

United States
Environmental Protection
Agency

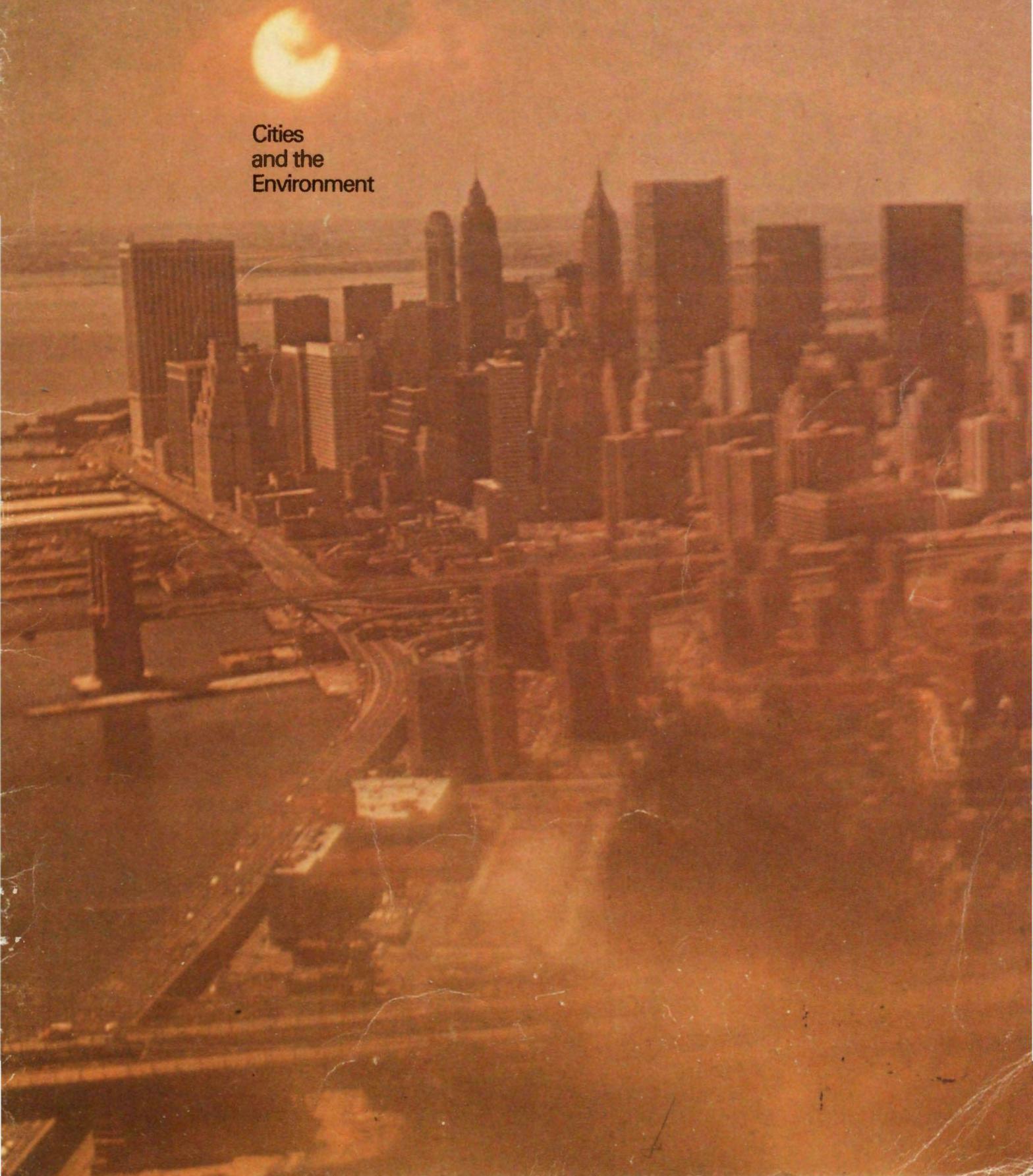
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EPA JOURNAL

Cities
and the
Environment



Cities and the Environment

Most of us live in cities, towns or other urban areas where pollution has its greatest impact.

Administrator Douglas M. Costle points out that since EPA has a direct responsibility to help solve these problems the Agency's programs are becoming increasingly urban-oriented.

He also emphasizes that EPA is focusing on public health issues involving drinking water, wastewater treatment, dirty air and exposure to toxic substances—all significant urban concerns.

To help understand specific city problems, the Journal takes a look at progress made in controlling pollution in the District of Columbia. The magazine also has articles on how urban life affects people in Washington

and Baltimore. The Baltimore piece gives an example of how citizens in an older ethnic neighborhood banded together to help preserve their area.

Another article outlines the plans of a national commission to help save neighborhoods in other cities around the country.

A major overall view of cities and their environment is provided by Patricia Roberts Harris, Secretary of the Department of Housing and Urban Development.

Other articles on subjects involving cities include a guide to EPA for mayors and other urban officials, three articles on air pollution, and one on the new clean water legislation recently passed by Congress.

The Journal also carries an interview with Joan Bernstein, EPA's General Counsel, and a preview of plans for World Environment Day, June 5.

The work being done by EPA's research program to help develop a technique which can predict dam failures is described.

This issue has another in a continuing series of articles on EPA's Regional Offices and the environmental problems and programs in these regions.

In addition, we carry a report on a new effort to employ the elderly to help implement pollution control programs. □



EPA JOURNAL

Douglas M. Costle, Administrator
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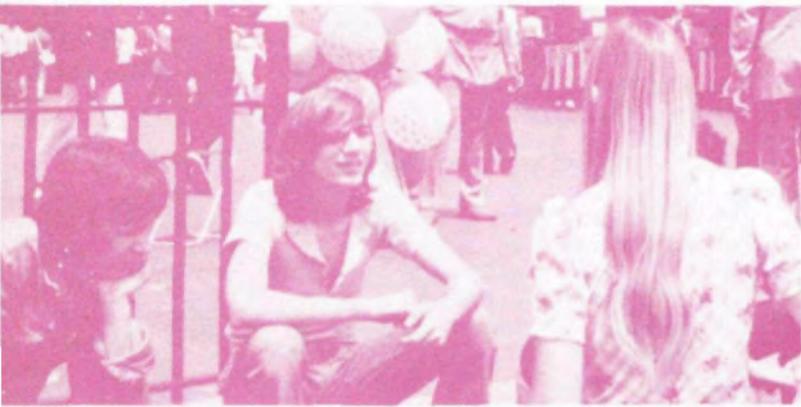
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EPA'S Purpose: To formulate and implement actions which lead to a compatible balance between human activities and the ability of natural systems to support and nurture life.



Working with our Cities

By Douglas M. Costle
Administrator, United States Environmental
Protection Agency

The cities are where the problems occur and where, ultimately, they must be resolved.

The Environmental Protection Agency has a direct responsibility to help solve these problems.

Yet, this Agency's tasks ahead are formidable. Many of the simple decisions are behind us. Increasingly, as we deal with problems such as failure to attain healthy air quality in our cities, or control of toxic substances, or providing safe drinking water for the public, we face difficult and painful questions of practicability and fairness, as well as of increasing strains on our scientific, technical and financial resources.

EPA has just been through a major charter revision. In amending our basic legislation—air and water pollution control and safe drinking water—Congress has reaffirmed the Nation's commitment to cleaning up and protecting our environment. In doing so, Congress has explicitly recognized and strengthened the role of the cities in carrying out these laws. Local elected officials have been given increased responsibilities for preparing plans to achieve air quality health standards in areas that do not meet those standards.

This Administration is sensitive to the enormity of the problems and challenges facing our cities.

What is true for the Administration is also true for EPA. Not only do we share a general sensitivity to urban problems, but increasingly we are seeing our major programs become urban-oriented. There is a compelling reason for this: as we grapple with the problems of air, drinking water, wastewater treatment, and toxic substances, we find ourselves increasingly focusing on public health, on preventing the introduction and dissemination of disease-causing agents into our air, water and soil and then into people.

The need to protect and improve the health of people will, I predict, drive EPA's programs over the next ten years. And because the majority of our people live in or near cities—where pollution problems are often the most severe and intractable—EPA, if it is to carry out

the responsibilities given it by law, has to come to grips with city problems.

We have a long way to go, both in our understanding of how we can best help solve many of our problems and how we can gain the flexibility we need to do so with reason and fairness.

This last point is particularly crucial. One of EPA's own difficulties has been a lack of flexibility, partially due to legislative mandates—and Congress made a special effort to correct this—and partially due to our own shortcomings in defining the problems. For example, a mayor of a city of 500,000 people faces a different set of environmental problems than does a mayor of a city of 50,000. And the situation is considerably changed when the population is 5,000. Yet our regulations have not always taken those differences into account.

For example, when Congress passed the landmark 1972 water quality act, it required all municipalities to achieve the equivalent of secondary treatment for wastewater discharges by 1977. It was left to EPA to define "secondary treatment." The agency did so in conventional sanitary-engineering terms, restricting for example, the amounts of suspended solids or biological oxygen demand that could be present after treatment.

The net effect was to invalidate the use of simple lagoon systems—a type of system in service in hundreds of smaller communities. These cities were then faced with the specter of making major capital investments in larger, more costly treatment plants and systems—investments which promised little in terms of significant improvements in water quality.

Two months ago we changed our regulations. Under certain conditions we now permit the use of lagoon systems. Not only will this save money for communities that can meet standards using simpler systems, but it will stretch the Federal dollars we do have further by allowing us to concentrate our financial aid on the problems that can only be solved by the application of sophisticated and expensive technologies.

Another example illustrates an attempt to solve a



major issue affecting larger cities. I am referring to the emissions offset policy for areas that are not attaining health related air quality standards.

Several years ago, it became apparent that despite their best efforts, a number of urbanized areas were not going to attain those standards. The net effect would have been to preclude growth in those areas—introduction of new industries, for example. But this would only have exacerbated a whole range of problems for such cities, including the need for new jobs and for an expanded tax base. Precluding healthy growth was clearly unacceptable, to the Agency as well as to the cities.

After much thought, EPA devised the offset policy. It would allow the introduction of new pollution sources, provided that emissions from other sources were reduced by an equal or greater amount. I might add that Congress has ratified this policy by writing a version of it into the recent Clean Air Act amendments.

This is not to say that the offset program is perfect, or that it is even an imperfect answer to a beleaguered mayor's prayer. It has caused and will cause headaches for cities and for EPA as we try to translate the concept into workable, equitable solutions. But it is an example of an honest attempt made by the Agency to resolve a major urban environmental dilemma.

I also want to assure you that the Agency is a full and eager participant in the President's Urban and Regional Policy Task Force that is now formulating a unified urban policy and plans for this Administration. Our own Agency efforts will contribute to that plan and our efforts will also be reflected in an increasingly consultative and co-operative relationship.

As I see it, there are four parts to this effort. They involve information services, technical assistance, research and analysis, and establishment of cooperative mechanisms.

It seems to me that one of our first aims has to be providing better information to city officials. They need to know about existing policies and programs that affect them, and about new or emerging developments. And they need to know in a timely manner, so that they will have an opportunity to influence new developments before they are cast in concrete or old decisions get so far down the road that we can't modify them. This

works both ways, I might add we need information from city officials.

Second, we need to provide technical assistance. I doubt that any one city, except perhaps the several largest, can—or should be expected to—provide the range of skilled personnel and other resources that are increasingly necessary to deal with the problems we face. By law, EPA is responsible for requiring cities to perform a multitude of tasks. I believe we ought to assume responsibility for aiding cities in this task.

Third, EPA needs to do much more to research and analyze urban issues. Our knowledge base badly needs expanding, both in scope and in depth. We need a better fix on how what we do affects what happens elsewhere. How, for example, do specific decisions about air quality or water quality affect housing or taxation? How can we design environmental programs to increase jobs? What kind of jobs can such programs best create? What are the specific benefits to be gained by those most affected by environmental degradation—the urban poor, so many of whom are minorities—as we strive to develop a sound toxic substances control program? These are just a sample of research needs. Once that research and analysis is done—in fact, as it is being done—we need to communicate this to the urban areas.

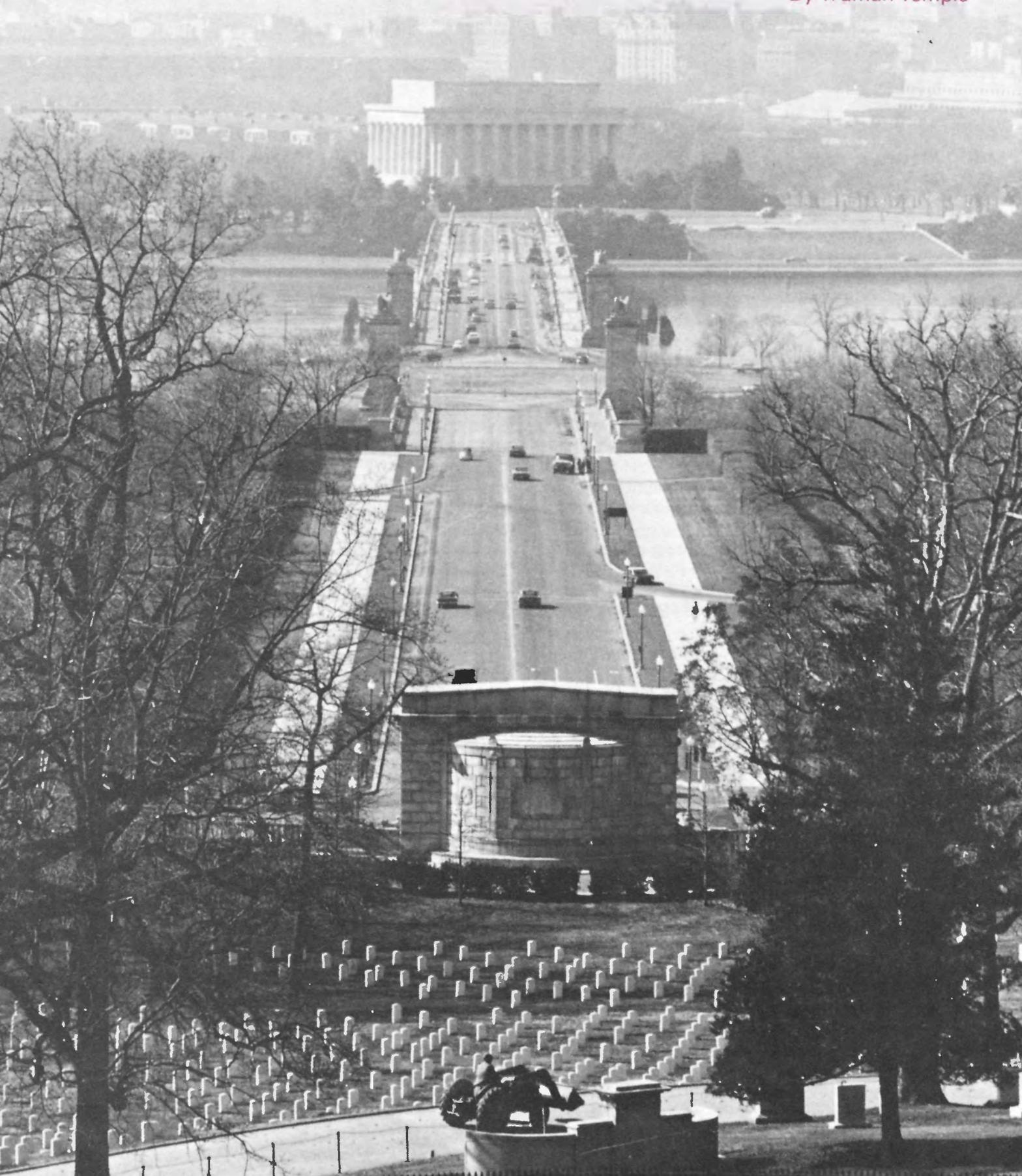
This brings me to the fourth part: we need to develop better mechanisms for working with our cities.

As a Federal official who administers programs that directly affect cities of all sizes and with widely varying problems, I need to learn from mayors and other urban officials how EPA's policies and programs can be improved.

Our cities are vital to the quality of life for millions of Americans, particularly for many of the poor and many of our minorities. Our environment directly affects, and is affected by, what happens in and to our cities. EPA is eager to enter into a partnership with the Nation's cities in pursuit of our common goal of a better environment. □

Cleaning Up the Nation's Capital

By Truman Temple



On July 2, 1972, the District City Council quietly adopted a brief regulation stipulating, "No person, nor his servant or agents shall cause, suffer, permit or allow the engine of a gasoline or diesel powered motor vehicle to idle for more than three minutes while parked, stopped or standing"

On March 29, 1976, Metro began regular service on the first leg of its new subway, a system planned to include 100 miles of track when completed

On September 15, 1976, vastly expanded facilities in the Blue Plains Wastewater Treatment Plant in the District began operations, immediately raising the plant's rated capacity from 240 million gallons a day to 309 million

All of these seemingly unrelated events are part of a major effort in the 1970's to improve the quality of life for more than three million persons living in metropolitan Washington.

Environmental cleanup in Washington still has a long way to go. The smog alerts continue. The Potomac River remains polluted. Signs along its banks warn the public against swimming or water skiing. The dense algal blooms of the 1960's have faded, but the nitrogen and phosphorus nutrients in the water are still excessive. The fecal coliform bacteria count remains high. A report issued last year concluded that "the Potomac and Anacostia Rivers do not meet the fecal coliform standards for either water contact or nonwater contact (e.g., boating) recreation." Although an independent study asserted that Potomac water quality will improve dramatically when a huge new Blue Plains treatment system is built (it is now about 70 percent completed), there is still doubt that the estuary around Washington will ever be clean enough for water contact recreation.

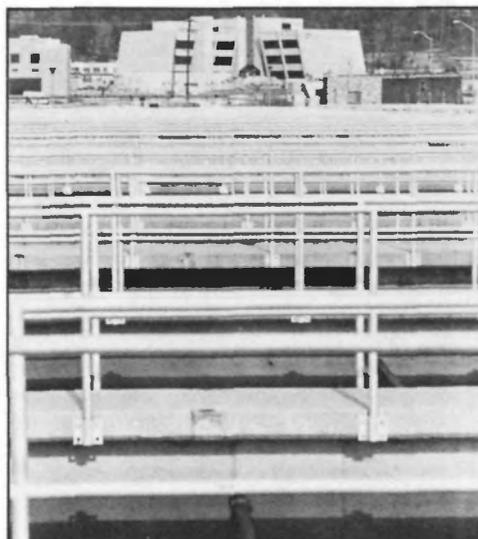
The effort to correct these serious pollution problems embrace not only water, air and solid waste, but also less conspicuous areas

These include the purchase of mechanical street sweepers (67 times more efficient than a crew of four men with truck), a litter control education program in public schools, 20 miles of bike paths, abandoned car removal, rat control, noise abatement, and inspection of radiation equipment in hospitals.

Among the circumstances which have stirred Washington into an awareness of its environmental problems are the record smog last summer and the continuing pollution of the Potomac and many of its tributaries. At a Potomac River Enforce-

ment Conference held in April and May of 1969, Federal, State and local participants unanimously agreed that despite earlier investments, the Potomac continued to be polluted. They warned that algal growths, sedimentation, high concentrations of fecal bacteria, and other pollutants created "conditions hazardous to health." Conferees called for advanced levels of wastewater treatment by 1977 at all eight treatment plants in the area, of which Blue Plains was by far the largest.

The plan received even greater public attention when it stirred the wrath of then Secretary of the Interior Walter Hickel, who demanded: "1977? Why not 1974?" Largely at his insistence, timetables were moved up and construction of the massive facilities began ahead of original schedules.



Blue Plains wastewater treatment plant

The expansion came none too soon. By 1971, a United Nations symposium heard a report from EPA's Helmut R. Reinhardt that despite the absence of heavy industry in the Federal City, a 40-mile stretch of the Potomac flowing through Washington was "grossly polluted." Blue Plains, designed to handle 240 million gallons of sewage a day from a 600-square-mile area, was overloaded. And the metropolitan Washington population was expected to increase dramatically to 7.7 million by the year 2000, bringing far more pollution.

Organizing Environmental Clean-Up

A broader event of national significance provided further impetus to Washington's clean-up movement. Creation of EPA in December, 1970 out of some 15 Federal bureaus and agencies encouraged cities and even other nations to follow the pattern of putting many environmentally-related functions under one roof. The District of Columbia created a Department of Environmental Services on July 27, 1971, and proceeded to pull together a number of pre-

viously independent activities. Abandoned cars, for example, once the province of the police department, were made the target of a special program within Environmental Services. (The move made much sense. It was well known that abandoned vehicles attracted rodents and were also an environmental hazard to children who often were injured playing in them.) Other more obvious environmental functions were brought together under central management, such as air and pollution control, radiation inspections, dead animal removal, noise abatement, solid waste management, and rat control. (The city's rat control program, was subsequently cited as outstanding by HEW's Center For Disease Control.)

In the meantime other forces were at work. The national measures to control pollution, embodied in laws governing air, water, noise, solid waste, toxic substances and pesticides were followed by national standards and local ordinances.

In the District, for example, bans on open burning of refuse from demolished buildings, diseased Dutch elms, autumn leaves and so on were enacted. Polluting incinerators in apartments and other facilities were outlawed and only well-designed incinerators equipped with pollution controls were permitted.

In order to meet standards, officials concluded that various coal-burning facilities including power plants would have to switch to oil or install high efficient pollution control equipment. Public schools, business and industry set to work making the needed changes, and by 1977, the task was largely accomplished.

Figuring The Costs

What is the price tag on the environmental clean-up in the District? What results have been achieved so far? And what other efforts still lie in the future?

To begin with, there is no precise figure available on the total expenditures in this decade, but the figure easily runs in the billions of dollars. If one considers Metro's subway as part of the effort to get polluting cars off the city's highways—and that was never far from the planners' thoughts in pushing it through—the cost at this point is \$5.1 billion for the subway system alone.

Add to that an estimated \$420 million for the Blue Plains expansion, \$22 million for the city's new incinerator, an estimated \$30 million for proposed land disposal of sludge from drinking water purification facilities sometime in the future, about \$525,000 for 15 new mechanical street sweepers, and you begin to get an idea of the additional capital investments involved in cleaning up the city.

These expenditures are one-time outlays. There are also the constant operating ex-

Truman Temple is Associate Editor of EPA Journal.

penses of keeping the cleanup machinery going. That includes, for example, \$68 million annually for the city's Department of Environmental Services and its 2,600 employees.

The various environmental standards, regulations and ordinances also have required very substantial investments by business, industry, and private institutions. The switch-over to oil from coal in the District has cost the Potomac Electric Power Company nearly \$24 million, and installation of electrostatic precipitators to clean up smoke from the utility's coal-burning plant in Alexandria, Virginia just across the river will cost \$50 million more.

The oil companies also have had to make investments here in a special kind of pollution control. Washington has pioneered among Eastern cities in its gasoline vapor recovery program at filling stations. The vapor that escapes into the atmosphere every time you have your auto's gas tank filled contains unhealthy ingredients such as hydrocarbons and benzene. Hydrocarbons react with other pollutants and sunlight to form smog, which affects the eyes and lungs and can damage plants and fabrics. A number of cases of leukemia have been attributed to atmospheric benzene.

The Washington City Council got on top of the problem about three years ago and enacted legislation requiring gasoline vapor recovery equipment. By May 31, 1977 vapor controls for gasoline stations were installed throughout the city.

John Brink, Director of the Bureau of Air and Water Quality Control within the Department of Environmental Services, says about 400 gas stations including government-operated facilities have complied. The work was completed in two stages, with recovery devices installed in storage tanks in 1975 and on fuel pumps by last May. Brink said Washington is the only jurisdiction east of the Mississippi that has carried out both phases of this program. It has reduced hydrocarbon emissions in the District an estimated 10 percent.

The Tailpipe Problem and Commuters

The auto is the number one air polluter in Washington, according to Brink, and the war against tailpipe fumes is being waged on several fronts. Washington officials obviously are not relying on Detroit to solve the problem; they have committed huge sums and major efforts to get people out of their cars and into other forms of transportation.

To get an idea of why the auto ranks first among sources of dirty air, a few figures are instructive. According to the Metropolitan Washington Council of Governments, an average of 447,000 autos entered the District core area daily between 6 a.m. and 7 p.m. during the work week in 1977, car-



rying an estimated 622,000 persons. This did not include public transit commuters.

Because a large number of these commuters park all day in residential neighborhoods in Washington, the District has been discouraging them by eliminating parking spaces, installing parking meters, and requiring parking permits in many neighborhoods.

In cooperation with the effort, the Department of the Interior already has eliminated about 1,600 all-day parking spaces along the Mall, restricting some of them to three-hour parking and abolishing the rest. Ultimately the District intends to prevent a total of 10,000 commuter vehicles from parking in residential areas in Washington. A program requiring parking permits begun only last July already covers some 800 city blocks on Capitol Hill, Georgetown, and elsewhere.

"There's no question in my mind that this is helping," says Brink, who notes that a Supreme Court decision was necessary last year to pave the way for the program.

What irks many environmental officials are the thousands of parking spaces provided free or at subsidized rates by the Federal Government to its employees. It's calculated that in 1977, of 41,000 parking spaces under GSA or Congressional control, three-fourths of them were free and the rest cost employees only \$4 to \$20 a month, far below commercial parking rates.

"It's very hard for us to talk about bus lanes and other transportation controls in dealing with this air problem when the Federal Government is giving free or very cheap parking spaces to so many people," declares one District planner.

"We need disincentives to commuters. They should be paying the \$61 a month

commercial rate instead of a \$5 government rate. But we even run up against labor unions on this, because they make low parking fees part of their contract demands with some business employers."

Nevertheless, Metro is making some headway in luring motorists into public transit. At this writing an average of 132,000 persons are riding the subway daily—and the number is rising. Another 400,000 ride buses each day. No one knows how many of these customers would otherwise be in autos, but it's safe to say public transit is a useful part of the clean air effort.

"We believe the increasing use of the Metro system by the public is paving the way for control of the auto," says Theodore Lutz, general manager for Metro. "As it grows in accessibility, it will develop a good basis for alternatives to commuting only by car."

Lutz has recommended to the Metro budget committee that the subway be expanded to weekend operations this September from the present five-day schedule, and this would greatly encourage public awareness of subway trains as a convenient, non-polluting way to travel. If weekend service is added, an estimated average of 200,000 persons would ride the subway daily. There are now 21 miles of Metro rail and 23 stations operating, with five more miles and four new stations due to be added by the end of February.



METRO's Rhode Island Avenue station where buses connect with subways in north-east Washington, D.C. at a major terminal of the transit system.

Other Clean Air Efforts

Washington officials are pushing ahead on other fronts to meet clean air standards, including new provisions in the 1977 amendments to the Clean Air Act. Lawsuits are pending against the General Services Administration and Pepco over control of particulate matter pollution, and negotiations are underway to resolve the problem. The District also is conducting a fugitive dust inventory and will be planning new control measures when results are in. The chief sources of this dust are building demolition, sand blasting, excavation, and open-bodied trucks carrying dirt and sand.

The City Council has passed a regulation requiring exhaust emission inspection of autos and this will become effective when similar programs get under way in Virginia and Maryland. Other incentives to reduce auto trips into the District include 29 miles of bus priority lanes, bike racks at many locations in the city, 10 miles of bike paths being engineered in addition to 20 existing miles of paths, and a computerized carpool locator service. There also is the "bus idling" ordinance to reduce emissions. City officials show signs of taking the latter regulation very seriously. Bureau of Air and Water Quality personnel have been authorized to issue tickets for violation of the regulations. One reason: An air monitoring station at Melvin Sharpe Health School showed a dramatic drop in carbon monoxide levels in 1976 after buses waiting to pick up school children there were prohibited by the new ordinance from idling their engines for long periods.

Some Positive Results

Environmental officials can point to some improvements in Washington so far as a

result of the clean-up campaign in the 1970's. The District has been meeting the ambient air standard for nitrogen oxides. Sulfur dioxide concentrations in the atmosphere have shown a general decline since 1968 and now meet Federally-mandated air quality standards, thanks to burning of low-sulfur fuels, (one percent sulfur now, and .5 percent starting next October). Suspended particulates also have shown a long-term reduction of about 50 percent, brought about by restrictions on open burning, the switch from coal to oil fuel, strict enforcement actions, and so on.

In solid waste management, the city is pursuing some innovations that hold promise for conservation and even cash revenues in the future. Richard F. Moreland, Chief of the Bureau of Solid Waste Disposal, notes that Pepco has submitted a letter of intent to the District to buy steam from the incinerator plant at some future date, for use in an adjacent power plant. Cost figures indicate the District could receive more than \$1.5 million annually for the steam. Since the incinerator uses no fuel other than trash, the income would rapidly pay off the costs of installing steam-producing equipment, he says.

After burning trash, the city is left with a large quantity of cinder-like material called aggregate and this is now stockpiled in various places. However, experi-

ments indicate the aggregate can be used as fill in roadbuilding and also in paving roads and walkways, a profitable form of recycling.

The long-term picture in water-supply appears satisfactory, according to Harry Ways, Chief of the Washington Aqueduct Division, Corps of Engineers. (The District handles drinking water distribution but the Corps is in charge of supply.)

A future source is now coming on line from Bloomington Lake where a dam is under construction on the Maryland-West Virginia border and will provide about 135 million gallons per day for the Washington area around 1982. "There never has been a shortage of water in the Potomac where there wasn't enough to go around," says Ways. "It's conceivable in that maximum water demands experienced to date here have exceeded recorded low flows in the Potomac and shortages would have occurred if these events had been concurrent."

But despite these hopeful signs, it is obvious that the Nation's capital—like so many other cities across the land—is facing long-range problems created by proliferating autos, years of neglect in planning for proper land use, suburban sprawl, and a continuing battle for funds to do an adequate job of clean-up.

The truth is that as long as metropolitan Washington's population continues to expand, a lot of environmental officials here—like the Red Queen in *Alice in Wonderland*—will have to keep running just to stay in the same place. □

Growing Up in Washington

By Tom Kelley

Once, when I was very young, my Uncle Tom came down from New York. Uncle Tom was a disciple of Eugene Debs and a man of fierce enthusiasms. He suspected, perhaps correctly, that nature and the bosses were conspiring against him.

My father, who disliked loud noises, took us all to the beach to keep cool. The beach was a plot of sand on the edge of the Tidal Basin, where the cherry trees now bloom. The year was 1925. There were a great many men, women and children on the sand, many wearing what were appropriately known as bathing costumes. Uncle Tom, always natty, had a horizontally striped sleeveless jersey and black trunks that came down to his knees. He flung himself into the water and swam out to the middle of the shallow basin, stood up, turned around and swam back. Then he stretched out under the sun.

My sister and I built a castle. My father took off his shoes and socks and went wading. My mother put on her glasses and read the Sunday paper. Later, when the sun loomed huge over Arlington, my uncle awoke and stood to put on his pants. He roared and sat down. The bottoms of his feet had burned a fiery red. We accompanied him painfully to the street car and

rode home to Capitol Hill. Tom, a proud man, wore his socks and shoes and, since the car was crowded, he stood up so the ladies could sit down. The next day his feet were blistered, as anticipated, and he was also covered with a rash. My mother, who may have been the first to know it, said the Tidal Basin was polluted and we were never allowed to swim there again.

There were other waters to swim in and most, I'm pretty sure, were clean. You could travel forty miles by ancient train for ten cents on Wednesdays, to North Beach and Chesapeake Beach on Maryland's Potomac shore. Northern Virginia was full of woods which were full of creeks and runs. Within the city limits there was Eastern Branch, as the Anacostia was called, where the rowdy boys who hung around Stanton Park and who were known as the Park Bums, went. There was the Potomac above Key Bridge and there was the wild and wonderful Rock Creek.

The summer of 1932 when I was nine, my cousin John Roddy was slowly dying from tuberculosis, out in Tenley Town, and every Sunday morning after Mass my mother, my sister and I boarded the Alta Vista car at the eastern edge of the Capitol Grounds and rode in hot discomfort on the hard straw-covered seats for what seemed hours and hours and hours. Downtown the great dark green solemn cars were propelled by electricity safely underground beneath narrowly divided strips of metal known as the third rail but when we reached Wisconsin Avenue the motorman stopped, pulled up the metal keel which had made contact down below, got out and unwound the trolley which sprang up to the overhead wires. We were almost there.

My Aunt Katherine lived on Windom Place near Reno Road and while my mother sat with John, my sister and I went down to the end of the street to play with the Donohues. The Donohues lived on the edge of the woods and there were a lot of them. The mother was called "Titanic", not because she was a large woman, for she was not, but because when she emigrated from Ireland she had come, part way, on the unfortunate ship of that name.

The Donohue boys had dammed Rock Creek and made a swimming hole. It was deep in the woods and there was swinging rope attached to the branch of an overhanging tree.

We would swim there on Sunday afternoon, the boys first, the girls later, a thousand miles from the heat of the city. The boys swam naked. Though we knew from frequent observation that the girls always wore suits, we would sneak through the woods, Sunday after Sunday in the foolish hope that just that once they had absent-mindedly failed to put them on.

The water was cool, clear and cold even

in August and we shared it with harmless snakes and turtles. You could drink it and we did. That evening of course, when we got back home in the dark, we were hot all over again.

What is now called heat pollution is caused by industrial plants which dump hot water into streams killing fish. In Washington, in August, 1932, heat pollution of a more personal kind was the unavoidable fact of daily life. The grown-ups had a lot on their minds that summer of the Great Depression—the Bonus Marchers were encamped involuntarily in nearby Maryland and Herbert Hoover was inventing the five-day week; government workers were getting Saturday off, without pay, in order to spread the work around—but people still had time to think about the heat.

The temperature was in the nineties day after day and on Sundays people who had autos, or machines as they were called went out driving in the country. The country was close—the moment you crossed Key Bridge you were in it and it was always cooler out there under the trees. The folks who didn't have autos stayed home, sat on their porches and drank ice tea. They sat on gliders if they had them (gliders were available at Sears Roebuck for \$8.75) and behind awnings if they lived on the sunny side of the street. Those who had forty cents to spare could go downtown to the magnificent, luxurious major movie houses, the Earle, The Metropolitan, the Palace and the Fox.

In the evening thousands of citizens took pillows and went to sleep on the grass—Hains Point, like Flanders Field, had bodies row on row, and each of the neighborhood parks—Stanton, Lincoln, Franklin and the rest—had nightly contingents snoring under the stars. The rich—or what passed for the rich in 1932—did better. The Kennedy Warren advertised its special coolness in a somewhat round-about way in the Star and the Post. "All Washington knows that Rock Creek Park is the one place to go for relief from the city heat. This same cool Park air is used to keep the Kennedy-Warren 15 degrees cooler than the outside temperature, night and day—Washington's first air cooled apartment." Actually on a 95 degree day 15 degrees cooler wasn't all that cool.

The air was not only hot, it was frequently fragrant. Fairfax County Circuit Judge Walter T. McCarthy upheld what may have been one of the country's first pure air ordinances that summer—no County could raise hogs without the permission of 75 per cent of the property owners within three quarters of a mile—but no one was doing much of anything about the horses. Horses had been pretty much replaced as the means for personal transportation by 1930 but they still pulled ice wagons, vege-

Tom Kelley, who lives a few doors from the house where he was born on Capitol Hill, is a veteran Washington journalist.



Swimming in the Tidal Basin



table trucks and junk carts and horse manure was found daily on every street in town. In summer Washington smelled like one large stable. Street cleaners pushing large cans on wheels and equipped with a stiff straw broom and a shovel made daily pick-ups and in the Spring they sold gardening housewives a can full for fifty cents. Still the horsey air of forty odd years ago was clearly better than the foul stationary auto fumes of late August.

The greatest difference between the past purity and the present pollution was in an area seldom commented on—the waves of sound. The past was hi fi, the air, if not full of music, was full of a number of pleasant sounds, each as clear as the bell of St Joseph's Church which woke us up on Sunday mornings.

One of the last blacksmiths in town had an open-air shop on a tiny triangle of land on Fourth St. N.E. between B and C. He was a thin, dark man with mighty arms and leather apron and the clear sweet clang of hammer on anvil was easily heard a block-and-a-half away on a quiet summer afternoon. In the evenings the men of the neighborhood played horseshoes in a strip of ground on the edge of Peabody school yard and at supper we could hear the voices and the clink of shoe on steel peg as if the players were all in the kitchen with us. The plaintive whistles of endless trains floated over all of Northeast Washington every night, all year round and bird song could be heard by people walking in parks and banjos by those strolling in the evening past the

front porches of houses where teen-agers lived.

The radio was still new and people played it loud with the windows open and you could walk a mile on residential streets and never be out of hearing range of Amos and Andy. The first sounds of the din which would eventually overtake us were themselves sharply defined on the evening air—most auto horns went "oooooga ooooooga", a non-musical rasp but the first melodious ones arrived about 1928 and I remember the scattered supporters of Al Smith sang to its tune "Hoover Get Out Of My Way".

Things deteriorated in the thirties and forties but slowly. Young government workers still rented canoes at Fletcher's boat house during World War II, paddled across to the Virginia side of the river above Key Bridge where there was a narrow bank of sand and went swimming. The danger was not from pollution but from the swift current and occasional undertow. The river below the bridge was probably too polluted for swimming then but the idea was a new one still and the young and foolhardy jumped in anyway. The air remained fresh and the sounds of day and night remained fairly distinct until the end of the war. A surprising number of people had managed to buy automobiles during the Depression years but an even greater number had not and no one besides millionaire playboys and sweepstakes winners bought a second car without trading in the first.

During the war Detroit made tanks and jeeps and Army trucks and gasoline was rationed and everyone spent long unjolly hours on the trolley. You can almost feel the misery when you look at old newspaper pictures of F Street during the Christmas rush; streetcars lined up like a circus train on a siding, as far as the camera's eye could see. Then the war ended and Detroit began building cars once more and those who had an old one wanted a new one and those who had none wanted a new one too. President Eisenhower sponsored the superhighway program and the woods of Arlington, Montgomery, Prince George's and Fairfax counties gave way to red brick apartment towers and picture window ramblers. The overheated streetcars were replaced by overheated buses which filled the air with noxious fumes and the suburban commuters crept ever more slowly in and out of town, under the thickening haze of their own exhausts. For those who lived near the city's main arteries the steady roar of the rush hour cars drowned out all clangs, coos, tinkles and rustles and an urban pedestrian could no longer distinguish a jack hammer's racking from the general din.

It's a long time since my Uncle Tom got his feet burned and whatever good happens to the Potomac I doubt that I will ever take a recreational dip there.

Some months ago I turned off Tenley Circle and found myself on Windom Place but I couldn't even figure out where that damned creek once had been. □

The East Baltimore Way

By Dr. Robert Burke

I'm partial to old city neighborhoods so it was natural that I would be sympathetic to an audience of several hundred people who turned out for a monthly meeting of the Southeast Community Organization four years ago in the century-old East Baltimore area. These people hadn't come specifically to hear me but I had been invited to talk about EPA's programs and the urban environment.

I had never been in East Baltimore prior to this meeting, in fact, had only a vague idea that the area even existed. My initial foray into the eight neighborhoods that comprise this community was like travelling back to the turn of the century. Impressions from this first trip to East Baltimore still remain vivid.

Horse drawn vegetable wagons were doing a brisk business on the narrow neighborhood side streets. The larger thoroughfares were filled with young and old people taking the evening promenade. The food in a local Greek restaurant was excellent and inexpensive. Good draft beer flowed for twenty cents a mug at a neighboring pub. Even at 11 o'clock in the evening, the area was vibrant and alive.

East Baltimore contains a blue collar and ethnically conscious population. There are, in fact, as many as 20 different ethnic and racial groupings and these include Poles, Ukrainians, Italians, Blacks, Finns and Spanish-speaking residents. Family, neighborhood and church are the institutions that bind East Baltimore together. It's what sociologists call an "insulated and traditional" community.

East Baltimore Means Neighborhoods
A visitor from Washington can reach East Baltimore in less than 50 minutes from EPA, Waterside Mall. Just follow the Baltimore-Washington Parkway into Baltimore City, turn right on Pratt Street through downtown, and you are in a small but cohesive neighborhood known locally as "Little Italy." This is where East Baltimore begins. Following Pratt Street further east you turn right on Broadway and follow it down to

the waterfront.

At the foot of Broadway is the old Fells Point neighborhood, an area of colonial style housing that retains a strong flavoring of the early 1800's when it was America's major ship building center. Here the U.S.S. Constitution and Constellation were built and in later years a former slave named Frederick Douglass worked on the docks. Fells Point is an unusual neighborhood where a traditional Polish-American population lives in harmony with newer residents who sport several alternative lifestyles. The restaurants and taverns match any in America in terms of quality provisions and atmosphere.

Further up the road from Fells Point you go onto Eastern Avenue into what is, in fact, the heart of East Baltimore. The three established neighborhoods of Highlandtown, Canton and East Highlandtown contain scenes of Baltimore most familiar to outsiders. Old, well-maintained rowhouses with carefully scrubbed white marble steps and street after street of small stores, homes, and neighborhood pubs where Greek, Slavic, German and an American-Indian population live. Despite East Baltimore's reputation as an insulated set of neighborhoods, it remains a place where outsiders can feel comfortable and at home.

Community Problems and Neighborhood Survival

Prospects for East Baltimore were not always as encouraging and there was a time ten years ago when it appeared as though parts of the area might literally disappear from the map. A combination of outside pressures and internal decay were threatening most parts of East Baltimore at that time. To get an idea about what happened to change this fate (which some felt to be almost preordained), we have to go back to that night when I had my initial contact with citizen activists in Baltimore.

The Southeast Community Organization (SECO) had been formed two years prior to this particular meeting. It was created as an "umbrella organization" to pull together the goals and programs of 100 neighborhood groupings. The problems ranged from decaying and abandoned housing in several areas, a decline in quality public school education, and a giant super-highway that threatened to cut the community in half. Other problems included poor public services for the young and the elderly, mounds of scrap metal, trash and garbage in vacant lots, and traffic by large trucks through the narrow side streets that was shaking old homes to their very foundation. There was a general feeling a decade ago that East Baltimore was being assigned to the junkyard and that there wasn't much the people could do about it.

Environmental Issues Emerge.

As I listened to these problems, my mind began to draw a blank. On the one hand, it

was clear that those gathered that night knew what they were doing and what they were after. On the other hand, I wasn't at all certain that what EPA was doing had much relevance to their immediate needs. I'm seldom at a loss for words but I began to panic as it came time for me to talk.

I looked at a copy of my speech and the words "heavy duty vehicle" and "photochemical oxidants" hit me right between the eyes. Two minutes before I was scheduled to say something, it dawned on me that EPA and the residents of East Baltimore were talking two different languages. I decided to drop the speech I had prepared and to wing it. But I also looked at the audience and knew instinctively that they had the smarts to decipher if I was making sense or trying to pull the wool over their eyes.

After a few introductory remarks outlining EPA's major program responsibilities and alluding to some similarities between Baltimore and my home town of Boston, I threw it back to the audience. If I had qualms about their concern for environmental pollution, these fears were quickly put to rest. They had, in fact, been dealing with the problems of pollution long before the term "Earth Day" became a part of America's established vocabulary. They made this point abundantly clear on several occasions that night.

Mrs. Sirkka Lee, the President of SECO, said that air pollution from industry and automobiles was making people in East Baltimore sick and was even causing cancer. This was three years before a Johns Hopkins study confirmed what Sirkka and most other residents of East Baltimore instinctively knew all along.

Father William Ott from Saint Michael's parish questioned how an effective transportation control plan for Baltimore could function in the absence of a viable mass transit system. In common sense terms he noted that while the now defunct trolley system used to travel at 10-minute intervals, the present bus system often comes only once an hour. "You should become more realistic in your expectations", Father Ott admonished EPA.

Gloria Aull, a major force in East Baltimore's fight against super-highway construction, was asking why existing environmental impact statements don't function to prevent the dismemberment of old neighborhoods by poorly conceived Federal projects. "These impact statements and most environmental programs were thought up by people who don't live in old cities. The environmental movement is out of touch with the neighborhoods. They should change their outlook since they really can't get very far without us." Gloria said with a forcefulness only slightly tempered by humor.

Elaine Smith and Matilda Kovel, two of East Baltimore's most dynamic neighbor-

Dr. Robert Burke is an EPA Headquarters Public Awareness Officer and a Baltimore aficionado.

hood leaders, pointed out that any effective solid waste disposal system must include a combination of neighborhood initiatives and a citywide disposal system. "I can't very well tell people in my block to pick up their damned trash if there's nothing to take it at the other end and a demonstration project is no substitute for this", Matilda said.

There were other things I learned that night. It became clear, for example, that "planning" and "urban renewal" are considered positive initiatives by Federal agencies. For old city neighborhoods, however, they have often meant the destruction of homes and the uprooting of families who have had ties to an area for generations.

Several other participants were skeptical about how EPA's noise abatement pro-

grams would ultimately lower noise levels on Eastern Avenue and Broadway. Others had doubts about the fairness and workability of EPA's programs to inspect automobiles for high pollution levels. The most lasting impression, however, was of people who felt they had been taken advantage of by government and who believed that they weren't taken seriously by established institutions.

Neighborhood Planning Begins

While these impressions were the best education I've had in government, a more important development was beginning to unfold that night in East Baltimore. SECO was about to begin a unique planning program of its own funded by the Ford Foundation and sponsored by the Washington-based National Center for Urban Ethnic Affairs (NCUEA). This would be the first in the Nation to directly involve urban, blue-collar residents in planning projects and priorities for their own neighborhoods. On subsequent Saturdays, I returned to East Baltimore as an observer and watched large numbers of citizens debate what should be done in each neighborhood.

It surprised me that there was no immediate consensus. It took several meetings for them to iron out differences but they gradually got to the core of things by directly tackling several major problems that have killed so many fine older neighborhoods in other parts of the country: housing deterioration, absentee landlords or inconsistent services for the young elderly, trash disposal, and other neighborhood related dislocations.

In retrospect, the most rewarding thing I noted about this particular endeavor was that it was done democratically by groups and citizens who had no particular background in urban planning or environmental controls. They did, however, have a knowledge of their neighborhoods, a concern for people, and a degree of humility and accountability which helped to keep the process quite consistent with community feeling. While this particular planning program was far from a mass movement, it seemed to account reasonably well for the divergent viewpoints that exist in East Baltimore. A plan for the area was finally developed and approved at an annual congress of East Baltimore residents.

The Gains Have Been Impressive

It is, of course, one thing to plan a program and quite another thing to actually carry the thing out. I was admittedly a bit skeptical about SECO's capacity to do all the projects it had planned and approved and I wasn't alone in thinking that the coalition might have bitten off more than it could chew. What happened in East Baltimore has been repeated in several other communities where subsequent planning programs at the neighborhood level have been initiated.

Unlike the community issues that brought the SECO coalition into existence, the planning of actual programs was generally lowered to the neighborhood and block level. SECO's major problem was to find ways to keep the diverse neighborhoods together on the basic issues confronting East Baltimore while stimulating effective planning which by its very nature had to function in much smaller geographic settings. Accommodation and common sense usually work to bridge this gap. For the most part, this is what happened in East Baltimore although it was not always entirely smooth sailing. Some neighborhood activists looked at planning as an abridgement of the broader issues that brought the coalition together in the first place. Some even left SECO during 1975.

But this schism was only a temporary setback for SECO. The plans they approved are being carried through. While a few are behind schedule, most are adhering closely to the agreed upon timetable that emerged from the planning phase of the program. Some are even ahead of schedule. These programs have produced a new terminology which has become as familiar to East Baltimoreans as the overworked terms "bottom line" and "milestone" are to Federal agencies.

Homesteading: This is one of SECO's most successful programs. The concept originated in Wilmington, Delaware, but it has really been pioneered in Baltimore. For only \$1.00, a prospective resident can buy an abandoned piece of real estate with access to improvement loans provided he or she supervises the reconstruction and agrees to live in the house for three years. Demand for these homes is currently outstripping supply in East Baltimore. Ways to get more housing included in the Homesteading program is currently being explored between SECO and the Baltimore City Government.

Shopsteading: Shopsteading is a spinoff of the successful homesteading program. Under this program which was conceived in Baltimore, a prospective small merchant can buy an abandoned or under-utilized store or storefront for \$100 along with funds for putting a business into operation. This program is particularly important for the Black neighborhoods where improvement programs have been hindered by the absence of sufficient stores to serve area residents.

Cooperative Neighborhood Development: This concept has been successfully applied in a formerly decayed section of East Baltimore known as Washington Hill. The entire area was rebuilt over a two year period and families have moved into the remodeled housing by investing in a neighborhood cooperative. The residents of Washington Hill, therefore, don't own their homes as such but they do own shares in the coopera-

Visitors crowd Baltimore's port.



tive. This gives them a stake in the entire neighborhood's well being and a good renovated home at affordable cost. Most important, Washington Hill exists today as a fully integrated area. Practically all sources agree that Washington Hill is SECO's most impressive showcase for what can be done in urban neighborhoods.

Reinvestment Initiatives: This program has involved several initiatives to encourage investment of local salaries and wages directly into the East Baltimore area for use by residents as loans.

Anti-Redlining Strategies: Redlining is a term which banks employ to restrict or prohibit mortgage and improvement loans to certain neighborhoods or blocks that are considered poor risk areas. While it is not always clear why certain areas are being "redlined", it was common knowledge that several areas of East Baltimore have been off-limits as far as the banks and lending institutions were concerned. A combination of factors are working to turn this problem around and it doesn't hurt when banks and other lending institutions can see the visible progress that the area is making with several of its other projects.

Other emerging programs have included the establishment of an active senior citizen program and a senior citizen's center, creation of a community health center and strong youth diversion programs that have cut down the rate of vandalism considerably. Trash and garbage are disappearing from the streets and the large trucks no longer rumble over the side streets of East Baltimore. To anyone who has witnessed what has happened, the changes in East Baltimore have been positive and, in some cases, dramatic. It's small wonder, therefore, that SECO has instituted a series of community tours to take visitors through neighborhoods. Candidate Jimmy Carter was one of the first guests to be taken through during May, 1976. East Baltimore has developed pride from what has been accomplished and the people there have an encouraging story to tell. That's a good tonic in these days when so much of what we read about older cities is bad.

What It Means for EPA

It isn't always easy or feasible to mesh these neighborhood programs with EPA's mandates and to some it may seem like trying to push the proverbial square peg into the round hole. But EPA has more in common with old communities like East Baltimore than is apparent to the casual observer.

It is clear that urban residents, including blue collar, minority, ethnic and "non-professional" populations are well aware of the health problems and neighborhood blight caused by environmental degradation. We are talking about a highly sophisticated

population (and a potentially powerful constituency) that has at least one perceptive advantage over outsiders. They know their own neighborhoods and working environment inside and out. They know that pollutants are affecting their health. EPA doesn't have to educate them about their problems. Many people who live in old neighborhoods are concerned with broader environmental and conservation issues. But they will primarily respond to EPA because of what the Agency can do for their health and welfare. In common sense terms, all kinds of urban people will listen to EPA and perhaps be guided by the Agency provided they hear officials who understand life as people in the cities experience it.

- The long-range success of most programs in urban areas must include outreach programs to the neighborhoods and communities that comprise each metropolitan area. Strong neighborhood coalitions like SECO wouldn't have developed to the extent that they have if traditional urban institutions had been responding effectively to human needs. These newer groupings are increasingly powerful, autonomous and often anti-establishment in nature. They include church groupings, ethnic and racial organizations, local small businesses, consumer groups, block associations, and many others organized around common concerns. Few outside sources can influence what these groups do, but what they do affects directions and priorities in most urban areas.

- In communicating with these urban neighborhood groupings, EPA must have the support of local city or county governments in order for these efforts to produce success. It is more likely now than in the past that some form of working relationship can be established since these governments, too, are relying more heavily on the neighborhood/community coalitions and other non-governmental institutions.

- To communicate effectively with urban residents like those in East Baltimore, we have to look to things that these people are most familiar with. The community weeklies are probably the most important and immediate source available to EPA. The large dailies and the network news programs are often regarded as part of "the establishment." Most East Baltimoreans have never seen a copy of the *New York Times* or the *Washington Post*. Many others don't even read the major Baltimore daily newspapers on a regular basis. But "just about everyone in East Baltimore reads the *East Baltimore Guide* from cover to cover," according to several residents of the area.

- There are specific areas where EPA's program objectives are dependent on whether or not old communities like East

Baltimore make it. Any kind of environmental program faces almost insurmountable problems if it is trying to function in areas dominated by decaying neighborhoods, poor housing, and a host of social and economic problems which must take priority over anti-pollution programs since they concern the day to day survival of neighborhood and people. On the other hand, as areas like East Baltimore continue to improve, local tolerance for pollution will probably diminish. And neighborhood people who have accomplished much themselves are far less likely to accept the fatalistic notion that jobs must be sacrificed for a clean environment.

- Concern for old neighborhoods has led to situations where outsiders begin to romanticize areas like East Baltimore or exaggerate the progress that has been made in recent years. Even pioneering communities like East Baltimore have a long way to go. Problems remain and several aspects of life are still unpleasant for many residents. Far from being romantics, people in East Baltimore have had to be tough and disciplined. There's too much at stake in terms of community survival for them to become sentimental about what they do.

EPA and the old neighborhoods have much in common but it remains for us and them to recognize our common interests, articulate them clearly, and make them work to our mutual advantage.

Conclusion: A Two-Way Delivery System Is Needed

EPA can develop an accommodation with old urban neighborhoods provided we take the time and foster the discipline to look at things the way people in these areas look at things. An effective "delivery system" in urban areas must be a two-way street. The cold and hard facts of political life dictate this. There will be no free ride for EPA or any other government agency with urban groupings.

The newer groupings have replaced the old political machines in some areas but in most cities, the two are reaching an accommodation based on common interests. The "rules of the game", however, continue to be clear and simple. In the old days, the neighborhood and ward organizations used to deliver the votes and the machine delivered patronage and services. It was a two-way delivery system and it wasn't an altogether unenlightened arrangement considering the alternatives available.

The newer urban groupings like SECO are issue-oriented rather than electorally inclined, but the old two-way delivery system is still in effect. In order to get their support and participation (as well as that of many city governments), they are going to have to be convinced that EPA has a set of anti-pollution programs in place that will provide payoffs in terms of improved health and long-life. □

Rescuing the Neighborhoods

By Paul Keough

Developing plans and programs to revitalize and improve the quality of life in the Nation's urban neighborhoods is one of the Carter Administration's highest priorities in 1978, according to Massachusetts State Senator Joseph F. Timilty.

Timilty, an expert on urban affairs, has been appointed by President Carter to serve as chairman of the newly-created National Neighborhood Commission. The 20-member Commission was created by Congress and given a mandate by President Carter to develop an overall master plan to deal with the growing neighborhood movement.

In cities throughout the country citizen groups have been formed with the express purpose of trying to preserve the identity, character and integrity of local neighborhood areas.

According to Timilty, the neighborhood movement received the biggest impetus during the Nixon-Ford Administration.

"During those years, our neighborhoods were completely ignored. Community-based groups who were committed to preserving local neighborhoods knew that they would have to fend for themselves. What no one knew is just how well-organized neighborhoods could become."

"We are now in the midst of the era of the neighborhood. For too long, national and State urban revitalization efforts have completely ignored the neighborhood movement," Timilty explained. The Massachusetts lawmaker, who had served as chairman of the Legislature's Joint Committee on Urban Affairs, which handles activity in such areas as public housing, private government-assisted housing, urban redevelopment, tenant-landlord relations and zoning, since his election in 1972, points out that, "Old ways of solving urban blight and restoring environmental quality in our cities have failed. In the past, our only answer was large construction programs. In the process, we uprooted families and destroyed neighborhoods. We concentrated on building up our cities' skylines and ignored areas where people actually lived. No matter how much money you pour into new buildings downtown, if you ignore the neighborhoods

a city cannot survive."

Timilty said that "We must shift our emphasis and develop plans to reconstruct, rehabilitate, and preserve the Nation's neighborhoods and the very fact that a Presidential Commission has been appointed to study the whole problem is evidence that the neighborhood movement can no longer be ignored."

The commission, which includes four members of Congress, five elected officials who are from urban areas, six elected representatives of neighborhood organizations and five professionals who deal regularly with neighborhood problems, has been given one year to develop its blueprint.

"What we hope to do is develop programs which would create a climate for neighborhood reinvestment and certainly the improvement of the natural environment has to be an essential ingredient in accomplishing this task," Timilty continued. Timilty, whose district comprises several Boston neighborhoods, as well as five suburbs west of the city, explained that it would do little good to restore neighborhood dwellings and revitalize the economy of these areas without improving the quality of the environment.

"One thing we must do is to develop better ways to mix residential use with recreational activities. In most of our city neighborhoods there is an amazing deficiency of open space. Yet if you take a look at any major city you will find a good deal of vacant space which presently is being used for illegal dumping. Or there are areas where vacant buildings that have been destroyed by fire or vandals now stand that could be converted into parks or recreational areas.

"Also, there are many urban areas that have rivers flowing through them or in cities like Boston, border on a waterfront area. Agencies like the Environmental Protection Agency and the individual States are spending millions of dollars upgrading the quality of water so that they would be suitable for fishing and swimming. But more attention must be given to ensure public access to these waterways. It will do no good to clean up these rivers and harbors if the land is controlled by private companies or investors. Ways to ensure that local residents are able to enjoy the full benefits of the cleaned-up water must be found.

"We also must keep in mind that as far as pollution is concerned, the urban dweller is our most endangered species and that creative solutions to these pollution problems must be developed. For example, automobile-related air pollution affects all of our major cities and is jeopardizing the health of urban dwellers. Neighborhoods are choked with traffic, and poisonous carbon monoxide and smog are ever present. Even our playgrounds are contaminated with lead that falls to the ground from auto exhausts and works its way into

the ground where children play. These are problems that we cannot ignore if we are to improve our neighborhoods."

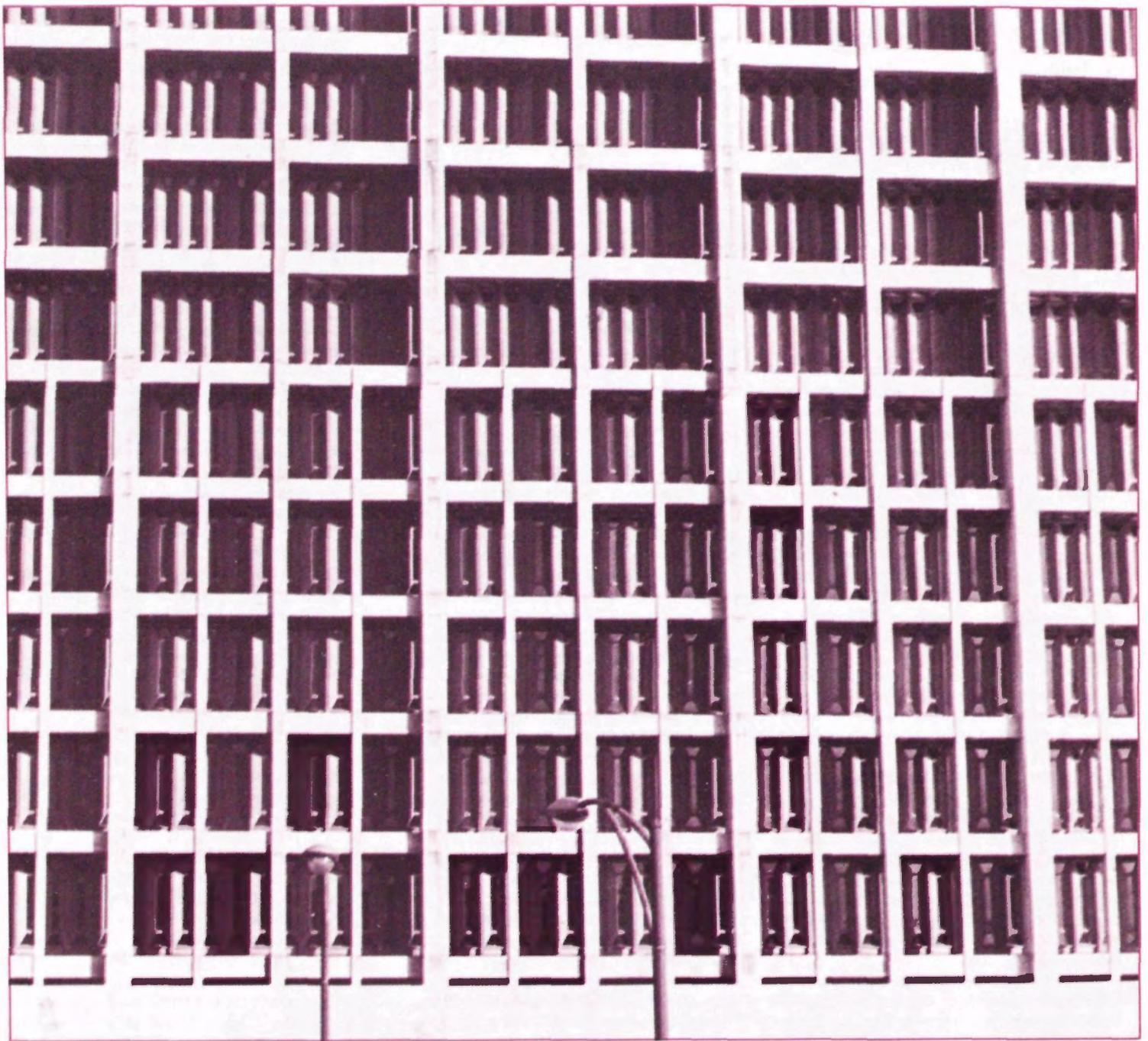
A five-year veteran of the Boston City Council, Senator Timilty said he does not envision a massive new Federal program to revitalize urban neighborhoods. Rather, he said that emphasis will be placed on re-channeling governmental efforts into local areas. "Federal funds will have to be the catalyst, but it is local industry, local lending institutions, and local neighborhood groups which will hold the key to the revitalization effort. I believe enough resources exist to do the job. It's just that there will have to be a rearrangement of priorities at every level and there will have to be initiatives to buttress the stability of urban neighborhoods," he stated. In Massachusetts, for example, Timilty helped establish a housing rehabilitation and neighborhood preservation program. The program is operated by the Massachusetts House Mortgage Finance Agency. Once fully operational, the program would authorize \$25 million in bonds to banks which in turn will issue low-interest loans to low income and moderate income families. These loans will be used to purchase one-to-four-family dwellings. The funds will be utilized as an aid to stabilize older neighborhoods.

Other programs have been enacted which would guarantee low interest loans to city dwellers who wish to rehabilitate their housing. The City of Boston also has developed programs by which abandoned property taken by tax default would be sold for a minimal cost to individuals who guarantee to fix the dwellings up and reside there for a certain period of time.

The Neighborhood Commission will be holding hearings throughout the country over the next few months. Timilty points out that unlike most Federal hearings, these sessions will be held in neighborhood meeting places and, in order to maximize public transportation will take place on weekends.

"Local neighborhoods have been the backbone of many of our great metropolitan centers," Timilty said. "Too many neighborhoods have been wiped out by the bulldozer. Too many neighborhood dwellings have been destroyed in the name of urban renewal. Too many families have been forced out of neighborhoods where they have been born because of urban blight, decay, and neglect. Fortunately, there has been a rebirth in the neighborhood spirit. Pride in the neighborhood is on the rise. It will be up to this Commission to develop a master plan which will keep this pride alive, a plan which will echo the needs and aspirations of our neighborhood dwellers."

Paul Keough is Director of EPA's Public Awareness Office for Region 1 in Boston



Cities and the Environment

By Patricia Roberts Harris
*Secretary of Housing and
Urban Development*

January 1, 1978 marked the eighth anniversary of the signing of the National Environmental Policy Act. I think we can be proud of what we have accomplished so far. We have done much to lower intolerable levels of pollution throughout the country and we are moving ahead in our efforts to prevent pollution through adequate consideration of the consequences of our actions before, rather than after, they occur. We are also moving ahead, albeit slowly, toward our goal of actively creating for future generations a better environment than that we ourselves inhabit.

These are important accomplishments. Much remains to be done, however, particu-

larly with respect to our urban environment. Today three-quarters of our population lives in our cities, towns or other urban areas. It is here that most pollution is generated and where its impact is greatest. The need to ameliorate the congestion, noise, air, design and other environmental problems that afflict this majority of our citizens is an urgent one.

The Department of Housing and Urban Development is particularly conscious of this need. It has a statutory responsibility, under the Housing Act of 1949, to ensure a "decent home and a suitable living environment" for all Americans. Its mission is the active shaping of a high quality urban en-

vironment. Its environmental concerns, thus, both precede and extend beyond the review requirements of NEPA.

Four walls, a roof and a floor do not make a home. Even a "decent home" in an overcrowded, run-down or derelict neighborhood will soon match its neighbors unless an effort is made to up-grade the whole neighborhood, not just by rehabilitating or building new houses but by improving its infrastructure and its social environment. It has become increasingly clear that each of our efforts to improve our living environment affects other efforts as well as the total urban environment, and that we must fully consider the related, aggregate effect of the projects we support on the physical, economic and social resources of individuals and communities, and on their future as well as present life.

It is for these reasons that we insist that the impact of the social, economic, cultural, aesthetic and physical effects of the projects we support must be carefully evaluated. It is why we insist that proposed programs must be considered in relation to the surrounding environment, and not just to the particular area or condition they are intended to improve. It is why we attempt to ensure that sources of pollution are controlled; that there is a balance between pollution generation and pollution treatment; and that equitable standards for development are produced and used with due regard for the capacity of natural and man-made systems.

Our interest is to ensure that the impacts of development, both beneficial and detrimental, are distributed fairly within the community. The poor, as well as the more affluent, should have equality of access to the amenities of the built environment. This means not only parks and playgrounds, but the opportunity for gainful employment as well.

The coming together of people into villages and towns, cities and metropolitan areas creates many opportunities, and many problems. The primary problem is how to establish an environment in which people can dwell, work, play and interact to the mutual benefit of both and to that of society. For it is the environment we create within our communities that becomes a magnet and a shaper of the growth of both the individual and his community.

Our inner cities, which are the most congested of our urban areas and where all aspects of the environment are most in need of improvement, last year had an aggregate unemployment rate of 9.2%. For their black youth, the unemployment rate last summer stood at 40 percent. Employment, education and other social needs are integral factors in any effort to provide a decent environment for the inhabitants of our urban areas. We must give these needs the same emphasis as the objective of preventing the inhabitants of HUD-supported projects from being exposed to excessive noise, inside or outside the building; for

ensuring that the quality of the air they breathe is adequate; and that they are not exposed to toxic chemicals and hazardous materials.

We have already taken steps to revise some of our programs and to institute new ones in order to integrate environmental concerns. For example, the Community Development Block Grant Program enacted into law in 1974 has made a number of changes in the way the Federal Government assists localities in renewal, rehabilitation and conservation efforts by replacing several individual Federal grant programs with a single grant program. Perhaps the most significant change involves the transfer of decision-making powers, including that for assessing the environmental consequences of major projects, from Washington to local governments. This linkage of environmental assessment to local decision-making means that environmental concerns are given full consideration by local officials as they determine how the grants will be used.

We are working now on improving local environmental assessment capabilities. Environmental goals and the assessment of



Patricia Roberts Harris

natural and man-made environmental conditions have been added to the Department's Comprehensive Planning Assistance (701) Program. All plans drawn up under this program that affect development must now be evaluated for their environmental as well as other implications and the result made available to the public before action is taken.

Urban development, particularly residential development, often requires more detailed guidance than that contained in national criteria and standards related to pollution sources. This is true with respect to air quality, noise, surface subsidence and the siting of housing in relation to hazardous areas, among other problems. The Depart-

ment's research program has an active environmental component, which has carried out a number of studies of urban noise, for which we have developed criteria and standards which must be applied to HUD-assisted projects. Other areas of research concern include total energy systems, radiation from the use of uranium mill tailings, and the reduction of earthquake hazards.

We have prepared a comprehensive guidance manual on the integration of environmental considerations in the comprehensive planning process to assist planning agencies in ensuring that policies, plans and programs are responsive to environmental concerns. This guidance is being circulated for comment and suggested revisions before a final edition is published. We also have a new project, of interest to those engaged in environmental assessment. It is to test the feasibility of adapting the computerized environmental data system and computer methodology developed at the Rice Center for Community Design and Research in the preparation of HUD environmental assessments and environmental impact statements (EIS). If the Center's data and methodology can be adapted as a basic system for all HUD regions, it would greatly reduce the existing overlap and duplication in drafting EIS's for different projects in the same area. We have sought the advice of EPA and other agencies in evaluating this system.

As our vision has broadened, so has our responsibility. We are currently spearheading the development of an areawide environmental impact statement. This is a new concept and we have just started to test its feasibility and usefulness. Its focus is on the environmental implications of growth and the combined impact of planned development. It will concentrate on major growth-related issues such as air pollution and drainage, land use, natural systems, infrastructure requirements, and the environmental criteria and performance standards to be applied to individual developments. Its aim is to develop a methodology for integrating environmental factors into the planning and decision-making processes on a broader and more efficient basis.

President Carter listed the rehabilitation of cities among the "environmental measures whose time has come" in his 1977 Environmental Message. Last June, Secretary of State Vance, noting the adverse effect on cities of major world-wide issues such as energy, unemployment, finance, and trade, pointed out the need to better understand the impact of the interaction of domestic and international trends on our cities and suggested that the Organization for Economic Cooperation and Development (OECD), which is composed of the industrialized market-economy countries, establish an ad hoc group to formulate an OECD program on urban concerns. The OECD's Environment Committee has

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Green Protectors

By Chris Perham

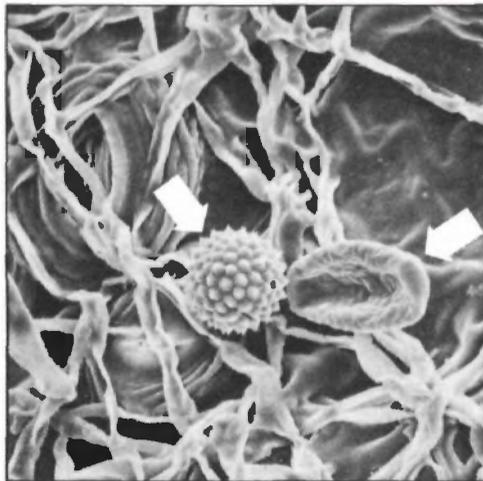
The cyclist, perspiring in the midday sun and gasping from the fumes of the cars that surround her, veers off the highway onto a bike path that runs through the park. Almost immediately, though the city still may be a mere block away, the temperature drops, noises are muffled, and the odor of gasoline fades behind the wall of trees.

Parks and open spaces have long been valued for many reasons: they offer shade, an eyerest from the glare of glass and concrete, and a haven for wildlife. Now an EPA-sponsored study indicates that open spaces can have a positive effect on air quality, and that in some cases buffer zones of vegetation can be more cost-effective than mechanical air pollution control devices.

Vegetation and even open soil can act as sinks or filters to trap and convert air pollution, according to the study. The 3-volume report is entitled "Open Space As An Air Resource Management Measure."

Open space, as defined for this study, is any area with a natural cover of soil, water, and plants, where there are usually minimal human activities, and legal restriction limit the development of facilities and structures.

This electron micrograph, taken by Professor William H. Smith of Yale University, shows ragweed pollen and fungus spores (see arrows) trapped on the underside of a London planetree leaf.



This definition goes beyond parks to include forests, lakes, rivers, sanitary landfills, cemeteries, wildlife refuges, utility rights-of-way, and strips along transportation corridors under the heading of open space. Many of these areas already exist in urban centers and can easily serve the secondary function of pollution filters.

As part of the study, the authors conducted a computerized and manual search of all literature that was available in the United States pertaining to the potential use of open space as a practical way to ease air pollution. Some international publications were also reviewed.

The study found that forests serve as an excellent way to reduce particle levels in the air. The trees act as a windbreak, causing dust and particles to settle out of the atmosphere. In some cases, the additional turbulence caused by irregular surfaces of tree tops precipitates out more pollutants.

One study found that a dense hedgerow was responsible for a 40 percent decline in the lead content of the air behind the hedge.

Some pollutants adhere to leaves and bark as well, especially when the surfaces of the vegetation are rough or hairy. Evergreens are considered the best trees for year-round filtering action. Because they retain their foliage for several years rather than dropping leaves each autumn, evergreens remove more submicroscopic particles than deciduous trees.

There are further variations; under controlled conditions, the rough leaves of a sunflower can collect 10 times as many pollutants as the smooth, waxy leaves of a tulip poplar. One comparative study cited in the report noted that a plot of spruce trees measuring 2.47 acres could remove 32 tons of dust from the air, 2.47 acres of pine trees could remove 36.5 tons, and a similar plantation of beech could remove 68 tons.

Vegetation also affects noxious emissions by absorption. Sulfur dioxide and other water soluble gases are taken up into plants through the stomata, microscopic openings on the underside of the leaves, and are used by the plant. Some ozone is absorbed through the cuticle, or external surface, of plants, and studies have found that herbaceous species like petunias take up more pollutants than woody species like oak.

Chris Perham is an Assistant Editor of EPA Journal.

Bare dry soil also absorbs ozone. Researchers feel that this is a physical and chemical process that receives some aid from decomposition of ozone by soil microorganisms. Fungal microflora, tiny plants, in soil are thought to be instrumental in the removal of carbon monoxide and hydrocarbons as well.

The EPA study notes that the efficiency of an open space or a windbreak depends on the type and placement of the vegetation. Close plantings of trees can reduce wind to a minimum directly behind the plantation. However, studies cited found that the action of a less densely planted buffer would allow more pollutants to penetrate and be subjected to filtering action.

Plants used in buffer zones of green spaces should be relatively resistant to the pollution found in the area, according to the report. Also, vegetation should be located according to collection ability—with those plants that filter large particles

A leafy glen in Central Park provides relief from the heat and noise of New York City.



placed closer to the source and collectors of smaller particles farther away

The great diversity of plant materials found along the edge of forests makes this area the most valuable for reducing air pollutants, the EPA study found. The most effective filtering takes place in the first 65 to 85 feet of the forest. The different sizes and types of plants form canopies at many levels, rather than just at the treetops as would be the case deep in a forest, and each successive canopy affects a few more pollutants.

Likewise, the introduction of openings within existing forest areas can increase the "edge" effect and create thermal chimneys where the upward movement of air exposes pollutants to the filtering action of leaves high in the forest canopy.

The report notes the need for careful attention to the plant species used in buffer zones. Pollution tolerance and general hardiness to urban stress is important because a damaged or dead plant will not serve its purpose. Certain evergreens would be favored because of their year-long filtering ability. Also, characteristics that favor particle retention, like rough leaves, leaves with many openings on the undersides, or vegetation with hairy surfaces, would make some species more valuable than others for control of pollution.

Buffer strips or green areas that are planned to ameliorate the air quality can have the added benefit of muffling noise from traffic or industry. Some studies indicated that a buffer strip 50 meters (164ft.) wide could achieve a 20-30 decibel reduction in the sound level.

If open spaces are planned properly, they allow for a good ecological diversity among the plants selected. As the vegetation matures, it allows for natural succession with a wide variety of plants that include shade-tolerant as well as sun-loving species, with a well-developed underbrush and abundant ground cover.

The maintenance needs of such an area are low and it provides cover for a variety of small wildlife as well.

The report notes a number of ways that open areas can be incorporated into existing cities. Urban parks play an important role in the reduction of pollutant levels. Central Park significantly dilutes the sulfur dioxide level in the middle of New York City, and Hyde Park in London reduces the smoke concentration an average of 27 percent.

Wedges of green space radiating from an urban center can be made to expand with the growth of a city. Buffer zones can grow along transportation corridors or follow existing physical features like rivers or valleys. The study notes that street tree plantings can act as an integral part of an air quality control system even in areas where space is limited. According to one researcher, streets with trees showed less than one-quarter the ambient pollution level of streets without trees.

Greenbelts, or concentric circles of open space around a city, can separate incompatible land use functions as well as contribute to air quality. According to the report, planners can reserve greenbelt open space land using the same planning design criteria that are currently applied to reserving land to serve population and development pressures.

Volume I of the report is entitled "Sink Factors." It contains the raw data compiled from an extensive literature search, including tables of emission and sink factors of pollution-sensitive plants and pollution-resistant plants. An accompanying appendix contains summaries of the pertinent literature.

Volume II, "Design Criteria," reviews the factors crucial to effective use of open space to ease air pollution. It gives schemes for design and location of buffer strips and other forms of open space, as well as directions for using the sink factors in mathematical models.

To illustrate possible uses of such criteria,

Volume III of the EPA report is a Demonstration Plan that hypothetically applies the study findings to the city of St. Louis, Missouri. The plan includes a cost-effectiveness analysis of using open space as part of an Air Quality Maintenance Plan. It attempts to evaluate some of the merits or problems of combining both natural and man-controlled management practices directed at easing air pollution.

The study concluded that open space would not be as cost-effective as precipitators for controlling particulates. However, the cost of controlling sulfur dioxide emissions with open spaces was a \$3 million capital investment with annual operating costs of \$477,525 as opposed to over \$20 million for mechanical control equipment, with an annual operating cost of over \$9 million a year.

Thomas McCurdy was EPA Project Officer for this study, which was done for EPA by Dr. Robert S. DeSanto, William P. McMillen, and Kenneth A. MacGregor of COMSIS Corporation, Glastonbury, Connecticut, with assistance from Richard A. Glaser and Mark Cooper. Dr. William H. Smith and Dr. Joseph A. Miller of the Yale School of Forestry and Environmental Studies provided electron micrographs and library services.

Limited copies of the report are available from Library Services Office (MD-35) EPA, Research Triangle Park, NC 27711. They can also be purchased from the National Technical Information Service, Springfield, Virginia 22151. □

Green foliage lines waterway in San Antonio, Tex.



Counsel for the Defense

An Interview with
Joan Bernstein, EPA
General Counsel

We would first like to discuss your role as General Counsel for EPA. Do you consider yourself the Agency's Public Defender?

I consider myself the Agency's counsel and the person primarily responsible for defending the Agency against legal challenge, whenever those challenges may appear.

What do you regard as the most important aspect of your work?

I consider the most important aspect of my work my charge from the Administrator to work very closely with Bill Drayton, particularly, and others in effecting what is generally known as regulatory reform at this Agency.

Is your office trying to make EPA regulations more reasonable and understandable?
Yes.

How are you doing that?

We have had a series of meetings designed to raise the consciousness of the lawyers who work with the program people. We are using examples of regulations which are particularly well written and can be understood by lay people.

We have invited various guests who have expertise and knowledge in ways to improve regulations to come and speak to us and we will continue to do that.

I am also very much involved in a little organization of the four General Counsels of the major health agencies to coordinate activities.

I will be very frank in telling you that my long-term goal is to actually undertake an inter-agency rulemaking where that is appropriate.

How many regulations do you think the EPA has?
Approximately 350.

Why did EPA appeal to you as a place to work?

My first reason is that I think environmental law is where the action is for a lawyer. By that I mean that it is very often in the forefront of legal and administrative issues. New law is being made every day. For a lawyer, that is a very exciting place to be.

Also, I am both interested and committed to changes in the law which improve everybody's environment. In addition, I was and am excited by this Administration and very much wanted to be a part of it.

Approximately, how many suits are pending against EPA?
155.

Who brings most of these actions—the industry groups, the environmental group?

Everybody sues EPA. I have been in other Government agencies and EPA is almost unique in that regard. Both industries affected and environmentalists' groups sue EPA on a regular basis.

Is this good or bad?

Well, it depends on what your view is. There are those who think that these issues can and should be resolved in the courts and only in the courts.

There are others who believe that policy decisions probably should not be made by the courts. In fact, it is probably one of the most significant and controversial issues in the Government today.

My own view is that where certain types of policy/political issues are involved they are probably not best resolved in the courts. Rather, they can best be addressed and resolved by public airing of divergent views via the "legislative" mode rather than the "judicial." The legislative approach is more flexible and designed to accommodate these divergent views.

Other issues more factual in nature are most appropriately resolved by the courts.

Is there anything that we can do to reduce the number of suits against us?

Yes, I think so. I think that there are several things that could probably reduce the ultimate litigation load. One is to increase public participation in the regulatory process itself.

EPA has generally a good record on broad scale participation but I think even we can make improvements and we are beginning to do that.

The more consensus you can achieve in the regulatory process, the less is the likelihood of legal challenge.

On the other side of the coin, does EPA have a number of suits pending against various people and industries?

Oh, yes. That is obviously the responsibility of the enforcement division primarily and not my office except for the pesticides area where we do the administrative litigation.



What kind of batting average does EPA have in defending against suits?

A very good one. We have been very successful and very pleased, especially with the ones that have rolled in since I have been here.

With very rare exception, we have done very well.

Is there any mechanism whereby someone from the outside can find out about rulings from your office on a regular basis?

Yes, the formal opinions of General Counsel are readily available. You have only to call up and get a copy.

I am working right now on setting up a docket record room on the first floor of EPA Headquarters in which the rule-making records will be available.

Also, I hope to have the opinions of the General Counsel indexed and available in that record docket room. They will then be much more accessible.

How many attorneys are there in your office?

About 52

Is that enough?

Well, there are 40 out in the Regional Offices. No, it is not enough to do a full-service job.

We have been very grateful for the support in getting additional resources which we've had from the rest of the Agency. We will probably be expanding over the next couple of years.

I am not clear about the breakdown as to where you have responsibility, where our enforcement office has responsibility and where Justice takes over. How could you describe the area which you are responsible for?

Functionally, my office defends when the Agency is sued. Most of that defense comes after a regulation is promulgated and either the industry sues us because the regulation is, in their judgment, too stringent or some procedural requirement has not been followed etc. Or an environmental group will sue on the grounds a rule is not strict enough.

Enforcement, on the other hand, is the part of the Agency which sues those who are regulated for failure to comply with the law or with the regulations.

Both of us work with the Department of Justice in the court aspects of either defending or prosecuting. In a word, enforcement is the prosecutor and we are the defender.

The Justice Department is involved in both. My work is handled through the Lands and Natural Resources Division. An attorney from here and an attorney from the Pollution Control Section of the Lands Division will handle a case jointly. Usually those challenges are in a Circuit Court of Appeals.

The enforcement people work primarily through the U.S. Attorney's Offices around the country.

Is your office involved at all in proposed actions that get other Federal agencies, for example, to clean up their waste?

Yes, we have been involved, not directly but rather indirectly. Our involvement has been in preparing legal opinions as to whether Federal facilities can be sued and under what circumstances.

We are not directly charged with bringing those law suits. In fact, if such law suits were lodged, Enforcement and the Department of Justice would bring them.

Are you confident that we can take action against other Federal agencies?

Yes.

What law would it be based on?

It depends on the individual statute.

What would be the penalty for a Federal agency that was found violating one of these laws?

In all likelihood, a monetary penalty, while it might be available, would probably not be desirable. Rather, a compliance schedule would be what the Agency would probably seek.

But you think that we do have the means to persuade these other agencies to clean up their waste if they are recalcitrant?

I am certain that we do. I doubt very much it will come to that. In fact, my latest information is that our recent effort—not my effort, but the Agency's effort—to call those problems to the attention of other agencies has been responded to very positively with assurances that they will meet those requirements.

Is your office called on to handle many Freedom of Information cases?

Yes.

What is your general attitude in most cases?

My attitude toward the Freedom of Information Act is that not only should the letter of the Act be followed but I believe it is the wisest course, whenever possible, to comply with the spirit of the Act.

My general view as a practical matter is that an agency should make almost everything public unless there is a very good reason not to.

Are EPA and other Government agencies able to compete with leading law firms in the quest for bright young attorneys?

EPA certainly is able to as far as this office is concerned. I have been inundated with applications from people who are extremely well qualified.

I think we have an extraordinary ability to attract those people. As to other Government agencies, I think it depends on the agency.

People are attracted to an agency because of the type of work it does and because of the quality of the people. My people are as gifted as any that I have ever seen in the private or the public sector. EPA is a very appealing place to work.

Is environmental law generally a good field for aspiring attorneys to consider entering?

It is a superb field.

Why?

Because it provides new opportunities to become a real expert in a new field.

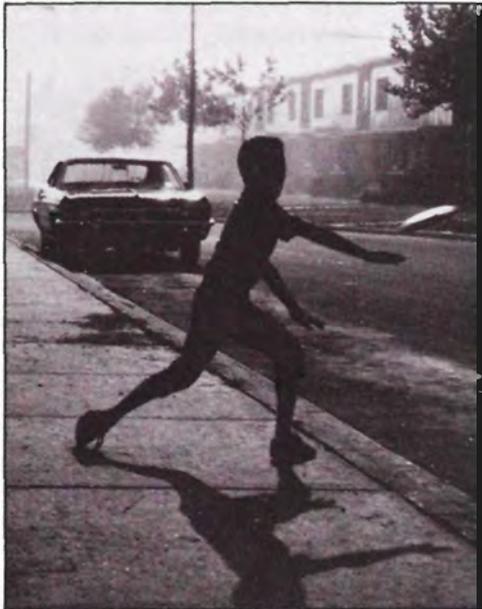
It is very different from going into say, SEC, which is an established agency where the law has been well developed. I offer that just as a contrast. At EPA, we are in the process of developing a new body of law. Nothing could be more exciting or more of a challenge to a young or for that matter an old lawyer. □

Lead and Children

By Dave Cohen

It always grieves me to contemplate the initiation of children into the ways of life when they are scarcely more than infants. It . . . demands that they share our sorrows before they are capable of entering into our enjoyments.

Charles Dickens



The scientific evidence piling up points in one direction: pollution discriminates. It disproportionately affects one group of citizens who are least able to defend themselves—our children.

"Health effects information indicates a need for increasing concern about low-level, long-term exposure to lead, particularly among children," EPA Administrator Douglas M. Costle said in recently announcing the Environmental Protection Agency's proposed new ambient air quality standard for airborne lead. "EPA has proposed the lead standard at a level based on the need to protect youngsters age one to five," Costle noted, "the most critically sensitive population.

"Levels of lead in the blood for most children in this country are higher than they should be. Lead health effects occur at lower thresholds in children than in adults, and children have a greater risk of exposure

to non-food material containing lead, such as dust and soil, as the result of playing in contaminated areas.

"EPA feels that if the proposed standard protects this age group, it will guard the rest of the population. Of course we must also rely on other regulatory authorities within EPA."

Costle was referring to the Agency's other lead-control activities, beginning with its 1971 requirement to limit auto lead emissions, the principal source of lead air pollution. In 1973, EPA issued regulations for the general availability of at least one grade of lead-free gasoline at most service stations, and the phasing-down of lead in all grades of gasoline by October, 1979.

Also, EPA has set national drinking water standards for lead, and is developing industrial water pollution rules for this pollutant. The Agency regulates lead arsenate pesticides and requires safe disposal procedures for all lead-containing pesticides. EPA regulates the recycling and disposal of used crankcase oil, lead acid batteries, and other wastes containing lead. Other EPA regulations for control of air emissions of sulfur dioxide and particulate matter require pollution control technology that also reduces lead emissions from industrial facilities.

"The proposed standard for lead is precautionary," Costle said, "and we are mindful that there are still key aspects of scientific knowledge about lead which are unknown or controversial. Frankly, the decision about what level to propose the new standard raises some difficult issues. We are publishing the proposal with a lengthened period for receiving public comments, because we want the maximum possible public discussion."

The proposed national standard for airborne lead is 1.5 micrograms of lead per cubic meter of air, figured on a monthly average. Following the issuance of a final standard by the Agency, which is scheduled for June, 1978, States must develop plans for EPA approval which demonstrate how they will attain the lead standard by 1982, and maintain it thereafter.

EPA has examined available information to assess the economic impact of technological controls necessary to reduce air emissions of lead from industrial facilities. For primary copper smelters, primary and secondary lead smelters, and battery plants, attaining the standard may require control of fugitive lead emissions, those emissions escaping in the manufacturing process rather than emissions from smokestacks. While the impact on these facilities is of great concern to EPA, which estimates the overall cost of installing the necessary controls will be about \$600 million, the Clean Air Act does not permit EPA to consider factors other than health in determining the level of the standard.

In 1975, the Natural Resources Defense Council and others brought suit against EPA in U.S. District Court, southern District,

New York, to control lead as a national ambient air quality standard under Section 109 of the Clean Air Act. As a result of Court action on this suit, EPA in March 1976 listed lead as a pollutant for which standards would be developed.

At the press conference announcing the proposed new standards, David Hawkins, EPA Assistant Administrator for Air and Waste Management, said, "In developing this proposal, the job facing EPA was to gauge what concentration of lead in the air could be regarded as a safe level for prolonged periods of exposure. We have been particularly concerned that the standard be protective of the health of young children.

"Achieving the air quality level of the proposed standard will result in costs for certain parts of the economy. We believe that impacts will fall principally on non-ferrous smelters, which have an extremely difficult situation in controlling fugitive emissions which contain lead. We are very concerned that our programs to achieve the standard minimize cost to industrial facilities wherever possible."

New studies by California health officials help document the adverse impact of lead on children.

"Children exposed to heavy air pollution may suffer in their school work and sports ability," according to a report by the California Air Resources Board staff.

"Youngsters who breathe in pollution also can expect a higher incidence of respiratory problems than adults and face the prospect of higher medical costs throughout their lives," the report adds.

"Excessive lead absorption may be related to learning disabilities and other symptoms termed minimal brain dysfunction," California Health Director Jerome Lackner said. . . ."

"Clearly, our understanding of the full range of air pollutant effects upon children is far from complete," the California Air Resources Board Staff Report notes. "However, there is sufficient information to indicate that children may be the most sensitive group of individuals within the population because: 1) their lungs are still developing; 2) they exchange more than twice the volume of an adult based on body weight, and 3) they have a faster ventilatory rate than adults. The last two considerations enhance the probability of increased pollutant absorption by the lungs."

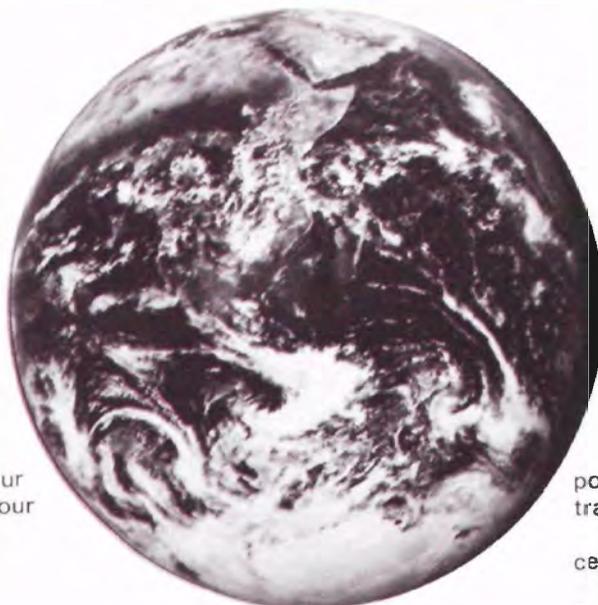
Samples from the various scientific research studies reported on by the Board include the following:

- "Among five-year-old boys and girls of Sheffield, England, it was observed that the highest rates of upper respiratory (colds, nasal discharge) and lower respiratory illness (coughs, colds going to chest, pneumonia, and bronchitis) occurred in areas of the city with high sulfur dioxide mean daily

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World Environment Day



"When you go around the earth in an hour and a half, you begin to recognize that your identity is with that *whole thing*."

Russell L. Schweickart
Astronaut

It doesn't take a spaceship to grasp the concept of what we would now call "global interdependence." However, as Astronaut Schweickart observed, a spaceship perspective helps.

Since the United Nations first officially addressed the crucial nature of international environmental issues at the historic Stockholm Conference on June 5, 1972, that date has been recognized and celebrated as *World Environment Day*. It is a day every year when governments and organizations in the United Nations are urged to undertake "world-wide activities reaffirming their concern for the preservation and enhancement of the environment, with a view to deepening environmental awareness. . . ."

Dr. Mostafa Tolba, Executive Director, United Nations Environment Programme, in discussing *World Environment Day*, noted:

"In the declaration of the United Nations Conference on the Human Environment adopted at Stockholm six years ago, governments faced the reality that man was both creature and molder of his environment and that humanity at large had a responsibility for the protection and enhancement of that environment.

"The basic challenge that the United Nations Environment Programme has faced since it was established by the General Assembly in December 1972 has been to promote the widest possible dissemination and understanding of the Stockholm principles and to encourage people to give them meaning and validity in every sector of life. *World Environment Day* provides us with an opportunity to remind the public of those principles, to

reaffirm their validity and to inspire new levels of commitment to them."

President Carter has also placed an important new emphasis on global environmental issues. Top government officials and private environmental organizations are starting their planning early in an attempt to assure that *World Environment Day 1978* adequately reflects its symbolic importance.

"This year, EPA is going to be taking more of a 'clearinghouse' and coordinating role for *World Environment Day*," says Joan Nicholson, Director of EPA's Office of Public Awareness. Nicholson said that the Agency, through its regional offices, will fund several relevant and creative projects by grassroots organizations.

Some of the ideas discussed at a recent meeting of the Regional Public Awareness officers included having their constituency groups display exhibits about their international environmental concerns; arranging events and media coverage for the ambassadors from different nations to show what their countries have been doing for the environment; sending national and regional speakers to local meetings, and encouraging national media coverage of *World Environment Day* activities around the country.

In December, EPA representatives from both the Office of Public Awareness and the Office of International Activities met in New York with United Nations Environmental program officials and representatives of private organizations to plan the event. The private organizations will be encouraging their State and local chapters to plan a spectrum of activities including fund raising luncheons with environmental speakers,

poster contests, and banning automobile traffic on selected streets.

Last year, *World Environmental Day* was celebrated in many different ways.

In Kenya, 40,000 people marched to raise money and stimulate public consciousness regarding the precious nature of water. Underscoring their concern was the famous observation of Captain Jacques Cousteau: "If the earth were the size of an egg, all the water and all the oceans, streams and glaciers would be but a single drop on the egg's shell."

In 129 international cities, including Cairo, Rio de Janeiro, Sydney, Madrid and Vancouver, autos were banned for the day on selected downtown streets. Programs and displays were staged in Thailand, Ghana, Nicaragua, Tanzania, Panama, Chile, Ireland, Ethiopia, and Fiji.

In Washington, the State Department hosted a formal program that included remarks by Douglas M. Costle, Administrator of the U.S. Environmental Protection Agency; Patsy Mink, Assistant Secretary for Oceans, International Environmental and Scientific Affairs; and Charles Warren, Chairman of the Council on Environmental Quality.

In Kansas City, the celebration included an environmental circus, complete with solar energy exhibits, canoe races, river steamboats and hot air balloons.

"We enthusiastically encourage any and all ideas, comments and suggestions," says Nicholson. "Issues of environmental significance transcend both boundaries and ideologies. The socially aware in every land are well aware of their crucial nature."

If you have suggestions, questions, or requests for further information they should be directed to your nearest EPA Regional Public Awareness Office. These offices also will be able to put you in touch with groups in your community planning *World Environment Day* activities. □



Predicting Dam Failures

By Chris Rice

Like the Toccoa Falls Dam in Georgia, the Teton Dam in Idaho was built of earth. So was the Beaver Creek Dam in West Virginia. All these dams collapsed releasing roaring waters which killed people and caused extensive property damage.

For those living downriver, the safety of the more than 9,000 major earthen dams in this country is of growing importance. President Carter in a December news conference stated that all of these dams will soon be checked by Federal authorities to ensure none are in danger of impending collapse.

The Environmental Protection Agency has borrowed an old pioneer trick that has modern application to this problem and has offered assistance to the Army Corps of Engineers and other Federal agencies responsible for the earthen dams.

Ira Wilder of EPA's Industrial Environmental Research Laboratory in Edison, N.J. says frontiersmen stuck knives in the ground and listened for vibrations to indicate whether Indians or buffalo were near. Earthen dams also vibrate, and a machine has been developed that measures the rumbles produced by friction within the soil. Significant acoustical readings mean that the dam is unstable.

The device, commonly called a "rumble reader," is the modern-

day equivalent to the frontiersman's knife. Ten-foot rods of half inch reinforced steel are driven into the ground at the dam and an electronic measuring device is attached to read the vibrations. The reader was originally developed to help EPA evaluate dikes holding toxic substances, but the recent failure of these major earthen dams has prompted EPA to bring the instrument to the attention of interested authorities.

Drs. Robert M. Koerner and Arthur E. Lord of Drexel University came to Wilder with the idea in 1973 and asked for EPA funding. Four years and \$150,000 later, EPA has an effective and inexpensive method for checking for dike and pond spills and the country may have the means to help predict collapse of major earthen dams. EPA's project officer for this program is Dr. John Broggen.

At Oswego, New York, last spring, EPA inspectors used the device to discover the possibility of failure in two storage lagoon dikes. The barriers held back poisoned water collected by a waste disposal firm. Failure of the dikes would have sent the heavily toxic liquid down Wine Creek into Lake Ontario.

The key to the warning system is sound. All solids emit sounds—called stress waves, or acoustic emissions—when placed under pressure. Many of these sounds are in the subacoustic range of

our hearing (from very large earth masses, for example), or way above it in the ultrasonic ranges (small soil particles).

Dr. Koerner's inspiration for investigating the connection between soil movements and sound came in 1972 from the Canadian town of St. Jean-Baptiste-Vianney, which reported a large-scale earth collapse. It seems that for a week before subsurface earth movements caused the disaster, the community's dogs continually howled and bayed. Koerner reasoned that the stressed soil emitted ultrasonic sounds that only the animals could hear.

Using relatively inexpensive instruments, Koerner and Lord constructed a prototype sensor that used an accelerometer and electrical impulse counter.

Inserting the sensor into small earth dams (the majority from 30 to 100 feet tall and often inadequately built by farmers for irrigation purposes), the scientists discovered that minute movement of water through the earth causes soil particles to shift slightly. This produces a rubbing friction which generates sound waves.

By comparing controlled laboratory and accelerometer readings from dams known to be properly constructed with suspect structures, scientists were able to classify earthen dams into different categories requiring varying frequencies of monitoring.

"These dams are not here today and gone tomorrow," said Wilder. "They take time to collapse and get noisy when they are subject to failure. There's enough warning."

Among the device's many beneficial features are its low cost (around \$5,000), its mobility (rods can be easily installed in a number of dikes or dams and left permanently while the monitoring device is lightweight and therefore highly mobile), and its simplicity (only a minimum of training is necessary to operate the device and interpret the readings).

At least one other use has already been found for the new invention. Philadelphia International Airport has used the device to assess the soil stability of a landfill operation extending under one of its runways.

So, from frontiersman's knives to the roar of a 747 on takeoff to the safety of thousands who depend on the purity of drinking water untainted by toxic spills and the safety of those living below major earthen dams, a small acoustics device developed by university scientists and funded by EPA may play an ever increasing role in today's world. □

Chris Rice is an EPA Headquarters Press Officer

A Glimpse of the Natural World We Help Protect

Nature in the City

A February ice storm can transform a city park into a crystal landscape. Enshrouded tree and shrub branches click and crackle in the wind.

But even when the sun is sparkling on the ice-laden trees, it is difficult to believe that life still exists in this beautiful but harsh setting.

Yet a new season of life is beginning.

In such urban parks as Washington's Rock Creek, the grey squirrels after mad mating chases through the tree tops now have new-born in their nests of leaves and branches.

The owls after hooting at each other under winter's often brilliantly star-lit nights have produced owlets.

On the ground, skunk cabbage, which provides the earliest spring flowers, has used its inner heat to poke its greenish brown hood through a patch of ice.

A hardy species of fly, attracted by the pungent odor from the florets on the stalk of the skunk cabbage, will fertilize this remarkable plant. This flowering and the birth of the owls and squirrels are the warm-up notes to announce the approach of the symphony of spring.

But a point often overlooked is that much of the splendor provided by the birth of the new season can be enjoyed by city residents.

It is not necessary to climb the Alps to find the riches of nature. They are usually available without charge to rich and poor and within easy walking distance.

Washington residents have Rock Creek and Anacostia Parks, Theodore Roosevelt Island, the Chesapeake and Ohio Canal and many other park areas.

Chickadees and white-breasted nuthatches and other winter birds are now flitting through these woodlands.

Gulls wheel and soar above the reflecting pool on the Mall in front of the Capitol. Ducks and herons can be found on the Potomac even in winter.

Nor is Washington the only city with a treasury of green spaces and natural waterways.

New York City has its Central Park and Jamaica Bay, famed for its bird life despite the roar of heavy airplane traffic.

In San Francisco, Golden Gate Park, Muir Woods and the magnificent bay contribute to the charm of this noted Western city.

Chicago has its Lake Michigan beaches, the nearby Indiana Dunes and the woodlands of the Cook County Forest Preserve.

Philadelphia boasts an 8,200-acre park and belts of rivers and green spaces.

In the Washington area we've heard mockingbirds singing on moonlit nights in the heart of the city.

While living in Arlington, Va., near Ft. Myer, we occasionally found opossums in the garage, rabbits in the back yard and raccoons in the garbage cans.

However, the largest raccoon we ever saw was one that used to waddle up to the patio of a home in Kansas City owned by the late Randall Jessee, EPA's Public Affairs Director for Region 7.

The animal had waxed plump on tidbits left for it by the Jessees.

Although all of us who work for EPA may not have the opportunity to feed raccoons, we have the satisfaction of knowing that in our work to some degree we are helping to protect urban woodlands and waterways.

As Thoreau said:
"A town is saved, not more by the righteous men in it than by the woods and swamps that surround it."—C.D.P.



People



John R. Gustafson

He has been appointed by EPA Administrator Douglas M. Costle to the position of Special Assistant to the Administrator and Director of the Office of Land Use Coordination.

Prior to coming to the Agency Gustafson served as a Deputy Director of Oregon's Department of Land Conservation and Development, the State's comprehensive planning agency. His appointment to EPA was made as part of an Intergovernmental Personnel Agreement between Oregon and the Federal Government.

In his new position in Washington, D.C., Gustafson will direct the Office of Land Use Coordination, which has the responsibility of coordinating Agency policies which impact on land use. In addition, he will work as a Special Assistant to Costle coordinating projects within the Administrator's office.

In his previous position with the State of Oregon, he was responsible for State and Federal coordination, citizen involvement, project reviews and environmental impact statements, economic planning and legislative liaison. He also served as the Oregon representative on the Pacific Northwest Regional Commission Alternative Futures Task Force.

Gustafson, 39, was born and educated in Eugene, Oregon. He is a graduate of Stanford University and attended graduate school at Stanford studying public administration on a fellowship from the Ford Foundation. From 1966-74, before working with the Department of Land Conservation and Development, he served as Deputy State Labor Commissioner. He has also worked before in Washington, D.C., as Special Assistant to the late

U.S. Senator Clair Engle of California.

While in Oregon he was an active AFL-CIO union member, Vice Chairman of the Portland Model Cities Planning Board, a member of the Pacific Northwest Steelheaders, Trout Unlimited, the Oregon Wildlife Federation, and a member of the professional public administration and planning organizations.

Michael P. Walsh

He has been named Special Assistant to David G. Hawkins, EPA's Assistant Administrator for Air and Waste Management. His new responsibilities include coordination of various program elements, particularly those involving State-level participation.

Walsh came to EPA in 1974. He was named Chief of the Technical Support Branch for the Mobile Source Enforcement Division in August, 1975. During the spring and summer of 1977 he served on the Agency's Clean Air Task Force.

Marian Mlay

She is the new Director of the Program Evaluation Division, which operates under the Office of the Deputy Assistant Administrator for Planning and Evaluation, headed by Roy N. Gamse.

Mlay comes to EPA from the Department of Health, Education and Welfare, where she served both at Headquarters and in the Chicago Regional Office. Her most recent appointment was Acting Director of the Office of Policy Development and Planning.



Robert S. Dyer

An oceanographer with EPA's Office of Radiation Programs, Dyer recently directed an underwater ocean research project at

two deep-sea nuclear waste dump-sites off the coast of San Francisco. The study—a joint effort of the U.S. and Canadian governments—was conducted at a depth of 3,000 feet and resulted in the first successful location and recovery of a radioactive waste drum from a Pacific dump-site. A manned submersible, the PISCES VI, equipped with sonar and movie cameras was used along with two escort ships to conduct the study, which made preliminary determinations of the condition of the waste storage drums.

Dyer directed similar studies in the Atlantic radioactive waste dump-site at a depth of 9300 feet during the summer of 1976. There he also made direct descents to recover the first radioactive waste drum from one of the many such dump-sites throughout the world to estimate how long the drums will isolate the radioactive wastes from the environment before being breached by corrosion.

These studies are part of a comprehensive program to develop regulations controlling any future sea disposal of radioactive wastes, part of EPA's responsibility under the Ocean Dumping Act of 1972. The technical results of these studies are also being used by the International Atomic Energy Agency (IAEA) to develop controls on international sea disposal of radioactive wastes pursuant to the International Ocean Dumping Treaty.

Dyer is the U.S. representative to the IAEA Advisory Group assisting in the development of such controls. He received his undergraduate degree in biochemistry from the University of Pennsylvania, and did his graduate work in oceanography-radioecology at Oregon State University.

Edward Grisham

He has been selected as Assistant to Region 6 Administrator Adlene Harrison and Director of the Office of Environmental and Energy Policy, Congressional Affairs, and Public Awareness for that Region.

Grisham comes to EPA after serving as a member of the

Board of Directors of A.A. Mathews Engineers, Inc., Los Angeles, and a member of the Board of Directors of Stevens, Thompson, and Runyan Engineers, Inc., Portland.



James N. Smith

Smith has been named as Special Assistant to Thomas Jorling, EPA's Assistant Administrator for Water and Hazardous Materials. He had served as a consultant to the Agency since April, 1977, and had previously consulted with EPA, the Council of Environmental Quality, the Congressional Research Service and private foundations on environmental matters.

Smith also had served as Deputy Director of the National Commission on Water Quality from 1973 to 1976, where he was responsible for the development, design, and implementation of a \$17-million study of the national water pollution control program.

From April 1969 to September 1973, Smith was employed as a Senior Associate for the Conservation Foundation. In this assignment, he analyzed public policy issues related to environmental quality control and natural resources conservation.

Previous to that, he was Executive Director to a Presidential Advisory Committee on Recreation and National Beauty, served as a Staff Assistant with the Secretary's Program Planning Staff in the Department of Interior, and was a Legislative Assistant to U.S. Senator Lee Metcalf.

Better Air

The Nation made significant progress in cleaning up its air from 1970 to 1976, according to a new EPA study.

- Sulfur dioxide levels declined 27 percent.
- Carbon monoxide levels dropped by 20 percent.

Particulates such as smoke and dust decreased by 12 percent.

"America's air is getting cleaner," declared EPA Administrator Douglas M. Costle in releasing the study. "The long term declines in particulates and sulfur dioxide are due to the successful efforts of State and local air pollution control agencies. The carbon monoxide cuts result primarily from auto emission controls."

"But we're still a long way from having healthy air throughout the country. Urban smog levels

remain high and are even increasing slightly in some areas. Some industries such as steel, copper, petroleum and electric utilities still are lagging in pollution control."

Air quality progress is measured by comparing the ambient air pollution levels with appropriate primary and secondary National Ambient Air Quality Standards for each of the pollutants. Primary standards protect the public health and secondary ones protect public welfare as measured by effects of pollution on vegetation, materials and visibility. Data for the study were obtained primarily from EPA's National Aerometric Data Bank, for which data is gathered from State and local air pollution control agencies through their air monitoring activities.

The report gives special emphasis to statistics on the reduction of the number of people exposed to dangerous air quality levels in New York City, Los Angeles, Chicago and

Denver. The greatest long-term improvement in those exposed to high levels of particulates such as dust occurred in the New York-New Jersey-Connecticut Air Quality Control Region, where the proportion of the population exposed to concentrations exceeding the annual primary health standard decreased from 60 percent to zero between 1970 and 1976. In Chicago the total dropped from 100 percent in 1970 to 64 percent in 1976. In Denver it declined from 83 percent in 1970 to 74 percent in 1975.

Other major findings of the report included these:

- The general long-term improvement in total suspended particulates reversed itself between 1975 and 1976 with many areas showing increases. The most likely explanation for

New Clean Water Legislation

Amendments to the Federal Water Pollution Control Act, the blueprint for one of the Nation's largest regulatory and public works programs, authorize a total of \$28.7 billion for water cleanup. Of that amount, \$24.5 billion have been budgeted for Federal matching grants to build municipal wastewater treatment plants.

In signing the new legislation passed by Congress, President Carter said, "This Act reaffirms our national commitment to protect the quality of our waters and the health of our people."

The President noted that this Act "culminates three years of hard work by the Congress to make the necessary mid-course corrections in our national water pollution control program. This is a fine example of how close cooperation between the Administration and the Congress can produce major legislation of national significance.

"The Clean Water Act of 1977 embraces many of the principles and proposals put forward by my Administration. The Congress has agreed to long-term funding for the municipal sewage treatment construction grant program which I urged in my Environmental Message earlier this year. This will help States and communities plan and implement effectively programs to clean up backlogs of municipal pollution.

"The bill also emphasizes the importance of controlling toxic pollutants which endanger the public health—a focus which my Administration has urged. . . ."

EPA Administrator Douglas M. Costle said, "The new amendments will assure the continued aggressive protection of the health of the American people

and the quality of our waters. Furthermore, these changes in the Act will provide a decisive signal to the Federal government, State governments, and local and private sectors that Congress reemphasizes and expects achievement of the ambitious goals of the 1972 legislation.

The authorization of \$24.5 billion for municipal wastewater treatment plant construction was commended by Costle, who stated, "In adopting a five-year authorization for the construction grants program, Congress has made a decisive commitment to meet existing needs in this program, and to provide the funding assurance necessary for sound planning and management. Also, several new provisions dealing with construction grants will further the ability of the Agency to promote alternatives—such as land treatment—which beneficially use the wastewater effluent and sludges from municipal systems and help meet the goal of the Act: to eliminate the discharge of pollutants. Land treatment projects are normally less costly to operate and maintain than technology-intensive advanced waste treatment systems."

Of the \$24.5 billion, \$4.5 billion are authorized by the new Act for Fiscal Year 1978, and \$5 billion each for Fiscal Years 1979-82.

Discussing other provisions in the new legislation, Costle said that "while no final agreement can satisfy everyone, EPA believes that these adjustments in the Act preserve the basic thrust of the Federal effort to clean up our Nation's waterways.

"The adjustments can be implemented without unduly increasing administrative complexity. Because the Amendments will provide for smooth transition, the basic programmatic and regulatory effort of the Federal Water Pollution Control Act, as it is now being implemented by EPA and the States, can continue without interruption."

In all, more than 50 changes were made in the Act as a result of the new Amendments. Some of the other major provisions include:

Enforcement flexibility is provided to the Agency in actions against polluters who have been unable to meet the old law's 1977 requirements,

this shift was simply weather. Large areas of the country were hit by drought during 1976 and the extremely dry soil conditions were believed to have contributed to wind-blown dust.

- The long-term improvement in the Los Angeles Basin in the percentage of days when the one-hour oxidant standard was violated reversed itself in 1975 and 1976. People there were exposed to a concentration above the standard on an average of 176 days per year in 1965-66, 105 days in 1973-74, and 112 days in 1975-76. The trend over the last four years appeared to be caused by an increase in days when the weather failed to disperse pollutants effectively.

- The early 1970's saw dramatic decreases in ambient sulfur dioxide levels in the Nation's urbanized areas. Since then the

national trends have become more stabilized, and violations of the standard are generally confined to areas around specific sulfur oxide sources. The report noted that urban sulfur dioxide levels have traditionally been higher in the Northeast and Great Lakes areas where emissions are associated with space heating. The general improvement in levels is indicative of trends in urban areas.

- Approximately three fourths of the 202 carbon monoxide trend sites showed improvement in the period studied. California sites had a slightly higher rate of improvement of seven percent compared with six percent per year for sites outside that State with four or more years of data. One encouraging sign for the future occurred in New Jersey, which has an aggressive program including inspection/maintenance to reduce auto-related pollution. A chart prepared by the

State Department of Environmental Protection shows that carbon monoxide ambient levels declined from 4 parts per million (12-month average) in 1973 to well under 3 ppm by 1977. During this same period total gallons of gasoline consumed by motor vehicles showed a marked increase.

- Photochemical oxidants now rank as one of the most serious and pervasive air pollution problems in the country, according to the report. In 1975, 86 percent of the ozone sites reporting to EPA exceeded the National Ambient Air Quality Standards. California sites were basically stable during 1970-76, but other sites showed a slight tendency for increasing patterns with 55 sites "up" and 46 sites "down."

- For nitrogen dioxide, the trends are stable in California but elsewhere there were twice as many sites showing "up" as "down" patterns. However, since most of the sites have accumulated only three years of data, it is too early to draw definite conclusions on trends outside California.

- A major feature of the EPA report is the presentation of multi-color air quality maps for total suspended particulates, sulfur dioxide, and photochemical oxidants (smog). The maps show how air quality varies from one location to another across the United States.

- The trends report is prepared annually. Copies are available free from the Monitoring and Data Analysis Division, Office of Air Quality Planning and Standards, EPA, Research Triangle Park, N.C. 27711, or may be ordered by phone at (919) 541-5351. □

despite good-faith efforts. The Act authorizes up to an 18-month extension of the 1977 deadline in cases where the Administrator determines that the discharger of a pollutant has made a serious commitment to achieve compliance with clean-water standards. Assuming polluters meet the criteria for receiving such an extension, compliance with discharge requirements is to occur no later than January 1, 1979.

Additionally, the new Amendments permit the extension of deadline requirements for municipal treatment plants on a case-by-case basis where construction cannot be completed or where Federal funds have not been made available. For such cases, the deadline may be extended from July, 1977, to no later than July, 1983.

A tough toxic pollutant control program is established. The Act sets "best available technology" (BAT) requirements for toxics by 1984. It also revises procedures for establishing and publishing Federal toxic effluent standards more stringent than BAT and extends

the period for compliance after the issuance of a standard from one to up to three years. Costle said that "the mandate is still clearly to eliminate the discharge of toxic pollutants in dangerous amounts. This is the only prudent direction for an industrial society to follow and the only course of action which will adequately protect the public health." With regard to the 1984 "best available technology deadline," Costle added, "The requirement is an outcome the Administration strongly preferred."

In addition, the Act grants new authority to EPA to regulate toxic pollutants at plant sites through the device of requiring best management practices. This authority will allow the Agency to require, at a plant site, effective controls to prevent spillage and leakage of toxic pollutants into the Nation's waters.

Other deadlines for installation of best available control technology were eased, depending on the type of pollutant. For "conventional" pollutants, the mid-1983 deadline must

now be met by 1984. For control of non-conventional, non-toxic pollutants, best available technology guidelines must be adhered to by no later than 1987.

Protection of wetlands is established under a comprehensive and integrated dredge-and-fill program. "Congress has essentially adopted the President's recommendation on the protection of wetlands," Costle explained. "Considerable attention has been focused on the so-called 'Federal project exemption.' It must be understood, however, that since the protection of wetlands from Federally authorized projects is under Administration control, and the President has a clear policy, including issuing of an Executive Order, to have all Federal agency activities conducted in a manner so as not to jeopardize wetlands, this provision should not adversely affect the protection of wetlands."

Oil spill liability and cleanup requirements have been extended (out to 200 miles offshore) and toughened. The limits of liability are raised for

both cleanup of oil or hazardous substances discharges from vessels and for cleanup of oil or hazardous substances discharged from onshore and offshore facilities.

Farmers and labor interests should find several provisions of the new Act encouraging. The Amendments assist farmers in meeting pollution control requirements. Under Section 208, Areawide Waste Treatment Management, funds are authorized for use by the Secretary of Agriculture in cost-sharing programs to implement best management practices on non-point sources of pollution (which now include irrigation return flows).

Besides the \$24.5 billion construction grants program, other provisions of interest to labor include manpower training grants and contracts, which have doubled to a total of \$500,000. Also, the use of American products in the construction grants program is required, except in cases where the Administrator determines that it would not be in the public interest. □

Around the Nation

1 REGION

Treatment Award

Region 1 recently presented its Wastewater Treatment Plant Award to the Bath, Me. water pollution control facility. Jerry Hopcroft of the regional Water Program Division gave the award plaque to Donald Koslosky, plant superintendent at a ceremony in Bath. Region 1 Administrator William R. Adams called the plant "exceptionally well run." "This plant serves as an example of how things can be done right," Adams remarked. This is the third plant in Maine and the twelfth in New England to receive the award, which was established to highlight the importance of proper operations and maintenance of sewage treatment facilities to the attainment of clean water.

Drinking Water

The States of Maine and Massachusetts have been granted authority for enforcing standards and testing requirements under the Federal Safe Drinking Water Act of 1974. The Act requires that all community water supply systems be sampled regularly to ensure they meet EPA standards, and that customers be notified if the water is unacceptable for health reasons. EPA has primary responsibility for enforcing the standards. However, States must prove that their standards are at least as strict as those set by EPA, and that they have capable testing and enforcement procedures before the responsibilities are handed over. Connecticut had previously assumed primary respon-

sibility for drinking water safety and the other New England States are refining their programs to meet EPA requirements.

2 REGION

Oil Rigs Get Permits

Region 2 has issued water pollution abatement permits to ten firms which will be involved in exploratory drilling operations in the Baltimore Canyon area on the Mid-Atlantic Outer Continental Shelf. The permits, which took effect January 3 after public hearings in New York City last October and November, will limit the discharge of pollutants, such as deck drainage, drilling muds, drill cuttings, and sanitary wastes, as well as other effluents. The permits were awarded to Continental Oil Co., Exxon Corp., Houston Oil and Minerals Corp., Mobil Exploration and Producing Service, Inc., Murphy Oil Corp., Shell Oil Co., Tenneco Oil Co., Texaco, Inc., and Union Oil Co. of California. Regional Administrator Eckardt C. Beck, said, "These permits apply to the exploratory phase of the offshore drilling. When and if the firms are ready to begin extracting oil for future sale, each firm must submit new applications for EPA discharge permits and go through the public notice, public hearing process again." Under the permits each firm must monitor the effects of effluent from the rigs on the surrounding bottom water, sediment, and biological community. EPA personnel will help monitor the operations by helicopter.

Power Plant Hearings

Region 2 has been holding hearings over several months to get public comments on an EPA requirement that five Hudson River power plants recycle their cooling water. The requirement is designed to minimize the impact on the river ecosystem caused by cooling systems that draw, use, and discharge large volumes of water. Many small fish, larvae, and eggs are destroyed in the process. EPA discharge permits are requiring the power plants to use the best available technology such as water re-use, cooling towers, or other appropriate means.

3 REGION

Mining Activities Studied

Region 3 has begun area-wide environmental studies of coal-mining activities in the Gauley and Monongahela River Basins, two areas among the most heavily mined in the country. The studies will identify areas where coal-mining activity may produce significant adverse impacts, so that Environmental Impact Statements may be written for the high risk areas at a later date. EPA recently established standards for coal mines as point sources of water pollution. Since increased mining activity is expected, the areawide study approach may ease the need to make Environmental Impact Statements on each of many coal mines in the region as mining activity increases.

Impact Statement Underway

Region 3 is preparing its first Environmental Impact Statement under the new

source regulations of the Water Act for the proposed Lower Armstrong Power Station near Adrian, Pa. The statement is being prepared based on plans by Allegheny Power Systems, Inc., to build a new electric power station consisting of three 626-megawatt coal-fired generating units with related facilities. The company has projected that the first unit will be in operation by mid-1984. The draft environmental impact statement, being prepared for EPA by a contractor, is expected to be completed in April, 1978.

4 REGION

Adverse Impact Found

Region 4 Administrator John C. White has found that the present operation of the Carolina Power and Light Co. Brunswick Nuclear Plant is having a major adverse environmental impact on fish-life along the North Carolina coast. This decision rejects the "once-through" cooling system used by the steam electric plant near Wilmington, N.C. and calls for reducing the amount of cooling water withdrawn. The present system draws two billion gallons of water daily from the Cape Fear Estuary, a sensitive breeding ground for many fish and shellfish. Many Federal agencies, including EPA, the Department of Interior, the National Marine Fisheries Service, the Fish and Wildlife Service, and the Nuclear Regulatory Commission, have contended for nearly ten years that the Brunswick plant cooling system has an adverse effect on the estuary ecosystem. The utility, as expected, has appealed the ruling to EPA Administra-

tor Douglas M. Costle. The appeal contends that the present system is adequate, and the State of North Carolina joins the utility in asking for a two-year period of additional study.

Inspection and Maintenance Started

In cooperation with the Kentucky Division of Air Pollution and the Jefferson County Air Pollution Control District, the Region 4 Air and Hazardous Materials Division has started a voluntary car inspection and maintenance program for the Metropolitan Louisville and Northern Kentucky (Cincinnati) areas. A 10-member team operates 4 mobile stations that measure concentration of pollutants in a car's exhaust gases. The results tell the driver if the vehicle is properly tuned, and if not, what problems might exist. The program is a major step in a statewide effort to reduce emissions to meet and maintain air quality standards for carbon monoxide and photochemical oxidants. Similar programs are operated in Arizona, Riverside, Cal., and Portland Ore. (See story on page 34.)

5 REGION

Cab Company Cited

Region 5 has called for a civil penalty of \$178,000 against the Yellow Cab Company of Cleveland, Ohio for using leaded gasoline in 22 taxicabs. Leaded gas destroys effectiveness of the pollution control devices required by Federal law. According to regional air enforcement officials, four pumps in use at the Yellow Cab garage in

Cleveland were illegally equipped with nozzles that permitted cars to be filled with leaded gas. The case was investigated by EPA's District Office in Cleveland.

Campbell Soup Must Clean Up

The Enforcement Division of Region 5 has taken action against the Campbell Soup Co. of Napoleon, Ohio, for excess particulate emissions. A 30-day Notice of Violation of State air pollution regulations was issued to the company because two coal-fired boilers have been emitting over 606 tons of particulate matter per year. The State air pollution regulations allow up to 128 tons of particulate emissions per year.

Power Plant Approved

EPA has approved the construction of a proposed Indiana and Michigan Electric Company coal-fired electric generating station near Rockport, Ind. The proposed plant consists of two 1,300 megawatt generating units that are scheduled to begin commercial production in the 1980's.



Offset Waiver Denied

Region 6 Administrator Adlene Harrison has denied a request from the Texas Air Control Board for a waiver of emissions offset requirements of the Clean Air Act Amendments of 1977. Harrison then explained to the Board under what conditions a waiver could be granted. The Board had applied for an emissions offset waiver for hydrocarbons in certain areas where air quality standards have not been attained. An EPA grant of

\$2 million could be made to the Texas Air Control Board if the State commits itself to management of the emissions offset policy, regardless of the final outcome of the waiver request. Harrison said that management of the program by the Board is in the best interest of the State because the Board has worked closely with industry and is staffed to run the program efficiently.

Construction Approval Pending

Region 6 officials met with representatives of the State of Louisiana in late December to discuss the technical details of consent agreements for air emission reductions in the Shreveport area. Earlier in the month Regional Administrator Adlene Harrison advised the State and General Motors Corp. that she was satisfied with the progress made in negotiations under EPA's emissions offset policy, and was confident that a construction permit could be approved. General Motors seeks to build a new plant in Shreveport.



Kansas Environmental Forum

About 100 people attended the Kansas Environmental Forum, hosted in Wichita by Deputy Administrator Barbara Blum and Regional Administrator Dr. Kathleen Camin last December. Many of the people who addressed questions and statements to the pair wanted to know about Federal regulations on the proposed \$1 billion coal gas plant to be constructed

in the area. Others asked about fluoridation of public water supplies, reduction of litter, and the developing of energy resources to meet the country's needs. Earlier in the day Blum and Camin met with farmers, environmentalists, and other citizens from throughout Region 1 in an effort to find those affected by regulations more say in how the regulations are drafted.

Drinking Water Documentary

A 30-minute television documentary entitled "Fit To Drink," made possible by a grant from EPA, was aired on Channel 19, Kansas City Public Television on January 17 and 22. The film reports on the condition of American drinking water, and how it will be affected by the New Federal Safe Drinking Water Act, which set new quality standards for drinking water supplies. Filmed primarily in the States of Missouri, Kansas, and Nebraska, "Fit To Drink" places emphasis on the ways small cities and rural communities are meeting the new standards. The film was produced by John Masterman and Laurel Defoe of the Channel 19 film documentary unit. It will be distributed to member stations of the Public Broadcasting Systems.



Air

Region 8 Administrator Alan Merson has asked Administrator Costle to designate Denver as a demonstration city for air quality, to show that urban air quality can be improved. Colorado

Governor Richard Lamm announced at a press conference that State government will support the effort, with coordination by the State Department of Health. EPA is concentrating efforts on an incentive program to get Federal employees to use carpools.

Cooperative Pesticide Applicator Certification

The Pesticides Branches of Region 7 and 8 are working with the State Cooperative Extension Services in Colorado and Nebraska training and certifying pesticide applicators as required by Federal Insecticide, Fungicide, and Rodenticide Act in 1972. Applicators in Colorado and Nebraska are required to meet the minimum requirements for certification that were established by EPA because the legislatures in these two States failed to enact legislation which would provide their States with the authority to conduct acceptable certification programs. Representatives of the Pesticides Branches administer written exams and also enforce the certification and misuse of the Federal law.



Consumer Information Center Opens

Region 9 has opened the country's first Regional Consumer Information Center in cooperation with the Consumer Product Safety Commission, the Occupational Safety and Health Administration and the Food and Drug Administration. The Center is located in the new regional office at 215 Fremont St., San Francisco, Cal. Administrator Costle,

Governor Jerry Brown, and Consumer Product Safety Commissioner Barbara Franklin participated in the opening ceremonies along with the four regional agency chiefs. Personnel from each participants agency are sharing the staffing responsibilities. Their goal is a one-stop phone service for consumers on issues which involves the agencies.



Drinking Water Surveys Continue

Region 10 is continuing surveys of public drinking water supplies in Oregon. At last report, water in 10 of 83 communities surveyed since last June was found to have excessive bacteriological contamination. EPA advised operators of those systems to issue "boil water" notices to their customers. EPA's drinking water surveys were made necessary when the State failed to assume primary responsibility for Safe Drinking Water Act enforcement and cut funding for State inspectors who had been conducting the surveys. □

Enlisting the Elderly for the Environment

"I expect to go on working here until they throw me out," he said.

With the introduction of this program for the elderly, EPA and the Administration on Aging are demonstrating that it is possible for one program to meet many needs. Over 200 older Americans across the country are being trained in various environmental fields. It is designed to answer the need for expanded environmental programs at the State and local level while providing employment for capable older workers.

Recently, Rosalynn Carter wrote to attendees at a conference on the SEE program about the conditions of many older Americans. She said "Using older American workers to conduct environmental pollution monitoring activities at the State and local level can provide an effective solution to two of our Nation's most serious problems.

"First, far too many of our senior citizens want to work but are unable to find jobs. Considering the fact that in the next ten years one out of every nine Americans will become a "senior citizen," it is time to act to keep them financially independent and contributing members of our society.

"And secondly, State and local environmental agencies are struggling to find the money and manpower to implement important legislation to improve and protect the quality of our environment."

The people being employed in the project possess experience, maturity, and judgment only available among our older citizens. Although most of the participants are retired, they are still eager to be involved in community affairs. Besides their eagerness and vitality, there is often a more realistic reason for them to work: Many older citizens have to live at or below subsistence level.

Overcoming age prejudice is often difficult. Medical advances and improved living conditions, have increased the life span of the average American. Lower mandatory retirement ages have helped build a huge population of vigorous, capable older Americans who have little to do.

Also in our increasingly mobile society the traditional pattern of



Dr. George Hasson, a participant in the Senior Environmental Employment program, indicates the areas where he is involved in a drinking water survey.

"My wife had passed on some time back. I was sick of staying by myself with a dog Tired of looking at the walls. I needed something to do," explained George Hasson, a retired dentist.

That was back in early September. Today, Dr. Hasson is a water supply technician, working five days a week in an effort which will ultimately contribute to drinking water safety in the State of Pennsylvania. His job is the direct result of the new Senior Environmental Employment (SEE) program which EPA is helping to finance.

"I'd be at home if it weren't for this," he said. "It's added years to my life."

What Dr. Hasson does is update State files by taking inventory of drinking water supplies in the Lancaster region. "We check the wells in this area — where they are, how many there are, and the method used for treating the water. We also inventory outlets for the water, like the number of units in a motel or a mobile home court, or the seating capacity in a restaurant."

It's an active, useful life, particularly so for a man who is 83 years old—the oldest participant in the new program.

several generations of a family living in the same house or within a few miles of one another has become more the exception than the rule. Many people have little contact with senior citizens. The generation gap promotes misconceptions and mistrust on both sides.

Developing concurrently with our awareness of the plight of the older Americans has been the realization that the job of cleaning up and preserving our environment will require the efforts and talents of a considerable number of people. There are scores of crucial jobs, particularly at the State and local level, which have remained undone because the jurisdictions often face budget restrictions too stringent to allow them to obtain mature reliable employees under standard hiring conditions.

To meet these needs, EPA last year proposed to the Administration on Aging development of the Senior Environmental Employment program.

In planning it, both agencies solicited the participation of organizations such as the American Association of Retired Persons, the National Retired Teachers Association, and the National Council on Aging. With the assistance of these groups,

Vincent Flynn adjusts a sound meter to take noise measurements for use in developing a community-wide noise control program.



plans were laid and 10 States were chosen as project sites.

The Administration on Aging provided \$1 million per year for three years. The 10 States chosen are Connecticut, New Jersey, Pennsylvania, Kentucky, Illinois, Arkansas, South Dakota, California, and Washington.

The major requirements of the program are: participants must be at least 55 years of age, their total annual family income is \$3,900 or less, and whatever project is undertaken by a State must augment or improve an already operating or planned program within that State rather than replace any activities. This final criterion has brought about many ingenious uses of older employees without interrupting current operations or displacing other employees.

In Arkansas, for instance, 10 older employees act as "information aides" in promoting public participation in a Federally subsidized effort which encourages better planning and more efficient management of water quality programs in States and regions. This "208" program, as it is called, requires a great deal of person-to-person contact and public relations.

Since the project began in July they have sent out over 2,500 letters explaining the 208 program, their involvement, and what could be done to assist the program. Since August, they have prepared and presented almost 100 slide/tape presentations about clean water. They have also made personal contact with over 500 businesses, civic, and governmental leaders in the State to stimulate interest in the 208 program.

Raymond Ford is a 76 year old ex-salesman from Cedar Rapids, Iowa. After retiring he moved to Arkansas where he soon decided that retirement was not for him—at least not yet. He heard about the senior citizen program, obtained an interview, and was hired. He is now involved in the 208 program as an information aide in the Hot Springs area and is truly excited about the program and his role in it. Says Ford: "When I get too old to work I can fish because now I know there will be fish in the river."

Besides the 10 water program employees, additional senior citizens have been employed by



Arkansas in a solid waste inventory project. In order to meet an EPA mandate, the State must conduct an extensive inventory of open dumps.

Pennsylvania also has two senior citizen programs which employ a total of 36 older Americans. Most of the potential employees in the Statewide Water Supply Inventory Program heard about the opportunity through public service announcements on television. Eventually 22 people were hired as water supply technicians. After an intensive four-day training program they began an inventory of public water supplies which are affected by the Safe Drinking Water Act. Once all the data are in, the information will be very valuable to State and local leaders in developing plans to meet the standards set out by the Act.

Although some of the participating States are farther along than others, all of the projects are in operation now. Besides some of the more obvious applications of senior citizen program workers' talents, a few of the projects have delved into areas which might not have come instantly to mind. New Jersey hired 21 senior citizens to do a follow-up study to a

survey in hazardous waste products generated by State industries. Following this they will also undertake a study of carcinogens (cancer causing substances). In Connecticut the Department of Environmental Protection is using its senior citizen participants to develop a library of materials concerning environmental control and abatement issues. And California has just begun a technical assessment program to determine the level of dangerous pesticide exposure suffered by migrant workers in the field.

Legislation is already in Congress to establish a permanent senior environmental employment corps. And generally throughout the country, more interest is being shown in the overall plight of the older American. A 65-show series on older Americans and their lives and concerns has been prepared for the Public Broadcast Service. Hosted by Hugh Downs, the show, called "Over Easy," features interviews with such well-known personalities as Mae West, Ella Fitzgerald, George Burns, Sam Ervin, and Lillian Carter, plus special features on health, consumerism, and lifestyles as they apply to our senior citizens.

Between the apparent success of the SEE program and increasing publicity, support for it still

A part of the quiet Community Program Everett Iander and Julia Peters, program workers, interview Mrs. Helen Clark of Allentown about her views on noise problems.

grows. One employer remarked, "At first I was skeptical, but this is working out fantastically! Once they have finished training, I can let them work pretty independently. You rarely see such enthusiasm on the job."

Employers are not alone in their praise. One of the SEE employees telephoned the National Council on Aging Project Coordinator in Washington three times in three months. His message: he just wanted to call and tell them how much he enjoys his work.

As the program continues its activities will be closely monitored by the Foundation for Applied Research which will conduct an ongoing evaluation of the program's success and potential problems. Results of this study will not only be closely followed by EPA and the Administration on Aging, but by Congress and State governments as well. Approximately 100 letters requesting information about SEE are received each week by EPA alone. Several States have already contacted EPA or submitted proposals to begin their own SEE projects.

Anyone desiring more information about the SEE program should contact Mrs. Patricia Powers, EPA Project Coordinator, at (202) 426-8882. □

Region 2 Report

By Eckardt C. Beck
*Administrator, United States
Environmental Protection
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As Administrator of Region 2, my first goal is to make EPA a partner, a catalyst, an expeditor in all areas of environmental concern which affect the States under our jurisdiction—a region that embodies major contrasts in geography, commerce, climate, and populations. New York and New Jersey both contain a blending of the most concentrated urban and industrial areas together with great tracts of still unspoiled and productive rural lands. Small in size, rich in natural beauty, Puerto Rico and the U.S. Virgin Islands share a fragile ecology—one susceptible to industrialization and its ability to destroy or diminish the natural environment.

The neatest, most orderly approaches to environmental problems at the Federal level often lose shape, coherence, and force when they are applied to diverse and intractable problems which are under the jurisdiction and control of autonomous and often conflicting agencies and governments—governments whose tax bases are different, whose funding authorities are different, and which react differently to different pressures and motivations.

From my own experience in Connecticut before joining EPA it seems clear to me that the State does not always have abundant wisdom in dealing with this kind of jurisdictional chaos. The pressure to solve local problems cannot, therefore, always come from the State to the communities, but must be exerted upward by local constituencies themselves. Given this responsibility, these constituencies will discover that they cannot afford to be fragmented but must understand the inevitable interactions of all elements of environmental policy and practice and transmit this awareness both to the general public and to the policymakers at every level of government. During my tenure in Region 2, I intend to work very hard to encourage this responsi-

bility and to explain this interaction.

We know that environmental problems never occur in neat and separate compartments. It is impossible, for example, to develop an adequate water quality management plan under Section 208 of the Federal Water Pollution Control Act without taking into account the location and operation of landfills for solid waste disposal and the requirements for air quality management. It is impossible to develop plans for drinking water supplies without looking at how the discharge of toxic materials from industries is being controlled. We are making the integration of environmental programs into a comprehensive over-all plan directed at specific goals the major priority for EPA in Region 2.

I view Section 208 as the vehicle for a truly comprehensive approach to water quality management that is coordinated with the other related environmental programs such as drinking water, air quality and solid waste disposal. The members of 208 agencies cannot be content simply to construct water quality plans in glorious isolation. I hope that, as Administrator in Region 2, I can assist in developing institutions and interfaces to bridge the gaps which now exist both among programs and among levels of jurisdiction, responsibility, and interest.

I believe this can be accomplished. As a beginning we are developing a prototype EPA-State Agreement with New York State which defines the relationships for the State and its various levels of government. It identifies the State's water quality problems and how they relate to the spectrum of environmental concerns. In addition to Region 2 and State staff, the 208 agencies in New York are providing input to the agreement. There will also be

ample opportunity for public review and comment on program priorities, both by the general public and those already involved in 208 advisory committees. The final document is expected to become the framework for all future allocations of funds and resources and for setting priorities under the State's continuing planning process. The document will be updated whenever necessary. We plan to develop similar agreements for New Jersey, Puerto Rico and the U.S. Virgin Islands.

Almost before my first day on the job in Region 2, I was in the thick of the controversy over New York City's Transportation Control Plan. The City's Mayor was charging in the press that parking restrictions in Manhattan would turn the City into a "ghost town" and destroy its already bruised economy. We managed to break through the political logjams that have delayed the Plan for so long. A U.S. District Court ruling early in 1977 forcing the City to implement four major strategies of the plan has recently been upheld by the Supreme Court. Through our initiatives, City officials and the environmental groups who brought the court suit worked together with EPA to produce a revised parking program that will reduce traffic congestion and vehicle entries into Manhattan . . . a program that all parties can live with . . . and one that has begun to be implemented. The City is also moving ahead on two other court-ordered strategies—taxi cruising limitations and a goods movement survey.

Now, the Clean Air Act Amendments of 1977 have given State and local officials a second chance to attack the Transportation Control Plan problem. We have obtained agreement from the Governor and the Mayor of New York City to convene a working group to develop Transportation Control Plan revisions in accordance with the new Act in a manner that will, I expect, both clean the air and actually benefit the City's economy.

Probably the most important new environmental thrust in Region 2 is that directed at

toxic substances. We now know that many substances, unquestioned until only a few years ago, pose even deadlier threats to health and safety than the pollutants which were the original target of environmental legislation when EPA was still a young agency. Heavy chemical use or production characterize much of the industry of New Jersey in particular, and also New York and Puerto Rico. Therefore, tighter control of the manufacture, processing, distribution, use and disposal of toxic chemical substances is a high regional priority, as is pretreatment for industries discharging toxic wastes into municipal systems. Polychlorinated biphenyls (PCBs) were discovered by an EPA sampling program in the environment in New Jersey and Staten Island for the first time outside of Michigan. We have done further sampling to determine the extent of the contamination and are now working with a Federal inter-agency work group considering regulatory approaches to the PCB problem.

Another major issue in the region, closely related to toxics, is industrial waste disposal, especially with regard to ocean dumping and industrial landfills. I consider the landfill problem, as typified in New Jersey, New York and Puerto Rico, a major challenge for our regional solid waste, toxics and drinking water strategies. Even though some of these landfills have been closed down, they may stand like ticking time bombs. For years landfills, no matter how toxic their wastes, have been put directly over aquifers, in important wetlands, or in other sensitive locations chosen only for economic advantage or political expediency. I don't intend to let this cheap and expedient form of disposal continue while acceptable alternative disposal technology stands ready. We are now in the midst of a legal action against one of the major landfills in New Jersey. We are seeking a civil penalty of several million dollars, an injunction against continued discharges, a closure program that is

acceptable to EPA, and finally, we are asking that the operators be made to post a substantial bond against the day when the ticking bomb goes off and pose an even greater threat to the surrounding ground and surface waters. In Puerto Rico, the problem is one of dozens of small uncontrolled dumps where open burning is common and water supplies are threatened.

Ocean dumping of municipal sewage sludge, industrial wastes, and dredged material in the coastal waters off New York and New Jersey is another regional issue of intense public interest. In 1976, dumping in the New York Bight area accounted for more than 80 percent (by volume) of all ocean dumping nationwide, excluding dredged material. When Puerto Rico is included, the percentage rises to 84 percent of the national total. To give another dimension to the problem, it has been estimated that while waste treatment plants in New York and New Jersey now generate 5 million dry tons of sludge each year, that figure will double by 1990.

In the past two years, Region 2 has phased out 24 industrial dumpers off the coast of New Jersey. Only ten remain and these are on compliance schedules to develop alternative methods of waste disposal before December 31, 1981, unless their wastes have been proven not to be damaging to the ocean environment and alternative methods are environmentally unacceptable. In Puerto Rico, all but one of the industrial waste dumpers are under compliance schedules to phase out ocean dumping by the end of 1979.

In 1976, Region 2 put the 14 municipal sludge dumpers on notice that they would have to develop alternative land based disposal methods by the end of 1981. This deadline was made a condition of the interim permits under which these dumpers operate, and we are supporting

the planning, design and construction of the alternatives with Water Pollution Control Act grants.

In 1977, five of the dumpers asked for extensions on the interim dates in their permits. I have made it clear to them we will tolerate no slippage of the 1981 phase-out date. In late October, Congress supported EPA's position by making the 1981 date mandatory in amendments to the Marine Protection Act signed into law by President Carter on November 4.

These examples show how our water quality programs involve and are inextricably bound with all other environmental concerns: Land use; solid waste disposal; sewage treatment; resource recovery; conservation. And they concern every level of government and every citizen those governments are organized to protect.

Who then is going to administer, monitor and enforce the policies on which our very lives may depend, if not an unfragmented and unified environmental constituency. And, in this mix of jurisdictions and responsibilities—I see my role and that of EPA regionally not only as one of program approval, granting and enforcement—but as a constant reminder at the grass roots level that just as the environment is a seamless web—its constituency, too, must be all-encompassing.

Economic questions are particularly sensitive in Region 2. Unemployment is high in the Northeast and the Caribbean. The industrial plant is old and inefficient. EPA finds itself getting some of the blame for cutbacks at Buffalo area steel plants or being attacked for opposing such job-generating projects as Westway in Manhattan. We must make doubly sure that our judgments on risks and benefits are carefully made, that we apply the laws even-handedly and justly and that we are acting toward clearly defined and accepted environmental goals.

The problems of Puerto Rico and the Virgin Islands are special. Today unemployment is high in the islands. Pressures are strong to accept any poten-

tial development, no matter what the environmental consequences. The Virgin Islands' delicate coral reefs and Puerto Rico's vital mangrove wetlands must be protected. I have found a strong awareness of these and other environmental needs among our colleagues in the islands' governments and a determination to deal with them. How, for example, can we insist that the operation and maintenance of the sophisticated new sewage treatment plants we are funding be supported by user charges when they are serving areas where basic housing and employment needs have not been met? And where will the trained people come from to operate and maintain these plants? I am exploring the ways we can work with the Commonwealth to overcome these obstacles.

Doug Costle has pledged that "EPA's regulatory tasks will be approached with objectivity, openness and scrupulous regard for the facts. But blatant non-compliance will not be tolerated." In order for the laws to be applied, they must first be understood. I will do everything in my power to support programs of citizen education and training; to foster debate on environmental issues; to assist in pointing out the connections between the many different kinds of environmental problems which tend to fragment constituencies and undermine accord.

During my tenure as Regional EPA Administrator I may not be able to solve all the problems, or clean up all the messes that we have either inherited or continue to make. But if I can build broader constituencies, establish links between the various levels of government, and build bridges across the gaps in understanding and action which now exist—I will feel that I have fulfilled my mission and, in this way, made a major contribution to the mission of EPA.

Tuning Up

Harry Jones has lived in the city all his life. Now that he's retired, he likes to spend part of his days with old friends at a nearby park. But some times his asthma is so severe that Jones is out of breath after walking half a block. His doctor has warned him to stay indoors when the pollution index is up because photochemical oxidants can aggravate his condition. Harry Jones spent many days last year confined to his apartment because of dirty air.

A number of studies, some sponsored by EPA, show that air pollution can cause shortness of breath and threatens people's physical well-being. In the 1976 Report to Congress on the Progress in the Prevention and Control of Air Pollution, EPA reported that a long-term study of animal exposure to car emissions brought on heart and lung diseases in each group. Other studies have shown that auto-related pollutants aggravate existing health conditions, especially those of the elderly and the very young.

The Clean Air Act Amendments of 1970 were passed by Congress to protect the public health and welfare. The standards set by EPA under that legislation to achieve air quality have not been met. Especially difficult problems are posed by auto-related pollutants; carbon monoxide and oxidants. Because of population growth and increasing urban congestion progress in solving this pollution problem has been slow, and expanded improvement efforts are necessary. A program of automobile inspection and maintenance, combined with transportation control plans and management of stationary emissions sources can result in cleaner air in urban areas.

Since 1973 EPA has been encouraging State and local

governments to consider using auto inspection and maintenance to help cut pollution levels. A number of surveys made since 1974 indicate that practically all cars that are not systematically checked and maintained develop serious emission problems.

Though car manufacturers are required by law and EPA oversight to cut emissions through increasingly strict control technology, in many metropolitan areas air pollution continues to exceed standards set to protect the public health. Emission control devices are now built into the design of cars and they must be maintained in order to perform up to their full potential.

In the Clean Air Act Amendments of 1977 Congress took additional steps to abate the

properly adjusted and maintained in order to keep pollutant emissions at low levels.

While motor vehicles are not the only sources of air pollution, they are a major source. In urban areas the concentration of cars, trucks, and buses can be responsible for as much as 99 percent of the carbon monoxide in the air, according to EPA studies, and over half of the oxidants. Photochemical oxidants, especially ozone, and carbon monoxide are the most common auto-related pollutants. Photochemical oxidants are the result of chemical reaction that occurs when hydrocarbons and nitrogen oxide emissions are exposed to sunlight. They can cause respiratory problems, exacerbate existing respiratory diseases, and can affect the way the lungs function. Carbon

carbon monoxide 40 to 50 percent according to EPA experts. Exhaust emissions of hydrocarbons can be reduced 25 to 40 percent, they added.

A number of programs already exist across the country for inspection and maintenance. Mandatory check-ups and repairs are required in Cincinnati, Ohio, Portland, Ore., Tucson and Phoenix, Ariz., and throughout the State of New Jersey. Voluntary inspection and maintenance is the case in Chicago, Ill., and Riverside, Cal.

Rhode Island is just beginning a program for mandatory inspection, with voluntary compliance on repairs, but will eventually require both. Las Vegas, Nevada currently tests cars upon change of ownership. Mandatory inspection and maintenance will start in Las Vegas and Reno in 1979.

The State of California will initiate a change of ownership I/M program for the Los Angeles metropolitan area in 1979 also. Colorado will begin an I/M program for 1977 and later model year cars in 1980.

New York City does not have a program for private automobiles yet, but taxicabs are required to undergo inspection and maintenance three times a year. State legislatures in New York, Massachusetts, Connecticut, and Kentucky among others, will be considering auto inspection and maintenance plans this year.

The variety of programs underlines the fact that the type of program is a State decision. Standards, procedures, and follow-up can be tailored by each State and municipality to fit local conditions and still attain a desired level of pollution reduction.

In New Jersey where annual safety inspections had been required for all automobiles for many years, the State installed emissions analyzers in 1972 at each inspection site and incorporated air pollution testing into the existing routine. The State finances this program by using \$1 from each car registration fee. Motorists whose automobiles fail are charged \$1 for reinspection.

Portland, Ore. uses stationary testing sites supplemented by mobile testing units, to administer its program. The mobile units are set up in various park-



An employee of an auto emission inspection station in downtown Cincinnati holds hose which runs from the tailpipe to a machine which registers carbon monoxide and hydrocarbon emissions.

health hazards caused by air pollution by setting 1982 as the deadline for attainment of the standards. If the States cannot meet the standards for photochemical oxidants and carbon monoxide, despite implementation of all reasonable measures they can receive an extension until 1987.

However, in order to qualify for an extension, a State must carry out an auto inspection and maintenance program (I/M) and transportation related control measures to achieve the standard as quickly as possible. The I/M programs are designed to ensure that certain key components of a car such as the carburetor, the ignition system, and the emission control devices are

monoxide results from incomplete combustion. It can impair the body's ability to absorb oxygen, put a strain on the heart, impair vision, and affect the central nervous system.

EPA's concern with emissions is health, but inspection and maintenance programs can produce added benefits. Properly tuned cars can get a 4 to 10 percent fuel saving. Regular maintenance can also protect the investment that an automobile owner has made in a new car, and the car will run better as a result. Periodic maintenance can also help to assure longer vehicle life.

A fully implemented inspection and maintenance program can cut tail-pipe emissions of

News Briefs

New Drinking Water Controls Proposed

A program for the first large-scale effort in history to deal with the organic chemical contaminants in drinking water has been proposed by EPA Administrator Douglas M. Costle. The Administrator said the program would give the American public an "insurance policy" against the dangers associated with chemicals in water. Some organic chemicals are suspected of contributing to human cancer risk.

Army Engineers to Aid EPA

The U.S. Army Corps of Engineers will assist the EPA in inspecting the construction of hundreds of new sewage treatment plants around the Nation. In announcing the interagency agreement providing for this service, Administrator Costle said "the Corps of Engineers will help give the Agency more time to devote to environmental aspects of the construction program. The Corps' construction expertise will help us ensure that these plants are built right...."

Uniform Health Effects Tests Being Developed by Four Federal Agencies

EPA and three other Federal Agencies are developing uniform standards and guidelines for industry to follow in measuring the human and environmental consequences of their products and manufacturing processes. The first guideline is expected to be completed this summer. The other three Federal agencies are the Occupational Safety and Health Administration, the Food and Drug Administration and the Consumer Product Safety Commission.

ing lots around the city and drivers bring their cars to these locations for testing. The cost of a compliance certificate is \$5.00.

The program in Phoenix and Tucson, Ariz. is handled entirely by a contractor. The firm built 12 stations in the two counties that contain the metropolitan population, and a mobile testing unit also serves the remote areas in both counties. All costs of running the inspection and maintenance centers are covered by a \$5 inspection fee. Early in 1976 a bill was introduced in the Arizona legislature to repeal the inspection and maintenance program. Support for the repeal effort faded as more people began to understand the importance of inspection and maintenance. In a 1977 referendum a majority of the voters supported the continuation of the program.

Actual testing of cars in the

Arizona program takes only five minutes. Operators enter the make, model, and year of the car into a computer to ensure that emissions are measured against the correct standards. An analyzer probe is inserted into the car's tailpipe with the engine at idle, then the engine is accelerated to simulate speeds of 30 and 50 miles per hour. The analyzer shows the hydrocarbon and carbon monoxide levels at each engine speed, and the levels are entered into the computer.

The computer printout at the end of the test shows the driver which emissions standards were exceeded. The driver is then given information on how the problem can be corrected. Most adjustments are minor, such as replacing dirty spark plugs, or fixing maladjusted carburetors, improper timing, and wrong idle mixtures. These can be done at

small cost to the owner, with substantial benefits resulting from a cleaner, more fuel-efficient car.

Having well-trained mechanics is important for a successful air pollution control program. Some auto manufacturers hold emissions control workshops to train workers for their dealerships. It is equally important for independent auto mechanics to be familiar with the best techniques for vehicle emissions tuning. This is especially true since the Clean Air Act Amendments of 1977 prohibit any owner or employee of a repair facility from knowingly tampering with the function of emission control devices.

EPA is also very interested in developing knowledge about emission controls. Through a grant from EPA, books for mechanics training were developed by Colorado State Univer-

sity. They include a seven-book self-instruction series on motor vehicle emissions control; an instructor's guide for vehicle emissions control training; audio-visual aids to accompany the instruction guide; a student workbook; a primer on auto emission controls for home mechanics, and an inspector's guide for vehicle emissions control. Colorado State also offers workshops to train teachers for emission control courses. The emissions control books are available on a limited basis from EPA headquarters and Regional Offices.

In 1977 many cities across the Nation violated pollution standards set by EPA under the Congressional mandate to protect the health of Americans. Auto inspection and maintenance programs offer the motor-ing public an opportunity to do their part to clean up our air. □

Keeping track of the opportunities offered by EPA programs, and anticipating the impact of EPA activities on urban areas can be a difficult task for local officials. Yet many of the laws that set forth the Agency's mandate require public participation and

some sections are specifically designed to put Federal funds and expertise to work at the local level.

While the first point of contact for environmental information will usually be the county, regional, or State environmental

agency, this guide to EPA programs offers a sampling of Agency projects and information that can be useful to city people. EPA has ten Regional Offices (see box for location and phone number) across the country that work with State govern-

ments. For more information about any of the projects mentioned in this article, contact the appropriate program office at the Regional Office serving your State.

Air

The Clean Air Act Amendments of 1970 directed EPA to establish national air quality standards for all important air pollutants to protect the public health. The Agency has set limits on the levels of air pollutants emitted by stationary sources like power plants, incinerators, and industries. Emission standards are set for new motor vehicles and for hazardous air pollutants. The 1970 Act also required States to develop and implement programs to control air pollution under EPA supervision.

The 1977 Amendments to the Clean Air Act require increased involvement of local elected officials in the development, implementations, and enforcement of plans to solve the Nation's air pollution problems. One particular area where local involvement is necessary is in preparing plans for those areas that have not met the air quality standards for carbon monoxide and/or photochemical oxidants.

Local elected officials have an opportunity to decide which agency will be designated to take the lead in coordinating the preparation of a plan. They should have reached agreement on the designated agency early this month. In areas where no consensus is reached, the Governor will designate an organization of local officials or a State agency to prepare the plan. The State and the local officials must jointly determine the division of responsibilities among the various in-

involved agencies for these planning, implementation, and enforcement activities.

A plan to attain the air quality standards by Dec. 31, 1982 must be submitted prior to Jan. 1, 1979. However, in some areas with severe carbon monoxide or photochemical oxidant problems, the standards may not be attained by 1982 despite all reasonable efforts. In these areas, under certain conditions, an extension of the attainment deadline up to 1987 is possible.

The new amendments authorize additional funds for organizations of local elected officials for plan preparation. These funds have not yet been appropriated.

Many of the plans for non-attainment areas will contain transportation control measures. EPA intends to work with the designated agencies to ensure that transportation activities aimed at helping to produce clean air are a product of the ongoing, comprehensive, coordinated and continuing (3C's) transportation planning process required by the Department of Transportation.

More information on these aspects of the Clean Air Act Amendments of 1977 and a wide variety of general pamphlets on air quality are available from the Regional Offices. A directory of air pollution control agencies for local officials is available from the Library (MD-35), EPA, Research Triangle Park, N.C. 27711.

Pesticides

The Federal Insecticide, Fungicide, and Rodenticide Act, as amended in 1972 and 1975, directs manufacturers of any insecticide, herbicide, fungicide, disinfectant, or any other substance used to control pests to register their products with EPA. EPA is in the process of classifying pesticides for general use or restricted use and requires that applicators be certified so they may handle restricted use pesticides. Most States have programs to train and certify individuals who will use pesticides classified as restricted. City pest control agencies may be interested in the general publications EPA makes available, such as "The Suspended and Cancelled Pesticide List," "Safe Storage and Disposal of Pesticides," and "Keep Poison Baits Out of Children's Reach." These can be obtained from the Regional Offices.

Inner City Initiatives

EPA is cooperating with the Department of Health, Education, and Welfare's Administration on Aging on a pilot program to employ older Americans in environmentally related activities. The Senior Environmental Employment (SEE) program includes ten State projects and one national noise abatement project (the Quiet Communities Pro-

gram) and employs 220 people.

The jobs include surveying toxic chemicals used in industrial areas, educating the public on areawide water quality planning, educating the public on programs in noise abatement, establishing and managing agency environmental libraries, presenting educational programs on the uses of pesticides and the hazards of poisoning to farmworkers, and working on surveys of environmental carcinogens. The high proportion of older people in inner cities has prompted EPA to explore the possibilities of setting up new programs that can meet both employment and environmental needs.

The Agency has also cooperated with the Department of Labor on several employment and training projects that involved environmental jobs. One was a Work Incentive Program that trained and placed 800 people, including putting women to work in such non-traditional jobs as pesticide application, waste treatment plant operation and maintenance, and waste collec-

tion. A recent grant to the National Urban League from EPA was used to study current environmental job recruitment and training programs in Boston, New York, Newark, Philadelphia, Baltimore, and Washington, D.C. The main aim of this project is to develop a strategy for recruiting and training

minority workers in environmental jobs. The study will find out how many jobs exist in the private and public sectors as a result of EPA programs, and will forecast employment opportunities related to EPA's construction grants program.

Information about these and other environmentally-related employment programs is available from the Environmental Workforce Coordinators in the Regional Office.

Research and Development

A wide variety of environmentally-related scientific studies are carried on in EPA laboratories and through grants and contracts with universities, research organizations and public agencies. The research and development program has many projects that may be of interest to cities, including studies of water supply, municipal wastes, urban run-off, air quality, and health effects of pollution. Work related to environmental aspects of energy development is also underway. Methods of sewage sludge disposal are being investigated, as are ways to recycle and reuse solid waste. Reports of EPA findings in these areas can be obtained by contacting the Regional Office or the Technical Information Division (RD-680), EPA, Washington, D.C. 20460.

Federal legislation gives EPA responsibility for many aspects of water quality protection. Under the Federal Water Pollution Control Act of 1972 the Agency was authorized to seek public participation in the development and enforcement of water pollution control regulations, to issue construction grants to help municipalities build wastewater treatment plants, and to issue grants to assist States in areawide waste treatment management planning. The 1977 Amendments to the Act updated these authorizations and increased the funds available through EPA for certain purposes. Under the Safe Drinking Water Act of 1974 EPA is responsible for setting minimum national standards to ensure that drinking water is protected, and is authorized to help States improve the quality of their drinking water.

Water Quality Management Planning

The problems posed by water pollution in urban areas are diverse and complex. Often no single control can be applied to resolve the dilemma because materials such as silt, chemicals, and human wastes can enter the water cycle from many points and in many ways. Congress addressed this difficult situation in section 208 of the 1972 Water Act by calling for the development of localized comprehensive management programs for major water pollution sources such as septic tanks, farm fields (agricultural run-off), and construction sites.

Water quality management plans, as defined by the Act, are more than technical studies. Section 208 requires that community priorities and values be considered as integral parts of the planning process through

public participation. Each State has designated an agency; local, regional, or statewide, to handle coordination of water quality management plans.

Initial plans are being submitted to EPA now but there is still time to ensure that local priorities are included in planning and implementation of future environmental controls. While the planning structures of 208 programs vary from State to State, all offer opportunities for involvement by local officials. Each State must include local officials on at least one policy advisory committee for the designated planning areas.

EPA offers a pamphlet called 'Where Do We Go From Here?' to help explain water quality management planning and its effect on local officials. If you are not familiar with the 208 planning effort in your area and want to get involved or would like further information, contact the Water Planning Division at the EPA Regional Office.

Safe Drinking Water

The Safe Drinking Water Act of 1974 set minimum water quality standards that apply to all community suppliers serving 15 or more connections of 25 people, and to non-community suppliers such as trailer parks, camping sites, and roadside motels that have their own sources. Suppliers whose water does not meet the standards must notify the public. Most larger public drinking water systems already meet the standards but smaller systems that cannot always deliver high quality drinking water may need to apply for an exemption while they seek ways to improve their service or may apply for a variance because of the

poor quality of water coming into their system. Public hearings must be held whenever a supplier applies for an exemption or a variance, and none will be granted if there is any risk to public health.

In many cases State governments have assumed primary responsibility for enforcing the provisions of the Safe Drinking Water Act. In States that do not have adequate water quality standards or enforcement power the program is conducted by the EPA Regional Office. An EPA pamphlet called "Is Your Drinking Water Safe?" explains the requirements of the law and lists Water Supply Agencies for each State. The pamphlet is available from Regional Offices.

A 30-minute film on water quality also entitled "Is Your Drinking Water Safe?" looks at the nature of water treatment in large cities, where the only available water is heavily polluted, as well as in rural areas where the supply may come from an underground source. The film is available from Modern Talking Picture Service Central Library, 2323 New Hyde Park Rd., New Hyde Park, N.Y. 11040. Refer to film #31486.

EPA has given a grant to a consortium of public interest groups to hold seminars on the safe drinking water program for local officials. The materials used in conducting such seminars are available through the American Water Works Association at 6666 W. Quincy Avenue, Denver, Colo. 80235. An instruction package costing \$45 includes an audio-visual presentation, an instructors guide, and participants handbook. The participant's handbooks cost \$3 apiece if purchased separately.

Municipal Sewage Treatment Construction

Under the 1972 Water Act EPA was authorized to give grants for up to 75 percent of the cost of planning, designing, and building municipal sewage treatment facilities. The Agency committed over \$18 billion for this purpose through 1977. The Clean Water Act Amendments of 1977 authorized approximately \$25 billion more through 1982 to continue this important work. Some aspects of the new law amend the administrative policies of the construction grants program and others direct that certain funds are to be used for specific new applications.

EPA is now authorized to provide technical and legal assistance in the administration and enforcement of any contract connected with Agency-funded treatment works, at the request of the grantee.

A provision to encourage the use of innovative and alternative technologies in sewage treatment was included in the new Act, as well. It allows certain percentages of authorized funds for each fiscal year to be set aside for funding a greater portion of costs, 85 percent instead of 75 percent, of plants that incorporate such features as cost reduction, improved reliability, energy conservation, and recycling or reclamation of nutrients or sludges. A case-by-case waiver procedure has been introduced for communities that can show that existing discharges into deep marine waters require less than secondary treatment.

EPA has many publications that explain how to apply for sewage plant construction grants, and guide the municipal official

through the construction process. A complete list of publications is available by writing to Municipal Construction Program Mailing Applications, GSA Central Mailing List Service (8 FSS), Denver Federal Center, Denver, Colo. 80225. Ask for EPA 7500-21. Some general pamphlets and an informative slide presentation on the program are available from EPA Regional Offices.

After the sewage treatment plant has been built, properly trained personnel are needed to operate it. EPA aids cities by developing training materials and granting funds through Regional Offices and States for operations and maintenance training seminars. The Agency gives grants for training of technicians that are matched by funds from the Department of Labor. At its laboratory center in Cincinnati EPA maintains an Instructional Resource Center that has a comprehensive collection of training materials and holds seminars for operations and maintenance instructors. For more information write Instructional Resource Center, National Training and Operational Technology Center, US EPA, Cincinnati, Ohio 45268, or call (513) 684-7501.

Noise

Noise pollution is a growing problem in urban areas because of the increasing number of sources that produce high sound levels and the growing population density. EPA's Office of Noise Abatement and Control was mandated by the Clean Air Act of 1970. The Noise Control Act of 1972 required the Agency to set levels of noise that protect the public health and welfare. In addition to identifying major noise sources, suggesting control techniques, and setting standards for each type of noise source, the Noise Office has initiated a number of projects that can help cities.

The Quiet Communities Program is putting retired citizens to work in Allentown, Pa., with 20 people surveying noise problems. This project helps communities to pinpoint which noise sources are most bothersome to people and plan ways to combat the problem. The Noise Office has developed an Attitudinal Survey for helping communities to assess citizen concern about noise. The Attitudinal Survey will help communities to focus their efforts to effectively solve their noise problems. These surveys are available from the Regional Offices. A model strategy document for the program is being completed and will soon be available from the Office of Noise Abatement and Control (AW-471), US EPA, Washington, D.C. 20460.

Another Noise Office project entitled Each Community Helps Others (ECHO) began last month with a meeting between city officials from Lincoln, Neb. and Des Moines, Iowa. ECHO pairs up urban communities of a certain size that have ongoing programs to assist communities of like size with similar problems to develop a noise program. EPA funds pay out-of-pocket expenses so that municipal officials can meet and share their expertise. Matching up similar communities helps cities to avoid elaborate plans that cannot succeed.

To help communities deal with the problem of aviation noise EPA offers a 15-minute film entitled 'Jet Roar.' The movie discusses what can be done and what is being done by pilots, planners, and people who live in the neighborhoods around busy airports. It is available on free loan from Modern Talking Picture Services Central Library, 2323 New Hyde Park Road, New Hyde Park, New York 11040. Refer to film #31781.

Other resources available through Regional Offices include a Model Community Noise Ordinance and a series of pamphlets on different aspects of noise—around the home, at work, and at play.

Radiation

EPA is responsible for providing Federal guidance on all radiation matters that could have effects on public health and for setting environmental standards. The Agency proposes guides and standards for controlling ionizing radiation, which is produced by X-rays and residues from testing of atomic weapons, and is deciding whether to develop guidelines for sources such as nuclear power facilities, emergency actions, and power plants, and non-ionizing radiation, such as that produced by radio and television transmitters and microwave devices. The Office has also developed information on the levels of non-ionizing radiation surrounding high voltage electrical transmission lines. The Radiation Program has set standards for radiation levels under the Safe Drinking Water Act of 1974 and under the Atomic Energy Act for the Uranium Fuel Cycle. The program is also promulgating Federal Guidance in medical X-ray, plutonium in the environment and many other areas where people could be exposed to radiation.

EPA operates a network of monitoring stations across the country that monitor radioactivity levels in air, water, and milk, among other things. In addition technological

radiation assessments are performed through this program and are available from radiation representatives in the Regional Offices.

Areas located near nuclear facilities are advised to have plans of action in case of radiological emergencies. The Radiation Program offers a Manual of Protective Guides and Protective Actions for Emergency Response Planning to help State and local government in this task.

A study of radio frequency radiation levels is being conducted in major cities across the country by the Electromagnetic Radiation Analysis Branch. The project measures exposure of urban residents to non-ionizing radiation from radio, television, and other radio frequency sources such as microwaves. A 25-minute videotape on this subject entitled "Non-Ionizing Radiation" is available from the Regional Offices.

Solid Waste Management

Mayors of the Nation's cities declared in 1973 that managing enormous quantities of residential, commercial, and institutional wastes is the biggest problem the cities face. Collection is expensive and land for disposal is scarce. About 135 million tons of these wastes were collected and disposed of in the U.S. in 1976. There are also 7 million annual tons of wastewater treatment sludge, which U.S. cities are finding increasingly difficult to dispose of in ways that are environmentally safe.

Surrounding the cities are industries producing about 375 million tons of manufacturing waste every year—35 million tons of which could contain toxic chemicals, pesticides, acids, caustics, flammables, and explosives.

Cities and their inhabitants find that fuel and energy are becoming increasingly expensive. Yet, burning mixed municipal solid wastes from the larger U.S. urban areas could generate energy equal to as much as 400,000 barrels of oil per

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Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
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New Jersey, New York, Puerto Rico, Virgin Islands
212-264-2525

Region 3 (Philadelphia)
Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia
215-597-9814

Region 4 (Atlanta)
Alabama, Georgia, Florida, Mississippi, North Carolina, South Carolina, Tennessee, Kentucky
404-881-4727

Region 5 (Chicago)
Illinois, Indiana, Ohio, Michigan, Wisconsin, Minnesota
312-353-2000

Region 6 (Dallas)
Arkansas, Louisiana, Oklahoma, Texas, New Mexico
214-767-2600

Region 7 (Kansas)
Iowa, Kansas, Missouri, Nebraska
816-374-5493

Region 8 (Denver)
Colorado, Utah, Wyoming, Montana, North Dakota, South Dakota
303-837-3895

Region 9 (San Francisco)
Arizona, California, Nevada, Hawaii
415-556-2320

Region 10 (Seattle)
Alaska, Idaho, Oregon, Washington
206-442-5810

day—nearly a third of the projected flow from the Alaska pipeline, enough to provide lights for all of our Nation's homes and commercial buildings. Recovery of the materials from residential and commercial solid wastes could provide 3 percent of the Nation's lead, 5 percent of its copper, 7 percent of its iron, 8 percent of its aluminum, 19 percent of its tin, and 14 percent of its paper. However, only about 6 percent of the total tonnage produced as municipal solid waste is being recovered.

The tonnage of wastes generated by communities and industry, their often hazardous nature, the costs and difficulties of their storage, collection, processing, and disposal; the problems of recovering or reusing these wastes and capturing their potential energy—these are the interrelated factors that circumscribe the Nation's solid waste problem being addressed by EPA through administration of the Resource Conservation and Recovery Act of 1976 (RCRA, PL-94-580).

Under this Act, the Office of Solid Waste was directed to carry out a range of responsibilities. Among these are specific programs that help solve various solid waste management problems. Technical assistance is provided to States and cities by panels of solid waste experts drawn from within EPA and the private sector. This is often-times accomplished by bringing together State and local officials with specific problems with their peers from other States and cities who have encountered and solved a similar problem. Information on

this program is available through the Regional Offices.

Educating the general public on the solid waste problem is also an important goal. Citizen education programs with public interest groups such as the League of Women Voters include workshops being held throughout the country to discuss the problems of solid waste management and how these problems might be solved.

Technical publications about new developments in the field of solid waste management are constantly being added. A computerized search of available literature can be obtained through the Solid Waste Information Retrieval System. Pamphlets, films, and slide presentations that explain innovations to nontechnical audiences can also be obtained through the Regional Offices.

Information on authorization of financial assistance to State and local governments to develop and implement comprehensive solid waste management plans is provided through the Regional Offices.

Public participation in the form of meetings, hearings, conferences, and workshops is required to allow for public involvement in the implementation of the law. In February public meetings on "State Planning Guidelines for Hazardous Waste Programs" will be held in Boston, New Orleans, and Seattle. Public meetings on landfill criteria, land disposal of sewage sludge, State planning guidelines, and regulations for transportation of hazardous wastes, will be held in various locations in the Spring. Exact dates of the meetings will be available from the Office of Solid Wastes, US EPA, (WH-562), Washington, D.C. 20460. □

Update

A listing of recent Agency publications, and other items of use to people interested in the environment.

General Publications

Single copies available from Printing Management Office, (PM-215), US EPA, Washington, D.C. 20460. (202) 755-0890.

What Everyone Should Know About the Quality of Drinking Water (December, 1977).

This 16-page booklet, illustrated with simple line drawings, explains why the Safe Drinking Water Act was passed and how implementation of the Act can affect our daily lives.

The Toxic Substances Control Act (November, 1977).

A 12-page booklet that gives background on the chemical risks that led to formulation and passage of the Act. It also explains the scope of the law, and major requirements such as testing, notification, record-keeping, and employee protection.

Federal Register Notices

Copies of Federal Register notices are available at a cost of 20 cents per page. Write Office of the Federal Register, National Archives and Records Service, Washington, D.C. 20408.

Pesticide Programs EPA

notice of reconsideration of registration of pesticide products containing benomyl. Pp. 61788-801 in the December 6 issue.

EPA establishes maximum permissible levels for residues of Ethylene dibromide (EDB) on various raw agricultural commodities; effective 12-14-77. Pp. 62913. December 14 issue.

Air Programs EPA modifies proposed regulations for prevention of significant air quality deterioration. Pp. 62020-21. December 8 issue.

EPA designates three methods for measuring concentrations of nitrogen dioxide in the air. Pp. 62971-72. December 14 issue.

EPA proposes requirements for the implementation of the national ambient air quality standards for lead; comments by 2-17-78. (2 documents). Pp. 63076-94. December 14 issue.

Regulations Under Consideration

The following rules are being developed by EPA. The Agency encourages public comment. EPA contacts and proposed issuing date are listed so that interested persons can make their views known. These rules will be issued in March, 1978: Pesticide Registration Guidelines, to detail the information needed about product performance for the registration process, write or phone Bill Preston (WH-568), US EPA, Washington, D.C. 20460. (202) 557-7351.

Coming Events

More information about these events and EPA's participation in them is available from Sue Sladek (202) 426-4188.

Clean Air Act Forum on the implementation of the 1977 Amendments cosponsored by EPA and the Air Pollution Control Association. The last in the series of forums will be held Feb. 23 at the Atlanta Hilton Hotel, Atlanta, Ga.

Administrator Douglas M. Costle will speak at the annual meeting of the Environmental Industry Council, to be held at the Hyatt Regency Hotel in Washington, D.C. Feb. 22-24.

Coastal Zone '78, a national symposium on coastal zone planning and management, will be held at the Jack Tar Hotel in San Francisco, March 14-16.

Cities and the Environment

Continued from page 15

scheduled a major 1979 project on the urban environment and economic development which will study their relationship and, hopefully, will lead to constructive policy recommendations.

Indeed, there has been an increasing recognition not only in government of the interrelationship of environmental concerns and the importance of the urban environment in this respect. The Sierra Club's president, J. William Futrell, has warned environmentalists that "the future of places like Yellowstone Park is going to depend on the future of places like Watts and Harlem."

At the President's direction, my Department is expanding its urban homesteading program which has been shifted from a demonstration to an operating program. The program is designed to transfer properties HUD has acquired to communities which then transfer the property to individuals who buy it at token cost and guarantee to bring it up to local code standards, after which they are given full title. The Congress recently approved a second program aimed at improving the urban environment, through urban development action grants. This program is funded at \$400 million and is aimed at assisting severely distressed cities and urban counties in combating physical deterioration and economic decline, generating employment and tax revenues, and reclaiming neighborhoods with excessive housing abandonment.

President Carter recently established a Cabinet-level Urban and Regional Policy Group, which I chair. We have delineated a number of recommendations for the President's consideration that we believe could assist us in helping our cities to cope with their problems and to make them more attractive and healthy places to live.

Many of our cities are faced with economic disparities between resources and services, a flight of capital investment to outlying sectors or more promising urban areas, a decreasing tax base and mismatches between the labor force and employment opportunities. The administrative capability of local government has not always kept pace with geographic spread and the increasing complexity and interdependence of urban problems. The financial burden of sustaining urban systems is all too commonly nearing the breaking point. The poor and disadvantaged who live in blighted and decaying areas become increasingly isolated socially and distrustful of government effectiveness in bettering their lot.

This clearly is not a suitable living environment. There also are the costs in energy and loss of agricultural land brought about by rapidly increasing suburban sprawl, and the danger to the health and spirit of the urban resident from congestion, noise, poor air

quality, inadequate living quarters and loss of human scale so often found in larger cities.

The viability of an urban area depends increasingly on the interaction of its physical structure, its economic activity, its social mix and stability, its political power, and its ability to deal with environmental problems in the broadest sense. Improved coordination on the Federal level must be characterized by an understanding of this interdependence and an understanding that the time has come to view the city and its suburbs as one entity. We must do this if we are to overcome the local political fragmentation and institutional isolation that have had such a deleterious effect on our efforts in the past. Only then will we be able to move ahead toward our national goal of a suitable living environment for all Americans. We at HUD look forward to working with you at EPA as partners in this urgent and most necessary effort. □

Lead and Children

Continued from page 21

concentrations. Significantly less respiratory disease existed in the lower pollution areas."

- "Japanese research . . . indicates that a lower mean peak respiratory flow rate was found in 10-11 year old school children from heavily polluted areas."
- "In Tucson, Arizona, . . . it was found that pollution from an Arizona smelter adversely affected the lung function of the children after exercise."
- "The athletic performance of 100 high school cross-country runners . . . showed a strong correlation between failure to improve their running times and high oxidant levels."

In a report in the *Western Journal of Medicine*, Dr. Wesolowski, of the Department of Health in Berkeley, Calif., who is involved in a program of evaluating blood samples from children for lead content, writes, "There are children in California with elevated blood lead levels. The data shows problems in Alameda, Contra Costa and, particularly Los Angeles Counties. Although not calculable with accuracy, the cost to society of neglecting this problem may be phenomenal. . . ."

Lead levels in Wesolowski's study were reported highest in inner-city areas, among poor blacks in Los Angeles and Oakland.

Lead enters the human body principally through ingestion and inhalation, with subsequent absorption into the blood stream and distribution to all body tissues. Exposure to airborne lead can occur directly by inhalation, or indirectly by ingestion of lead-contaminated food, water, or non-food

materials including dust and soil. Lead accumulates in the human body throughout life, to a large extent immobilized in bone. A significant amount of body lead is in the blood and soft tissues.

Lead has its most pronounced effects on the hematopoietic (blood-forming) nervous and renal (kidney) systems, but may also harm the reproductive, endocrine, hepatic, cardiovascular, immunologic and gastrointestinal systems. Exposure to high levels of lead may have severe and sometimes fatal consequences such as brain disease, colic, palsy, and anemia.

Lead is emitted to the atmosphere by vehicles burning leaded fuel and by certain industries. In 1975, combustion of gasoline accounted for 90 percent of all lead emissions. As a result of EPA's phasedown of lead in gasoline, lead emissions from gasoline combustion are expected to go down 60 percent from current levels by 1985. However, vehicle-related emissions are still projected to be the greatest national emission source of lead in 1985.

There are multiple sources of lead exposure besides air pollution. Lead is found in paint, inks, water supply and distribution systems, pesticides, and fresh and processed food.

Other Federal agencies have also taken actions to control lead. In 1975, the Occupational Safety and Health Administration proposed regulations to limit occupational exposure to lead. Also, the Department of Housing and Urban Development, the Consumer Product Safety Commission, the Food and Drug Administration, and Center for Disease Control have or will be taking actions against lead contamination.

"We are coordinating this new airborne lead standard proposal with the Interagency Regulatory Liaison Group," Costle said. The group is composed of EPA, the Occupational Safety and Health Administration, the Food and Drug Administration, and the Consumer Product Safety Commission.

When the new proposed standard for airborne lead eventually goes into effect, it will supersede the standards in those four States which have lead air quality standards of their own: California, Pennsylvania, Montana, and Oregon. □

Opposite: Aerial view of row houses in Philadelphia.

Back Cover: Aerial view of Honolulu looking toward Diamond Head, the extinct volcano which is a major landmark.





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