

905R77113

ENVIRONMENT MIDWEST together



*H*ello, from the 650 people who work for you at the Midwest Office of U.S. Environmental Protection Agency.

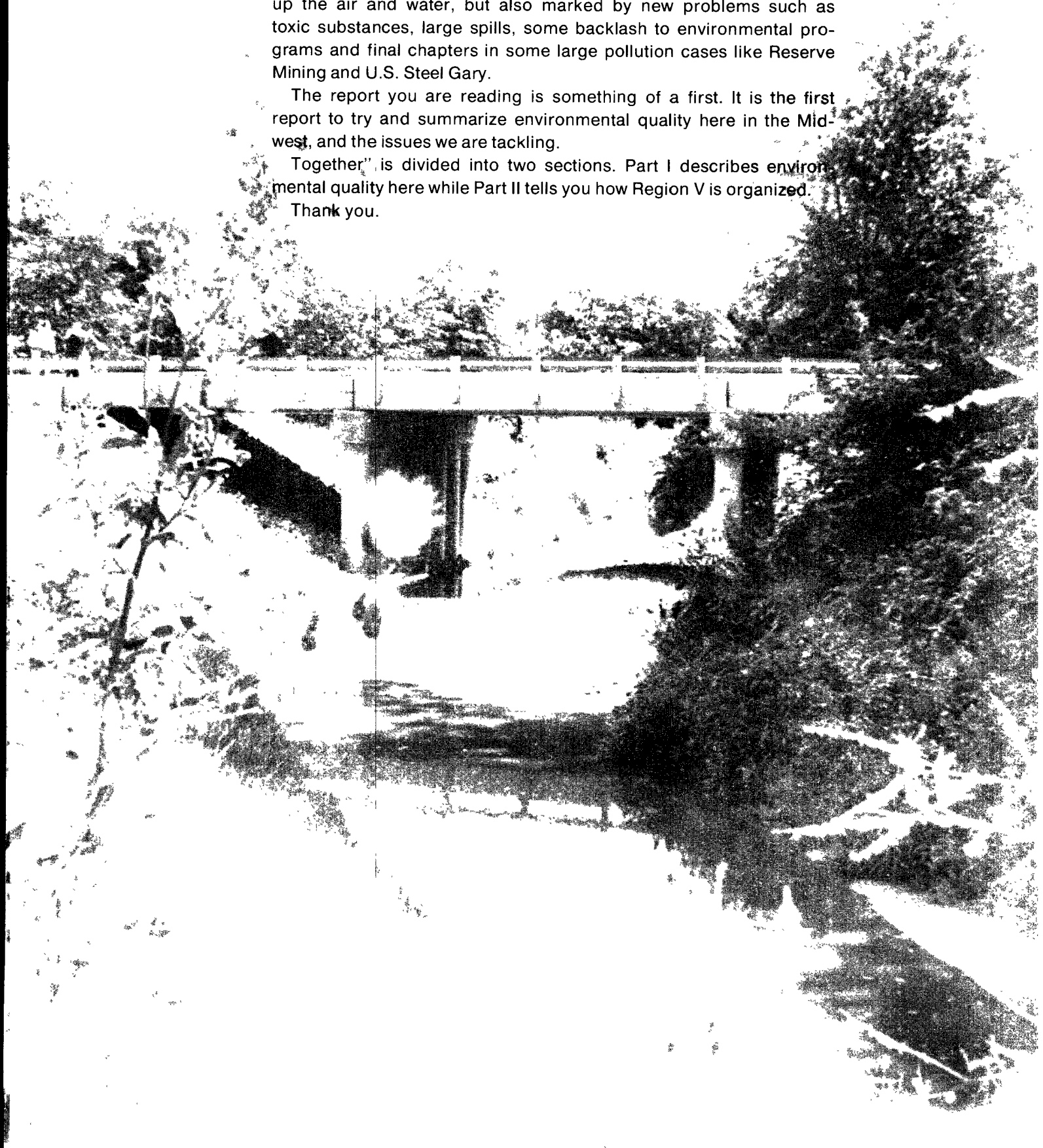
The Midwest Office works to protect environmental quality in six states—Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. That's a big part of America—containing one fifth of the nation's population and one fourth of its manufacturing activity.

This is the fourth edition of "Together"—our annual report. It covers 1976-1977, years marked by some real progress in cleaning up the air and water, but also marked by new problems such as toxic substances, large spills, some backlash to environmental programs and final chapters in some large pollution cases like Reserve Mining and U.S. Steel Gary.

The report you are reading is something of a first. It is the first report to try and summarize environmental quality here in the Midwest, and the issues we are tackling.

"Together" is divided into two sections. Part I describes environmental quality here while Part II tells you how Region V is organized.

Thank you.



ENVIRONMENTAL QUALITY REVIEW

AIR



Imagine driving down the highway and seeing billboards with the ominous warning "Breathing May Be Hazardous to Your Health". It sounds far-fetched, but might well come to pass in a futuristic society were it not for the efforts by EPA to clean up the nation's air.

Our air is polluted. For years we've stood idly by, ignoring the noxious gases, toxic substances, and particulates released in the name of "progress".

What's so serious about air pollution? Consider the health effects. Possible increases in cancer, lead poisoning, and asthma are just a few of the problems. There are six major pollutants—each with its own list of associated health drawbacks.

The Pollutants . . .

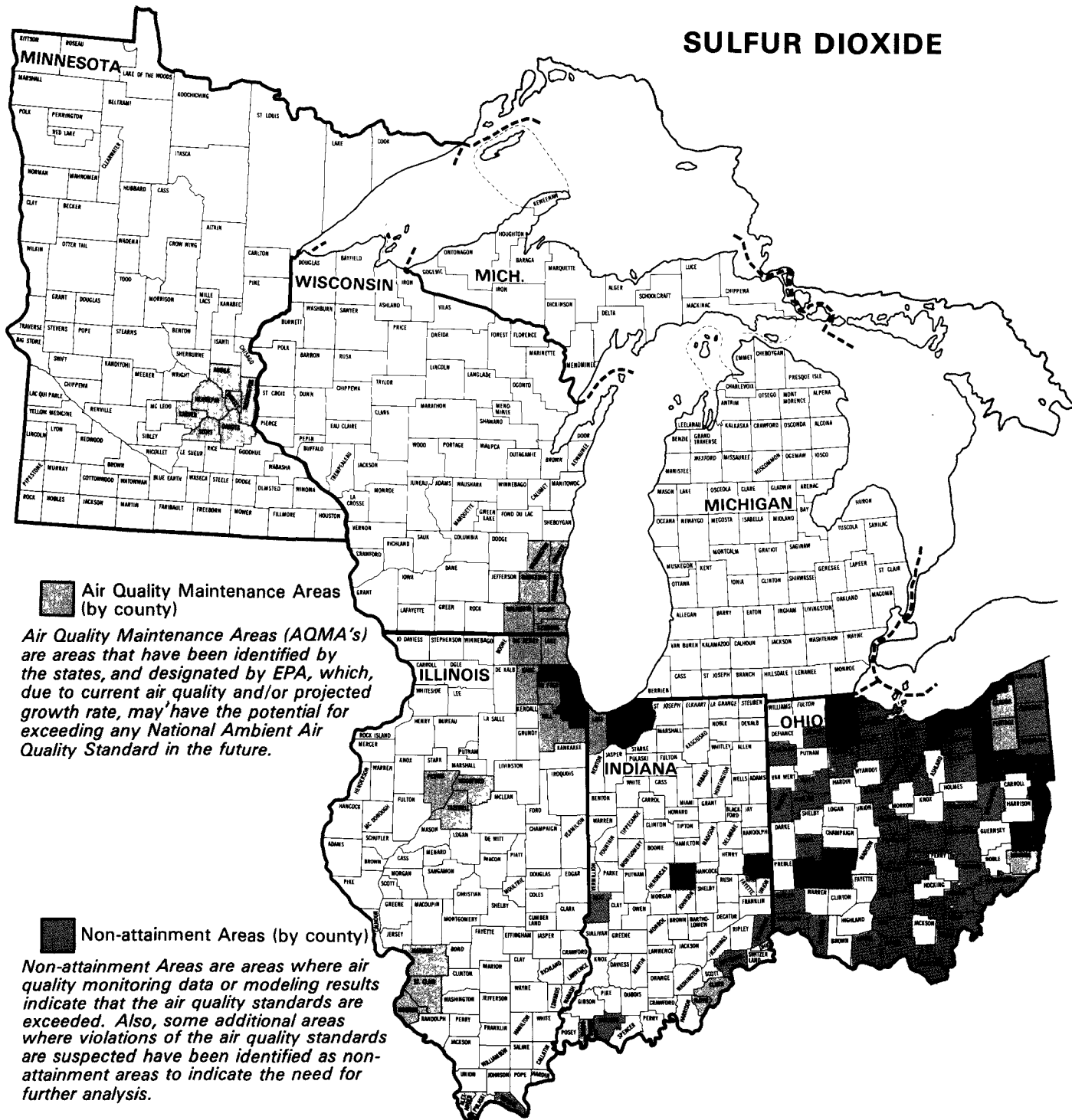
SULFUR OXIDES: Most are produced through combustion of coal or fuel oil. Sulfur oxides leave their mark through the discoloration of plants, they eat away at iron and steel, and can dissolve marble. When it comes to the human body, sulfur oxides can aggravate asthma, lung and heart disease, and cause reduced lung function in children.

TOTAL SUSPENDED PARTICULATES: This category is a catch-all for any particle in the air including soot, mists, sprays, dust, dirt and toxic substances. Related health effects are wide-ranging. Inhalation of lead particles can cause lead poisoning; particulates may weaken the body's resistance to infection and cause injury to the linings of the lungs and throat. Dust and mists can prove irritating to the eyes.

CARBON MONOXIDE: A tasteless, odorless, colorless gas, carbon monoxide is spewed forth into the environment by a familiar culprit—the automobile. Exposure to small amounts can result in fatigue, dizziness and headaches. As it inhibits the ability of oxygen to enter the blood, exposure to large amounts of carbon monoxide can be fatal. Persons suffering from lung disease, anemia, or cerebral-vascular disease should avoid contact with carbon monoxide whenever possible.

PHOTOCHEMICAL OXIDANTS: These pollutants are secondary in nature. They are the result of chemical reactions that occur when other pollutants are exposed to sunlight. Smog is produced in this fashion.

SULFUR DIOXIDE



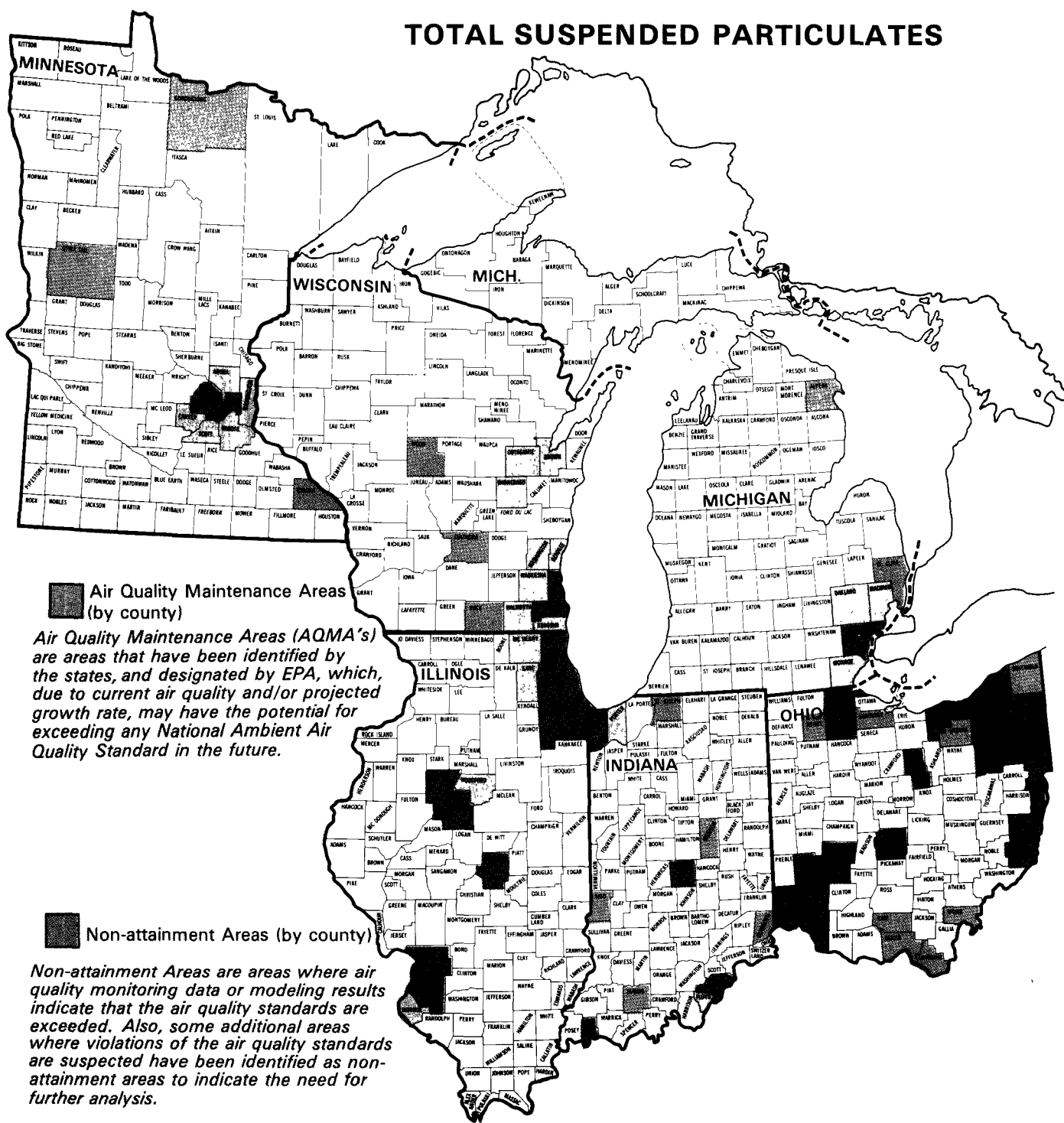
Other photochemical oxidants include formaldehyde, nitrogen peroxide and peroxyacetyl nitrate.

Ozone is a constituent of photochemical smog. Ozone is currently the subject of intensive studies regarding health effects. It is believed that exposure to ozone results in severe respiratory irritation. Other photochemical oxidants are given credit for causing headaches, coughing, chest pains, and triggering asthma.

NITROGEN OXIDES: Nitrogen oxides are formed in high-temperature combustion processes such as electrical power plants. Exposure is linked with inhibiting vegetation growth and serious respiratory problems. High concentrations may prove fatal.

HYDROCARBONS: Hydrocarbons are found in auto emissions and are also formed from the evaporation of industrial solvents found in painting and dry-

TOTAL SUSPENDED PARTICULATES



cleaning processes. While no adverse effects are directly related to hydrocarbons, they react under light to form photochemical oxidants.

Region V and Clean Air

As specified in the Clean Air Act Amendments of 1970, all states were required to develop and implement specific programs for achieving clean air stan-

dards set by EPA. EPA approved all state program plans but encountered a snag in Ohio where the proposed plan was deficient in the area of sulfur oxides. EPA developed regulations to compensate for the deficiency and these were adopted in August of 1976. Although the regulations resulted in a program plan that demands the least amount of pollution reduction consistent with maintaining public health standards, immediate reaction by utilities and in-



dustries was far from favorable. Over 35 utilities and industries brought charges against EPA. Most of the furor is over the use of scrubbers and other control techniques. Scrubbers are expensive pollution control devices which reduce the amount of sulfur oxide emitted through the burning of high sulfur coal. The charges are under review by the 6th U.S. Circuit Court of Appeals.

If technology has its way, the next decade will bring an effective, yet inexpensive replacement for scrubbers. Scientists at the University of Tennessee's Space Institute announced the development of an efficient electrical generating process which burns high sulfur coal while producing a minimum of pollution. Magnetohydrodynamics is the name of the process which catches 95% of the sulfur oxides without using costly scrubbers. Advocates of the process say such plants will be able to produce 50% more power than conventional plants and the process will be commercially available by 1985 or 1990.

Meanwhile Region V reports a decrease in sulfur oxide and particulate levels in several metropolitan areas. In Chicago particulate levels dropped from 153 micrograms per cubic meter in 1975 to 148 micrograms per cubic meter in 1976. Sulfur oxide levels dropped from .031 parts per million to .019 parts per million in 1976. The national standard is .03 parts per million. Other cities recording decreasing sulfur oxide and particulate trends included Detroit and Cincinnati.

Ozone Alley, Fluorocarbons, and All of Us . . .

One of the most persistent and controversial air problems remains the threat of ozone. Ozone is the focal point for two environmental issues. EPA, together with the Food and Drug Administration and the Consumers Product Safety Commission, has imposed a ban on all fluorocarbon sprays by April 15, 1979. It is believed that the use of fluorocarbons depletes the ozone layer—a protective layer of air in the upper atmosphere surrounding the earth which screens out ultraviolet rays. Destruction or depletion of the ozone layer would result in a significant increase in skin cancers throughout the world. The new ban will

affect approximately one billion pressurized spray containers manufactured in the United States.

Looking at ozone in Region V, the amount of ozone found in both our urban and rural areas has risen sharply. By mid-June, 1977, Chicago had received its fourth ozone advisory of the year, and people with cardiac problems were being advised to avoid strenuous activity and remain indoors. The first alert, beginning in May and extending into June, was the longest advisory in Illinois history, lasting 23 days.

The harmful ozone in the lower atmosphere is formed from hydrocarbon emissions which interact with sunlight. Layers of ozone tend to build-up in the cities although the problem also extends (to a lesser degree) out to rural communities. The Chicago lake-front area extending to Waukegan was nicknamed "Ozone Alley."

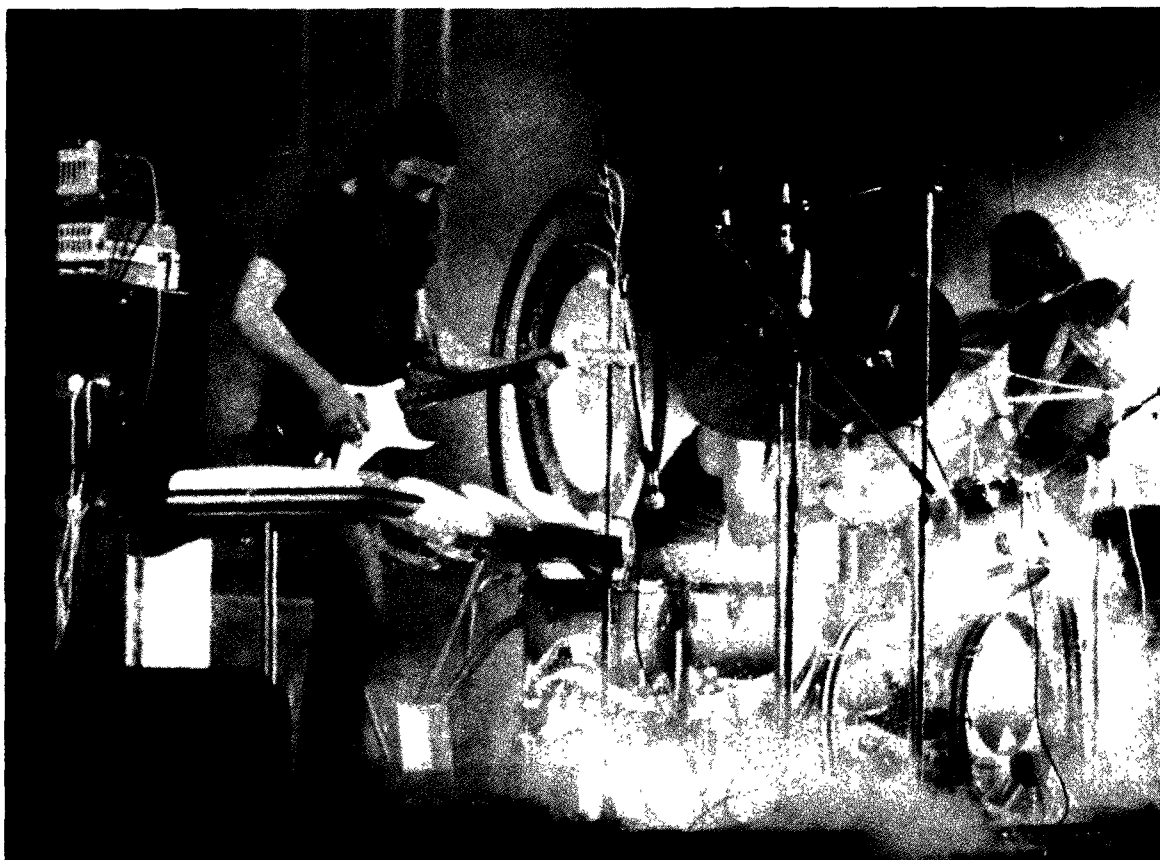
EPA is working with the six states in Region V to tackle the ozone problem and develop a feasible solution. All Region V states have ozone levels over the health standard, and in some areas the ozone level has risen to three times the health standard. The key to reducing the problem is to reduce hydrocarbon emissions from motor vehicles and industry. The six states and EPA are developing a solution to the problem which should be proposed in 1978. Possible strategies include emission testing of automobiles and trucks, controls on numerous industries, and the increased use of mass transit.

Chicago and Cincinnati already have auto emission testing programs. Chicago's voluntary testing screens 700 cars per day at six stationary and 10 mobile testing units, but in order to screen all the city's cars, a mandatory program would need to process 4000 cars per day. EPA feels that if such a program became mandatory, exhaust pollutants could be reduced by 30-50% over a five year period.

At the national level, the crackdown on auto emissions has resulted in direct confrontation with the auto industry. EPA is currently seeking the authority to impose a penalty of \$65 to \$100 per car, beginning in 1983 on new cars which will not meet nitrogen oxide standards in effect at that time. The major automotive manufacturers have said that the recommendation is too stringent and will result in inflation, lost jobs, and the waste of billions of gallons of gasoline each year. The controversy rages on, with EPA holding firm on a policy on pollution control through auto efficiency.

EPA is not only concerned with eliminating pollutants, but also with maintaining pollution free areas. EPA's policy, known as emission offset, advocates restricting industrial polluters from building in areas where the air pollution level is already in violation of standards. Another EPA requirement focuses on the prevention of significant deterioration of air quality in areas with cleaner air. Sources are restricted from expanding in those areas where it is known that the air quality will deteriorate as a result of the action. While this new area of responsibility causes many federal-state management questions, the end result will be cleaner air for us all.

Noise



A passing freight train, blaring television set, revved-up car, or neighbor's lawnmower—almost daily each one of us is exposed to sounds that are louder than what we consider comfortable. When sounds pass the comfort threshold and interfere with communication, we usually think of them as "noise."

Noise is a subtle, yet serious pollutant. Over 14 million Americans are exposed to high noise levels from trucks, planes, motorcycles, stereos, lawnmowers, and kitchen appliances. On-the-job conditions can pose an additional threat with an estimated 15 million people exposed to dangerous noise levels in conjunction with their work.

EPA began fighting noise pollution in 1972 with the passage of the Noise Control Act. All regions received instructions to begin working directly with communities in an effort to aid towns in the development of noise pollution workshops which serve to instruct municipal officials on noise pollution ordinance development, monitoring devices, and enforcement strategies. EPA's goal is to promote cooperation and understanding between towns and cities so that they may develop compatible noise ordinances. An excellent example of inter-community cooperation is demonstrated by St. Francis and West Allis, Wisconsin. Town leaders in West Allis are helping officials in St. Francis design their noise pollution control ordinance so it will be compatible with the existing regulations in West Allis.

Citizens, too, are showing an increased interest in the problems of noise pollution. In a unique rul-

ing in Ferndale Heights, Illinois, citizens were given the right to report noise pollution violations and in lieu of proper monitoring equipment, the complainant's testimony is sufficient to prove a violation. If measurements are taken, they must show that the numerical limits are exceeded to prove a violation.

Currently, nearly 20 million Americans have suffered some type of hearing loss. At one corporation in Illinois, 250 workers filed worker's compensation complaints for partial and total hearing losses received while working in the company foundry, assembly line, and testing rooms.

Transportation Modes — Environmental Headaches

Noise pollution is a general area, but it is possible to address a few of the specifics. The noise generated by traffic is generally considered one of the major offenders. EPA operates the U.S. Noise Enforcement Facility in Sandusky, Ohio to test newly manufactured trucks and air compressors to make sure they conform to stringent EPA standards. New EPA standards which will be effective January 1, 1978, will require new medium and heavy trucks not to exceed a noise level of 83 decibels at 50 feet. By 1982, the noise level must be reduced to 80 decibels. EPA's aim is to reduce truck noise by 45%.

Individual communities tackle traffic noise in various manners, some of which are quite innovative as well



as practical. Detroit, Michigan is handling traffic noise pollution through better construction practices. City highways are being excavated below grade-level and landscaped in an attempt to block noise naturally.

Officials in Gahanna, Ohio used a more forceful tactic, threatening to close down a portion of the Outerbelt Highway unless a noise barrier was constructed. The city claimed the state promised them the noise barrier when permission for construction was granted in 1966. The Department of Transportation recently promised Gahanna that construction of the 3,700-foot concrete noise barrier will be completed by the end of November 1977. Outerbelt traffic noise will be reduced 10 decibels as a result of the barrier—the first of its kind in the state.

Airport noise is another area of vital concern. Far too often, the roar of jets overhead makes for miserable living conditions for residents of areas near airports. In Region V the worst offender is O'Hare International Airport. Sound levels at O'Hare frequently measure over 90 decibels. Homeowners near the airport have flooded the management with letters of complaint and their problem is so serious that several residential areas are now ineligible for FHA mortgages. In response to public outcry, Illinois Congressman Abner Mikva has introduced legislation that would provide for stricter control over airport noise. Illinois Attorney General William Scott proposed an

STATE ROLL CALL

Cities in Region V that have existing, new, or are drafting noise pollution control ordinances

ILLINOIS	INDIANA	MICHIGAN	OHIO	WISCONSIN
Arlington Heights Carbondale Champaign-Urbana Chicago Cook County Des Plaines Downers Grove Evanston	Evansville Gary Hammond Logansport	Ann Arbor Birmingham Comstock Detroit	Ashland Barnesville Berlin Heights	Montgomery New Philadelphia Northwood Norwalk Piqua Richfield Richmond Heights
Highland Park	Ogden Dunes South Bend	Gladwin Grand Rapids Harbor Springs Kalamazoo Livonia Meridian Twp. Milford Pontiac Saginaw Washington Twp. Westland Wyoming	Cortland Findlay	Shaker Heights St. Clairsville Staubenville Streetsboro Toledo Twinsburg Uhrichsville Wellsville Wickliffe Woodville Wooster Youngstown
Joliet Marengo Moline Northbrook Northlake	MINNESOTA Bloomington Brooklyn Park Cannon Falls Columbia Heights Minneapolis Rochester St. Cloud		Kettering Lewisburg Lynchburg Macedonia Manfield Maple Heights Marion Massillon Maumee Middleburg	Howard Kenosha Milwaukee Racine West Allis
Park Ridge Peoria Rockford				

Existing
New
Drafting

airport noise abatement regulation that is under consideration by the Illinois Pollution Control Board in 1977.

In Minnesota, the state pollution control agency is conducting an indepth study of jet aircraft noise in an attempt to find ways to help alleviate deafening conditions near Minneapolis-St. Paul Airport.

Region V EPA views airport-related noise as a serious environmental threat and an area demanding immediate attention. EPA has developed a process to enable airports and communities to assess the magnitude of airport noise in their areas and will be working directly with numerous airports and towns to plan and implement noise abatement strategies.

According to United Airlines President Richard Ferris, the airlines and government agree that most older four-engine jets should be replaced. This would include early DC-8's, 707's, Convair 880's, and 990's. There is some disagreement on whether or not to sound-deaden Boeing 727's, 737's, and McDonnell DC-9's. The airlines feel it is too expensive; however, such retrofitting is required by 1984 through a new FAA ruling.

The Department of Transportation recently proposed an airline tax plan for the refitting or replacement of aircraft that do not meet federal noise standards. If such legislation passes, the outcome should be a major step towards improving environmental quality.

Sound Levels and Effects		
Common Sounds	Noise Level (dB)	Effect
Carrier deck jet operation Air raid siren	140	
	130	
Jet takeoff (200 ft.) Thunderclap Discotheque Auto horn (3 ft.)	120	Maximum vocal effort
Pile drivers	110	
Garbage truck (50 ft.)	100	
Heavy truck (50 ft.) City traffic	90	Very annoying Hearing damage (8 hours)
Alarm clock (2 ft.) Hair drier	80	Annoying
Noisy restaurant Freeway traffic Man's voice (3 ft.)	70	Telephone use difficult
Air conditioning unit (20 ft.)	60	Intrusive
Light auto traffic (100 ft.)	50	Quiet
Living room Bedroom Quiet office	40	
Library Soft whisper (15 ft.)	30	Very quiet
Broadcasting studio	20	
	10	Just audible
	0	Hearing begins

This decibel (dB) table compares some common sounds and shows how they rank in potential harm to hearing. Note that 70 dB is the point at which noise begins to harm hearing. To the ear, each 10 dB increase seems twice as loud.



PESTICIDES



It all began with SILENT SPRING. Rachel Carson's best-seller on environmental threats sounded the alert to an unsuspecting public. Pesticides may be dangerous.

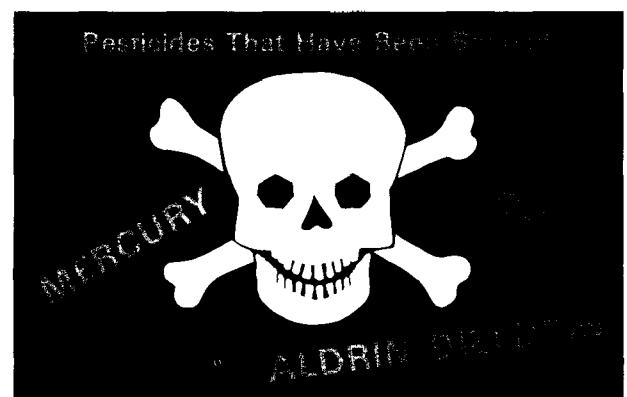
The term "pesticide" is actually a catch-all term for any substance that repels or destroys pests; and for any mixture of chemical used as a plant regulator or killer.

While it is certainly true that some pesticides can be lethal, it is also a fact that they are tremendously useful substances. A skillful combination of some 1400 chemicals results in 46,000 pesticides that have dramatic effects on man's lifestyle and well-being. Pesticides can claim credit for increasing crop production, eliminating the vectors of several deadly diseases, and improving livestock production.

EPA's work with pesticides is primarily in the area of regulation. By provision of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1972, EPA has the authority to regulate all pesticides in both interstate and intrastate commerce. EPA has the power to suspend registration, thereby halting production, if a pesticide is considered an imminent health hazard to public welfare. Since the program began, EPA banned the controversial DDT, and has taken similar action on mercury, aldrin, and dieldrin. Several other pesticides are currently under study including the phenoxy herbicides, chemical sprays that have been banned for forest spraying in seven counties in the State of Minnesota.

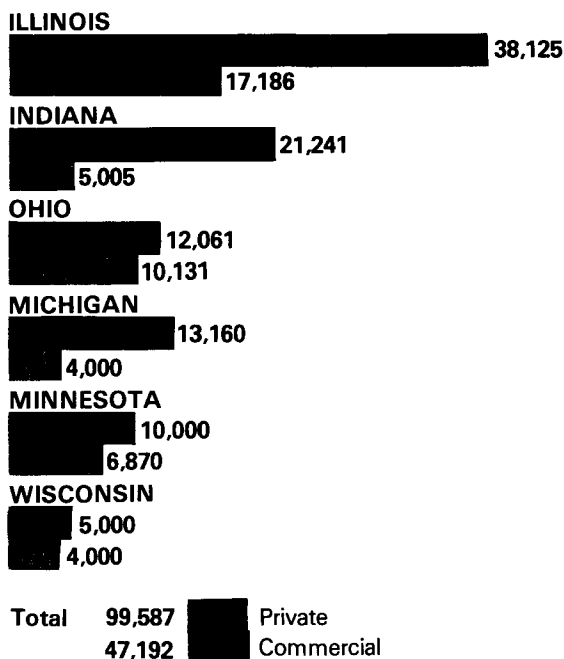
President Carter, in his May 1977 Environmental Message, directed EPA to expand its power in pesticide regulation. In the past EPA had the task of regulating the 46,000 individual pesticides on the market. The new presidential order will simplify the task by giving EPA the authority to regulate the 1400 chemical ingredients rather than the final products. What does this mean to Region V? With over 6000 pesticides registered in the Midwest, the new order should make registration and checking for violations a more efficient process. In 1976, over 600 inspections were made and 900 samples were collected in Region V for laboratory analysis.

Whenever people are exposed to poisonous substances there is always the possibility of accidents. In Lombard, Illinois, the local police force has de-





Number of Pesticide Applicators Trained in Region V



veloped an ingenious poison prevention program which focuses on children. Primary grade school children get a classroom visit from "Officer Nicely" and receive free poison warning stickers for placement on dangerous substances. Children also receive a coloring book on pesticides and an informative brochure to take home to parents.

While it is possible to eliminate pesticide poisonings by eliminating the use of pesticides all together, such an action would result in more harm than good. A viable alternative is a new approach to pest control called Integrated Pest Management. Integrated Pest Management uses a combination of biological and chemical options for pest control based on the type of pest, crop, and environment.

According to EPA Administrator Douglas Costle, "Some pest species have developed a genetic resistance to pesticides, and in many cases, natural balances have been disrupted, or entirely new pest problems have emerged as a result of pesticide treatments. We want to do what we can to assist the Department of Agriculture and the agriculture community in developing alternative crop production techniques which reduce reliance on the ever increasing cost and rapidly diminishing supply of petrochemical-based fertilizers and pesticides. This explains our interest in Integrated Pest Management".

An example of Integrated Pest Management in action can be seen through the Dial-A-Bug program in Michigan. Information about weather, insect popu-

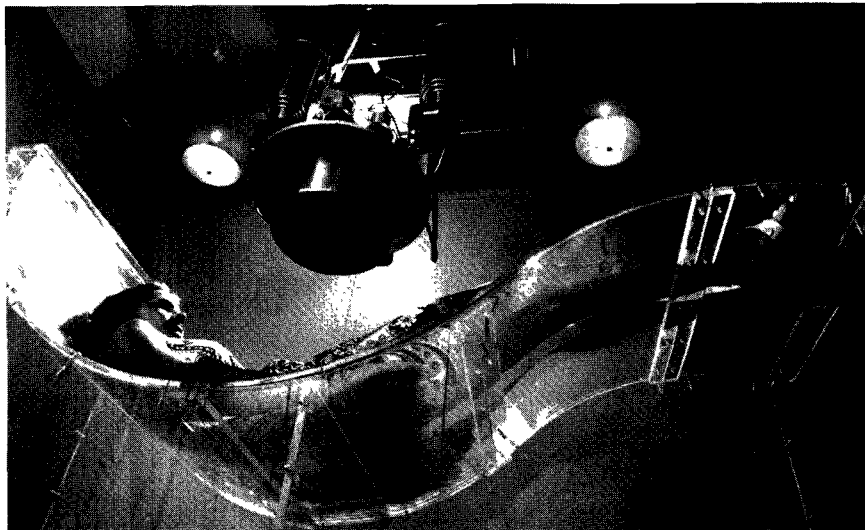
lations and other data is collected daily from 27 regions in the State and analyzed by computer, which relays the information to agricultural extension agents. Farmers can obtain (regional) up-to-the-minute data, and studies have shown that use of Dial-A-Bug has reduced the use of insecticides by 30%.

What's Happening Now . . .

Many pesticides are used each year by individuals who may have little knowledge of proper application techniques or background on the possible effects of the pesticide. EPA is working with the states in the development of applicator training and certification programs. Plans have been submitted by all the Region V states, and the Pesticide Branch is hopeful that all state plans will be approved by October of 1977.

The certification program divides pesticides into two groups—general and restricted. General pesticides are those which can be used safely without special knowledge—a good example is the household ant trap or mosquito spray. Restricted pesticides are far more dangerous and require application by or under the supervision of a trained applicator. So far close to 100,000 Region V citizens have received training and passed state applicator examinations. As the state programs move ahead during 1977-8, the number of trained applicators is expected to increase.

RADIATION



Radiation is an invisible pollutant. We can't see it, hear it, or smell it, but it is present all around us. Man is exposed to radiation from both natural and manmade sources. Natural radiation comes from cosmic and terrestrial sources. Sunbathing gives the body direct exposure to cosmic radiation, that is, the radioactive rays from the sun. The water we drink and ground we walk upon are sources of terrestrial radiation.

Manmade radiation is divided into two categories: ionizing and nonionizing radiation. Included is radiation produced by x-rays, nuclear power plants, radio and television transmitters, microwave devices, ultraviolet light, lasers and high voltage transmission lines.

EPA is interested in radiation since it can affect our environment and health. The use of radiation has resulted in significant medical advances. Our communication systems are associated with minute amounts of radiation as are nuclear power station releases.

Scientists have found that exposure to large doses of radiation can have harmful health effects. Some of the health problems associated with radiation can

include genetic defects, cancer, cataracts, skin burns, and some neurological and behavioral changes.

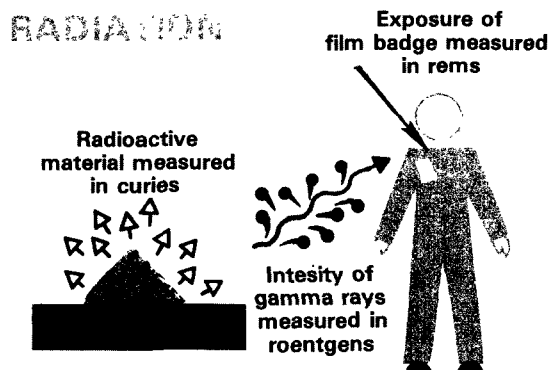
In Region V, the Radiation program is coordinating its activities with the state radiation offices. In 1977, the Agency will propose standards for radioactive materials in drinking water under the Safe Drinking Water Act. Under other authorities, EPA is also proposing new federal guidance for medical and dental x-ray practices in federal health care facilities. Currently, EPA is involved in a coordinated federal program for developing a long-range plan for safely managing and disposing of radioactive wastes. During 1978, Region V will define and evaluate the problem of decommissioning radiological facilities in urban areas. Regional findings will be used in a national assessment plan.

The Canada/United States Water Quality Board recommended in its 1976 annual report that federal, state, and local or Provincial agencies engage in environmental monitoring programs to assess the impact of nuclear power stations upon the Great Lakes. There are presently 20 nuclear power reactors in operation on the Great Lakes using the water of the Lakes for condenser cooling. At this time the impact of thermal and radioactive discharges upon lake biota is not being assessed.

EPA is proposing new radiation standards which will reduce public exposure to planned releases or radioactive materials from the nuclear power industry to one-twentieth of previous guidelines.

As an added measure of safety assurance, EPA formally reviews all nuclear facility plans through the required Environmental Impact Statements.

Looking at radiation associated with communication systems, a special radiation monitoring van from EPA visited Region V during 1976 to check the intensity of broadcast radiation from UHF and VHF television and FM radio transmitters. The project was the first phase of a two year analysis on environmental levels of radio and microwave radiation in urban areas of the United States. The study, being done with the President's Office of Telecommunications Policy, will determine the amounts of electromagnetic radiation in various parts of the country, define the need for non-ionizing radiation guidelines, and study possible health effects on humans.



Radiation — it's all in the name. Rems, roentgens, and curies are all units associated with radiation. EPA measures the biological effects of radiation in millirems. Each year man is exposed to approximately 200 millirems from a combination of natural and manmade radioactive sources.

SOLID WASTE



Remember the city dump? Remember the sickening smells of rotting trash and all those mini-mountains of decaying auto remains and appliance pieces?

Garbage may well be an unrealized tribute to our modern throwaway society, but it also accounts for a tremendous waste of precious natural resources. Each year Americans dispose of 48 billion cans, 26 billion bottles and jars, 4 million tons of plastic, 7.6 million television sets, 7 million cars/trucks, and 30 million tons of paper. Annually, we generate over 150 tons of municipal refuse which could be converted into the energy equivalent of 200 million barrels of crude oil using available technology. Right now, the concept of resource recovery (recovering energy and other materials from municipal solid waste) is understood and practiced by only a few. EPA is banking on resource recovery systems becoming a way of life.

In Region V, the problem of garbage disposal and resource recovery is of massive proportions. Thirty percent of the nation's garbage accumulates in Region V. Finding a final resting place for the Mid-

west's throwaways is an incomprehensible environmental headache. The Regional office is active in giving technical assistance to states and communities considering resource recovery. Under the provisions of the new Resource Conservation and Recovery Act, EPA also has the power to provide limited financial assistance to states and municipalities interested in developing their own resource recovery systems.

Where It's At . . .

Region V has two major resource recovery plants currently in operation with plans outlined for 10 more to be under construction by 1980.

The 1000-ton-per-day resource recovery facility in Chicago, Illinois, converts trash into supplemental fuel for a Commonwealth Edison generating station. Another benefit from the plant is the recovery of steel cans for recycling. According to a Chicago city report, the supplementary fuel plant is the most efficient, clean, and economical solution to the city's waste disposal problem. Officials estimate the plant will

save the city \$600,000 a year in operating costs as compared to an incinerator disposal system of equivalent capacity. Commonwealth Edison estimates the energy produced by the processed waste fuel will supply enough energy at presently planned consumption rates to supply the electrical needs for about 45,000 Chicago homes.

At Milwaukee, Wisconsin an \$18 million plant takes all of that city's municipal waste and separates it into metals, paper, glass, and fuel. A total of 90% of the Milwaukee garbage can be recycled. The project is presently the largest waste recycling plant of its kind in the country. The Wisconsin Electric Power Company has signed a contract to purchase the shredded fuel which will later be fired as a supplement to coal to generate electricity. The plant was dedicated in May, 1977 and by the end of the first month nearly 300 tons per day (1/4 of the facility's planned daily load) were being processed.

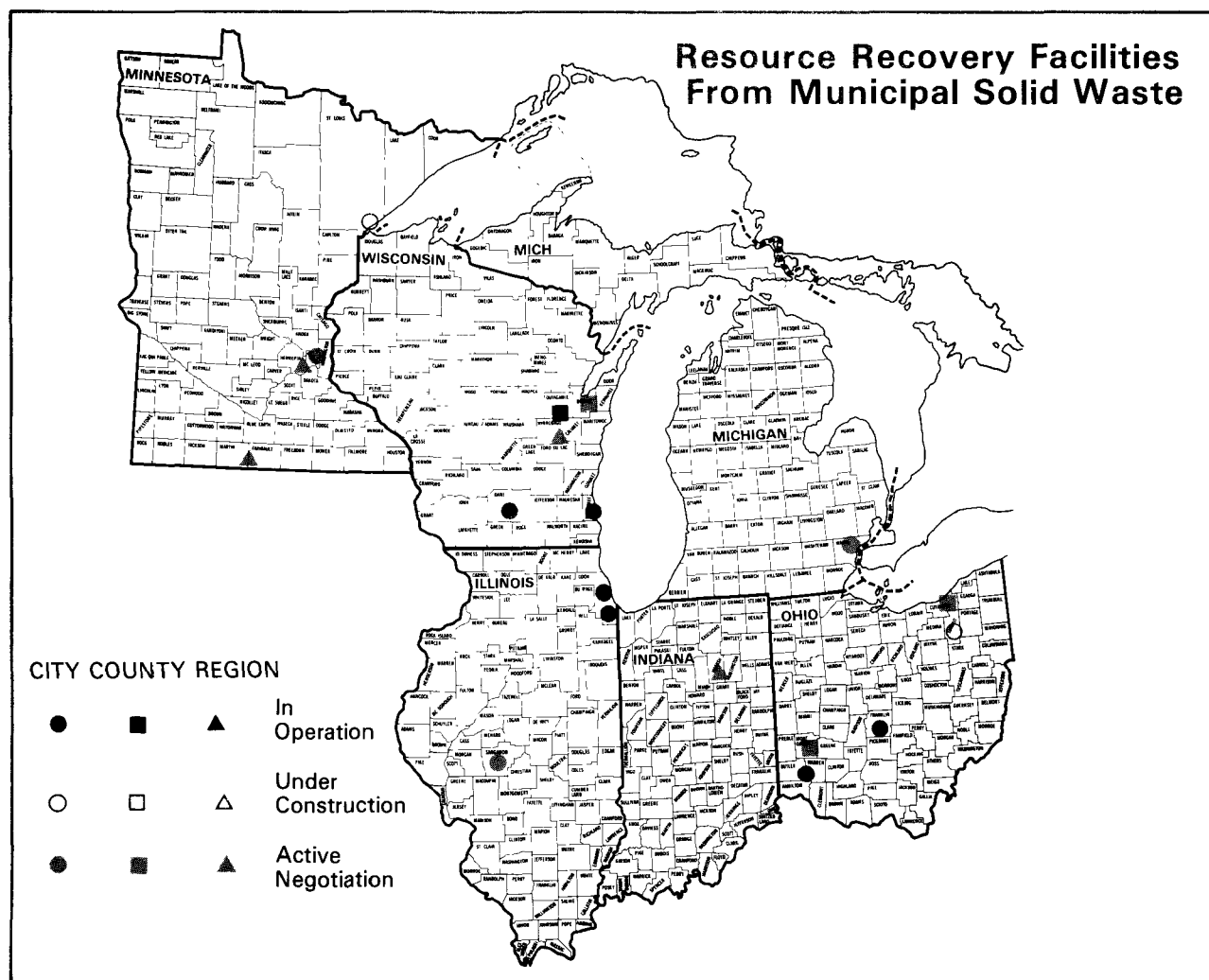
In 1971, an EPA sponsored resource recovery demonstration facility opened in Franklin, Ohio. The pilot plant used a "wet pulp" method for separating aluminum, ferrous metals, glass, and paper fibers from municipal garbage. Although plant operation has been intermittent, Franklin served an important role in pointing out the benefits and "kinks" in a significant re-

source recovery concept. Major facilities based upon the Franklin process are under construction in Florida and New York.

EPA And The States . . .

Each of the states has been working closely with EPA in the development of solid waste management programs (comprehensive plans for controlling the collection, recovery, recycling, and disposal of municipal refuse and hazardous waste). EPA and state solid waste agencies have been working to complete individual state hazardous waste surveys. Such surveys will identify potentially dangerous conditions regarding closed disposal sites, and develop more uniformly strong hazardous waste management programs which will encourage private industry to design and construct all types of hazardous waste disposal facilities.

Early in 1977, residents of Wilsonville, Illinois claimed that a hazardous waste disposal site in their town posed a serious health threat. At the request of Illinois EPA, U.S. EPA Region V conducted an independent study on the safety and potential hazards at Wilsonville. Report findings were due for release by Fall, 1977.



How far along are the state solid waste management programs?

- ILLINOIS** The State Division of Land Pollution Control is currently evaluating the results of a \$3 million grant program for solid waste management and resource recovery demonstrations.
- INDIANA** A "Guide to Recycle the Source Separation Way" was recently published by the State Board of Health for use by communities considering the collection and sale of municipal refuse separated at the site of generation.
- MICHIGAN** Michigan is developing a resource recovery plan by 1978 which will allow for issuing revenue bonds, contracting for services, construction and operation.
- MINNESOTA** A \$3.5 million solid waste disposal and resource recovery grant program is currently in operation. Grants totaling approximately \$800,000 were made in 1976.
- OHIO** 15 projects totaling \$1 million were approved and plans were reviewed for a \$46 million recycling center for Akron. Six one-day workshops on the new state solid waste regulations were held for interested citizens and officials.
- WISCONSIN** The Wisconsin Solid Waste Recycling Authority issued a request for proposals for a resource recovery facility to be located in a three-country area including the cities of Oshkosh and Neenah. Proposals from the private sector are expected in August, 1977. EPA assisted the Authority with a solid waste planning grant earlier in their project.

EPA is encouraged by the states' progress and interest in solid waste program development. Individual citizens, too, can help in solid waste management. Contributing newspapers to community paper-drives and taking aluminum cans or glass bottles to the local recycling center is a conscientious move toward resource recovery. Citizens in over 400 Mid-western cities and towns have access to community recycling plants. Recycling has proven economical for big industry and has become popular with many major manufacturers. Union Carbide, Raytheon, and Grumman are investigating recycling and/or resource recovery methods. Even our telephones can and are being recycled. With the awakening of an energy conscious nation, the trend toward resource recovery is expected to become a significant part of the national energy-saving program. Resource recovery is here to stay.



ILLINOIS	55
INDIANA	34
OHIO	106
MICHIGAN	101
MINNESOTA	33
WISCONSIN	81

WATER

In 1972 the condition of our waters was grim. Newspapers printed the obituary for Lake Erie, industrial rivers resembled floating carpets of slime and grease, and Lake Superior was the daily dumping ground for 67 tons of taconite waste. Only the foolhardy would drink from the Detroit River or swim in the Cuyahoga. With municipal and industrial growth on the upswing, the end seemed nowhere in sight.

The picture changed dramatically with the passage of years. Enactment of the Federal Clean Water Act Amendments signaled the beginning of an environmental war. For the first time there was a national policy on cleaning-up water pollution, with goals and deadlines for the achievement. The new law decreed the nation's waters must be fishable and swimmable by 1983. The Act required all industry and municipalities to obtain permits for dumping wastes, and the amount that could be dumped was placed under tight restrictions. Secondary wastewater treatment was required by law no later than July 1, 1977. The clean-up effort was aided by 18 billion dollars which EPA was authorized to administer through a grant program for the funding of wastewater treatment facilities.

All this occurred five years ago. The 1977 progress report is realistic, yet favorable, noting definite water quality improvement in many areas of the country. The Regional picture is also encouraging. Over 11,000 industries and municipalities have received permits. Permit violations are most frequently attributable to municipal construction delays or failure of industrial plants to comply with effluent limitations.

The Region V states predict that 1983 water quality goals will be met by Minnesota, Wisconsin, Indiana, and Michigan. Some waters in Illinois and Ohio

**On April 9th,
you can prevent
this happening
in Dane County.**



Next April 9th, we're inviting you and your neighbors to join in the planning process for a water quality program for Dane County.

Your ideas are welcome.

The options are many.

The choices can be difficult.

Conflicting interests have to be resolved to make economic sense while serving environmental needs and the overall community welfare.

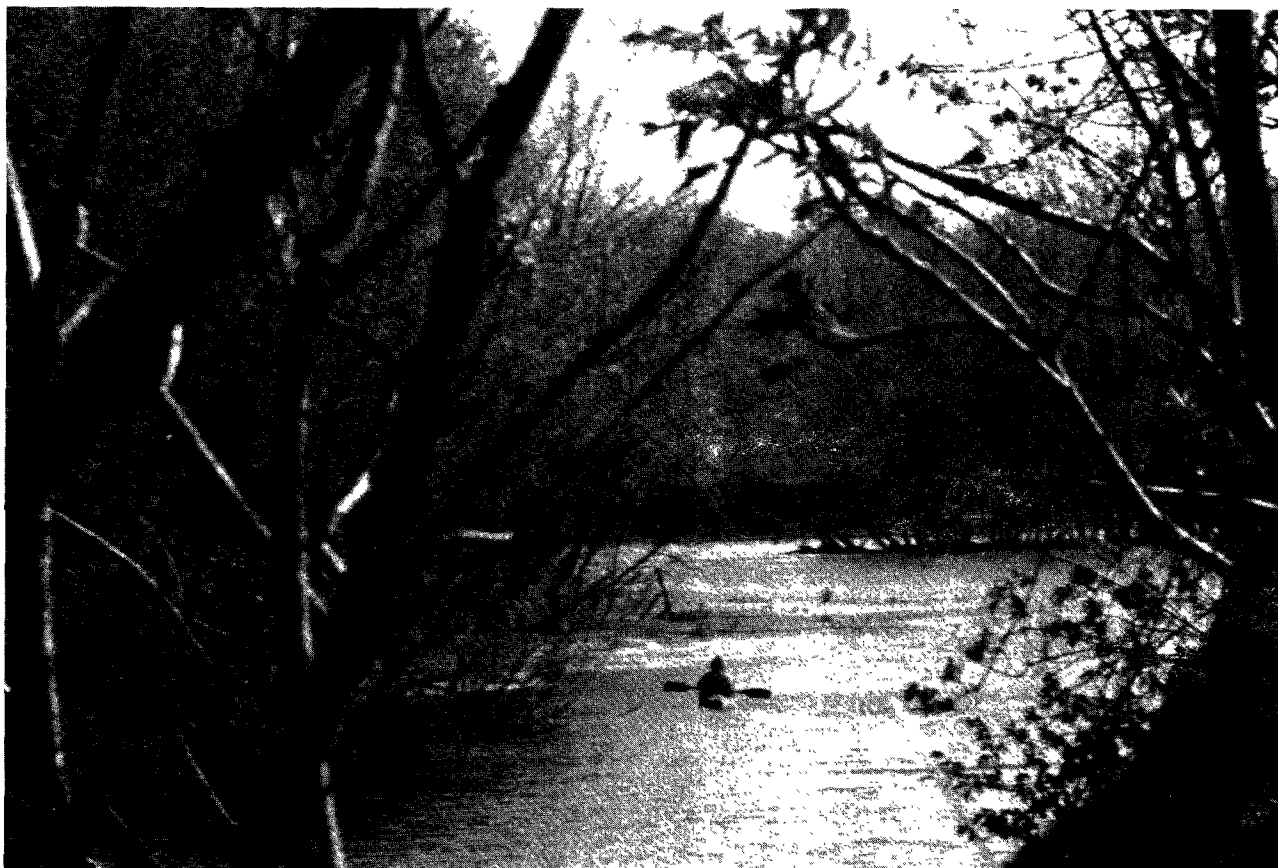
This is your chance to be part of the power structure in Dane County. Our water resources depend on how you help make these decisions.

**See you April 9th, at the Holiday Inn,
9:00 A.M. Look for
"Water Planning Workshop."**

The clean water people of Dane County



Prototype of a "Call to Meeting" ad developed by Region V for its 208 agencies.



are not predicted to meet standards; however, these areas have unique problems such as acid mine drainage—one of the complex issues EPA will address in 1977-78.

Remaining water quality problem areas as noted by states include:

ILLINOIS	The Chicago area waters and the tributaries to the Big Muddy River where acid mine drainage makes attainment of the "fishable, swimmable" goal questionable
INDIANA	The Indiana Harbor Canal, the West Fork of the White River, and the upper Pakota River, also an area suffering from acid mine drainage.
MICHIGAN	The waters around Detroit, the Clinton River, Flint River, and Kalamazoo. EPA brought legal action against Detroit in May of 1977, for serious pollution discharges from the Detroit Water and Sewage Department.
MINNESOTA	Fecal coliform bacteria present a problem in the Red River of the North, Minnesota River, Cedar River, Des Moines River and the Twin Cities Metropolitan Area.
OHIO	Problem areas in Ohio include the waters around Cleveland, Akron, Toledo, and Lorain and in the Mahoning River Valley. Acid mine drainage also presents pollution problems for streams in the southeast portion of the state.

WISCONSIN Water quality problem areas include the urban areas of Milwaukee, the Fox River to Green Bay, and portions of the Wisconsin River.

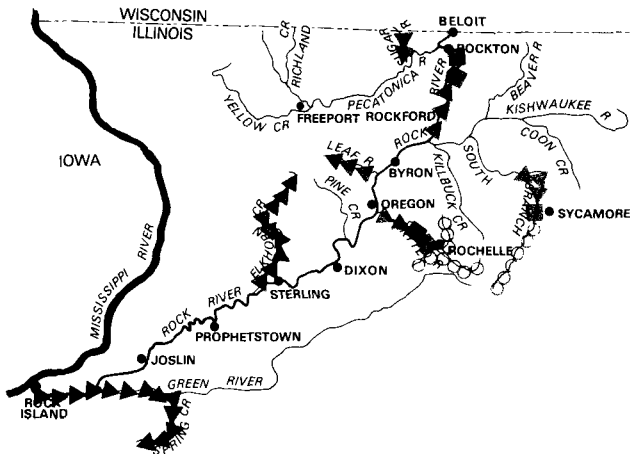
Waters Clouded By Issues . . .

The fight for clean water is clouded by numerous issues—PCB's, Reserve Mining, phosphates, thermal pollutants, industrial discharges and mercury pollution.

★An alarm on toxic substances sounded in 1975 when tests revealed high concentrations of PCB's in Great Lakes fish. EPA established the Office of Toxic Substances to deal with this and similar problems. Research on toxic substances will continue as authorized by the Toxic Substances Control Act. The new law requires all producers of selected toxic substances to provide EPA with production and test data before such chemicals reach the market. The Great Lakes Water Quality Review from the International Joint Commission (US and Canada) cited the need for toxic substances control and monitoring programs as "imperative."

★The continuing controversy over phosphates in the Great Lakes gains momentum as projected studies indicate that phosphorus loadings will increase at an alarming rate during the next decade. The addition of phosphorus to the lakes results in eutrophication—slow choking of the lakes by excessive nutrient growth. It would appear that the most practical way to combat the problem of phosphorus is to enact a ban on detergents using

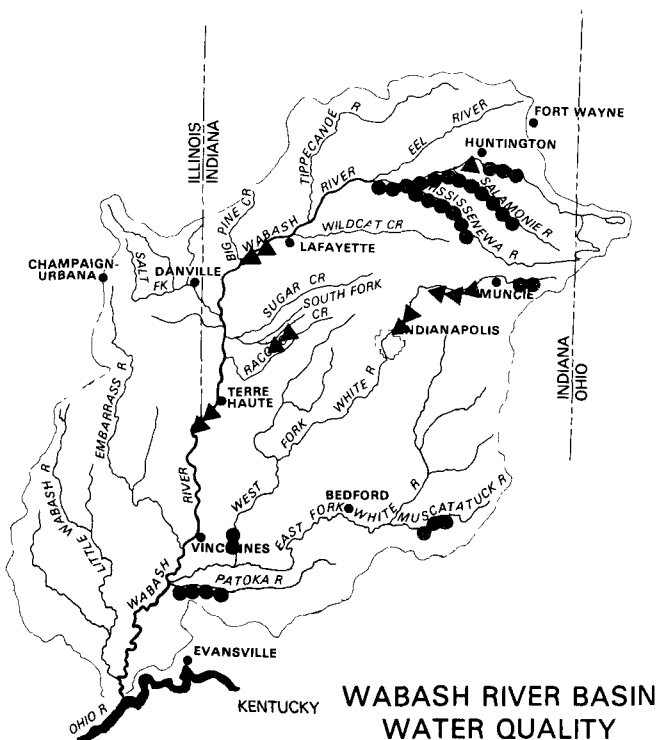
ILLINOIS



ROCK RIVER BASIN WATER QUALITY

- Good
- ▲ Medium
- Poor
- Unknown

INDIANA



WABASH RIVER BASIN WATER QUALITY

- Good
- ▲ Medium
- Unknown

phosphates. Although some cities have bans on phosphates, no nation-wide ban has yet been passed.

★The Reserve Mining plant in Silver Bay, Minnesota has been the scene of heated controversy since 1967, when the Federal Water Pollution Control Administration declared that taconite wastes from the facility were harming Lake Superior. During 1977 the State Supreme Court approved an on-land disposal site and work began on the new disposal facility during June.

★A series of poisonous chemical spills in the Ohio River prompted EPA to take another look at methods designed to prevent and/or deal with emergency spills. EPA is currently considering stepped up monitoring procedures and working for increased emphasis on spill prevention by industry.

★As part of its "Get Tough" pollution policy, EPA fined US Steel (Gary) \$4.2 million for pollution violations of the federal air and water pollution laws. This is the largest recorded EPA imposed penalty in the history of the agency.

Water Quality Interpretations
Throughout Basin

The six basin maps are EPA interpretations of quality reports provided by the Midwestern states. As standards are not uniform from state to state, the reader should not generalize the reported quality for any river running through more than one state. Rivers rated "Good" are usually suitable for fishing and boating. "Medium" rivers may contain industrial wastes and should be considered poor fishing rivers. Any river rated "Poor" is unsuitable for fishing, recreational use, and is probably heavily polluted from industrial or municipal waste.

% of Major Municipalities and Industries Meeting July 1, 1977 Secondary Treatment Deadline

State

ILLINOIS



INDIANA



MICHIGAN



MINNESOTA



OHIO



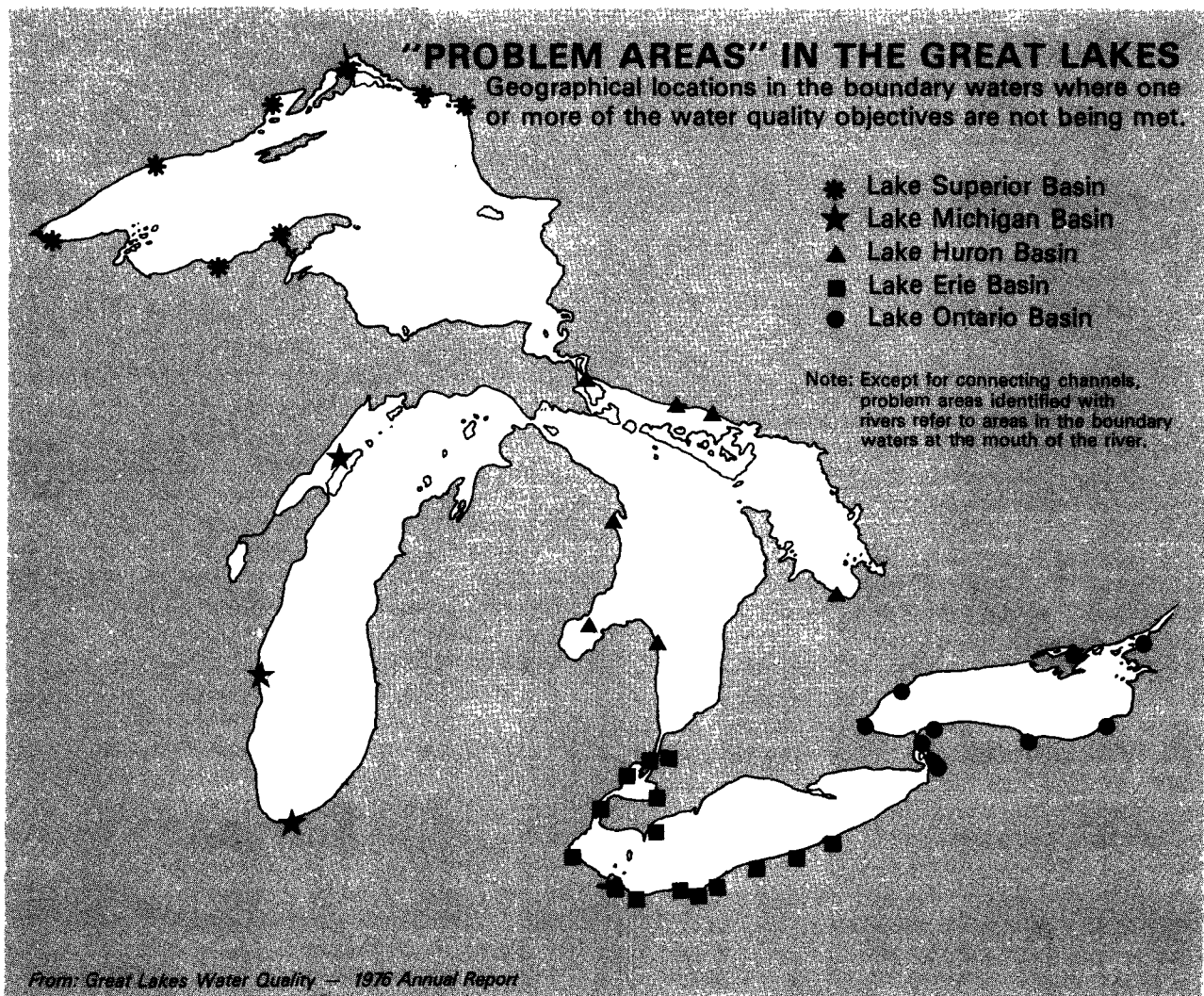
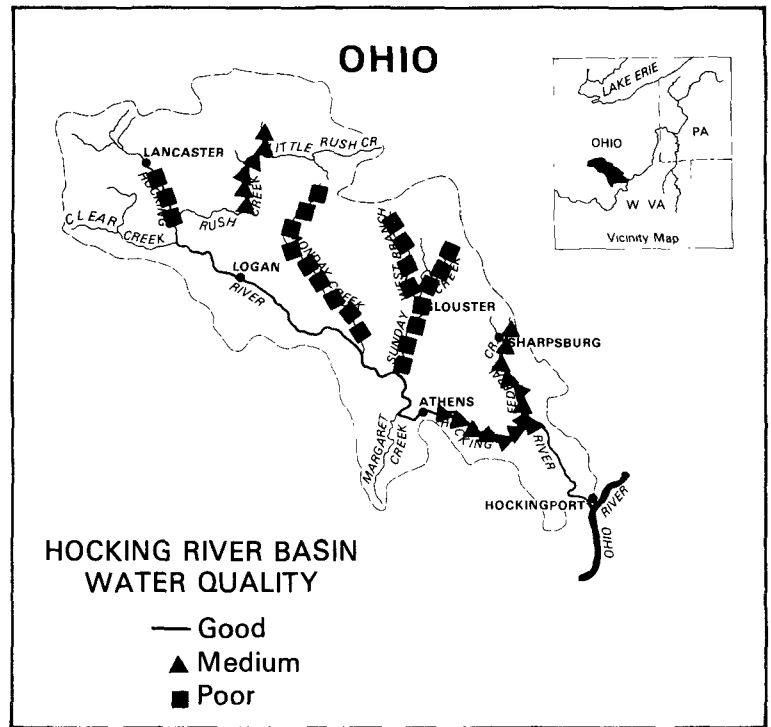
WISCONSIN

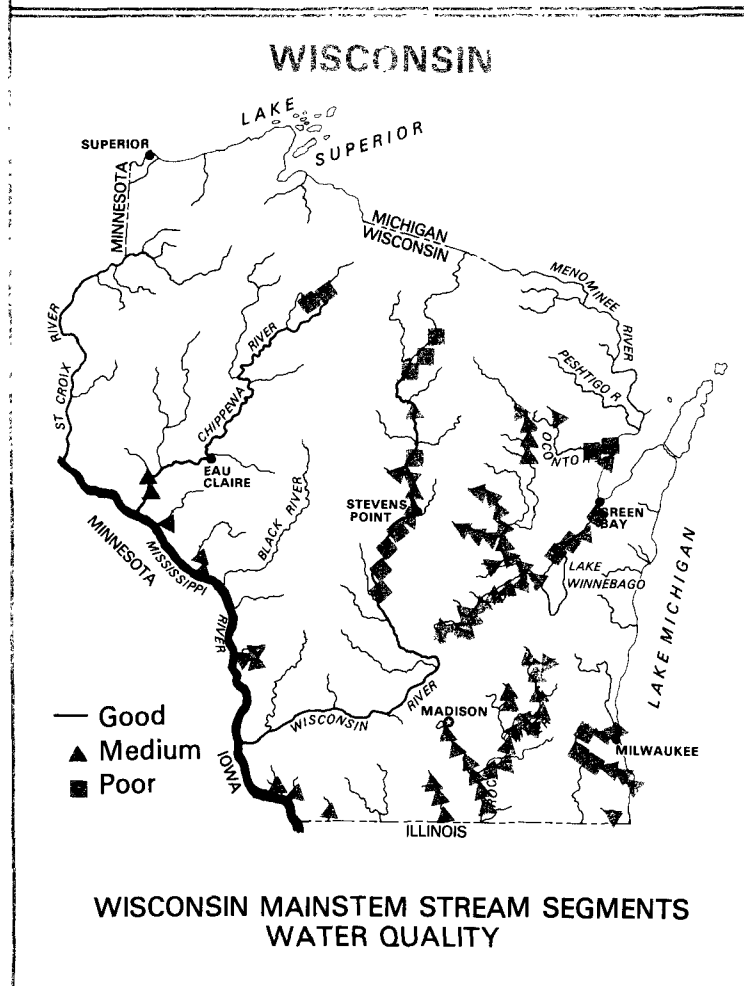
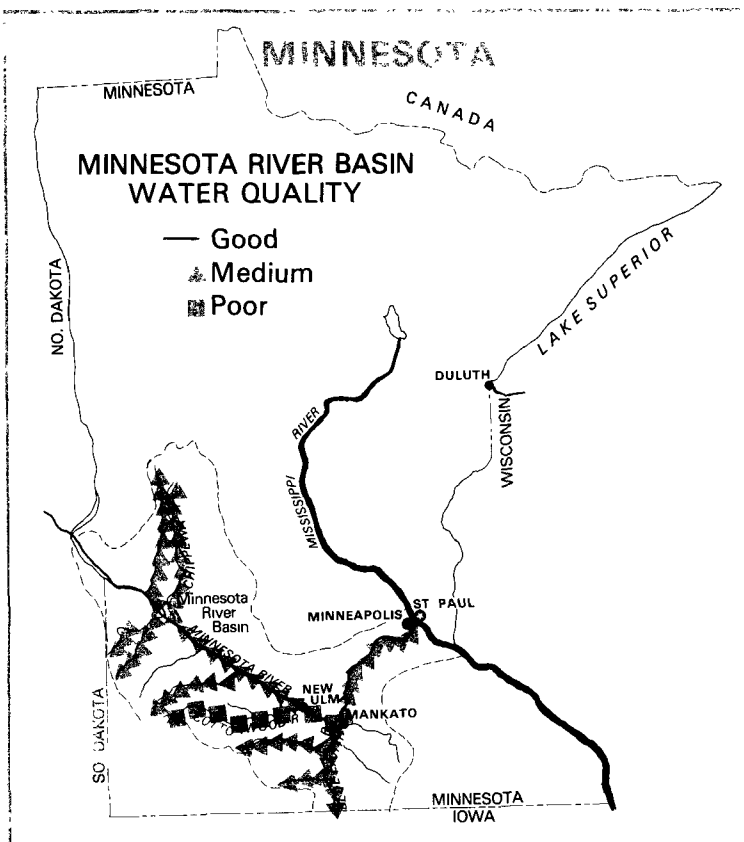


The Techniques of Cleaning-Up . . .

Although the Federal law states the nation's waterways must be cleaned and protected from further pollutants, specifics of the gigantic project are not clearly spelled out. Section 208 of the water law calls for regional water quality management plans—regional programs for dealing with common water quality problems. Such plans address the preservation of clean water as well as the restoration of polluted waters and advocate public participation throughout the planning process.

In Region V, 37 regional planning agencies are working closely with cities and towns to identify problems and develop methods of reducing and eliminating pollutants. Planning solutions include combinations of building wastewater treatment facilities, enacting regulations, stream monitoring, and limiting sources of pollution. Although in some states the planning effort is slowed to a snail's pace as a result of political red-tape, the public's interest in 208 is increasing.





While the Coastal Zone Management program is not administered by EPA, its environmental impact deserves mention. The Illinois House passed HB 2118, the Illinois Coastal Zone Management Act, in May, 1977. If passed by the Senate, it would make Illinois eligible for \$1.2 million annually in Federal funds for the protection of Lake Michigan shoreline through scientific studies, correcting shoreline damage, acquisition of beaches, improvements in fisheries, and grants to municipalities for improving their shorelines. Other Region V states are currently implementing similar programs.

The best known facet of PL 92-500 is the construction grants program, which is the largest public works project in the nation. Under construction grants, municipalities may apply to EPA for partial (75%) funding for municipal wastewater treatment projects.

Overall budget for Region V is \$4.5 billion and the region leads the nation in the total number of projects, with over 1800 facilities under construction at the present time. The largest project is an \$520+ million tunnel system for the Chicago Metropolitan Sanitary District. When completed, the tunnel network can store sewage and storm water runoff until it can be pumped into wastewater treatment plants. Benefits from the project will include reduced drainage, and a reduction in the release of polluted flood waters into Lake Michigan.

By far the greatest challenge facing the construction grants program is racing against the clock in order to obligate all federal monies before the national September 30, 1977 deadline. The complexity of the grants program adds to the problem. An unbelievable workload is expected in August and September 1977 as the states and EPA attempt to obligate the 1.4 billion remaining in the regional construction grants coffer.

More At Stake Than Recreation . . .

With so much attention being given to the goal of fishable, swimmable waters, one might think the recreational and aesthetic quality of water was the only objective. This is hardly the case. EPA has a major program to ensure the safety of drinking water. The Safe Drinking Water Act requires EPA to establish and enforce national drinking water standards. EPA is active in supporting state and local community drinking water programs by providing financial and technical assistance.

Naturally, the quality of the water you drink depends on where you live. Individuals with well water are far more likely to contract bacterial diseases than those people receiving city water. The importance of safe drinking water cannot be overlooked. Between 1960 and 1970, over 46,000 people suffered illness as a result of polluted drinking water. Twenty deaths were reported throughout the country. EPA's goal is to eliminate drinking water hazards and thereby ensure safe drinking water for all.

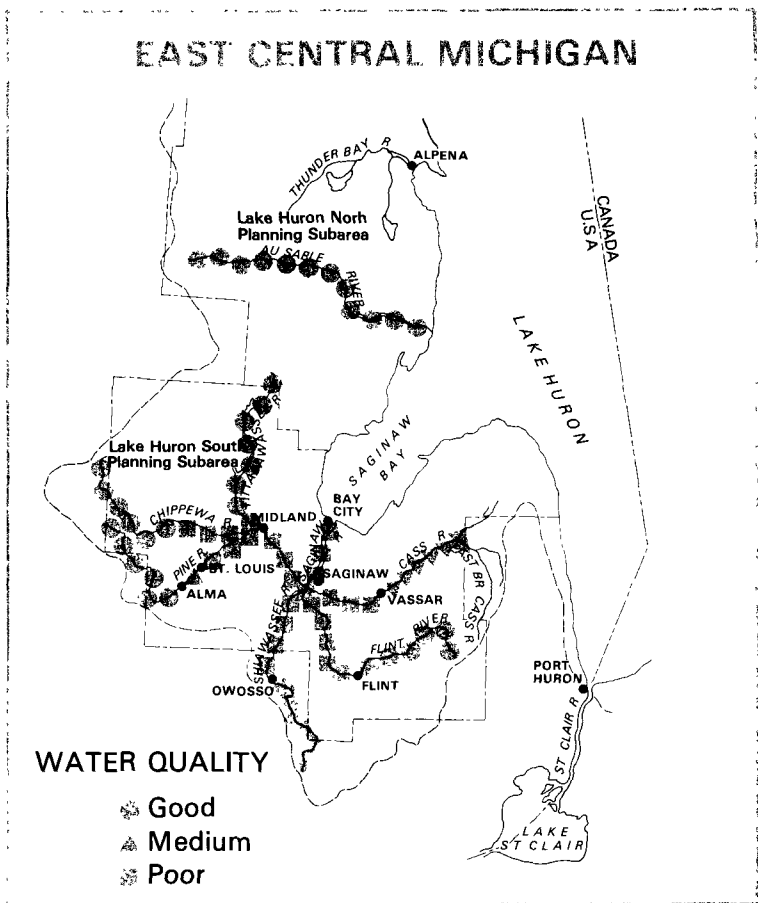
It is difficult to comprehend the amount of drinking water used each day. Cook County and the City

of Chicago use 1 billion gallons a day. Conservative estimates project a national use of 443 billion gallons per day by 1980.

Region V uses the Model States Information System to gather additional information on drinking water supplies. In response to a drinking water crisis caused by the disposal of taconite wastes in Lake Superior, the city of Duluth, Minnesota received a federal grant for the construction of a treatment plant. When completed the new facility will be capable of removing potentially hazardous asbestiform fibers from the water.

In other parts of the nation, EPA scientists have launched studies on the possibility of carcinogens in drinking water supplies. In Region V, such a study is currently being conducted on the Fox River near Aurora, Illinois.

While EPA has stringent primary water standards, secondary standards dealing with the aesthetic parameters of water are a new development. During March 1977, EPA proposed standards dealing with odor, color, chlorides, copper, foaming agents, hydrogen sulfide, sulfates, ph, and several trace elements. While not mandatory, the new standards are designed to aid the states in the development of their individual programs.



REGIONAL ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICE

REGIONAL ADMINISTRATOR

George R. Alexander, Jr.

REGIONAL COUNSEL

DEPUTY REGIONAL ADMINISTRATOR

Valdas V. Adamkus

AUDIT AND INSPECTION

OFFICE OF PUBLIC AND INTERGOVERNMENTAL AFFAIRS

OFFICE OF CIVIL RIGHTS AND URBAN AFFAIRS

OFFICE OF RESEARCH AND DEVELOPMENT

OFFICE OF GREAT LAKES COORDINATOR

MANAGEMENT DIVISION

- Data Processing Branch
- Financial Management Branch
- Manpower Development Branch
- Program Development Branch
- General Services Branch
- Personnel Branch

AIR AND HAZARDOUS MATERIALS DIVISION

- Pesticides Branch
- Air Programs Branch
- Waste Management Branch

WATER DIVISION

- Planning Branch
- Construction Grants Branch
- Water Supply Branch

SURVEILLANCE AND ANALYSIS DIVISION

- Quality Assurance Office
- Technical Support Branch
- Field Support Branch
 - Eastern D. O.
 - Central D. O.
 - Western D. O.
- Air Surveillance Branch
- Great Lakes Surveillance Branch
- Central Regional Laboratory

ENFORCEMENT DIVISION

- Water and Pesticides
Enforcement Branch
- Permit Branch
- Air Enforcement Branch



Region V Deputy Administrator Valdas V. Adamkus looks over shoulder of Regional Administrator George R. Alexander, Jr.

THE REGIONAL ADMINISTRATOR

The official spokesmen for Region V are the Regional Administrator and Deputy Regional Administrator. The Regional Administrator keeps in close contact with the Washington office, serving as an advisor on national policy matters. EPA policy is officially set by the Administrator in Washington and it is the responsibility of the Regional Administrator to see that program goals and policies are carried out as they pertain to the Midwest. In order to accomplish regional and national goals, the Regional Administrator allocates agency personnel and financial resources through the five program divisions. The Deputy Regional Administrator is well-versed in all program areas so that he may assume responsibilities belonging to the Regional Administrator when necessary.

As representative of the EPA Administrator, the Regional Administrator represents the Agency on the Federal Executive Board and the Federal Regional Council. He's also the Agency-appointed representative on the Great Lakes Basin Commission, the Upper Mississippi River Basin Commission, and holds membership on the Winter Navigation Board, an Army Corps of Engineers feasibility program extending the navigation season in the Great Lakes-St. Lawrence Seaway. During 1976 and 1977 he has served as Chairman of the United States Section of the Great Lakes Water Quality Board of the International Joint Commission.

THE REGIONAL COUNSEL

Not all pollution fighters are scientists. The Regional Counsel and staff cannot be found within any program division, yet their role is vital to the success of the nationwide pollution clean-up effort.

The Regional Counsel serves as the principal legal advisor to the Regional Administrator and is the chief law officer of the Region. He and his staff are a component of the headquarters Office of General Counsel, and are therefore technically not a part of the regional office.

The Office of Regional Counsel provides legal advice and opinions to all of the programs, divisions and offices of Region V.

The past year has been the busiest in the Office's history. Its six attorneys and three secretaries responded to 361 formal requests for legal opinions. These requests came from both within and outside EPA, and dealt with a wide range of topics including the meaning of environmental statutes, legality of state regulations, eligibility of applicants for program or construction grants, employee complaints of discrimination based on race or sex, and civil service questions.

In addition, the Office of Regional Counsel tries all appeals that are taken from grant eligibility decisions of the Regional Administrator. At the end of 1976 there were 76 grant appeals pending nationwide, of which 26 involved Region V! Most of these concerned municipalities and school districts seeking reimbursement for waste treatment construction projects.

Another busy area for the Regional Counsel's staff involves protests filed by unsuccessful bidders on construction projects funded by EPA. In 1976 the Office produced twenty-one formal decisions resolving bid protests which were adopted and issued by the Regional Administrator.

A major role for the Regional Counsel is to represent the Region in court suits. Since EPA's regulatory programs affect so many people in so many ways, it is only natural that the cry "sue EPA" is being heard ever more frequently. Suits against Region V are now being filed at the rate of two or three per month.

These kinds of cases involve a wide range of EPA activities, including air and water pollution issues and questions on environmental impact statements. Office attorneys also worked with Enforcement Division personnel in a successful joint effort to preserve EPA's procedures to place plants that are violating pollution regulations on a list of facilities that are not eligible to receive federal grants or contracts.

Finally, the Regional Counsel's office devotes a good deal of its time in assisting the Office of Civil Rights and Urban Affairs in guaranteeing that contractors working on EPA funded projects comply fully with all equal employment opportunity requirements.

OFFICE OF PUBLIC AND INTERGOVERNMENTAL AFFAIRS

Questioning citizens, media and outside agencies find answers and direction through the Office of Public and Intergovernmental Affairs. The comprehensive public affairs program communicates Agency policy to a variety of publics while providing sounding-board for community ideas.

In the exercise of its Intergovernmental Affairs function, the Office gives information on EPA policies and programs to agencies and officials at other levels of government. The monitoring of state legislative activity and the representation of the regional office on some intergovernmental bodies are additional responsibilities of this position.

Community ideas and feedback have become a key ingredient in the public affairs program. During 1976 and into 1977, Town Meetings were held in Cleveland, Ohio; Marquette, Michigan; Springfield, Illinois; Indianapolis, Indiana; Bowling Green, Ohio; Cincinnati, Ohio; and Grand Rapids, Michigan. The day-long exchanges included meetings with business leaders, local government officials, environmental groups, and concerned citizens. Town meetings will continue throughout 1977 under the new title of "American Environmental Forums."

A successful business-government conference on process change methods of pollution clean-up was held in Chicago during January 1977. Over 400 attendees represented numerous environmental in-

terests and the conference received wide national coverage.

In cooperation with the technical programs, the Office produced the first film on toxic substances. The Fall of 1976 saw an aggressive information campaign with race car driver Bobby Unser calling attention to high smog levels and importance of auto tune-ups for better gas mileage and clean air.

The Office provided the Water Division with a public participation specialist to work directly with local 208 agencies. Public Affairs also assisted in putting on numerous hearings and public meetings for various regional and Washington programs.

Responding to requests from educators, the Office of Public and Intergovernmental Affairs developed Environmental Education Packets—resource packages for classroom use which promote a hands-on approach to learning about the environment. These were prepared for distribution to 20,000 schools during Fall, 1977.

The speakers bureau expanded during 1976 with numerous invitations from schools and citizens groups. The Office continued its high level of service to the news media and strengthened the link between publics and EPA through the use of weekly radio shows on the environment and two monthly publications—the internal newsletter and popular outside magazine ENVIRONMENT MIDWEST.

OFFICE OF CIVIL RIGHTS AND URBAN AFFAIRS

The Office of Civil Rights and Urban Affairs is composed of two sections: in-house Equal Employment Opportunity and external Contract Compliance.

The former insures that Equal Employment Opportunity is practiced within EPA through such activities as the Federal Women's Program, Title VI enforcement, the Spanish-Speaking Program and the EEO Complaint System.

Contract Compliance is responsible for monitoring Equal Employment Opportunity in EPA-funded wastewater treatment facility construction. At present, the Region V Office of Civil Rights and Urban Affairs is monitoring 480 contracts totalling \$4.8 billion.

All contractors and sub-contractors take part in preconstruction conferences where EPA and Department of Labor EEO requirements are explained. Reporting procedures are also discussed. The need for minority hiring and "good faith" efforts are covered in depth with grantees, contractors, and consulting engineers.

Involvement by the Office of Civil Rights and Urban Affairs includes the following project areas:

1. The equitable utilization of minority engineering

and architectural firms.

2. The equitable utilization of minority construction contractors.
3. EEP on demonstration grants.
4. EPA Form 4700-4, Compliance Report, the equal treatment of all persons to be served by a project.
5. OCRUA also investigates complaints filed under the Labor-Standards Wage & Hour provisions of the Davis-Bacon Act.

To assist in the administration and accomplishment of its various programs, the office published a series of booklets for issuance to grantees, consulting engineers, and contractors. The success of the compliance program was evidenced by the rise in the use of minority workers on construction jobs to a high of 13.3%.

During 1977, the Office of Civil Rights and Urban Affairs continued the in-house implementation of the Equal Employment Affirmative Action Plan. Affirmative action plans for state and local governments were evaluated and technical assistance was provided when requested.

OFFICE OF RESEARCH AND DEVELOPMENT

Finding the "right" answers to tough environmental questions—this is the job of the Office of Research and Development. The questions and problems on the environment are numerous and varied. Defining cancer-causing agents in the environment, studying the effects of phosphates on lake eutrophication, and developing new ways to can and freeze food which will require less water: these are just three representative problems being dealt with through this office.

Research and Development is a massive operation. More than 1/5 of the total EPA budget is allocated for scientific study. In addition to the Washington headquarters and 10 regional offices, further work is directed at numerous field stations, 15 major laboratories, and at academic, industrial, and research facilities throughout the country.

The Office of Research and Development acts as the official research liaison with the states, universities, and the public. The Region V staff is responsible for relaying the results of regional and national research and development to the general public and special interest groups. One means of achieving this goal is through the Technology Transfer program. Technology Transfer is a public information system which utilizes seminars, design manuals, capsule reports, and brochures to get the message across.

The Region V Research and Development Director provides liaison with all regional activities and keeps

the Regional Administrator advised on research programs and accomplishments. The Director and his staff are responsible for reviewing all research proposals, managing the research position for Region V, and for assessing the environmental research needs of the Midwest.

During 1977 the Region V Office of Research and Development provided project officers for 15 major programs ranging from research on food processing to metal manufacturing.

Current studies include the Muskegon Wastewater Management Program—a research grant used to demonstrate the large scale use of land application for the treatment and reuse of combined municipal-industrial wastewater. In another research project, the Office is monitoring the Lawrence Avenue Underflow Sewer System Project—a Chicago demonstration project to assess the feasibility of using underground tunnels for the temporary storage of stormwater runoff.

Some research programs are jointly administered. The most notable example is the Development of Environmental Monitoring Systems for the Great Lakes. Several years in the planning, Region V and Washington EPA have worked closely on the combined NASA/EPA program. The actual development of specialized monitoring equipment is just beginning and the program is expected to continue throughout the 1970's.

OFFICE OF THE GREAT LAKES COORDINATOR

The Great Lakes comprise the largest freshwater reservoir in the world, covering 95,000 square miles and containing some 65 trillion gallons of water. International concern over the quality and future for the Great Lakes resulted in the 1972 US/Canada Water Quality Agreement. In response to the commitment to meet water quality objectives, EPA established and implemented the Great Lakes National Program. Based in Region V, the Regional Administrator serves as the program manager for the effort. The Great Lakes Coordinator supports the Regional Administrator in carrying out the Great Lakes Program. The Office coordinates, implements and monitors efforts being made by EPA and the states in response to the 1972 Water Pollution Control Act.

In conjunction with his membership in the International Joint Commission, the Great Lakes Coordinator held two chairmanships from 1976-1977. During 1976 he served as Chairman of the Remedial Program Committee; in 1977 he held the post of Chairman of the Implementation Committee. Other memberships includes Chairmanship of the IJC/Rainy River Pollution Control Board, and alternate US Chairman to the IJC/Red River Pollution Control Board.

The work of the Great Lakes Coordinator covers a broad spectrum. Significant staff effort is placed on Section 108(a) and on project monitoring and evaluation.

Demonstration grants totalling \$1.5 million were obligated during FY-76 under Section 108(a) of the 1972 Water Pollution Control Act. This program provides for federal funding to states, political subdivisions, interstate agencies or other public agencies to carry out projects that will demonstrate new methods and develop preliminary plans for the elimination or control of pollution within the watershed of the Great Lakes. Projects continuing under Section 108(a) include:

1. Wisconsin State Board of Soil & Water Conservation Districts, for the "Development and Implementation of a Sediment Control Ordinance for Water Quality Improvement."
2. Douglas County Soil & Water Conservation District, Western Lake Superior Erosion-Sedimentation Control Program, Wisconsin-Minnesota.
3. Allen County Soil & Water Conservation District, "Reduction of Sediment and Related Pollutants in the Maumee River and Lake Erie."

In addition to the 108(a) projects, the Office of the Great Lakes Coordinator is also responsible for the coordination of grants to finance four pilot watershed studies.

MANAGEMENT DIVISION

MANAGEMENT DIVISION

- Data Processing Branch
- Financial Management Branch
- Manpower Development Branch
- Program Development Branch
- General Services Branch
- Personnel Branch

The Management Division provides Region V with the administrative and support services necessary for smooth Regional operations. The Division advises the Regional Administrator and his program managers in the areas of planning, management systems, and administrative support.

The responsibilities of the Division include program planning, resource distribution, and evaluation, specialized grantee assistance, financial management, general administrative services, personnel management, data processing support, manpower develop-

EPA Administrator Doug Costle presents award to Region V's Charles Lewis at Management Division's annual awards program



ment, graphic arts support, facilities management, safety and security.

The Planning and Evaluation Branch assists in the development of the Region's program from year to year. The Branch helps program managers formulate budgets, specify objectives, and monitor accomplishment. Internal evaluations are conducted periodically. The Branch also assists grantees in the areas of property, procurement, audit coordination, accounting, and fiscal matters.

The Financial Management Branch assures that Federal financial regulations are adhered to, that employees receive their paychecks on time, that bills and contracts and grant obligations are paid, that official travelers are reimbursed, and that appropriate financial systems are in place and accurate records are kept. The Grants Administration Section monitors procedures and assures that Regional staff and grantees are trained in grants processing.

The Personnel Branch has the responsibility for recruitment, staffing, classification, employee development, and employee relations for the over seven hundred employees in the various offices of Region V. The Branch administers the Executive Development and the Upward Mobility Programs and provides staff services for the annual awards ceremony. Personnel staffers advise Regional managers in all areas of personnel management including performance appraisals, employee-management relations, and employee recognition and incentives.

The General Services Branch takes care of I.D. Cards, procurement and purchasing, property, safety, reproduction, supplies, mail distribution, facilities management, general complaints, and all manner of odds and ends that must be done if an office is to open each morning. The Graphic Arts Section produces all sorts of visual aids, signs, layouts, maps, charts, slides, and the like for use in exhibits or publications in support of Region V's programs.

The manpower development activity assists the states in Region V to develop an adequate supply of skilled personnel for the successful implementation of Federal statutes at state and local levels. EPA-related educational and training grants are administered and coordination with manpower agencies and programs is accomplished.

The Data Processing Branch provides ADP support to programs and activities in Region V. Branch responsibilities include planning computer use, data entry and retrieval, review of requests for ADP equipment and services, technical advice to managers, liaison with ADP in Washington, and Regional computer training. In addition to providing support to programs like water supply, enforcement, air surveillance, and construction grants, the Branch handles local and national financial, personnel, timekeeping, and other management systems supported by ADP in Region V.

AIR AND HAZARDOUS MATERIALS DIVISION

AIR AND HAZARDOUS MATERIALS DIVISION

- Pesticides Branch
- Air Programs Branch
- Waste Management Branch

Toxic chemical spills, SO₂ regulations, pesticide applicator training programs, hazardous waste regulation—the work handled by the Division of Air and Hazardous Materials spans a diverse range of timely environmental issues. Regional programs for Air, Noise, Radiation, Pesticides, Toxic Substances and Waste Management are managed through this office. Primary responsibility of the Air and Hazardous Materials Division is to assure that national EPA program recommendations and goals are implemented in the Midwest. To achieve this aim, personnel are provided to work closely with state and local agencies on grants, planning and monitoring systems, data collection and analysis, and on the development of regulations.

The six areas covered by the Division are divided among three Branches: Pesticides, Air Programs, Solid Waste Management, and the new Office of Toxic Substances.

Pesticides

Pesticides promotes safe pesticide use through state applicator training and certification programs. Five of the Region V states have certification programs which resulted as a joint effort by EPA with the states. The State of Wisconsin has completed plans for a certification program and is awaiting approval by the legislature. In addition to working on state training programs, the Branch regulates all pesticides registered in Region V, investigates pesticide accidents and spills and is currently investigating the use of Integrated Pest Management as an alternative pest control measure.

Air Programs Branch

Air Programs coordinates and implements the Regional air program objectives with local and State agencies, the Office of Air and Waste Materials, and federal agencies. Branch personnel work closely with state officials on programs to control existing



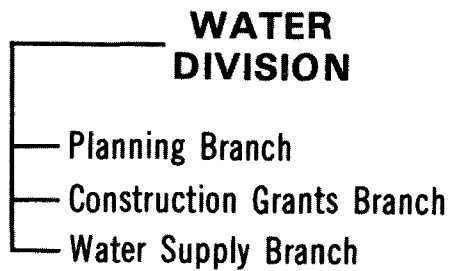
Famed race car driver Bobby Unser spoke out for clean air through regular car tune-ups in a Region V sponsored tour

sources and to insure that industrial growth will not threaten existing clean air. 1976 saw the adoption of EPA-developed sulfur dioxide regulations for the State of Ohio. Ozone and particulate matter pollution remain a critical issue throughout the Region.

Waste Management Branch

Noise, Radiation and Solid Waste Management fall within the realm of the Waste Management Branch. Each office works with State and local personnel, providing technical assistance in the development of program plans and other program functions. The administration of grants, radiation monitoring and fostering development of community noise control ordinances are but a few of the areas of involvement for the Waste Management Branch.

WATER DIVISION



When we talk about the Water Division, the first thing that comes to mind is the building of wastewater treatment plants. While it is true that the Construction Grants Branch works with the states on wastewater treatment grants, the focus of the Division is actually divided between dealing with water issues of today and planning for tomorrow.

Over 180 employees are divided among the construction grants, planning, and water supply branches.

Scuba divers prepare to collect sediment samples at Shagawa Lake, Minnesota



Construction Grants

Construction Grants is responsible for the management of a \$4.5 billion grant program for the construction of wastewater treatment facilities in Region V. The Region is administering over 1800 active projects representing a Federal grant investment in excess of \$3.3 billion. Construction grants authority extends over application review and assistance, grant awards, project monitoring, on-site inspections, User Charge/Cost Recovery Systems, Infiltration/Inflow Analysis, and completed Plant Operation and Maintenance.

Planning Branch

The Planning Branch provides direction to the Regional water planning and water quality program. Under Section 208 of the Federal Water Pollution Control Act, EPA is authorized to make financial assistance available to state governments for area-wide waste treatment management planning. Planning to prevent future pollution is a "hometown" project. Local officials in an area advise their Governor which areas require planning due to high levels of pollution. Governors designate planning areas within their own states and see that public meetings are held at which local citizens may express their views on the issues involved. EPA has money available for regional planning agencies to help offset costs, thereby encouraging public participation and more comprehensive planning efforts.

In addition to involvement on 208, the Planning Branch represents the Region on interagency planning committees, prepares Environmental Impact Statements on proposed projects, administers the Clean Lakes Program, and provides assistance to State and local officials on EPA planning requirements.

Water Supply Branch

The Water Supply Branch is responsible for implementing the Safe Drinking Water Act in Region V. Program implementation is an awesome task—over 95,000 public water supply systems exist in Region V, and to perform annual or biennial sanitary surveys on each system would run close to \$15 million.

EPA's involvement entails working with the states on the development of state drinking water programs. To make state programs work, tough regulations or enforceable legislation is a "must." Five out of the six Region V states have declared their intent to seek primary enforcement responsibility for their public water supply system programs.

In addition to state drinking water programs, EPA is also responsible for protecting sources of underground water. Regulations for the Underground Injection Control Program are under final revision.

SURVEILLANCE AND ANALYSIS DIVISION

SURVEILLANCE AND ANALYSIS DIVISION

Quality Assurance Office

Technical Support Branch

Field Support Branch

Eastern D. O.

Central D. O.

Western D. O.

Air Surveillance Branch

Great Lakes Surveillance Branch

Central Regional Laboratory

The Surveillance and Analysis Division functions as the "eyes and ears of EPA". Providing up-to-the-minute feedback on the state of the environment is the major objective of this technical division.

Surveillance and Analysis collects, monitors, analyzes, and evaluates environmental quality data for support of regional and national monitoring programs and enforcement efforts. The Division is responsible for maintaining the Environmental Emergency Response Center for handling oil and chemical spills throughout Region V. Other responsibilities include coordinating Environmental Impact Statement reviews, Section 10 and section 404 permit reviews, and insuring compliance with environmental laws by federal facilities. In working with the other EPA divisions, Surveillance and Analysis evaluates state program plans and provides technical assistance to the states when needed. Most importantly, the Division is responsible for the implementation of regional monitoring programs to meet regional and national objectives not met by Washington EPA programs.

The year-to-year accomplishments of the Regional Surveillance and Analysis Division would fill several volumes. Over 140 technical and support personnel staff the Regional facilities which include the Chicago EPA office, the Central Regional Laboratory, and District Offices in Ohio, Minnesota, and Illinois. Major achievements during 1976-1977 include:

★Development of a position paper advocating a detergent phosphate ban for the Great Lakes. Phosphates are considered a major source of eutrophication in the Great Lakes. A ban on phosphates

in detergents is considered by Region V EPA to be the easiest and cheapest way to correct the problem.

★Publication of a summary report on toxic substances in the Wabash River Basin. The report identifies known toxic sources, compounds, and additional monitoring needs.

★Review comments and testimony in court proceedings and on the subsequent permit application for the Reserve Mining Milepost 7 land disposal site. The Division also operates an ambient air monitoring network near Silver Bay, Minnesota to evaluate and study the correlation between pollution trends and public health.

★Completion of a 2½ year water quality evaluation of the Mahoning River. Conducted in support of permits for steel mills in the area, the river study includes mathematical modeling of all parameters, evaluation of treatment methods and cost projections.

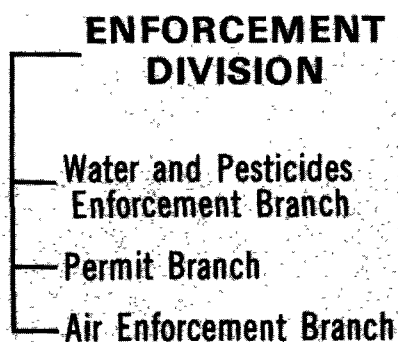


Sampling Lake Michigan water from Region V's research vessel, the Roger R. Simons

★Continuation of the Great Lakes Surveillance Program. In addition to the 9-year water quality sampling program, the Division is engaging in a special two-year study of atmospheric pollution in the Great Lakes through a grant with Governors State University. Testing is done aboard the EPA oceanographic vessel—Roger R. Simons. The Surveillance and Analysis Division is also working with NASA to develop methodology which will enable satellites to monitor Great Lakes and ocean water quality.

★Sponsorship of specialized technical workshops with state and local agencies for the purpose of improving the quality of collected environmental data. The program included an evaluation of all state laboratories, a series of ozone calibration workshops, state air monitoring field audits, and assistance to the states in the development of written water quality goals.

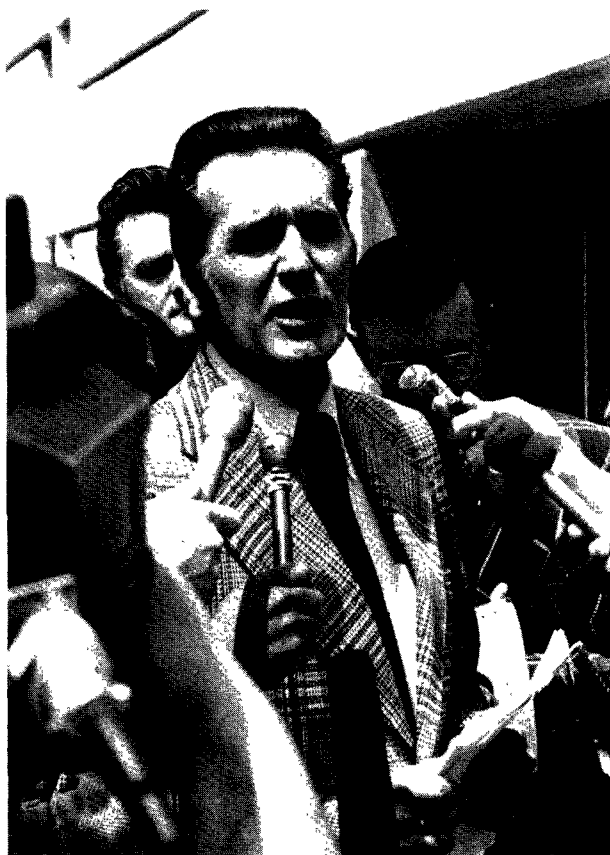
ENFORCEMENT DIVISION



Enforcement

Enforcement acts as the "strong arm" for EPA. According to the Clean Air Act, and Federal Water Pollution Control Act, it is illegal to discharge any pollutants into the nation's air or waterways which do not meet stringent standards. The Enforcement Division is responsible for assuring compliance with the law by all Region V waste sources.

EPA Enforcement Division Director James McDonald



An air or water permit is not a license to pollute. Permits set strict limits on "what" and "how much" may be discharged. Any source in violation of, or discharging without a permit faces court action, possible imprisonment, and severe fines.

While some industries consider the environmental restrictions a nuisance, the real payoffs are seen in environmental improvement—air and water that is cleaner and healthier. In Region V, Enforcement's persistent efforts against the paper mill dischargers have resulted in a cleaner Fox River in Wisconsin. Other actions are reflected in significant improvements along Lake Michigan beaches and on the Cuyahoga River. The air we breathe is cleaner, too. Through enforcement actions, the number of Region V cities failing to meet national air quality standards has been cut in half and steps have been taken to insure that the clean air in the rural parts of the Midwest stays that way.

The Enforcement Division consists of three branches: Water and Pesticides Enforcement Branch, Permit Branch, and the Air Enforcement Branch.

Water and Pesticides Enforcement Branch

The Water and Pesticides Enforcement Branch implements the EPA enforcement program to ensure that waste dischargers and pesticide users and handlers comply with the applicable laws and statutes. During 1977, Region V EPA won a major enforcement victory against water permit violations by U.S. Steel. Also notable was the significant rise in the number of toxic substances violations and necessary enforcement actions.

Permit Branch

The Permit Branch directs the Regional NPDES permit program (National Pollutant Discharge Elimination System), and monitors the operation of these States with NPDES authority. Over 12,000 permits have been issued in Region V, 1100 of which were for major dischargers.

Other areas of involvement for the Permit Branch include thermal demonstrations, ocean disposal permits, and the Corps of Engineers Dredge and Fill Permit Program.

Air Enforcement Branch

The Air Enforcement Branch develops and implements a regional air pollution enforcement program for over 4000 major air pollution sources in Region V, and provides technical back-up for state air pollution control programs. During 1976 the branch took enforcement action on 130 cases of air standards violations from power plants, steel mills, and other industrial sources.