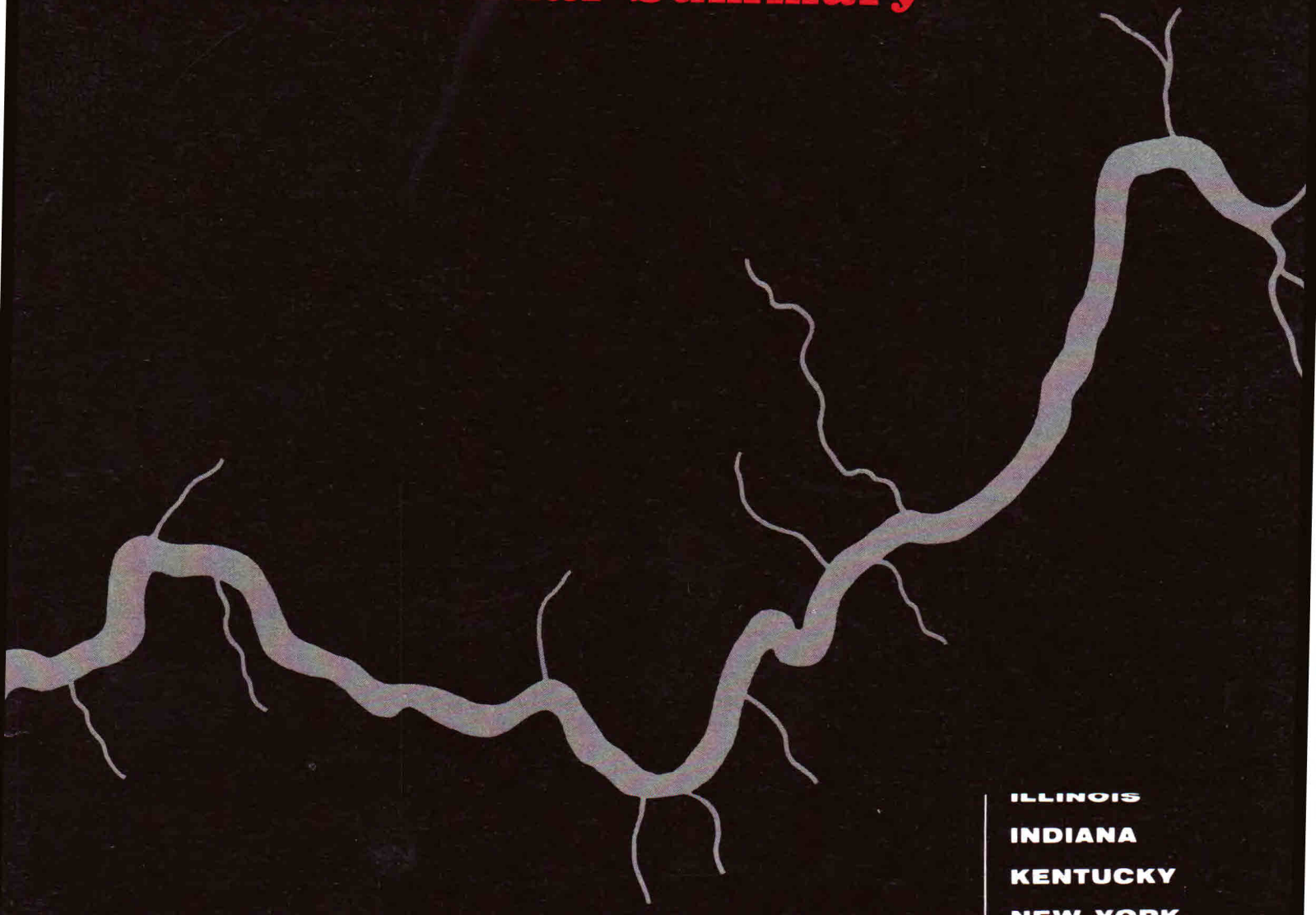
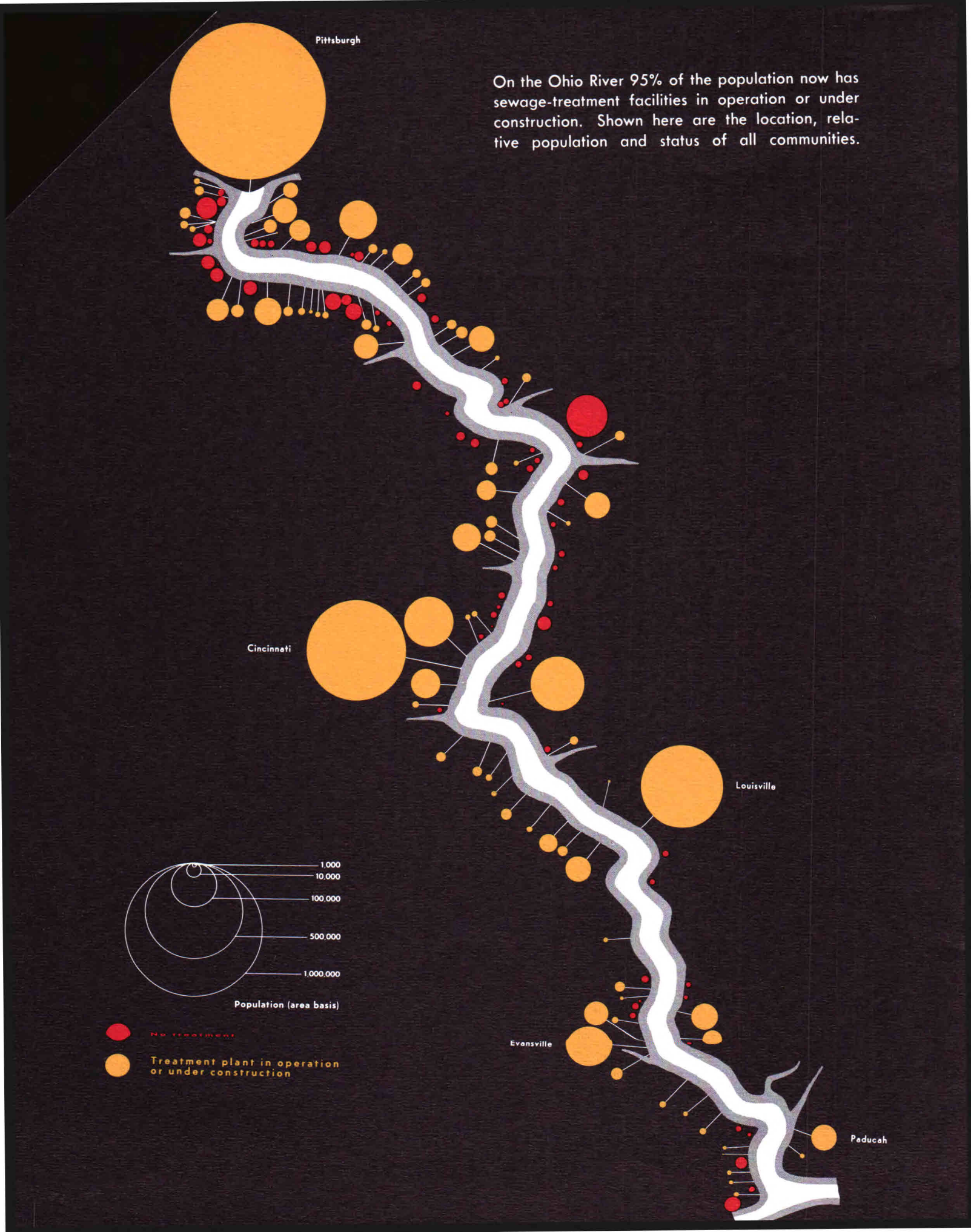
OHIO RIVER VALLEY WATER SANITATION COMMISSION – 1959

Eleventh Annual Summary



A report on the interstate crusade for clean streams to the Governors of:

ILLINOIS
INDIANA
KENTUCKY
NEW YORK
OHIO
VIRGINIA
PENNSYLVANIA
WEST VIRGINIA


On the Ohio River 95% of the population now has sewage-treatment facilities in operation or under construction. Shown here are the location, relative population and status of all communities.
Pittsburgh
Cincinnati
Louisville
Evansville
Paducah
1,000
10,000
100,000
500,000
1,000,000
Population (area basis)
No treatment
Treatment plant in operation or under construction

Eleventh Annual Report

OHIO RIVER VALLEY WATER SANITATION COMMISSION–1959

Headquarters: 414 Walnut Street, Cincinnati 2, Ohio

On June 30, 1948, eight states in the Ohio River Valley signed a compact pledging united effort in a regional crusade for clean streams. For this purpose the legislatures of Illinois, Indiana, Kentucky, Ohio, Pennsylvania, New York, Virginia and West Virginia created the Ohio River Valley Water Sanitation Commission.

The Commission is composed of three representatives from each state, appointed by the Governor of the state, and three representatives of the federal government appointed by the President of the United States. It is the duty of the commissioners to prevent pollution by sewage or industrial wastes originating within a signatory state from injuriously affecting the various uses of interstate waters. To achieve this end the compact empowers the commissioners to make determinations regarding control measures and to supplement state enforcement efforts.

In undertaking this task the commissioners faced the reality of generating action from millions of people and hundreds of industries. For example, a decade ago the Ohio River was everybody's repository for waste and nobody's responsibility. Less than one percent of the 3 ½ million people along its banks provided sewage treatment! Today, treatment plants are operating or being completed to serve 95 percent of the population. Meantime, there has been substantial progress in curbing the indiscriminate discharge of industrial wastes.

Whatever has been accomplished, however, provides no basis for complacency. Conditions in the upper Ohio, and on some of the tributaries are still far from satisfactory. Oil pollution, for example, as well as the discharge of certain industrial effluents hardly can be said to be under adequate control. Neither has there been a demonstrable reduction in acid discharges from coal-mining operations. And a few communities have been notably laggard in meeting their obligation.

These and other matters relating to more effective conduct of pollution-control challenge the eight-state Commission in its second decade. This eleventh annual summary provides the details.

GOALS...and progress in reaching them

The Ohio River begins its 981-mile journey through six states at Pittsburgh. Until April of this year it began that journey under the most unhappy circumstances. At the very start it was burdened with sewage pollution from 1,400,000 persons!

Small wonder, then, that the Ohio River Valley Water Sanitation Commission has looked upon completion of the Allegheny County Sanitary Authority sewage-purification plant as one of the major goals in the crusade for clean streams. Today, the Commission rejoices that this goal has been achieved. And it salutes the citizens of metropolitan Pittsburgh who made an investment of one hundred million dollars to bring it about.

Equally gratifying is the record made by progressive communities downstream. Small and large, they did not wait on Pittsburgh, which was burdened with building the biggest single project in the Ohio Valley. They have already matched Pittsburgh with proportionate investments to safeguard water quality. At Marietta, Ohio, for example, the 16,000 citizens shouldered a debt of $120 for every man, woman and child to build sewage-treatment works. At Parkersburg, W. Va. the cost was three million dollars — $100 per capita. Cincinnati has invested $60 million in the proposition that its wastes shall not affect the water supply of downstream neighbors at Louisville, Evansville or Paducah. Each of the latter cities in turn has met its obligation to provide sewage-treatment.

This is but a sampling of the response that has been generated among Ohio Valley municipalities to halt the abuse of streams. And it brings into focus another goal of the Commission — the control of industrial pollution. There is satisfaction in reporting that three-quarters of the industries have done something about preventing the degradation of streams. But the delinquency of those who have not yet complied continues to over-shadow the efforts of the majority.

Behind this brief summary of where we stand today in the Ohio Valley on water-pollution control are the dedicated efforts of eight states to reach certain goals. What these goals are, and the progress being made toward their attainment, may be outlined as follows:

Sewage-treatment facilities for the 3,600,000 population in municipalities on the Ohio River.

STATUS — Purification plants serving 95 percent of the population are now operating or nearing completion. Less than one percent of the population was serviced eleven years ago. Among the larger municipalities whose progress thus far has not kept pace with their neighbors are: Huntington, W. Va. (pop. 86,400); Ambridge, Pa. (16,000); Martins Ferry, Ohio (13,200); Bellaire, Ohio (12,600); Cairo, Ill. (12,100); and Maysville, Ky. (8,600).

Treatment of sewage from all municipalities that may affect interstate waters.

STATUS — Action within the borders of each of the signatory states has resulted in this record: 8,400,000 people — which represents 82 percent of the sewered population in the entire drainage district of the Ohio Valley — now have sewage-treatment plants operating or under construction.

Meantime, final plans have been approved for construction of plants to serve another 900,000 persons. Not all of the existing treatment plants, however, are performing as well as they should. Some are now extended beyond their design capacity, and a few could be improved in operation. Plants serving about 1,000,000 people are in this category; but for more than half this number improvements are now under construction.

GOAL

Control of all industrial waste pollution to protect public health or preserve the waters of the district for other purposes.

STATUS — Of the 1,442 industrial plants that discharge effluents directly into streams, 80 percent are reported by the signatory states as complying at least with minimum requirements established by the Commission. And 916 of the plants included in this group are rated as having adequate control facilities.

The statistics indicate that progress has been made. But the Commission can hardly concede satisfaction with some aspects of the program. Minimum requirements were promulgated in 1955 as the first step in curbing industrial pollution. They called for cessation of the obvious — the discharge of anything that would float or sink, or which added color or odor to the river. But four years have elapsed and there are still 300 industrial establishments — 20 percent — who have failed to comply with their obligations.

Air and boat surveillance, which has been intensified by the states and the Commission, has revealed unfortunate evidence of what may be construed as callous disregard of pollution-abatement necessities. For these and other reasons, the Commission concludes that the work advanced in good faith by a majority of industries is being nullified by the delinquency of a few.

GOAL

Develop information on radioactivity levels in the Ohio River.

STATUS — A network of monitor stations has been established in cooperation with federal and state agencies through which the Commission is compiling a record of radiation levels in the Ohio River and its tributaries. In addition, the Commission contracted with the University of Louisville two years ago to conduct a continuing examination of radioactivity in river mud, aquatic plants, organisms and fish. The three-year record leads to the conclusion that the radioactivity of streams in the Ohio Valley district is below the maximum permissible limits defined by radiological experts.

GOAL

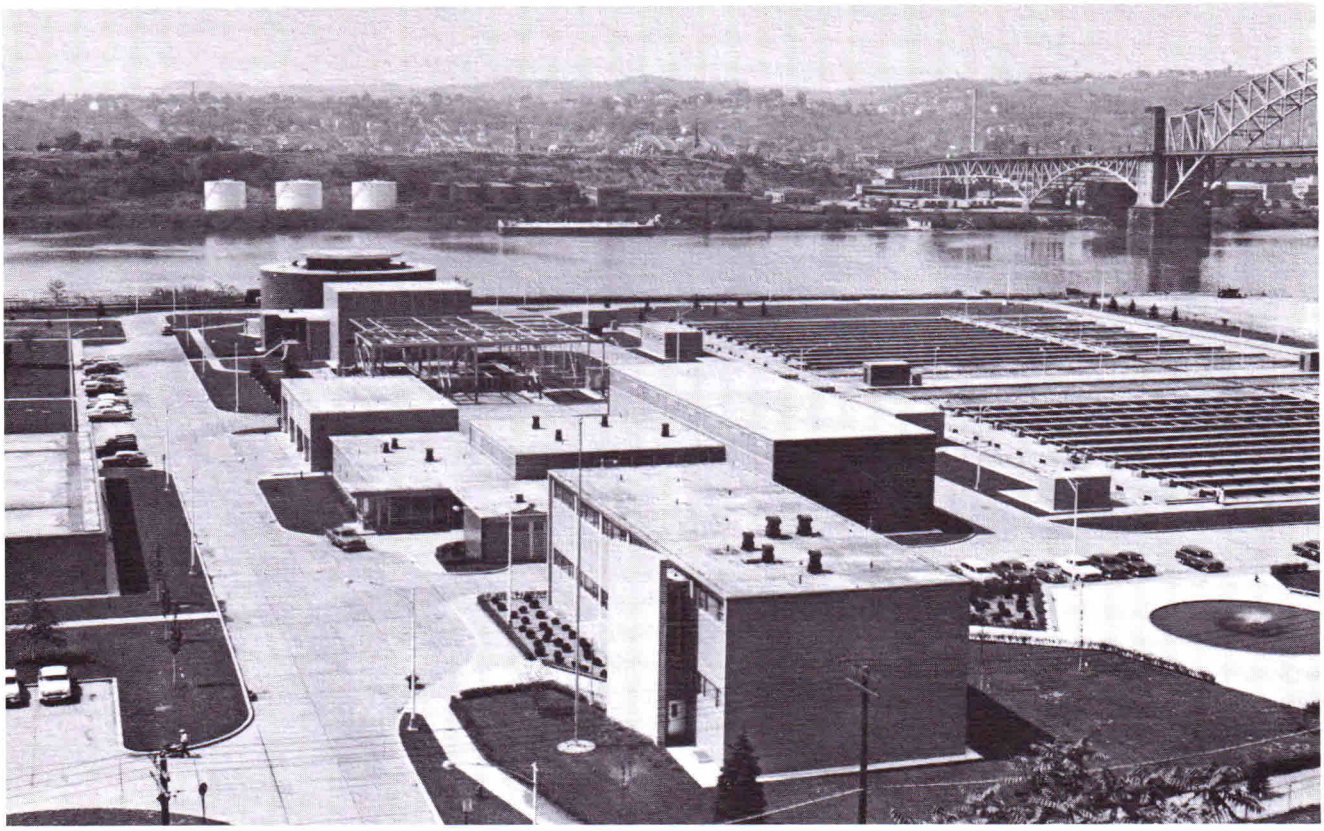
Stimulate a positive attitude toward possibilities of reducing mine-acid discharges and aggressively promote control efforts.

STATUS — After several years of appraisal the Engineering Committee of the Commission is convinced that there are practical methods to ameliorate the degradation of streams from mine drainage. Adoption of recommended control measures is now being considered by the Commission. These reflect experiences in Indiana, Pennsylvania and Ohio where some gains have been registered in curbing acid discharges, notably at strip-mines. Meantime, the Commission has authorized the conduct of "curbstone clinics" for personnel of the signatory states; the purpose is to provide actual demonstration of recommended control methods applied under varying conditions.

GOAL

Bring to a halt the indiscriminate discharge of salt wastes into the Ohio River.

STATUS — In September 1958 the Commission adopted a control proposal declaring that the discharge of salt-containing effluents shall be proportioned in accordance with availability of dilution water in a receiving stream. The object is to equalize or "even-out" salt concentrations. An appraisal of flow and quality variations in the Ohio River revealed that application of proportioning would virtually eliminate undesirably high salt concentrations. Furthermore, such a control program would permit the river to assimilate many times the amount of salt now being discharged. The Commission established a time limit of one year for compliance.



Biggest sewage-purification project in the Valley, the $100 million Allegheny County Sanitary Authority plant, started operation in April 1959. It serves the 1,400,000 population in the Pittsburgh metropolitan area.

GOAL

Curb pollution from the handling, transportation and storage of oil products by boats and at shore installations.

STATUS — In September 1958 the Commission declared that no one "shall cause or permit oil or oily substances in amounts sufficient to be unsightly or deleterious to be pumped, discharged, thrown or deposited" into the waters of the Ohio Valley district. This was followed by the adoption, on February 6, 1959, of recommended practices to be observed on boats, at terminals and other installations where oil is used, transferred or stored.

Perhaps it is too early to judge the effectiveness of these efforts. If complaints reaching the Commission are any criterion, oil pollution has not noticeably been diminished. And surveillance from air and boat reveals places where opportunity exists to practice more effective preventive measures.

GOAL

Supplement state efforts in securing compliance with sewage-treatment requirements.

STATUS — On June 17, 1959 the commissioners from West Virginia requested intervention of the Ohio River Valley Water Sanitation Commission to expedite compliance of the City of Huntington, W. Va. with interstate pollution-control requirements. In response the Commission has notified Huntington of its intention to initiate proceedings unless it receives a satisfactory report from the city on action to be taken. The city was served with a notice in 1952 of Commission requirements.

Under the terms of the compact (Article IX), the Commission may issue orders upon any municipality or corporation. And . . . "any court of general jurisdiction or any United States District Court in any of the signatory states shall have the jurisdiction, by mandamus, injunction, specific performance or other form of remedy, to enforce any such order. . . ."

As far back as 1949 the state ordered Huntington to cease polluting the Ohio and Guyandot Rivers. The matter was disputed in various courts and finally, in 1953, the West Virginia Supreme Court upheld the validity of the state order. In 1955 the state sought without success to indict elected officials of Huntington for failure to comply. Construction on part of the Huntington project was started in 1957. But the city has proposed a pay-as-you-go financing schedule which would require until about 1969 to complete the work. The state has denied the city's request for any additional delay.

Only once before has the Commission been requested to supplement enforcement action in a signatory state. In November 1956 the commissioners from Ohio called upon the Commission to intervene with the City of Gallopolis in securing compliance with the provisions of the eight-state compact. The Gallipolis sewage-treatment plant is now under construction.

Develop an inventory of the aquatic-life resources of the Ohio River, with particular reference to types, number and distribution of fish.

STATUS — A final report on a three-year study is scheduled for 1960. This project is being carried out under contract by the University of Louisville Department of Biology. A correlated study is being conducted by the Kentucky Department of Fish and Wildlife Resources.

More than 130 kinds of fishes have been taken in collections made since 1957. Some 200 collections have been made, and well over a half million fish have been handled. The standing crop of fishes has varied from 35 to as high as 1,733 pounds per acre of river surface. These values are indicative of a high productivity, which compares quite favorably with the standing crop of lakes.

Flavor-testing studies are also being made. In the lower portion of the river the flavor is unimpaired and the table species find a ready market. However, in the upper Ohio River, near the larger centers of population and industrialization, the flesh generally has a disagreeable taste, often characterized as "oily".

Develop findings and adopt recommendations with regard to pollution-control on interstate tributaries.

STATUS — On February 6, 1959 the Commission reviewed a staff report on conditions in the Monongahela River prepared in collaboration with West Virginia and Pennsylvania. This tributary contributes one-third the annual flow of the Ohio River at Pittsburgh and has a profound influence on the quality of the Ohio. Furthermore, the Monongahela is an interstate stream that flows from West Virginia and then through Pennsylvania.

The Commission adopted recommendations for a program in which all sewage discharged into the Monongahela River shall be treated to provide substantially complete removal of settleable solids and removal of not less than 45 percent of total suspended solids.

Encourage interest and seek guidance from groups whose competence and influence would help to promote Commission objectives.

STATUS — Sponsorship of "industry action committees" to share in the development of the regional clean-streams program was initiated in 1950. Six groups — representing steel, metal-finishing, chemical, coal, oil refining and paper and pulp manufacturers — have been active participants.

A Water Users Committee was activated early in 1952 to provide an unusual service. Its members represent municipalities and industries who use the Ohio River or its tributaries as a source of water supply. They make chemical and bacteriological analyses and provide other data on water-quality conditions. This volunteer effort, now in its seventh year, forms the nucleus of the Commission's network of monitor stations.

Also in 1952 an aquatic-life advisory committee was established. This group of eminent biologists and fish management experts are providing information to guide the Commission on the quality of water capable of maintaining fish and other aquatic-life.

GOAL

Devise and maintain a monitor system for the appraisal of water-quality conditions in the Ohio River and on its principal tributaries.

STATUS — Information on chemical and bacteriological conditions is being received from 44 stations. This monitor network has been developed through a cooperative contract with the U. S. Geological Survey, with the aid of U. S. Corps of Engineer lockmasters and in cooperation with municipal and industrial water-plant operators.

The program, now in its seventh year of operation, is the source of vital data for appraising river conditions and for sleuthing pollution sources. It has also provided opportunities for alerting downstream water users of impending quality changes.

GOAL

Evaluate the feasibility of operating "robot monitors," which will automatically record changes in water quality and transmit the information to central headquarters.

STATUS — Three years of developmental effort reveals possibilities of adapting certain automatic equipment for the measurement of water-quality characteristics. A contract has now been awarded for constructing a proto-type multiple measuring unit in a weather-proof housing suitable for installation at remote locations. Another contract has been awarded for installation of a telemetering system whereby river quality information can be logged at the Commission offices in Cincinnati.

Financial Report . . . for year ended June 30, 1959

Statement of Receipts and Disbursements

Receipts:		Disbursements:		
From signatory states	$130,322.50	From state funds	$138,468.14	
Federal Grant under P.L. 660	110,659.00	From Federal funds	89,545.52	
Miscellaneous	2,898.00	Total disbursements		228,013.66
Total receipts	$243,879.50	Excess of receipts over disbursements		$ 15,865.84

Statement of Resources — June 30, 1959

	State Funds	Federal Funds	Total
Available resources for period to June 30, 1958	$ 58,440.12	$ 34,654.84	$ 93,094.96
Add: Annual budget — July 1, 1958 to June 30, 1959	130,000.00		130,000.00
Federal Grant under P.L. 660		110,659.00	110,659.00
Miscellaneous	2,898.00		2,898.00
	191,338.12	145,313.84	336,651.96
Less Disbursements July 1, 1959 to June 30, 1959	138,468.14	89,545.52	228,013.66
Available resources for period to June 30, 1959 before encumbrances	52,869.98	55,768.32	108,638.30
Encumbered resources at June 30, 1959 for equipment for the Robot Monitor Project		51,300.00	51,300.00
Available resources at June 30, 1959 after encumbrances	52,869.98	4,468.32	57,338.30

TALLY FOR THE VALLEY

The tabulations below have been compiled from information supplied by the eight signatory states. They represent the status of municipal and industrial-waste control facilities as of June 30, 1959, for the entire 155,000 square mile area that comprises the Ohio River Valley Water Sanitation Compact drainage district.

Progress during the past year in municipal waste-control may be summarized as follows. New treatment facilities for 38 communities (pop. 261,000) and additions to treatment works serving another 20 communities (pop. 495,000) were placed in operation.

Construction of new sewage treatment plants was started during the year by 44 communities (pop. 453,000). Construction was also started on additions or improvements to existing treatment works at 16 communities (pop. 150,900).

MUNICIPAL AND INSTITUTIONAL SEWAGE-TREATMENT FACILITIES — July 1, 1959

Number of communities (top number) and population served (bottom number)

STATUS	ILL.	IND.	KY.	N. Y.	OHIO	PA.	VA.	W. VA.	TOTAL	% of TOTAL
Adequate treatment	41	117	125	6	209	81	25	25	629	39.3
	224,000	825,600	526,400	71,700	1,889,500	432,500	73,700	101,200	4,144,600	40.9
Treatment provided, but not adequate	4	17	13	7	32	12	27	11	123	7.7
	12,300	86,800	82,800	23,000	213,400	41,000	30,100	31,000	520,400	5.1
Treatment provided, not adequate; improvements under construction	3	6	1	0	8	3	0	2	23	1.4
	23,300	481,000	1,300	0	91,100	9,500	0	11,900	618,100	6.1
New treatment works under construction	1	8	4	1	33	86	3	18	154	9.6
	3,700	80,000	406,100	1,500	668,900	1,540,000	10,200	402,300	3,112,700	30.8
No treatment, construction not started	13	67	32	8	79	136	27	104	466	29.2
	39,600	174,500	86,300	15,300	341,000	609,300	51,400	200,600	1,518,000	15.0
Discharge of minor significance	3	62	23	0	82	12	6	16	204	12.8
	6,400	51,000	34,000	0	54,900	43,200	5,100	17,200	211,800	2.1
TOTAL	65	277	198	22	443	330	88	176	1,599	100.0
	309,300	1,698,900	1,136,900	111,500	3,258,800	2,675,500	170,500	764,200	10,125,600	100.0

INDUSTRIAL WASTE-CONTROL FACILITIES — July 1, 1959

For industries discharging effluents directly into streams

STATUS	ILL.	IND.	KY.	N. Y.	OHIO	PA.	VA.	W. VA.	TOTAL	% of TOTAL
Adequate control facilities	9	173	119	16	256	144	19	181	917	63.5
Control provided, but not adequate	8	30	58	13	115	55	10	28	317	22.0
Control facilities inadequate, improvements under construction	0	0	11	0	19	3	0	1	34	2.4
New control facilities under construction	0	4	0	0	1	7	0	19	31	2.1
Planning stage, no action or not operating	0	4	13	18	0	59	8	42	144	10.0
TOTAL NUMBER OF INDUSTRIES	17	211	201	47	391	268	37	271	1,443	100.0
Complying with ORSANCO *minimum requirements*	17	180	137	16	344	244	28	185	1,151	79.8

ADMINISTRATIVE AFFAIRS

During the year summarized in this report Russell E. Teague, M.D., of Kentucky, served as chairman. Elected to take office on July 1, 1959 were Mr. Maurice E. Gosnell of Illinois as chairman, and Mr. Ross H. Walker of Virginia as vice-chairman.

Chairman-elect Gosnell brings to this post the background of a lawyer who has been intimately associated with local and state government affairs. For eighteen years he has served as city attorney for Lawrenceville, Ill. and from 1940-48 he was state's attorney of Lawrence County.

Mr. Gosnell has played an active role in both state and national bar associations and is at present on the board of governors of the Illinois Bar Association. He is also a member of the Board of trustees of Vincennes University. Mr. Gosnell graduated from the University of Illinois, where he studied in the school of commerce and law.

Membership Changes — Mr. Minor Clark, commissioner of the Kentucky Department of Fish and Wildlife Resources was appointed to the Commission on November 25, 1958 by Governor Chandler. He succeeds Mr. Earl Wallace who was one of the signers of the interstate compact and who served continuously as a commissioner since 1948. Upon the retirement of Mr. Wallace because of ill-health he was presented with a scroll of appreciation by the members of the Commission.

Committees — Certain functions of Commission business are conducted through standing committees. An important advisory group is the Engineering Committee which is composed of the executive engineer officers of the signatory state pollution-control agencies and one representative each from the U. S. Public Health Service, the U. S. Corps of Engineers and the U. S. Department of the Interior. Six of these men are members of the Commission.

Appropriations — Operating funds are appropriated by the states, the amount representing a pro-rata share of the Commission's operating budget based one-half in proportion to population and one-half in proportion to land area within the Compact District. Originally set at $100,000 per year, in 1955 the signatory states increased the budget to $130,000 annually. Under the pro-rata distribution, Ohio provides $30,420; Kentucky, $27,560; Indiana, $22,945; Pennsylvania, $20,215; West Virginia, $15,860; Illinois $6,695; Virginia, $4,875; New York, $1,430. In addition, the Commission receives a federal grant in accordance with the Water Pollution Control Act of 1956 (Public Law 660). A financial statement for the fiscal year is given on a preceding page. A more detailed statement is available upon request.

Officers of the interstate Commission as it began its twelfth year of operation in July, 1959. Starting at the left: Ross H. Walker, vice-chairman; Edward J. Cleary, executive director and chief engineer; Mrs. Verna B. Ballman, treasurer; Fred H. Waring, secretary; Leonard A. Weakley, legal counsel; Maurice E. Gosnell, chairman.

members of the commission

ILLINOIS

Roland R. Cross, M.D., Director of Public Health
Maurice E. Gosnell, Gosnell & Fitzpatrick
Clarence W. Klassen, Chief Sanitary Engineer

INDIANA

A. C. Offutt, M.D., State Health Commissioner
B. A. Poole, Stream Pollution Control Board
Joseph L. Quinn, Jr., The Hulman Company

KENTUCKY

Laban P. Jackson, Commissioner of Conservation
Russell E. Teague, M.D., State Health Commissioner
Minor Clark, Department of Fish and Wildlife Resources

NEW YORK

Earl Devendorf, Department of Health
Herman E. Hilleboe, M.D., State Health Commissioner
Joseph R. Shaw, Associated Industries of New York State, Inc.

OHIO

Hudson Biery, Ohio Valley Improvement Association
Ralph E. Dwork, M.D., Director of Health
Kenneth M. Lloyd, Mahoning Valley Industrial Council

PENNSYLVANIA

Karl M. Mason, Department of Health
M. K. McKay, Sanitary Water Board
Charles L. Wilbar, Jr., M.D., Secretary of Health

VIRGINIA

E. Blackburn Moore, State Water Control Board
T. Brady Saunders, State Water Control Board
Ross H. Walker, State Water Control Board

WEST VIRGINIA

N. H. Dyer, M.D., State Health Commissioner
W. W. Jennings, State Water Commission
Bern Wright, State Water Commission

UNITED STATES GOVERNMENT

Edwin E. Abbott, Corps of Engineers
Leroy E. Burney, M.D., Public Health Service
O. Lloyd Meehean, Fish and Wildlife Service

officers

Russell E. Teague, M.D., Chairman
Maurice E. Gosnell, Vice-Chairman
Fred H. Waring, Secretary
Verna B. Ballman, Treasurer
Edward J. Cleary, Executive Director and Chief Engineer
Leonard A. Weakley, General Counsel

staff

Edward J. Cleary, Executive Director and Chief Engineer
Robert K. Horton, Assistant Director
David A. Robertson, Jr., Engineer-Hydrologist
Francis W. Montanari, Sanitary Engineer
William L. Klein, Chemist-Biologist
Harold W. Streeter, Consultant
Verna B. Ballman, Office Manager

Secretaries: Ruth C. Bergmeyer, Alice Courtney
Jane W. Renaldo, Grace B. Ziegler

Regulatory Agencies of the Signatory States

Listed on this page are the names and addresses of the regulatory agencies in the signatory states. Questions concerning compliance with water-pollution control requirements should be addressed to the agency in the state in which a municipality or industrial plant is located. The state agency will arrange for such contact or consultation with the Commission as may be necessary or requested.

ILLINOIS	Technical Secretary State Sanitary Water Board Springfield, Illinois
INDIANA	Technical Secretary Indiana Stream Pollution Control Board 1330 West Michigan Street Indianapolis 7, Indiana
KENTUCKY	Executive Director Kentucky Water Pollution Control Commission 620 South Third Street Louisville 1, Kentucky
NEW YORK	Executive Secretary New York State Water Pollution Control Board New York State Dept. of Health Albany 1, New York
OHIO	Engineer in Charge Sewage and Industrial Wastes Unit Division of Sanitary Engineering Ohio Department of Health Columbus 15, Ohio
PENNSYLVANIA	Sanitary Water Board Box No. 90 Harrisburg, Pennsylvania
VIRGINIA	Executive Secretary State Water Control Board 415 West Franklin Street Richmond 20, Virginia
WEST VIRGINIA	Executive Secretary State Water Commission 1709 Washington Street, East Charleston, West Virginia