 and possibly years beyond. Also, in 1997 President Clinton announced a program to designate 10 rivers in the nation as American Heritage Rivers. Staff has prepared an application on behalf of 24 Ohio River communities to have this magnificent resource named as one of these rivers. The designated rivers will be announced in 1998.

For many years, the Commission has been recognized internationally as a leader in water pollution control. This reputation was apparent in 1997 when representatives from the Lake Biwa-Yodo River Water Quality Preservation Organization from Osaka, Japan visited the Commission's office in Cincinnati. Not only were they impressed with the programs being carried out and ORSANCO's success in the areas of pollution reduction and water quality improvements in the Ohio River Valley, but they proposed that an "agreement of friendship and cooperation between the two organizations" be signed in conjunction with the Commission's 50th Anniversary celebration planned for 1998.

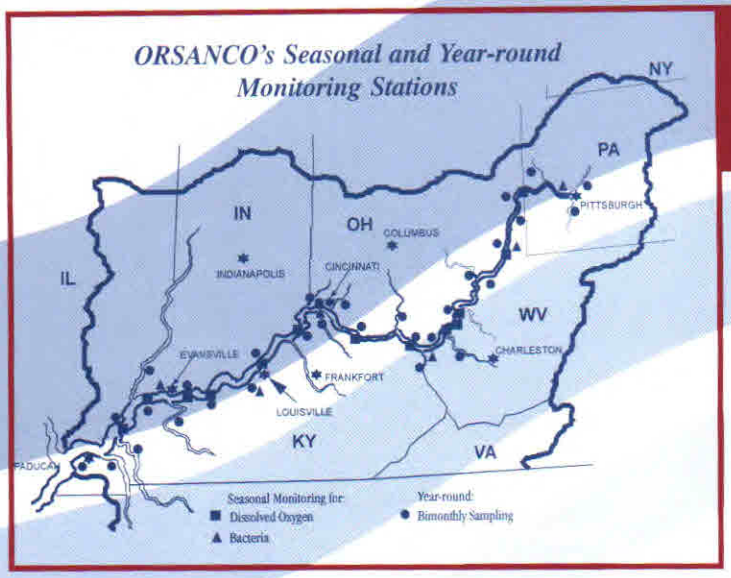
Part of ORSANCO's success over nearly 50 years of existence can be attributed to the support received from the Compact states and their representatives, the federal government, and all who served on the various advisory and standing committees that contribute input and direction for the programs to improve water quality.

A larger part of this success and the abatement of pollution to the River belongs to the competent and enthusiastic staff at the Commission's offices. They are truly the ones who carry out the Commission's directives and follow the various programs through to completion. Now that we are entering ORSANCO's 50th year, we look forward to commemorating that milestone in July 1998. As part of this celebration, we can all reflect back to the signing of the Compact and give thanks to the foresight and commitment of that group to provide our generation with a river that meets all our expected uses. By continuing in their footsteps, we too can help protect the Ohio River's heritage for future generations.

William M. Kudaroski

Commission Chairman

Since the first "River Sweep," volunteers have collected more than 70,000 tons of trash, making the riverfront safer and more scenic.



Monitoring Water Quality

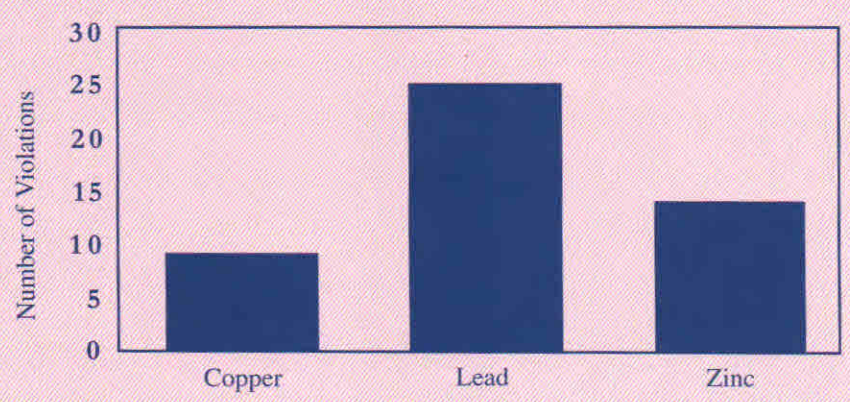
The Commission has defined specific water quality objectives for the Ohio River that reflect water quality conditions needed to achieve the River's designated uses. To assess whether the Ohio River achieves those objectives, the Commission conducts routine monitoring of the main stem and lower reaches of several major tributaries. Monitoring programs for 1997 included year-round bimonthly sampling for certain chemical constituents and physical properties, yearly biological assessments of the River's aquatic communities, and seasonal (six-month) dissolved oxygen and bacteria monitoring.

Bimonthly Sampling

Bimonthly sampling is conducted at 17 sites on the Ohio River and 14 tributaries. Samples are analyzed for 24 parameters; the Commission has adopted numerical criteria for 17 of those parameters.

During 1997, criteria for 13 parameters were met in all samples. The three parameters for which criteria were exceeded in one or more samples were copper, lead, and zinc. Criteria for these three metals have been established to protect aquatic life. However, no evidence has been found to confirm aquatic life impairment resulting from the presence of these metals.

Number of Aquatic Life Criteria Violations for 1997 at Bimonthly Sampling Stations



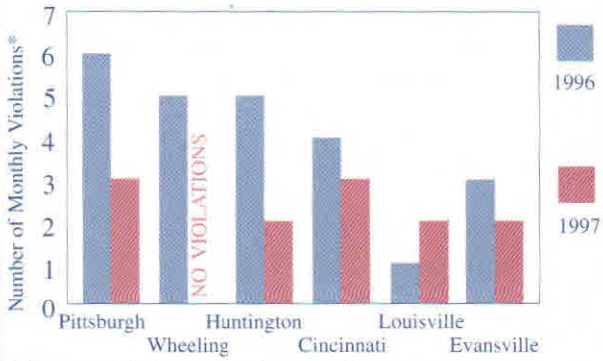
Results from analyses of 85 samples.

Bacteria Monitoring

Ohio River Valley residents have long treasured the River as a recreational resource for boating, swimming, skiing, and other activities. Although many of the historic swimming beaches have disappeared from the River's shorelines, water quality improvements have resulted in an increasing use of the River each year.

To define the extent to which the Ohio River is safe for those having contact with the water, the Commission monitors for the presence of two forms of bacteria—fecal coliform and *E. coli*—from May through October. Elevated densities of these bacteria may indicate the presence of more harmful bacteria called pathogens, which can cause intestinal illnesses and infections.

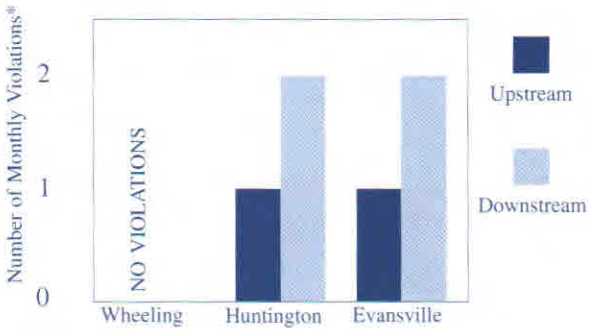
Monthly Bacteria Standard Exceedances
Recreation Season (May-October) 1996 vs. 1997



* Bacteria violation occurs when monthly geometric mean of at least five samples exceeds the standard.

The Commission's monitoring data for bacteria are collected five times monthly from six sites located downstream from larger cities on the Ohio River where bacteria may be most elevated. Water utilities upstream of cities also send their data to ORSANCO from seven locations.

Comparison of Monthly Bacteria Standard Exceedances Above and Below Selected Ohio River Cities in 1997



* Bacteria violation occurs when monthly geometric mean of at least five samples exceeds the standard.

In 1997, exceedances of the bacteria standard were less frequent than in previous years, possibly due to the unusually dry weather conditions in the Valley. The most notable differences were exhibited in the upper half of the Ohio River.

Problem Areas along the Ohio River

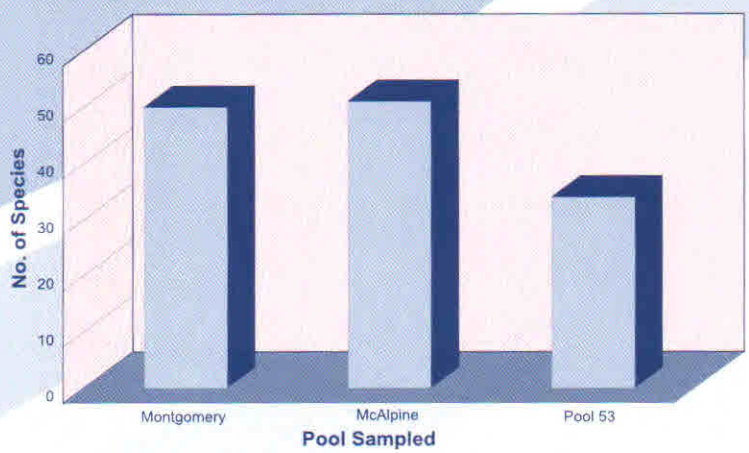
Bacteria levels can fluctuate dramatically within hours due to a release of bacteria-laden sewage to the Ohio River. (See page 8 for more information on CSOs.) Most releases causing severe impacts to water quality occur in larger cities, such as Pittsburgh, PA; Wheeling and Huntington, WV; Cincinnati, OH; Louisville and Paducah, KY; and Evansville, IN. Many of these cities issue contact recreation advisories when bacteria levels are elevated. When recreating in these areas, especially after a rainfall when a release is most likely to occur, contact the local health agency for the most up-to-date information.

Biological Studies

Fish and Macroinvertebrate Surveys

According to the Compact, the Ohio River must be capable of supporting fish and other aquatic life. To determine if the River meets this goal, ORSANCO conducts yearly field studies of fish and macroinvertebrates. In 1997, the Commission collected fish from three navigational pools (areas between two dams) to assess the overall conditions of the biological community. Results indicated that the Ohio River supports a diverse and healthy fish community in the Montgomery Pool (Upper River), McAlpine Pool (Middle River), and Pool 53 (Lower River).

Number of Fish Species Collected at Each Pool Sampled in 1997



To expand its database of biological information, the Commission amassed macroinvertebrate data by collecting samples every five miles along the Ohio River. These results will also assist in Ohio River biocriteria development.

Biocriteria Development

ORSANCO is currently developing Ohio River "biocriteria" which will be used as a basis for detecting impairments on the River's aquatic community. The Commission has assembled a panel of national experts to provide technical guidance in this effort; the panel includes representatives of government agencies, industry, and academia. A major step forward was achieved in 1997 as ORSANCO developed a tentative list of individual measures needed to define the overall health of the River's fish community.

Dissolved Oxygen Monitoring

Fish and other aquatic life are dependent on dissolved oxygen in a water body. Levels of dissolved oxygen vary during the year, with the lowest concentrations in the summer months. To monitor oxygen conditions, ORSANCO receives data from electronic monitors at 13 locations along the Ohio River. These monitors are operated by the U.S. Army Corps of Engineers and by hydroelectric power generating facilities. Because the data are received on a real-time basis, ORSANCO can work with the operators of navigation dams and/or hydropower plants to take mitigating action when low dissolved oxygen levels occur.

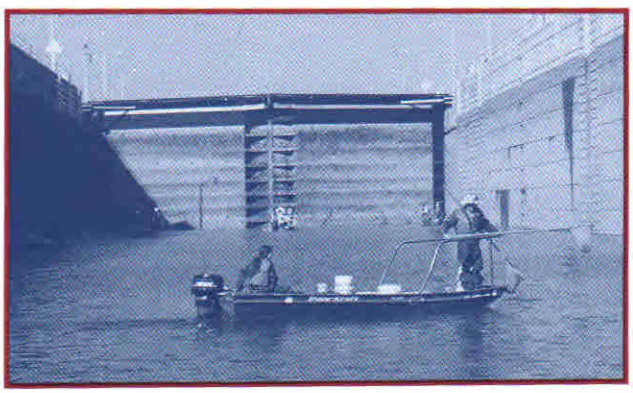
In recent years, low dissolved oxygen levels have been rare, due to improved waste water treatment. In 1997, however, levels below the daily average criterion (5 mg/L) were recorded at more than half of the monitoring locations.

Fish Tissue Analyses

In conjunction with its yearly fish population studies, the Commission collects fish tissue samples from the Ohio River to be analyzed for selected contaminants. Results of these analyses are sent to environmental and health agencies of states bordering the Ohio River, which then determine if consumption advisories should be issued on certain species of fish.

During 1997, the Commission collected and tested samples of 10 species of fish, including two popular gamefish—walleye and sauger—from 16 locations along the River. Results indicated contamination in some species from polychlorinated biphenyls (PCBs), chlordane, or mercury, and prompted state agencies from Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia to issue consumption advisories for fish taken from the Allegheny, Monongahela, and Ohio Rivers.

Among fish included in these advisories are carp, channel catfish, paddlefish, white bass, sauger, freshwater drum, largemouth bass, smallmouth bass, smallmouth buffalo, flathead catfish, and hybrid striped bass. People eating fish from these rivers should contact the appropriate state agency listed at the right for the most current consumption advisory information.



Lock chamber surveys are conducted in conjunction with riverwide sampling to provide a more complete representation of the fish population.

For Current Fish Consumption Advisories Contact Your State Agency

Pennsylvania
Division of Assessment and Standards
Bureau of Water Quality Management
PA Department of Environmental Protection
717-787-9637

Ohio
Ohio Department of Health
Bureau of Environmental Health and Toxicology
614-644-6447

West Virginia
West Virginia Department of Environmental Protection
304-759-0515

Kentucky
Natural Resources and Environmental Protection Cabinet
Division of Water 502-564-3410
Department for Health Services 502-564-7181
Fish and Wildlife Resources 502-564-3596

Indiana
State Department of Health
Environmental Epidemiology Section
317-233-7808

Illinois
No Ohio River Advisories

Special Studies

Wet Weather Demonstration Study

Under dry weather conditions, the Ohio River is generally suitable for all designated uses, including swimming, fishing, water skiing, and after treatment, as a drinking water source. Rainfall, however, can result in impairment of some uses. Pollutants washed off streets, parking lots, roofs and fields enter the Ohio River and its tributaries either directly or through sewer systems. This pollutant runoff raises levels of bacteria in the River and may have other less evident impacts. To better understand the impacts of these wet weather sources of pollution and to determine cost-efficient approaches to their control, ORSANCO has undertaken intensive studies in two urban areas along the Ohio River.

Cincinnati

ORSANCO began a multi-year wet weather study in the Cincinnati/Northern Kentucky area in 1995 with combined funding from U.S. EPA, Metropolitan Sewer District of Greater Cincinnati, Sanitation District #1 of Northern KY, and Cincinnati Water Works. The study investigated combined sewer overflows (CSO) and nonpoint source impacts during both wet and dry weather.

As a result of this investigation, ORSANCO determined that fecal coliform bacteria was responsible for the most frequent and excessive exceedances of water quality standards in the study area. In 1995, a model was developed to simulate river bacteria levels resulting from wet weather events. The approach used for this study can be utilized on other large rivers to evaluate water quality problems. Additional monitoring is being conducted to better calibrate the model. The project is expected to be completed in December 1998.

Louisville

In cooperation with U.S. EPA and local utilities and governments, ORSANCO initiated a wet weather impact study in the area of Louisville, KY and the southern Indiana cities of Clarksville, Jeffersonville, and New Albany. During 1997, the Commission compiled background data and conducted one wet and one dry weather sampling event in the late fall.

A goal of this study is to apply the methodologies used in the Cincinnati study to this area of the Ohio River. However, the McAlpine Lock and Dam, located within the study area, causes special challenges due to complex river flow conditions. The project will continue into 1998, with additional modeling and monitoring.

Assessment of Nutrient Loading

Over the past decade, researchers have monitored a large zone of hypoxia (low dissolved oxygen) in the Gulf of Mexico near the mouth of the Mississippi River. It is believed that the zone is caused by high levels of nutrients, such as nitrogen and phosphorus, in the Mississippi. Since the Ohio River is the largest tributary to the Mississippi, it is likely that it contributes a portion of the nutrients that enter the Gulf.

In 1997, ORSANCO received $100,000 from U.S. EPA for a study of nutrients in the Ohio River Basin. Tasks include: compiling and assessing historic nutrient water quality data in the Ohio River Basin; designing and implementing a monitoring program for nutrients on the Ohio River and major tributaries; estimating nutrient loads and relative contributions from point and nonpoint sources; and developing an inventory of nutrient control programs in the Basin.

Data generated from this project will document baseline water quality conditions upon which to measure future improvements and identify what is needed to achieve meaningful reductions in nutrient loading from the Ohio River Basin that ultimately may affect the Gulf of Mexico.

Watershed Pollutant Reduction Program

Agricultural runoff and industrial discharges are potential sources of pollutants to the waterways.

Some pollutants are discharged to waterways from specific, well-defined sources; others enter from less distinct pathways, including runoff, ground water and atmospheric deposition. To address the latter type of pollutants, ORSANCO established a Watershed Pollutant Reduction Program in 1995. The initial focus of the program was on dioxin, a chemical that can affect human health at extremely low concentrations. Following a series of public workshops, seven other pollutants were added for study: atrazine, chlordane, copper, lead, nitrogen, phosphorous, and polychlorinated biphenyls (PCBs).

While dioxin has been detected in fish tissue and bottom sediments from the Ohio River and certain tributaries, no data were available on its presence in the waters of the rivers. In 1997, an innovative sampling technique was utilized to measure dioxin concentrations at three locations on the Ohio River and one on the Kanawha River. Results of three measurements at each site indicated the presence of dioxin at low concentrations. This information will be used to help locate and control the sources of this contaminant.

ORSANCO/Ohio River Users Program

The best water quality management decisions are based on strong scientific information. With this concept in mind, in 1993, the Commission created the ORSANCO/Ohio River Users Program as a means by which river users could suggest and financially support studies to improve the scientific understanding of the Ohio River. Since its inception, several projects have been recommended by the River Users Program Advisory Committee and funded through the program. These include the establishment of a repository for Ohio River biological information, online since 1995, and a study to recommend protocols for evaluating site-specific water quality criteria for the Ohio River, which was completed in 1997.

Three additional projects were recommended for funding by the Advisory Committee and approved by the Commission's Technical Committee—Guidelines for Delineating Mixing Zones for the Ohio River, Evaluation and Recommendation of Water Quality Models for the Ohio River, and Guidelines for Determining Background Water Quality Conditions. These programs, designed as guidance documents to promote consistency in the protection of aquatic life and human uses of the Ohio River, are expected to be completed in 1998. Several studies are currently under consideration.

Pollution Control Standards

Adoption of '97 Standards

The Commission has maintained Pollution Control Standards for discharges to the Ohio River since 1951. The Standards designate specific uses for the River, set water quality criteria to protect those uses, and establish treatment requirements to meet the instream criteria. Implementation of the Commission's Standards is carried out by the states through the National Pollutant Discharge Elimination System (NPDES) permits program. ORSANCO reviews draft permits for Ohio River discharges to assure that its Standards are incorporated.

ORSANCO consults regularly with state and federal agency personnel, and its advisory committees, representatives of industry, academia, environmental groups, and the general public, to assure the Standards are up to date. Formal review is conducted every three years. The most recent review concluded in 1997 and resulted in the following changes:

- A section was added to establish specific requirements for the control of combined sewer overflows.
- Criteria for mercury were modified to provide protection of both human health and aquatic life.
- A provision for the establishment of site-specific criteria was added.
- Values for "critical river flows," which take into consideration low and average flows, were updated to reflect the most current data. Critical river flows are used to calculate permit limits.

Status of Waste Water Dischargers

In 1997, the Commission monitored 23 facilities for compliance with its Pollution Control Standards. Of those facilities, 16 were selected for high-volume discharges (more than 10 million gallons per day), and seven for prior compliance problems. None of the facilities tracked achieved complete compliance with the Standards; however, many of the 1997 violations were attributed to flood conditions in March.

Emergency Response & Spill Detection

Organics Detection System

An integral component of ORSANCO's emergency response efforts is the Organics Detection System (ODS), an early warning system established in 1978 in cooperation with Ohio River drinking water utilities and industries. When an accidental spill or release of certain organic substances is detected at one of the 15 stations on the Ohio River and selected tributaries, ORSANCO notifies state and federal agencies, and, as necessary, downstream water intakes, so appropriate actions can be taken. A new Ohio River ODS station between Cincinnati and Louisville was installed during 1997.

The Portsmouth, OH ODS site identified an unknown benzene release from an industrial facility near New Boston, OH in January 1997. The Commission notified Ohio EPA who, in turn, eliminated this source of pollution.

To facilitate communications when a spill or accidental release occurs, the Commission maintains a 24-hour telephone service and posts spill reports to an electronic bulletin board. This bulletin board can be accessed by computer. ORSANCO also has developed a computer model of the Ohio River that predicts the movement and concentration of a spill as it travels downstream. To test the accuracy of this model, time-of-travel studies (using dye as a tracer) were conducted in the Greenup Pool in 1996 and 1997.

Because the Ohio River and its tributaries are "working" waterways, being utilized for industrial processes and transportation, spills and accidental discharges do occur.

American Heritage Rivers Initiative

Early in 1997, President Clinton announced an initiative to help communities revitalize their rivers and the banks along them—the streets, historic buildings, natural habitats, parks—to help celebrate their history and their heritage. This program, the American Heritage Rivers, will initially name 10 rivers that best exemplify the heritage of this nation.

ORSANCO, on behalf of 24 Ohio River communities, nominated the Ohio River for such status. As an American Heritage River, communities would gain access to existing federal programs and funding to assist in their planned projects for riverfront enhancement. Announcement of the 10 American Heritage Rivers will be in 1998.

Participating Communities

Pennsylvania
- Baden

Indiana
- Aurora
- Clarksville
- Evansville
- Jeffersonville
- Lawrenceburg
- Madison
- Mt. Vernon
- New Albany

West Virginia
- Chester
- Follansbee
- New Martinsville
- Williamstown

Ohio
- Belpre
- Cincinnati
- Gallipolis
- Portsmouth

Illinois
- Golconda

Kentucky
- Cloverport
- Hawesville
- Louisville
- Maysville
- Paducah
- Vanceburg

Public Information & Education

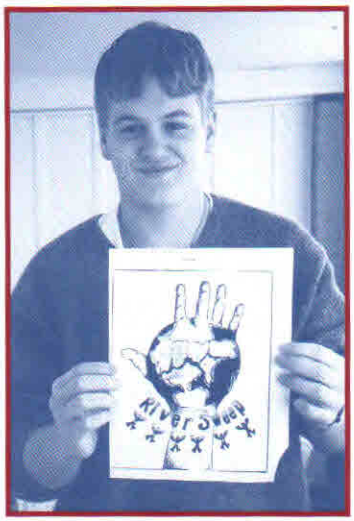
An important role of the Commission is to inform the public of issues relating to the Ohio River and its tributaries. The Commission accomplishes this in part through its publications, presentations to schools and civic organizations, and two public participation programs—the River Sweep and RiverWatchers volunteer monitoring.

River Sweep

This nationally-recognized river bank cleanup brought together more than 22,000 volunteers in 1997 to pick up approximately 11,000 tons of trash from the shores of the Ohio River and several tributaries.

Since 1989, ORSANCO, in partnership with Ashland Inc., other Valley businesses and industries, and environmental agencies from the main stem states, have united people with diverse backgounds to work toward a goal of a cleaner Ohio River Valley.

The River Sweep Poster Contest, an annual event since 1994, invites students in kindergarten through 12th grade to create visual displays that increase awareness of litter problems along the valley's waterways. Winners are awarded U.S. Savings Bonds, and the Grand Prize winning poster is used to promote the River Sweep. To learn more about the River Sweep, or to view the winning posters from the last four years, visit the Sweep on the World Wide Web at: **www.orsanco.org/sweep.html**



1998 River Sweep poster contest winner Sherrod Melvin, a Junior at Raceland High School in Wurtland, KY

Photo by Sam Piatt

1997 River Sweep Corporate Sponsors

AK Steel
Allegheny Ludlum
Allegheny Power
American Commercial Lines
American Electric Power
Aristech
Ashland Inc.
BASF
Bayer
BFI
CH2M Hill
Cinergy
Consolidated Grain & Barge, Inc.
CSXT
Dow Corning
DuPont
Duquesne Light
Elf Atochem NA
Exxon
Gallatin Steel
GE Plastics
Lousville Gas & Electric
Louisville Water Co.
Lukens
Neville Chemical
North American Stainless
NOVA Chemical
Procter & Gamble
Shell Chemical
SIGECO
US Steel
Weirton Steel
Wheeling-Pittsburgh Steel

RiverWatchers Volunteer Monitoring

Since 1989, ORSANCO has provided the opportunity for citizens to learn more about water quality by conducting chemical tests on Valley rivers and streams. The groups sending their data to ORSANCO serve as "watch dogs" of the waterways.

RiverWatchers Participants for 1997-1998

Anderson High School, Cincinnati, OH
Blazer High School, Ashland, KY
Cairo High School, Cairo, IL
Daviess County Middle School, Owensboro, KY
Dickson Intermediate School, Pittsburgh, PA
Evansville Day School, Evansville, IN
French Island Marina, Rockport, IN
Good Shepherd School, Evansville, IN
Hancock County High School, Lewisport, KY
Lawrenceburg High School, Lawrenceburg, IN
Madison Consolidated High School, Madison, IN
Marietta High School, Marietta, OH
Marietta Middle School, Marietta, OH
Massac County High School, Metropolis, IL
Mater Dei High School, Evansville, IN
Moundsville Junior High School, Moundsville, WV
Perry Traditional Academy, Pittsburgh, PA
Ripley Elementary School, Ripley, OH
River Ridge Intermediate School, Villa Hills, KY
Sacred Heart of Mary School, Weirton, WV
St. Francis Xavier School, Moundsville, WV
Shawnee High School, Louisville, KY
Taylor High School, North Bend, OH
Valley High School, Louisville, KY
Vandevender Junior High School, Parkersburg, WV
Wahama High School, Mason, WV
Walnut Hills High School, Cincinnati, OH
Warwood Middle School, Warwood, WV
Worthington Intermediate School, Worthington, KY

An outdoor classroom built by students from Warwood Middle School in Warwood, WV, is a perfect place to conduct testing.

A student from Marietta Middle School collects a sample from the Ohio River.

1997 Flood

Flooding is a problem to those who live and work along the Basin waterways, and the spring of 1997 proved to be one of the worst for residents in recent Valley history. With 24 deaths, more than $400 million in damage, and hundreds without homes, many counties along the Ohio River in Kentucky, Ohio, Indiana, and Illinois were declared federal disaster areas. ORSANCO's offices are located near the Ohio River in a community which was devastated by the rising waters. While the Commission's offices were not directly affected by the flood, staff donated time and supplies to the relief effort and opened the office building to those needing temporary facilities.

Ohio River floodwaters invade a riverfront home

Photograph by Julius Ricks of Cincinnati, Ohio

Public Information Advisory Committee (PIACO) Map Project

An new project was intiated in 1996 by the Commission's Public Interest Advisory Committee (PIACO) that will benefit all those interested in the Ohio River Valley's vast resources. A proposed map project will consolidate information on the Ohio River's history, natural resources, recreational opportunities, cities, special events, and much more into a format accessed via the World Wide Web. The web site is expected to be available in 1998.

Administrative Issues

Elected Officers

In 1997, William M. Kudaroski of Pennsylvania was elected Chairman and Phillip C. Morgan of Illinois was elected Vice Chairman. Roy W. Mundy of Kentucky was elected Secretary/ Treasurer for the period July 1, 1997 through June 30, 1998.

50th Anniversary

A special 50th Anniversary Committee is guiding preparation for the Commission's golden anniversary in 1998. Among the special events will be an Ohio River Conference 2000 in July that will reflect on ORSANCO's past commitment to water quality in the Ohio River Valley, and will join together all interested parties to discuss management plans for the first half of the next century. For information about the Conference, call the Commission offices. Additional activities planned for 1998 include a 50th Anniversary Photo Contest and displays at Valley boat shows and conventions.

On the Web

Visit ORSANCO on the World Wide Web at **www.orsanco.org** to learn more about the Commission, its programs and projects, Ohio River facts, updates from the RiverWatchers, and events such as the River Sweep.

Bridge spanning the Ohio River
Photograph by Troy Mellott of Nelsonville, Ohio

Available Publications

Publications are developed to provide information on water quality conditions, results of investigations, and activities of the Commission. 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. The following publications were produced in 1997:

ORSANCO 1996
Annual Report of activities during 1996

Quality Monitor
Semiannual publication of data summaries from the Bimonthly Sampling and Bacteria Monitoring Programs, and the Organics Detection System

Emergency Response Directory
An annual compilation of instructions concerning the appropriate agencies to notify when a spill or accidental discharge occurs to the Ohio River or a tributary

The ORSANCO Outlook
A newsletter published yearly,with general information on water quality conditions and the activities of the Commission

RiverWatchers
An annual newsletter for participants in the Commission's volunteer monitoring program

Technical Publications

Biennial Assessment of Ohio River Water Quality Conditions 1994-95

Biennial Assessment of Ohio River Water Quality Conditions 1994-95, Summary

Pollution Control Standards for Discharges to the Ohio River, 1997 Revisions

Herbicides in the Lower Ohio River Basin, an investigation focusing on water pollution from atrazine and its sources

Investigating CSOs and Their Impact on the Ohio River, Identification of Longitudinal/Bacteria Impacts from CSOs

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Photograph by Elizabeth Chrissian of Cincinnati, Ohio

An Ohio River sunset

Financial Report

OHIO RIVER VALLEY WATER SANITATION COMMISSION
Combined Balance Sheet
All Fund Types and Account Groups

June 30, 1997

	Government Fund Types		Fiduciary Fund Types		Account Groups		Total
	General	Special	Agency	Pension	General	General	(Memorandum
Assets	Fund	Revenue Funds	Fund	Trust Fund	Fixed Assets	Long-Term Debt	Only)
Cash	$ 466,230	$ 226,047	$	$ 54,121	$	$	$ 692,277
Restricted investments			290,934	1,451,797			1,814,782
Accounts receivable:							
Due from the Federal government		242,731					242,731
Due from state and local governments	83,250	2,495					85,745
Other receivables	2,700	10,000		17,930			12,700
Due from other funds				40,000			40,000
Prepaid expenditures	1,939						1,939
Property and equipment					1,925,084		1,925,084
Amount to be provided for retirement of long-term debt in future years						1,067,791	1,067,791
	$ 554,119	$ 481,273	$ 290,934	$ 1,563,848	$ 1 925,084	$ 1,067,791	$ 5,883,049
Liabilities							
Accounts payable	$ 25,461	$ 71,391	$	$	$	$	$ 96,852
Accrued expenses:							
Annual leave	51,489						51,489
Worker's compensation	2,636						2,636
Due to other funds	40,000						40,000
Deferred compensation			290,934				290,934
General long-term debt						1,067,791	1,067,791
	119,586	71,391	290,934			1,067,791	1,549,702
Fund Equity							
Investment in general fixed assets					1,925,084		1,925,084
Fund balances:							
Reserved for prepaid expenditures	1,939						1,939
Reserved for employee retirement benefits				1,563,848			1,563,848
Unreserved:							
Designated for specific fund purposes	432,594						432,594
Undesignated		409,882					409,882
Total fund equity	434,533	409,882		1,563,848	1,925,084		4,333,347
	$ 554,119	$ 481,273	$ 290,934	$ 1,563,848	$ 1,925,084	$ 1,067,791	$ 5,883,049

OHIO RIVER VALLEY WATER SANITATION COMMISSION
Combined Statement of Revenues, Expenditures and Changes in Fund Balance
All Governmental Fund Types

Year Ended June 30, 1997

	Government Fund Types		
	General Funds	Special Revenue Funds	Total (Memorandum Only)
Revenues			
Federal, State and local funds	$	$ 1,449,937	$ 1,449,937
State assistance	1,056,000		1,056,000
Contributions		305,600	305,600
Other	45,381		45,381
	1,101,381	1,755,537	2,856,918
Expenditures			
Programs:			
Water Pollution Control and Abatement	854,773	370,778	1,225,551
Combined Sewer Overflow Demonstration		616,949	616,949
Upper River Recreational/ Aquatic Habitat Study		133,382	133,382
Ohio River Sweep		246,758	246,758
Biological Information Systems		1,806	1,806
ORSANCO/Ohio River Users Program		41,671	41,671
Watershed Pollutant Reduction		235,440	235,440
Site Specific Procedures		31,775	31,775
Evaluation and Recommendations of Water Quality Models for the Ohio River		156	156
Guidelines for Delineating Mixing Zones for Ohio River Discharges		81	81
Guidelines for Determining Background Water Quality Conditions		277	277
U.S. Army Corps of Engineers/ORSANCO Partnership Program		71,514	71,514
Capital Outlay	83,911		83,911
	938,684	1,750,587	2,689,271
Excess of revenues over expenditures	162,697	4,950	167,647
Other financing sources			
Operating transfers in	73,438		73,438
Operating transfers out		(73,438)	(73,438)
Excess of revenues and other sources (uses) over (under) expenditures and other uses	236,135	(68,488)	167,647
Fund equity, beginning of year	198,398	478,370	676,768
Fund equity, end of year	$ 434,533	$ 409,882	$ 844,415

Regulatory Agencies of the Member States

Illinois
Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Indiana
Department of Environmental Management
Office of Water Management
100 North Senate Avenue
Post Office Box 6015
Indianapolis, Indiana 46206-6015

Kentucky
Natural Resources and Environmental Protection Cabinet
Division of Water Quality
14 Reilly Road
Frankfort, Kentucky 40601

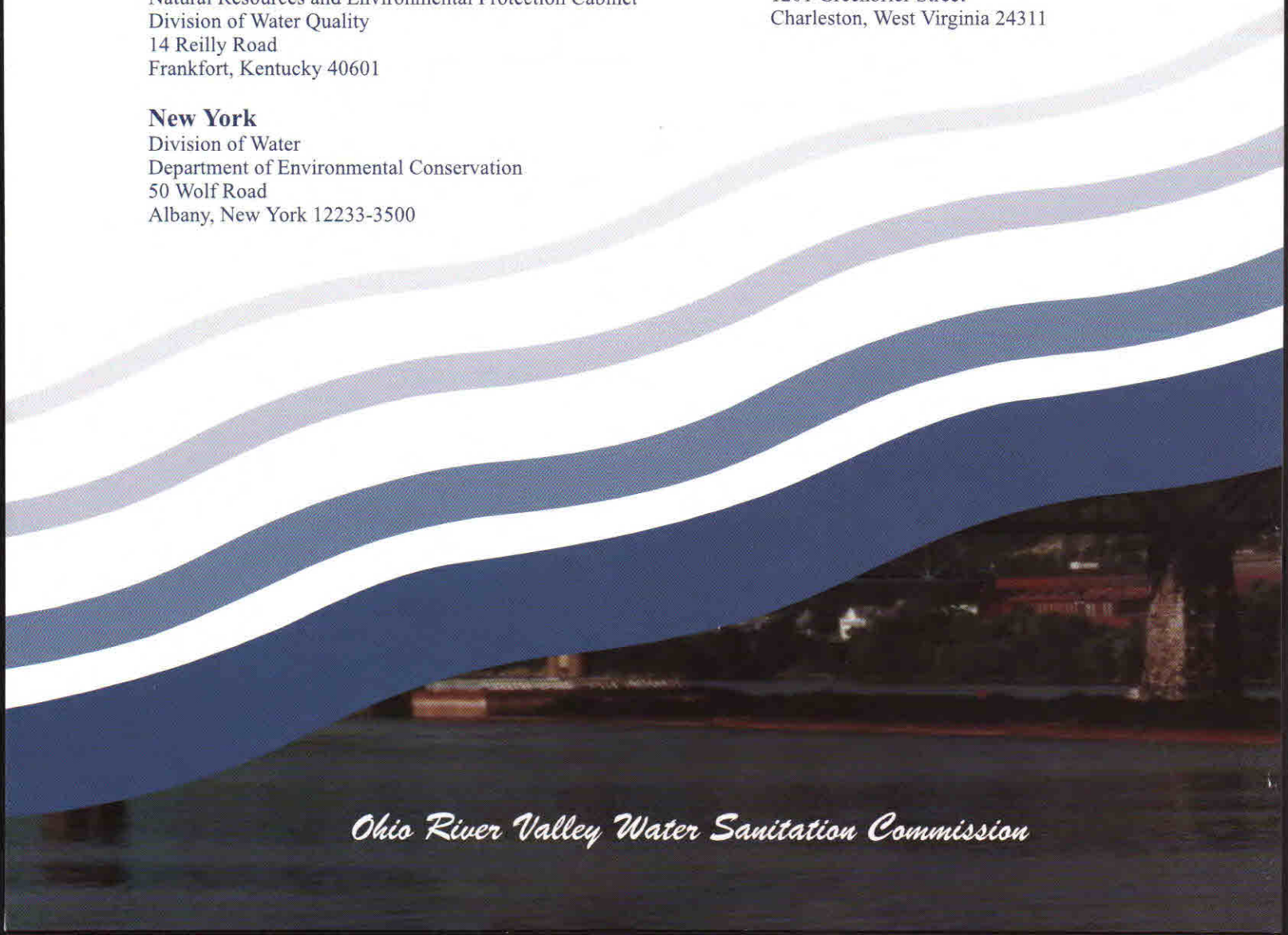
New York
Division of Water
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-3500

Ohio
Environmental Protection Agency
Division of Water Pollution Control
1800 WaterMark Drive
Post Office Box 1049
Columbus, Ohio 43216-1049

Pennsylvania
Department of Environmental Protection
Bureau of Water Quality Management
Post Office Box 8465
Harrisburg, Pennsylvania 17150-8465

Virginia
Department of Environmental Quality
Post Office Box 10009
Richmond, Virginia 23240

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



Ohio River Valley Water Sanitation Commission