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CHESAPEAKE BAY
U.S. ENVIRONMENTAL PROTECTION AGENCY

The Chesapeake, Atchafalaya & EPA

Environmental problems involving the Nation's largest estuary, the Chesapeake Bay, and the country's biggest river, the Mississippi, are discussed in this issue of EPA Journal.

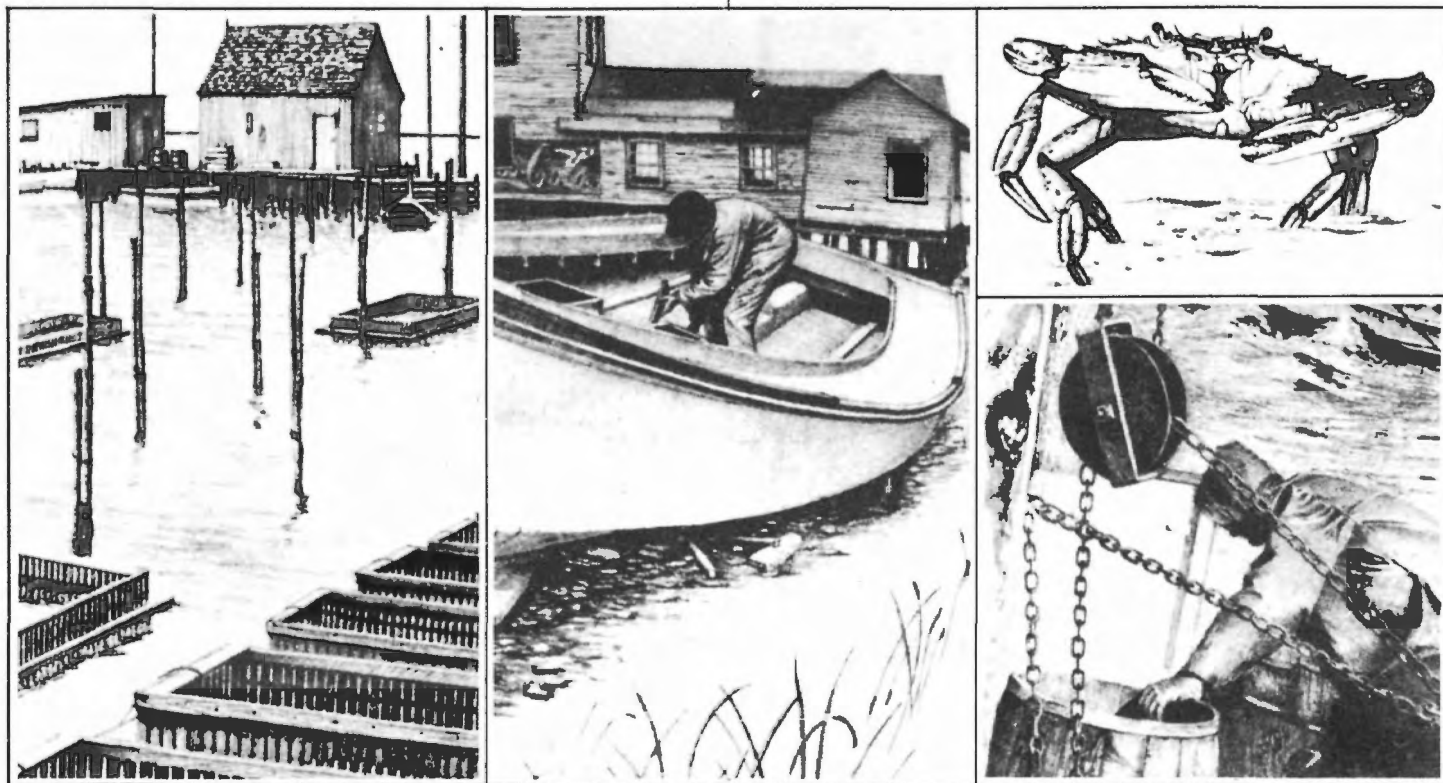
The special pride that many Easterners feel in the Chesapeake is reflected in the following paragraph from a new book, "Beautiful Swimmers," by William W. Warner:

"The Bay. There is no possible confusion with any other body of water, no need for more precise description. It is, after all, the continent's largest

one of the articles in this issue.

Far to the South, EPA is seeking answers which may help decide the fate of the Atchafalaya Basin, a spectacular wilderness swamp in central Louisiana. The Basin serves as a safety spillway that in high-water times siphons off much of the peak flow of the Mississippi River which might otherwise flood Baton Rouge and New Orleans.

The Corps of Engineers has been considering the possibility of making the Atchafalaya River deeper and wider so that it can carry out flood waters at a



estuary. Its waters are rich, the main supply of oysters, crabs, clams and other seafoods for much of the Atlantic seaboard. Its shorelines cradled our first settlements. It is the Chesapeake."

The title of this fascinating book comes from the scientific name of the Atlantic Blue Crab, *Callinectes sapidus*. (*Callinectes*, Greek for "beautiful swimmers," *sapidus*, Latin for "tasty.")

The book is an engrossing account of the life of the blue crab, the watermen who catch them and the Bay which nourishes them in such abundance. Mr. Warner reports that anywhere from 150 million to 240 million blue crabs are removed from the Bay each year, a multi-million dollar crop.

Increasing concern about the future of Chesapeake Bay has prompted a major study by EPA to develop a management system to protect the Bay's water quality. The launching of this study is the subject of

much faster rate. Conservationists fear that this dredging could drain the river swamplands which now support an extraordinary abundance of wildlife.

EPA is working with the Corps, the State of Louisiana, and other Federal agencies to prepare a comprehensive plan for management of water resources in the Atchafalaya Basin which will accommodate flood control and yet preserve the swamp areas necessary for wildlife.

Other subjects covered in this issue are:

EPA's new regulations to curb boat wastes; the Agency's role with the news media; a review of the latest CEQ annual report; an article on the coming of the metric system; the latest in a series of regional reports, this one from Region V in Chicago; and a review of the Agency's new movie on the construction grants program. □

EPA JOURNAL



U.S.
ENVIRONMENTAL
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COVER: This view of one of the famed Chesapeake Bay skipjacks was taken from another sailing vessel at last year's annual Chesapeake Appreciation Day. The one-masted skipjacks, built for the dredging of oysters, comprise the only commercial sailing fleet left in the United States, according to Maryland officials.

INSIDE COVER

Drawings by Consuelo Hanks from **BEAUTIFUL SWIMMERS: Watermen, Crabs and the Chesapeake Bay** By William W. Warner. Copyright (c). 1976 by William W. Warner. Reprinted by permission of Little, Brown and Company in association with the Atlantic Monthly Press.

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PROTECTING THE CHESAPEAKE

Flying through a dawn mist over Chesapeake Bay, the osprey suddenly folded its huge wings, hurtled downward and sank completely out of sight as it plunged, talons first, into the Bay in a shower of water.

Emerging a few seconds later with a wriggling three-foot eel, the osprey, often called the fish hawk, shook the water from its wings and rested for a moment on the surface. Then it flapped off with its prey clutched in its talons towards its large nest of sticks on a nearby channel light marker.

The osprey nestlings began their clamor for food as soon as they heard the squealing whistle of the arriving parent.

So began another day in the life of the osprey, one of the billions of organisms dependent upon Chesapeake Bay, the Nation's largest estuary, for their livelihood.

The osprey, which has been making a comeback on the Bay since the banning of DDT, is a symbol of the extraordinary wealth of fish, shellfish and wildfowl that feed, breed and thrive in the Bay waters.



Osprey guards its nest on a channel light marker.

However, the future of the Bay is threatened by its most intensive user, man. Millions of people visit the Bay every year for its fishing and boating and hundreds of towns and industries depend on its waters.

It is this mounting use and abuse which led the Senate Appropriations



Racing on Chesapeake Bay.

Committee to direct EPA to conduct an in-depth study of Chesapeake Bay after it found that "this estuary is a critically important natural and economic resource, but is subject to many pressures which, if uncontrolled, will lead to the degradation of the whole Bay area."

This study, which is beginning now, will be under the over-all supervision of Daniel J. Snyder, III, Region III Administrator and National Program Manager for the Chesapeake Bay. Director of the Chesapeake Bay study program is Len Mangiaracina.

"The primary goal of the program will be to develop a management system which is designed to maintain and improve the over-all water quality of Chesapeake Bay," Administrator Russell E. Train explained.

Mr. Train said that the Bay "is an incomparable recreation resource for one of the most crowded population areas of the country. Most importantly, it serves as a source of livelihood for many of the eight million people who live in the Bay area."

"Their way of life, their culture and values, as well as the livelihood that the Bay provides, are increasingly threatened by the pressures for industrial development, from population growth, from housing developments and other construction, from man-induced changes in salinity, and from the flood of substances ranging from silt to pesticides and other chemical compounds that continue to pour into the Bay."

On a personal note, Mr. Train said that "for many years, my wife and I sailed the length and breadth of the Chesapeake Bay on weekends and whenever else we had the chance, anchoring at night among the innumerable creeks and coves that make the Bay one of the world's great sailing grounds."

"It was then that we began a love affair with the Bay that led almost 10 years ago to the purchase of a waterfront farm in Talbot County on the Eastern Shore. There I spend every free moment I can!"

The over-all study of the Bay by EPA, which may take several years, will use a two-pronged approach:

1. Strengthening planning and regulatory actions to deal with the special problems of Chesapeake Bay. Consideration will be given to increasing priority for construction grants to municipalities within the Chesapeake Bay drainage area, reviewing permits given to industries and cities for discharge of wastes to the Bay and tightening permit restrictions when necessary, coordinating activities of area-wide plan-



Dead fish washed ashore at Sandy Point State Park, near Annapolis, Md.

- ning agencies and encouraging local planning agencies to seek appropriate legislation to curb pollution from such non-point sources as farms.

2. Establishing and strengthening knowledge of existing and potential water quality problems which could be subject to regulations. The Region III



Maryland fisherman hangs up his nets.

Office is reviewing existing information about the Bay, evaluating present State and Federal monitoring programs with the objective of correcting any weaknesses and seeking to identify areas where further study and research are needed.

Mr. Snyder said that the study will emphasize the coordination of existing programs being conducted by agencies now operating in the Bay area, including the Maryland, Pennsylvania, Virginia, Delaware and West Virginia state agencies, the eight local planning agencies now operating under the Federal Water Pollution Control Act, the Army Corps of Engineers, and the National Oceanographic and Atmospheric Administration.

The Army Corps of Engineers is

completing a huge hydraulic model of the Bay. This approximately \$10-million, nine-acre model is located in a 14-acre building on the Eastern shore near the Bay Bridge. It will be used to study tidal action and many Bay water functions and problems.

Hundreds of studies of the Bay have been made by the Corps of Engineers, the State of Maryland, and many other public and private agencies over the years. Approximately 50 public and private institutions have a professional interest of one sort or another in the Chesapeake Bay estuarine system.

In an effort to take advantage of this wealth of existing knowledge about the Bay, EPA plans to establish a Policy Advisory Committee, a Citi-

zens Advisory Committee and a Technical Advisory Committee.

Scientists, planners and resource managers will be invited to a workshop conference on the Bay that EPA plans to sponsor late this summer or in the fall.

The major emphasis in the early phases of the study will be coordination of the efforts of the agencies and jurisdictions which have an interest in the Bay, collecting and analyzing technical data and developing an effective monitoring system. Research will also be a significant part of the study.

A total of 10 positions and \$500,000 has been made available to Region III to begin the study.

Some of the critical problems now threatening the Bay's water quality are: toxic organic materials such as pesticides and industrial chemicals; nutrients such as nitrogen and phosphorus from municipal and industrial wastes, which stimulate excessive growth of aquatic plants; disposal of contaminated dredge spoils; and heavy loads of sediments from eroded land.

The Administrator recently wrote to the Governors of Maryland, Virginia and Delaware reporting on the problem of contamination by the toxic pesticide, Kepone. The letters advise the Governors of the maximum safe residue levels of Kepone for oysters, crabs and finfish, recommended by EPA to the Food and Drug Administration.

The discharge of nitrogen and phosphorus in human and other wastes has contributed to heavy blooms of algae plants in the upper Bay, which threaten to upset the Bay's ecological balance.

Another cause of concern in the Bay is the gradual loss of rooted grasses in the tributary streams. These grasses play an important role in providing food for waterfowl and shelter for many water creatures.

Other water quality problems in the Bay are: bacteriological degradation, a diminishing level of dissolved oxygen in the water, fish kills, oil spills, thermal and industrial pollution, and increased deposits of sediment.

The Bay is immense—195 miles long, four to 30 miles wide, and with an average depth of 28 feet. But using it in an irresponsible manner, as a sink for a wide variety of industrial and domestic wastes, could shorten the useful biological and recreational lifetime of this world-famous Bay. □

Sentinel on the Bay

By Truman Temple*

When Captain John Smith sailed up the Chesapeake in 1606 he called it "a very goodly Bay, 18 or 20 myles broad" and added:

"In sommer no place affordth more plentie of Sturgeon, nor in winter more abundance of fowle, especially in time of frost. I tooke once 52 Sturgeons at a draught, at another 68."

If Captain Smith should sail up the Bay today, he would still find it goodly, but he might also encounter some EPA research vessels making sure it stays that way. For the Bay is threatened with environmental problems, and one of the functions of EPA's Annapolis Field Office is to monitor them and keep the Agency and the public alerted to the hazards.

Like many of EPA's operations, the Field Office came from another agency. It started life in 1965 as part of the water pollution control program in the Department of Health, Education and Welfare and was later moved to the Interior Department. It was an arm of the Federal Water Quality Administration when that Agency became part of EPA in 1970.

Through the years, the Field Office's mission also has changed. Not only must the staff patrol the Bay's 195-mile length but also devote a very large proportion of work to other environmental problems of Region III. During a recent interview, for example, Oterio Villa, director of the facility, was interrupted by several phone calls. One disclosed that the highly toxic pesticide Kepone had been found in crabs in the James River. Another dealt with Philadelphia's drinking water supply. And the Field Office's activities also range from air sample monitoring in Washington, D.C. to arsenic in the soil at Alexandria, Virginia, and measurements to determine pollutants in the effluents from steel mills around Pittsburgh.

Although "crisis" sampling has preoccupied the staff in recent months as one after another hazardous pollutant has cropped up in the environment, much of their activities deal with routine enforcement of water and air laws, including the National Pollutant Discharge Elimination System of permits.

To serve the Region, the Field Office operates with a staff of 30 in the cramped quarters of a rented building (and three trailers) at the western edge of Annapolis.

The workload has grown so heavy that a new laboratory building near the existing site is now planned for completion next year that will increase space from 7,500 square feet to more than 30,000. The facility also will be redesignated as a consolidated regional laboratory from its present status.

The enlarged quarters will come none too soon. The staff not only must provide technical expertise to the Region, including sampling of drinking water, monitoring river basins, and air and NPDES enforcement, but it must also make numerous ocean cruises to inspect dumping sites on the continental shelf. In addition, the Field Office provides three Districts and seven area offices of the Coast Guard with analyses in oil spill cases.

"We use four or five different methods to analyze the oil," Mr. Villa explains. "If necessary, we can even tell whether the oil came from a Venezuelan or Arabian oil field by the vanadium and nickel in it."

The Field Office maintains a small fleet to carry out its tasks. At the moment it has a 33-foot Bertram, a 27-foot Concord, a 23-foot Thunderbird it acquired from EPA's Cincinnati Lab, plus a couple of Boston Whalers for quick runs into shallow coves. Four of the staff members are qualified scuba divers. On the oceanographic cruises aboard large Coast Guard cutters—13 trips so far to the dumping grounds off Delaware and Maryland—the staff has taken samples from 200 feet down. (DuPont and the City of Philadelphia, which now use the ocean dumping sites, are scheduled to phase out their operations in the next few years.)

Who are the most and least cooperative industries in the Field Office's experience? Oddly enough, the answer does not seem to correspond to the industry's resources. One of the best that he has encountered in the Region, Mr. Villa declares, is a pork processing plant in Virginia! The firm, Cornwell Brothers, not only has pioneered in controlling pollutants from its meat handling operations but has

been praised by former EPA General Counsel Alan G. Kirk for its efforts. And at the other end of the spectrum, some nationally known companies have used extensive stalling tactics and legal maneuvers to avoid compliance with the law, according to Mr. Villa. On a couple of occasions, EPA inspectors were even denied entrance to the plants and had to get their enforcement lawyers on the phone before they could get inside the gates.

Mr. Villa, who majored in chemistry at Dickenson College, Carlisle, Pa., and did graduate work at the University of California at Berkeley and at George Washington University, Washington, D.C., has maintained an interest in the sea for a long time. He served as a Naval officer aboard the cruiser U.S.S. Columbus for three years including a tour in the Far East, and later worked in a Naval research laboratory in California. He joined the Annapolis Field Office in 1966, and has been director since 1973. In his current post he has helped in formulating EPA regional guidelines for management of dredge spoil, in designing the new laboratory, and in planning for the new EPA study of the Chesapeake Bay.

If a visitor took a superficial look at the daily work of the Annapolis staff, he would assume that only a small amount of its time—perhaps 5 percent—is spent patrolling and monitoring the Chesapeake. But Mr. Villa points out that this is deceptive. When one adds in the related monitoring of the many tributaries emptying into the estuary, and the NPDES permit program for industries along those rivers, much of the facility's work is involved with the ultimate impact of man's activities on the ecology of the Bay. "By this yardstick, close to half of all our work affects the Chesapeake," Mr. Villa declares.

That says something about the problems of the estuary and why the forthcoming EPA study of this rich body of water has support in Congress. As Senator Charles McC. Mathias of Maryland said in recent hearings, "I can't imagine any other single natural resource in this country that demands protection more, both in terms of its inherent resources, and of its dangers, which are increasing."

To which Captain Smith might add a heartfelt "Amen." □

**Truman Temple is a Headquarters Public Affairs Officer.*

Challenge of a Louisiana Swamp

Along the Atchafalaya River in central Louisiana lies a spectacular swamp area about the size of Delaware.

It is laced with natural lakes and bayous, shaded by cypress, tupelo gum, and oak trees, overhung with Spanish moss. Its waters teem with fish, including Louisiana's gourmet specialty, crawfish. In recent years the commercial fishing in the Basin has produced a \$25-million catch annually, with crawfish topping the list as the most valuable species.

The Atchafalaya Basin swampland is a bountiful home for wild animals and birds, including such endangered species as the black bear, the brown pelican, and the alligator.

Boaters who cruise along the canals and natural waterways of this watery basin are awed by the natural beauty. Herons, egrets and bitterns wing their way through the corridors of this shadowy forest.

Even though the Atchafalaya's recreational opportunities are not well known nationally, visitors in this waterland bring Louisiana an estimated \$42 million a year in recreation revenue.

Moreover, the Atchafalaya has a unique and critical use as a safety valve for the Mississippi in the high-water months every spring and especially during periodic disastrous floods. It is the sluice that has kept Baton Rouge and New Orleans from being washed away every 20 years or so.

The Atchafalaya River and its adjacent waterways have been filling up with silt, reducing their flood-carrying capacity. The Army Corps of Engi-



Cypress and tupelo gum trees, many festooned with Spanish moss, thrive in the wetlands.

neers believes that widening and deepening portions of the main river channel would allow the silt to be carried more effectively through the Basin and into the Gulf of Mexico. Conservationists fear such dredging would drain the swamps that support the extraordinary abundance of wildlife.

At the request of Congress and Louisiana officials, EPA is working with the Corps, the State, and other Federal agencies to prepare a comprehensive water management plan that will provide flood control and yet preserve the swamp areas necessary for wildlife.

The Basin so far has been a good safety valve, a key component in the elaborate system of levees and floodways built by the Corps of Engineers to protect people and property along the Mississippi's last 500 miles. Portions of its water are diverted into the Atchafalaya far upstream from Baton Rouge by a diversion dam to reduce the level of the lower Mississippi and control flooding.

Three-in-One-Floodway

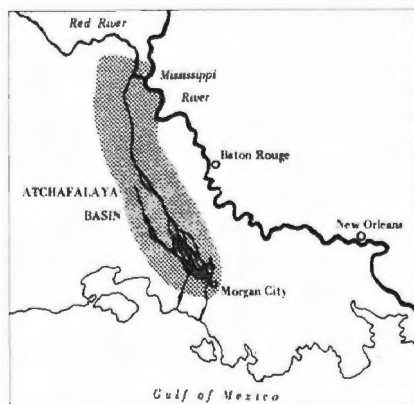
The diverted water has a short cut to the Gulf of Mexico, about 120 miles instead of 500 by way of New Orleans. It reaches the Gulf through the natural Atchafalaya outlet at Morgan City, 70 miles west of New Orleans, and through an artificial channel at Wax Lake, 10 miles farther west.

Considerable dredging has already

been done on the main Atchafalaya channel. Levees have been built on each side of the northern portion. Outside each levee are lowlands that can be flooded also when the main channel is overloaded. At the southern end of the Basin all three floodways become one, and it is here that silt and mud are filling the lakes and swamps, steadily destroying the wetlands. Flood-borne silt is already forming a new delta in the Gulf south of Morgan City.

In addition to Mississippi water, the Atchafalaya wetlands get a constant supply of water from rainfall (averaging about 60 inches annually) and from the Red River, which extends northwestward through Louisiana to Arkansas, Oklahoma, and Texas.

The problem of managing the Atchafalaya floodway is a maze of apparently conflicting interests that must be balanced against each other and against the expected costs and benefits. Flood management can hurt or benefit wildlife habitats and fishing. Siltation can ruin wilderness areas and make flood control less and less effective. Landowners want their acreage drained and want to be paid by the Government for permission to let it be flooded. Boaters and sportsmen are attracted to the natural waterways, but they want canals and dredging to make them more accessible. Oil and gas men don't mind the floods—they can drill anywhere—but they need



Continuing on page 6



Aerial view of part of the Atchafalaya Basin, a pattern of lakes, river channels, sand bars, deltas and swamps.

deep waterways to get equipment in and barges out. Conservationists want to preserve the habitat for the beavers, otters, waterfowl and alligators; they worry about industrial and pesticide pollution from the Red River. Crawfishermen want a healthy catch year, which means seasonal flooding and a fairly dry period in late summer when the females can burrow in the mud and lay their eggs.

50 Years of Planning

EPA has been in this maze since 1973, studying the environmental effects, particularly those concerned with water quality, of various proposals by the Corps of Engineers for future work on the Atchafalaya Floodway Project.

For nearly 50 years the Corps has been making plans for enlarging and improving the floodway, and from time to time has dredged, diked, and built gates and sluices. The Corps' plans now call for widening and deepening the main Atchafalaya channel to 9,200 square meters (100,000 square feet) in cross-section. They say this will minimize siltation at moderate flows and so help the whole floodway to carry 1.5 million cubic feet of water per second, one half of the peak flood for which all the Corps' control works on the lower Mississippi are designed.

Under the National Environmental Policy Act of 1969, an environmental impact study must be made before the Corps can take such an action and before Congress can appropriate the

funds. Resolutions in both Houses of Congress in 1972 urged the Corps to review the whole project with EPA, the State of Louisiana, and other Federal agencies "with a view to developing a comprehensive plan for the management and preservation of the water and related land resources of the Atchafalaya River Basin" including "provisions for reductions of siltation, improvement of water quality, and possible improvement of the area for commercial and sport fishing."

EPA's share of this work has concentrated on studies of water quality, ecology, and multipurpose resource management. Agency people have been involved directly and through contract research for the last three years.

EPA Study Teams

Victor W. Lambou of the Environmental Monitoring and Support Laboratory at Las Vegas, Nev., is project officer and leader of a study team of EPA scientists and technicians based in Baton Rouge, La.

The Las Vegas helicopter team has flown extensive water sampling missions throughout the Atchafalaya Basin, establishing about 180 sampling sites. Water and bottom sediment samples are also taken by two-man teams in small boats, using a laboratory houseboat for on-the-spot analysis.

Major research for EPA on the Basin's ecology and resource manage-

ment has been done on contract by Louisiana State University scientists Sherwood M. Gagliano and Johannes L. van Beek, who last year formed their own company, Coastal Environments, Inc., at Baton Rouge, to continue the work, now in its third year.

The three-year study by Coastal Environments, Inc., will cost EPA about \$240,000, and the water quality studies by EPA people, both from the air and on the surface, are expected to total \$300,000 by the end of this fiscal year.

The Agency has worked closely with the Corps of Engineers, the Interior Department's Fish and Wildlife Service, and Louisiana agencies in charge of public works, environmental conservation, and resource management throughout the joint study period, said Peter Smith of the Office of Federal Activities in Washington.

Parallel Interests

"We have found in many cases that our interest are parallel, not conflicting," he said. "The Corps of Engineers wants to limit siltation as much as we do, though for different reasons. We see the filling up and drying out of wetlands; they see the clogging and reduced effectiveness of the floodway channels."

"Everyone participating in this inter-agency, interdisciplinary project has learned from the others."

Dr. Edwin Royce, Office of Research and Development, Washington, put the same conclusion in a different way: "We found at the beginning of



Oil and gas wells bring industry to some parts of the basin.

our study that the Army engineers were only partly aware of the environmental problems—and the opportunities—facing them. I hope our joint efforts have helped to educate them; we have certainly learned a lot. Today the environmental study is an accepted part of planning for management of the Basin. Its importance and value are no longer questioned."

The Corps has prepared a draft environmental impact statement, soon to be released, which devotes considerable attention to ecological effects and which treats the proposed floodway expansion as a multipurpose plan for the whole Atchafalaya Basin.

The results of EPA's water quality studies are not yet available; most of the baseline data are in, but scientists are still working on the simulation modeling and the predictive aspects of the water quality changes that have been observed since the study began.

Some Recommendations

Preliminary recommendations have been made, however, by Mr. Gagliano and Mr. van Beek, after the first two years of their study. They say the Atchafalaya ecosystem is being harmed by sediments and undergoing "accelerated succession" to a dry-land environment, detrimental to both wetland resources and floodway efficiency. They recommend:

- Limited channel dredging with dredge spoils used to bank the channel more narrowly than the Corps has previously proposed.



Raccoon searches for food in the Atchafalaya swamp.



Crawfish are the Basin's most valuable fishery resource.

- Setting up "management zones," seven on each side of the river, in which seasonal flooding could be separately controlled so as to preserve existing land uses as much as possible. Some zones would be predominantly forests, some swamps and lakes, some "exploitative" (agriculture, oil drilling), with buffer areas between.

- The zone system would distinguish the "pluvial" swamps, whose water comes from local rainfall, from the "fluvial" swamps subject to seasonal flooding.

- The life cycle of the crawfish should serve as a guide to swamp water levels. What's good for the crawfish is good for the wetlands: seasonal flooding and enough drying to let oxygen help decompose dead plants on the swamp floor.

- The banks of distributary channels—those that carry flood water to the sea—should be managed to minimize backflow sedimentation. If sediments can reach the fluvial swamps only when a flood overflows the banks, the swamps receive just the top water, which carries relatively less sediment, and most of the silt load would go into the Gulf of Mexico.

Deltas and Hyacinths

The Atchafalaya project has many other interesting aspects that can only be touched on in a brief article.

The southern edge of the area is an estuarine ecology; tides and storms bring salt water into the river mouth, the Wax Lake channel, and numerous

bays. Deltas are forming at both flood outlets. Their growth must be predicted and navigation maintained. Some scientists wish to encourage the delta growth and foster the development of new marine wetlands.

In the Basin itself large areas of water hyacinth are growing. This nuisance plant that clogs waterways and hastens eutrophication is now believed to have potential uses for sewage treatment and water purification. Proposals have been made to harvest the water hyacinth for animal feed supplement and garden mulching and also to grow it deliberately in wastewater treatment systems. Aquaculture of fish and crawfish in ponds is also being studied.

But the prime values of the Atchafalaya remain what they have been for several generations: a unique and very productive freshwater wetland and a lifesaving outlet for the raging Mississippi.

More than a century ago the Mississippi very nearly carved its own course through these swamps. This natural event would have left the docks dry and idle at Baton Rouge and New Orleans and changed the geography of Louisiana.

When man blocked that change by building dams to keep the Mississippi in its channel and to divert only controllable portions of highwater and floods into the Atchafalaya, the wetlands were saved for a while. Now the challenge is to keep the wetlands intact for another hundred years and still prevent disastrous floods on the lower Mississippi. □

CARBON BOAT WASTES

By Peter Acly*

Are you planning to buy a boat, or do you already have one? If so, and your craft is equipped with a toilet, you may be affected by some recent EPA water pollution regulations, which require that most boats be equipped with special devices to control the discharge of sewage. New boats—defined as those built after January, 1975—will have to be so equipped by January 30 of next year. Older vessels have three additional years to comply.

EPA's regulations are part of the Agency's plan to control water pollution caused by the dumping of human sewage into the Nation's waterways. Congress when it passed the 1972 Water Pollution Control Act Amendments gave EPA the task of controlling pollution from human wastes discharged from the more than 600,000 boats and ships which regularly use the Nation's rivers, lakes and coastal waters.

The volume of sewage discharged from vessels in U.S. waters is estimated to equal that of a medium-size city. The contributors include 550,000 toilet-equipped recreational boats, 54,000 small commercial vessels, 6,000 tow and tug boats, almost 1,500 Army Corps of Engineers vessels, 710 Navy ships, about 700 oceangoing commercial ships, and a large number of foreign vessels which enter U.S. waters.

There are good reasons for being concerned about the pollution of waterways by human wastes. If improperly treated, sewage contains large numbers of living bacteria which can cause outbreaks of waterborne diseases such as typhoid and hepatitis. Sewage also contains chemicals, some of which alter the natural balance of life in waters by promoting the excessive growth of plant life or by reducing populations of wildlife and fish. In addition, no one wants to use polluted waters for boating, fishing or swimming.

To tackle the vessel waste problem, the Agency asked for and listened to the opinions of a large number of affected groups: the boating public, commercial shippers, the U.S. Navy, environmental groups, and the U.S. Coast Guard, which is charged with

enforcement responsibilities. EPA's Office of Water Planning and Standards wanted the answers to some tough questions: How much cleanup of vessel wastes would it be feasible to require? What technology was available to do it? How much would it cost? Would the costs involved have any serious effect on the commercial activity of U.S. vessels? Could the regulation be effectively enforced?

After several years of work, EPA issued final regulations on Jan. 29.

New Rules

The new rules were formulated around the principle that the chemical and physical properties of water bodies are not always the same; therefore, especially sensitive waters—those which can't cleanse themselves easily through natural processes—should be granted a higher degree of protection than other waters.

Based on that principle, the EPA regulations forbid any discharge of vessel wastes into most freshwater bodies within any State. These include landlocked lakes, reservoirs and other freshwater impoundments, and rivers not usable for interstate travel. Generally speaking, then, small or sensitive bodies of water get special protection.

Sewage may lawfully be discharged into other waters, but it will have to be treated first by on-board equipment to meet stringent health standards. Waters in this category include most sea-connected lakes, rivers that can be used for interstate travel, the Great Lakes, estuaries, and coastal waters. Initial treatment standards for bacteria and solid material will have to be met, either in 1977 (for "new" vessels) or in 1980 (for older vessels).

Even tougher treatment standards will go into effect later, although boat-owners who act quickly to meet the initial standards may qualify for an exemption from any further requirements.

The terms of the exemptions are complex, and affected boat-owners should check the regulations in detail. But, in summary, a new vessel meeting the initial treatment standards anytime before January 1980 will be exempt from any further requirements

during the operable life of the equipment already installed. Also, older vessels which meet the initial requirements by January 1978 qualify for a similar exemption.

To comply with the EPA regulations, many owners of toilet-equipped vessels will have to install new equipment that has been approved by the U.S. Coast Guard. This will involve the installation of either a "holding tank"—from which wastes can be pumped out for treatment ashore—for use in no-discharge areas, or a "flow-through" device for use on waters where sewage must be treated before discharge.

The 1972 Act also provides for the designation of specific no-discharge areas in waterways into which the discharge of treated sewage would otherwise be allowed. One such provision permits EPA, if petitioned to do so by a State, to extend special protection to waters near shellfish beds, drinking water intakes or swimming areas. Another provision allows the States to extend no-discharge protection to other designated waters, provided that EPA is first able to determine that adequate pump-out and treatment facilities are available to service all vessels using those waters. To date, special no-discharge actions under the latter provision have been approved for the States of Missouri, Michigan, New Hampshire, Vermont, Wisconsin, New York and California. The Michigan and Wisconsin no-discharge actions have caused concern on the international front: Canada has expressed the opinion that those particular no-discharge actions interfere with the free passage of Canadian shipping through the Michigan and Wisconsin portions of the Great Lakes. Discussions with the Canadians are under way to clarify this issue.

The Coast Guard is responsible for determining which specific treatment or holding devices are acceptable to meet the EPA standards. It will also enforce the regulations by inspecting boats and ships to see that needed equipment is in place and functioning properly. □

*Peter Acly is an EPA Headquarters Press Officer.

YOUTHFUL WATER SAMPLERS

Environmental education has taken on a new meaning for thousands of high school students throughout the country.

They learn to test water for oxygen content, turbidity, and other pollution indicators and then take their equipment and notebooks to survey the pollution problems of lakes and streams in their own neighborhoods.

Such learn-by-doing programs are under way in Ohio, Washington State, Florida, Georgia, Maryland, Wisconsin, Kentucky, and New Jersey, to name only a few. Some are sponsored by the school districts and ambitious teachers, some by nearby university departments of environmental sciences and education. Still others are sparked by private foundations.

EPA's Regional Offices have frequently given active support and technical assistance for these projects.

Typical of such programs is the Watershed Heritage project in Ohio, illustrated in these photos.

Watershed Heritage was started by the Institute for Environmental Education, a non-profit organization in Cleveland, with support from the Ohio EPA, the Region V Office of EPA in Chicago, the EPA laboratories and training center in Cincinnati, and the U.S. Office of Technical and Environmental Education.



What is it? Insect larvae, small crustaceans, and worms collected from a stream are indicators of the water's quality.

Thirteen of Ohio's State Universities helped in planning the project, and five of them are supervising regular field surveys of water quality by high school students in their areas.

The students test the quality of lakes and streams in their neighborhoods on regular schedules, using equipment

and techniques approved by both State and Federal EPA's.

High school teachers in the project receive training from the Institute. Inexpensive field kits for chemical and bacteriologic testing can be purchased from the Institute or borrowed.

Students in their first year on the project learn to test water for acidity, dissolved oxygen, flow rates, and coliform bacteria. In the second year they learn more sophisticated tests. The university provides a graduate student to assist the teacher in the field and in the laboratory. For the teachers the project often provides part of their academic credit for advanced degrees.

Data obtained by student water quality inspectors is never used in litigation or in establishing water quality violations, said Joseph Chadbourne, Institute President. But it can and sometimes does serve as an early warning system, alerting the appropriate regulatory agency to make its own spot check.

Watershed Heritage is now in its third year. It was selected last fall by the Department of Housing and Urban Development and the American Revolution Bicentennial Administration for inclusion in their joint "Horizons on Display" list of places and projects worthy for visitors to see during 1976. □



Team of students, with teacher and graduate student advisor, spread out to monitor an Ohio creek. While some collect biota (living things) from the water, others take water samples.



Samples are taken back to the school laboratory for further quality checks.

The Metric System Is Coming

*Five feet two; eyes of blue,
Oh what those five feet can do,
Has anybody seen my gal?*

This golden oldie of the Jazz Age may have to be rewritten some day, with my gal's height as 157 centimeters.

The United States is moving steadily into the metric system. Cigarette lengths are given in millimeters, skis in centimeters. Many auto engines have capacity ratings in liters, not cubic inches. Blood donors give blood in pints, but the sterile plastic bags really hold 500 cubic centimeters each, a generous pint.

Weather reports on television and radio and the newspaper give temperatures in degrees Celsius as well as degrees Fahrenheit.

By 1980, the Treasury Department has decreed, liquor sold in the United States must be bottled in prescribed metric sizes: liter instead of quart, 750 milliliters instead of fifth, etc. A transition period will start next October when metric sizes in liquor bottles will be optional.

Although miles and gallons still have a strong hold on the average American's consciousness, it seems only a matter of time till they will be replaced by kilometers and liters. Pounds and acres will give way to kilograms and hectares.

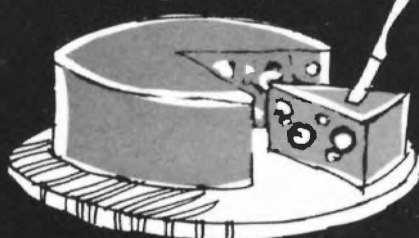
The metric system is increasing in use throughout the world for two principal reasons: It is simple and it is a decimal system. The U.S. monetary system has always been based on decimals (factors of ten). The dime equals one-tenth of a dollar and the cent equals one-hundredth of a dollar. By contrast, our customary measurement systems involve units which require the use of fractions.

Weight

1 kilogram = 2.2 pounds



250 grams = 9.0 ounces



500 grams = 1.1 pounds



100 grams = 3.6 ounces

Length



30 centimeters = 1 foot



President Ford signed into law last Dec. 23 the Metric Conversion Act, declaring a "national policy of coordinating the increasing use of the metric system in the United States" and establishing a U.S. Metric Board to coordinate the "voluntary conversion."

While the law sets no deadline, many American industries are actively pressing for conversion because of their extensive international trade with countries using the metric system.

EPA is doing its bit to help convert the United States to the metric system of measurement, officially known as the International System of Units.

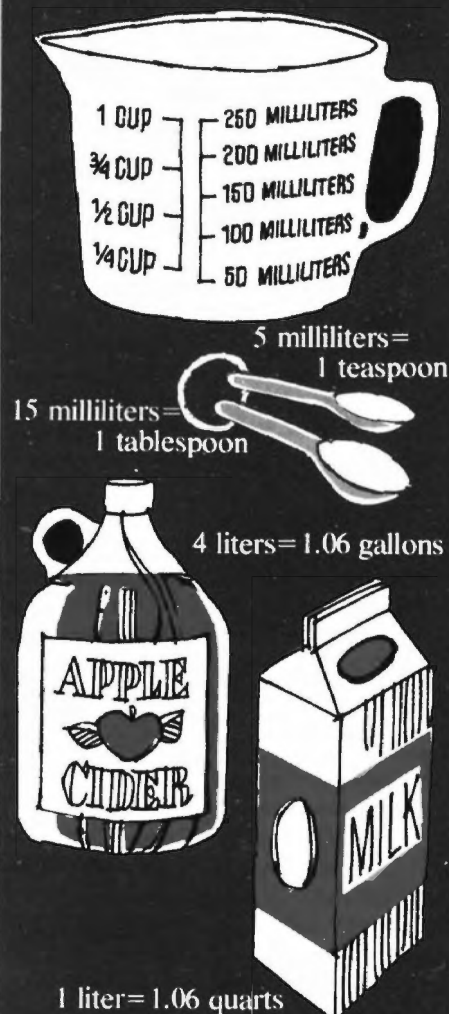
EPA is ahead of most Federal agen-

cies in using metric measurements, according to a three-man Agency task force that reported last year to Alvin Alm, Assistant Administrator for Planning and Management.

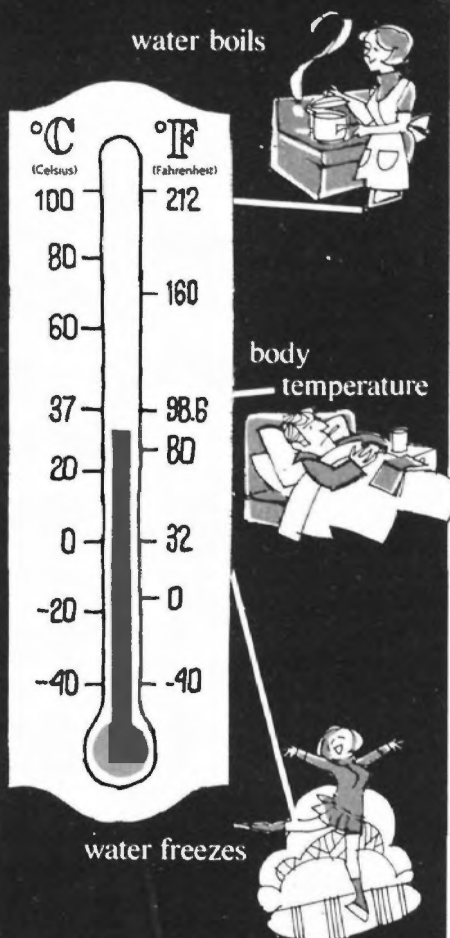
More than three years ago, in January 1973, an "all-hands" memorandum from Deputy Administrator Robert Fri urged the use of metric units in all EPA standards, reports, and documents. Common equivalents (in feet, acres, pounds, etc.) should be given in parentheses whenever desirable, the memorandum said.

Research people in EPA laboratories are already "thoroughly familiar with the metric system," the report said, and laboratory functions "may require

Volume



Temperature



metric units are used extensively and increasingly in Agency reports and publications, the practice is far from unanimous.

Water pollution: standards that are developed from research using metric measures of ten have to be translated in engineering applications from milligrams per liter(metric) to pounds per thousand gallons. Often the conversion can be by-passed by using parts per million.

Air pollution: here some of the old units are locked into the Nation's customs and even the language of the law. Auto exhaust pollutant limits are set in grams per mile, a halfway metric measure. "We will continue using grams per mile and gallons per mile until the United States switches to kilometers," says Eric Stork, Deputy Assistant Administrator for Mobile Source Pollution Control. One small omen appears: motorcycle pollutant standards are given in grams per kilometer!

The Office of Air Quality Planning and Standards in North Carolina, under Deputy Assistant Administrator Bernard Steigerwald, issues all its emission factors in both metric and old-style units. Industry emission limits are given in kilograms per metric ton (2200 lbs) and pounds per English ton (2000 lbs.) New emission factors for vehicles are also listed in both old and new units. But industrial standards that are set per unit of production must follow the industry's customary unit, which may be a ton, a barrel, or 1,000 cubic feet.

Solid waste: This is still measured in pounds and tons, and when it is burned, the heating value is given in British thermal units.

Radiation: No problem here; radioactivity is solidly scientific and metric.

Construction grants: EPA's biggest task, in terms of money, is necessarily tied to the construction industry and its traditions. Sewage plants treat so many gallons per day; their construction requires tons of sand, bags of cement, 20-inch concrete blocks, and eight-inch bricks.

It seems likely, however, that even the conservative construction industry will gradually change to metric measures. The task force has recommended that all EPA contractors be required to use them in their work statements, contracts, and reports, with the equivalent units given in parentheses.

After a while everyone will get tired of the parentheses. □

little or no education or . . . policy changes and actual conversion."

The task force noted that conversion may present problems, even encounter resistance, in EPA's engineering functions, where the old units are firmly entrenched. The report recommended a three-phase "plan of attack":

- Promote Agency awareness of the metric system and persuade employees of its usefulness and inevitability;
- Develop specific conversion policies and draft the necessary Agency Orders, Code of Federal Regulation Notices, etc.; and
- Carry out the conversion within a detailed and flexible time schedule.

The task force was made up of William A. Cawley, Chairman, and Ferial S. Bishop, both of the Office of Research and Development, and John A. Alter, Office of Planning and Management.

Mr. Alter, who has been named EPA's coordinator for metric conversion, said that a central working group with representatives from each Assistant Administrator's Office and the Regional Office of Intergovernmental Operations will be named soon to help deal with significant conversion requirements for such programs as monitoring, permits, and construction.

An informal, unscientific survey by the EPA Journal revealed that, while

EPA & THE NEWS MEDIA

By Patricia L. Cahn*

The proper relationship between government and media in a democratic society has been the subject of fruitful controversy in this country for the last 200 years, and longer.

Thomas Jefferson, saying he would rather have press sans government than government sans press, took the libertarian side of the question, but that view has not won universal acclaim, even in this enlightened age. As long as government and media exist, they will be adversaries simply because each has a different interest. The media want total freedom to report what they see as truth, and many in government would like nothing better than a constant stream of favorable news and comment about cherished programs, with a comfortable silence when these programs go wrong. Each party is bound to be disappointed.

Although government and the media are friendly adversaries, the underlying truth is that they have an absolute need for each other, a need that is given tacit acknowledgement in the fact that there is not a single agency in the Federal government that does not have some sort of staff to provide services to the media. All of which leads me to the main point: that the media have a definite influence on the way environmental policy is formulated and carried out.

Rarely is such policy put together in a vacuum. In the promulgating of regulations, EPA insists that the regulation writer must take into consideration, and state in writing, what the impact of this regulation will be on the public.

Ambitious programs can be doomed to failure if launched without regard to public opinion, and in the face of strong public opposition. On the other hand, such programs can proceed rather well, with the inevitable ups and downs, if the media have the facts and report them, thus tilling the soil of public opinion.

The environmental movement itself would not have become the popular cause it is without wide media coverage. Our activities have high visibility and high controversy, and you can be sure that the press and broadcast

people take an intense interest in almost everything EPA does. The nature of that interest varies according to the audience the medium reaches.

There are five major classifications of media covering EPA. First, the most comprehensive coverage is by trade journals. These are essentially newsletters which are subscribed to by thousands of organizations and individuals across the country, people who need a continuous, detailed look at all the news or potential news to come out of EPA. The reporters who represent these newsletters come into the Agency every day, but they spend more time with the program people than in the Public Affairs Office.

Also interested in the technical or legal details of EPA actions are the representatives of the environmental activist groups. These organizations may not send somebody around every day or even every week, but they keep a close eye on us. Each publishes a newsletter, too, so they are in that sense media themselves. But more importantly, they act as an instant conduit for information to the mass media, often to our consternation or embarrassment.

Third, we see a lot of reporters stationed in D.C. who are employed by local newspapers from around the country. These reporters are either assigned permanently to the environment beat or else cover it on an ad hoc basis as major stories emerge. They usually drop by to follow up on a speech or a news release, or attend a press conference. They are interested primarily in how an announcement affects their local areas.

A fourth group consists of reporters or columnists of national reputation and the network TV reporters. They cover only the stories of major consumer or topical interest to the nation as a whole.

The fifth and final category of media contacts is local reporters calling long distance—most often from radio stations around the country. They are interested in getting an official to make a brief comment they can record on tape for rebroadcast later that day.

Our Public Affairs Office has 8 people who spend fulltime in media rela-

tions. Each has a special knowledge in one area such as air or water or pesticides. They keep in close contact with the operating level of the Agency, write press releases and fact sheets, and spend a tremendous part of their time answering phone calls from media people who are usually on a tight deadline and need information quickly.

Our "information specialists" give the reporters all the information they can muster from their own knowledge and then put them in touch with good contacts in the various programs.

It is our policy at EPA that anyone in the press can talk to anyone in the Agency. A journalist is under no obligation to tell us in the Public Affairs Office who he has spoken to or wants to see, unless he prefers that we make the arrangements. Likewise, EPA officials don't have to account to Public Affairs when they talk to anyone on the outside. There is no attempt to control access to those who know. This has given us red faces at times, when a reporter gets slightly different points of view from two or more program people. But that's a price we pay for the openness we feel is essential.

Mr. Train and the Deputy Administrator, John Quarles, have made themselves available day and night.

Even if we wanted to be secretive (which we don't), we would have a hard time doing so because of the Freedom of Information Act. It obliges all agencies to make known a broad range of data on their operations, with certain lawful exceptions like unpublished official policy recommendations and so-called trade secrets.

We are happy to say that we have never denied an FOI request from a news source—to maintain that record we once had to defy a State Department request for silence on a Korean rat poison case—but, so far, we're batting 1.000.

There isn't an agency in Washington

** Excerpted from 1976 "Lecture on Media" given by Patricia L. Cahn, Director, Office of Public Affairs, at the University of Wisconsin at Green Bay, March 16.*

that has decentralized power to the degree that EPA has. In that respect we are highly fashionable, because there is a great hue and cry in the nation today on the need for local input to Federal officials. Ofttimes, we have to send inquiring reporters back to their local communities to get the facts on a case because that's where the decisions are made. Reporters generally don't believe this until they see it.

Responding to the media is a big part of our job but no means all of it. We quite frankly use the mass media in every way we legitimately can to get information out to the public.

Propaganda you say! Well, perhaps. There are a great many definitions of that buzz-word, and I tend to agree with Merrill and Lowenstein who comment in "Media, Messages, and Men," that in an open society propaganda is pluralistic and competitive and provides the information and ideas for political argument and for the formation of public opinion. If you buy their definition, I will admit to the use of propaganda.

An agency such as EPA has to make some efforts to compete, not so much with the news media but with multi-million dollar advertising budgets of commercial polluters. But we are prohibited by law from buying space or time in the media. And besides, our public affairs budget is miniscule in comparison with those of industry.

I recall that the president of one electric power company spent more money on one series of fullpage newspaper ads protesting EPA's requirements for gas stack scrubbers than EPA spent on its public affairs program for an entire year.

So, we can't really compete. But we do use every avenue within our legal and budgetary means to get our message out.

We distribute news releases to 750 newspapers and news bureaus in Washington, D.C. (Did you know that there are an estimated 2,000 reporters in Washington?) Then, we mail releases everywhere in the Nation to weeklies, dailies, TV and radio stations, universities, foundations, labor unions, trade associations, corporations and environmental organizations—but they have to ask first to be put on our mailing list. We don't mail indiscriminately because it's costly and wasteful.

Our Press Office also prepares a daily recorded radio feed, in the form of a news message or a brief interview with an Agency spokesman, which any radio station across the country can pick up with a phone call.

We produce 30- or 60-second spots for television and radio and distribute them to all commercial stations across the country. Their use depends on the contribution of free broadcasting or telecasting time by the stations.

My office—in fact, all the Agency officials who come in contact with the media—value their relationships with reporters and are careful to maintain their trust. Writers who report accurately and fully can assist our policymaking in very material ways.

I believe the media's influence on the environmental policymaking process tends far more to the positive than the negative. Let me tell you of an uncomfortable but positive instance that illustrates how the media can steer us away from our own bumbles.

Two or three years ago, we developed our now infamous Transportation Control Plans. We proposed a wide range of modifications, including exclusive bus lanes, flexible traffic management, computerized signals, car pools, van pools, off-street parking bans, higher bridge tolls, parking surcharges, semi-annual auto inspection,

and so on. We even talked about gas rationing.

We thought we had done a brilliant job. The thing we forgot about was public opinion, and the media lost no time in bringing that opinion most forcefully to our attention. There was massive opposition to any transportation control plan which would have the effect of forcing or even gradually easing the motorist out of his car or making the car more expensive to operate.

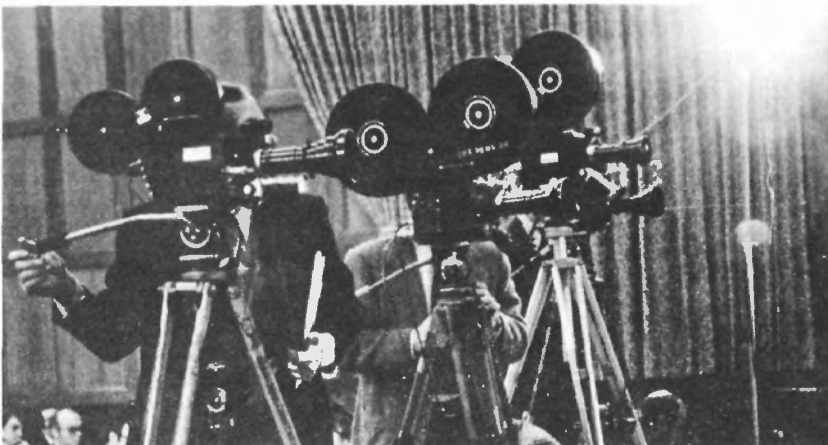
We were compelled by the irresistible force of public opinion, expressed in blazing editorials, to back off and admit that we had been "a bit premature." We realized that without a great deal of public education, changed social values, and far better mass transit, federally imposed transportation control plans would never work.

Instead, we developed new plans designed to encourage the cities to move in a more progressive direction. Our Regional Administrators believe that the voluntary approach of cooperation with Governors and Mayors will produce better results in the long run.

I can't think of a better instance to demonstrate the old truism that the media serve to prevent bureaucrats from pursuing unpopular policies in isolation and against the expressed will of the people.

So the media have a definite influence on EPA policymaking: sometimes steering us away from an unwise course, sometimes goading us into taking actions prematurely, certainly by assuring that our policies will be made in the full glare of the media's spotlight. It causes us to squint occasionally (some of us wear a permanently puckered brow!) but we welcome the light. □

Televisions cameras cover EPA auto pollution hearing.



CEO

REPORTS

The Sixth Annual Report of the Council on Environmental Quality begins on an ominous note. Its first chapter, "Carcinogens in the Environment" bluntly states:

"This chapter concerns cancer. It discusses several probable causes but focuses on one, the chemicals introduced into our environment by our consumption pattern and way of life. It describes cancer (not one disease, but a family of them), and considers the special problems of diagnosis occasioned by the latency-period characteristic of cancer. It analyzes the difficulty of screening cancer-causing agents (carcinogens) before approving them for mass production and distribution, and cites current efforts to improve methods for testing potentially hazardous substances. It concludes by arguing that prevention rather than treatment offers the most effective attack on cancer today."

Although cancer is not the only disease linked to environmental factors, it is one of the most important, costly, and rapidly accelerating health problems in the United States:

"Cancer killed a reported 358,400 citizens in 1974. About one million are under treatment for the disease, and each year 900,000 new cases are diagnosed . . . The American Cancer Society estimates that 25 percent of the 213 million people now living in the United States will ultimately develop some form of cancer."

The World Health Organization estimates that 60 to 90 percent of all cancer is related to environmental factors. A disconcerting and growing body of evidence indicates that man-made hazards, many of them chemical in nature, may be responsible for an incidence of cancer that has more than doubled since the turn of the century. Each year thousands of new chemical compounds are invented by U.S. industry and hundreds are introduced commercially and go into use.

Unfortunately, the capacity to develop new chemical substances far exceeds the ability of scientific investigators to determine the carcinogenic

potential of the chemicals. "In the past ten years the production of synthetic organic chemicals has expanded by 225 percent; relatively few of the new compounds have been studied for their cancer-causing potential. Because of the typical latency period of 15-40 years for cancer, we must assume that much of the cancer from recent industrial development is not yet observable." Between 10 and 16 percent of the chemicals tested for carcinogenicity produce cancer in animals, but of some two million known chemicals only about 6,000 have been laboratory tested for carcinogenicity.

The majority of known environmental carcinogens are encountered at the workplace. Above-normal incidences of cancer are found in workers having contact with known or suspected carcinogenic substances such as asbestos, arsenic, benzopyrene, benzidine, bis-chloromethylether, coal tar, carbon black, and vinyl chloride. Because relatively few detailed studies of worker populations have been conducted, evidence for many of these substances is only now being developed.

Cancer hazards may be found in some consumer products. Some chlorinated hydrocarbons and arsenical pesticides that have been used in homes and gardens are known carcinogens. Commercially processed foods have also been found to contain residues of pesticides known to be carcinogenic and other chemicals suspected of being so. Foods may also contain naturally occurring carcinogens such as aflatoxins produced by particular mold contaminants. Some drugs and cosmetics have been reported as carcinogenic.

Combustion products released from industrial and commercial smokestacks may contain a variety of carcinogenic materials. In 1975, the Environmental Protection Agency found cancer-producing agents in low concentrations in the drinking water of all 80 cities whose water supplies it investigated.

The economic and social conse-

quences of cancer in the United States are massive; it is estimated that annual expenditures for cancer go into tens of billions of dollars. Compared with the amounts of human and financial resources invested in treatment, the investment in cancer prevention has been small. Yet, recent improvements in cancer therapy have been only modest. The chapter concludes that the only prudent policy toward cancer is to increase the emphasis on prevention and to identify cancer risks before human exposure. Of highest priority is the rigorous screening of chemicals for noxious properties before they reach the marketplace.

In his message transmitting the 1975 report to Congress, President Ford states:

"We can be proud of the progress we have made in improving the Nation's environmental quality. Yet we must meet additional challenges over the next few years. We must improve our understanding of the effects of pollutants and of the means and costs of reducing pollution. As we develop new energy sources and technologies, we must assure that they meet environmental standards. We also must continue the job of cleaning up pollution from existing sources."

The 763-page report provides background on environmental issues and analyses of developments in air, water, solid waste, noise, land use, energy and related fields. The good news is that despite continuing hard questioning of anti-pollution efforts and their costs, spokesmen for both industry and government are showing less inclination to dismiss environmental concern as a faddist nuisance. Consideration of environmental factors is becoming accepted as a valid component of private and public decision making.

By most conventional methods of measurement, air quality in the country has greatly improved during the five years since passage of the Clean Air Act Amendments. Sulfur dioxide has been reduced 25 percent nationwide and this is particularly evident in

major metropolitan areas; particulates, the other main pollutant from stationary sources, were cut by 14 percent. Of the approximately 20,000 major stationary sources, 15,600 have either met the standards or have a schedule for doing so. Emissions from 1975 model automobiles have been reduced 67 percent from emission levels of cars built five years ago. Yet undesirably high levels of the major air pollutants continue to occur at many locations.

Water quality indicators, trend analyses, and studies all show that many of the worst point sources of pollution are being effectively controlled and that some of our most heavily polluted waterways are being cleaned up. By July 1975 over 40,000 discharge permits had been issued; the emphasis was upon "major" industrial and municipal discharges. At the end of the fiscal year, about \$6.6 billion of municipal waste water treatment funds had been obligated and one billion had actually been spent.

Other highlights of the authoritative report include:

- CEQ economists estimate that the cost of pollution abatement that will be required in the 1974-1983 decade by federal environmental legislation will be \$217.7 billion. This is up \$22.9 billion from the 1974 estimate, mostly due to inflation. The per capita cost is about \$98 for 1976. For the median income family, costs probably will rise to about 2.5 percent of gross family income in 1983, before the ratio begins to decline.

- Estimated investment costs for air pollution control will reach a peak in 1977 and those for water pollution control in 1983. The latter does not include projected costs to control non-point sources of pollution.

- CEQ-EPA analyses indicate that the demands for pollution control investments will not seriously disrupt capital markets or displace significant amounts of investment for industry's plans for expansion or modernization. Pollution control expenditures are currently stimulating the economy so that

the Gross National Product is higher than it otherwise would have been.

- All the analyses seem to indicate that environmental programs had a net effect of increasing the number of available jobs; air and water pollution control deadlines and the municipal grants program have stimulated expenditures.

- Demographic studies indicate that the population growth rate in larger metropolitan areas has dropped substantially from what it was between 1960-70. In smaller metropolitan areas it increased slightly, but in nonmetropolitan areas the annual growth rate has increased almost a full one percent. The shift in growth rates presumably reflects a quality of life.

- The environmental impact of new energy technologies should be assessed while they are in the research and development stage. For example, a Stanford Research Institute study estimates that a shale oil industry complex capable of producing 6.4 quadrillion British thermal units annually by the year 2000 might have direct environmental effects of the following magnitude: solid wastes would be almost nine times the total residential and commercial totals of 1973; a daily water requirement of 417 million gallons, enough to supply the daily household needs the Washington, D.C. metropolitan area; sulfur dioxide emissions equal to those from thirteen 1,000-megawatt power plants burning low-sulfur western coal without any emission controls.

- Nuclear power production has not reached the commercial significance predicted. The industry is troubled by technical reliability and safety problems. Increasing costs of generating plants and adjunct fuel facilities have made the economics of nuclear power doubtful. Controversy over a safe disposal method for radioactive wastes remains unresolved.

- Most lakes studied in the eastern States are suffering some degree of accelerated eutrophication, primarily due to nutrients that drain from agricultural and urban land but affected

also by effluents from industry and sewage treatment plants.

- Preliminary analysis of water quality data for 1970-74 shows a decline in DDT levels consistent with the restrictions on domestic use. Levels in wildlife and human food supplies are significantly lowered; soils show a stabilization if not a decline of DDT levels.

- Data for Great Lakes fish show static or rising levels of polychlorinated biphenyls (PCBs). Water samples from the North Atlantic show PCB residues at least as high as those of DDT, despite the much higher load of DDT discharges; the indication is that PCBs are even more persistent in the ocean than long-lasting DDT.

- Over-fishing has seriously depleted populations of some of the commercial fish species off U.S. coasts.

- Approximately one out of every ten animal species native to the United States may be endangered or threatened; similarly, more than one out of ten of the higher plants may be endangered, threatened with becoming endangered, or recently extinct.

- In the developing nations, where nearly three-fourths of the world's people live, the overriding environmental problem is hunger. The long-run solution requires reduction of population growth, economic development, and development aid to raise food production.

The highlights cited here can only suggest the scope and rich diversity of this report. It has something for environmentalists of all persuasions. Whether your specialty is the macroeconomics of pollution control, flue gas desulfurization, coastal zone planning, or the preservation of the black-footed ferret and the blue whale, you will find information of interest in this almanac of the environment. The report may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402; stock #040-000-00337-1. The price is \$6.60. □

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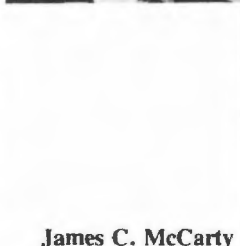
Daniel F. Krawczyk



Frank H. Rainwater



Dr. Norman R. Glass



James C. McCarty



Administrator Train and King Carl Gustaf

Four men at the Corvallis Environmental Research Laboratory have been named to new posts in the reorganized laboratory by Dr. A. F. Bartsch, Director:

Dr. Norman R. Glass, Director of Ecological Effects Research, heads the laboratory's research on the effects of environmental pollutants on freshwater, marine, and terrestrial ecosystems. Major groups under him include the Marine and Freshwater Ecology Branch, including field stations at Newport, Ore. and Ely, Minn.; the Terrestrial Ecology Branch; and Western Fish Toxicology Station, both at Corvallis.

Daniel F. Krawczyk, Director of Laboratory Analytical Support, directs a staff responsible for chemical and biological analysis of environmental samples, operation and calibration of instruments, automatic data processing, computer programming, technical information services, and the laboratory's library.

James C. McCarty, Director of Laboratory Operations and Support, is responsible for laboratory administration: program planning and coordination, financial management, purchasing, personnel services, security, safety, and facilities management.

Frank H. Rainwater, Director of Assessment and Criteria Development, directs research on the effects of forestry on stream life, and on statistical analysis and mathematical prediction of pollutant impacts. Major research groups under him include the Criteria and Assessment Branch, Ecosystems Modeling and Analysis Branch, Special Studies Branch, and the Alaska Field Station at College, Alaska.

His Majesty Carl Gustaf XVI, King of Sweden, visited EPA Headquarters last month to confer with Administrator Russell E. Train and other top EPA officials.

The King had requested the meeting so that he could discuss environmental programs in the United States and Sweden. The Swedish King has long been interested in environmental protection and nature conservation.

Mr. Train first met the King at the 1972 United Nations Conference on the Human Environment in Stockholm.

Michael D. Muse, Environmental Protection Specialist in Region IX, San Francisco, recently received a commendation from President Ford for his "efforts to reduce the cost of government and conserve resources."

Mr. Muse saved EPA an estimated \$8,000 last year by adapting an existing air program computer system to serve as an information and retrieval file for approximately 2,400 wastewater discharge permits in the Region.

For his "initiative, resourcefulness, and foresight" in automating the Region's discharge permit record keeping, Mr. Muse was given an EPA special achievement award of \$450.

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Carol M. Thomas and Linda Smith

Carol M. Thomas, Director, Office of Civil Rights, recently presented Linda Smith, Technical Publications Coordinator, Office of Research and Development, with a certificate recognizing her outstanding service as a supervisor of trainees in EPA's Upward Mobility Program.

Certificates were also awarded to Margaret Stasikowski, Cincinnati, Ohio; Robert Poss, Seattle, Wash.; and Sheldon Brandt, Las Vegas, Nev.

The supervisors worked with trainees in EPA's ACCENT program (Aid to Careers of Competent Employees in Need of Training).

Steven Reznick has been appointed Associate Deputy Assistant Administrator for Energy, Minerals, and Industry in the Office of Research and Development. He reports to Stephen J. Gage.

For the last two years, Dr. Reznick has been Director of Program Coordination and Regional Studies for the National Commission on Water Quality.

He was granted a B.S. in physics from the Massachusetts Institute of Technology in 1963 and earned his doctorate there in 1967. He then held successive research posts at MIT, the Technical University of Denmark, and the University of Bristol, England.



Steven Reznick

Richard J. Denney Jr.



From 1971 to 1973 he served as a physicist in EPA's Office of Water Programs and Office of Research and Development. In the 1973-74 academic year he was a researcher and lecturer at Princeton University's Center for Environmental Studies.

Dr. Reznick is married, the father of one child, and lives in Bethesda, Md.

Richard J. Denney Jr. has been appointed Associate General Counsel for the Pesticide Division by General Counsel Robert V. Zener.

Mr. Denney, 36, joined EPA in March 1971 and had been Assistant General Counsel in the Air Quality, Noise, and Radiation Division.

He is a graduate of Stanford University with a bachelor of science degree in physics, and he earned a doctorate in law at Harvard Law School. He has practiced law in San Francisco, Calif., and Washington, D.C. For two years he was Assistant General Counsel to the East African Community, Nairobi, Kenya.

He is married to the former Rebecca Brown of Worcester, Mass. They have two children and live in Chevy Chase, Md.



Jerome H. Svore

Robert Schaffer



EPA's Region VII recently won the Government Professional Development Award of the Missouri Society of Professional Engineers. Regional Administrator Jerome H. Svore accepted the award at the Society's 26th annual meeting in Kansas City, on behalf of the Agency, which was cited for its outstanding contribution to the advancement and improvement of the engineering profession in 1975. It was the third time Region VII has received the award. About 30 percent of the Agency's permanent regional staff members are engineers, a majority of whom have advanced degrees.

Robert Schaffer has been named Associate Deputy Assistant Administrator for Air, Land, and Water Use, Office of Research and Development, reporting to Thomas A. Murphy.

Mr. Schaffer had been Director of Permit Assistance and Evaluation, Office of Enforcement, for two years, and had previously served in several water pollution control posts in EPA and its predecessor agencies.

He is a graduate of Hartwick College, Oneonta, N.Y., in 1956 and has worked with the N.Y. State Department of Health; the Public Health Service, Cincinnati, Ohio; and with Dow Chemical Company.

REGION V ON PARADISE

Mid America's rich and diverse environment continues to make strong and steady improvement on the road back to clean air and clean water.

While some pockets of resistance to pollution cleanup remain in this six-state Region, dischargers generally are trying to reduce their wastes.

EPA's Mid-America region—Region V—consists of Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. Within its boundaries reside 20 percent of America's population, 25 percent of its manufacturing activity and diverse land-use forms—urban-industrial, farm and recreation—to name the broadest uses. Also in this Region are four of the five Great Lakes.

The massive size and diversity of this Region and the resulting complexity of its pollution problems will continue to require a strategy based on cooperative partnership roles between Federal and State environmental protection agencies, as mandated in all Federal environmental statutes.

The strong cooperative efforts between these agencies, apparent in the Construction Grants Program, were extended in a significant way during FY 75 in takeovers by Indiana, Michigan, Minnesota, Ohio and Wisconsin of the National Pollutant Discharge Elimination System, the water permit program.

As of this date, these five States have permanent authority to issue permits, do compliance tracking and enforce all permits within their States, excluding Federal facilities. Through Federal-State cooperative efforts, some 10,000 permits—approximately 1200 for major dischargers and 7800 for minor dischargers—have been issued over the past two-year period. Followup visits to each of the 1,200 major dischargers are expected to be completed this year.

Major Bottleneck

The major bottleneck continuing to plague this program is the reluctance of a number of major steel and electric power producers to agree to permits.

The result has been a lengthy process of adjudicatory hearings. Additional requests for such hearings are expected in the coming months. So far 375 industrial and municipal dischargers have requested these formal administrative reviews to challenge permits issued. Region V faces special problems in Ohio with permit issuance because of the steel industry. Ninety-five major permits remain contested. This number constitutes two-thirds of all major permits not yet issued in the Region.

While extensive monitoring of Great Lakes water quality is only now getting under way by Region V's surveillance vessel, significant improvement has been found in many of the feeders to the Lakes. Swimming is coming back as a recreational activity in the Twin Cities stretch of the Mississippi, new wastewater facilities like those installed recently by Jones & Laughlin are improving the Cuyahoga, and the return of fish to Michigan's big industrial rivers—the Kalamazoo, the Detroit, and the Rouge—have prompted widespread national media attention in the Region.

Due to extensive investment in municipal treatment control facilities, phosphorus reduction in the Lake Michigan basin is expected to reach

the goal of 1 part per million on schedule.

The International Joint Commission, meeting in Windsor, Ontario, last summer, was told about a two-year study of Lake Michigan that will complete the first cycle of intensive surveys on all the Great Lakes undertaken by Region V in cooperation with Canadian authorities and Region II as part of the Canadian-American agreement of 1971. This study will evaluate changes in the Lake's water quality since the 1960's, and provide the basis for future cleanup programs. After the Lake Michigan study, this program will continue with one-year studies of each of the other lakes on a five-year cycle.

Region V has a total of \$2.9 billion dollars committed to building and improving sewage treatment systems in the six-state area through 1977 (that figure is currently under Congressional debate). Massive plants are now under construction in Cleveland and Detroit. Facilities like the new \$72-million Green Bay industrial-municipal plant have already gone on line in the past year, and innovative programs like the deep tunnel project in Chicago for storing storm water, are under way.

National Goal

At this time, four of the states in the Region—Illinois, Michigan, Wisconsin and Minnesota—say they are confident that all waters within their jurisdictions will meet the 1983 national goal of swimmable and fishable waters.

As a result of the massive amounts of construction grants made to cities throughout the Region, thousands of



Cleveland skyline and Lake Erie.



Wabash Street Bridge, one of the draw bridges over the Chicago River.

new construction and related jobs are being created.

Important new legislation providing for increased protection of public drinking water supplies was assigned to the Agency as a result of the passage of the Drinking Water Supply Act of 1974. In Region V, the number of sources classified as drinking water sources subject to the provisions of the Act will increase from 7000 to almost 80,000. The new Act applies to any place serving 25 or more persons per day or having 15 service connections.

A special study of the drinking water of 83 cities in the Region was conducted through Region V's Central Regional Laboratory during the spring of 1975. It supplemented a similar study of 81 cities across the U.S. by EPA to measure minute concentrations of organic compounds believed to have a carcinogenic potentiality.

The Federal-State program to achieve National Ambient Air Quality Standards will undergo a major shift in direction during FY 76. Past efforts were spent on identifying polluting sources and areas where standards were not expected to be attained and carrying out enforcement actions against major sources. A major confrontation between the Region and U.S. Steel over the long promised shutdown of an open hearth in Gary took place as Region V backed up the Indiana Pollution Control Board's refusal to grant an additional extension. The open hearth was closed on December 31, 1974, when U.S. Steel refused a court compromise. U.S. Steel also closed three coke ovens at

its Gary works in December of 1975 after a lengthy enforcement action.

The main thrust of the air program during the coming months will be the re-evaluation of State Implementation Programs, specifically for total suspended particulates and sulfur dioxide, and a new enforcement push for stationary source compliance in 50 non-attainment areas identified within the Region. Financial assistance to State and local air pollution agencies during FY 76 will total almost \$10 million.

The major bottleneck in the air program has been in the State of Ohio, where industries and power plants using high-sulfur coal successfully challenged State and Federal sulfur dioxide requirements. This has forced EPA to develop its own regulations for Ohio and has slowed enforcement.

Violation Notices

During the past fiscal year, EPA issued 68 notices of violation to air violators, 21 Administrative Orders and one case, Wabash Smelting of Wabash, Ind., was brought to the U.S. Attorney and led to a no-contest criminal conviction for air pollution violations.

A persistent problem has been bringing into compliance three metropolitan areas where auto-related pollutants have required additional transportation control strategies. Cities involved at present include Chicago, Indianapolis and Cincinnati. Mandatory auto emission inspection has been established in Cincinnati. Federal enforcement orders have been issued to the Chicago metropolitan area to increase inspections, and vapor recovery from gas pumping facilities has been started in Indianapolis, which may yet need mandatory auto emission inspection.

Air pollution controls in the Region to date have significantly improved air quality in Chicago, Detroit and Minneapolis-St. Paul.

In Chicago, the maximum annual level for sulfur dioxide and total suspended solids went from 92 to 81 micrograms per cubic meter and from 163 to 161 micrograms, respectively. In Detroit, sulfur dioxide dropped from 82 to 74, and in Minneapolis-St. Paul, the TSP level decreased from 102 to 94.

The Federal-State environmental effort in Region V, in the future, as the mistakes of the past are corrected, will need to plan for wiser use of resources.

One of the principle vehicles for this type of planning is the Areawide Waste Management planning now getting under way in earnest throughout all of the country. Under Sec. 208 of the 1972 Water Pollution Control Act Amendments, over \$37 million in funds has been awarded to Region V agencies designated by the Governors of each state to take a total look at pollution problems through 1983 and, more importantly, come up with a management plan for dealing with these problems.

This program will have its greatest impact in the urban industrialized centers, and will affect well over half the population in the Region.

The success of this program—which is very closely related to land use management—will in great measure depend on local participation and it will form the backdrop for future construction grants decision. Also, it will for the first time establish baseline data on the quantity and quality of nonpoint discharges.

Similar planning under the Air Quality Maintenance Areas program will also have similar land use management implications.

Lack of concern for the future was a root cause of the environmental crisis in Region V. Rational planning for tomorrow's environment will allow for a better way of life for all the people of this Region. □



Smelt nets hanging from Lake Michigan seawall in Chicago, Ill. High rise apartments in background.

Hunting the Great Midwestern Myth

By Frank Corrado*

The problem is really quite simple, you see. I'm just overly insecure in situations like this.

"How can you stand living in the Midwest," he opens.

"Oh, it's okay, if you can take the weather," I mumble.

"What do you do for entertainment," he continues, enjoying his easy victory.

No response.

"I mean, we've got the mountains out West, and Denver and San Francisco. And back East, there's New York . . . and Boston and Philly . . . with so much to do.

The mumbling starts again: "Oh, there's lots to do in the Midwest," I say, and bury my head in a copy of the *New Yorker*.

He smiles the kind of smile you would expect and then goes back to staring at the nifty little stewardess from Petosky, Michigan, who's serving drinks.

How else do you answer these people with horn rim glasses, glen plaid suits and wing-tip shoes who look down at the Midwest from 30,000 feet whether they're airborne or not?

I mean, like I have these secret dreams, you know, where I've lost 20 pounds, grown a new head of light brown hair and generally look like an "old boy" from out East or a Brooks Brothers cowboy from Denver.

Then, in these dreams, I just happen to sit next to one of these dudes, my lines well rehearsed, my Chicago—"A" toned down and then I let them have it, in of course, a very erudite fashion about how great the Midwest really is. I mean, it really is.

Start with Illinois. As the natives say, "There's Chicago and then there's the rest of the State." How true. As columnist Mike Royko once noted, anyone south of 111th St. in Chicago has a southern twang in his voice. If you look at the geography, Illinois is almost totally a rural state. Pioneers hesitated settling on its prairies originally, thinking a lack of trees indicated poor soil. Some of America's great rivers—the Mississippi, the Ohio and the Wabash, cut its outline. And of course, the license plates proudly read "Land of Lincoln" although some Kentuckians and Hoosiers take issue. Chicago is truly the

gem of the Region with its magnificent lakefront, its superb restaurants and shops, and of course, Mayor Daley. The industrial base in this city is second to none, which has caused many people to say that "if you can't get a job in Chicago, you can't get one at all." Farther south, the State ranks number one in soybean production and number two in corn. And an incredible amount of coal lies under all this.

The upper northwest corner of Indiana next to Chicago has one of the greatest steel-making complexes in the world, but, as you go south, the farms



Chicago's John Hancock Building with sailboats in foreground.

take over again, growing corn and hogs, not to mention the sweet-smelling fields of spearmint used by Mr. Wrigley. During World War II, many Indiana fields were planted with hemp as a national security measure, creating a temptation that young people and county sheriffs find irresistible these days. Farther south, Indiana becomes hilly and you come upon the nation's biggest limestone quarries, which I think, are mainly in business to help build war memorials for Indianapolis, which, sports humorist Jim Murray once noted, had to be at least

one war ahead of the Pentagon. Indianapolis is also home of the Z&Z "brickyard" famous for its annual Memorial Day Madness. As a matter of fact some very high priced condominiums have been built overlooking that track. Status. Nearby Columbus, Indiana, thanks to the Cummins Engine Company people, has some of the most spectacular architecture in America and farther south, in New Harmony, restoration of its famous early commune is under way. Open favorites in this area are Nashville known for its sassafras tea and Hoosier humor and Parke County which could give Vermont a good run on the number of old covered bridges still around.

Just north of Indiana is Michigan—the Great Lakes State. People tend to forget occasionally that Michigan really gives the appearance of being two States, with its upper Peninsula sitting atop northern Wisconsin. Michigan borders four of the five Great Lakes and has a very big tourist industry. Lumber cutting was the original lure that brought people here, and carriage builders later turned to building Chevy's, Fords and Plymouths. Michigan is the blueberry-growing capital of the world, but is also known for its cherries, apples, and peaches. Presently, Detroit is starting a building renaissance, and there's new optimism rampant now that fish are returning to the Detroit and Rouge rivers.

While Michigan claims to have more inland lakes than Minnesota, there is no doubt among Minnesotans as to where the good life is. Mary Tyler Moore doesn't live there for nothing. Minneapolis, the San Francisco of the Midwest, has to really be experienced. Its Nicollet Street Mall and sophisticated stores top anybody's list. And Minnesota has a solid cultural heritage as well, having turned out Sinclair Lewis, F. Scott Fitzgerald (who drank at the Commodore Hotel in St. Paul), Bobby Dylan, who was raised in Hibbing, Minn., not to mention football's Bronco Nagurski, who holds court at his Amoco service station in International Falls (*Elaine's*, it is not). Minnesota is also the home of the Mesabi iron range, the major ore supply for the steel mills of Gary and Cleveland. Reserve Mining is

*Frank Corrado is Director of Public Affairs, EPA Region V.

here as well. Up around Bemidji, the Mississippi River starts its trip south. Famous products from the State include Gino's Pizza, Chung King, Pop-pin' Fresh rolls, Cheerios and Scotch Tape.

Wisconsin, Minnesota's eastern neighbor, produces 41 per cent of America's cheese (that's no baloney) and most of the great fishing lies told hereabouts. Formed by the great Wisconsin glacier, the State "unfolds in timber-crowned ridges, hillside pastures and valley hayfields" to quote a lurid National Geographic description. Wisconsin also has two famous cities—Milwaukee, which dispenses gusto by the barrel, and has a zoo good enough to make the Disney people jealous; and of course Green

Bay, home of a small religious sect which confines its worship to autumn Sunday afternoons and whose children are named after Saints Vincent, Bart and Paul. Green Bay also reportedly has a city ordinance against squeezing certain household paper products which are manufactured there.

Finally, there's Ohio, home of eight U.S. presidents (bet you can't name them all). In Akron reside the people who own the blimp and the other guys (who don't want to be confused with the blimp people). Cleveland has given us Thomas Edison and Bob Hope (but Dean Martin is from Steubenville, I'm forever being reminded). Through the flats of Cleveland the Cuyahoga river flows. No further explanation here.

The famous southern Ohio town, Cincinnati, is close enough to Kentucky to be considered a bit southern (right across the Ohio river) but it isn't. Cincinnati is truly one of the best Midwestern cities, with a lively downtown, a hilltop district called Mt. Adams where Johnny Bench resides, polishing World Series memorabilia. Cincinnati also hosts several EPA laboratories. The Delta Queen, a marvelous remnant of leisure and luxury and last of the great river boats, sails forth from this port city.

Well, do I really need to worry about this fellow from out of town, looking down his nose at the Midwest? No. As a matter of fact, I feel so sorry for him, I think I'll buy him a drink. □



Thomas E. Yeates
Director, Management Division



Robert J. Schneider
Great Lakes Coordinator



Christopher M. Timm, Director,
Surveillance and Analysis Division



James O. McDonald, Director,
Enforcement Division



Henry Longest
Director, Water Division



George R. Alexander, Jr. Regional Administrator



Valdas V. Adamkus
Deputy Regional Administrator

REGION V's LEADERSHIP TEAM



Lee Botts
Assistant for Congressional
and Intergovernmental Relations



Roland L. Cornelius
Director, Office of Civil Rights
and Urban Affairs



Frank Corrado
Director, Office of Public
Information



Clifford Risley, Jr. Director,
Office of Research and
Development



controls reinstated

Three elements of EPA's transportation control plans for the Boston area have been reinstated by the U.S. District Court of Appeals. They include a freeze on commercial parking spaces, vapor recovery systems for gasoline stations, and incentives to reduce single-passenger auto commuting. These aspects of the plans had been suspended since September 1974 pending resolution of legal actions challenging EPA's authority and the technical data on which the plans were based. Gasoline station operators have until June 1 to install the vapor recovery systems.

treatment plant awards

Region I's Water Programs Division has started a program to encourage and recognize the good operation and maintenance of sewage treatment plants. Every month certificates will be awarded to the two officials in charge of plants judged to be operated efficiently and maintained in superior condition. The awards, to be presented at local community ceremonies, emphasize the importance of proper sewage treatment to the improvement of waterway quality.



sludge dumping

New York City's sewage plant sludge can continue to be dumped at sea for the next five years without danger to

public health or beach water quality, according to a draft environmental impact statement filed recently by EPA. The Agency had been considering proposals to move the dump site, an area roughly 22 kilometers (12 nautical miles) off the Long Island and New Jersey coasts, or to open new dump sites.

However, Regional Administrator Gerald M. Hansler said the present site would be adequate until 1981, since the amounts of sludge to be disposed of have not increased as rapidly as expected because of delays in starting advanced treatment plants. The statement recommends continued monitoring of the dumping site and designation of an alternate site if that becomes necessary.

Land-based alternatives to ocean dumping are being considered by the Interstate Sanitation Commission, Mr. Hansler said. These include incineration, pyrolysis (heat treatment), and land application of the sludge. EPA's goal is to end all sludge dumping in the New York Bight by 1981.

minority firms hired

Three minority certified public accounting firms in New York City have been awarded contracts to do accounting work for the Region II Office, and a contract is under negotiation with a fourth firm in Puerto Rico. The firms will supplement the Office's auditing staff. Each contract's value may range from about \$6,000 to \$114,000.



sewer moratorium

A ban on additional sewer connections in a Philadelphia suburb was recently imposed by Region III. Officials of Region III believe it was the first such action by EPA, although sewer moratoriums have been frequently ordered by State agencies.

The action prohibits new connections to the Saw Mill Run pumping station, near Norristown, Pa., and will remain in effect until the station's capacity is enlarged. The East Norriton-Plymouth Joint Sewer Authority is planning the enlargement, with Construction Grant funding from EPA.

During heavy rains, the undersized

pumping station now permits raw sewage to overflow into a tributary of the Schuylkill River, which is the source of several drinking water systems.

pesticide fines

More than \$8,000 in fines was paid recently by four manufacturers for violations of the Federal pesticides law. The violators and their fines were: Lebanon Chemical Corp., Lebanon, Pa., \$2,700; Bowman Mell and Co., Harrisburg, Pa., \$500; Arcal Chemicals, Seat Pleasant, Md., \$3,000; and Monsey Products Co., Kimberton, Pa., \$2,200.



record penalty

The largest settlement yet received in Region IV for pesticide registration violations was the recent \$15,000 penalty paid by the Kare Chemical Co., a subsidiary of the Eagle Family Discount Store, Opa-Locka, Fla. The firm was charged with six counts of non-registration and six misbranding violations. Six different products were involved, including swimming pool disinfectant, lawn spray, algicide, and insecticides.



air violators cited

Region V Enforcement Director James O. McDonald recently issued formal notices of violation of federally enforceable State air pollution regulations to large companies in Ohio and Indiana. The Cleveland Electric and Illuminating Co. was cited for excessive particulate emissions at power plants in Ashabula, Avon Lake, Willoughby, and Cleveland. Sixteen boilers at these plants, the notice said, were emitting particulates at the rate of 28,000 tons per year; State regulations allow only 7,100 tons per year.

Bethlehem Steel Corporation's two coke batteries at Chesterton, Ind.,

were charged with emitting 2,215 tons per year of particulates, more than four times the 506-tons-per-year rate allowed by Indiana regulations.



hispanic convention

Many Region VI employees will take part in the annual convention of IMAGE, an organization of Spanish-speaking government employees in Dallas May 26-30. The IMAGE Government Employees' Association is composed of Hispanic persons employed at all levels of Federal, State, and local governments throughout the country, but especially in the Southwest. More than 7,000 delegates and visitors are expected. EPA will have an exhibit at the convention, explaining the Agency's programs and activities. Carlos Romero, Region VI Civil Rights Officer, is EPA's coordinator for the convention.

wrecker convicted

The first criminal conviction for failing to control asbestos dust in building demolition has been obtained in U.S. District Court in New Orleans. The Big Chief Wrecking Co., Fort Lauderdale, Fla., and its foreman, Jack Deutsch, were found guilty of ignoring EPA rules for dust control when company workers demolished the old Hotel Dieu Hospital in New Orleans in 1974. The rules, issued the year before, require wreckers to wet down asbestos-containing materials and remove them in dust-tight containers before the general destruction of a building. Inhalation of asbestos fibers is linked to bronchial and lung cancer.



kansas fish kills

Aerial applications of pesticides are suspected of being the cause of extensive fish kills in ponds and streams of south central Kansas in March. Sam-

ples of living and dead fish, bottom muds, and water collected by the State Fish and Game Commission were analyzed in EPA's Kansas City, Mo., Surveillance and Analysis Laboratory and found to contain endrin and parathion.

The pesticide spraying began in late February to control an army cutworm outbreak that threatened the wheat crop. Larry Anderson and C.E. Poindexter of the Region VII Pesticides Branch headed EPA's investigation to determine if there were any violations of Federal law. They worked in cooperation with the Federal Aviation Administration, the State Department of Agriculture, and the State Department of Water Quality and Hygiene.



penalties sought

Region VIII is seeking civil penalties totalling \$300,000 in four pending Federal District Court cases.

In Utah EPA is asking for a \$140,000 judgment against Park City Ventures, for 14 days of tailings spills from the firm's mining operations in Park City, and \$10,000 from Thatcher Chemical Co., Salt Lake City, for a chemical discharge into the Surplus Canal, a tributary of Great Salt Lake.

In Colorado the Ralston Purina Co., owner of the Keystone ski area, is charged with spilling oil into Dillon Reservoir for 11 days, and a fine of \$110,000 is sought. For endangering the water supply of Crested Butte by tailings spills into Coal Creek, the U.S. Energy Corporation, a mining company, is being sued for \$40,000.

drinking water grants

Three States in Region VIII have been awarded the first drinking water supply supervision grants, under the Safe Drinking Water Act. They are: Colorado, \$107,600; North Dakota, \$75,000; and South Dakota, \$75,000.

The funds will be used for technical assistance, engineering surveillance, monitoring, and laboratory support.



steel plant cleanup

The Kaiser Steel Corporation recently agreed to clean up the air pollution from its Fontana, Calif., plant after EPA asked for a Federal District Court injunction against the firm. The corporation signed a consent decree, agreeing to reduce its emissions of sulfur oxides and particulate matter to acceptable levels. Installation of "scrubbers," gas cleaning equipment, began immediately on some stacks, and the first units will be in operation this summer. Kaiser also agreed to shut down all but three of its antiquated open hearth furnaces, and to use no more than two of them at any one time. The decree requires full compliance with EPA's emission order by Jan. 1, 1980.

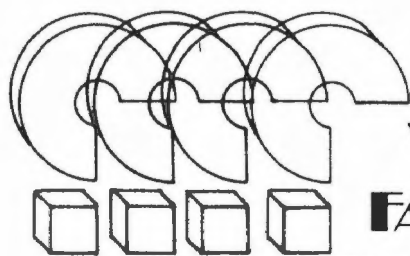


foot rot fungus

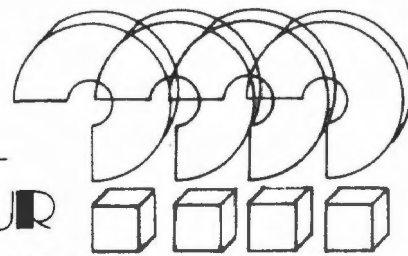
Winter wheat growers in eastern Oregon recently received special permission from EPA to use an unregistered fungicide, Benlate, on some 261,000 acres of crops. The product is the only one known to be effective on wheat foot rot, a fungus infection that threatened the growers with a loss of more than \$4 million this season. Later a similar authorization was made for eastern Washington.

municipal penalty

The Eagle Water and Sewer District in Ada County, Idaho, near Boise, recently paid a \$250 civil penalty for violation of its wastewater discharge permit. Region X officials believed it is the first such penalty to be paid by a municipality or municipal service corporation.



WILL ENVIRONMENTAL FACTORS INFLUENCE YOUR CHOICE OF A VACATION SITE?



Kenneth Eng, Environmental Engineer, Facilities Technology Division, Region II, New York:

"To a large degree, environmental factors will affect my choice of a vacation place. But the eventual selection will depend upon the purpose of the vacation. If I wanted to go sight-seeing or swimming, a polluted site would obviously not be chosen.

"However, if studying the culture and mores of a certain society or people were my primary interest, then only the worst environmental hazards would deter me from a visit. Moreover, by visiting an area where pollution is rampant, I might be able to recommend or assist the people to handle some of their pollution problems.

"This summer my wife and I plan to visit Hong Kong to see what it is like now. I was last there as a very small child some twenty years ago."

Dick Thiel, Chief, Environmental Impacts Branch, Water Division Region X, Seattle, Wash.:

"With a wife, four children and a dog to take along, I choose vacation spots on a socio-economic and political basis rather than on environmental grounds. However, whenever possible, I look for unspoiled natural surroundings which show as little evidence of man's influence as there can be. The wonders of God's creation are best experienced away from noise, congestion, and the hyper-active pace of everyday life.

"My choices are the ocean shore, and the quiet mountain lakes."

George Coblyn, Director of Civil Rights and Urban Affairs, Region I, Boston:

"Yes, environmental factors have influenced my choice of where to use vacation time. Usually, my wife and I travel overseas but this year I am staying put. The environment created by urban neglect will keep me in the inner city of Boston and its blighted environs.

"I will be working with the Third World Organization, a movement that represents people of color, blacks, chicanos, Indians, Portuguese, Chinese, Puerto Ricans and all the rest. Headquarters are in the newly built Harriet Tubman House on Tremont Street and I will be interviewing and recruiting members of minorities for construction work under EPA's federally sponsored construction grant projects.

"I think that our Agency hasn't taken a close and hard enough look at the problems of the Nation's inner cities and their endangered species—man. These people live in an environment of deprivation—deprived not only of the esthetics and pleasantries of life, but even of health itself.

"Perhaps we have been too elitist, with our concern centered upon open land, the amenities of nature, and recreational areas that attract the affluent and Sierra Club members. Certainly, many of EPA's supporters are the same people who move to small towns in Massachusetts and Connecticut, where in the name of preservation they practice economic exclusion against minorities and the poor.

"Were I not staying in Boston this year, probably we would go to the new nation of Guinea, to visit the place my father was born when it was a colony—Dutch Guinea."

Garland Cates, Supply Management Specialist, General Services Division, Research Triangle Park, N.C.:

"Environmental factors influence my choice of a vacation site to the extent that I won't go to a beach that has the reputation of being a dirty beach or to an area that has a reputation for dirty air. But usually I go where my family wants to go and to a place that fits into my budget. I plan to go South this year, to Mississippi where I have family living."

Birute Bulota, Illustrator, Graphics Art Section, Region V, Chicago:

"The choice of where to go and what to do on vacations is definitely influenced by environmental considerations—primarily the presence of breathable air and clean water. Some years, in February or March, I go to the Rocky Mountain area for skiing where the air is clear and clean. I do go sailing on Lake Michigan, but not swimming because I like cleaner water to swim in. In summer I've sailed to Mackinac and fished on the islands nearby—the water at least appears to be clean up there. I've driven through the continental United States, and parts of the country are still beautiful, but many of the urban areas seem like waste lands. I have to work in a city, but I usually flee from cities for holidays."

Kenneth Eng



Dick Thiel



George Coblyn



Garland Cates



Birute Bulota





news briefs

RETENTION OF WATER CLEANUP DEADLINES URGED BY QUARLES

Proposals by the National Commission on Water Quality that Congress postpone the water cleanup deadlines set in the Water Pollution Control Act have been described as "inconsistent, undesirable and hopelessly impractical" by Deputy Administrator John R. Quarles Jr. A general delay in the 1977 date for requiring the best practicable pollution control methods for industries and cities "would be tantamount to rewarding" polluters who have delayed in complying, he declared. Mr. Quarles also said that there is no need for a five-or ten-year postponement of the goal of "fishable, swimmable" water by 1983, as proposed by the Commission. The Deputy Administrator expressed these views at a recent meeting of the Water Pollution Control Federation.

VOLKSWAGEN RECALLS 138,000 CARS FOR EMISSION CHECK-UP

Stanley Legro, Assistant Administrator for Enforcement, recently urged owners of Volkswagen Rabbit and Scirocco models, 1975 and early 1976, to take advantage of the maker's offer to correct defects in the cars' catalytic converters and evaporative emission control devices. EPA and the Transportation Department had been investigating user complaints when the voluntary recall offer was made. About 138,000 cars are involved, the Volkswagen firm said.

CONTROLLED BURNING RECOMMENDED FOR PCB DISPOSAL

Carefully controlled incineration is the best method of disposing of polychlorinated biphenyls (PCBs), EPA has concluded. The oily, synthetic chemicals, used chiefly as insulating fluids in electrical equipment, are dangerous if allowed to escape into the environment. They are toxic, resist natural decay, and accumulate in the fatty tissues of plants, animals, and man. The disposal guidelines were published in the Federal Register April 1.

FEDERAL NOISE STANDARDS SET FOR TRUCKS AFTER NEXT YEAR

All medium and heavy-duty trucks manufactured after Jan. 1, 1978, will have to meet EPA noise standards, Administrator Russell Train has announced. He estimated the regulation would reduce urban traffic noise by more than 25 percent by the year 1990.



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WITHIN OUR REACH

A new film is now available which tells the story of how an American town, Parsippany-Troy Hills, N.J., was able, with the help of EPA, to solve its water pollution problems at minimum cost to local taxpayers.

The movie, which was produced for the EPA Public Affairs Office by Richter, McBride, Inc., is titled "Within Our Reach" because it shows other cities and towns with water pollution problems how they can use Federal funds to meet 75 percent of the cost of the planning, design and construction of treatment plants.

Expressing their opinions in this film are the mayor, other local and Federal officials and citizens who worked to help get the new waste treatment plant for Parsippany-Troy Hills.

This community obtained a \$25 million Federal grant to help build its plant. The town benefited in cleaner water and also in the additional jobs created by construction and operation of the new facility.

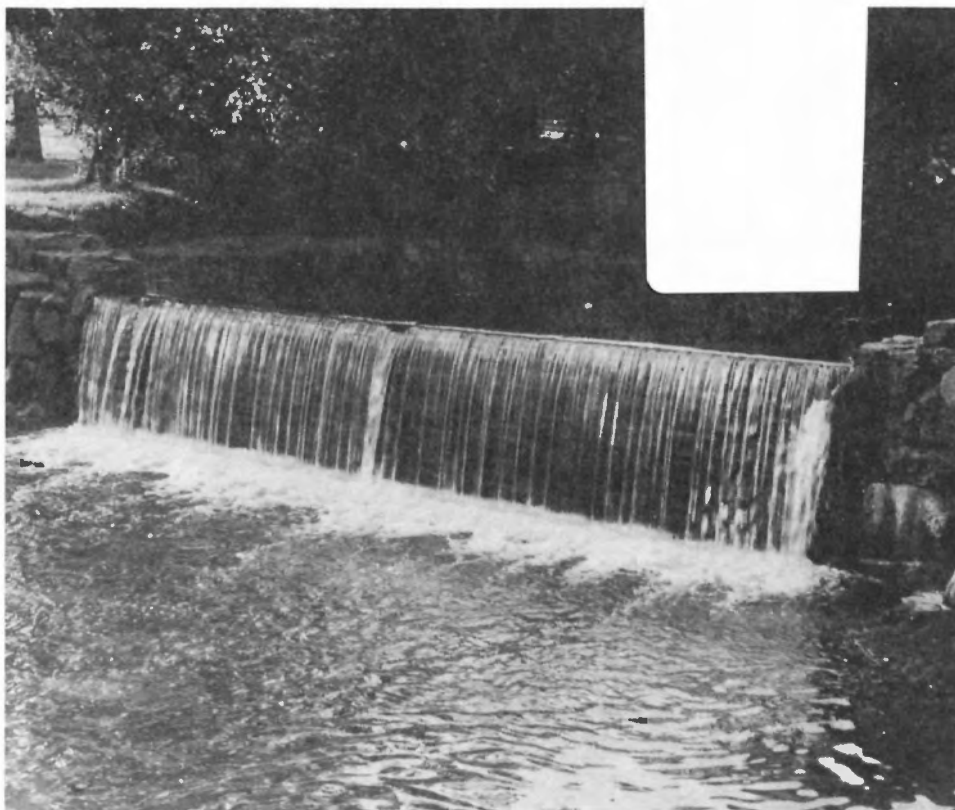
Parsippany-Troy Hills is now seeking another \$30 million in Federal funds for a tertiary treatment plan and for completion of its sewer system.

The film notes that thousands of wastewater treatment facilities are now being built under the \$18-billion program authorized by Congress.

"Yet," the film states, "billions of dollars authorized by Congress for cleanup construction are still not scheduled for use."

"At least 10,000 towns and cities in the nation must still come forward with grant applications to improve their existing sewage treatment plants."

"The full eighteen billion dollars provided for wastewater treatment construction must be committed by Sep-



Clean water is the goal of the \$18-billion construction grants program.

tember 30, 1977, and must be used effectively."

The movie closes with a statement by Administrator Russell E. Train: "We're all striving for the same goal, to clean up the waters of every community in this country. This is a vital goal for the health of the American people, for recreational opportunities and for the quality of life of present and future generations. It's a goal that for the first time within a hundred years, is within our reach."

The producers of the film, Richter McBride, Inc., also produced "The Gifts," a prize-winning film on water

pollution made for the Federal Water Pollution Control Administration, which has now been seen by an estimated four million people.

Much of the photography in "Within Our Reach" has the same haunting beauty which characterized "The Gifts" film.

A free loan of this new 17-minute movie may be obtained by writing Modern Talking Picture Service, New Hyde Park Road, New Hyde Park, New York, 11040. Copies of the film are being sent to all Regional Offices and major EPA laboratories. □