THE OHIO RIVER VALLEY WATER SANITATION COMMISSION

Nineteen Hundred and Ninety

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*As of April 1, 1991



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AND

THE HONORABLE GEORGE H.W. BUSH, President of the United States

The Commissioners of the Ohio River Valley Water Sanitation Commission (ORSANCO) — an interstate compact water pollution control commission 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 the approval of the Congress of the United States — respectfully submit the following



report of the Commission's activities in 1990.

ORSANCO headquarters are located at 49 E. Fourth St., Cincinnati, OH 45202 (513)421-1151

Chairman's Report

ORSANCO - LEADING THE WAY

Across the country and around the world, 1990 witnessed a resurgence of concern for the environment. As the United States celebrated the 20th anniversary of Earth Day, the Ohio River Valley Water Sanitation Commission celebrated its 42nd year of working to improve the water quality of the Ohio River Valley. Now, as ORSANCO enters the final decade of the 20th century, we are evaluating what we have accomplished and setting new goals to insure continued improvements in the water quality of the Ohio River and its major tributaries.

When the Commission was created in 1948, its initial goals to improve water quality were very easy to establish. Most cities and industries discharged their wastes untreated into the rivers. Our streams were devoid of oxygen, laden with bacteria and toxic chemicals, incapable of supporting a balanced aquatic community and unsuitable for basic human uses. The Ohio River was virtually an open sewer.

Today, most of these gross pollution problems have been addressed. Almost 99 percent of the communities which discharge wastes to the Ohio River have achieved secondary wastewater treatment, fish populations are rebounding, and the river is being used for recreational purposes more than ever before.

The problems facing the Ohio River today are of a different nature, and a new approach to achieving further water quality improvements is needed. ORSANCO must take the lead in establishing new goals and



programs to further reduce pollution.

With point sources successfully regulated, it is clearly documented that the greatest amount of pollution to the Ohio River is now from nonpoint sources, including agriculture, resource extraction, and urban runoff. If we are to continue to make real progress in improving water

quality, we must address the problems of nonpoint source pollution. The best way to approach this is on a hydrologic basis, working with other water quality agencies in the Ohio River Valley to develop goals and implement a basin-wide strategy.

Toxic substances continue to be detected at low concentrations in the Ohio River, and their sources are not always apparent. While many of ORSANCO's other programs deal with immediate problems, our toxics program is aimed at

Gordon R. Garner



understanding the underlying causes of pollution. Groundwater contributions of toxics appear to be a major problem which is not addressed by current state programs. Other nonpoint sources such as urban runoff and resource extraction also appear to contribute toxics to the river.

ORSANCO has long been a leader in using monitoring technology to track the status of the river. Long term trends are closely evaluated, as are real time detections of chemical spills. In addition, there are significant new efforts to upgrade the Commission's biological monitoring programs. Little is known about the biology of large river systems and the use of biological monitoring techniques to measure trends and evaluate problems. ORSANCO is committed to important new efforts to improve biological monitoring and establish a baseline biological program for the Ohio River.

ORSANCO is in a unique position to build consensus and lead the way into a new decade of water quality improvement. The nature of many water pollution problems has changed since 1948, but ORSANCO is keeping pace with these changes, and through innovation and leadership will continue to bring improvements to the rivers and streams of the Ohio Valley.

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1990 WATER QUALITY CONDITIONS

The Ohio River Valley Water Sanitation Compact, which established ORSANCO in 1948, pledged the member states to control water pollution in order to achieve certain water quality objectives. Those objectives are water quality conditions suitable for:

- public and industrial water supply, after appropriate treatment,
- recreational use,
- maintenance of fish and other aquatic

ORSANCO has always based its programs, decisions, and actions on the most up-to-date, technically sound data available on water quality conditions of the Ohio River and its tributaries.

Approximately 40 percent of the Commission's current annual budget is used to carry out water quality monitoring activities, representing the largest program expenditure. Data from these monitoring activities provide the foundation for most other Commission programs, and are also used by federal, state and local agencies, as well as the private sector.

The Commission conducts year-round monthly monitoring of the Ohio River and its major tributaries. Special monitoring is conducted during warm weather months to determine the suitability of the river for contact recreation and fish propagation.

Cooperative programs with others include biological monitoring in conjunction with numerous state and federal agencies, and monitoring of organic chemicals, which is carried out through local water utilities and industries.

It is fitting to begin a review of the year's activities by considering how closely 1990 water quality conditions in the Ohio River met the objectives of the Compact.

Flow

For the second year in succession, stream flow was above normal in 1990. Frequent precipitation throughout the year meant that low flow conditions, which usually result in certain types of water quality problems, did not occur.

However, for the second year in a row levels of fecal coliform bacteria significantly exceeded stream criteria established to protect contact recreation in one or more months at all 12 sampling locations. It is believed that combined sewer overflows which occur during rain storms were primarily responsible for the high bacteria levels in 1989 and 1990.

These results were in sharp contrast to those of 1988, the last year of below-normal flows, when contact recreation criteria were generally met.

Heavy Metals and Phenolics

The Commission monitors 22 water quality parameters at 36 locations on the Ohio River and its major tributaries in its monthly sampling program. In 1990, stream criteria for 15 of those parameters were met at all times.

The criterion for copper was exceeded most often. Approximately one-third of the samples contained copper concentrations higher than the level set to protect aquatic life.

The criterion for mercury, which can accumulate in fish, was exceeded in approximately one quarter of the samples. Cadmium concentrations exceeded the aquatic life protection level in just over 10 percent of the samples. Cyanide, lead, phenolics, and zinc criteria were exceeded in one to 10 percent of the samples.

There are numerous potential sources of each of these materials. Actual effects on aquatic life have not been documented.

Organic Chemicals

The Commission monitors organic chemicals through its Organics Detection System, which consists of 15 sites along the Ohio River and three of its tributaries. Of 22

organic chemicals monitored daily, six exceeded Commission stream criteria.

The stream criterion for chloroform was exceeded in almost one third of samples analyzed. Five other chemicals exceeded criteria in one to 10 percent of samples.

However, available data from utilities along the Ohio River indicate that these chemicals do not exceed established limits in finished drinking water. Sources of these chemicals have not been fully indentified.

New Efforts

New efforts initiated in 1990 include expanded biological monitoring to better define the impacts of pollutants such as metals on aquatic life.

Another new effort addresses combined sewer overflows, which appear to be the major source of elevated bacteria levels in the river.

Continued efforts in toxic substances control and nonpoint source assessment seek to identify specific sources of metals and organic chemicals in order to develop programs to control those sources. The following pages describe Commission programs which address these problem issues.

High water conditions throughout the Ohio River 'alley led to such problems as high bacteria levels during 1990.



EMERGENCY RESPONSE ACTIVITIES:

PROTECTION OF WATER SUPPLIES

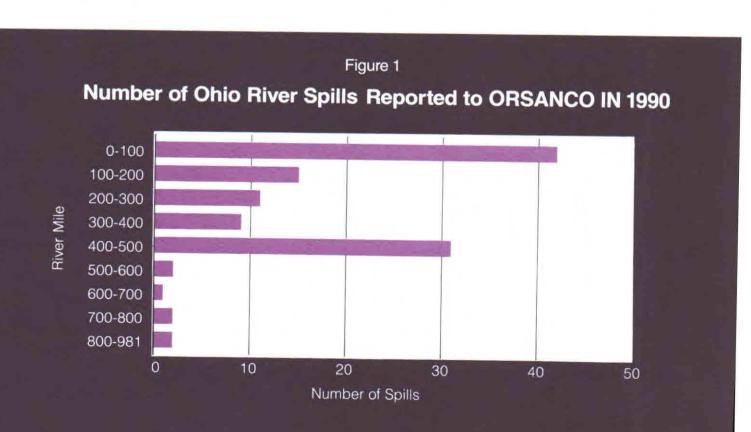
The Ohio River basin is the site of extensive industrial activity, including the manufacture of steel, chemicals and petroleum products. The Ohio River and its major tributaries are used heavily for transporting cargoes supporting these industries. Major highways and rail lines which run along and across the rivers are also used to transport chemicals. Pipelines, primarily carrying petroleum, cross the rivers. As a consequence of these activities, accidental spills occur from time to time. Since the Ohio River serves as a source of drinking water for almost three million people, it is critical that a high level of emergency response capability be maintained.

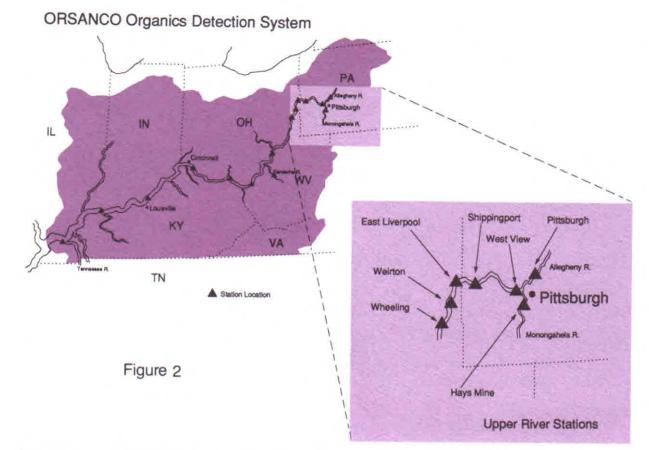
State environmental agencies, U.S. EPA, and the U.S. Coast Guard carry out programs for spill prevention and response. In support of their efforts, ORSANCO has been assigned two areas of responsibility: assistance in communications to insure that interstate notification takes place, and coordination of river monitoring to insure that water users downstream of a spill are

protected.

In order to carry out its responsibilities when spills occur, the Commission has developed the following:

- 24-hour telephone coverage to receive spill reports.
- Daily receipt of river flow forecasts from the National Oceanic and Atmospheric Administration (NOAA).
- Directory of telephone numbers of emergency response agencies.
- Electronic bulletin board, which allows transmission of spill information via computer modem. A voice message line provides spill updates to those without computer capability.
- On-river monitoring capability, including boat, sampling gear, and instruments for field testing to allow the Commission to track a spill.
- Organics Detection System, which detects unreported spills and provides data on the effects of reported spills through regular (at least daily) monitoring for certain organic chemicals at 15 points along the Ohio River and its tributaries.





Organics Detection System

A major spill of carbon tetrachloride to the Ohio and Kanawha Rivers in 1977 illustrated the need for continuous monitoring of the river for the presence of organic chemicals.

In response, the Commission established an Organics Detection System (ODS) in 1978. The system is a cooperative endeavor with water utilities and industries along the Ohio and its major tributaries. The Commission provides the analytical equipment (gas chromatographs), operating assistance, and system communications. The cooperating utilities provide personnel and laboratory space.

Normal operation consists of daily sampling by each participant for certain organic chemicals. Results are conveyed to ORSANCO headquarters on a routine basis. When an unusual detection occurs, results are immediately conveyed to ORSANCO via facsimile transmission. Additional sampling is initiated, and the Commission institutes emergency notification procedures.

The capabilities of the Organics Detection System were enhanced by several developments in 1990. Two new stations (Shippingport, PA and Weirton, WV)

were added, bringing the system total to 15 (see Figure 2). Equipment for both of these installations was funded by enforcement penalties imposed by Pennsylvania Department of Environmental Resources and West Virginia Department of Natural Resources. The addition of these two stations enhances the ability of the system to protect water utilities on the upper river, which has both the highest concentration of water intakes and the greatest number of spills. (see Figure 1).

Also in 1990, three ODS sites -Portsmouth, OH, Cincinnati, OH, and Louisville, KY — received new equipment as part of the Commission's program of regular replacement of aging components (major components of the system have a design life of about 10 years). Two demonstration projects involving new technologies for the system were initiated. At Weirton, automatic sampling equipment was installed, which allows increased sample collection and analysis with minimal operator involvement. At Cincinnati, a computer system was installed which allows direct electronic access to analytical results. These two advances further enhanced the operation of the system and the protection it provides without requiring significant increases in human resources.



CHRONOLOGY OF ORSANCO RESPONSE TO A SPILL

A pipeline break near Freeport, Pennsylvania on March 30, 1990, resulted in the release of approximately 75,000 gallons of a mixture of petroleum products to the Allegheny River. This incident required activation of all of ORSANCO's emergency response capabilities. The following is a chronology of the Commission's involvement.

Saturday, March 31 — Initial report received that a spill occurred to a creek which enters the Allegheny approximately 30 miles upstream of the Ohio. State and federal personnel responded and downstream water utilities closed their intakes. ORSANCO notified Ohio and West Virginia state personnel of the incident and posted details on the Commission's bulletin board. At 10:00 p.m., ORSANCO assistance was requested on the river to track the spill.

Sunday, April 1 — Updates from the spill site were posted on the bulletin board and message line. A field crew arrived at the site and determined that a fluorometer (an instrument which can be operated on a boat) could detect the material spilled.

Monday, April 2 — The field crew began tracking the spill by boat. One crew member was dispatched to West View ODS

site to assist in sample analysis. The Hays Mine ODS site on the Monongahela River, which was not affected by the spill, assisted in analysis of samples collected from the ORSANCO boat. Information was posted on the bulletin board and message line and relayed to downstream state and water utility personnel with estimates of arrival times at downstream intakes.

Tuesday, April 3 — On-river tracking continued as the spill entered the Ohio River. Fluorometer readings located the spill; samples analyzed at ODS sites showed the concentrations of contaminants present. Results and times of arrival were updated and all information was posted and disseminated.

Wednesday, April 4 — Effects of the spill were substantially dissipated; East Liverpool, OH, mile point 40.2, was able to successfully treat river water through the addition of carbon.

Thursday, April 5 — The field crew brought samples from East Liverpool to downstream water utilities in Steubenville, OH and Wheeling, WV. Both cities applied the same level of extra treatment as East Liverpool and were able to successfully treat the river water. By this time, the spill had dissipated.

FISH TISSUE CONTAMINANT MONITORING

Since 1975, the Commission has collected samples of fish tissue for analysis of selected contaminants, including pesticides, metals, and polychlorinated biphenyls (PCBs). Although most of these chemicals are rarely detected in water, they are known to concentrate in fish tissue. Fish species traditionally collected for environmental monitoring purposes have been those considered most likely to show contamination, such as carp and catfish.

Results of those tissue analysis have consistently shown that two substances — PCBs and chlordane — often exceed levels established by the U.S. Food and Drug Administration for human consumption.

In order to address the needs of state agencies responsible for issuing fish consumption advisories, the program was modified in 1987 to analyze fillets of those species most commonly consumed by humans. This program has become increasingly important in targeting human

health concerns. As tissue results are received, the Commission serves to coordinate communications among the states concerning data results and the issuance of fish consumption advisories. 1990 witnessed the most successful interstate coordination effort to date.

In February 1990, based on the results of the Commission's fall 1989 studies, the States of Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia issued advisories against the consumption of certain fish species from the Ohio River. These species included channel catfish, flathead catfish, white bass, and carp.

Results from fish collected in the fall of 1990 indicate that concentrations of PCBs and/or chlordane exceed FDA limits in carp or channel catfish at 14 of 26 locations sampled. At one location, paddlefish, collected and analyzed by the Commission for the first time in 1990, also exceeded the FDA action level for chlordane.

The FDA limits for PCBs and chlordane were not exceeded in other species tested, including sauger, bass, and freshwater drum. States are expected to renew their advisories based on these results.

BIOLOGICAL MONITORING

One of the primary objectives of the Compact is that the Ohio River be capable of maintaining fish and aquatic life. Since 1957, cooperative fish population studies have been conducted with environmental and fisheries management agencies of the Compact states and the federal government.

The Commission has traditionally collected fish population data from lockchambers. In 1990, the program was expanded to include electrofishing, in order to provide a more complete assessment of fish populations at different locations in the river.

Through the use of electrofishing,

more species of fish were collected in 1990 than in previous years; however, there was a decrease in the total number of individual fish collected. This decrease in fish populations is believed to be a result of unfavorable spring spawning conditions due to high river flows.

The Commission recognizes that, in order to fully assess the ability of the Ohio River to support aquatic life, additional types of biological studies are necessary. A comprehensive biological monitoring strategy was therefore developed in 1990, which includes studies of macroinvertebrates, periphyton, and shellfish. These organisms make up an important element of the aquatic food chain; their populations can influence the success of fish populations.

TOXICS CONTROL

Control of toxic substances has increasingly become the focus of water pollution control efforts in the United States. In 1983, the Commission adopted a Toxic Substance Control Strategy and in 1986, Toxics Control was established as a specific program.

Toxic substances present in the Ohio River include inorganic chemicals, such as the metals lead and mercury, and organic chemicals, such as benzene and chloroform. These chemicals are found in routine samples of the river at concentrations slightly above laboratory detection levels. Another aspect of the toxics problem in the river is the contamination of fish tissue by chlordane (a pesticide) and polychlorinated biphenyls (PCBs).

The Commission's toxics control program involves intensive studies of sections of the river to identify sources of toxics. Four sections of the river are currently under study, as shown in Figure 3. The original focus of the studies was on industrial and municipal wastewater dischargers. However, as the studies have progressed, it has become increasingly clear that other types of pollution sources must be addressed:

 Ground Water — Field studies of two upper river segments have shown increases in certain toxic chemicals near sites where these chemicals have contaminated ground water.

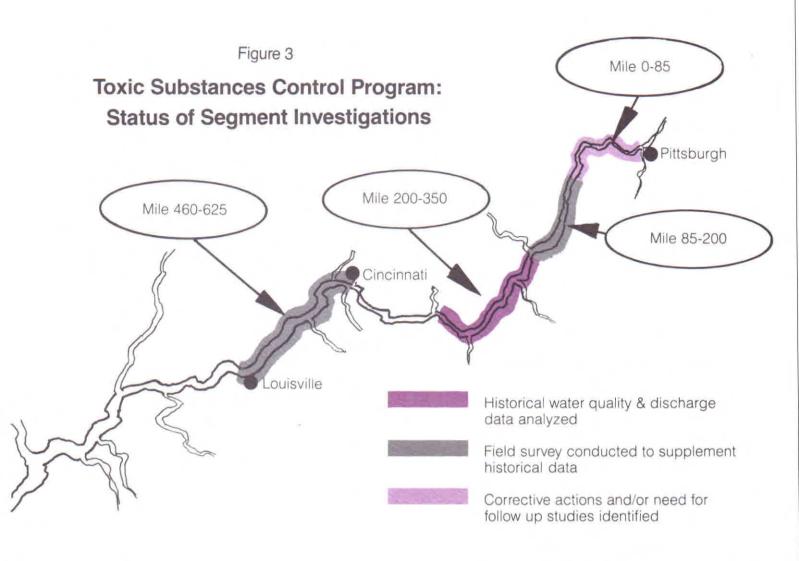
Sediment sampling is part of ORSANCO's toxics control program (right).

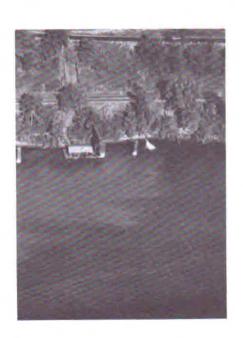
Opposite page: Outfall discharges effluent to the Ohio River; ORSANCO staff member Jason P. Heath checks sample during toxics survey; Floating debris in Ohio River tributary

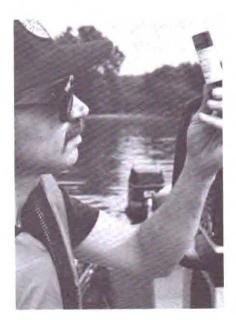
- Nonpoint Sources Elevated concentrations of metals have been found in bottom sediments of tributaries where the same metals were not detected in the overlying water. This indicates intermittent, or nonpoint, sources.
- Urban Runoff While no direct discharges of chlordane have been detected, studies such as U.S. EPA's National Urban Runoff Program have shown high concentrations of chlordane in urban runoff. The highest concentrations of chlordane in Ohio River fish have been found at locations downstream of urban areas. This suggests that urban runoff to the Ohio River is a major source of chlordane in fish tissue.

The presence of toxic substances in the river at any level is a matter of concern to the Commission. Because of the numerous possible sources, and the fact that even concentrations below measurable levels can have negative effects on human health and the environment, the toxics control program is a highly complex undertaking. The Commission will continue to seek innovative approaches to better understand this problem and its solution.











NONPOINT SOURCE POLLUTION

Most industries and municipal treatment plants along the Ohio River have successfully controlled their waste water discharges. Today, the greatest contribution of pollution occurs from nonpoint sources. These sources include agriculture, resource extraction, and urban runoff. Figure 4 shows nonpoint source pollution causes over half of the use impairment in the Ohio River. Figure 5 provides a breakdown of individual nonpoint sources.

Because nonpoint source pollution is a watershed problem and is not based on political boundaries, a basin-wide approach will insure basin-wide progress. The Commission is well-suited to develop such an approach.

In May 1990, the Commission adopted a framework for the control of nonpoint source pollution to the Ohio River. The program includes plans to:

- Establish goals for reducing loads of nonpoint source pollutants to the Ohio River.
- II. Coordinate efforts among basin states to insure achievement of goals.
- III. Consult with other basin organizations.

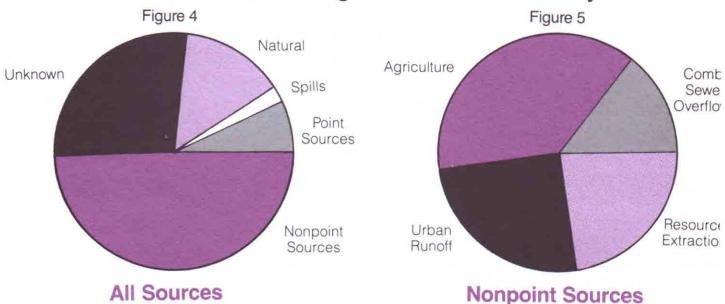
 IV. Modify current monitoring efforts to better characterize nonpoint source pollution.

Successful implementation of this program will require commitment from member states, federal agencies, and the Commission. While control of nonpoint sources has received increased attention on a national level, a greater resource commitment is needed to achieve results.

The national emphasis is towards control of agricultural and urban runoff. Although these are important, the Ohio Valley is also plagued with the effects of resource extraction (which includes mining and oil and gas drilling). Of the stream miles affected by resource extraction activities in the United States, over 50% are in the Ohio River Valley. Development and implementation of practical and cost effective treatment technologies is needed. The establishment of goals for the reduction of pollutants from nonpoint sources will focus attention on this problem.

Another nonpoint source pollution concern is the contribution of toxic substances to surface water from contaminated ground water associated with industrial development. Current Commission efforts include the study of individual sites to estimate the contribution of pollutants to the Ohio River from ground water.

Sources of Pollution Affecting Ohio River Water Quality





NONPOINT SOURCE INVESTIGATIONS: COMBINED SEWER OVERFLOWS

One of the objectives established in the Compact is to insure that all sewage discharged to the Ohio River receives adequate treatment. The task is nearly complete for dry weather flows; only five small communities, out of 136 along the river with sewer discharges, provide less than secondary treatment. Under wet weather conditions, however, the picture is not as bright. With every storm event, the river is subject to discharges of untreated sewage through combined sewer overflows (CSOs).

The excessive rainfall in 1990 highlighted the need for a better understanding of the water quality impacts of CSOs. These events are believed to cause excessive levels of bacteria in the Ohio River, directly affecting recreational use of the river. Figure 6 displays fecal coliform levels in the Ohio River in 1990 compared to the drought year

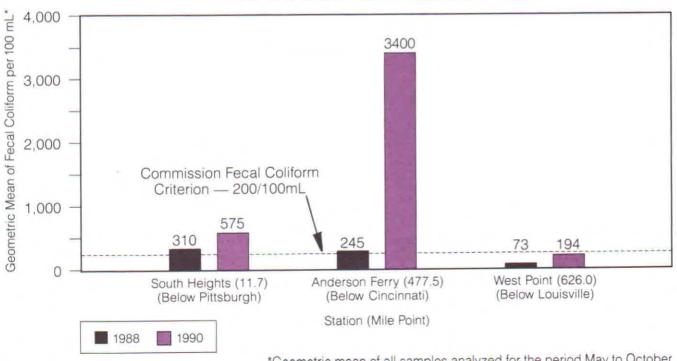
of 1988. The effects of increased rainfall can be clearly seen.

In 1990, the Commission initiated an investigation of the problem by conducting an inventory of sources. This study identified 1,252 known CSOs in 57 communities along the Ohio River.

What Are Combined Sewer Overflows?

Many communities have combined sewer systems which were designed to carry both waste water and storm water to the treatment facility. When it rains, the excess water causes these combined sewers to overflow, sending a mixture of storm water and sewage directly into rivers and streams.

Figure 6
Comparison of Ohio River Bacteria Levels
1988 vs. 1990 Recreation Season



*Geometric mean of all samples analyzed for the period May to October

POLLUTION CONTROL STANDARDS

The Commission has adopted Pollution Control Standards which must be met by all waste water discharges to the Ohio River. The standards include designated river uses, stream criteria to protect those uses, and specific requirements for dischargers in order to achieve and maintain the stream criteria. In order to insure that its standards remain technically valid and that they are based on the most current information available, the Commission conducts a formal review of the standards at least every three years.

In 1990, a formal review of the Commission standards was completed. The review was initiated in 1989 with a request for comments. Based on comments

received, certain revisions were proposed and were presented at public hearings in the Pittsburgh, Cincinnati, and Evansville areas in July 1990. Revisions were then adopted by the Commission at its October meeting.

The 1990 revisions reflect the increasing complexity of water pollution control concerns. Key changes resulting from the revisions are as follows:

- I. Adoption of stream criteria to protect human health at a one in one million cancer risk level.
- II. Adoption of *Escherichia coli* as an alternative bacteria indicator to protect contact recreation.

Phillip C. Morgan, left,
Commissioner from Illinois and
member of the Commission's Public
Hearing Board, discusses changes
to the Pollution Control Standards
with Melvin Hook, Commissioner
from Pennsylvania and Chairman of
the Pollution Control Standards
Committee.



Ohio River

Clean-water regulations show appreciation of rich resource

The speed and ease with which the Ohio River Water Sanitation Commission approved new pollution-control eight member states take a cleaner The The True of the Private Private

The new rules stiffen regulations governing the discharge of toxic chemicals into the river. The commission unanimously adopted standards significantly tougher than those discussed at three preliminary hearings.

It is noteworthy that the rules were approved easily in a three-day meeting in Lexington. Spokesmen for the commission's member states, which

include Ohio, Kentucky and Indiana, expressed surprise that so many important issues were resolved without

This suggests not only that state governments along the Ohio River system see the need to protect this invaluable resource, but also that industry in these states are prepared to The Ohio River

The Ohio River has benefited greatly from clean-water programs during the past 20 years. Much restate governments willing to cooperate with the water sanitation commission, there is reason for optimism.

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III. Adoption of federal technology-based limits as the minimum acceptable level of treatment for industrial discharges.

The Commission's standards are implemented by the member states through the National Pollutant Discharge Elimination System (NPDES). Copies of all draft permits for Ohio River discharges are sent to the Commission by the states for review and comment.

When necessary, the Commission can apply its enforcement powers to correct compliance problems. At the present time, the Commission is party to two consent

orders, together with U.S. EPA and Ohio EPA, for the Cincinnati Mill Creek treatment facility and the City of Wellsville.

To provide critical information regarding the extent to which the Commission's standards are being achieved, certain Ohio River discharges are routinely tracked for compliance with these standards. In 1990, 28 facilities were monitored for compliance. Of these, 15 were monitored due to their large volume of discharge (greater than 10 million gallons per day), while 13 discharges were monitored due to previous compliance problems.



OHIO RIVER SWEEP '90

Because the water quality of the Ohio River has improved significantly for many years, the river has become a popular recreational resource. With this increased recreational use, more and more litter is deposited.

With that in mind, the Commission decided to face the problem head-on by organizing a campaign to promote public awareness and educate the public about the litter problem. In 1989, the first Ohio River Sweep was held, as a pilot project. "The Sweep," a riverbank cleanup, extended from Cincinnati, OH to Ashland, KY. Due to the initial success of the program, it was expanded in 1990 to include the entire Ohio River shoreline (981 miles through six states).



On Saturday, June 16, 1990, over 14,000 people participated in the second Ohio River Sweep. More than 8,000 tons of trash were either recycled or placed in sanitary landfills. The following state agencies provided organizational assistance for the project:

- Ohio Department of Natural Resources
- Ohio Environmental Protection Agency
- Kentucky Natural Resources and Environmental Protection Cabinet
- West Virginia Department of Natural Resources
- Illinois Environmental Protection Agency
- Indiana Department of Environmental Management
- Pennsylvania Department of Environmental Resources.



The 1990 Ohio River
Sweep generated
significant media
attention throughout
the Ohio River Valley
(opposite page, top).
More than 2,000 people
participated along the
shoreline in Ohio
(opposite page, bottom)
and more than 4,500
participated throughout
the 26 counties that
border the Ohio River
in Kentucky (at left).

"Take Pride in America"

The 1990 Ohio River Sweep won the "Take Pride in America" state award in each of the six Ohio River states. The state awards are forwarded to Washington, DC for national competition. The national winner will be announced in May 1991.



THE YEAR IN REVIEW

Gordon R. Garner of Kentucky was elected Chairman and Albert R. Kendrick of Indiana was elected Vice Chairman of the Commission for the period July 1, 1990 to June 30, 1991. Gerald C. Smith of Pennsylvania was elected Secretary. Richard L. Herd., Jr. of the Commission staff was elected Treasurer.

New appointments to the Commission included Phillip C. Morgan, Director, Danville Sanitary Authority, and William T.

Wallace, Commissioner, Bureau of Public Health, West Virginia.

The Commission is made up of three representatives from each of the member states who are appointed by their respective Governors and three representatives of the federal government, who are appointed by the President. Commissioners participate as a public service and receive only reimbursement for their expenses in performance of Commission-related duties.

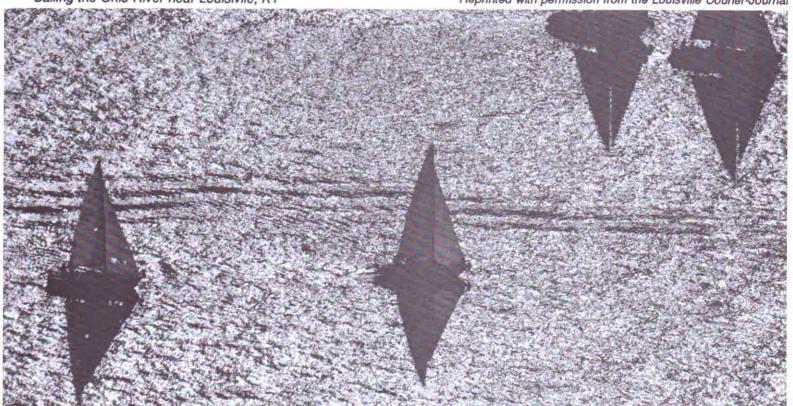
ADVISORY COMMITTEES

The Commission receives advice and counsel from a wide range of viewpoints through its advisory committees, each of which represents a particular river-based interest. The Water Users Advisory Committee consists of public and private utilities which use the Ohio River as a source of water supply. Industry advisory committees, such as those representing the chemical and power industries, bring

together companies which use the river for industrial purposes. The Public Interest Advisory Committee (PIACO) is comprised of private citizens from the member states. The Publicly Owned Treatment Works (POTW) Advisory Committee represents wastewater treatment departments or districts in the Ohio Valley. All advisory committee members serve on a voluntary basis.

Sailing the Ohio River near Louisivlle, KY

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PUBLICATIONS

Publications are developed to provide information regarding the Commission's water pollution control programs. Charges are levied for some publications to cover production and mailing costs. These charges are waived when requests are from government agencies or non-profit organizations. In 1990, the following publications were produced:

ORSANCO - 1989

Annual report of activities during 1989 (22 pages, no charge)

Quality Monitor — 4 Issues

Quarterly publication of data summaries from the Manual Sampling Program, Water Users Network and the Organics Detection System (no charge)

Emergency Response Directory

A compilation of instructions concerning the appropriate agencies to notify when a spill or accidental discharge occurs on the Ohio River or a tributary (8 pages, no charge)

The ORSANCO Outlook

A newsletter published periodically with general information on water quality conditions and the status of Commission programs (no charge)

Assessment of Water Quality Conditions — 1988-1989

An in-depth report of main stem water quality data (102 pages, plus appendix, \$6)

Assessment of Nonpoint Source Pollution in the Ohio River

An in-depth report on the extent of water quality impairment of the Ohio River attributable to nonpoint source pollution (no charge)

Nonpoint Source Pollution in the Ohio River

A brochure that gives a basic overview of nonpoint source pollution in the Ohio River (no charge)

ORSANCO Information Pamphlet

A brief overview of the Commission, its history and its programs (no charge)

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JASON P. HEATH

Environmental Engineer

MATTHEW L. FROST

Environmental Engineer

LESLE HELLMANN BETSCHER

Analytical Chemist

JONATHAN A. MCSAYLES

Environmental Chemist

ALEXANDRA K. STEVENSON

Communications Coordinator

DONNA M. BEATSCH

Data Processing Technician

MICHELLE M. MALONE

Bookkeeper

MARILYN P. KAVANAUGH

Administrative Assistant

BARBARA A. HORTON

SANDRA L. JONES Secretaries The following financial information was extracted from the Annual Audit Report of Hall & Associates, Certified Public Accountants for the year ending June 30, 1990

COMBINED STATEMENT OF ACCRUED REVENUES AND EXPENSES AND AVAILABLE RESOURCES-YEAR ENDING JUNE 30, 1990

	GENERAL FUND	COMPLIANCE*	SPECIAL† ACCOUNT	TOTAL ACTIVITES
RESOURCES				
Carryover on July 1, 1989	\$ 7,099	\$40,555	\$ 97,865	\$ 145,419
Revenues				
Illinois	39,000			39,000
Indiana	145,600			145,600
Kentucky	167,300			167,300
New York	8,125			8,125
Ohio	197,900			197,900
Pennsylvania	108,825			108,825
Virginia	28,175			28,175
West Virginia	85,725			85,725
U.S. EPA — 106 Grant	375,632			375,632
Miscellaneous	1,044	0.000	17.010	1,044
Interest	101 157	9,890	17,046	29,936
Other Sources	104,457	- W	130,000	234,457
Total Resources	\$1,268,882	\$50,345	\$244,911	\$1,564,138
EXPENDITURES				
Temporary Help	\$ 13,389			\$ 13,989
Payroll	461,246			461,246
Employee Benefits	105,377			105,377
Staff Travel	57,992	\$ 345		58,337
Commissioner Travel	30,889			30,889
Adv. Committee Travel	12,297			12,297
Supplies	144,476			144,476
Telephone	18,682		a = a 00==	18,682
Equipment	21,702		\$ 74,190	95,892
Rent & Utilities	60,424			60,424
Repairs & Maintenance	17,187			17.187
Contractual Services	20,300			20,300
Printing & Reproduction	32,756			32,756
Lab Fees & Delivery	140,821		rate reactor to resour	140,821
Total Expenses	\$1,137,538	\$ 345	\$ 74,190	\$1,212,073
Resources Available on				
June 30, 1990	\$ 131,344	\$50,000	\$170,721	\$ 352,065
See accompanying Notes to Financial Statement	ent			

The following information was extracted from the Annual Actuarial Report of William M. Mercer, Inc. for the year ending September 30, 1990

STATEMENT OF RESOURCES AND DISBURSEMENTS EMPLOYEES PENSION TRUST FUND

Pension Trust Fund Value — October 1, 1989	
Annual Employer Contribution	
Fund Earnings and Change in Market Value	
Disbursements for Year Ending September 30, 1990	(63,344)
Pension Trust Fund Value — September 30, 1990	\$1,055,431

Notes to Financial Statement

^{*}The Compliance account was established in 1985 to mitigate potential expenses that could be incurred through litigation or by responding to spill events. The account is funded by the interest earned on funds received from Commission States and is limited by a \$50,000 ceiling.

[†]The Special Account was established in 1989 to receive fines, settlements, reimbursements or any other monies that may be made available as a result of an enforcement or other action by the Commission or one of its members or by donation by others. Disbursements from this account are made at the direction of the Commission.

ILLINOIS

Division of Water Pollution Control Environmental Protection Agency 2200 Churchill Road Springfield, Illinois 62706

OHIO

Division of Water Pollution Control Environmental Protection Agency Post Office Box 1049 Columbus, Ohio 43266-0149

INDIANA

Department of Environmental Management 105 S. Meridian Street Indianapolis, Indiana 46225

PENNSYLVANIA

Bureau of Water Quality Management Department of Environmental Resources Post Office Box 2063 Harrisburg, Pennsylvania 17120

KENTUCKY

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

VIRGINIA

State Water Control Board Post Office Box 11143 Richmond, Virginia 23230

NEW YORK

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

WEST VIRGINIA

Division of Water Resources Department of Natural Resources 1201 Greenbrier Street Charleston, West Virginia 25311

Regulatory Agencies Of The Signatory States



