

The background of the cover is a photograph of a river scene. In the foreground, the dark, silhouetted trunks and branches of trees frame the left and top portions of the image. In the middle ground, a large steel truss bridge spans the river. The water is calm with some light reflections. In the far background, there are rolling hills under a pale, overcast sky.

ORSANCO

YEARBOOK 1973

Ohio River Valley Water Sanitation Commission

MEMBERS OF THE COMMISSION

ILLINOIS

Clarence W. Klassen, Environmental Protection Agency (resigned)
Joyce Lashof, M.D., Director of Public Health
John E. Pearson, University of Illinois

INDIANA

Blucher A. Poole, Stream Pollution Control Board (retired)
Joseph L. Quinn, Jr., The Hulman Company
William T. Paynter, M.D., State Health Commissioner

KENTUCKY

Arnold L. Mitchell, Department of Fish and Wildlife Resources
Thomas O. Harris, Department of Natural Resources
Dale H. Farabee, M.D., Department for Human Resources

NEW YORK

Joseph R. Shaw, Associated Industries of New York State, Inc.
Lyle W. Hornbeck, Bond, Schoeneck and King
James L. Biggane, Department of Environmental Conservation

OHIO

Ira L. Whitman, Environmental Protection Agency
Lloyd N. Clausing, City of Portsmouth
Christine M. Carlson, League of Women Voters

PENNSYLVANIA

Marion K. McKay, University of Pittsburgh (retired)
Wesley E. Gilbertson, Department of Environmental Resources
Maurice K. Goddard, Department of Environmental Resources

VIRGINIA

Denis J. Brion, State Water Control Board
Andrew M. McThenia, Jr., State Water Control Board
(vacancy)

WEST VIRGINIA

N. H. Dyer, M.D., State Health Commissioner
Edgar N. Henry, Division of Water Resources
Ulysses B. Yeager, Consulting Engineer

UNITED STATES GOVERNMENT

Donald T. Williams, Corps of Engineers
Francis T. Mayo, Environmental Protection Agency
(vacancy)

OFFICERS

Edgar N. Henry, Chairman
Wesley E. Gilbertson, Vice-Chairman
Fred H. Waring, Secretary
Albert J. Brooks, Treasurer
William L. Klein, Acting Executive Director
Leonard A. Weakley, Legal Counsel

STAFF

William L. Klein, Acting Executive Director
Robert J. Boes, Chemical Engineer
David A. Dunsmore, Data Processing Manager
Russell A. Brant, Geologist
Albert J. Brooks, Office Manager

STAFF ASSISTANTS

John P. Donnelly, Richard N. Smith,
Alice L. Gosney, Robert L. Laugel

SECRETARIAL STAFF

Sarah L. Baldwin, Donna M. Liberto, Jane W. Renaldo



Years Of

**Water Quality
Management**

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 this Yearbook,
reporting on the activities
of the Commission in 1972 and 1973.

ORSANCO

YEARBOOK 1973

ORSANCO: Advocate for the River

The River is forever. It was here before we came and will remain after we have gone. We only share its present moment. It is not ours, but it is ours to keep.

Yet in our keeping, the River has suffered much. We have dirtied and dammed it. We have tamed it and transformed it. We have slowed its once wild and boisterous progress to the sea.

We have harnessed it and humbled it. We have changed its twisted coursings when it pleased us. We have built our towns and factories upon its wide-set shores and fouled its ample waters with our wastes.

Twenty-five years ago, the River stood a sorry monument to the excesses of civilization. The River had made many rich, and was the poorer for it. The River was little more than a sewer. A ditching place for the effluents of affluence.

But in pursuit of affluence, we nearly lost a treasure. Things

are better now. The River looks cleaner. There is new life in its water.

Twenty-five years ago, the people of the Ohio River Valley came together to share the responsibility for cleaning up the Ohio and its tributaries. They formed ORSANCO—the Ohio River Valley Water Sanitation Commission—to coordinate the cleanup effort and protect the River from further abuse.

The beginnings of ORSANCO predate the signing of the Compact which established it by nearly a decade and a half. In 1934, the Cleanup and Beautify Cincinnati Week Committee of the Cincinnati Chamber of Commerce undertook to give the city a thorough scrubbing and facelift. The cleanup drive was a success and Committee members wondered if there were something else in need of attention. It was Hudson Biery, then director of public relations for the Cincinnati Street Railway Company and later to become ORSANCO's first chairman, who suggested the River.

What seemed at first a really unlikely idea caught fire and by 1935, the Stream Pollution Committee of the Cincinnati

Chamber of Commerce was ready to go to work.

It soon became apparent, however, that more than local enthusiasm was needed for the cleanup of a 981-mile long river that flowed through many jurisdictions.

In 1936, Congress lent its authority to the demands for concerted interstate action by authorizing the formation of the Ohio River Valley Water Compact Commission. The Commission began drafting a Compact.

Assisted by the Council of State Governments, a working document emerged from the Compact Commission in 1938. By 1940, six states along the River had accepted it. Eight more tortuous years of negotiations were needed before the remaining states became signatories.

Then, on June 30, 1948—by sheer coincidence the same day that President Harry S. Truman signed the first comprehensive piece of national water pollution control legislation—the Compact became law.

In a brief but emotion-filled ceremony held in the Hall of Mirrors in Cincinnati's famous Netherland Plaza Hotel, representatives of Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia and West Virginia inked the Compact. ORSANCO was born.

The states pledged to cooperate faithfully in cleaning up the Ohio and its major tributaries. At the outset, the Commission envisioned as ORSANCO's role "to enact any necessary legislation to enable each . . . state to place and maintain waters of said basin in a satisfactory sanitary condition, available for safe and satisfactory use as public and industrial water supplies after reasonable treatment, suitable for recreational usage, capable of maintaining fish and other aquatic life, free from unsightly or malodorous nuisances due to floating solids or sludge deposits, and adaptable to such other uses as may be legitimate."

To carry out the goals envisioned by the Compact, the Ohio River Valley Water Sanitation Commission was formed. The Commission, currently meeting three times yearly, is composed of health and water quality experts from the citizenry, government, academia, and world of business and industry. The emphasis of ORSANCO's programs has shifted subtly over the years towards its role as coordinator for the development of uniform policies and practices. ORSANCO strives to assist the states in securing compliance with state, interstate and federal control regulations and in reaching 100% compliance

with established stream quality criteria.

All that takes money and lots of it. It's estimated that more than three billion dollars have been spent since 1948 to clean up water in the Valley. Without coordinated planning, those billions might have bought far less success.

Three billion dollars is a lot of money, but then again, a River is forever. It really doesn't seem like too much to pay for a natural treasure like the Ohio.



Pittsburgh's Golden Triangle, 1948



Toward Superior Water Quality

How do you measure something as elusive as water quality? One way is to count the number of smiling children on the beach. Another way uses milligrams of something per liter of something else. Conclusions are hard to come by. Trends are somewhat easier. The battle for high quality water is a continual one. One that lends itself better to the question "How are we doing," rather than "How have we done."

ORSANCO measures dozens of water quality indicators in terms of milligrams per liter or parts per million. And the trends are encouraging.

Along the mainstem of the Ohio, more than 20 parameters being checked meet desired goals 100% of the time at all monitor locations. All except four characteristics — dissolved oxygen, coliform densities, pH and threshold odor — are now meeting desired goals 98% of the time or better.

ORSANCO publishes detailed analyses of monitoring data in its monthly "Quality Monitor." Copies may be obtained from the Cincinnati headquarters. The following summaries give an indication of the general trends:

Visible Pollution and Spills

There were 83 incidents of grossly visible pollution reported to the Commission each in 1971 and 1972 — fifteen more than reported in 1970. There were 40 accidental spills of oil or chemicals in 1971 and 61 in 1972. During 1970, 39 spills were reported.

Dissolved Oxygen

The minimum dissolved oxygen concentrations on the mainstream was 2.0 mg/l at Markland Dam during 1971 and 1972. Taken as a whole, dissolved oxygen concentrations exceed ORSANCO stream criteria an average of 93% of the time.

Dissolved Solids

ORSANCO specifies that dissolved solids shall not exceed 750 mg/l at any time, nor exceed 500 mg/l in monthly averages. These values were met 100% of the time in 1971 and 1972.

Chloride

The maximum monthly average for chloride concentration in the 1971-1972 period was 65 mg/l at New Haven while the lowest concentration was 4 mg/l at Evansville. All values are well below the U. S. Public Health Service recommended maximum of 250 mg/l.

Sulfate

With the exception of one monthly average of 260 mg/l at Natrium, sulfate levels for 1971-1972 were all below the 250 mg/l level recommended for drinking water by the U. S. Public Health Service.

Iron and Manganese

Concentrations of iron and manganese tended to be slightly higher in 1971-1972 than for 1970, but still well within levels generally thought to be safe for drinking water.

Nitrate and Fluoride

Maximum average values for nitrate and fluoride in 1971-1972 were slightly lower than in 1970 and were within limits recommended for drinking water by the U. S. Public Health Service.

Threshold Odor

ORSANCO's standard of 24 units for threshold odor was met 99-100% of the time at Portsmouth, Louisville, Huntington, Evansville, and Cincinnati. At Natrium, numbers of 24 or less were observed 67% of the time, compared with 80% in 1970.

Monitors of a different sort

pH Characteristics

In 1971 and 1972, 99.8% of all readings at 24 monitoring sites fell within the desired range of 6.0 to 8.5. Mine drainage in some portions of the basin still results in pH somewhat lower than is desired in the upper part of the river.

Temperature

Data from 11 robot monitor stations show that maximum temperatures in the river were within allowable ranges 99.5% of the time. The highest recorded river temperature was 85.6 degrees Fahrenheit at New Haven.



Other Chemical Constituents

Virtually all the values for other chemical constituents were well within maximum allowable standards set by ORSANCO or the U. S. Public Health Service. Among the other chemical constituents measured periodically are arsenic, barium, cadmium, chromium, copper, cyanide, selenium, lead, silver, mercury, zinc, beryllium, boron, molybdenum, nickel, strontium, and vanadium.



Tally for the Valley

Water quality in the Valley is a function of many variables—population growth, new industry, treatment plants—just to name a few. Quality improves almost in direct proportion to the number of well operated treatment plants, although non-point source pollution from sediment and runoff is more difficult to check.

Each year the signatory states submit data to ORSANCO on the number of municipalities, institutions and industries that discharge directly to the streams served by the Compact district. Together with the data from robot monitors, these figures provide a

reference point for year to year comparisons.

Along the mainstream of the Ohio, 132 sewage treatment plants now serve a population of 3,461,000 in 295 communities. These figures compare with 129 plants, a population of 3,575,000, and 291 communities two years ago. Today, only five communities along the mainstem—all with populations under 5,000—are not served by sewage treatment plants.

In the entire Compact district, 1,218 treatment plants serve a sewered population of 12,226,000 in 1,559 communities. Two years ago, the same number of plants

served a sewered population of 12,040,000 in 1,498 communities.

New plants or upgraded facilities at existing plants continue to be built. Two years ago, improvements or new additions in the Compact district were completed at 27 locations serving 25 communities with a sewered population of 99,800. This year, 150 new or upgraded plants have been placed onstream serving 165 communities with a sewered population of 142,130.

New or upgraded plants are being built at 61 locations for 205 communities in the Compact district to serve a population of 2,990,000. Of special interest is the massive regional treatment plant serving the Pittsburgh area which has recently been upgraded to secondary treatment.

On the industrial front, 1,614 plants now discharge wastewater to the streams in the Compact district. Of these plants, 1,228 comply with minimum standards set by ORSANCO and 1,108 comply with all requirements set by ORSANCO and the states. The number of plants discharging directly to surface waters in the Compact district has dropped by 34 in the past two years.

Municipal and Institutional Waste Control Facilities Scorecard—July 1, 1973

Numbers of communities (top) and population (bottom).

STATUS	ILL.	IND.	KY.	N.Y.	OHIO	PA.	VA.	W.VA.	TOTAL	% of TOTAL
Control currently acceptable	63 325,413	87 278,734	168 887,044	2 9,610	265 1,728,824	168 868,460	41 135,496	104 494,360	898 4,727,941	49.2 38.7
Treatment provided, improvement needed	21 45,344	166 1,779,871	2 16,090	12 71,490	86 1,357,027	116 704,491	41 67,667	15 51,042	459 4,092,262	25.2 33.5
Treatment provided, improvements under construction	1 3,980	18 227,300	52 517,455	1 19,200	48 901,574	79 1,273,805		3 19,070	202 2,962,384	11.1 24.2
New treatment plants under construction		3 2,046		1 955	2 3,211	3 16,524	1 1,150	3 3,497	13 27,383	0.7 0.2
No treatment, construction not started		38 38,429	2 2,331	1 1,500	17 17,911	102 212,020	11 13,557	81 129,274	252 415,022	13.8 3.4
Total	85 374,737	312 2,326,320	224 1,422,920	17 102,755	418 4,008,549	468 3,075,300	94 217,870	206 697,243	1,824 12,225,692	100.0 100.0



The Cheat River in West Virginia



Numbers don't tell the whole story. The key ingredient in successful water quality management is people. Educational programs and public participation are cornerstones of ORSANCO's pollution control philosophy.

ORSANCO's newly created Public Interest Advisory Committee is the citizen's direct line to the Commission's business.

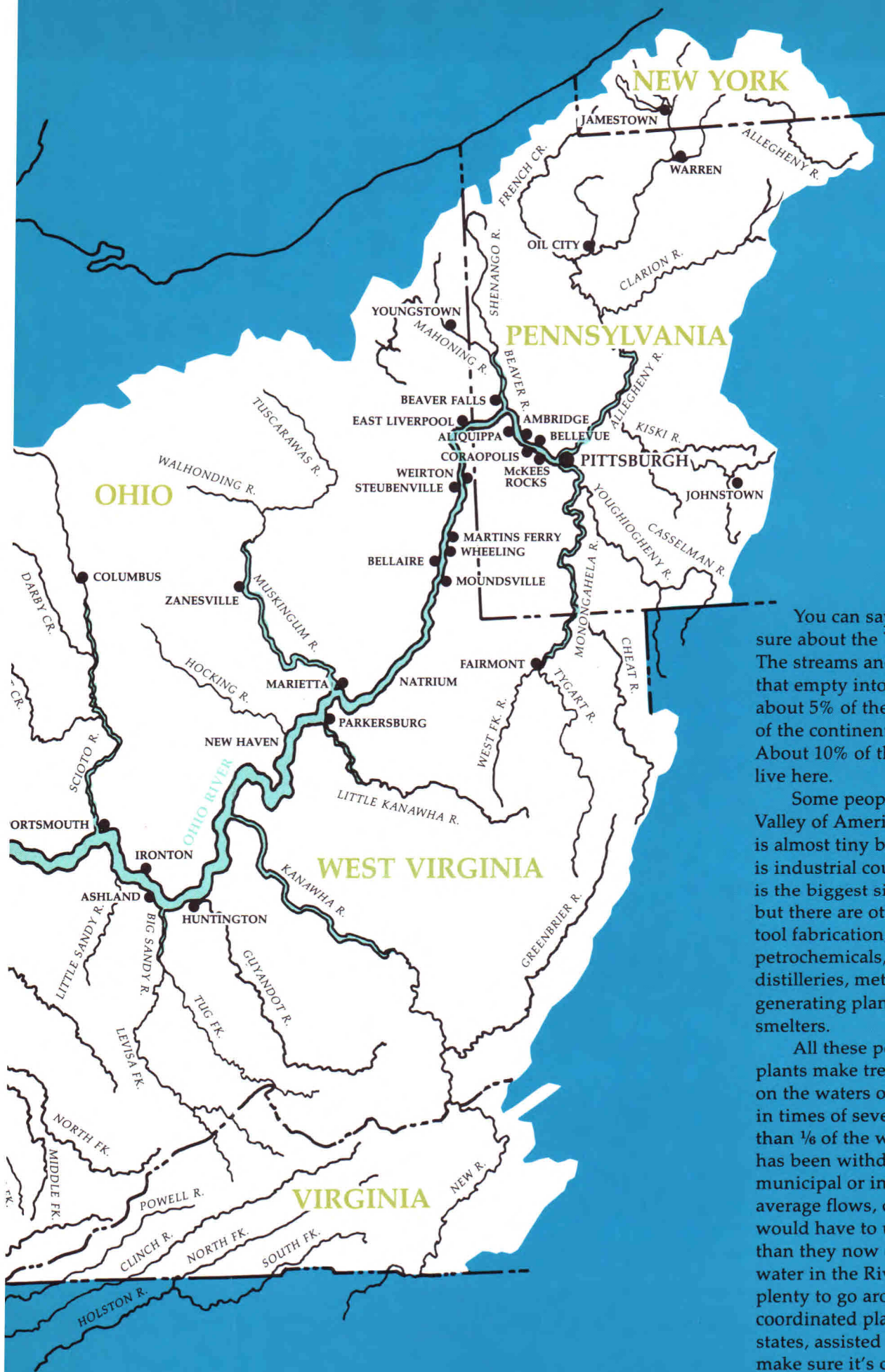
ORSANCO is exploring other ways to communicate with the people of the Valley as well. As part of its expanding public awareness program, ORSANCO has commissioned a major film. Titled "The Valley," the 28-minute, 16 millimeter color film focuses on ORSANCO's role in water quality management in the Ohio River Valley. The film may be borrowed from ORSANCO headquarters or any of the state pollution control offices listed on the back cover of this report.

Industrial Waste Control Facilities Scorecard—July 1, 1973

STATUS	ILL.	IND.	KY.	N.Y.	OHIO	PA.	VA.	W.VA.	TOTAL	% of TOTAL
Complying with ORSANCO minimum requirements	34	172	147	12	246	327	55	235	1,228	76.1
Control currently acceptable	41	167	135	8	209	308	55	185	1,108	68.7
Control facilities inadequate, improvements in progress	4	26	8	5	25	12		18	98	6.1
New control facilities under construction				2				5	7	0.4
Control facilities provided, improvements needed	5	56	9	11	126	76	3	115	401	24.8
Number of industries	50	249	152	26	360	396	58	323	1,614	100.0
Completed improvements of new facilities	3	25	11	7	29	39	4	20	138	

The Ohio River Valley Compact District





You can say one thing for sure about the Valley—it's big. The streams and 19 major rivers that empty into the Ohio drain about 5% of the total land mass of the continental United States. About 10% of the nation's people live here.

Some people call it the Ruhr Valley of America, but the Ruhr is almost tiny by comparison. This is industrial country. Steel is the biggest single industry, but there are others—papermaking, tool fabrication, pharmaceuticals, petrochemicals, brick and ceramics, distilleries, metalworking, power generating plants and aluminum smelters.

All these people and industrial plants make tremendous demands on the waters of the Valley. But even in times of severe drought, less than $\frac{1}{8}$ of the water in the Ohio has been withdrawn once for municipal or industrial use. With average flows, cities and industries would have to use 500% more water than they now do to use all the water in the River just once. There's plenty to go around, and coordinated planning among the states, assisted by ORSANCO, will make sure it's clean enough to be useful.

Work in Progress

Monitoring

Monitoring is the foundation of sound water quality management. ORSANCO, pioneer among the interstate compact agencies in 1948, also pioneered the use of around-the-clock, unattended robot monitors in 1960. Today, ORSANCO has 20 robot monitors in operation throughout the Valley.

The robot monitors are only part of the picture, however. Thirty-two manned checkpoints produce data on bacterial counts, threshold odor, and several

chemical contaminants which the robot monitor can't detect.

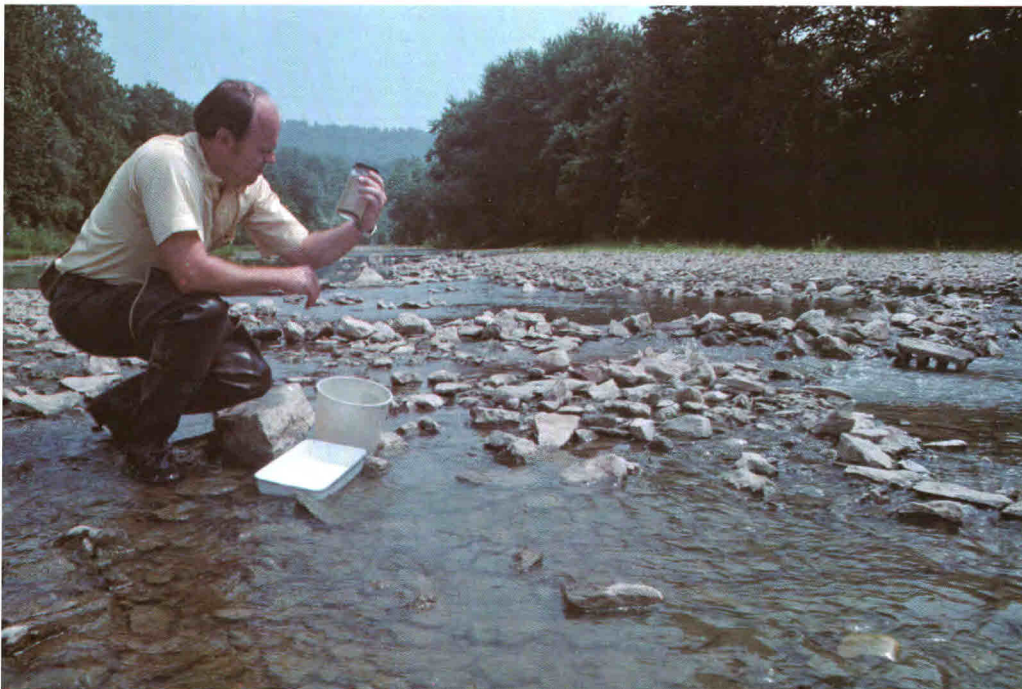
The signatory states and federal agencies also provide monitoring data for ORSANCO. Kentucky, Indiana and Ohio, for example, have robot monitors of their own around the state. Manual testing programs augment the monitoring effort, checking for such water quality indicators as coliform counts, heavy metals, and phosphates.

At the federal level, the Environmental Protection Agency, the Corps of Engineers, and the Geological Survey provide data from their monitoring efforts to ORSANCO. USGS and the National Weather Service (NOAA) make their data on river flow rates and hydrological conditions available. In addition to supporting other monitoring efforts, EPA has been keeping a running record of aquatic life at various locations along the river for the past decade.

Recently, EPA has seen some extremely pollution-sensitive organisms such as Asiatic clams and caddis fly larvae return to portions of the river where they had previously been unable to live. Living proof that the River is getting cleaner.

ORSANCO is constantly reevaluating its monitoring program in the light of changing needs. Specifically, ORSANCO is exploring ways to better accommodate state, interstate and federal needs. Monitoring should be particularly worthwhile in helping to satisfy planning requirements of the federal law, compiling the required water quality inventories, and in waste load allocation studies for discharge permits.

Biologist surveys aquatic life in Wheeling Creek



Modeling

The newest application of monitoring data has been in the development and verification of a dynamic river model called STREAM. STREAM is a computer program which is capable of telling planners what benefits will accrue if higher levels of treatment are applied to wastewater discharge.

STREAM has modules for examining travel time, dissolved oxygen, temperature, and mineral content. Developed with the support of EPA, information from STREAM has been shown to be highly accurate when compared with actual data obtained by robot monitors.

Since completion of the model in 1972, STREAM has undergone several refinements and work is continuing towards making it an even more valuable planning tool.

The most obvious use of a model is to forecast what will happen to a pollutant as it travels downriver. That use is particularly valuable with regard to oxygen – consuming materials, sewage, industrial waste and in the case of thermal pollution from power plants.

The model also allows water quality experts to check up on their predictions after treatment facilities have been built. Often, an accurate model will debunk commonly accepted “facts” or bring new facts to light. And the lightening fast computer run, paired with data from the robot monitors, makes it possible to spot inadvertent or willful pollution much more rapidly than by using either the model or the monitors alone.

A Users Manual for STREAM has recently been updated and copies are available for study at ORSANCO headquarters. The definitive manual will be published later by EPA.



Cooling towers at the John Amos plant on the Kanawha





Work in Progress



Mine Acid Reclamation

Coal has been a mixed blessing for the Valley. It's a priceless natural resource in these times of scarce energy. But coal mining creates one of the toughest of all pollution control problems — acid mine drainage.

Coal is almost invariably found with an iron- and sulfur-containing mineral called pyrite. When a coal mine is opened, the pyrite combines with air and water to form iron sulfates and sulfuric acid. Thousands of abandoned mine sites in the valley continue to form sulfuric acid, which leaches into streams killing nearly everything it touches.

Preventing and treating acid mine drainage is one of the Valley's highest priorities. It's tough going, but some real progress is being made.

The solutions don't come from mail order catalogues. Each one must be tailor-made to fit the specific problems. Some underground mines can be sealed off or strip mines can be graded and

planted over. Some acid mine drainage can be treated on the spot with portable neutralizers which contain soda ash briquets. In some locations, such as the Will Scarlet Mine in Illinois, treatment plants are being built which collect the water and whip it with limestone chunks in a neutralizer.

Not all the techniques will work everywhere. But each of them will work somewhere.

Reclamation is every bit as important as neutralization in cleaning up after strip mining activities. Besides acid mine drainage, strip mining operations may leave vast expanses of scarred earth or spoil banks which won't grow anything.

Great progress has been made in controlling mining practices to include backfilling and replanting. Besides sealing the mines against further acid formation, plantings begin to rebuild the soil. Native vegetation is given a foothold in which to grow and restore the land to its original state.

Intelligent reclamation plans and land management practices can create new recreational space so badly needed near thickly settled urban areas. A case in point is

Moraine State Park in Butler County outside of Pittsburgh.

Backfilling and grading of the surface mined land was a key provision of the plan to resculpt the terrain into useful parkland.

The deep mines were sealed and strip mines were revegetated, providing shelter for wildlife and space for camping. The final jewel in this setting was Lake Butler.

Lake Butler might have been a useless, acid contaminated eyesore. Instead it was the site of the 1973 National Boy Scout Jamboree.

Today, the 15,000 acre park plays host to more than a million visitors annually. It's proof to the skeptical that you don't have to give up precious energy reserves to stem water pollution. You can do both, if they're both done right.

Work in Progress

Industrial Reuse

Further improvement in water quality in the Valley depends upon more than new brick and mortar of the old design. More sophisticated control schemes — designed into a process from the ground up — will be called for as the nation moves towards greater emphasis on recycling and zero discharge of pollutants.

Industry in the Valley will give these new concepts their toughest tests. Much of the industry here is particularly pollution prone. Nevertheless, closed loop processes with far greater water recycling are the wave of the future.

The future is already beginning to show itself at certain steel

mills, pharmaceutical and paper plants in the Valley. Armco Steel is already taking advantage of a system which recoups spent pickle liquor.

At Armco's Ashland, Kentucky mill spent acid is being collected and upgraded to fresh, strong pickling solution. Furthermore, the iron contaminating the spent pickle liquor is recovered and roasted, yielding almost pure iron oxide. The oxide can be sold to pigment makers for about \$70 per ton.

Water recycling is gradually coming into its own as well. Paper makers are realizing that water is a raw material as fully

important to their product as wood chips. It isn't practical to treat large quantities of process water only to discharge it back into the river.

So Mead Paper's Chillicothe, Ohio plant reclaims sizeable amounts of paper fiber from its whitewater and uses the water over and over again. It's better than eating up huge areas of land to build new treatment plants.

Eli Lilly's giant biologicals plant near Terre Haute, Indiana, is a blueprint for state-of-the-art waste treatment. Lilly segregates waste from dozens of processes, treats them separately, and reclaims valuable by-products, waste heat and solvents.

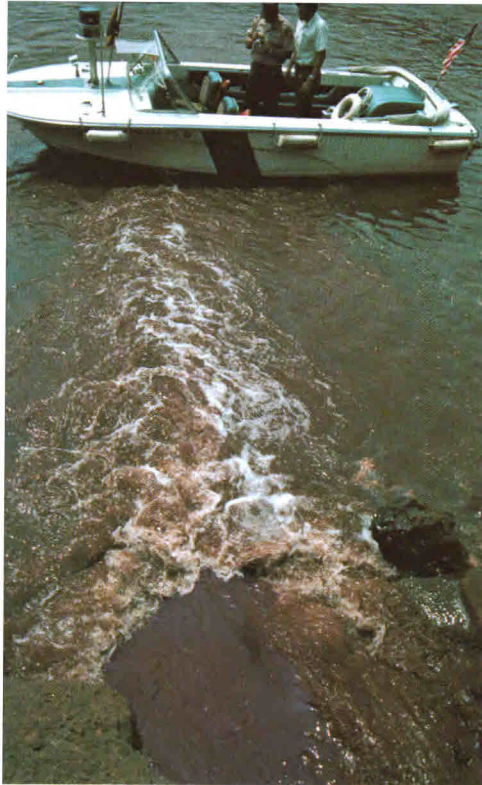
There's a lot of work going into pollution control in the Valley. Work that's on the cutting edge of technology. As this work progresses, ORSANCO can serve as a clearing house for sharing information, for assessing its impact on the River, and for coordinating long range planning.

Spent acid recovery, Armco Steel



Wastewater clarifier, J&L Steel





Industrial waste, Pittsburgh

Although the River is getting cleaner—an observation supported by trends in the monitoring data—much remains to be done. The Valley is not yet a land flowing with milk and honey. There is still raw sewage. Outfalls from steel mills still need plugging. Primary sewage treatment, which was adequate only a short time ago will need upgrading to secondary treatment in all locations.

ORSANCO's Policy Committee has set ambitious goals for the next few years.

In addition to its traditional activities in the field of monitoring ORSANCO plans to explore a variety of alternatives to data gathering and improve its data handling ability.

The Commission has seen a clear need for coordination among the signatory states as they undertake planning responsibilities under Section 303(e) of the Federal Water Pollution Control Act.

Under provisions of the National Pollutant Discharge Elimination System, the states have primary responsibility for many aspects of water pollution control including issuance of discharge permits. Should there be a

The Continuing Challenge



difference of opinion among the states with respect to those permits, ORSANCO would be in an excellent position to mediate them.

ORSANCO will continue to use its statutory enforcement powers to aid states in securing compliance with control requirements.

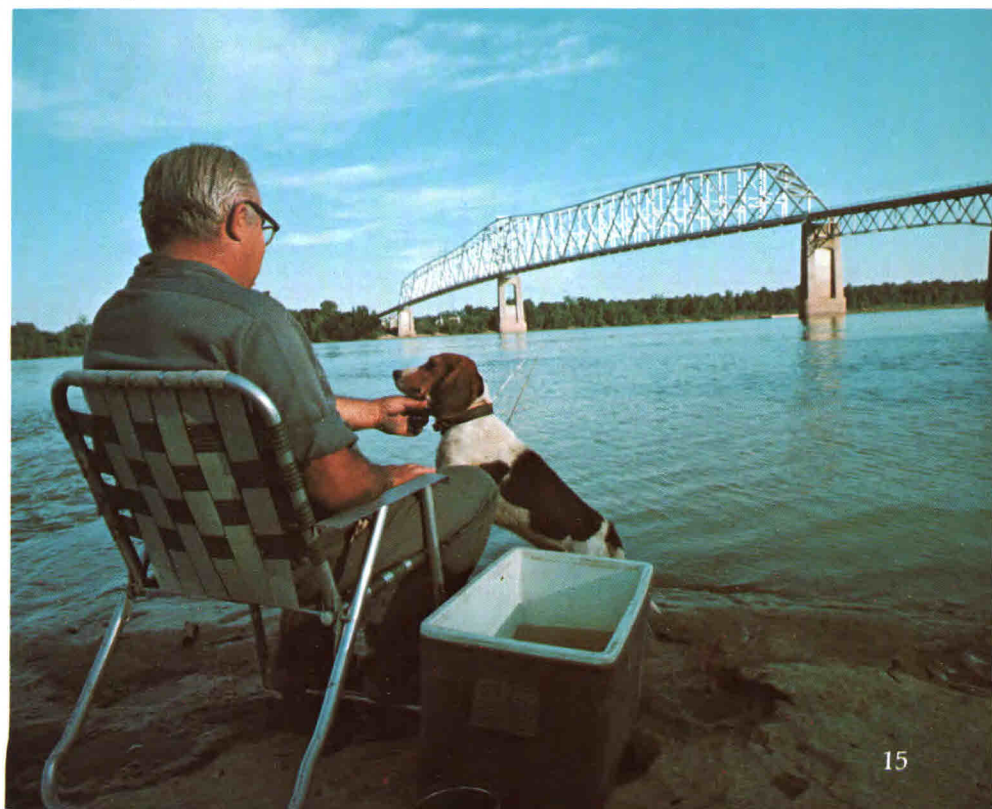
The Commission has set up a mechanism for transfer of all ORSANCO water quality data to the federal STORET data banks. ORSANCO maintains a registry

of all wells used for underground injection of wastewaters.

The Commission is developing uniform practices for performance auditing of waste treatment plants, including and on-site inspection.

The goal of all this ambitious activity is clear—making sure that there's clean water for all legitimate uses in the Valley. Water for basic human needs. Water for recreation. Water for the industry so vital to the economy of this Valley. This is water quality management in its broadest possible sense. That's what we'll be doing for the next twenty-five years.

Good fishing at the river's end





Chairman's Message

A quarter of a century? Really? Somehow, it doesn't seem possible. In the past two and a half decades we've seen tremendous change in our Valley. Changes in our social institutions. Technological advances. Improvements in our lifestyles. On our twenty-fifth anniversary you'll forgive us if we're tempted to look back for a few moments to pay tribute to a handful of people who have been with ORSANCO from the beginning. People like Blucher A. Poole, Clarence W. Klassen, N. H. Dyer, M.D., and Joseph L. Quinn who signed the original Compact. Marion K. McKay, who, at 91, is the Commission's oldest member. Fred H. Waring, who has been Secretary of the Commission since its beginning. And, of course, Edward J. Cleary who wrote the book about ORSANCO. These are the wise and sensitive people who have guided ORSANCO from its first, uncertain steps to the threshold of maturity. But enough of the past. It's been an exciting twenty-five years. And by the looks of things, the next twenty-five will top the first.

Edgar N. Henry, Chairman

Administrative Highlights

The Commission is composed of three representatives from each of the signatory states and three representatives of the United States Government. Commissioners receive no salary, but are reimbursed for expenses incurred in the performance of Commission business.

Edgar N. Henry and Wesley E. Gilbertson served as chairman and vice-chairman, respectively, of the Commission in 1972. Both Mr. Henry and Mr. Gilbertson were re-elected for 1973. Fred H. Waring continued to serve as secretary of the Commission in fiscal 1972 and 1973. Albert J. Brooks was elected Treasurer in January 1973, to succeed Verna B. Ballman.

Joyce Lashof, M.D. became a member of the Commission in February of 1973, replacing F. D. Yoder, M.D. from the State of Illinois.

William T. Paynter, M.D. became a member of the Commission in February of 1973, replacing A. C. Offutt, M.D. from the State of Indiana.

Thomas O. Harris and Arnold L. Mitchell were appointed to the Commission from the Commonwealth of Kentucky in June 1972, succeeding James S. Shropshire and Minor Clark.

Ira L. Whitman was named to the Commission from the State of Ohio in April 1972 to succeed John W. Cashman, M.D.

Lloyd N. Clausing was appointed to the Commission from the State of Ohio in June 1972 to succeed Raymond H. Fuller. Christine M. Carlson was appointed in June 1973 to succeed Barton A. Holl.

Denis J. Brion was named to the Commission from the

Commonwealth of Virginia in November, 1972 to succeed William H. Singleton. Henry S. Holland resigned his post in June 1973 leaving a vacancy among the Commissioners from Virginia.

It is with profound sorrow that the Commission reports the death of Ross W. Walker on October 25, 1972. Mr. Walker was one of the original members of the Commission. He signed the Compact in 1948 as a representative from the Commonwealth of Virginia.

William L. Klein assumed the post of Acting Executive Director upon the retirement of Robert K. Horton from the Commission. Mr. Horton served as Assistant Director of the Commission until 1968 when he was named Executive Director and Chief Engineer, succeeding Edward J. Cleary who retired.

Verna B. Ballman, one of the original employees of the Commission, retired on October 31, 1972.

Sara L. Baldwin joined the staff in September 1972, replacing Alice F. Courtney, retired. Donna M. Liberto joined the data processing staff as secretary during October 1972. Ruth C. Bergmeyer retired on December 1, 1973.

Credits

Photography: Ted Jones
Design: Bill Wagoner

Financial Report

The following information relative to revenues, expenses paid and statement of resources was taken from the Audit Reports of Wm. H. Mers and Company, Certified Public Accountants for the years ended June 30, 1972 and 1973.

OHIO RIVER VALLEY WATER SANITATION COMMISSION

STATEMENT OF REVENUES AND EXPENSES PAID

	FOR YEARS ENDED JUNE 30	1972	1973
Revenues:			
From signatory states:			
State of Illinois	\$ 9,282.00	\$ 11,088.00	
State of Indiana	32,942.00	40,942.00	
Commonwealth of Kentucky	37,765.00	45,760.00	
State of New York	2,002.00	2,332.00	
State of Ohio	45,318.00	56,386.00	
Commonwealth of Pennsylvania	27,664.00	32,164.00	
Commonwealth of Virginia	6,370.00	7,524.00	
State of West Virginia	20,657.00	23,804.00	
Total from signatory states	182,000.00	220,000.00	
From U. S. Environmental Protection Agency (Grant by authority of Federal Water Pollution Control Act)	176,576.00	268,070.00	
Other income:			
Interest earned on bank deposits	1,714.54	2,042.94	
Sale of publications	198.48	137.18	
Miscellaneous income	392.45	2,696.22	
Total from other income	2,305.47	4,876.34	
Total revenues	\$360,881.47	\$492,946.34	
Expenses paid:			
From general funds:			
Current year budget	182,888.73	214,224.63	
Encumbered funds at June 30—prior year	14,616.95	20,444.86	
Total from general funds	197,505.68	234,669.49	
From federal funds	171,325.99	188,464.52	
Total expenses paid	\$368,831.67	\$423,134.01	
Revenues over/(under) expenses paid	\$ (7,950.20)	\$ 69,812.33	

STATEMENT OF RESOURCES AT JUNE 30

	1972	1973
Available resources at first of fiscal year	\$ 32,190.95	\$ 24,240.75
Add Revenues:		
Signatory states	182,000.00	220,000.00
U. S. Environmental Protection Agency	176,576.00	268,070.00
Other income	2,305.47	4,876.34
	393,072.42	517,187.09
Less: Expenses paid	368,831.67	423,134.01
Available resources at June 30, before encumbrances	\$ 24,240.75	\$ 94,053.08 ¹
Encumbered resources at June 30	20,484.86	13,390.85
Available resources at June 30	\$ 3,755.89	\$ 80,662.23 ¹
Available resources before encumbrances is comprised as follows:		
Cash on deposit with Central Trust Company	\$ 16,352.30	\$ 90,659.96
Cash on deposit with American Airlines, Inc.	425.00	425.00
Cash on deposit with Ohio Bureau of Workmen's Compensation	186.00	238.00
Petty cash on hand	200.00	200.00
Accounts receivable—U. S. Environmental Protection Agency	11,772.00	
Accounts receivable—Signatory states		11,215.00
Accounts receivable—Advances for employees:		
Employees' pension trust	2,685.52	2,503.80
Hospitalization	529.02	
Travel advances	345.00	95.84
	32,494.84	105,337.60
Less:		
Excess of advance over expenses of U. S. Geological Survey Grant entitled Characteristics of Subsurface Formations for the Storage or Disposal of Wastewaters	8,254.09	11,284.52
Totals	\$ 24,240.75	\$ 94,053.08

¹ Includes \$65,517.62 Federal Funds available for obligation until September 30, 1973.



REGULATORY AGENCIES OF THE SIGNATORY STATES

ILLINOIS

Environmental Protection Agency
State of Illinois
2200 Churchill Road
Springfield, Illinois 62706
(217) 525-5467

INDIANA

Indiana Stream Pollution Control Board
1330 West Michigan Street
Indianapolis, Indiana 46206
(317) 633-4420

KENTUCKY

Department of Natural Resources
Capital Plaza Tower
Frankfort, Kentucky 40601
(502) 564-3410

NEW YORK

Environmental Health Services
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12201
(518) 457-7362

OHIO

Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216
(614) 466-2390

PENNSYLVANIA

Department of Environmental Resources
P.O. Box 2351
Harrisburg, Pennsylvania 17120
(717) 787-2666

VIRGINIA

State Water Control Board
P.O. Box 11143
Richmond, Virginia 23230
(804) 770-2241

WEST VIRGINIA

Division of Water Resources
Department of Natural Resources
1201 Greenbrier Street
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