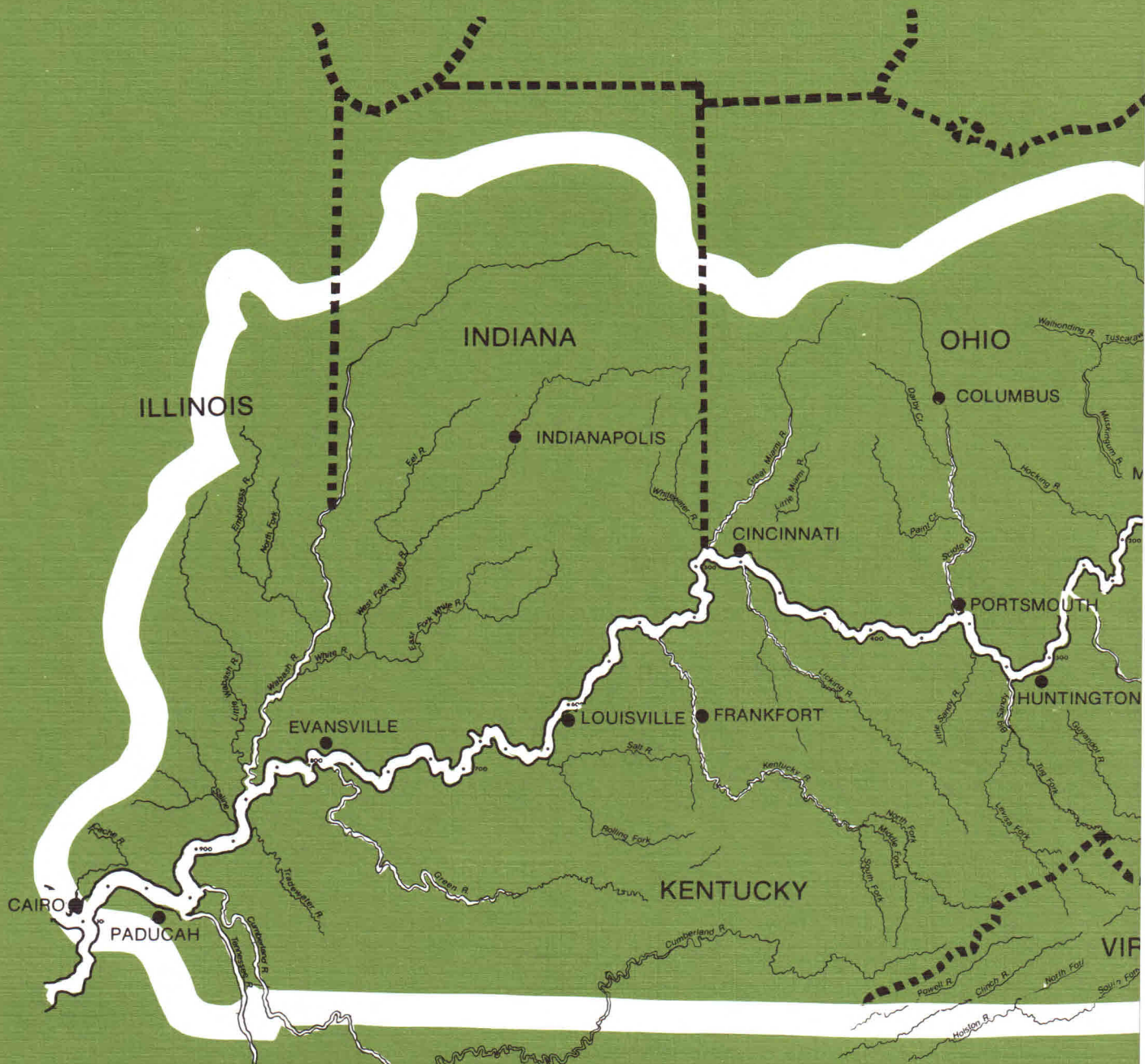


ILLINOIS  
INDIANA  
KENTUCKY  
NEW YORK  
OHIO  
PENNSYLVANIA  
VIRGINIA  
WEST VIRGINIA

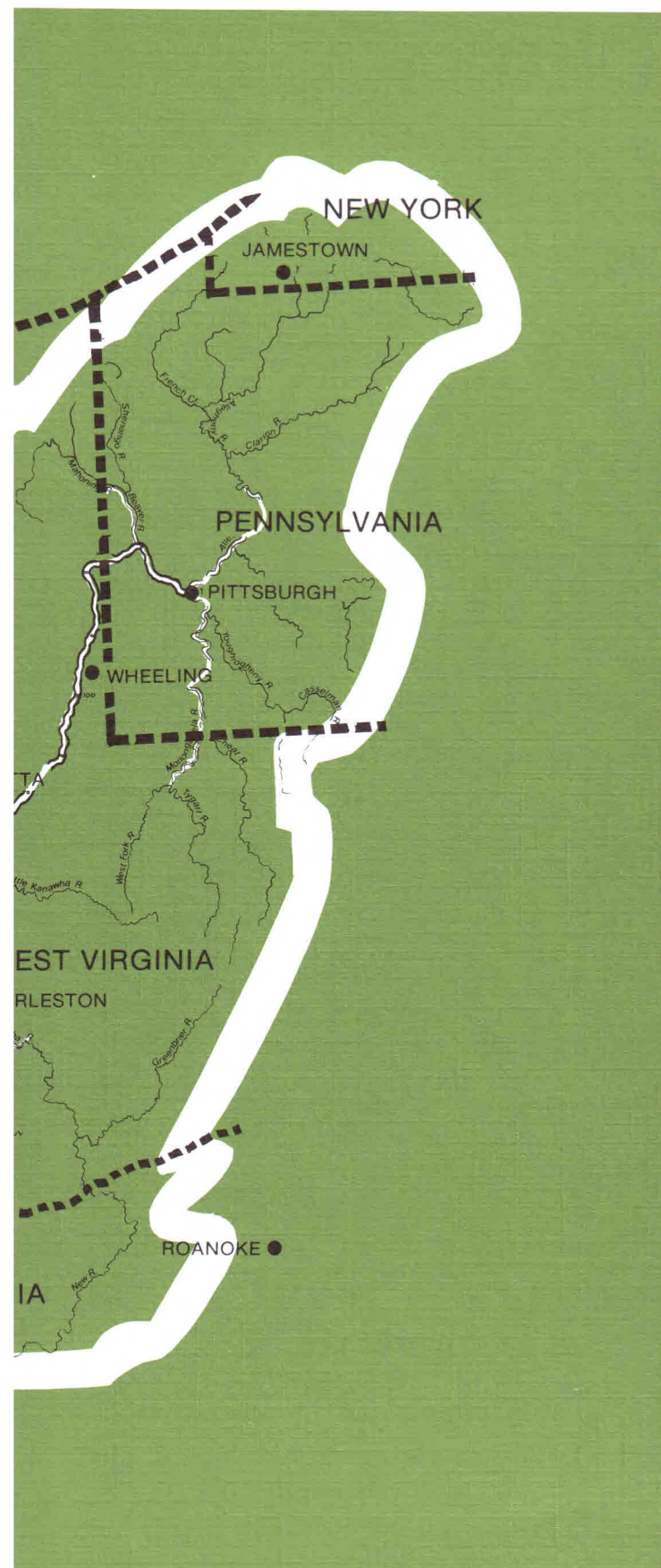
# FORSAINCO / 1984



# OHIO RIVER VALLEY COMPAC



# DISTRICT



TO:

**The Honorable James R. Thompson**  
*Governor of Illinois*

**The Honorable Robert D. Orr**  
*Governor of Indiana*

**The Honorable Martha Layne Collins**  
*Governor of Kentucky*

**The Honorable Mario M. Cuomo**  
*Governor of New York*

**The Honorable Richard F. Celeste**  
*Governor of Ohio*

**The Honorable Richard L. Thornburgh**  
*Governor of Pennsylvania*

**The Honorable Charles S. Robb**  
*Governor of Virginia*

**The Honorable Arch A. Moore, Jr.**  
*Governor of West Virginia*

The Commissioners of the Ohio River Valley Water Sanitation Commission — an interstate compact 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 the approval of the Congress of the United States — respectfully submit a review of the Commission's activities in 1984.



## ILLINOIS

Richard J. Carlson, *Director, Illinois Environmental Protection Agency*  
 Richard S. Engelbrecht, Ph.D., *Professor of Environmental Engineering,  
 University of Illinois*  
 Cordell McGoy, *Correctional Lieutenant, Vienna Correctional Center*

## INDIANA

Joseph Harrison, *Attorney, Bowers, Harrison, Kent & Miller*  
 Albert R. Kendrick, Jr., *Safety & Environmental Protection Supt., Monsanto Company*  
 Woodrow A. Myers, Jr., M.D., *State Health Commissioner*

## KENTUCKY

Charlotte E. Baldwin, *Secretary, Natural Resources and Environmental Protection Cabinet*  
 Gordon R. Garner, *Executive Director, Louisville & Jefferson County  
 Metropolitan Sewer District*  
 Ted R. Richardson, P.E., *Cardinal Engineering Corporation*

## NEW YORK

William J. Kilgour  
 Thomas A. Storch, Ph.D., *Director, Environmental Resources Center, SUNY-Fredonia*  
 Henry G. Williams, *Commissioner, Department of Environmental Conservation*

## OHIO

Lloyd N. Clausing, *Senior Engineer, Goodyear Atomic Corporation*  
 Augusta A. Prince  
 Warren W. Tyler, *Director, Ohio Environmental Protection Agency*

## PENNSYLVANIA

Nicholas DeBenedictis, *Secretary, Department of Environmental Resources*  
 Paul Emler, Jr., *Senior Environmental Advisor, Allegheny Power Service Corporation*  
 Gerald C. Smith, *System Company President, American Water Works Service Company*

## VIRGINIA

Joseph S. Cragwall, *State Water Control Board*  
 Millard B. Rice, *State Water Control Board*  
 Robert C. Winingar, *State Water Control Board*

## WEST VIRGINIA

Edgar N. Henry, *Director, Water Development Authority*  
 David K. Heydinger, M.D., *State Director of Health*  
 David W. Robinson, *Chief, Division of Water Resources, Department of Natural Resources*

## UNITED STATES

Jean M. Barren  
 Joseph D. Cloud  
 Charles R. Jeter, *Regional Administrator, Region IV, US Environmental Protection Agency*

## OFFICERS

David W. Robinson, *Chairman*  
 Paul Emler, Jr., *Vice Chairman*  
 Joseph H. Harrison, *Secretary/Treasurer*  
 Leo Weaver, *Executive Director and Chief Engineer*

## LEGAL COUNSEL

Leonard A. Weakley, *Taft, Stettinius and Hollister*

\*as of April 1, 1985



## CHAIRMAN'S MESSAGE

# *Fulfilling the promise...*

Almost four decades ago, eight states signed the Ohio River Valley Water Sanitation Compact creating this Commission. The states pledged and promised, each to the other, faithful cooperation in the control of future pollution and abatement of existing pollution in boundary waters. The Compact specifies that these waters will be safe and satisfactory as public and industrial water supplies after reasonable treatment, suitable for recreational usage, capable of maintaining fish and other aquatic life, and adaptable to such other uses as may be legitimate. While there is no mistaking the progress and the improvement in water quality readily discernible to the eye and upon analyses of statistics, nagging questions remain. *Can I drink the water? Can I eat the fish? Can I swim in the river without getting sick?* The answer should be a resounding YES, but, unfortunately it is only a qualified yes. Therein lies the challenge to fulfill the promise.

In 1984, the Commission adopted revised and more comprehensive Pollution Control Standards which include sewage and industrial waste treatment discharge requirements and specify stream uses and criteria. These standards continue the requirement for secondary treatment for municipal treatment plants and the equivalent for industry, contain outright prohibitions for seven toxic pollutants and establish stream criteria for many other toxic pollutants which, if met, will allow for a forthright yes in answer to the three questions.

We are in a strategic and timely position for the Commission to move ahead in lending its authority and stature, as necessary and desirable, to successfully achieve the adequate treatment of all wastewater discharges to the Ohio River. The Commission has a particularly significant role when it comes to *two* aspects of the enforcement-regulation procedures. The first is where there are interstate implications

and an extended period of difficulty is being encountered in bringing about compliance by a discharger, whether it be municipal or industrial. The second is where more than the secondary level technology requirement will be required to achieve the water quality necessary to sustain the designated use.

Billions of dollars have been spent on the cleanup of Ohio Valley Rivers by government and industry. Much has been accomplished, but their job is not complete. Because some municipal wastewater treatment plants fail to meet the minimum discharge requirements, the uses contained in the Compact are not being met in a few limited areas. The Commission is becoming increasingly aware of the impact of many organic chemicals in toxic amounts. Pollution of groundwaters impact the quality of the Ohio River. The effect of run-off from urban areas, agricultural land, strip mines and forests, collectively called "non-point" pollution, has not been substantively addressed. These issues remain as the next challenge for the Commission, and will be prominent on future meeting agenda.

A look back at how far we have come, makes it obvious to me that the promise will be fulfilled.

David W. Robinson, *Chairman*





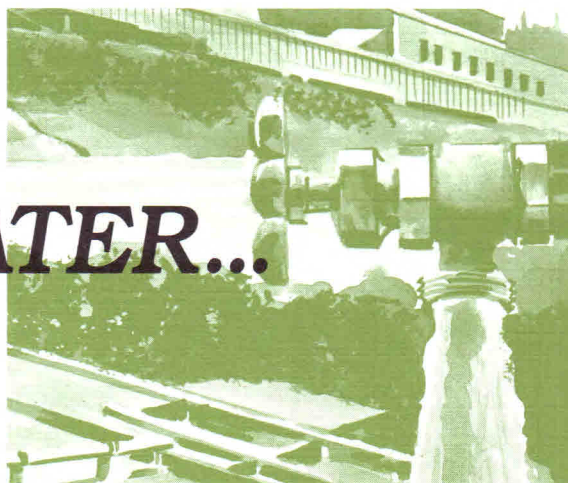
# Measuring Up...

One of the guiding principles of the Compact, which created the Ohio River Valley Water Sanitation Commission, is that pollution by sewage or industrial wastes originating within a signatory state shall not injuriously affect the various uses of the interstate waters. These uses include water for drinking

or industrial use, recreation, fishing and agriculture.

Periodically, it is necessary to take stock, and assess progress toward fulfilling the promises made to the citizens in the Ohio Valley and what remains to be accomplished.

## DRINKING WATER...



Is Ohio River water safe to drink? This question has been on people's minds because studies have shown that cancer rates are higher than the national average in cities that use the Ohio River as a water supply source.

This information, along with an increased public awareness of accidental spills and discharges to the Ohio and its tributaries, results in fears about the safety of these streams as a source of drinking water. The Commission's Organics Detection System (ODS) was installed at 12 locations along the Ohio River and three major tributaries. The streams are sampled and analyzed daily to provide an early warning to downstream water utilities in the event unus-

ual levels of chemicals are detected.

As shown in Figure 1, there are small amounts of organic compounds in the Ohio River. Daily sampling at the ODS sites has resulted in the compilation of an extensive database on the type and background levels of seventeen routinely monitored compounds.

More than 12,000 samples were collected from 1979-1984. The most frequently detected compound was chloroform as shown in Figure 2. Chloroform was detected 9,416 times with an average of 0.6 parts per billion (ug/l). Other compounds frequently detected were methylene chloride, 1,1,1-trichloroethane, tetrachloroethylene, and trichloroethylene.



Four of the seventeen compounds (chloroform, bromoform, dibromochloromethane, and bromodichloromethane), are trihalomethanes (see Figure 1). The US EPA's drinking water standards limit concentration of these and other trihalomethane compounds to 100 parts per billion in the treated drinking water. This is, for example, more than 150 times the average level of the trihalomethane Chloroform found in the river. Trihalomethanes, particularly Chloroform, may be generated in the raw water treatment process to varying degrees. However, it does serve a useful purpose to compare what is considered a safe level in the finished water, with the minute amounts contained in the river which is the source of drinking water.

These compounds are widely used in industry as feed stocks and solvents and all are on the US EPA's priority pollutant list. Although none of the compounds

have been proven to be human carcinogens, they can cause health problems if untreated, according to the American Medical Associations' "Drinking Water and Human Health".

In addition to the ODS, the Commission Pollution Control Standards contain stream criteria for 15 constituents which were established to protect public water supplies. Fourteen of these met the criteria for public water supply at all times during the past year. Only the phenolics criterion was exceeded in about two percent of the samples from the Ohio River.

Over three million people receive their drinking water directly from the Ohio. The Commission, in cooperation with state pollution control agencies, is monitoring the safety of the Ohio and its tributaries as a water supply. Available data indicates that, after reasonable treatment, the Ohio is a safe source of drinking water.

FIGURE 1 1979-84 AVERAGE CONCENTRATION OF CHEMICALS DETECTED  
in 12,202 samples by the Ohio River Sampling Stations of the O.D.S.

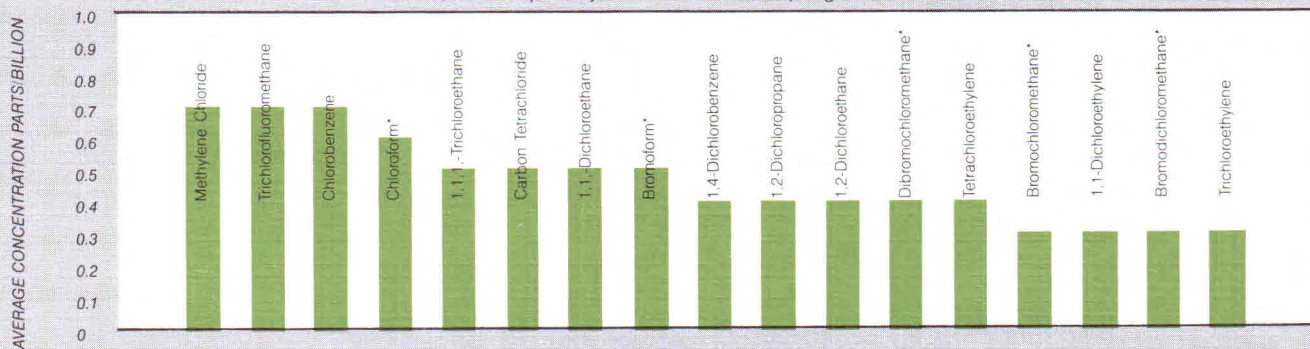
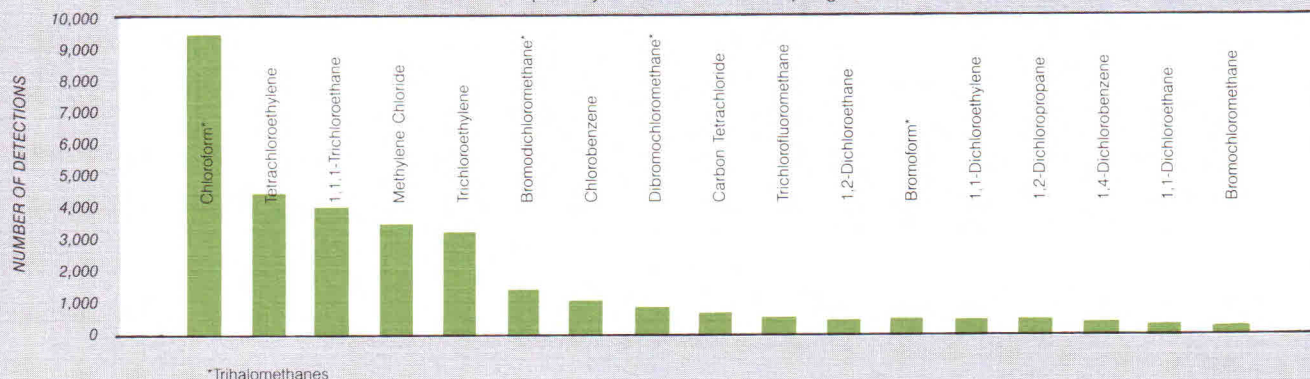
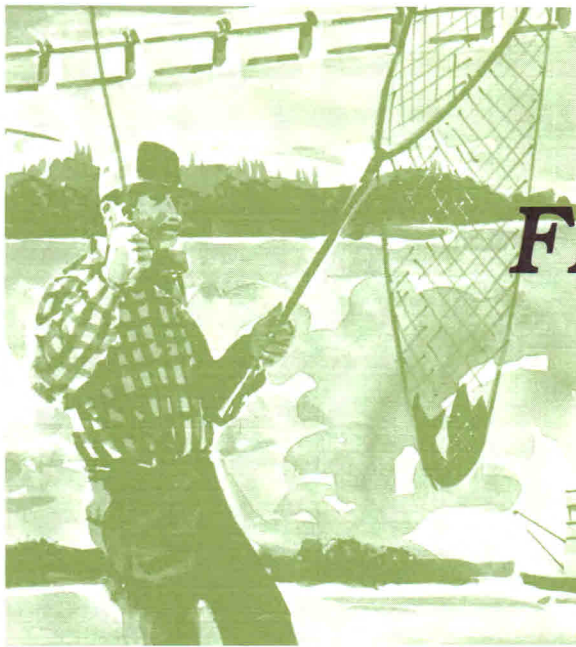


FIGURE 2 1979-84 AVERAGE NUMBER OF DETECTIONS  
in 12,202 samples by the Ohio River Sampling Stations of the O.D.S.







## FISHING...

"How's the fishing?" "Can I eat the fish I catch?" Information from the Commission's fish surveys provides an affirmative answer. The surveys have provided fish population data for more than twenty years. In 1975, the surveys were expanded to include the analysis of fish tissue for polychlorinated biphenyls (PCBs), selected pesticides and heavy metals.

The fishery has greatly improved over the last 25 years. The proportion of "rough" species, such as carp and suckers, has decreased substantially relative to the total catch in the Allegheny, Monongahela and Kanawha Rivers and in all sections of the Ohio River. Figure 3 compares the relative abundance for the period 1979-1983 of three major categories of fishes: sport, including bass, walleye and sunfishes; commercial, including catfish and drum; and other, including shad, carp, and suckers.

In 1983 surveys, large numbers of the young-of-the-year were collected, indicating that favorable river quality conditions existed for successful spawning. This is supported by dis-

solved oxygen data, which indicate that the Commission's requirement of a minimum of 5.0 milligrams per liter during the April 15 to June 15 spawning season was met in all samples collected. Slightly depressed dissolved oxygen levels in the Ohio River were experienced later in the year, however, during the low flow months of August and September.

The Commission also samples for a number of other substances for which criteria have been established to protect aquatic life. While data collected in 1984 did not identify any recurring problems, levels of copper, mercury, phenolics and zinc above the Commission's criteria were occasionally measured.

Fish tissue analyses, performed by the US Food and Drug Administration (FDA) on fish collected in the surveys, indicate that PCBs and chlordane occasionally exceed the FDA tolerance limit.

Laboratory results of Ohio River fish samples analyzed from 1975 to 1981 (primarily channel catfish and carp), when compared to FDA tolerance limits have indicated only isolated incidences of PCBs in excess of 5 ppm (parts per million) and chlordane in excess of 0.3 ppm, the established guidelines at that time. The concentrations of PCBs in fish tissue at levels in excess of 5 ppm have decreased



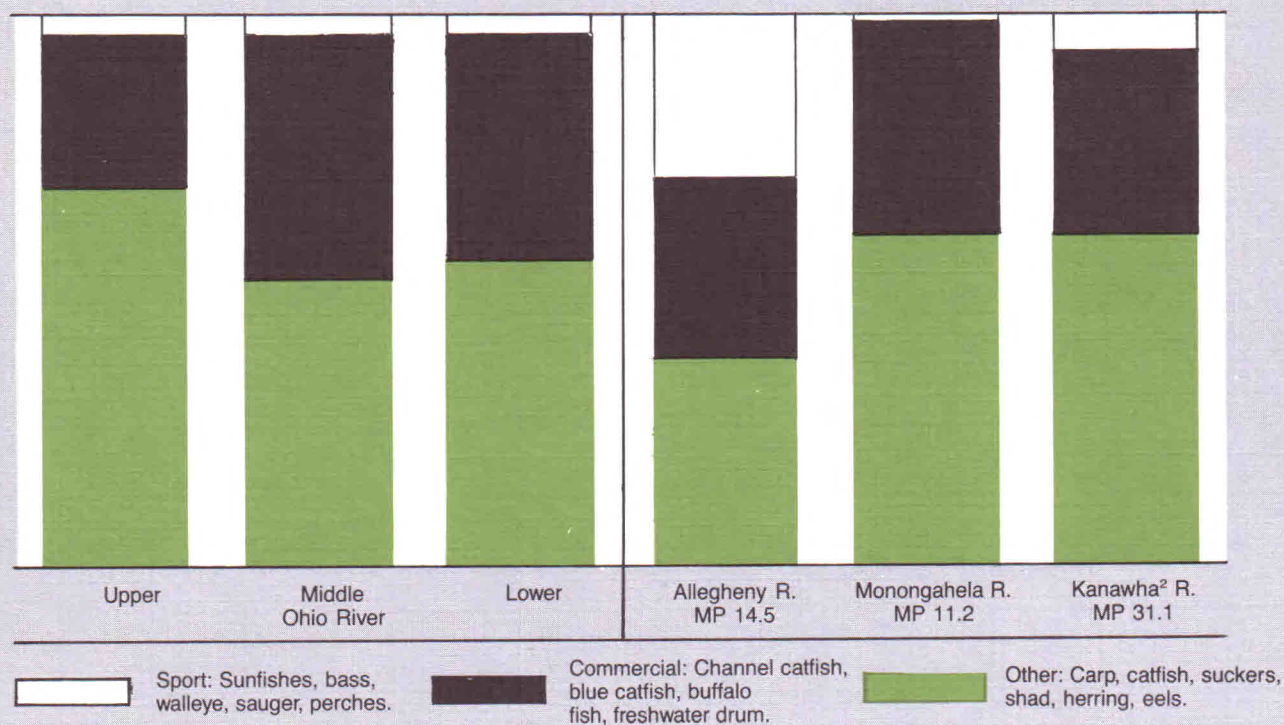
over the years and no fish sampled from the Ohio River in 1981 exceeded this limit. However, in September, 1984, the FDA officially decreased the tolerance level for PCBs in fish for human consumption distributed through interstate commerce from 5 parts to 2 parts per million.

The most recent results of Ohio River fish tissue analyses are from fish collected in the fall of 1983. These data show that 40 percent of the channel catfish and less than 3 percent of the carp tested had PCB levels in excess of the newly established 2 ppm tolerance level. (None of the levels were in excess of 5 ppm.) Similarly 30 percent of the catfish and none of the carp had levels of chlordane in excess of the 0.3 ppm guideline used by the FDA.

Since fish species differ in diet, habitat, growth rate and physiology, fish accumulate contaminants at different rates. Long-term effects of human exposure to PCBs and pesticides have not been fully determined by health experts. FDA tolerance levels for fish contaminants, like many health related standards, are based on the consumption of certain quantities of fish with consistent levels of contaminants in excess of the established level over a period of time.

While it is unlikely that catfish or carp from the Ohio River are consumed in such quantities with regularity by any individual, levels of PCBs and chlordane determined in the 1983 survey suggest that fish (carp and catfish) taken from the Ohio River should not be a primary source of protein.

FIGURE 3 RELATIVE ABUNDANCE OF FISH<sup>1</sup>  
OHIO RIVER AND THREE TRIBUTARIES  
1979-1983



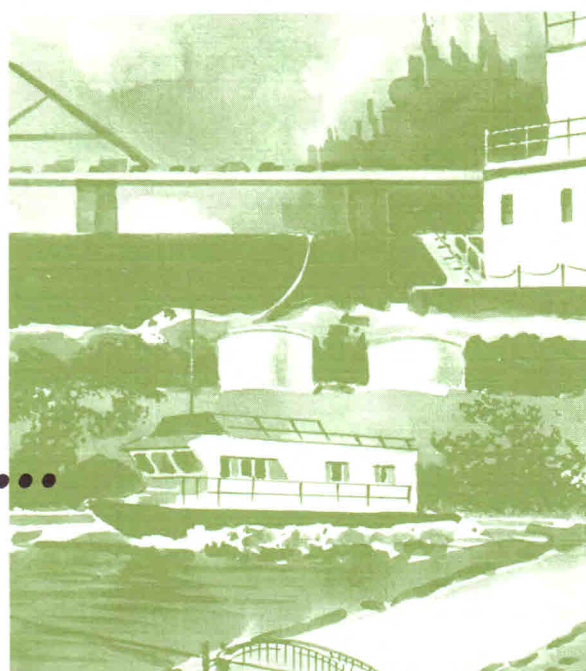
Minnow population subtracted from total catch

Source: 1) Fish population surveys coordinated by the Commission in cooperation with: the states of Illinois, Indiana, Kentucky, Ohio, Pennsylvania, West Virginia, the US Corps of Engineers, US Department of Interior — Fish and Wildlife Service, and the US Environmental Protection Agency.

2) Collected and compiled by West Virginia Department of Natural Resources.



# RECREATION...



Ohio River Valley streams are used and enjoyed for recreational purposes by millions of people each year. Residents of cities and towns along the Ohio and its major tributaries boat, fish, water ski and swim. Along the Ohio River, over 250 launch ramps and marinas add to the convenience; the pleasure boater has access to gasoline, supplies, and even fine restaurants at riverside facilities. There are no formal bathing beaches on the river; commonly, people swim from boats.

Several water quality parameters measure the suitability for recreational use. Water temperature determines when the river will be used most frequently. Turbidity is a measure of the clarity of the water. Many health agencies have established either a maximum turbidity limit, or a minimum depth at which the bottom should be visible, as a safety requirement for bathing beaches. The parameter used most widely to assess safety from water borne diseases is fecal coliform bacteria.

Because of the importance of recreation, the Commission conducted an

investigation to develop a strategy for the protection of the river for this use. The study found that the fecal coliform bacteria criteria for recreational use were exceeded about half the time. This finding was released to the public in 1984 and caused widespread concern over the safety of water contact recreation.

As a result of the investigation, the Commission initiated a program of closer tracking of wastewater treatment facilities from which effluent discharges were not being properly disinfected, and increased sampling for fecal coliform bacteria at locations where persistent problems were indicated. The locations sampled were below four urban areas — Wheeling, Huntington, Cincinnati, and Louisville. Results from July, August, and September of 1984 showed that recreational criteria were met in one month below Huntington and in none of the months at the other locations. Results from water utilities located above the cities of Wheeling, Huntington, Portsmouth, Cincinnati, Louisville, and Evansville indicated that the recreation criteria were met from June through October, but



not in May. These results were similar to those obtained in past years at the same locations. In early May, at the end of the spring runoff period, fecal coliform levels are high. During the warm, dry summer months, levels are usually within the recreation criteria. The special 1984 results indicate that immediately below major cities levels remain high throughout the summer.

The recreation criteria for fecal coliform bacteria were adopted to protect swimmers from such illnesses as gastrointestinal upsets, earaches, and sore throats. Diseases which resulted in the past from water contact, such as polio or typhoid fever, are not likely to be transmitted under present conditions. The major safety concerns in recreational use of the Ohio River relate to physical factors. At times of high flow in particular, swift currents and floating debris can make swimming and boating in the river very hazardous. Even under the best conditions, these factors together with the turbid water, which makes it impossible to see hazards on

the bottom, can pose problems. It must also be recognized by the recreational user that there is a considerable amount of barge traffic on the river, and that barge tows do not have the maneuverability to avoid small boats or swimmers. Areas in the immediate vicinity of navigation dams are restricted due to the concentration of barge traffic and the currents.

Water quality is one factor which should be considered by recreational users. Areas immediately below wastewater discharges should be avoided for this reason. Caution and common sense must be used in order to assure that recreation on the river will be a pleasurable experience.



TABLE I  
COMPLIANCE WITH STREAM BACTERIAL CRITERIA FOR CONTACT RECREATION  
Ohio River 1984

Milepoint	Location	May	June	July	August	Sept.	Oct.
86.8	above Wheeling	No	No	No	Yes	Yes	Yes
102.4	below Wheeling	—	—	No	No	—	—
306.9	above Huntington	No	Yes	Yes	Yes	Yes	Yes
341.0	below Huntington	—	—	No	No	Yes	—
350.7	above Portsmouth	No	—	Yes	—	—	No
462.8	above Cincinnati	—	—	Yes	Yes	—	Yes
477.5	below Cincinnati	—	—	No	No	No	—
600.6	above Louisville	No	Yes	Yes	Yes	Yes	Yes
625.9	below Louisville	—	—	No	No	No	—
791.5	above Evansville	No	Yes	Yes	Yes	Yes	Yes

— Data not available

COMMISSION STANDARDS (MAY-OCTOBER)

Maximum allowable level of fecal coliform for Primary Contact Recreation — shall not exceed 200/100 ml as a monthly geometric mean based on not less than five samples per month; nor exceed 400/100 ml in more than ten percent of all samples taken during the month.



# WASTEWATER TREATMENT

## *Requisite to a Clean River*



The Ohio River and its tributaries serve as a source of water supply to millions of people, a resource for recreation and fishing to sports enthusiasts and as highways for industrial commerce. The quality of its waters is vital to the economy and overall well being of the region and the nation as a whole. The Ohio River and its tributaries serve another important function — they receive wastewaters from numerous industries and municipalities. Unless each community and industry provides consistent effective treatment, the

cleanliness of the rivers will be compromised. It is based on this principle that the Commission was created with the authority to prescribe and enforce standards of wastewater treatment to assure that discharges from one state to another will not injuriously affect designated uses.

Biennial surveys of the status of wastewater treatment plants in the Valley are conducted to provide a measure of accomplishments and needs relating to construction of facilities. Results of the latest survey (1983) shown on Table

TABLE II 1983 SURVEY\*/OHIO RIVER BAS

FACILITY NEEDS	IL	IN	KY	NY	OH
MUNICIPAL					
NO NEEDS	53	182	207	7	150
	248,873	1,572,006	1,162,637	51,540	1,163,754
INCREASED TREATMENT	25	82	60	0	57
	61,601	468,970	506,366	0	1,137,278
INCREASED CAPACITY	3	17	16	0	19
	14,890	163,564	241,690	0	128,660
INCREASED TREATMENT AND CAPACITY	10	15	20	5	137
	55,965	80,359	67,781	45,990	1,776,139
REPLACEMENT	8	0	31	1	27
	19,151	0	129,091	3,060	152,779
TOTAL	99	296	334	13	390
	400,480	2,284,899	2,107,565	100,590	4,358,610
INDUSTRIAL					
NO NEEDS	11	128	70	19	144
INCREASED TREATMENT	0	5	0	0	14
INCREASED CAPACITY	0	1	0	0	0
INCREASED TREATMENT AND CAPACITY	0	2	0	0	2
REPLACEMENT	0	0	1	0	2
TOTAL	10	136	71	19	162

\*Does not include: (1) Facilities treating domestic sewage and privately owned facilities of 40,000 gal/day or less  
(2) Industrial facilities of 40,000 gal/day or less  
(3) Industrial facilities requiring temperature adjustment only  
(4) Coal-related industrial facilities



It indicates that industries in the Valley have made outstanding progress in constructing necessary facilities to meet current discharge requirements. Many needs, however, remain for municipal facilities. Specifically, for the Ohio River, 56 of 126 plants need to be either upgraded, expanded or totally replaced. These plants serve almost 1.5 million of nearly 3.75 million persons now served by central treatment plants. Two of these facilities, Cincinnati's Mill Creek Plant and Louisville's Morris Forman plant, serve a total of about 1 million people.

An investigation into the greater Cincinnati Metropolitan Sewer District's Mill Creek Plant was authorized by the Commission in September, 1984. The Mill Creek Plant, designed to provide secondary level treatment for an average flow of 120 million gallons per

day (mgd) of combined domestic and industrial wastewater, has been able to provide the secondary level of treatment to approximately 16 percent of the flows accepted at the facility. The result of these insufficiently treated discharges has reduced the level of river water quality below the Cincinnati metropolitan area. The District is negotiating the provisions of a Consent Decree with the state of Ohio and US EPA to define and schedule a remedial project. A Commission Investigating Committee report was scheduled to be completed in early 1985.

The Louisville-Jefferson County Metropolitan Sewer District has been aggressively pursuing a Corrective Action Program provided in a Consent Decree, and in 1984 achieved treatment levels approaching the Commission's standards.

## ASTEWATER TREATMENT FACILITIES

PA	VA	WV	TOTAL	% TOTAL	OHIO RIVER MAINSTEM	
					TOTAL	% TOTAL
182	18	82	881	56.0	72	56.3
2,911,968	74,856	577,691	7,763,325	56.2	2,212,608	59.6
12	5	11	252	16.0	11	8.6
121,864	6,985	48,379	2,351,443	17.0	1,121,894	30.2
12	0	2	69	4.4	8	6.2
154,020	0	1,500	704,324	5.1	71,930	1.9
15	18	55	275	17.5	30	23.4
84,689	49,606	446,728	2,607,257	18.9	300,156	8.1
10	9	10	96	6.1	7	5.5
20,210	37,023	21,980	383,294	2.8	5,720	0.2
231	50	160	1,573		128	
3,292,751	168,470	1,096,278	13,809,643		3,712,308	
150	11	77	610	92.7	118	91.4
10	0	4	33	5.0	7	5.4
0	0	0	1	0.1	0	0
2	0	1	7	1.1	2	1.6
4	0	0	7	1.1	2	1.6
166	11	82	658		129	



## *Taking the pulse...*

The streams of the Ohio Valley comprise a complex and dynamic ecosystem shared by the people of the eight states which have joined together and pledged to each other faithful cooperation in controlling water pollution. The Commission maintains a network of monitoring systems for the Ohio River and its major tributaries to provide the necessary information which is fundamental to the sound management required to fulfill this pledge.

In 1984 several special programs were inaugurated. Increased sampling for fecal coliform bacteria was conducted at four locations along the river (see page 10). In September, two multi-year survey projects were initiated. In cooperation with the US Geological Survey, cross-section sampling was conducted at six locations to determine the extent to which samples analyzed by the Commission are representative of com-

posite river quality. Preliminary bioassay screening of river quality above and below Neville Island near Pittsburgh, Cincinnati, and Louisville to measure for the presence of toxicity was also conducted. The bioassay studies to date, revealed that no toxic effects were present in these areas. This project is a cooperative effort with the states and US EPA.

These programs are projected to continue for the next three years.

Overall, the Ohio and its major tributaries are some of the most closely examined rivers in the United States. This is made possible by the cooperative efforts of local, state and federal agencies, and industries. The result is an extensive base of data from which knowledgeable decisions can be made towards "protecting the uses" of this most vital resource.

## *SPILL RESPONSE...*

Spills and accidental discharges of polluting materials have been a problem for as long as man's activities have taken place on and adjacent to rivers. Despite the best spill prevention efforts, human error cannot be eliminated totally and occasional accidents will happen. The number of spills reported to the Commission each year indicates a 50 percent reduction from 1978 to 1984. Because spills will never be totally eliminated, it is necessary to maintain the capability to respond to and minimize effects on the uses of the river.

The successes achieved in control-

ling continuous discharges of sewage and industrial wastewater to the Ohio River have made the river more sensitive to spills. Portions of the river which were populated only by pollution tolerant aquatic organisms now support commercial and sport fish species. These fish are more likely to be killed by spills and accidental discharges.

In 1978, the Commission intensified its role in spill response with the establishment of the Organics Detection System (ODS). The system consists of instruments and equipment at 12



sites on the Ohio River and three major tributaries. The site collects a sample each day for analysis. If unusual concentrations of any compound are found, the Commission is notified and additional samples are collected. The Commission in turn notifies state and federal agencies as well as downstream ODS sites. Duplicate samples are sent to a backup laboratory for confirmation by gas chromatograph/mass spectrophotometer (GC/MS) analysis. In addition, the movement of the compound in the water is forecast to provide advance warning to downstream water utilities. The utilities can then alter their treatment to deal with the threat or close their river intakes until the contaminant has passed. There is, therefore, the need for timely, accurate information on the magnitude and location of a spill.

The success of the system may be measured by the number of unreported spills which have been detected. From 1978 through 1980, 12 such incidents occurred. From 1981 through 1983, no unusual concentrations of the compounds analyzed were detected. In 1984, however, four such detections were made. The "radar" effect probably

has been a major incentive to reducing the number of spills.

## CHRONOLOGY OF A SPILL

*Thursday, January 26, 1984*

Wheeling reported unusually high levels of Benzene, Toluene, Dichlorobenzene, and an unknown compound. The following steps were taken:

- duplicate samples were sent to the backup laboratory for confirmation;
- West Virginia and Ohio water pollution control agencies, US EPA, and downstream ODS sites were notified and given estimated times of arrival of the compounds; and
- investigation to locate sources initiated by the regulatory agencies.

*Friday, January 27*

Parkersburg ODS site reported unusually high concentrations of Benzene, Toluene, and other chlorinated halogenated organic compounds. The backup laboratory reported confirmation of the Wheeling results. Ohio, West Virginia, and US EPA were so notified.

*Saturday, January 28*

Huntington ODS site reported nothing unusual. Kentucky and Indiana water pollution control agencies and the public were notified.

*Sunday, January 29*

Commission staff answered numerous inquiries on the situation from water utilities and news media. The ODS sites continued to analyze water samples.

*Monday, January 30*

Times of arrival at downstream water utilities were updated, state agencies and the public were notified. Later in the day, Benzene and Toluene were found at Huntington at low concentrations.

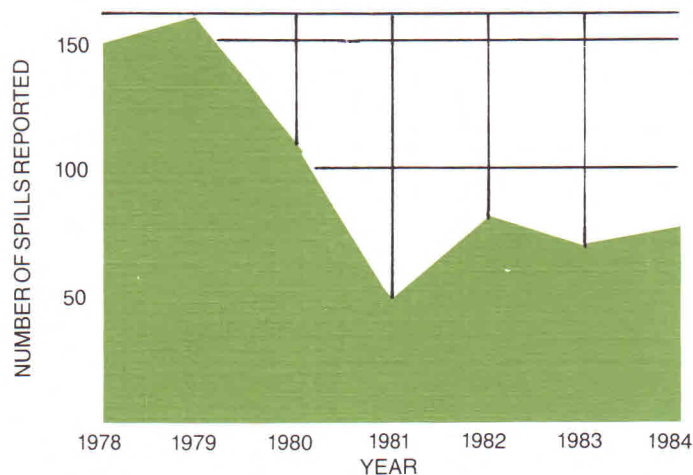
*Tuesday, January 31*

The Huntington ODS site reported trace concentrations of Benzene and Toluene. The Portsmouth site also found traces of the two compounds. Methylene Chloride, a degradation product of several of the compounds found upstream, was also found. By Tuesday evening, concentrations had declined to trace amounts.

*Wednesday, February 1*

The state agencies, US EPA, ODS sites, and the public were notified that the event was concluded.

FIGURE 4.  
NUMBER OF SPILLS REPORTED  
TO ORSANCO — 1978-1984





# *The year in brief...*

## ***The Commission***

David W. Robinson of West Virginia was elected Chairman of the Commission for the period of July 1, 1984 to June 30, 1985. Paul Emler, Jr. of Pennsylvania and Joseph H. Harrison of Indiana were elected Vice Chairman and Secretary/Treasurer, respectively.

Indiana Governor Robert D. Orr appointed Thomen S. Danielson, M.D. ex officio Commissioner from that state by virtue of Dr. Danielson's position as Acting State Health Commissioner of the Indiana State Board of Health. Gordon R. Garner and Ted R. Richardson were appointed to the Commission by Kentucky Governor Martha Layne Collins.

Three representatives from each of the member states and three representatives of the federal government are appointed to serve on the Commission. Commissioners participate as a public service and receive only reimbursement for their expenses in performing Commission related duties.

During 1984, resolutions were passed by the Commission to recognize the service of three Commissioners whose terms of office came to an end, namely: Frank C. Campbell (Kentucky); Frank L. Stanonis, Ph.D. (Kentucky); and Ronald G. Blankenbaker, M.D. (Indiana).

## ***Advisory Committees***

The Commission has a number of advisory committees which provide advice and counsel to their specialized areas on matters of public interest. These include: The Water Users Advisory Committee representing companies or agencies which operate water treatment plants; the Publicly Owned Wastewater Treatment Works Advisory Committee representing wastewater treatment departments or districts or other public agencies; the Public Inter-

est Advisory Committee which is composed of citizens residing in the member states; Industry Action Committees, such as those representing the chemical and power industries, provide for industrial participation. All advisory committee members serve on a voluntary basis and with the exception of the members of the Industry Action Committees, receive reimbursement for committee meeting expenses.

## ***Energy Roundtable***

The Energy Roundtable provides a forum for discussion of policy issues and problems concerned with energy management and water pollution control, and related environmental-economic issues that have regional or multistate effects. Membership on the Energy Roundtable consists of one

Commissioner from each of the signatory states; one Commissioner from the federal government; a member of the Public Interest Advisory Committee; and one member each from the Power Industry Committee and East Central Area Reliability Council (ECAR).



# Publications

Publications are developed to provide information regarding findings from the Commission's water pollution control programs. Charges for publications are levied to cover production costs. These charges are waived when requests are received from government agencies and non-profit organizations and institutions (single copies only). In 1984, the following publications were produced:

## Annual Report 1983:

The Commission's review of activities during 1983 (20 pages, no charge)

## Assessment of Water Quality Conditions, Ohio River Mainstem, 1982-83:

A summary of mainstem water quality data (108 pages, \$5 w/o appendices)\*

## The Unfinished Agenda for the Ohio River Valley:

An overview of progress in the abatement of water pollution (4 pages, no charge)

## 1983 Status of Wastewater Facilities:

The results of the 1983 update of a survey of municipal and industrial wastewater treatment plants in the Ohio Basin (120 pages, no charge)

## Pollution Control Standards (September 13, 1984 Revision):

Revised Pollution Control Standards, superceding Pollution Control Standards No. 1-70 and No. 2-70, including stream criteria and standards of treatment (15 pages, no charge)

## Operating Procedures and Quality Control Assurance Program for Water Quality Monitoring Network:

A procedures manual for quality for all sampling and monitoring (89 pages, \$6)\*

## Quality Monitor:

A quarterly publication of data summaries from electronic monitors, along with quarterly summaries of monthly manual sampling data (no charge)

---

# Staff

## Administration

Leo Weaver, P.E., *Executive Director and Chief Engineer*

William L. Klein, *Assistant Executive Director*

Gerald P. Brezner, P.E., *Assistant to the Chief Engineer*

Richard L. Herd, Jr., *Accountant-Office Manager*

Kathi Allender Cobb, *Administrative Assistant*

Betty Ann Robinson, *Accounting Technician*

Jeanne Jahnigen Ison, *Information Specialist*

## Technical Services

Alan H. Vicory, Jr., P.E., *Manager*

Peter A. Tennant, P.E., *Water Resources Engineer*

Linda C. Shumway, *Environmental Specialist*

Marilyn P. Kavanaugh, *Secretary*

## Surveillance

Glenn E. Moore, *Manager*

Ali Sodeifi, *Electronics Engineer*

John L. Keyes, *Biologist*

Janis R. Flick, *Chemist*

Donna M. Carroll, *Computer Operations Specialist II*

Robert D. Timmerman, Jr., *Surveillance Specialist (Evansville, IN)*

Wade C. Dawson, *Surveillance Specialist (Parkersburg, WV)*

Nancy L. Armstrong, *Secretary*

\*Cost of publication plus \$2.50 postage and handling charge



# FINANCIAL REPORT

The following information relative to revenues, expenses, and statement of resources was extracted from the Annual Auditors Report of Clark Schaefer Hackett & Co., Certified Public Accountants, for the year ended June 30, 1984

## THE OHIO RIVER VALLEY WATER SANITATION COMMISSION

### STATEMENT OF REVENUES, EXPENSES AND AVAILABLE RESOURCES YEAR ENDING JUNE 30, 1984

#### Revenues:

Signatory States:		
State of Illinois .....	\$ 30,240	
State of Indiana .....	111,660	
Commonwealth of Kentucky .....	124,800	
State of New York .....	6,360	
State of Ohio .....	153,780	
Commonwealth of Pennsylvania .....	87,720	
Commonwealth of Virginia .....	20,520	
State of West Virginia .....	64,920	
Total — Signatory States .....		\$ 600,000
U.S. Environmental Protection Agency:		
Water Pollution Control Grant .....		376,521
U.S. Army Corps of Engineers:		
Electronic Monitoring Support .....	\$ 67,500	
Allegheny and Pittsburgh District Support .....	51,550	
Total — U.S. Army Corps of Engineers .....		119,050
Other Revenues .....		21,336
Available Resources at beginning of year .....		47,854
Total — Resources .....		<u>\$1,164,761</u>

#### Expenses:

Compliance Assurance .....	\$ 79,559	
Water Quality Assessment .....	93,794	
Water Quality Management .....	106,156	
Electronic Monitoring .....	121,604	
Manual Monitoring .....	115,715	
Quality Control Assurance .....	28,162	
Organics Detection System .....	156,407	
Data Terminal Operations .....	30,827	
Advisory Committees .....	71,316	
Publications and Communications .....	58,738	
Administrative Management .....	121,304	
Administrative Services .....	96,118	
Fiscal Services .....	39,007	
Total Expenses — .....		<u>\$1,118,707</u>
Available Resources at end of year .....		<u>\$ 46,054</u>



# *Regulatory Agencies of the Signatory States*

## **ILLINOIS**

Division of Water Pollution Control  
Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706  
(217) 782-1654

## **INDIANA**

Stream Pollution Control Board  
State Board of Health  
1330 West Michigan Street  
Indianapolis, Indiana 46206  
(317) 633-0700

## **KENTUCKY**

Division of Water Quality  
Natural Resources and  
Environmental Protection Cabinet  
18 Reilly Road  
Fort Boone Plaza  
Frankfort, Kentucky 40601  
(502) 564-3410

## **NEW YORK**

Division of Water  
Department of Environmental  
Conservation  
50 Wolf Road  
Albany, New York 12233  
(518) 457-6674

## **OHIO**

Office of Wastewater Pollution Control  
Environmental Protection Agency  
Post Office Box 1049  
Columbus, Ohio 43216  
(614) 466-7427

## **PENNSYLVANIA**

Bureau of Water Quality Management  
Department of Environmental Resources  
Post Office Box 2063  
Harrisburg, Pennsylvania 17120  
(717) 787-2666

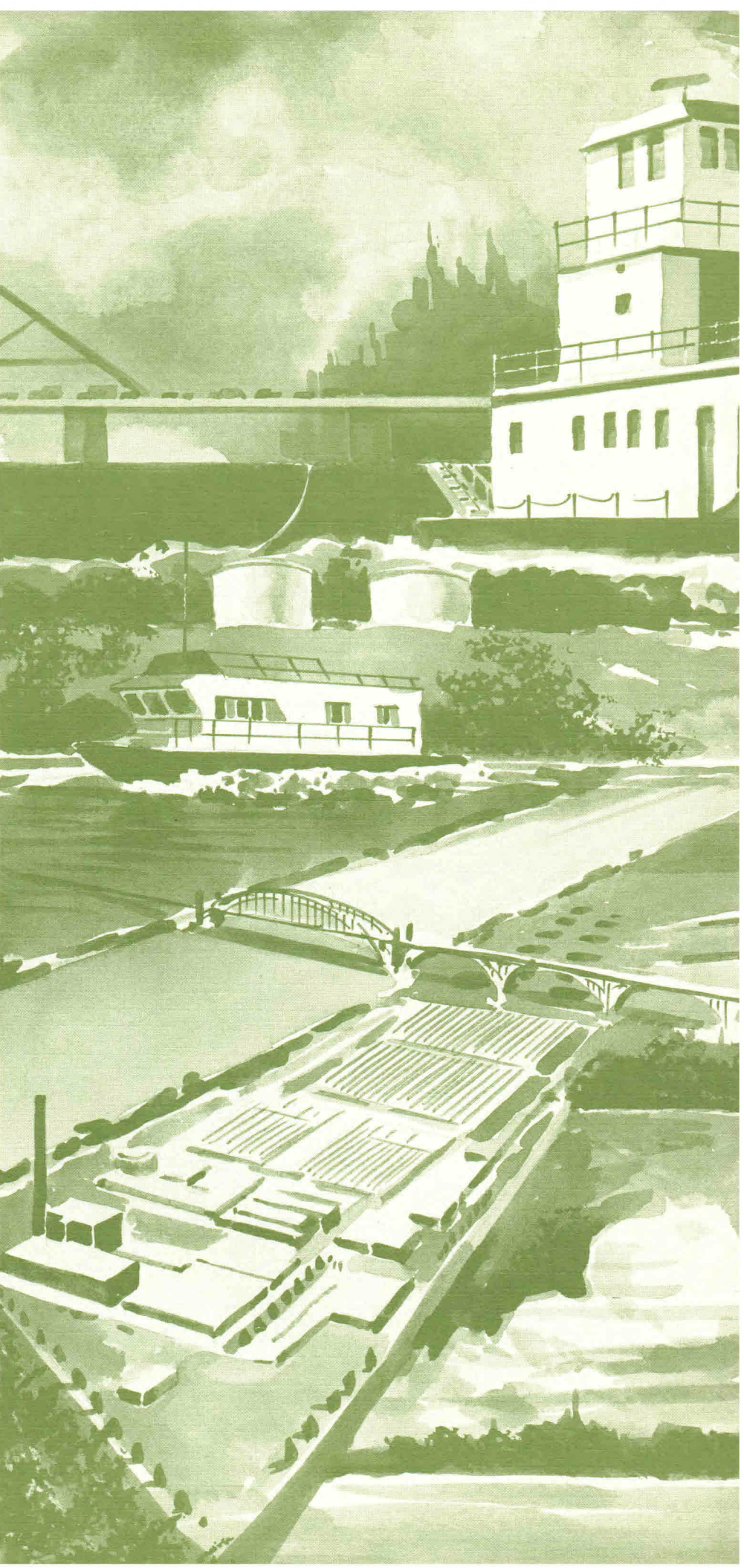
## **VIRGINIA**

State Water Control Board  
Post Office Box 11143  
Richmond, Virginia 23230  
(804) 257-6383

## **WEST VIRGINIA**

Division of Water Resources  
Department of Natural Resources  
1201 Greenbrier Street  
Charleston, West Virginia 25311  
(304) 348-2107





OHIO RIVER VALLEY WATER SANITATION COMMISSION



414 WALNUT ST. CINCINNATI, OHIO 45202

Bulk Rate  
U.S. Postage  
PAID  
Cincinnati, Ohio  
Permit No. 7812