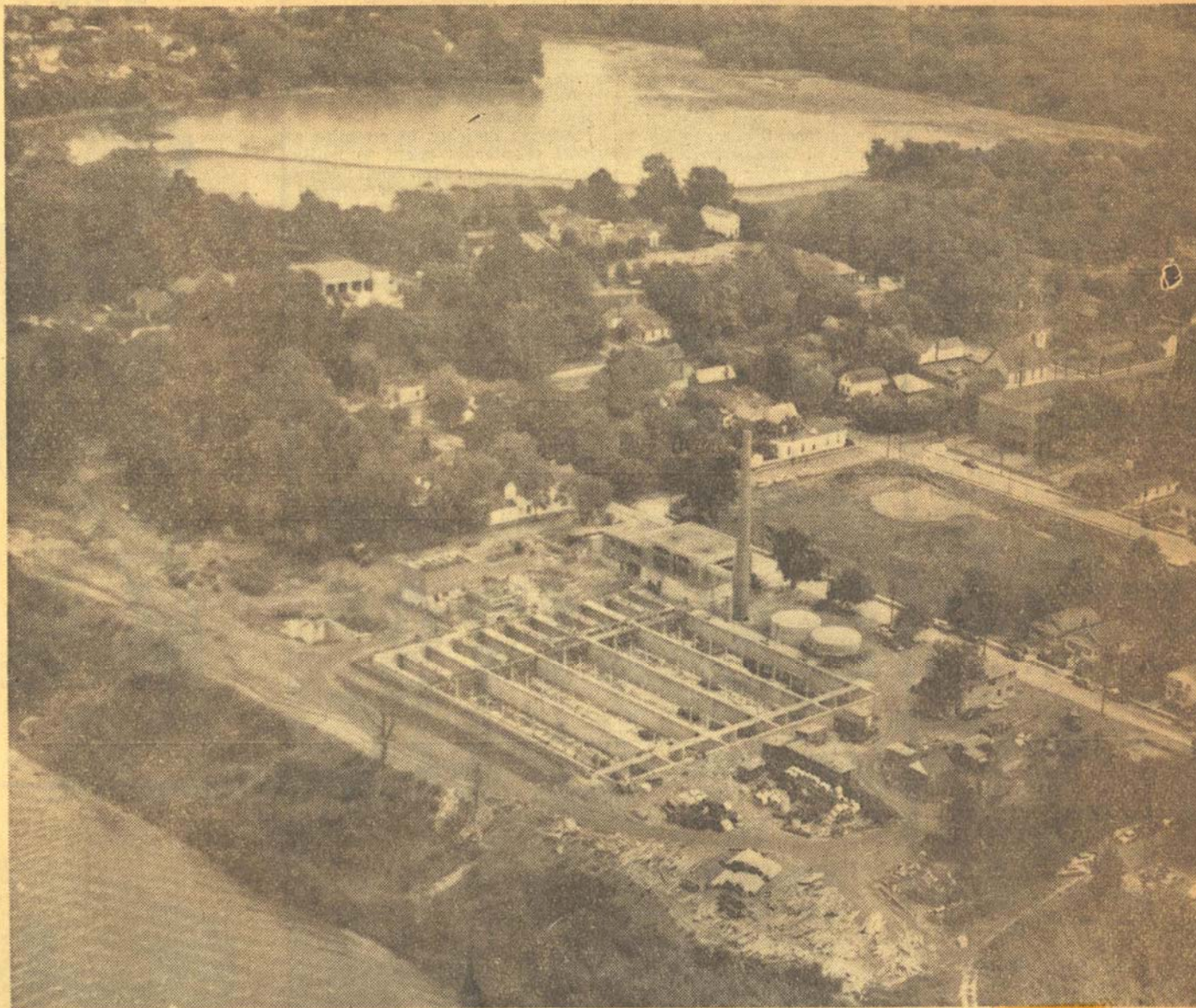


Dedication Oct. 6 for Sanitation Project



TREATMENT PLANT: An aerial view of the \$2,000,000 treatment plant in Bromley, a part of the \$7,600,000 sanitation sewage project, is shown in the above picture. The Ohio River is shown in the foreground while the old Lagoon lake is in the background.

The treatment plant will be the scene of the formal dedication ceremonies on Oct. 6. Russell Manual, commercial photographer of Ludlow, made the aerial "shot" of the new treatment plant.

350 Mayors, Dignitaries Will View \$7,600,000 Project in Visit Here

On Oct. 6, northern Kentucky will be honored by the presence of an estimated 350 mayors of various Ohio River cities and state and national dignitaries. It will mark the official dedication of Kenton and Campbell counties' \$7,600,000 sanitation sewage project.

While the mayors of almost every city, both large and small, along the Ohio River from Pittsburgh to Cairo, will pay their official visit to northern Kentucky, Gov. Lawrence Wetherby of Kentucky and Gov. Frank Lausche of Ohio will head the long list of state officials from both Kentucky and Ohio.

National figures are expected to include Sens. John Sherman Cooper and Earle Clements, Rep. Brent Spence and the possible visit from Alben W. Barkley, former Kentucky senators and vice president.

To Present Plaque

Representatives of Chamber of Commerce from several states and national chamber officials will be among others attending the formal dedication.

The national Chamber of Commerce will present a plaque to representatives of the Kenton-Campbell Sanitation District, which has supervised the construction of the \$7,600,000 sanitation project, in recognition of two northern Kentucky counties being the first communities along the Ohio River to complete the sanitation project under the eight-state pact, which was formed under the national stream anti-pollution act.

Tell of Plans

George Beuttel, chairman of the local commission, and William (Billy) Anderson, general manager, said plans are now being formulated for the formal dedication. The exercises will be held at the project's \$2,000,000 treatment plant, which is now nearing completion at Bromley.

The visiting mayors and other dignitaries will first visit the sanitation plant located in Ohio near the Lunken Airport. They will then be taken by boat down the Ohio River to the Bromley disposal unit for the dedication of the local project.

The dedication will be known as "Clear Water Day" as it will mark the formal acceptance of both plants.

Work Remains

While work will be completed on the treatment plant in Bromley, work still remains to be concluded on connecting sewage lines in both Kenton and Campbell counties. The entire project, Mr. Anderson said, will be completed within the near future.

All sanitary sewage from 16 northern Kentucky cities, which are part of the sanitation district, will empty into the disposal or treatment plant in Bromley. It will be here that sewage will be treated before being deposited into the Ohio River.

Mr. Anderson said while several cities along the Ohio River have their systems in operation, the northern Kentucky project will be the first one to be completed since the signing of the eight-state pact.

Sanitation Project Initiative Is Praised

Officials of eight states witnessed the formal groundbreaking Wednesday for the disposal plant which Campbell-Kenton County Sanitation District No. 1 is building at Bromley, and had words of high praise for the initiative taken by northern Kentucky in the battle to control pollution in the Ohio River.

Northern Kentucky, said E. Blackburn Moore, "has set an example that might well be followed throughout the entire Ohio Valley." Mr. Moore, of Virginia, is chairman of the eight-state Ohio Valley Sanitation Commission.

The ceremony was held at the site of the plant on Pike street, between Roman and Moore streets, Bromley. The sewage treatment plant is an important part of the local \$7,600,000 project.

"Only One to Act"

"Although the pollution control project covers eight states, this is the only community that has done anything about it," said

Henry Ward, state conservation commissioner, in expressing pleasure at the leadership shown in the northern Kentucky project.

Besides Mr. Moore and Mr. Ward, other officials present included:

Earl Wallace, conservation commissioner, and W. F. Lamb, deputy commissioner, of Kentucky; Clarence W. Klassen, of Illinois; Earl

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Local Sanitation Initiative Lauded

(Continued from Page One)

Devendorf, deputy commissioner of New York; Hudson Biery, Kenneth M. Lloyd and F. H. Waring, of the Ohio commission; H. E. Moses, vice chairman of the Pennsylvania commission; Ross Walker, of Virginia; Robert F. Rocheleau, of West Virginia; W. W. Towne, basin engineer of the Ohio-Tennessee Drainage Basin, and Edward J. Cleary, executive director of the Ohio commission.

Morlidge Speaks

The history of the local project was described in talks by J. B. Morlidge, former Newport city manager, and Harry F. Schaeper, Ft. Thomas, member of the local Sanitation Commission.

Mr. Biery, a Cincinnati who has played a prominent part in the 17-year movement to clean up the entire Ohio River of pollution, gave a history of the whole Ohio Valley project.

Richard G. Howes, Ft. Thomas, a member of the local commission, was general chairman of the dedi-

Waging War On Pollution

(First Of A Series)

BY PHILLIP M. SWATEK

THE Ohio River, which twice before carried the promise of a new era, is fast becoming the deep channel for the atomic age, more promising, more fateful than anything in our past.

Already the greatest concentration of atomic energy installations in the nation—perhaps in the world—is in the Ohio River Valley with Cincinnati, wide-eyed and a little hesitant, in the center.

Not so dramatic as the truculent atom, but of great significance, are the chemical and synthetics industries mushrooming along the river banks. These are plants of massive simplicity, brighter and happier than the coal tips and mill sheds which are the traditional giants of the valley industrial scene.

The spark for this growth, the new era, is generated by the river itself, as it has been in the past.

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PIONEERS drifted west on the Ohio to open a wilderness and drive the stakes of a nation. Close behind the canoes and flatboats of civilization came the steamboats, colorful roustabouts and pages of an industrial era.

This was the age, 100 years ago, when Cincinnati was taking its place as the third largest city in the country, thriving on the smoke swirling over the waterfront from hundreds of steamboat stacks.

With so much of our history shaped by the course of the Ohio, the river could qualify for a shuffling retirement, backwash of time and events gone by. But instead, the future is once again laying out claims in the Ohio River Valley.

In most of these regional visions there has been and is one doubt that sooner or later floats to the surface... a doubt about the river, about the water itself. The question is not whether the river will continue to flow, but whether the water will be fit for the 17,600,000 persons to drink and thousands of industries in the valley to use, let alone be suitable for all the people and new industry expected to move into the 155,000-square-mile area.

This question and the fight against stream pollution are not new to Cincinnati, of course, which has come to be regarded as the spiritual capital of the antipollution effort.

Nearly a half century ago some of the more sensitive Cincinnatians complained in picturesque language about drinking mixed sewage and water. But it has always been a difficult campaign to put over in any river town because the water generally is fouled before it gets to city.

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WAGE treatment plants, very costly, are of the most benefit to persons down

the river, those without a single vote in municipal elections.

Industry, especially in the beginning, sometimes was reluctant to enter the campaign wholeheartedly, though nobody yet has mustered a really inspiring argument for pollution.

Industry's problems were different. First, pollution abatement is expensive and it often put a co-operating business at a disadvantage with noncomplying competitors. Second, effective treatment of some industrial waste is and remains a scientific puzzle, despite years of costly research.

The obvious, but monumental solution was to set up an organization to see that all cities, towns and industries up and down the valley took responsibility for their own pollution, certainly an equitable arrangement which would, if everyone complied, solve each local problem in the only place it could be solved—upstream.

In 1928, the first important steps for an interstate organization to do the job, clean up the Ohio and its tributaries, were taken. The droughts, of the early '30s, leaving the great river crawling in filth, dramatized the danger of having a sewage-ridden water supply in many key cities, Cincinnati among them.

Eight states—Ohio, Kentucky, Indiana, West Virginia, Virginia, New York, Pennsylvania and Illinois—were primarily concerned with the 20th century Augean-stables assignment. Congress authorized the states to enter a compact in 1936, but it wasn't until 1948 that each of the states had passed enabling legislation. It was then, five years ago, June 30, 1948, the Ohio River Valley Water Sanitation Commission got the official seal from eight states and was told to go to work.

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MEMBERS of the commission are to gather in Charleston, W. Va., Wednesday to hear a progress report on the first five years. While the pollution is too complex for ready simplification, the report deals separately with municipal sewage and industrial waste.

Understandably, the challenge to industry doesn't capture the imagination as easily as the idea of drinking sewage and water, but it is, nevertheless, important to everyone living in the Ohio River Valley. Jobs and money, in short.

Edward J. Cleary, executive director and chief engineer for the commission, said, "Where streams must serve the dual purpose of providing a water supply as well as the medium for the carriage of waste water, pollution control is not an academic philosophy.

"Pollution abatement in the Ohio Valley is realistic recognition that water conservation is a matter of survival. And I am not overdramatizing the situation when I use the word 'survival.'"

TOMORROW: Extent of Pollution.

In War On Pollution

(Second Of A Series)

BY PHILLIP M. SWATEK

"ONE quart of sewage in every gallon of Ohio River water—" and "the same as 700 dead horses floating by Cincinnati every day!" are two of the fine old war cries employed through the years by crusaders for pollution abatement.

While this picturesque language has, unfortunately, some basis in fact, officials of the Ohio River Valley Water Sanitation Commission have had to use less flamboyant terms.

Edward J. Cleary, executive director and chief engineer of the commission, boils it down this way:

"Pollution means 'too much' of foreign substances in water. Too much, so that it is unsuitable, following reasonable treatment, for drinking purposes or industrial uses.

"Pollution means too much — so that the water cannot sustain aquatic life. Too much so it is not satisfactory for recreation, navigation, agriculture or other legitimate uses."

Defining the problem—as elementary as it might seem—was one of the first big jobs the eight-state commission tackled after its organization June 30, 1948. A complete report on the progress made in the five-year period will be made to commission members Wednesday at Charleston, W. Va.

It is important to get from Mr. Cleary's definition the understanding that *excessive* pollutants produce the problem and danger. The commission is not striving, as aesthetically laudable as it might be, to turn the Ohio into an endless supply of Hiawatha bottled drinking water.

"Whether we like it or not, most of our streams must serve in the dual role as a source of water supply and as the ultimate repository for all waste drainage," Mr. Cleary said.

"This conflict in water use can be reconciled. We already have the technical means to do it. The extremist view, that all we need is a legal prohibition banning all waste discharges, is not workable either in theory or fact," he declared.

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WATERS OF the Ohio were not mountain-brookish in character in the first place. It was a muddy river, a good part of the time, when the Shawnee Indians prowled the banks.

Secondly, a healthy river can absorb and neutralize a great deal of sewage and other organic wastes by natural processes. Aerobic bacteria, which must have oxygen to live in the water, goes to work on the waste as soon as it hits the river. More bacteria is attracted by the decomposing process—more oxygen required—and eventually the foreign material is dissolved into harmless carbon dioxide gas and more water.

When pollution is excessive, more aerobic bacteria is needed to convert the waste than there is oxygen to support the bacteria. Oxygen depleted, the valuable aerobes are lost. An

aerobic bacteria, which needs no oxygen, rises from the depths to manufacture putrid-smelling gas and sludge. The river can no longer purge itself and becomes a sewer.

Typhoid and dysentery germs, a threat to any sewage-contaminated water supply, give sharper emphasis to the need for curbing pollution and the danger of sick rivers.

To set the odds for a river-borne epidemic, the coliform count was established. Coliforms, minute organisms from warm blooded animals, are not harmful themselves but they indicate to what extent human waste is affecting the water. An individual voids between two and 10 billion coliforms every day. Where coliforms live, dangerous microbes may also live.

The commission adopted 5000 as a reasonable average maximum coliform count. Raw water with a coliform count of 5000 can be made safe (a coliform count of one in a half glass of water) for drinking after "reasonable treatment." It is a practical goal, if not ideal.

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THE COLIFORM count at Cincinnati is roughly about 400 times the average maximum recommended by the commission. A few places along the river—most notably Louisville and just below Parkersburg, W. Va.—are worse, but not many.

To keep residents of Cincinnati and other river towns on their feet, municipal waterworks must pour in great amounts of chlorine. Cincinnati's water is safe as long as the chlorine is dumped in, but it is a loaded gun held at the city's head.

And the recent action by the Ohio House of Representatives exempting villages of 5000 or less population from clean-stream laws until 1956 would help to keep up both the coliform count and loaded gun. Hamilton County representatives all voted against the moratorium. The amendment now goes to the Ohio Senate.

Hudson Biery, one of Cincinnati's first crusaders and a member of the commission, declared, "Enactment of this amendment would place Ohio in the position of seeking special privilege among the eight compact states and welching on what has been referred to often as the most important interstate agreement of modern time."

W. R. Kellogg, city manager and a member of the Ohio Pollution Control Board, said the legal framework for hardship and special cases in the amendment is not needed under the present control law. He said the board has already issued interim exemption orders to some 300 municipalities that do not have water works, though some 260 others have been ordered to proceed with sewage disposal.

"Any attempt by the Assembly at this time to seek special dispensation for Ohio municipalities could only be construed by our sister states of the Ohio River Compact as failure to go along with our agreement with each other. This is not being asked by any other state," Mr. Kellogg said.

Waging War On Pollution

(Third Of A Series)

BY PHILLIP M. SWATEK

RIVERS FOULED by domestic sewage can stir up in an informed citizenry all kinds of vivid mental images, including the specters of disease and epidemic.

Stream pollution by industrial waste is more difficult to dramatize. The problem of control is more complex. Sewage is sewage no matter what sized town it comes from, but industrial waste may include heat, salt, acid or radioactive traces, and in varying degrees. A great deal has yet to be learned about industrial pollution.

Still, industrial pollution is of vital importance to the future of any community and to an entire region such as the 155,000-square mile Ohio River Valley.

It is particularly important here now if the Ohio Valley, with Cincinnati strategically close to the center, is to become, as it promises to be, the main artery in the development of atomic energy in this country.

Beside the influx of atomic energy installations, synthetics and chemical industries are also settling fast in the valley alongside established steel and coal operations. The Ohio River is becoming the Ruhr of modern America.

For industry can find no substitute for water. Every ton of steel requires 65,000 gallons of water, every ton of explosives requires 50,000 gallons and for each ton of synthetic rubber, 320,000 gallons of water are needed. (Cities can't find a substitute either. Cincinnati pumped, on an average, more than 90 million gallons a day last year).

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ADDITIONAL POWER for cities in the middle of Ohio and Indiana will be generated along the Ohio River, because, despite the long transmission after the power is generated, that's where the water is. Without the assured flow of the Ohio, there would not be the great concentration of atomic plants in the valley.

The water just left in the river is becoming more valuable all the time, too—for transportation. Shipping tonnage on the Ohio 50 years ago—before all the dams were built and the river canalized—was between two and four million a year. The annual tonnage now is at 56 million. Ton-miles, barometer of long hauls, where river transportation is most efficient, was over 10 billion last year.

Shipping, pollution abatement and industrial usage are all getting a little power from the network of reservoirs being built by the U. S. Corps of Engineers in the Ohio Valley. The reservoirs, about half of which are completed, hold back potential flood waters. But just as important if not more important, they store water for release in periods of low-flow on the Ohio.

Having water in the river at all times—enough so it can honestly be called a river—is important for many reasons. Most obvious is so shipping won't be grounded part of each year. Second, it is important because the danger of pollutants grows proportionately with the decrease in water or river flow. Certain amounts of pollution, which could be neutralized and dispatched harmlessly in a steady river, may be deadly in a pool.

A third reason is that industrial operations generally require a fixed amount of water. If, late in the summer, as an example, there isn't enough water in the river for the operation, the industry has no choice but to shut down.

Industry and shipping are concerned as municipalities are with quality of the water,

though perhaps not as poignantly as the individual.

Mine acid which drains into the streams of the Ohio River Valley, for instance, does damage of several million dollars to barges, power plants, cooling systems, waterworks and other installations every year. The U. S. Public Health Service figured out in 1940 that annual damage on just part of the Ohio River was \$2,071,000.

It has been determined that this mine drainage is equivalent to 2½ million tons of sulphuric acid being dumped into the Ohio every year, an estimate now regarded as conservative. Mine acid, a problem still to be solved though "laboratory" solution has been discovered, is the biggest single pollution in the Ohio River Valley.

Coal mine operations add other pollutants to the river in addition to acid. Ferrous and aluminum sulfates, which make the water "hard," are generally part of the mine drainage. Coal mining operations also produce silt and fine coal, which coat the river beds and stifle aquatic life.

Other industrial wastes include chlorides or salt (an important point in regard to diet) and phenol, which is an important point for anyone who can taste. Phenol, or carboic acid, may be discharged by oil refineries, synthetic rubber plants and other industries, but steel mills have taken much of the criticism in the past.

It is usually phenol you taste when drinking water is remarkably unpleasant. Only three parts of phenol in a billion parts of water can produce the bad taste.

Heat is regarded as a pollutant because heated water will not hold as much oxygen as relatively cool water. Oxygen is important because it supports aerobic bacteria, which make it possible for the river to absorb organic waste. A primary factor in locating atomic energy plants is the enormous amount of water needed as a coolant, so heat as a pollutant is particularly important to the Ohio Valley.

None of the other possibilities of pollution—including radioactivity—produced by the atomic energy plants in the valley are being minimized. Atomic Energy Commission scientists, scientists at Kettering Laboratory and those of other agencies, both public and private, are watching developments intently.

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THOUGH the atomic operations, is, of course, guarded, Edward J. Cleary, Executive Director and Chief Engineer of the Ohio River Valley Sanitation Commission, had this to say after he was taken on an inspection tour of the atomic installations:

"When every industry in the Ohio River Valley has as clear a conception of its waste disposal problems and the responsibility for solving them as does the AEC and its contractors, considerable progress forward in stream pollution control will have been achieved. What I saw in terms of technical accomplishment, ingenuity of operation and conscientious methods of control reveal a depth of understanding that should inspire other industrial organizations whose problems of waste disposal certainly cannot be more complex than those of the atomic-energy industry."

Mr. Cleary will give a complete report today at Charleston, W. Va., on progress in both municipal and industrial pollution abatement. Members of the eight-state Commission, which was put into operation June 30, 1948, are meeting there to hear the five-year summary.

TOMORROW: Long Fight Being Won.

*Long Fight Being Won***Waging War On Pollution***(Final Of A Series)***BY PHILLIP M. SWATEK**

THE OHIO RIVER, once known as America's biggest sewer, has reversed its course after nearly two centuries of increasing pollution and is now becoming cleaner.

News of the "great transformation" was announced yesterday to members of the Ohio River Valley Sanitation Commission at Charleston, W. Va., by Edward J. Cleary, executive director and chief engineer of the eight-state organization.

"New pollution has been halted, existing pollution is being decreased and the trend of a half century has been reversed," Mr. Cleary declared. It was a half century ago that a few incensed residents of Cincinnati started the up-and-down battle for pollution abatement.

Much of the time the struggle for pollution abatement was a running defeat at the hands of selfishness or a retreat into the sands of apathy and ignorance. The battle turned five years ago, June 30, 1948, when the governors of Ohio, Kentucky, Pennsylvania, West Virginia, Indiana, Illinois, Virginia and New York, fixed their signatures to the Ohio Valley compact and the commission was launched.

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TO THE GREAT credit of the progressive individuals who fathered the organization, the commission was given not only something to fight for, but something to fight with . . . an unusually meaningful power-of-enforcement clause. The clause had so many teeth that nobody has yet seen it prudent to let the commission try it out. Education and co-operation, particularly with industry, have been the ingredients in the first five years' success.

In the relatively short period the commission has been at work, staff members have been able, in addition to many other less epic projects, to complete investigations, hold public hearings, adopt requirements and issue notices when necessary to municipalities and industries along the Ohio from Cincinnati all the way to Pittsburgh, 483 miles.

In addition, investigations and recommendations for remedial action in pollution abatement have been completed on 130 miles of Indiana's Wabash River, on which the city of Terre Haute is about ready to build its sewage treatment works.

Fairness and thoroughness of these preparatory steps taken by the commission, plus the weight the interstate organization could throw around if pushed, have reversed the dreary trend.

As of June 30, 1953, 42 per cent of municipal sewage going into the Ohio or its tributaries is being treated. The percentage is based on the 9,319,000 persons in the valley whose waste goes into the river. Other millions

of area residents whose sewage doesn't go into the Ohio Valley streams aren't counted in determining this percentage.

Another 10 per cent of the "sewered" population are building new sewage treatment plants. Sixteen per cent more are ready to start construction of facilities.

This leaves 32 per cent of the population affecting the valley's streams in a barbaric position, from their neighbors' point of view. While the significance of the remaining 32 per cent isn't pleasant to contemplate the improvement in the last five years is both enormous and heartening.

"Not only are streams receiving less sewage pollution than they had before, but the prospect for even cleaner streams lies immediately ahead as new works reach completion," Mr. Cleary said.

Cincinnati plans to put the \$6 million Little Miami sewage disposal plant into operation and start construction of another similar installation this fall. Sixteen Northern Kentucky communities opposite Cincinnati are matching this progress by jointly completing a sewage treatment plant that goes into operation next year.

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THE FIVE-YEAR REPORT to commission members showed that of the 1246 industries that discharge waste directly into valley streams, 809 are now operating control facilities. Thirty-one others of the total are building treatment works and 116 more are finishing up plans for facilities.

"Municipal treatment works also handle substantial quantities of industrial waste because by far the greatest number of industries are connected to city sewer systems," Mr. Cleary said.

"Five years is a short time in a campaign of stream pollution control when we consider that efforts to cope with the problem have met with indifferent success for more than 50 years. Yet in this brief period, a great transformation has occurred.

"These accomplishments grow more impressive when it is considered that the past few years have not been propitious for construction. The war emergency, with consequent curtailment of material and a moratorium on the issuances of public-works bonds, were severe handicaps to the building of sewage-treatment plants," Mr. Cleary asserted.

"There have been disappointments along the way, as well," he said, "but it is now clear that most people throughout the valley realize what a great treasure the Ohio is—certainly one of the nation's most valuable assets.

"No longer are they willing to see the river destroyed. The Ohio River Valley may well be on the threshold of its greatest age."