

CLEAN-UP ON THE DELAWARE

by

Earl Selby

Interstate commission on the  
Delaware River basin

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BY EARL AND DOROTHY SELBY

*A Reprint of An Article Appearing in the January 5, 1946 Issue of Colliers.*

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# **CLEAN - UP ON THE DELAWARE**

BY EARL AND DOROTHY SELBY

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**A STORY CONCERNING ACTIVITIES OF  
THE INTERSTATE COMMISSION ON THE  
DELAWARE RIVER BASIN**

# CLEAN-UP ON THE DELAWARE

BY MARY AND DONALD SEELY

Philadelphia's sewers add their noisome bit to the Delaware's daily load of a half billion gallons of sewage and industrial wastes

**T**HE Delaware is a slovenly river that has been begging for a bath since the Founding Fathers met along its banks. As far as pollution is concerned, it could surpass almost any river in the world, for there are few better examples of man's inhumanity to man—and to nature.

Every day in the year 500,000,000 gallons of sewage and industrial wastes plop into the river's system. Ninety-five per cent of it is raw and untreated. When the bacteria get working on this material, they produce a stink that has made strong men shudder and weak women faint.

There is a story, perhaps apocryphal, that naval aviators flying into the Philadelphia port area for the first time are cautioned not to become alarmed when they smell a strange odor at 5,000 feet. The smell is not fire; it's only the Delaware.

It is easy, of course, to account for the river's odor; the difficulty comes in doing something about it. For more than a century, people living along the river looked for a solution. Until ten years ago they hunted in vain, and then the Interstate Commission on the Delaware River Basin was born.

You can see that this commission, whose name was promptly shortened to Incodel, has a big future. For the commission has staked out a goal in the most problem-beset of areas. It wants to show America how home rule can boss our rivers; how, to be specific, the people

can effect region-wide co-operation to control those cantankerous resources that are the province of no one state. Incodel believes there is a middle ground between U.S. control of these resources and chaotic do-nothing by the states. Its accomplishment is in provoking New York, New Jersey, Pennsylvania and Delaware into mutually accepted pacts for controlling, conserving and improving the Delaware.

Because the river is only 369 miles long, and rarely surges into the headline-capturing violence of flood, the tendency is to dismiss Incodel as a purely regional experiment. The fact is that what Incodel has done thus far has created considerable stir.

In the Missouri River Valley, for instance, groups are working to create a multistate commission designed to end both the cat-and-dog struggle of the irrigation people versus the flood-control authorities, and also the inefficiency of the various states. The same program is developing in the Columbia River Valley, while the Potomac basin now has its own Incodel-patterned agency.

In its operation, Incodel is unique. It can pass no laws, issue no directives, build no buildings. Its sole weapon is conversation; its method, persuasion. None of the twenty commission members (five from each of the 4 states) is of national stature, but the idea is. With a working staff of five—an executive secretary, a research engineer, a draftsman,

and two secretaries—Incodel stepped into one of America's great muddles. In the basin, there are no less than 838 distinct governmental units, such as cities, townships and counties, thousands of factories and hundreds of thousands of farms. Unco-ordinated in their use of the river, they lived, before Incodel, in a state of factional warfare, with industry fighting government, state pitted against state, city against city. All the while, the Delaware—one of the Eastern seaboard's most important rivers—was sabotaged.

Industries, for instance, thought it foolish to stop using the Delaware as a free conveyor belt for their often-poisonous wastes when cities, with a far greater volume of refuse, went on dumping their sewage. Cities, in turn, refused to have a conscience about the river when the states had none; and for over a century the communal guilt of the four states in refusing to enforce river-control laws had been the excuse of each for placidly letting the river go to hell.

Naturally this had multiple repercussions as a half billion gallons of sewage and wastes poured daily into the Delaware and its tributaries.

Item: In summer the river's low oxygen content around Philadelphia permits hydrogen sulphide gases to form. Because of the fumes, the U.S. government almost had to be satisfied with less-than-perfect secret radar equipment when metal corroded right on a

war plant's assembly line. Only expensive machinery and a new production technique saved the day.

Item: Pennsylvania has already lost part of the reconversion battle. Industries refuse to plan now for postwar plants because of the state's polluted streams.

Item: Russian sailors found the water so dirty it clogged their ship pumps, necessitating expensive repairs.

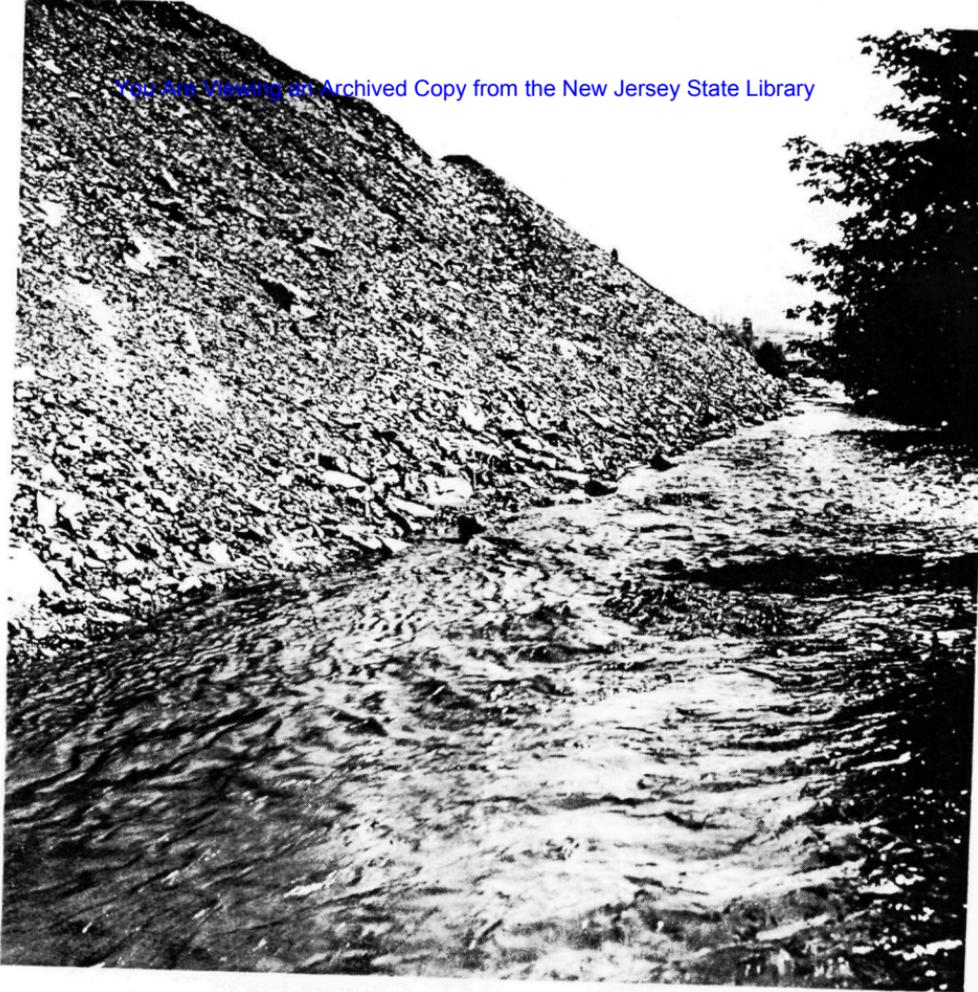
Item: Scientists are now investigating the theory that the high incidence of infantile paralysis in the Camden-Trenton-Philadelphia area may be caused by the river.

Further, there is the possibility that if pollution is unchecked, Philadelphia, our third largest city, may turn into a forgotten port. The federal government has already sunk \$80,000,000 into improving the Delaware and now faces the possibility that all of it will have been wasted unless something is done. But Incodel is making great strides to protect the federal investment and to guarantee a healthful environment for 5,000,000 of the basin's citizens—all on a \$35,000 annual administrative budget.

Ten years ago, the basin states began searching for a technique to end the anarchy of the past. In its world of dams, the Tennessee Valley Authority was fulfilling its promise—a workable, efficient solution to the river problem. The question was whether any one else could do part of the same job.



Ellwood J. Turner, Chairman of Incodel



Millions of tons of silt are washed into Schuylkill River from coal mining operations.

When in 1935 the Council of State Governments was formed in Chicago, as a sort of interstate clearinghouse for mutually needed information, its co-operative method appealed to the Delaware basin states. New Jersey was the first state to create a Joint Legislative Commission on Interstate Cooperation. Pennsylvania and New York were the second and third to follow New Jersey's lead. In 1936 these commissions, together with the representatives of Delaware—which did not form a commission until 1939—met in Philadelphia for the first time. One major problem confronted them: the river. Accepting the challenge, the delegates organized Incodel.

Three major divisions were set up in the new organization. The commission itself had

four state delegations, each including a senator, a representative, a member of the governor's cabinet, and a planning-board delegate. The idea was that this gave Incodel a friendly voice in almost every branch of state government. Later a delegate-at-large was added from every state.

Technical advisory committees on quantity and quality of water, research and planning were named in the second division, while the third—the staff—was authorized to pool the combined facilities and information of the existing state government agencies.

Seldom has a commission been created on such a slender shoestring. As a matter of fact, it is doubtful if Incodel would be what it is today had not Ellwood J. Turner, a veteran Pennsylvania lawyer and legislator,

been among those present at the first meeting. From the Pennsylvania banking department he wangled free office space. He borrowed secondhand furniture, and persuaded the state government council to pay for Incodel's executive secretary, stenographer and office supplies. He convinced the National Resources Planning Board in Washington that it should lend an engineer; they sent a young Bostonian named Jim Allen. He stayed on with the commission, and today, as executive secretary, is the indefatigable aide of Turner, who is now Incodel's chairman.

Thus equipped, Incodel went to work. Instead of taking orders from the states, it set out to advise them on a course of action—but to do it in such a way that the commission supplemented rather than supplanted the existing agencies of state government.

Incodel's officials, led by Turner, had a theory that men in a courtroom, where the basin states previously had done most of their negotiation, never reach a meeting of the minds except under compulsion which only breeds future rancor. Therefore, said the commission, let some men who are not being coerced into a forced settlement meet around a conference table.

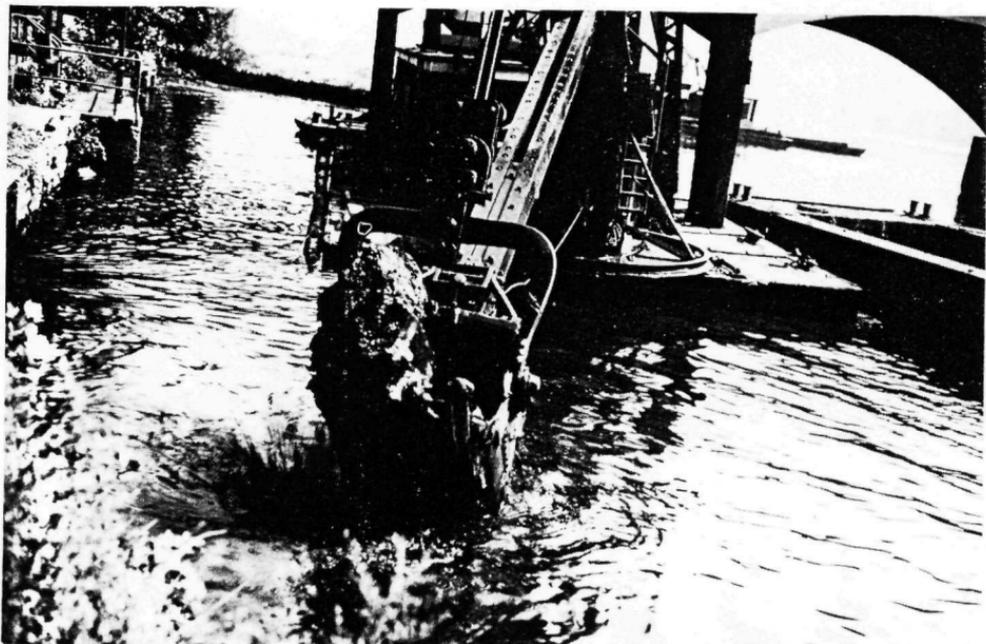
The four chief engineers of the basin's health departments—Harry Croft in New Jersey, Ted Moses in Pennsylvania, Charles Holmquist in New York, and Richard Beckett in Delaware—were appointed the advisory committee on water quality. At first, their meetings were filled with rhetoric rather than

action. Gradually, however, their sessions resulted in a unified plan whereby sewage treatment measures were decreed for each of four zones.

In setting these divisions, the four men relied on the habit of sewage bacteria of eating themselves literally to death. If the microscopic organisms have enough oxygen they will keep on re-creating themselves, but each time in a lower form of life, until finally the process can go no further, and only inert, lifeless matter is left. With insufficient oxygen they cannot develop.

Normally, dissolved oxygen is found in all water but it can be depleted if there are too many bacteria. When this happens, man must help. And so, in the first zone, running from the headwaters to Trenton, oxidation treatment must be employed to permit bacteria to render 85 per cent of the sewage innocuous; the river will neutralize the balance. The provision is made, however, that the effluent cannot be so great in volume or potency that it will consume more than one twentieth of the river's normal oxygen supply.

This is a very high standard, but it was necessary to maintain the comparatively clean water now present in the upper reaches. In the second zone, extending down to Penny-pack Creek in Philadelphia, the engineers specified that effluent could be poured into the Delaware only to the point where one tenth of the dissolved oxygen was used for bacterial food. This figure jumps to one half in the third zone which, stretching from the creek to the Pennsylvania-Delaware bound-



Dredging silt in lower Schuylkill River, Philadelphia, to prevent clogging of waterworks' pipes.

parts of the river. For the last division, reaching down to the sea, the sanitation code asked only that sewage be kept from being a nuisance, both to recreation and navigation.

There are other factors, such as floating solids (banned completely), and acidity (held to a minimum), but the oxygen consideration is primary. The engineers reached their particular standards by analyzing future water use of the river. The first two zones eventually will be the postwar drinking fountain for New York, Philadelphia, Trenton and other cities. Consequently the standards are much higher than in the third and fourth, where the river will be mainly used by industries and for navigation. But in both places the water must be clean enough, so that fish, which now die by the thousands in the poisonous refuse, can survive.

## Industrial Lobbies Oppose Code

Incodel's political *savoir-faire* in dealing with the legislatures enabled it to get the committee's sanitation code promptly made law in New York, New Jersey and Delaware, but in Pennsylvania certain industrial lobbies proved too strong. Undaunted, the commission created an effective stopgap by persuading the State Sanitary Water Board to adopt its standards for prosecution of pollution offenders. (And in the last legislative session, Pennsylvania made the code into law.)

So far, so good. The question was: Did the code have teeth? It did. Spurred by it, 35 Pennsylvania and 12 New Jersey communities bordering on the dirtiest parts of the Delaware shelled out more than \$10,000,000 to build pre-Pearl Harbor sewage collection and treatment plants.

Had not the war interfered, there would have been more antipollution construction; even so, Incodel has not relaxed. Ceaselessly preaching co-operation, it has coaxed the communities into backing a \$100,000,000 building program which awaits only the release of manpower and construction materials. Even Philadelphia, renowned as a citadel of the do-nothing, has blueprints ready for completing at least three plants within five years, and the Pennsylvania legislature has now passed laws by which the state will help cities both to plan and build treatment units.

But sewage is only one phase of the pollution problem. The whole valley's toughest dilemma is the coal silt in the Schuylkill, largest Delaware tributary. Once a beautiful stream, the river has become tainted by the dumping of 30,000,000 tons of minuscule coal—enough for an island 30 miles long, 200 feet wide and 10 feet high. In upstate Pennsylvania, mountains of culm—the coal particles strained away in preparing anthracite for market—tower three, four and five hundred feet high.

Incodel found that for every four tons of the fuel sent to market, the mine men cheat themselves by carelessly allowing one ton to slip away in the wash. It makes no difference that 67 per cent of the waste is burnable and that the remainder can be used for lipstick base, dry ice and parkway filling.

There was no hope for Incodel to stop the silt dumping until Pennsylvania's Republican administration ceased revering King Coal. Accordingly, Incodel presented fact after fact to the state officials, seeking to convince them that they had to crack down on the operators.

Finally, in the spring of 1944 came the two breaks the commission had been awaiting. Making an historic about-face for his party, Governor Edward Martin suddenly plumped 100 per cent for clean streams. This gave the impetus of official sanction to Incodel's plan to beat the silt-culm menace by having the state appropriate \$15,000,000 to dredge the upper river and build a desilting basin; the federal government to use at least \$10,000,000 for scouring out the lower river; and the coal operators to spend \$6,000,000 for silt treatment plants. Pennsylvania has already appropriated \$5,000,000.

The second break came in the U.S. government's position. Army engineers had reported in 1938 that there was no ground for federal intervention; it was, said the Army, a state problem. Then, in 1944, Allen and Turner went to work. Buttonholing Pennsylvania's senators, at that time Joe Guffey and Banjo Jim Davis, they succeeded in getting them to introduce a resolution calling for a resurvey of the engineers' previous study. The measure was unanimously adopted. The Army men are now at work amid indications that they will change their previous finding and urge that federal funds be appropriated for the clean-up.

But while the state and federal governments have indicated that they will meet their responsibilities, the mine men have been in no mood to divert their war earnings for treatment plants, even though it has been demonstrated that the salable material increases ten per cent when the silt is reclaimed and marketed.

The state, however, is going to force the companies to increase their sales—an ironic twist in industry-government relations—by issuing orders instructing them to plan now for the silt-recovery plants.

"As far as the state of Pennsylvania is concerned," says Attorney General James Duff, who carried Incodel's program to Governor Martin, "the days of appeasement toward coal operators are through."

Even Incodel's boosters will admit that this action has not yet rid the Schuylkill of its coal scab; but no opponent can deny that the commission initiated the first integrated plan for letting a democratic task force at-

tack the problem.

Because the powerful hard-coal lobby was admittedly one of the shrewdest opponents a fledgling commission could have tackled, the Schuylkill program was carefully discussed both in meetings of the full membership and in the five-man executive board. The four state delegations to Incodel convene on an average of four times a year, while the board meets about every 45 days to mobilize for immediate action whenever necessary. Thus, when Philadelphia's water consumption soared astronomically in 1942, the matter was mentioned in a board meeting attended by Turner, Beckett, Joseph Paul from New Jersey, Franklin Lichtenwalter from Pennsylvania and Doctor M. P. Catherwood from New York.

Believing that a great deal of water was being wasted, the commission flooded the area with pamphlets declaring that because "water wins wars; don't be a drip." A month later Penn City burghers had proved they could use 40,000,000 less gallons a day and still not be the Bathless Groggins of America.

No less successful was Incodel's approach to the crucial dilemma of water diversion. Without water, a community withers, expansion stops, progress ends. Knowing this, Pennsylvania, New York and New Jersey pitched knives at one another for a quarter century, each determined to usurp the lion's share of the river. The U.S. Supreme Court and two previous interstate compacts had failed to resolve the conflicts, but Incodel did it in less than four years.

## A Formula is Accepted

It simply asked, Charles Baizer, Russell Suter and Howard Critchlow, the water-control agency chiefs in Pennsylvania, New York and New Jersey, to act as the advisory committee on water quantity and thereby determine how the inherent right of each to use the river system could be best enjoyed and protected. Surprising everyone—including themselves, as Ryder later confessed—the men arrived at a formula specifying who could divert how much, and when. Under its terms, now made law, New York City is building the famed, 200-mile aqueduct. Oystermen, whose \$7,000,000 business would be destroyed if too much headwater diversion disturbed Delaware Bay's fresh-salt water balance, are content that their industry won't be ruined.

The upstream diversion work led Incodel quite naturally into still another task. How to preserve the still-virgin upper river basin. Accessible to 15,000,000 persons by a short automobile ride, the 55,000-acre area is one of the seaboard's major recreation wildernesses. In it are such playtime paradises as the Pocono Mountain resorts, and the magnificent Delaware Water Gap.

Fearing that this rolling, picturesque land will be exploited, Incodel has begun broadcasting that the states and local governments must do two things: Effectuate measures to conserve, protect and develop the soils, forests, water and scenery, and improve transportation facilities so that many more city dwellers can find their leisure in the area.



Upper River Basin, yet unspoiled, is one of country's major recreational areas.

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Coming as the first unified proposal, the commission's program has been incorporated into the postwar planning agenda of New York and Pennsylvania.

In recreation, as in its other achievements, Incodel realized that its role was only suggestive. Its function did not go beyond demonstrating that local governments, if given impartial advice and direction, can unite in a democratic fashion to solve their own problems.

As a creation of the four Delaware basin states, the commission is dependent upon them for financial support, but there are no grumbles when the legislatures appropriate funds for it. Pennsylvania now contributes \$15,000; New York and New Jersey \$8,750 each, and Delaware \$2,500.

Incodel set some kind of record for political agencies when at war's outbreak it voluntarily asked the states to cut its budget by one third, on the grounds that for at least the first two years after Pearl Harbor, operations would be reduced.

The politicians manifested a good deal of surprise over this request. They went along, of course, but not without comment. There was, for example, the one old Pennsylvania farmer-legislator who remarked, "Don't understand it, but there must be something unusual about that Incodel crowd."

Thus far, the old boy has never had to retract his words.

THE END