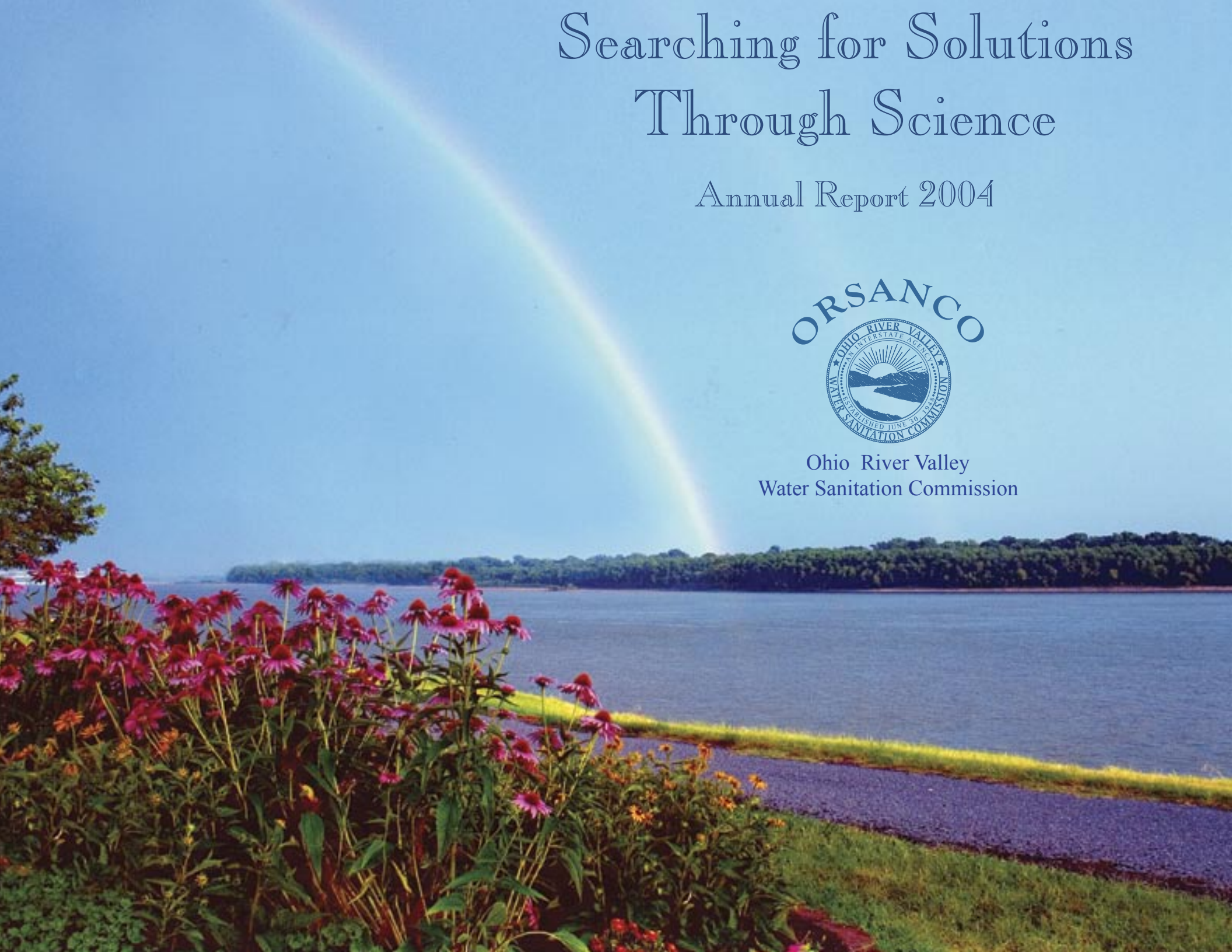
Searching for Solutions Through Science

Annual Report 2004



ORSANCO

Ohio River Valley
Water Sanitation Commission

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*as of 12/31/04

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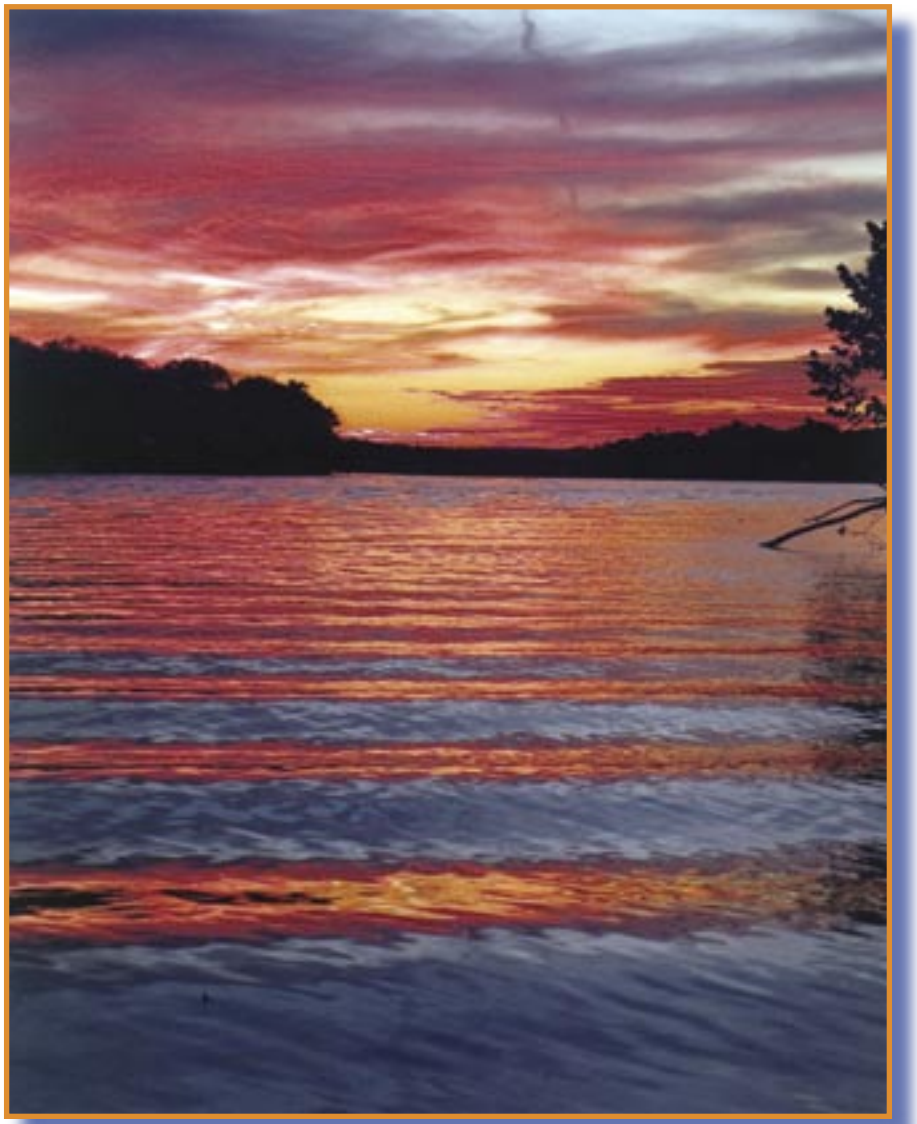
Cover photograph: "Rainbow over the Ohio" taken west of Newburgh Locks and Dam by Chris Stofleth of Newburgh, IN

Many photographs in this report were submitted by amateur photographers during the 2004 Friends of the Ohio photography contest.

Searching for Solutions
Through Science

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 approval of the Congress of the United States. The Commissioners of ORSANCO respectfully submit the following report of activities for 2004 to:



Photograph by James Sutton, III, Washington, WV

The Honorable Rod R. Blagojevich
Governor of Illinois

The Honorable Joseph E. Kernan
Governor of Indiana

The Honorable Ernie Fletcher
Governor of Kentucky

The Honorable George E. Pataki
Governor of New York

The Honorable Robert Taft
Governor of Ohio

The Honorable Edward G. Rendell
Governor of Pennsylvania

The Honorable Mark R. Warner
Governor of Virginia

The Honorable Joe Manchin, III
Governor of West Virginia

and

The Honorable George Walker Bush
President of the United States of America

Message from the Chairman

The Ohio River provides a lifeline and corridor for commerce stretching over 900 miles. Every day several million people depend on the river for the economy of their town, drinking water, transportation and recreation. Because the quality of the river is of utmost importance, ORSANCO's core purpose of controlling and abating water pollution in the Ohio River Basin is essential to the people of the valley.

The different entities utilizing the river for different purposes will always provide a challenge in maintaining the purity of the River. In 2004, ORSANCO continued to build its success by forging partnerships -- initiating programs that will contribute to river science and a better understanding of water quality.

Effective partnerships and alliances are a key success factor for ORSANCO. Clearly aligning ORSANCO's mission with the missions of state and federal governments strengthens all of these entities. We will continue to define those relationships and build a clear understanding of accountabilities and the strengths each organization brings to the table.

The combined sewer overflow (CSO) issues along the shoreline of many communities are prime examples of mission-critical partnering. ORSANCO will apply itself to these local issues in a way that is absolutely supportive of state enforcement efforts while maintaining sound river basin management. Monitoring, modeling and setting water quality standards must reflect the convergence of affordability and achievability.

ORSANCO makes its mark with sound scientific knowledge and a commitment to improve water quality. Sound science will continue to be a basic underpinning of Commission activities. ORSANCO must act on and generate good information and data as a basis for all future decisions. Data collection, monitoring and analysis are critical to ORSANCO's success.

Assuring adequate and sustained funding for the Organics Detection System, which provides daily analyses of river water for the presence of certain organic compounds, is an ongoing challenge. Strategically planning the new generation of drinking water protection and deciding how it will be paid for is another key Commission topic.

It is important that our children understand the history and importance of the river, its vulnerabilities, and the benefits it brings. ORSANCO's Educational Foundation will provide a wonderful opportunity for students to learn about the river while spending time on the river. The Foundation's boat, the P.A. Denny, a historic sternwheeler, is the perfect classroom for students to learn about water quality, the aquatic life and the legacy of the river.

These are just a few of the many topics before ORSANCO. With the continued dedication and candor of the Commissioners, good decisions will be made based on sound science, alignment of our mission with those living in the communities we serve and continued stewardship of this amazing resource, the Ohio River.

John L. Huber

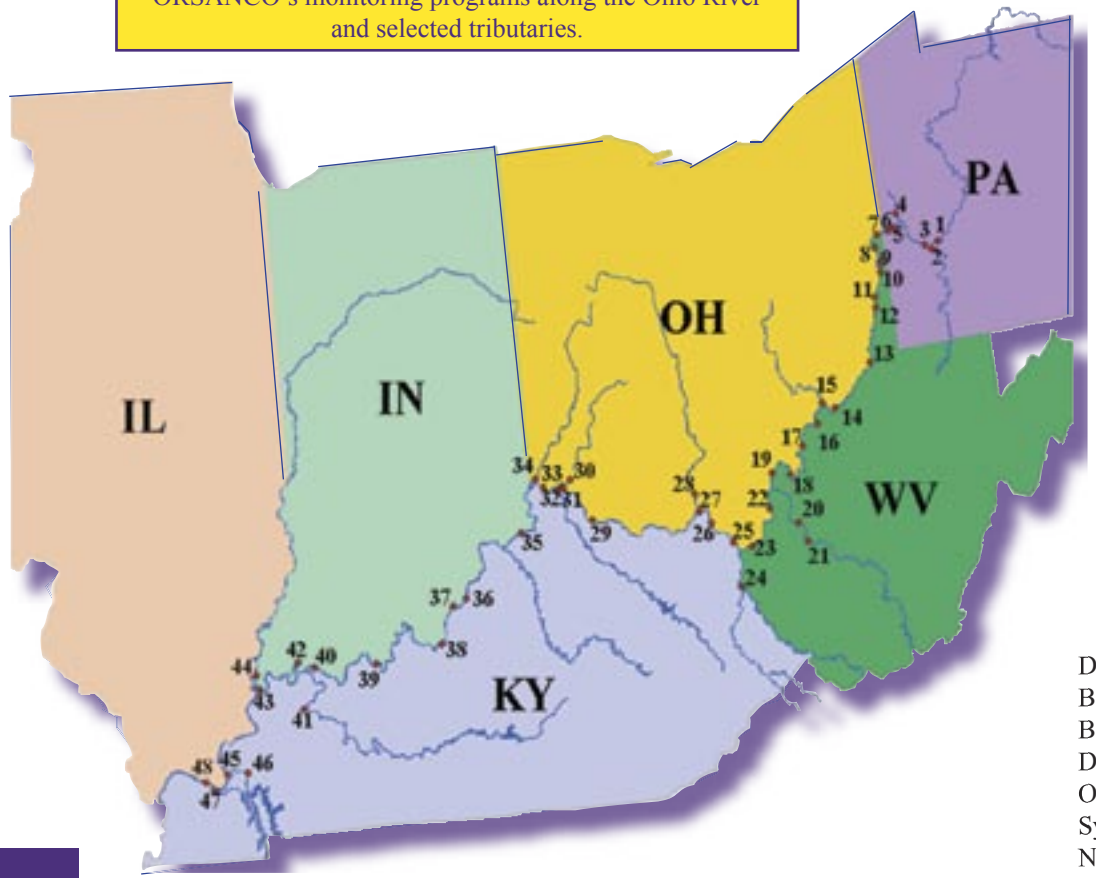
Ohio Commissioner Amy Wright and Chairman John L. Huber

Chairman John L. Huber and Kentucky Commissioner LaJuana Wilcher

Monitoring Network

Decision making through sound scientific knowledge is the foundation of ORSANCO and its member states for the control of water pollution in the Ohio River and its tributaries. The effectiveness of these efforts can be measured through monitoring water quality conditions. Rather than conducting individual monitoring efforts on the Ohio, the states have found it more efficient to delegate this responsibility to ORSANCO. The Commission, in turn, conducts a number of different monitoring programs in order to be responsive to changing conditions and to fulfill the informational needs of the member states and the nation. These programs include bacteria monitoring, organics detection system, bimonthly and clean metals sampling.

Compact states have delegated water quality monitoring activities to ORSANCO for improved efficiency and consistency. This map shows testing locations for ORSANCO's monitoring programs along the Ohio River and selected tributaries.



ORSANCO's Monitoring Programs

- Dissolved Oxygen
- Bacteria
- Bimonthly
- Dissolved Metals
- Organics Detection System
- Nutrients/Algae

1. Pittsburgh, PA (Allegheny River)
2. Pittsburgh, PA (Monongahela River)
3. Pittsburgh, PA (Ohio River)
4. Beaver Falls, PA
5. Montgomery Locks and Dam
6. Midland, PA
7. East Liverpool, OH
8. New Cumberland Locks and Dam
9. Weirton, WV
10. Follansbee, WV
11. Pike Island Locks and Dam
12. Wheeling, WV
13. Hannibal Locks and Dam
14. Willow Island Locks and Dam
15. Marietta, OH (Muskingum River)
16. Parkersburg, WV
17. Belleville Locks and Dam
18. Racine Locks and Dam
19. Kyger Creek
20. Winfield, WV (Kanawha River)
21. St. Albans, WV (Kanawha River)
22. R.C. Byrd Locks and Dam
23. Huntington, WV
24. Louisa, KY (Big Sandy River)
25. Ashland, KY
26. Greenup Locks and Dam
27. Portsmouth, OH
28. Lucasville, OH (Scioto River)
29. Meldahl Locks and Dam
30. Newtown, OH (Little Miami River)
31. Ft. Thomas, KY
32. Covington, KY (Licking River)
33. Cincinnati/Anderson Ferry, OH
34. Cleves, OH (Great Miami River)
35. Markland Locks and Dam
36. McAlpine Locks and Dam
37. Louisville, KY
38. West Point, KY
39. Cannelton Locks and Dam
40. Newburgh, IN
41. Sebree, KY (Green River)
42. Evansville, IN
43. J.T. Myers Lock and Dam
44. Mt. Vernon, IN (Wabash River)
45. Smithland Locks and Dam
46. Pickneyville, KY (Cumberland River)
47. Paducah, KY (Tennessee River)
48. Paducah, KY

Water Quality Assessment

ORSANCO's latest Biennial Assessment of Ohio River Water Quality Conditions was published in 2004. The report assesses, based on ORSANCO's water quality monitoring programs, whether the Ohio River meets water quality requirements for the following designated uses: habitat for warm water aquatic life; public water supply; contact recreation; and fish consumption. In the Biennial Assessment, ORSANCO classifies the river as fully supporting, partially supporting or not supporting each of these uses.

- Contact recreation: 367 miles (over one-third) of the Ohio River are classified as impaired for contact recreation use and 345.3 miles (35 percent) were unassessed. Impairments are based on exceedances of ORSANCO's stream criterion for bacteria.

- Public water supply after reasonable treatment: 949 miles are classified as fully supporting; 32 miles are classified as partially supporting due to elevated levels of phenolics (11 miles) and high bacteria levels. The affected portion of the river (with elevated phenol levels) is not used as a source of public drinking water.

- Aquatic life: 779 miles are classified as fully supporting; 16 miles are classified as partially supporting, 185 miles were unassessed. Pollutants causing these impairments are unkown.

- Fish consumption: 981 miles (100 percent) are classified as partially supporting due to the presence of Polychlorinated Biphenyls (PCBs) and/or dioxin in fish tissue.

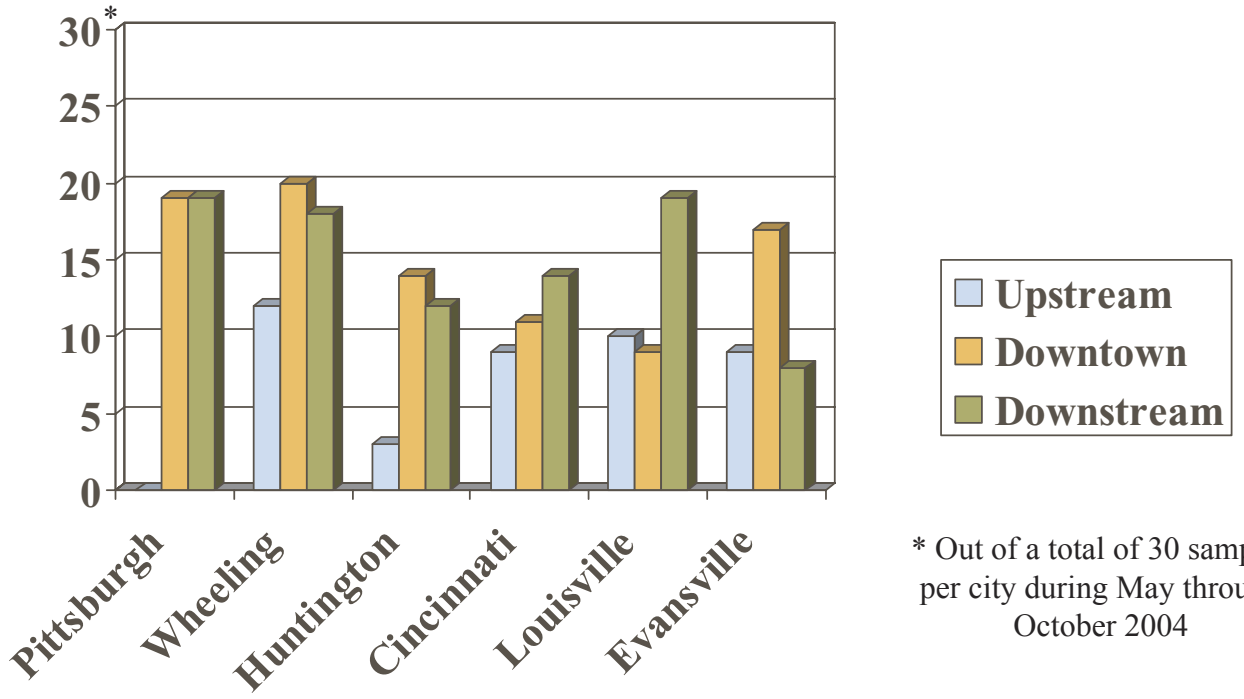
Photograph by Emilio Fernandez, Cincinnati, OH

Water Quality Monitoring

Bacteria Monitoring

ORSANCO monitors six urban areas along the Ohio River five times monthly from May through October for the presence of fecal coliform and E. coli bacteria. This information is supplied to local health departments for their use in evaluating the need for contact recreation advisories. Sampling locations near cities were selected based on the likelihood of elevated bacteria levels.

2004 Number of Violations of Bacteria Criteria to Protect Swimmers



* Out of a total of 30 samples per city during May through October 2004

Bimonthly Sampling

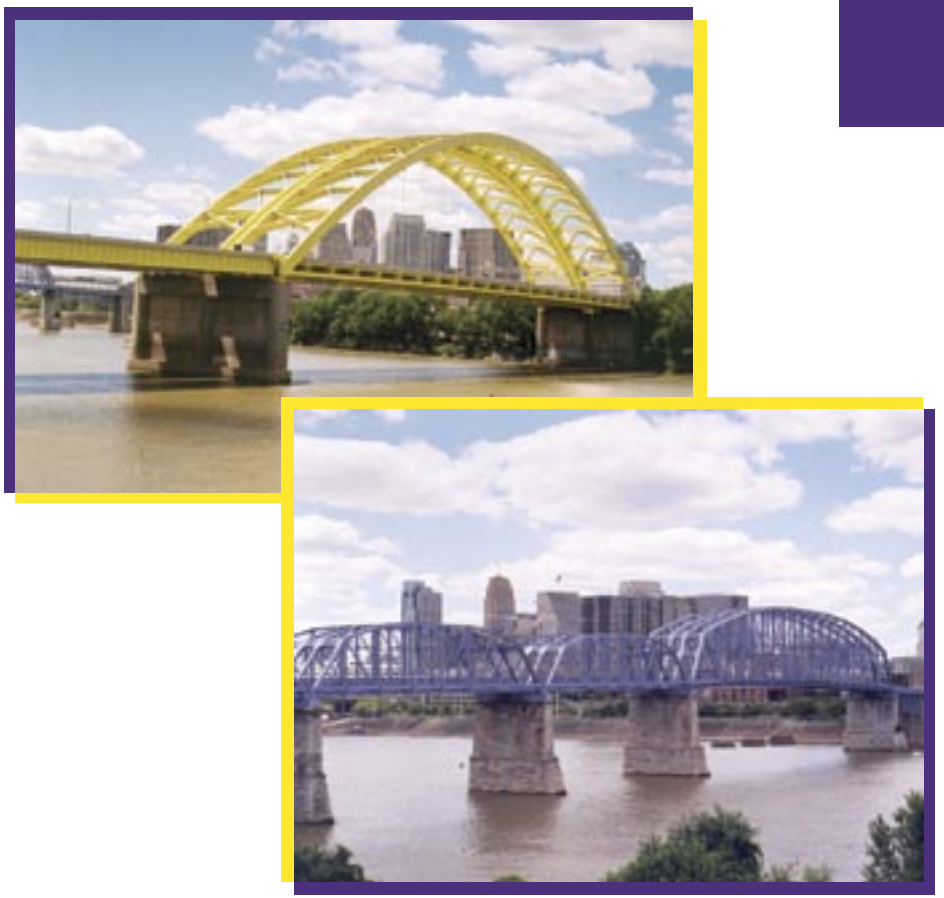
ORSANCO's bimonthly sampling program was established in 1975 to provide basic water quality information and to demonstrate water quality trends. Sampling took place throughout 2004 at 17 locations on the Ohio River and 14 on the tributaries to the Ohio for a total of 31 locations. Data from the year-round bimonthly sampling program are published semi-annually in ORSANCO's Quality Monitor, which is available on the ORSANCO web site.

Algae & Nutrient Monitoring

Excessive discharges of nitrogen and phosphorus, also termed nutrients, have led to nuisance blooms of algae in many waters of the United States. Such blooms threaten fish and other aquatic life as well as drinking water quality. While algae blooms have not occurred on a widespread basis in the Ohio River, drinking water utilities have reported increased algal activity, which can result in taste and odor problems. Working with utilities, ORSANCO has developed a program whereby utility personnel collect samples that are analyzed for nutrients and algae. One goal of this program is to provide supporting data for the development of numeric nutrient criteria by October 2006. Nutrient data also will be used to quantify loadings to the Mississippi River (see page 11).

Clean Metals Sampling

For measurement of the presence of metals, ORSANCO has transitioned to ultra-clean sampling. Ultra-clean protocols detect measurements at extremely low levels and show concentrations of metals lower than detectible in traditional methods. Results to date also confirm that most metals in the Ohio River are in the particulate form, associated with sediments, rather than in the dissolved form, which is a better indicator of aquatic life impacts. Both dissolved and total recoverable metals were detected at levels below ORSANCO's criteria.

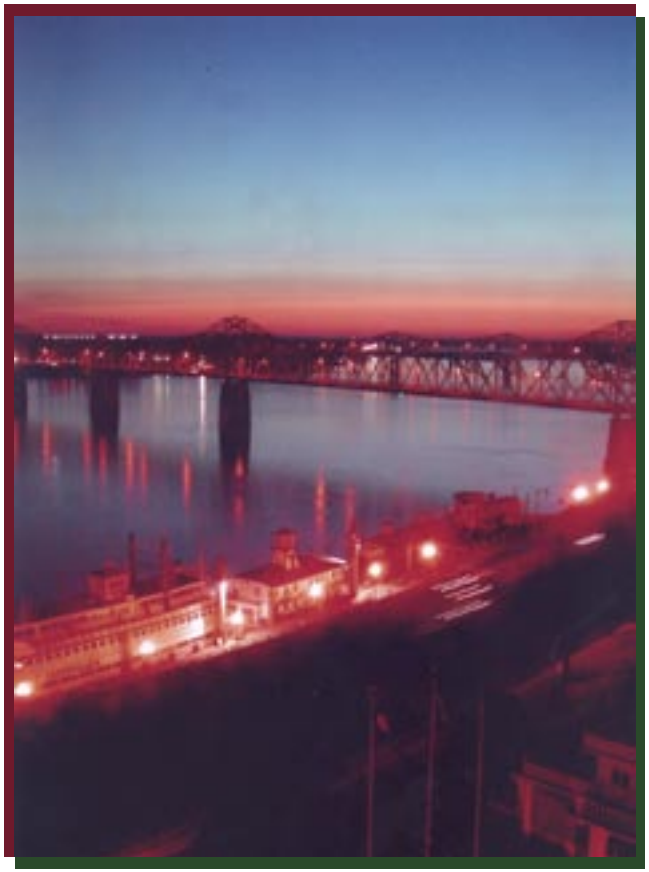


Photographs by Pearl Leonard of Melbourne, KY

Watershed Pollutant Reduction Program

Pollution problems in the Ohio River basin, an area over 200,000 square miles, originate from a variety of sources. Moreover, water quality degradation in one state may be caused by sources in several other states, and it is often beyond the means of a state to identify causes and develop solutions for such issues.

In 1995, ORSANCO established the Ohio River Watershed Pollutant Reduction Program, which combines existing data with targeted monitoring activities, to identify the extent and severity of contamination within the Ohio River Basin and ultimately develop pollution reduction strategies.



Photograph by Brandi Hess, Rome, IN

An initial list of eight pollutants to be investigated through the Watershed Pollution Reduction Program was selected based on public comments gathered at a series of workshops, with dioxins and PCBs as the first to be addressed by the program.

The information developed through the Watershed Pollution Reduction Program provides valuable input into the determination of total maximum daily loads (TMDL), regulated by the Federal Water Pollution Control Act. A TMDL is the maximum amount of a pollutant that can be incorporated by a body of water without causing impairment or exceeding state water quality standards. TMDLs are required for all waters in which beneficial uses are impaired.

In 2004, specific activities to address dioxins and PCBs included:

- Sediment sampling, to supplement longitudinal surveys completed in 2001 and 2002, to further characterize PCB and dioxin levels. Approximately 200 sediment samples were collected in 27 areas along the Ohio River and its tributaries.

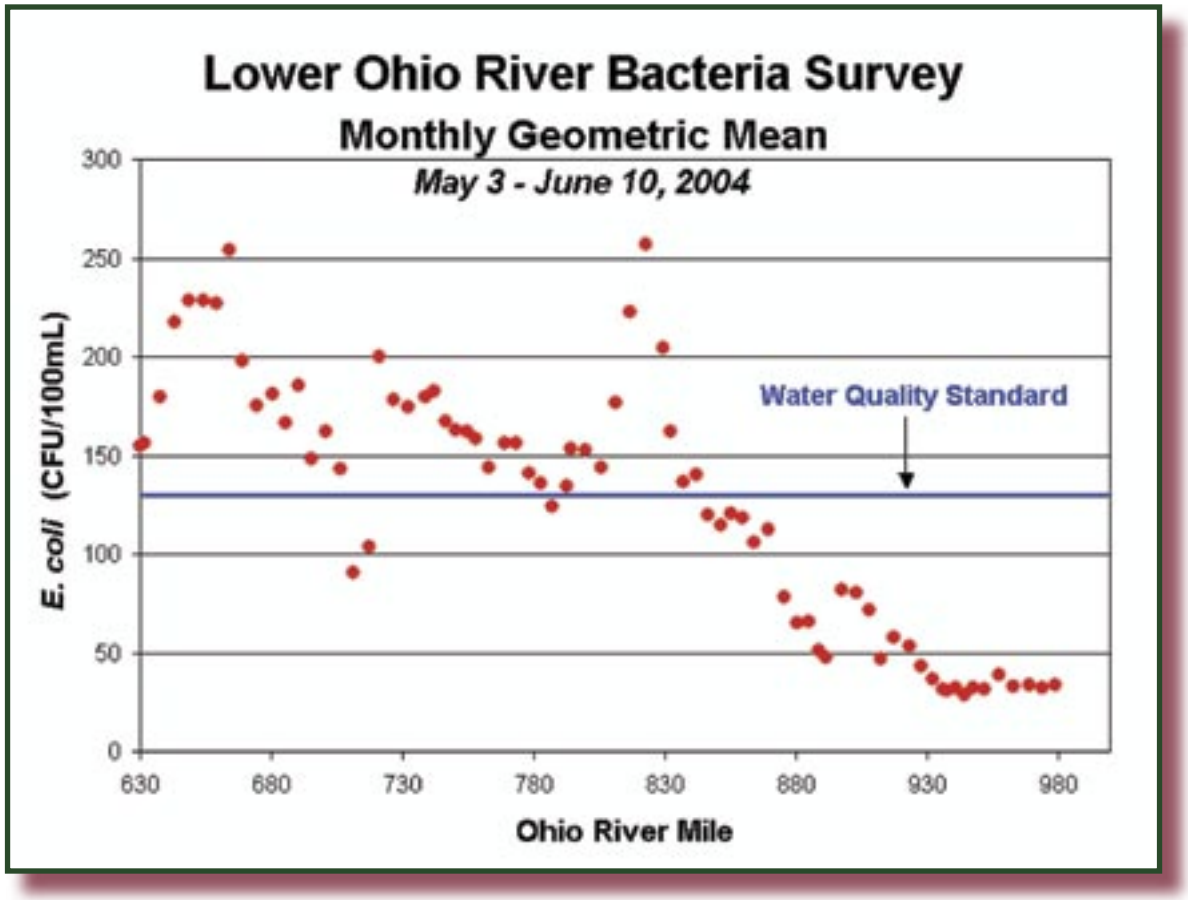
- High-volume water sampling at 10 Ohio River locations. The data generated from this sampling was used in the TMDL assessment to establish existing PCB and dioxin loadings in the Ohio River.

- Publicly Owned Wastewater Treatment Works (POTW) effluent sample collection. Three rounds of sampling were completed at nine municipal wastewater treatment facilities. Results have revealed the extent POTWs are contributing to the PCB and dioxin loads in the Ohio River.

The Ohio River Watershed Pollutant Reduction Program also turned its attention to comprehensive river-length monitoring of bacteria levels. Making this possible is the Commission's Mobile Water Quality Laboratory.

ORSANCO's mobile laboratory permits on-site analyses of bacteria samples. With the ability to bring the laboratory to the river, the Watershed Pollutant Reduction Program is able to adhere to stringent sample "hold-time" while conducting large-scale surveys in isolated areas.

In 2004, river-wide monitoring efforts generated sufficient data to assess the entire river for contact recreation use impairments. Five weeks of intensive sampling was completed on the lower Ohio River from West Point, KY, to Cairo, IL, (350 river miles) where the Ohio River meets the Mississippi River. Samples were collected every five miles, on major tributaries, and downstream of most POTWs. An intensive survey was completed for the upper portion of the Ohio River from Pittsburgh, PA, to Apple Grove, WV, (280 river miles) and another intensive survey was conducted for the lower portion of the Ohio River.



Pollution Control Standards

Since 1951 ORSANCO has maintained Pollution Control Standards for discharges to the Ohio River. These Standards indicate specific uses for the water, set water quality criteria to protect those uses and specify treatment requirements to meet the established criteria. State agencies implement the Commission's Standards through the National Pollutant Discharge Elimination System permits program. ORSANCO reviews draft permits to assure that the Commission's Standards are incorporated.

Urban Wet Weather Impact Studies

Pollution from urban areas significantly impact the quality of waterways in the Ohio River Basin. Urban pollution sources include stormwater runoff and combined sewer overflows (CSOs). Combined sewer systems carry both wastewater and stormwater. During heavy rainfall or snowmelt, the systems can become overloaded, causing wastewater to bypass sewage treatment and be discharged untreated.

Forging partnerships with states and cities, ORSANCO has taken a lead role in determining the water quality impacts of urban wet weather pollution on the Ohio River and has conducted wet weather impact studies in three major urban areas: Wheeling, WV; Cincinnati, OH; and Louisville, KY.

The Cincinnati Wet Weather study, concluded in 2002, identified bacteria as the main pollutant of concern and determined that CSOs and sanitary sewer overflows (SSOs) account for 75% of the bacteria load in Cincinnati.

Completed in 2004, surveys of the Wheeling, WV, area show that wet weather sources of pollutants have a more significant impact on tributaries than on the Ohio River. Specific sources to tributaries have not been identified but may be attributed to urban runoff, septic systems and wildlife waste.

The Louisville Wet Weather study concluded in 2004. This study also identified bacteria as the main pollutant of concern, with bacteria levels in exceedance of contact recreation criterion at times during the dry weather.

An objective of the wet weather studies was to create a water quality impacts model tool, which estimates the relationship of CSO controls to associated water quality improvement. Municipalities with CSOs can utilize this model to facilitate development of long-term control plans.

Enforcement of Standards

ORSANCO participated in the negotiation of a federal consent decree in conjunction with US Department of Justice, US EPA, Ohio EPA and Metropolitan Sewer District (MSD) of Greater Cincinnati, OH, to control its sources of wet weather pollution from CSOs. The consent decree, finalized in May 2004, requires Greater Cincinnati MSD, among other requirements, to update its long-term control plans and utilize ORSANCO's model from the Cincinnati Wet Weather Study in its alternatives analysis.

Photograph by Vic Campbell, Sr., Logan Creek, IN

Basin Management Initiatives

Demonstration Study in Watershed-Scale Nonpoint Source Pollution Abatement

ORSANCO entered into a cooperative agreement with US EPA, subcontractor Malcolm-Pirnie, Inc., US EPA – Office of Research and Development, USDA – Natural Resources Conservation Service, ODNR – Division of Soil and Water Conservation, Upper Big Walnut Creek Watershed Partnership, and the City of Columbus to evaluate the effectiveness of watershed-scale nonpoint source pollution abatement programs by studying the Big Walnut Creek in Ohio.

The approach of this project is to model field-scale pesticide runoff loss and correlate with downstream water quality monitoring data "before" and "after" implementation of environmental restoration. The knowledge gained by conducting this project will provide recommendations for evaluating and improving the efficacy of future nonpoint source pollution abatement programs in the Big Walnut watershed and other management practice systems across the nation.

Abatement of Gulf of Mexico Hypoxia

Annually, a hypoxic zone, an area of low oxygen levels, occurs in the Northern Gulf of Mexico. Scientific studies confirm the zone is caused by the discharge of excess levels of nutrients from the Mississippi and Atchafalaya rivers. The Ohio River contributes approximately 30% of the total nutrients in the Mississippi River.

To reduce the nutrient contribution of the Ohio River to the hypoxia present in the northern Gulf of Mexico, ORSANCO is working to develop a nutrient reduction strategy for the Ohio River Sub Basin of the Mississippi River watershed. This hypoxia has become an important national issue, as there are 31 states in the Mississippi watershed.

Utilizing grant funding from US EPA, ORSANCO is serving as convener for an Ohio River Sub Basin Committee (ORSBC), which will lead the nutrient reduction efforts in the Ohio River watershed. As part of this process, ORSANCO, through the Sub Basin Committee, will forge new partnerships with agricultural and conservation agencies in order to ensure broad participation in the nutrient reduction efforts. The ORSBC will prepare an Ohio River Sub Basin Nutrient Reduction Strategy as its work product.

Biological Programs

Fish & Macroinvertebrate Monitoring

In 2004, ORSANCO's biological monitoring programs focused on the implementation of a probability-based survey program assessing fish populations in individual pools of the Ohio River. This is a continuation of a monitoring strategy initiated over the past two years. This method applies a sampling design that randomly selects locations within a specified pool reach. Navigation pools are being sampled on a rotating basis, resulting in complete sampling coverage of the Ohio River every five years.

In addition to the probability-based sampling, ORSANCO established 18 fixed monitoring stations along the entire length of the Ohio River. These stations were located at prior sampling sites with known habitat and fish populations to provide a constant, long-term monitoring program.

Also in 2004, historical biological data on the Monongahela River was assessed and a report was issued providing background data from prior sampling and explaining the use of the Ohio River Fish Index (ORFIn). This report was submitted to US EPA Region III's Wheeling, WV office.

ORSANCO continued the refinement and development of the Ohio River macroinvertebrate program by conducting a methods comparison study. The current method, deploying and analyzing communities that colonize artificial multiplate samples (Hester-Dendy), was not supplying a dataset that was sufficiently robust to adequately assess a particular site. Three additional methods were employed at 10 sampling sites along the Markland Pool of the Ohio River. ORSANCO will employ these additional methods in order to make accurate assessments in the future.

Environmental Monitoring and Assessment Program (EMAP)

ORSANCO is cooperating in a comprehensive ecological survey of the Great River Ecosystems (GRE) of the United States. EPA's GRE, a component of EMAP, is currently focusing on the Missouri, Upper Mississippi and Ohio rivers. By providing monitoring data for assessments of current ecological condition and baselines for future risks to natural resources, coordination of dozens of state and federal agencies, as well as private organizations is required. ORSANCO played a role in the EMAP-GRE project by developing fish population and fish tissue collection methods for the project and training the various field crews from several states throughout the basins in these methods. ORSANCO was also involved by conducting field audits of states efforts throughout the season for quality assessment purposes.

Paddlefish, one of the 126 species of fish ORSANCO has identified in the Ohio River

Drinking Water Protection

Protection of Ohio River drinking water utilities from spills and other threats to water quality is one of ORSANCO's highest priorities. Along with state and federal agencies, ORSANCO works to assure that adequate notification takes place for all spills to the Ohio River, and provides monitoring, as necessary, to determine the location and severity of spills that impact the Ohio River water quality.

In 2004, 320 spills were reported to ORSANCO. Water utilities received adequate notification and took precautionary measures, as needed, to keep public drinking water supplies safe.

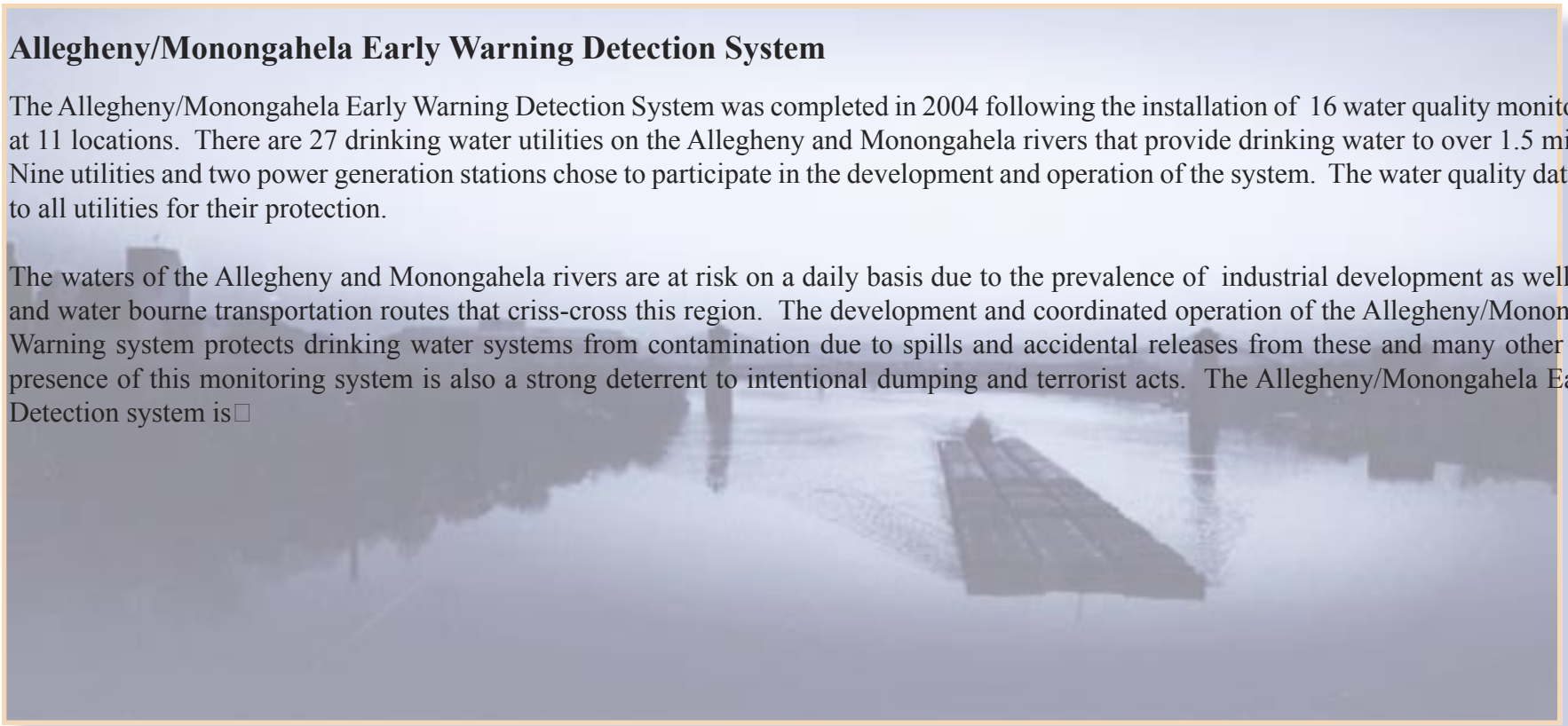
Organics Detection System (ODS)

Recognized nationally and internationally as a premier water quality monitoring system, ORSANCO established its Organics Detection System in 1978. The ODS is a cooperative effort between the Commission, water utilities and industries along the Ohio River and its tributaries. The ODS provides daily analyses of river water for the presence of certain organic compounds at 15 locations. This cooperative partnership has repeatedly demonstrated its effectiveness in assuring the safety of public water supplies. If unusual levels are detected, downstream water utilities are notified and efforts are undertaken to determine the source.

Allegheny/Monongahela Early Warning Detection System

The Allegheny/Monongahela Early Warning Detection System was completed in 2004 following the installation of 16 water quality monitoring devices at 11 locations. There are 27 drinking water utilities on the Allegheny and Monongahela rivers that provide drinking water to over 1.5 million people. Nine utilities and two power generation stations chose to participate in the development and operation of the system. The water quality data is available to all utilities for their protection.

The waters of the Allegheny and Monongahela rivers are at risk on a daily basis due to the prevalence of industrial development as well as the shore and water bourne transportation routes that criss-cross this region. The development and coordinated operation of the Allegheny/Monongahela Early Warning system protects drinking water systems from contamination due to spills and accidental releases from these and many other sources. Its presence of this monitoring system is also a strong deterrent to intentional dumping and terrorist acts. The Allegheny/Monongahela Early Warning Detection system is□



Photograph by Emilio Fernandez, Cincinnati, OH

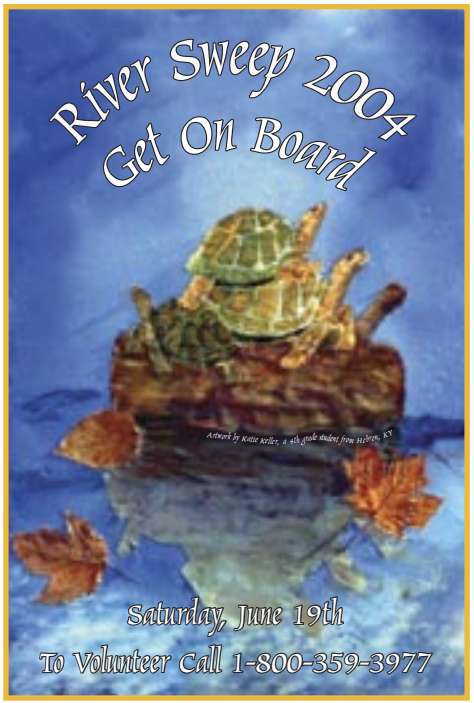
Public Information Programs

River Sweep 2004

Since 1989, volunteers from Pennsylvania to Illinois have swept the shores of the Ohio River and its tributaries for litter and debris. The Annual Ohio River Sweep is held on the third Saturday in June. Thousands turned out for River Sweep 2004 despite high water in some areas. Sponsored by ORSANCO, the Sweep is made possible through the hard work and dedication of volunteers along with the financial support of corporate sponsors. River Sweep encourages participation and stewardship in water quality protection. Tires, plastics, appliances and other items recovered are properly disposed of or recycled.

In conjunction with the River Sweep, a poster contest is held in grades Kindergarten through 12 inviting students throughout the basin to submit original artwork in order to help promote the event. Selected contest winners receive savings bonds and have their artwork made into posters and t-shirts.

River Sweep 2004 Volunteers



River Sweep 2004 Poster Contest winner, Katie Keller, a 4th grade student from Hebron, KY.

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Friends of the Ohio

Capturing the diversity and vastness of the Ohio River in just one image is a difficult feat but one that ORSANCO's Friends of the Ohio undertook when it hosted a photography contest. Friends of the Ohio is a member-based supported program, which funds environmental education and outreach programs. Amateur photographers were invited to submit their photos of the Ohio River and tributaries for selection and publishing in a 2005 Ohio River calendar, which aims to help increase awareness about the Ohio River and water quality.

The winning photograph, taken by Jean Landis and shown below, is featured on the cover of the Friends of the Ohio 2005 Calendar. The photograph was taken at California Nature preserve in Cincinnati, OH.

Students in Dearborn County, IN view Life Below the Waterline

Life Below the Waterline

ORSANCO's 2,200-gallon mobile aquarium, Life Below the Waterline, visited nine Ohio River Basin locations in 2004, displaying Ohio River fish for educational events and festivals. Using the aquarium, ORSANCO staff members educate the public about improving water quality conditions in the Ohio River. Visitors to the aquarium learn that fish, collected using a method called electrofishing, can be used as indicators of water quality. The presence of 126 species of fish in the Ohio River indicates that water quality has improved over the past 30 years. A typical display showcases approximately 20 to 25 species of fish.

Public Information Programs

RiverWatchers

Since 1992, ORSANCO has promoted stewardship of the Ohio River and its tributaries through the RiverWatchers volunteer monitoring program. Currently, the program provides sampling equipment for 30 schools within the Ohio River Basin. Every two years, participating teachers attend a training workshop to refresh their monitoring skills and learn new techniques. In 2004, 12 teachers were trained at Evansville, IN; Moundsville, WV, and Cincinnati, OH, training sites. In October, ORSANCO teamed with a RiverWatchers teacher, Gary Fields, from Mason, WV, to present the volunteer monitoring program to teachers at the West Virginia Science Teachers Association's annual conference. Two new schools were added to the program this year, including St. Michael School in Wheeling, WV, and Rising Sun High School in Rising Sun, IN. Both schools have monitoring sites on the Ohio River.

Wahama High School, Mason, WV

RIVER WATCHERS

INDIANA: Lawrenceburg HS, Mater Dei HS, Rising Sun HS, Switzerland County HS

KENTUCKY: Bishop Brossart High School, Boyd County Career & Technical Education Center, Daviess County HS, Hancock County Middle School, North Middle School, River Ridge Intermediate School, Worthington Intermediate School, Boy Scout Troop, Individual Participant

OHIO: Clark Montessori School, Chesapeake Middle School, Cincinnati State Community & Technical College, Elizabethtown Elementary, Franklin Junior High School, Marietta HS, New Richmond HS

PENNSYLVANIA: Fairless Intermediate School, Perry Traditional Academy, Warwood Middle School

WEST VIRGINIA: St. Michael School, St. Francis Xavier, Wahama HS

VIRGINIA: Committee for the Improvement of Dickenson County

ORSANCO Educational Foundation

In 2004, the Commission authorized the creation 501c3 organization to develop, manage and raise funds for educational and public awareness programs.

The first program initiated by the Foundation was ORSANCO's River Education Center. The L & L Nippert Charitable Foundation provided seed funding for this program.

Members of the Board of Trustees are:

Melvin Hook, Chairman

Ronald Potesta, Vice Chairman

Lee Servatius, Secretary/Treasurer

David Bailey, Assistant Treasurer

Jeanne Ison, Foundation Executive Director

Alan Bernstein, BB Riverboats, Covington, KY

John L. Huber, President and CEO Louisville Water Company

Ron Riecken, Inland Marina, Evansville, IN

Alan Vicory, Executive Director and Chief Engineer, Ohio River Valley Water Sanitation Commission

The ORSANCO Educational Foundation is sponsored by:

L & L Nippert Charitable Foundation

Ohio Environmental Protection Agency Education Foundation

J. Mack Gamble Fund of the Sons & Daughters of the Pioneer Rivermen

BB Riverboats

Greater Cincinnati Water Works

Louisville/Jefferson County Metropolitan Sewer District

Ford Motor Company

Hach Company

ORSANCO Educational Foundation

ORSANCO River Education Center (OREC)

The ORSANCO Educational Foundation acquired the P.A. Denny river vessel to serve as its floating science classroom. Beginning in 2005, this historic sternwheeler will provide a river-based educational experience on the Ohio River for Kindergarten through 12th grade students who attend schools in the Ohio River Basin. The River Education Center is being outfitted with a wet laboratory and four learning stations where students will work with on-board educators to collect and analyze water and biological samples, investigate weather and river flow conditions, learn about navigation and assess land use in abatement impacts for water quality.

The curriculum is aligned with state and national standards for science, math, social studies and language arts. The program will not only teach students how to collect and analyze data, but to combine these skills with critical thinking to solve a simulated pollution situation aboard the OREC. In addition to the OREC voyage, the curriculum will include two weeks of pre-voyage activities, and a post-voyage community action project where students address a local water quality issue in their community.

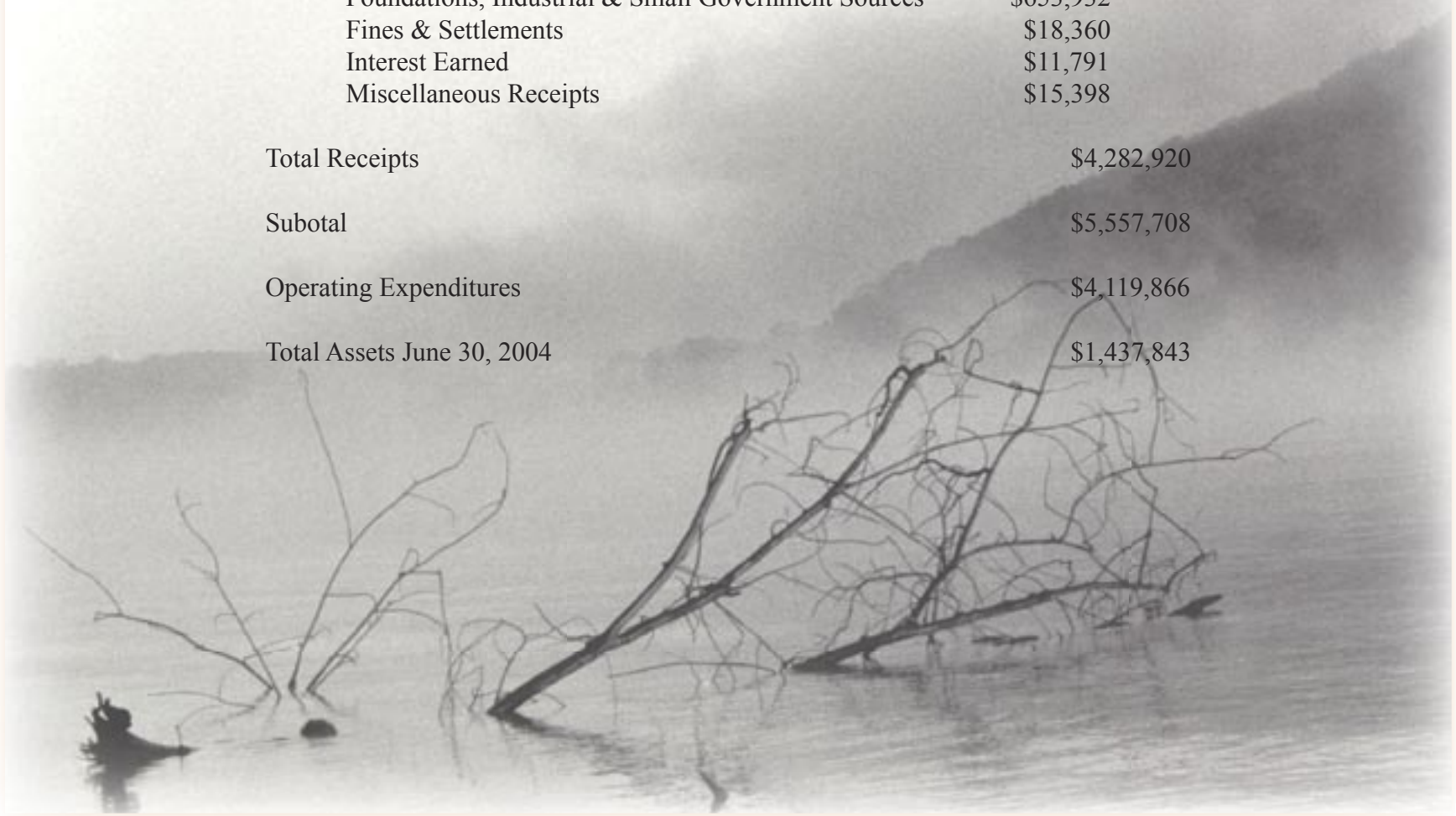
ORSANCO River Education Center

Financial Report

Statement of Activity

Year ended June 30, 2004

Beginning Assets July 1, 2003		$1,274,788
Revenues		
Signatory States	$1,260,600	
US EPA	$2,322,839	
Foundations, Industrial & Small Government Sources	$653,932	
Fines & Settlements	$18,360	
Interest Earned	$11,791	
Miscellaneous Receipts	$15,398	
Total Receipts		$4,282,920
Subotal		$5,557,708
Operating Expenditures		$4,119,866
Total Assets June 30, 2004		$1,437,843



A detailed statement can be found in June 30, 2004 Audited Financial statements

ORSANCO Staff*

*as of December 31, 2004

David Bailey
Manager of Administrative Programs & Human Resources

Donna Beatsch
Data Processing Specialist

Andrea Brofft
Communications Coordinator

Stacey Cochran
Environmental Specialist

Sam Dinkins
Environmental Specialist

Tracey Edmonds
Administrative Assistant

Erich Emery
Manager of Research, Ohio River Users & Biological Programs

Mindy Garrison
Environmental Specialist

Joe Gilligan
Comptroller

Jason Heath
Water Monitoring, Assessment & Standards Manager

Eben Hobbins
Environmental Specialist

Jeanne Ison
Public Information & Education Programs Manager

Jennifer Monroe
Public Information & Technical Programs Secretary

Erin Overholt
Public Information & Education Specialist

Jay Patel
Data Systems Administrator

Dan Phirman
Biologist

Crystal Richardson
Environmental Specialist

Jerry Schulte
Manager of Source Water Protection & Emergency Response Programs

Paul Spires
Head of Maintenance

Gary Suskauer
Environmental Specialist

Peter Tennant, P.E.
Deputy Executive Director

Jeff Thomas
Aquatic Biologist

Alan Vicory, Jr., P.E., DEE
Executive Director & Chief Engineer

Matt Wooten
Aquatic Biologist

Greg Youngstrom
Environmental Specialist

Lila Ziolkowski
Environmental Chemist

Years of Service

Alan Vicory - 25 years
Jason Heath - 15 years
Erich Emery - 10 years
Matt Wooten - 5 years
David Bailey - 5 years

State Agencies

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

Indiana
Department of Environmental Management
Office of Water Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division of Water
14 Reilly Road
Frankfort, Kentucky 40601

New York
Department of Environmental Conservation
Division of Water
625 Broadway
Albany, New York 12233

Ohio
Environmental Protection Agency
Division of Surface Water
122 South Front Street
Columbus, Ohio 43215

Pennsylvania
Department of Environmental Protection
Office of Water Management
16th Floor Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, Pennsylvania 17105-2063

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

West Virginia
Department of Environmental Protection
Division of Water and Waste Management
601 57th Street
Charleston, West Virginia 25304

Photograph by Chris Stofleth, Newburgh, IN

Ohio River Valley Water Sanitation Commission

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