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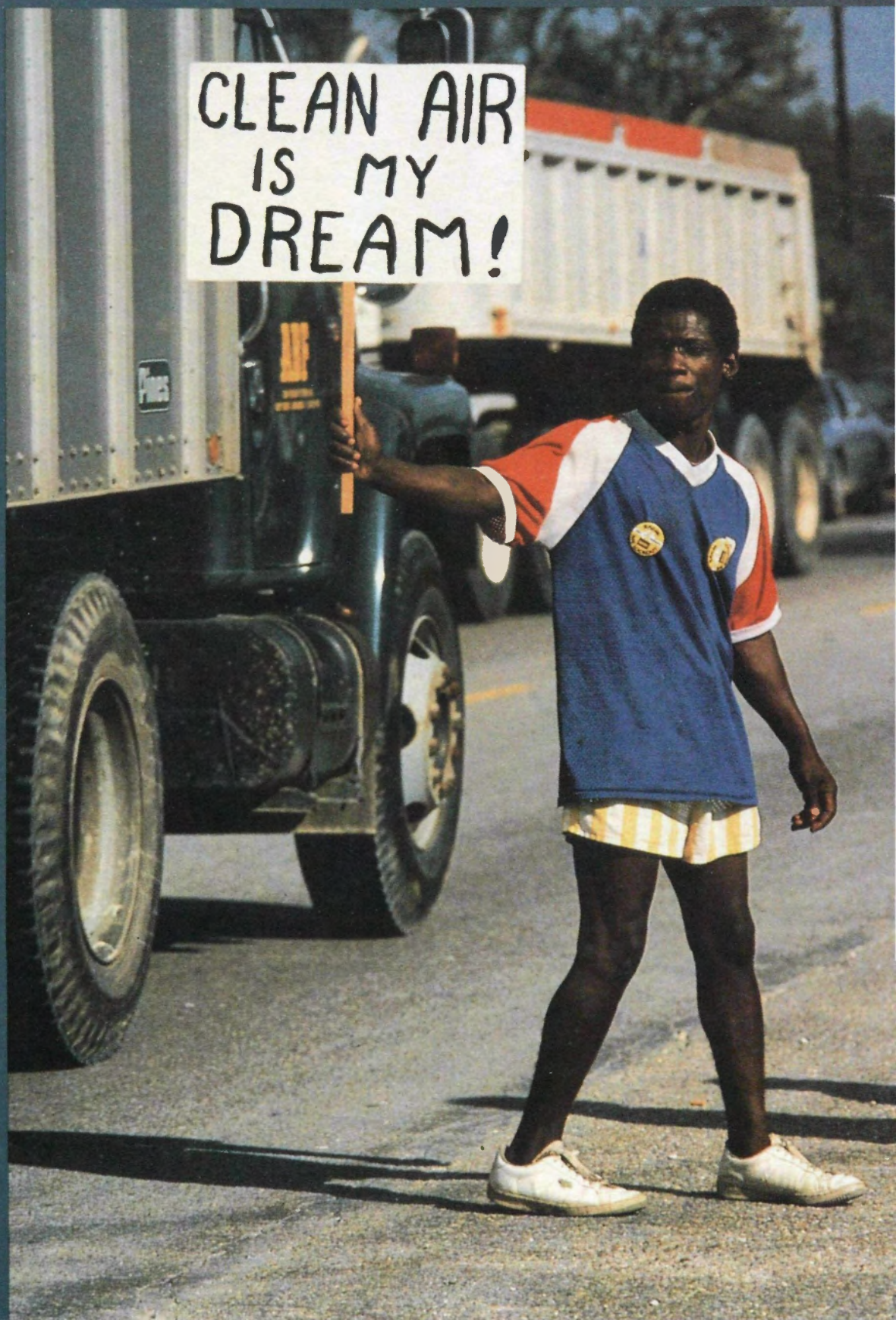
Environmental Protection—Has It Been Fair?



EPA JOURNAL

A Magazine on National and Global Environmental Perspectives

March/April 1992 ■ Volume 18, Number 1 175 N92-001

Front Cover:
November 1988: Young activist in Louisiana Toxics March protests pollution from petrochemical plants along Mississippi. Copyright Sam Kittner.

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From the Editor

Is it time that we broadened the definition of environmental protection in this country?

The physical environment of America's minorities—Hispanics, Native Americans, Asians, African Americans, the poor of any color—has in one way or another been left out of the environmental cleanup of the past two decades. Black children, as a whole, have more lead in their blood than do white children. Blacks are decidedly overrepresented in air-pollution nonattainment areas. The environment of migrant farm workers, particularly in their exposure to hazardous pesticides, has not been well protected, to say the least. People of color are much more likely to have hazardous waste sites in their backyards than are whites. Some environmental problems suffered by minorities are not even in the standard lexicon: poorly insulated homes that are hot in summer and cold in winter; neighborhoods infested with rats.

The environmental effort launched by Earth Day, 1970, has been largely defined by middle and upper class whites. It has been environmentalism with a big E, a specialized activity serving a special segment of our society. Environmental protection laws have largely reflected that definition. Ironically, Earth Day, itself, was socially oriented and broad based, involving tens of millions of people of all ages, incomes, and regions of the country.

Some will argue that, for the most part, minorities and the poor have not volunteered for the environmental movement. Agreed; they may have had more pressing problems. Does that mean that they should not share in the benefits?

A skeptic says, "If you broaden the definition of protection to include the devastated environment of the inner city, where is the end?" It may be that there is no end, only a goal, one that we can strive for but never completely achieve: decency, compassion, hope. It may be that every social cause should, fundamentally, have this aim. Not simply because it is right, but because on a planet with great risks as well as great benefits, it is realistic. □

John Heritage

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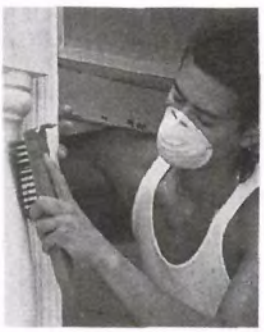

THE ISSUE

EXPANDING THE DIALOGUE

WHAT'S KNOWN, WHAT'S NOT

DEPARTMENTS

GRASS-ROOTS GROUNDSWELL

STEPS AT EPA

EPA is charged by Congress to protect the nation's land, air, and water systems. Under a mandate of national environmental laws, the Agency strives 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.

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Phaseout of Ozone Depleters Accelerated

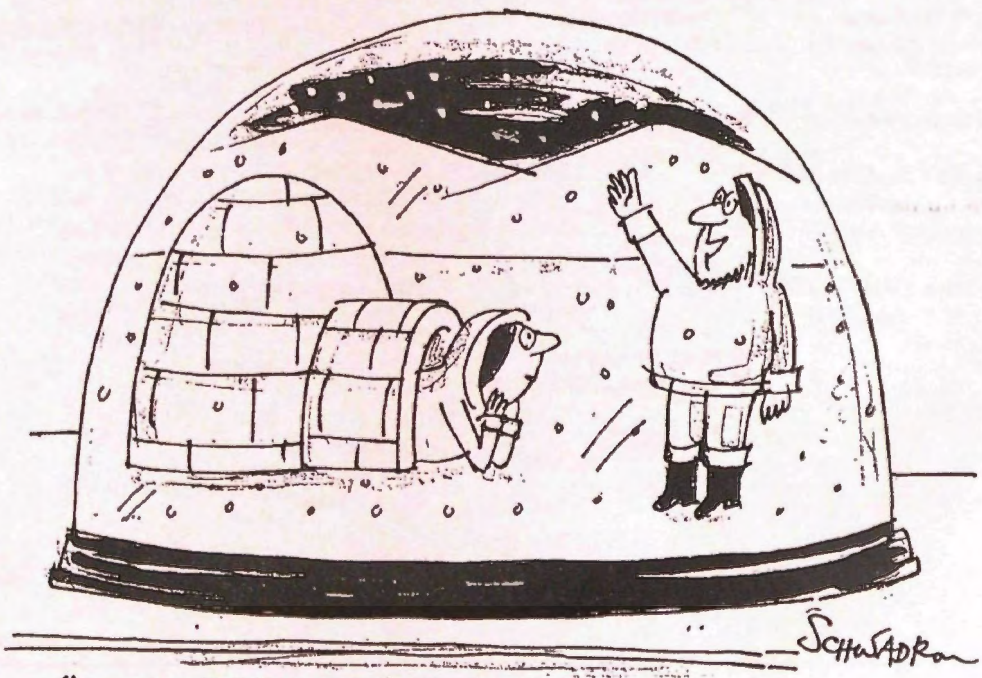
President Bush has announced that the United States will phase out most ozone depleting substances five years ahead of international deadlines and called on other nations to agree to an accelerated schedule. Current U.S. production is already more than 40 percent below levels allowed by the Montreal Protocol and more than 20 percent ahead of Europe's non-aerosol production phasedown. The announcement came as recent scientific findings indicated faster, more widespread ozone depletion than was previously known.

The Washington Post reported: "... The president's pledge to halt production of chlorofluorocarbons (CFCs) by Dec. 31, 1995, commits the United States to a faster phaseout schedule than most of the industrialized nations that signed the Montreal Protocol—an international treaty that sets a deadline of 2000 for elimination of the chemicals, which are widely used in consumer products .... The CFC explosion of the past 20 years has put so much of the chemicals into the atmosphere that there is no way of stopping continued depletion of the ozone shield. Even with the faster phaseout, the protective layer is not expected by scientists to be restored to its 1970s condition until the middle of the next century.

Last week, NASA scientists reported that a converted spy plane flying over New England and eastern Canada recorded the highest level of ozone-threatening chlorine compounds ever measured anywhere in the world. The level was 50 percent higher than previously seen over Antarctica, where an ozone hole was first discovered in 1985 .... The Montreal Protocol of 1987, signed by 71 nations, provides for regular reevaluations of whether a faster phaseout is warranted. A working group is scheduled in April to set an agenda for a full meeting of signatories in November. Germany has pledged to eliminate CFCs by Jan. 1, 1995, and one of the most popular substitutes by 2000. The European Community is committed to a deadline of July 1997 ...."

The Wall Street Journal commented: "... The action, which comes in the wake of data showing that the problem is worse than was believed, reflects a timetable that producers and users of the substances generally accept. 'We think we can live with it,' said Joseph McGuire, senior vice president of the Air Conditioning and Refrigeration Institute. 'We think it's doable.' U.S. production of chlorofluorocarbons, CFCs, which are widely used in refrigerants and solvents, and other chemicals that destroy the stratospheric ozone layer, will have to be eliminated by Dec. 31, 1995, four years sooner than required under an international treaty. Limited exceptions will be allowed for certain medical equipment such as dose inhalers for asthmatics and other essential uses and for the servicing of existing equipment. The president also is urging producers to cut output to 50 percent of 1986 levels by year end.

Partly because of a U.S. tax on CFC production, output is 42 percent below 1986 levels, as industry has found it easier than expected to come up with safer substitutes .... Environmental groups supported the president's action, but said it falls short of what is needed. Liz Cook, ozone campaign director at Friends of the Earth, said, 'We're glad the president recognized the ozone problem is a global emergency. But we think the crisis is so dire that we will continue to press for the U.S. to eliminate all ozone-depleting chemicals sooner than the deadline.' The accelerated phaseout applies to major CFCs, halons, methyl chloroform, and carbon tetrachloride. Under the 1990 revisions to the Clean Air Act, the administration has authority to accelerate the phaseout of these chemicals when data indicate a need to do so. ..."



Harley Schwadron. Reprinted with permission.

Ongoing Enforcement Actions

Record $15.7 Million Sought in Complaint Against Tennessee Gas Pipeline

In the largest administrative penalty ever sought by the Agency, EPA has filed a $15.7 million complaint against Tennessee Gas Pipeline Company of Houston, Texas, for violations of the Toxic Substances Control Act. The company operates an interstate natural gas-transmission system that extends approximately 10,000 miles; the complaint alleges that it improperly used and disposed of PCBs at 26 gas compressor stations along the pipeline from 1980 to 1990. The stations are located in Alabama, Kentucky, Mississippi, Ohio, and Tennessee.

The company is working with EPA and the states to clean up its equipment and any soil or water contaminated by the chemical. Last year, Texas Eastern paid a $15 million penalty for similar violations, and is now in the middle of a 10-year program to clean up PCBs at a cost of $750 million.

U.S. Sugar Guilty of Felonies; Will Pay Highest Fine Ever Under RCRA

United States Sugar Corporation has agreed to plead guilty to eight felony charges filed by the Department of Justice and to pay a criminal fine of $3,750,000. The crimes, which occurred at the company's Bryant plant in Palm Beach County, Florida, involve the illegal disposal and transportation of hazardous wastes. The fine is the largest penalty ever assessed under the Resource Conservation and Recovery Act.

Three of the eight counts charge the company with illegal disposal of lead subacetate during harvests in the period 1986 through 1989. The chemical was used in the sugar mill laboratory; the used chemical, which is a hazardous waste, was then disposed of in two forms: Mixed with sugar cane juice, it was dumped on the company's property; as a contaminant in laboratory filter papers, it was dumped in a local landfill.

The next three counts charge the company with illegal disposal of two solvents, tetrachloroethylene and methylene chloride, which it used to degrease mechanical parts. The used solvents, mixed with oil and grease, were dumped in earthen surface impoundments at the Bryant plant.

The last two counts charge the company with illegal transportation of a solvent that was an ignitable hazardous waste. Used to degrease mechanical parts, and mixed with waste oil, the solvent was transported to a waste-oil recycler without a manifest. U.S. Sugar did not inform the recycler that an ignitable hazardous waste was mixed with the oil; the recycler did not have a permit to treat or to dispose of hazardous waste.

The charges derive from soil, water, and chemical samples taken by EPA personnel and FBI agents during a search of the Bryant plant.

Kennecott Utah Copper Faces Fines of More Than $1.4 Million

EPA has asked for fines against Kennecott Utah Copper Corporation totaling more than $1.4 million: $1,129,000 for mismanagement of PCBs, and $291,850 for failure to report the release of hazardous materials to the environment. The charges stem from inspections of the company's smelter, refinery, Magna concentrator, Bonneville Plant, and Bingham Canyon mine. They allege: 180 counts of improper use of transformers containing PCBs, 16 counts of improper disposal of PCBs, 20 counts of failure to maintain records of PCB equipment, and one count of failure to mark an area containing a PCB transformer. They further allege that Kennecott was aware of the following releases of hazardous materials but failed to report them to authorities: approximately 21,000 pounds of corrosive wastes spilled on the ground; 17,000 pounds of sulfur dioxide discharged to the air from smelter wastewater in an open canal; and sulfur dioxide and sulfur trioxide discharged to the air because of equipment failures at a substation and stack.

The PCB mismanagement charges were brought under the Toxic Substances Control Act, the hazardous-material release charges under the Superfund law and the Emergency Planning and Community Right-to-Know Act—the former requires that hazardous material spills be reported to the National Response Center in Washington, the latter that local and state emergency response groups be notified as well.

Sale of Sterilizing Solution Stopped

EPA has ordered that the sale of Sporicidin Cold Sterilizing solution be stopped, and has requested that all stocks of the product be recalled. The sterilant is used primarily in hospitals and in dental and veterinary facilities to destroy spores, bacteria, fungi, and viruses on delicate instruments and equipment. EPA's order was based on test data which showed that the sterilant was not fully effective in destroying spores, and possibly other microbial life, as claimed on the product label. The Agency has filed a $430,000 civil complaint against Sporicidin International for making false claims about the product's effectiveness. Other federal agencies joined EPA in its action. Administrator Reilly said: "Because of the federal government's findings, I urge health-care providers to use alternative products for high-level disinfection and sterilizing needs. Products formulated for the control of infections are a serious concern. Consequently, I am renewing our efforts to ensure the products this Agency licenses for use in sterilizing and disinfecting are effective."

The Washington Post reported: ". . . Federal regulatory officials yesterday forced a national recall of one of the most widely used hospital and dental sterilizing solutions, after government laboratory tests revealed that the product destroys only a fraction of the potentially dangerous microorganisms it is supposed to kill. In a rare collective show of force, the Food and Drug Administration, the Environmental Protection Agency, and the Federal Trade Commission took legal and administrative actions against Sporicidin Co. yesterday, requesting that the Rockville company order an immediate product recall, seizing $1 million of its existing inventory and enjoining the company from promoting its cold sterilant solution . . . . Sporicidin's main product—Sporocidin Cold Sterilizing Solution—is used principally to sterilize medical and dental instruments that cannot be cleaned using normal sterilization processes. For example, a wide range of fiber optic scopes—like those used to probe the gastrointestinal tract and the bladder—as well as equipment used in anesthesia and dental surgery would be damaged if cleaned in standard high temperature sterilizers. Instead, to kill the thousands of potentially harmful fungi, viruses, bacteria, and other microorganisms that populate hospitals and can be picked up during medical procedures, physicians customarily bathe their instruments for several hours in cold disinfectant solutions . . . . Sporicidin, which has been on the market for 14 years, is one of the most popular of these products. According to the company, it is the principal cold sterilant used in dental schools; and federal officials said that it is widely used in Veterans Administration hospitals and has approximately a 25 percent share of the overall cold sterilant market . . . ."

The New York Times said: ". . . Dr. Robert Schattner, a dentist who is president of Sporicidin, questioned the actions against his company. 'There is no question these products are safe,' he said in a telephone interview. 'I don't understand what's going on. For 14 years these products have been used in hospitals, and there has not been one case of infection associated with them.' Dr. Schattner said the company would temporarily suspend operations to comply with demands of the regulatory agencies and 'to vigorously contest these actions.' Although no reports of illness have been associated with instruments and devices cleaned with Sporicidin products, health officials said they were concerned about the potential hazard. 'Sterilizing and disinfecting agents are supposed to protect patients from contact with harmful microorganisms,' said Dr. David A. Kessler, the Commissioner of Food and Drugs. 'These products do not work. Doctors, dentists, and other health professionals should stop using them.' . . . . The [Food and Drug Administration (FDA)] and the environmental agency acted because the sterilizing solution is regulated by both agencies. The [Federal Trade Commission], which regulates advertising, was involved because claims of the products' potency were inconsistent with government test results, said Sharon Snider, an FDA spokeswoman . . . . Seizure actions were initiated for inventory at Sporicidin's headquarters in Rockville, Maryland; a distribution warehouse, Multi-Modal Freight Systems, in Baltimore, and a contract manufacturing company, Chem-Mix Inc., in Jonesborough, Tennessee. Other products involved in the seizure are Sporicidin Brand Disinfectant Spray solution, Sporicidin Brand Disinfectant, and Sporicidin Disinfectant Towelettes.

Toxic Emissions from Dry Cleaners To Be Reduced

A regulation proposed by EPA would reduce emissions of perchloroethyline from large dry cleaning plants. The solvent, also known as PCE or PERC, is the most widely used cleaning agent in the industry and is one of 190 toxic air pollutants EPA must regulate within the next 10 years under the 1990 Clean Air Act.

The proposal is the first air toxics rule to be written under the Act. It was prepared with the help of the International Fabricare Institute, and reflects an effort by EPA to minimize costs to small businesses.

Under the rule, operators would have to install a carbon adsorber, refrigerated condenser, or equivalent device to control vented PCE emissions. They would have to practice pollution prevention procedures, including good operation and maintenance, for both dry cleaning machines and auxiliary equipment, such as solvent tanks. And they would have to conduct a weekly inspection to prevent emissions from broken or improperly operating equipment and keep a record of such things as the amount of PCE used.

The rule would apply to both "industrial" and "commercial" dry cleaners. Industrial cleaners, the largest, typically supply rental uniforms and other such items to business and institutional customers. Commercial cleaners, the most common, include the small, independently operated neighborhood shops.

Of the approximately 25,200 cleaning plants in the United States, 9,700 currently have no controls and could be affected by the rule. However, the Clean Air Act allows EPA to be sensitive to economic impacts on small business, and the Agency has set a "consumption cutoff" that will exempt all but 3,700 plants from having to install controls. The cutoff is 220 gallons of PCE a year for cleaners with dry-to-dry machines—those that wash and dry in the same unit; it is 300 gallons a year for cleaners with transfer machines—washing is done in one unit, drying in another. The cleaners that would be exempted under the rule account for only 1.4 percent of total PCE emissions, so the effect of the exemption on public health would be negligible.

The proposed rule would reduce the total emissions of PCE by 13 to 26 percent. The estimated capital cost for the cleaners that are now uncontrolled would be $63 million by 1996; the annualized cost in 1996 would be $9 million. The increased cost of dry cleaning for customers would be less than one percent.

Steve Delaney photo.

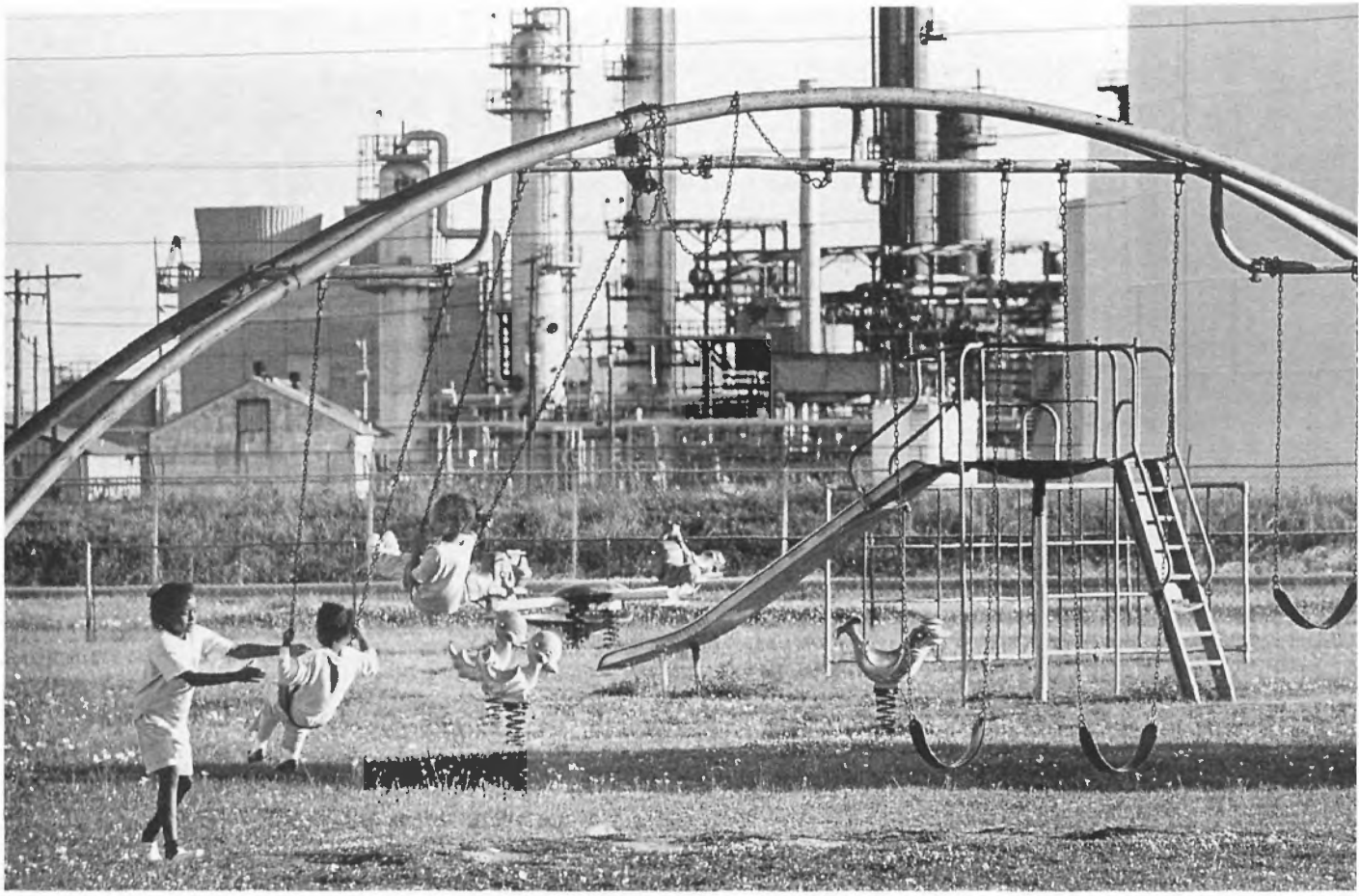
All Four New Jersey Utilities Join Green Lights

New Jersey's four electric utility companies have joined EPA's Green Lights program; the state is the first to have all its electric utilities join.

Public Service Electric and Gas, Rockland Electric, Jersey Control Power and Light, and Atlantic Electric have all agreed to survey their facilities and to install new lighting systems where energy and cost savings can be achieved. What's more, they will aid customers to do the same. All Green Lights members can access an EPA computer-based support system.

Twenty to 25 percent of electricity used in the United States each year goes to lighting. Half of that, 250 billion kilowatt hours, at a cost of $20 billion, could be saved if energy-efficient lighting were substituted, where feasible, for older systems. Efficient systems produce brighter lighting with less energy, contribute to a more productive workplace, and create less heat, thereby reducing the demand for air conditioning.

EPA launched the Green Lights Program in 1991 as a voluntary, non-regulatory program to encourage U.S. corporations, utilities, states, and local governments to adopt energy-efficient lighting as a profitable means of pollution prevention. Several hundred Green Lights partners have joined in the program across the country.



RACE, POVERTY, AND THE ENVIRONMENT

The Disadvantaged Face Greater Risks

by Paul Mohai and Bunyan Bryant

Americans have tended to assume that pollution is a problem faced equally by everyone in our society. But awareness and concern about inequities in the distribution of environmental hazards have been steadily increasing. The first event to focus national attention on environmental injustice occurred in 1982 when officials decided to locate a PCB landfill in predominantly black Warren County, North Carolina. Protests very similar to those of the civil rights movement of the 1960s erupted. They led to an investigation the following year by the General Accounting Office (GAO) of the socioeconomic and racial composition of communities surrounding the four major hazardous waste landfills in the South. The GAO report found that three of the four were located in communities that were predominantly black.

The Warren County incident and the GAO report led the United Church of Christ's Commission for Racial Justice,

Housing project is cheek by jowl with oil refinery.

Copyright Sam Kittner

a participant in the Warren County protests, to sponsor a nationwide study in 1987. The study used systematic and statistically analyzable data to determine whether the distribution of commercial hazardous waste facilities in minority communities fit the pattern found in the South. It found that it did. Specifically, it found that the proportion of minorities in communities which have a commercial hazardous waste facility is about double that in communities without such facilities. Where two or more such facilities are located, the proportion of minorities is more than triple.

In addition, using sophisticated statistical techniques, this study found that race is the single best predictor of where commercial hazardous waste facilities are located—even when other socioeconomic characteristics, such as average household income and average value of homes, are taken into account. The report concluded that it is "virtually impossible" for this disproportionate distribution to occur by chance, and that underlying factors related to race, therefore, in all likelihood play a role in the location of commercial hazardous waste facilities. At the time the report was released, Dr. Benjamin F. Chavis, Jr., Executive Director of the United Church of Christ's Commission for Racial Justice, termed the racial biases in the location of these facilities "environmental racism." Because of its national scope and its strong findings, the Commission's report became a major turning point in raising public awareness about the disproportionate burden of environmental hazards on minorities.

The striking findings of the United Church of Christ study led us to investigate whether other studies existed and to determine whether the evidence from these studies, taken together, demonstrated a consistent pattern of environmental inequity based on socioeconomic and racial factors. We also conducted a study of our own to examine the distribution of commercial hazardous waste facilities in the Detroit metropolitan area. Further, to uncover more information and focus greater attention on this issue, in January 1990 we convened the Michigan Conference on Race and the Incidence of Environmental Hazards at the University of Michigan's School of Natural Resources. (See accompanying article.)

A question often raised is whether the bias in the distribution of environmental hazards is simply a function of poverty. That is, rather than race per se, is it not poverty that affects the distribution of environmental hazards? And are not minorities disproportionately impacted simply because they are disproportionately poor (although one has to ask why minorities are disproportionately poor in the first place)?

Classic economic theory would predict that poverty plays a role. Because of limited income and wealth, poor people do not have the means to buy their way out of polluted neighborhoods. Also, land values tend to be lower in poor neighborhoods, and the neighborhoods attract polluting industries seeking to reduce the costs of doing business. However, the mobility of minorities is additionally restricted by housing discrimination, amply demonstrated by researchers to be no insignificant factor. Then, because noxious sites are unwanted (the "NIMBY," or not-in-my-backyard syndrome) and because industries tend to take the path of least resistance, communities with little political clout are often targeted for such facilities: The residents tend to be unaware of policy decisions affecting them; they are not organized; and they lack the resources (time, money, contacts, knowledge of the political system) for taking political action. Minority communities are at a disadvantage not only in terms of resources, but also because of underrepresentation on governing bodies. When location decisions are made, this underrepresentation translates into limited access to policy makers and lack of advocates for minority interests.

Taken together, these factors suggest that race has an impact on the distribution of environmental hazards that is independent of income. Thus, as part of our investigation, we attempted to assess the relative influence of income and race on the distribution of pollution. We did so by examining the results of those empirical studies which analyzed the distribution of environmental hazards by both income and race. We also assessed the relative importance of the relationship of income and race in the distribution of commercial hazardous waste facilities in our Detroit area study.

From our investigation, we found 15 studies that, like the United Church of

(Dr. Mohai is Assistant Professor and Dr. Bryant is Associate Professor in the School of Natural Resources at the University of Michigan in Ann Arbor. Drs. Mohai and Bryant were Co-Principal Investigators of the University of Michigan's 1990 Detroit Area Study. They were also co-organizers of the University of Michigan Conference on Race and the Incidence of Environmental Hazards held January 1990 in Ann Arbor, Michigan. Both served on the National Advisory Committee of the First National People of Color Environmental Leadership Summit held October 1991 in Washington, DC.)

Christ study, provide objective and systematic information about the social distribution of environmental hazards. A number of interesting and important facts emerged.

First, an inspection of the publication dates revealed that information about environmental inequities has been available for some time. Rather than being a recent discovery, documentation of environmental injustices stretched back two decades. In fact, information about inequities in the distribution of environmental hazards was first published in 1971 in the annual report of the Council on Environmental Quality. This was only one year after EPA was created, one year after the National Environmental Policy Act was passed, and only one year after the first Earth Day—an event viewed by many as a major turning point in public awareness about environmental issues. There were nine other such studies published in the 1970s. Clearly, it has taken some time for public awareness to catch up to the issues of environmental injustice.

It is worth noting that most of the studies conducted in the past two decades focused on the distribution of air pollution and hazardous waste. Clearly, systematic studies of the social distribution of other types of environmental hazards, such as water pollution, pesticide exposure, asbestos exposure, and other hazards are needed. Also worth noting is that these studies vary considerably in terms of scope. Some focused on single urban areas, such as Washington, DC, New York City, or Houston; others focused on a collection of urban areas; while still others were national in scope. This is important in that it reveals that the pattern of findings is not an artifact of the samples selected: Regardless of the scope or of the methodologies employed, the findings point to a consistent pattern.

In nearly every case, the distribution of pollution has been found to be inequitable by income. And, with only one exception, it has been found to be inequitable by race. Where the distribution of pollution has been analyzed by both income and race, and where it is possible to weigh the relative importance of each, in five out of eight cases race has been found to be more strongly related than has income. Also noteworthy is the fact that all three national studies which looked at both income and race found race to be more importantly related to the distribution of environmental hazards than income.

Jeremy Kemp photo.

Abandoned industry site abuts on residential neighborhood in southeast Chicago.

In our own Detroit area study, we found that minority residents in the metropolitan area are four times more likely than white residents to live within one mile of a commercial hazardous waste facility. We also found that race was a better predictor of residents' proximity to such facilities than income.

Taken together, the findings from these studies indicate clear and unequivocal class and racial biases in the distribution of environmental hazards. Further, they appear to support the argument that race has an additional effect on the distribution of environmental hazards that is independent of class. Indeed, the racial biases found in these studies have tended to be greater than class biases.

Ultimately, knowing whether race or class has a more important effect on the distribution of environmental hazards may be less relevant than understanding how the conditions that lead to it can be addressed and remedied. Currently, there are no public policies in place which require monitoring equity in the distribution of environmental quality. Hence, policy makers have little knowledge about the equity consequences of programs designed to control pollution in this country.

Are some groups receiving fewer environmental and health benefits than others from existing programs? Have the risks to some actually increased? If the social, economic, and political disadvantages faced by the poor and minorities are unlikely to be compensated any time soon, then proactive government policies will be needed to address the issue of environmental inequity. The distribution of environmental hazards will need to be monitored, existing policies and programs adjusted, and new programs designed to ensure that all groups share equitably in the efforts to control pollution.

A quarter of a century ago, the Kerner Commission warned, "To continue present policies is to make permanent the division of our country into two societies: one largely Negro and poor, located in the central cities, the other predominantly white and affluent, located in the suburbs and in outlying areas." When that warning was made, EPA had not yet been created and the nation's major environmental laws had not yet been passed. The terms "environmental racism" and "environmental justice" were unheard of. Our study and those of others indicate that current environmental policies have contributed to the division. To know that environmental inequities exist and to continue to do nothing about them will perpetuate separate societies and will deprive the poor, blacks, and other minorities of equitable environmental protection. □

Note: This article is adapted from a longer paper entitled "Environmental Racism: Reviewing the Evidence," forthcoming in B. Bryant and P. Mohai, eds., Race and the Incidence of Environmental Hazards: A Time for Discourse *(Boulder, Colorado: Westview Press, 1992).*

THE MICHIGAN CONFERENCE: A TURNING POINT

by Bunyan Bryant and Paul Mohai

The Majority of Presenters Were People of Color

For the last 15 years or so, the civil rights movement has faltered as government and corporate America have reordered their priorities and as civil rights leaders have struggled in vain to bring currency to a movement that has lost momentum. Both the death of prominent civil rights leaders and the benign neglect of policy makers have blunted the edge of the movement, even though the conditions that spawned it are, in many instances, worse now than they were three decades ago. Today, we have more segregated schools, segregated housing patterns, and homeless people, and the economic gap between people of color and whites has increased significantly.

However, a resurgence of that movement may be taking place as people of color and oppressed communities across the nation begin to redefine their struggle in terms of a safe and clean environment as a basic right for all, regardless of race or color. Each day, people of color are becoming more aware of the millions of inner city children who are being exposed to lead poisoning, causing irreversible mental retardation and impaired growth. As they eke out a living from the land, pregnant farm workers exposed to pesticide sprays are prone to have offspring deformed at birth. Prenatal exposure to dangerous chemicals in the high-tech industries contributes to numerous birth defects and premature births. Uranium-contaminated Navajo land and water are believed to contribute to the high incidence of organ cancer in Navajo teenagers—17 times the national average.

As indicated in the preceding article, we became involved with issues of environmental equity after becoming acutely aware that communities of color were disproportionately exposed to environmental hazards, more so than affluent white communities, and that a struggle was being waged in minority and low-income communities across the country. Based upon the evidence, we decided to organize a working conference, national in scope, at the University of Michigan School of Natural Resources to bring further attention to this most pressing issue.

Nine of 12 scholar-activists who

presented papers at the Conference on Race and the Incidence of Environmental Hazards were people of color. Robert Bullard, Professor of Sociology at the University of California at Riverside, Beverly Wright, Associate Professor of Sociology at Wake Forest University, and Charles Lee, Director of Special Projects on Toxic Justice of the Commission of Racial Justice of the United Church of Christ, were key in helping us identify other scholars and activists. We also invited a number of participant observers from federal and state agencies, such as EPA, the Agency for Toxic Substances and Disease Registry, the Governor's Office of the State of Michigan, the Michigan State Department of Minority Health, the Michigan Department of Natural Resources, and others.

This was the first time that a retrieval/dissemination conference on race and the incidence of environmental hazards was held where the majority of presenters of scholarly papers were people of color. Although scholars had worked on various aspects of this issue, the conference enabled scholar-activists to come together to share their research findings and to take steps to disseminate information about this most important issue. The conference was not only a major step forward in getting scholar-activists to focus their attention on this issue as a group, but it gave national visibility to the debate on environmental equity, thus increasing the awareness of government policy makers and lay people alike. As a result, we expect other scholars of color to take this issue on as a legitimate area of inquiry. (For more information about the outcomes of this conference and the environmental equity movement, see our forthcoming book, *Race and the Incidence of Environmental Hazards: A Time for Discourse.*)

Although race and the incidence of environmental hazards was seldom an issue for policy makers before the conference, this is no longer the case; policy makers at multiple levels of government are involved in environmental equity discussions. And while these discussions may be provocative, they still will have to work their way into policies that ensure that all Americans can live in safe, clean, and decent environments. Environmental equity should be the highest priority for policy makers if they are indeed interested in alleviating much of the disproportionate amount of pain and suffering experienced by people in minority and low-income communities.

A follow-up strategy of the Michigan conference was a meeting with key government officials in Washington, DC. A subgroup of conferees sent a memo requesting a meeting with Louis W. Sullivan, Secretary, Department of Health and Human Services; William K. Reilly, Administrator, EPA; and Michael R. Deland, Chairman, Council on Environmental Quality. Copies went to all governors, various state legislators, and the Congressional Black Caucus. In this memo, we proposed to discuss the agencies' involvement in:

- Undertaking research towards understanding the environmental risks faced by minority and low income communities
- Initiating projects to enhance risk communication targeted to minority and low-income population groups
- Requiring, on a demonstration basis, that racial and socioeconomic equity consideration be included in Regulatory Impact Assessments
- Ensuring that a racial and socioeconomic dimension is overlaid on present and future geographic studies of environmental risk
- Enhancing the ability of "historically black colleges and universities" (HBCUs) and other minority institutions to participate in and contribute to the development of environmental equity
- Appointing special assistants for environmental equity at decision-making levels within agencies
- Developing a policy statement on environmental equity.

We met with William Reilly and an assistant to Michael Deland on September 13, 1990. Because of scheduling problems, we were unable to meet with Louis Sullivan. Of all the people we met with in Washington, including Congressman John Lewis (D-Georgia), and staff members of Congressmen John Conyers (D-Michigan) and Ron Dellums (D-California), the representative for the Council on Environmental Quality was least familiar with this issue. By the time we arrived in Washington, William Reilly had already sent a memo to his 12,000 EPA employees recognizing Black History Month and stating more specifically the inherent value of having a multi-cultural workforce reflective of American society to help ensure an equitable environmental policy. He also put together an internal workgroup to study and report to him on the issues raised at the Michigan conference. And, on April 9, 1990, at the National Minority Environmental Career Conference at Howard University, he stated:

> Participants in the January 1990 University of Michigan Conference on Race and the Incidence of Environmental Hazards conducted an intensive review of environmental risk from a socioeconomic perspective. This review pointed out significantly disproportionate health impacts on minorities due to higher rates of exposure to pollution.

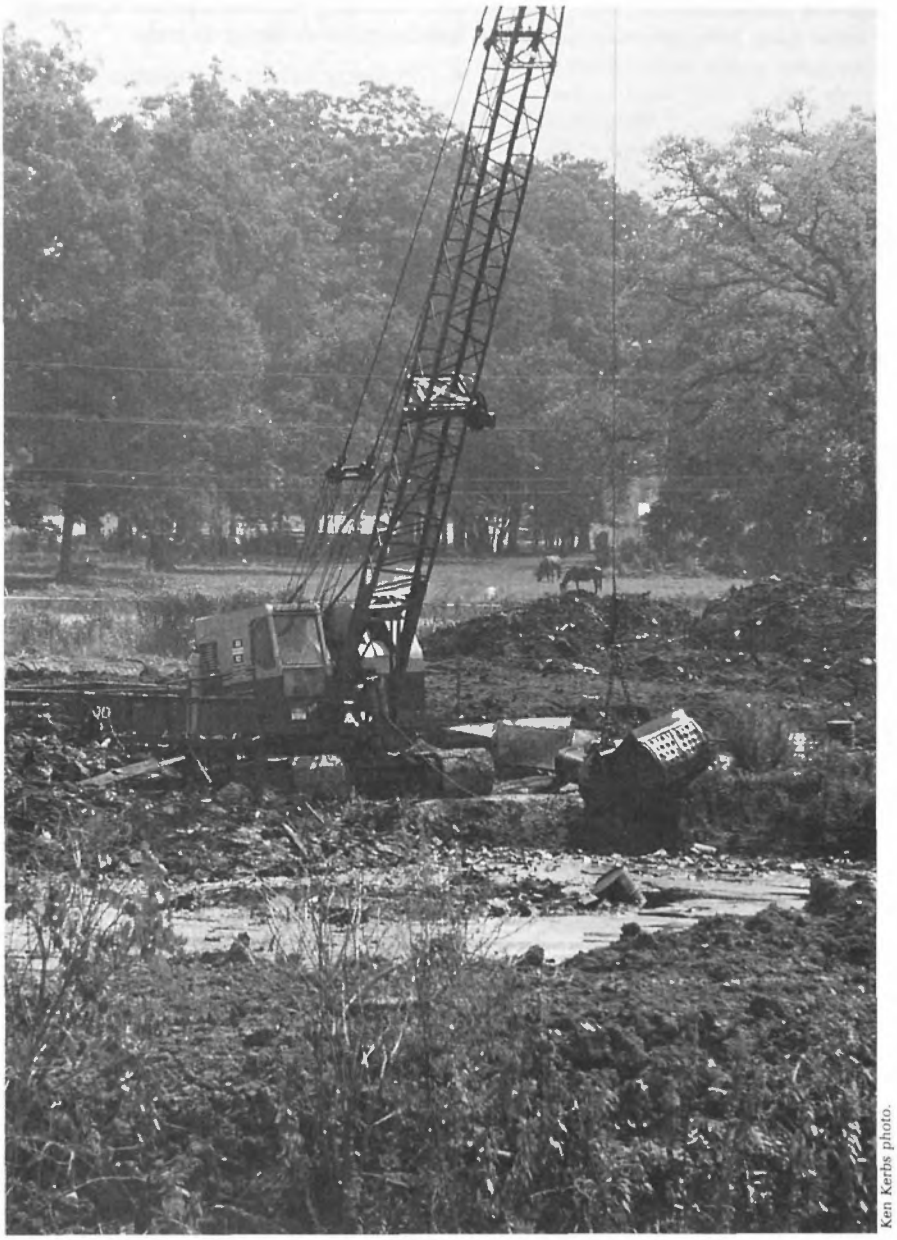
To our knowledge, this was the first public recognition by EPA that environmental hazards disproportionately impact people of color and the first time the Administrator had agreed to meet with any group made up primarily of people of color to discuss environmental equity issues. It was also the first time that an EPA Administrator put together an internal workgroup to focus directly on these issues.

While William Reilly has recognized the disproportionate impact of environmental hazards on people of color, and has directed the Agency to address this issue, the proof of the pudding will be not in the discourse or in the report itself, but in tangible and productive outcomes. □

IN OUR BACKYARDS

by Robert D. Bullard

Minority Communities Get Most of the Dumps



Ken Kerbs photo.

Superfund site in rural Louisiana.

(Dr. Bullard is a professor of sociology at the University of California, Riverside, and author of Dumping in Dixie: Race, Class, and Environmental Quality *(Westview Press, 1990).*
Research for this article was supported in part by a grant from the Fund for Research on Dispute Resolution.)

Despite the numerous laws, mandates, and directives by the federal government to eliminate discrimination in housing, education, and employment, government has made few attempts to address discriminatory environmental practices. People of color (African Americans, Latinos, Asians, and Native Americans) have borne a disproportionate burden in the siting of municipal landfills, incinerators, and hazardous waste treatment, storage, and disposal facilities.

Environmental inequities do not result solely from social class factors. The ability to escape a health-threatening physical environment is usually correlated with income; however, racial barriers complicate this process for millions of Americans. African Americans, no matter what their educational or occupational achievement or income level, are exposed to greater environmental threats in their neighborhoods because of their race.

An African American family with an income of $50,000 is as segregated as an African American family on welfare. Institutional racism influences local land-use policies, industrial facility siting, and where people of color live, work, and play.

Waste sites and other noxious facilities are not randomly scattered across the landscape. Waste generation is directly correlated with per capita income, but few garbage dumps and toxic waste sites are located in affluent suburbs. Waste facilities are often located in communities that have high percentages of poor, elderly, young, and minority residents.

The first major empirical study that linked municipal solid waste siting with the race of surrounding residents was conducted in 1979 and chronicled in *Invisible Houston: The Black Experience in Boom and Bust*. From the early 1920s to the late 1970s, all of the city-owned municipal landfills and six of the eight garbage incinerators were located in African American neighborhoods.

From 1970 to 1978, three of the four privately owned landfills that were used to dispose of Houston's garbage were located in African American neighborhoods. Although African Americans made up only 28 percent of

Houston's population, 82 percent of the solid waste sites (public and private) were located in African American neighborhoods.

African American neighborhoods from South Central Los Angeles to Southeast-side Chicago to Rahway, New Jersey, are vulnerable to waste facility siting. As recently as 1991, Residents Involved in Saving the Environment, or RISE (a biracial community group), challenged the King and Queen County (Virginia) board of supervisors for selecting a 420-acre site in a mostly African American community for a regional landfill. From 1969 to 1990, all three of the county-run landfills had been located in mostly African American communities.

Siting inequities are not unique to facilities where household garbage is dumped. The findings I recently published in *Dumping in Dixie* revealed that African Americans bear a disparate burden in the siting of hazardous waste landfills and incinerators in South Louisiana's "Cancer Alley" and Alabama's "blackbelt." The nation's largest commercial hazardous waste landfill, the "Cadillac of dumps," is located in Emelle, Alabama. African Americans make up 90 percent of Emelle's population and 75 percent of the residents in Sumter County. The Emelle landfill receives wastes from Superfund sites and from all 48 contiguous states.

Few government studies have examined siting inequities. A notable exception is a 1983 U.S. General Accounting Office (GAO) study. GAO found four off-site commercial hazardous waste landfills in EPA's Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee). Three of the four landfills were located in mostly African American communities, although African Americans made up only one-fifth of the population in the region.

Siting inequities in EPA's Region 4 have not disappeared. In 1992, African Americans still make up about one-fifth of the population in the region. However, the region's two currently operating off-site commercial hazardous waste landfills are located in zip codes where African Americans are a majority of the population. For those who would dismiss this pattern as a function of social class, it is important to note that there has never been a shortage of poor white communities in Region 4 (not that anyone is advocating siting waste facilities in low-income white areas).

Siting disparities are not unique to African American communities. In California, the mostly Latino East Los Angeles and Kettleman City have come under siege from companies trying to site hazardous waste incinerators. Kettleman City, a rural farmworker community of perhaps 1,500 residents, of which 95 percent are Latino, already has a hazardous waste landfill. With the aid of the California Rural Legal Assistance Foundation, local residents have contested the construction of the hazardous waste incinerator. (See article on page 47).

Siting inequities are national in scope. The Commission for Racial Justice's landmark *Toxic Wastes and Race* study found race to be the single most important factor (i.e., more important than income, home ownership rate, and property values) in the location of abandoned toxic waste sites. The 1987 study also found that:

- Three out of five African Americans live in communities with abandoned toxic waste sites
- Sixty percent of African Americans (15 million) live in communities with one or more abandoned toxic waste sites
- Three of the five largest commercial hazardous waste landfills are located in predominately African American or Latino communities and account for 40 percent of the nation's total estimated landfill capacity in 1986
- African Americans are heavily overrepresented in the population of cities with the largest number of abandoned toxic waste sites, which include Memphis, St. Louis, Houston, Cleveland, Chicago, and Atlanta.

Communities with hazardous waste incinerators generally have large minority populations, low incomes, and low property values. A 1990 Greenpeace report, *Playing with Fire*, confirmed what many environmental justice activists had suspected all along:

- The minority portion of the population in communities with existing incinerators is 89 percent higher than the national average
- Communities where incinerators are proposed have minority populations 60 percent higher than the national average
- Average income in communities with existing incinerators is 15 percent less than the national average
- Property values in communities that host incinerators are 38 percent lower than the national average
- In communities where incinerators are proposed, average property values are 35 percent lower than the national average.

Native American lands have become prime targets for waste disposal proposals. More than three dozen reservations have been targeted for landfills and incinerators. Because of the special quasi-sovereign status of Indian nations, companies have attempted to skirt state regulations.

In 1991, the Choctaws in Philadelphia, Mississippi, defeated a plan to locate a 466-acre hazardous waste landfill in their midst. In the same year, a Connecticut company proposed to build a 6,000-acre municipal landfill on the Rosebud reservation in South Dakota—a project dubbed "Dances with Garbage." The Good Road Coalition, an alliance of grass-roots groups, blocked the proposal to build the giant municipal landfill on Sioux lands.

A new form of environmental activism has emerged in communities of color. Activists have begun to challenge discriminatory facility siting, biased local land-use policies, illegal redlining practices, housing discrimination, and other problems that threaten public safety. People of color have formed groups and begun to build a national movement against what they defined as environmental injustice. A national policy is needed to begin addressing environmental inequities. □

FARM WORKERS: AMONG THE LEAST PROTECTED

by Ivette Perfecto
and Baldemar Velásquez

They Suffer the Most from Pesticides

Copyright John W. Emmons.

World Resources Institute estimates that 313,000 farm workers in the United States suffer from pesticide-related illnesses each year.

While many people are aware of the dangers of pesticide residues in food and the detrimental effects of pesticides on the environment, few appreciate the serious health hazards that pesticides pose to farm workers and their families. The fact is that farm workers are disproportionately affected by the pesticides that characterize agriculture in the United States.

The United States is the largest single user of pesticides in the world.

(Dr. Perfecto is an Assistant Professor at the University of Michigan's School of Natural Resources. Valásquez is President of the Farm Labor Organizing Committee in Toledo, Ohio.)

By EPA's own estimate, each year U.S. farmers use about 1.2 billion pounds of pesticides at an expenditure of $4.6 billion. More than 600 active ingredients are combined with other ingredients to form approximately 35,000 different commercial formulations. Yet, full evaluation of their hazards lags far behind the development of new products. Less than 10 percent of the products in current use have been fully tested for potential health effects; of the 600 active ingredients in these products, EPA was recently able to provide full safety assurance for only six.

Those who suffer most directly from the chemical dependency of U.S. agriculture are farm workers, who are working in the fields while some of the most toxic substances known to humans are sprayed. The World Resources Institute has estimated that as many as 313,000 farm workers in the United States may suffer from pesticide-related illnesses each year. Another source estimates that 800 to 1,000 farm workers die each year as a direct consequence of pesticide exposure.

Ninety percent of the approximately two million hired farm workers in the United States are people of color: The

majority are Chicanos, followed by Puerto Ricans, Caribbean blacks, and African Americans. This primarily minority population has among the least protected jobs of all workers. Farm workers are intentionally excluded from the Occupational Safety and Health Act (OSHA), which governs health and safety standards in the workplace; from the Fair Labor Standards Act, which governs minimum wages and child labor; and most importantly, from the National Labor Relations Act, which guarantees the right to join a union and bargain collectively.

The exclusion of farm workers from OSHA regulations has particular relevance to the pesticide issue. Under OSHA's principles of environmental hygiene, when workers are exposed to a toxic substance in the workplace the priority course of action is to eliminate the substance from the workplace altogether or to replace it with a non-toxic or less toxic substitute. If this is impossible, the option next in priority is to separate the workers from the toxic substance. The last option usually involves provisioning workers with some protective measures (e.g., protective clothing, masks, glasses, etc.).

Not being covered by OSHA, and therefore not able to legally petition the Occupational Safety and Health Administration, farm workers are forced to petition EPA, which is the agency in charge of regulating pesticides. But such petitioning offers few formal legal remedies, leaving farm workers virtually unprotected against pesticide hazards. Under the Federal Insecticide, Rodenticide, and Fungicide Act, which is intended to regulate pesticide use, "re-entry" times (the interval that must elapse between the application of a pesticide and workers' re-entry into the fields) have been set for just 12 pesticides. Moreover, there is no provision to assure that these regulations specifying re-entry times of either 24 or 48 hours are enforced.

In fact, it is not uncommon to see farmers spraying while workers are in the field. A study conducted by the Florida Rural Legal Service in 1980 reported that 48 percent of more than 400 farm workers interviewed had been sprayed at least once while harvesting. Seventy-five percent of the workers surveyed said they had experienced one or more symptoms of pesticide poisoning while at work. In addition, many growers do not provide workers with protective masks or gloves and do not inform workers when and what chemicals are being used.

Furthermore, evidence indicates that for some acutely toxic pesticides, extant protective measures are ineffective. A case in point is the deadly pesticide ethyl parathion, a leading cause of farm worker poisoning in the United States and worldwide. In 1986, EPA found that parathion caused poisoning among all categories of workers who came in contact with it. In addition, EPA admitted that parathion was associated with unacceptable risks to farm workers and that poisonings occurred even under the most stringent protective conditions. In other words, little or no margin of safety exists for parathion use. Nevertheless, it is still legally used on nine major crops in the United States.

Parathion is only one of many acutely toxic pesticides belonging to the organophosphate family. These pesticides came into wide use approximately 20 years ago, when environmental awareness called for limitations on persistent pesticides that were contaminating the environment and damaging wildlife. Many of the persistent pesticides belong to the organochloride family and have been associated with chronic health effects, including cancer, reproductive malfunctions, birth defects, and a broad range of developmental and behavioral growth problems. The organophosphates, on the other hand, degrade much faster and therefore reduced the risk for wildlife and for consumers.

However, for farm workers the switch from organochlorines to organophosphates meant exposure to more acutely toxic pesticides, since many of these rapidly degradable pesticides (parathion is one of them) are characterized by acute toxicity, which can cause dizziness; vomiting; irritation of the eye, upper respiratory tract, and skin; and death. There is an irony here that has not escaped the attention of farm workers: The new wave of environmental consciousness, which forced welcome changes in production technologies, may have actually made things more precarious for farm workers, substituting acute symptoms for chronic ones.

In the past, the EPA has operated under the assumption that these chemicals are essential for high productivity in U.S. agriculture. This notion was recently challenged by a 1989 report of the National Research Council, which concluded that low input agriculture was not significantly less productive than chemically intensive agriculture. As noted in this report, pesticides are not the only option for pest control. Integrated Pest Management, for example, is a strategy that combines alternative methods of pest control (including biological and cultural controls) to achieve a significant reduction in chemical pesticide applications.

Public awareness of these issues is burgeoning, and, consequentially, pressure on agencies like EPA is likely to intensify. Farm workers, the vast majority of whom are people of color, are building their consciousness and are taking their place alongside industrial workers in demanding a safe workplace. Environmentalists, heeding the call for environmental justice, are being challenged not to stand by and allow environmental policies that solve problems for some, yet leave others at risk—and they are responding. Consumers, while insisting on safe produce, are increasingly unwilling to allow others to be poisoned in their stead.

All this is occurring in the context of new revelations that chemical pesticides have not been all that successful in the first place and that alternatives are already available which could lead to a new agriculture. Such an agriculture—call it sustainable or ecological or low input or simply rational—is now on the horizon. The time seems ripe to reject the anachronistic notion that chemical poisons must be part and parcel of modern agriculture and redefine the meaning of "modern" to include the health and safety of farm workers, farmers, consumers, and the environment. □

HEALTH CONCERNS FOR FISH-EATING TRIBES?

by Patrick C. West

Government Assumptions Are Much Too Low

Ottawa/Chippewa Indians, members of the Grand Traverse Band, net fish in Lake Michigan.

Inter-Tribal Fisheries and Assessment Program photo.

There is concern that Native Americans may consume much greater amounts of Great Lakes fish than the general population and hence be at greater risk for dietary exposure to toxic chemicals.

To date, most studies of fish consumption have looked at licensed sport fishermen; they inadvertently exclude reservation-based Indian subsistence fishermen, who, by treaty rights, are not required to obtain state fishing licenses. The few studies that have been completed so far provide only indirect evidence that Michigan Great Lakes reservation Indians may have disproportionally high fish consumption levels.

One study of a traditionally oriented subsistence tribe in Alaska indicates high levels of fish consumption; and a fine study of the Grassy Narrows band of Ojibwa in Ontario, Canada, indicates that they were exposed through fish consumption to higher levels of mercury from a spill than was the surrounding white community. However, there is scant evidence on the fish consumption patterns of Native Americans in the lower 48 states, and the applicability of these northern-tribe studies to southern tribes could be questionable.

Not all tribes may be as traditionally resource based as the Alaska and Ontario tribes studied, and certainly not all are fishery based. The Blackfeet in Montana, for example, traditionally refuse to eat fish. But others, such as certain Northwest tribes, and Michigan and other Great Lakes based tribes, have a long cultural tradition of fishing-based economies similar to the tribes discussed above. For these tribes, we might expect higher than average fish consumption.

The Michigan Great Lakes tribes of the Bay Mills, Grand Traverse, and Sault Ste. Marie bands of Chippewa all have a long and well documented fishing culture. When they ceded the lands of Michigan in the Treaty of 1836, they carefully reserved their most important resource, the Great Lakes fishery. (These rights were recently upheld by the courts.)

With this resource so highly valued both culturally and economically by these tribes, we would expect to find high levels of fish consumption—especially on the Bay Mills reservation, where high levels of poverty prevail and subsistence small-skiff fishermen are common. Even for the commercial fishing sector of the economy, it has been well established that much extra fish is distributed among crew members for subsistence consumption (as part of labor compensation) and as part of cultural ritual and tradition.

In addition to these historical and cultural indicators, we have evidence that off-reservation Native Americans in Michigan consume more than whites or than other minorities. Off-reservation Indians do need state fishing licenses, and in our recent statewide survey of consumption by Michigan sport fishermen, we picked up a significant subsample of off-reservation Native Americans. The sample was spread over 18 randomly drawn cohorts, from mid-January to early June 1988; respondents were asked to recall detailed fish-consumption patterns for the seven-day period prior to filling out the survey.

The current State of Michigan standard used to regulate point discharge of toxic chemicals into surface waters (Michigan Rule 1057) assumes a fish consumption rate of 6.5 grams/person/day. The formula is very complex. However, the important thing to emphasize here is that the greater the fish consumption assumed in the formula, the tighter the standard becomes—in other words, the lower the levels are set for toxics permitted

(Dr. West is Associate Professor of Natural Resource/Environmental Sociology and Samuel T. Dana Professor of Outdoor Recreation at the School of Natural Resources, University of Michigan.)

to be discharged by industrial and municipal drain pipes. If assumed consumption is too low, toxic emissions may be permitted that are a danger to public health.

In our study, the average consumption for the full sample was 18.3 grams/person/day, quite a bit higher than the 6.5 gram assumption currently used in Rule 1057. Further, when the sample was broken down by ethnic groups, non-reservation Native Americans consumed 24.3 grams/person/day compared to 20.3 grams/person/day for other minorities, and 17.9 grams/person/day for whites. In an analysis involving multiple variables, we found that middle-age Native Americans had the highest rates of consumption of all Native Americans, or 30.6 grams/person/day.

We would expect on-reservation subsistence fish consumption to be even higher than these levels, especially on poorer reservations, such as Bay Mills, where poverty dictates subsistence fishing as a protein source that is also sanctioned by traditional culture. For all Great Lakes tribes with high fish consumption levels, there is strong reason for concern for the public health of the reservation. By way of illustration, studies have found a high correlation between high levels of consumption of Great Lakes fish and high levels of PCBs in the blood of the consumers.

In sum, a great deal of concern is warranted for the health of Michigan Great Lakes Indians based on studies done elsewhere; based on our sport fish consumption study that includes off-reservation Indians in Michigan; and based on studies tying high Great Lakes fish consumption with high toxic loads in the human body. However, direct studies of on-reservation fish consumption are badly needed for Great Lakes tribes as well as for those in the Pacific Northwest and elsewhere. A major study is about to get underway in the Pacific Northwest, and Michigan tribes have approached EPA about the need for studies on their reservations. These will be key studies not only for assessing the potential impact of fish consumption on the health of Great Lakes tribes but also in terms of protecting their Great Lakes fishing rights. □

BREATHING POLLUTED AIR

by
D. R. Wernette
and
L. A. Nieves

Minorities Are Disproportionately Exposed

At Argonne National Laboratory, scientists have been studying the relative potential for exposure of minority population groups to substandard outdoor air quality. The studies have focused on areas identified by EPA as failing to attain national ambient air quality standards.

Under the Clean Air Act, EPA has established standards for ground-level ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, and particulate matter and annually identifies areas having excess levels of these pollutants. These so-called "nonattainment" areas generally consist of counties of many square miles, and residents' exposure to air pollution surely varies depending on where individuals live and work within an area. Nevertheless, the racial and socioeconomic makeup of the population in these areas can imply differences in potential exposure to pollutants and may suggest directions for research and remedial action. So far, scientists have examined these differences for African Americans, Hispanics, and whites (non-Hispanic).

(Wernette is a sociologist and Nieves is an economist in the Environmental Assessment and Information Systems Division at Argonne National Laboratory. *The research described in this article has been supported under contract with the U.S. Department of Energy, Office of Minority Economic Impact.)*

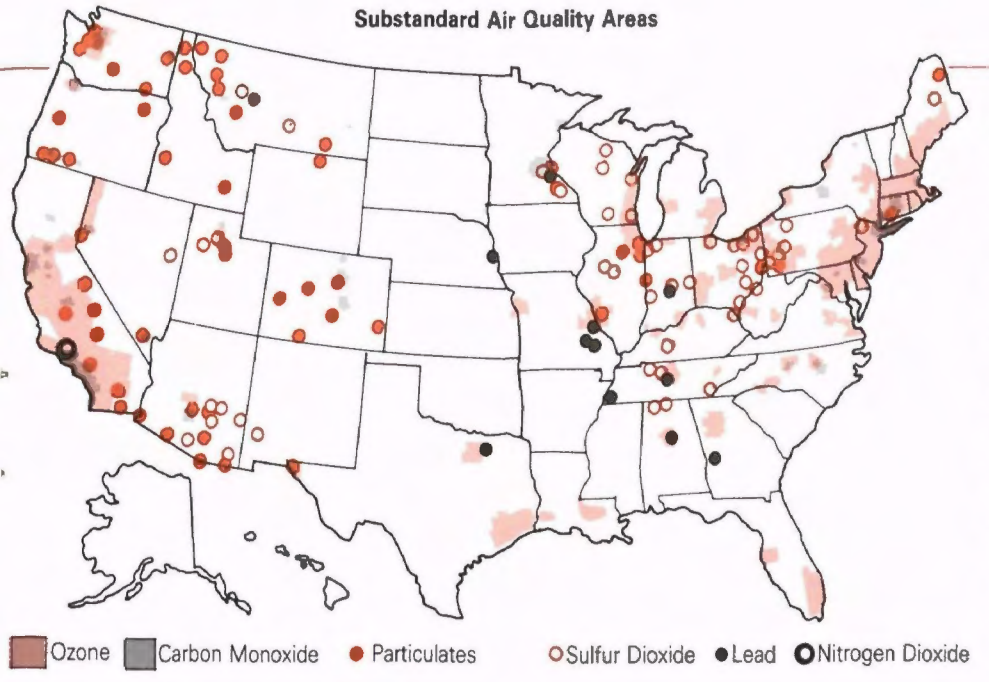
In the United States, excluding Alaska and Hawaii, higher percentages of both African Americans and Hispanics live in areas with reduced air quality than do whites. For instance, 52 percent of all whites live in counties with high ozone concentrations; for African Americans, the figure is 62 percent, and for Hispanics, 71 percent. Population group distributions were found to be similar for the other pollutants cited above.

These differences in potential exposure to pollutants may be due in part to minority population distributions across regions. Hispanics, for example, are more concentrated in the West, where there is a greater tendency than elsewhere for the population as a whole to be exposed to high levels of ozone. However, the different regional concentrations of population groups do not account for all of the differences in their potential exposure to reduced air quality. Not only are percentages of minorities living in substandard air quality areas higher for the country as a whole, but they are higher when the four U.S. census regions are considered separately.

For example, 50 percent of whites in the Northeast census region live in areas with excessive carbon monoxide. In contrast, 85 percent of northeastern African Americans and 88 percent of northeastern Hispanics reside in those areas.

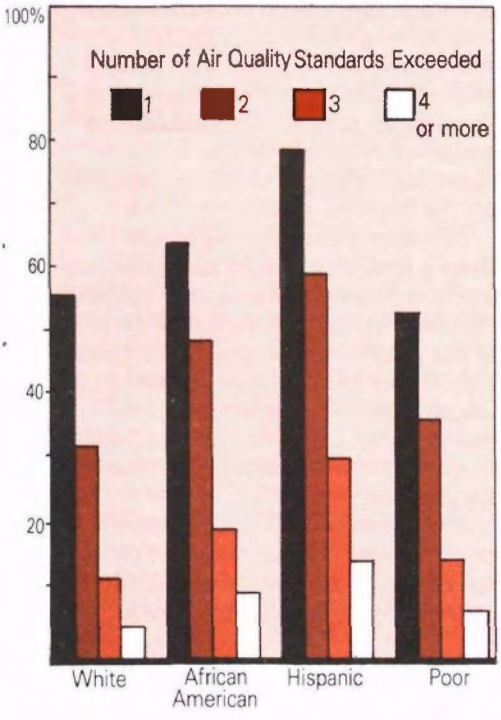
In 1990, 437 of the 3,109 counties and independent cities in the United States failed to meet at least one of the EPA ambient air quality standards. Of these counties, 136 had excessive levels of two or more pollutants, 29 exceeded standards for three or more pollutants, seven exceeded standards for four or more pollutants, and one exceeded standards for five pollutants.

To what extent do the proportions of whites, African Americans, and Hispanics living in these counties differ? As the bar chart shows, 57 percent of all whites, 65 percent of African Americans, and 80 percent of Hispanics live in the 437 counties with substandard air quality. Out of the whole population, a total of 33 percent of whites, 50 percent of African



Americans, and 60 percent of Hispanics live in the 136 counties in which two or more air pollutants exceed standards. The percentages living in the 29 counties designated as nonattainment areas for three or more pollutants are 12 percent of whites, 20 percent of African Americans, and 31 percent of Hispanics. Finally, 5 percent of whites, 10 percent of African Americans, and 15 percent of Hispanics live in the seven counties that exceed standards for four or more pollutants. In short, the percentage of minority populations in these areas is consistently greater than the percentage of whites as the number of air pollutant criteria that are exceeded increases from one to four or more.

Percentage of Population Groups Living Where Air Quality Standards are Exceeded



The rightmost bar of the chart shows the percentages of the population with incomes below the poverty level in relation to the number of pollutants that exceed standards. Regardless of the number of pollutants that exceed standards, lower percentages of poor people (from all population groups) are potentially exposed to substandard air quality than percentages of either African Americans or Hispanics. This is the case for one or more pollutants as well as for four or more pollutants.

This is noteworthy because both African Americans and Hispanics have above-average percentages of their populations with incomes below the poverty line. One might expect such income differences to cause the differences in percentages of the population living in substandard air quality areas shown here—and, indeed, low income may contribute to the patterns observed. However, a comparison between poor, African American, and Hispanic percentages shows that these minority groups are more concentrated in such counties than the poor population in general. This suggests that more than low income is a factor in the above-average percentages of African Americans and Hispanics in areas with reduced air quality.

Air pollutants that cause substandard air quality come from many and varied sources including traffic, industry, and even that cozy fire in the fireplace. Industrial and electricity-generating facilities are major sources of some of the contaminants of concern. For that reason, the relationship between minority population percentages and concentrations of such facilities is also of interest.

Air-polluting facilities are not evenly distributed over the four regions of the country or between urban and rural counties. Almost half of the nearly 3,000 major air-polluting facilities nationwide are in the South, followed in order by the North Central, West, and Northeast regions. Likewise, 63 percent of the facilities are in urban (Metropolitan Statistical Area) counties. Of all U.S. counties considered urban, only 12 percent have high percentages of minorities (greater than 31 percent), but these high-minority counties contain 21 percent of all urban facilities. Thus, the air-polluting facilities are disproportionately concentrated in counties with high percentages of minorities. Specifically, among urban counties, those with high minority population concentrations have more than twice as many air-polluting facilities as those with below-average (less than 14 percent) minority populations.

We find that air quality trends and the distribution of air-polluting facilities analyses tell the same story: Minorities live in greater concentrations both in areas with above-average numbers of air-polluting facilities and in air-quality problem areas. Why this is the case is the focus of our continuing research.

Whatever the reason(s), these patterns have important implications because of the different distribution of the costs and benefits of these facilities. The gasoline, electricity, chemicals, and other goods from these facilities may benefit individuals around the world, but the pollution-related health and economic costs of the facilities are more likely to be borne by the people in the adjacent areas, who are identified by this research as disproportionately African Americans and Hispanics. □

Barbara R. Rascher photo. Jackson, Mississippi, Clarion-Ledger.

ENVIRONMENTAL EQUITY: EPA'S POSITION

by William K. Reilly

Protection Should be Applied Fairly

I have a certain idea about environmental protection: It is about *all* of us; it benefits *all* of us. In fact, it improves our health, defends our natural systems, and involves us in the humanly defining enterprise of stewardship. That's why talk of environmental racism at EPA and charges that the Agency's efforts pay less regard to the environments of poor people infuriate me. I am determined to get to the bottom of these charges, to refute or respond to them.

At its core, environmental equity means fairness. It speaks to the impartiality that should guide the application of laws designed to protect the health of human beings and the productivity of ecological systems on which all human activity, economic activity included, depends. It is emerging as an issue because studies are showing that certain groups of Americans may disproportionately suffer the burdens of pollution. And it is emerging because across America people of color are forging a constituency to put this issue squarely on the national agenda.

The debate surrounding equity is deeply rooted in American history, for our tradition suggests, as Alexander Hamilton stated, "that every individual of the community at large has an equal right to the protection of government." Despite notable gaps between ideal and practice, this principle continues to undergird our notions of proper governance.

A conference in Michigan and a report by the United Church of Christ raised my concern about the equity issue. They indicated that certain

(Reilly is Administrator of EPA.)

Mississippi Choctaws protest proposed toxic waste dump.

waste facilities tended to be sited disproportionately in poor and minority communities. I formed an Environmental Equity Workgroup, comprised of 40 professionals from across the Agency who were tasked with assessing the evidence that racial minorities and low-income communities are exposed to higher environmental risks than the population at large. I also wanted to know: What could EPA do to address any disparities that were identified?

It was already clear that EPA had entered a pivotal period in our history, a time of transformation, formidable challenges, fresh directions. The concept of risk—its assessment and management—is a pervasive theme. This follows more than two decades of doggedly pursuing an improved environment. The United States has spent approximately $1.5 trillion to attack contamination of the air, water, land, and food supply, registering, in many cases, substantial progress and more than a few triumphs. No other country comes close to this record.

In one of my first actions as Administrator, I asked EPA's Science Advisory Board (SAB) to suggest ways to improve the process of identifying, assessing, and comparing multiple risks. The SAB report, published in 1990 and entitled *Reducing Risk: Setting Priorities and Strategies for Environmental Protection*, urges EPA to target the most promising opportunities for reducing the most serious risks to human health and the environment. The health risks emphasized in the report include ambient air pollution; exposure to dangerous chemicals, especially workplace exposure; indoor air pollution; and contamination of drinking water, particularly by lead.

Risk is central to equity, and the Environmental Equity Workgroup started with some basic questions: How is environmental risk distributed across population groups? How have EPA programs addressed differential risks in the past? How can we do so in the future?

Of course, these questions are not new. Over 20 years ago, a group of African Americans inhabiting South Carolina's Gullah Islands sent an early warning signal through the environmental movement. Although living at subsistence levels on fish and garden produce and still speaking a Creole dialect deeply enriched by African words, the Gullah community showed great skill in mobilizing public opinion and using the legal system to defeat a German chemical company's efforts to build a major processing plant that would have disturbed the delicate ecology of the wetlands and shallow seas around their islands.

In 1982, a demonstration against the siting of a polychlorinated biphenyl (PCB) landfill in predominantly black Warren County, North Carolina, became a watershed in the movement to link environmental issues with social justice. In response to the protests, Representative Walter Fauntroy (DC) requested the General Accounting Office (GAO) to investigate the race and income dimensions of locating dangerous and dirty facilities. Answer: Blacks were disproportionately represented in three of the four sites that were surveyed.

By January 1990, the debate over environmental equity had progressed sufficiently for the University of Michigan's School of Natural Resources to hold a conference on the relationship between race and the incidence of environmental hazards. In its aftermath, a group of social scientists and civil rights leaders informally joined together as the Michigan Coalition. It was the arguments of this group that prompted me to create the Environmental Equity Workgroup.

At EPA, our approach to environmental equity is drawing on three interwoven strands: the Agency's strengthened relationship with minority academic institutions; ambitious goals we have for hiring many more racial minorities in policy and decision-making positions at the Agency; and plans to address the distribution and management of environmental risk. Prior to the workgroup's appointment, EPA had developed specific programs to increase employment opportunities and reach out to minority academic institutions. The workgroup, consequently, focused on the distribution of risks.

In my charge to this workgroup, I emphasized EPA's basic goal of making certain that the consequences of environmental pollution should not be borne unequally by any segment of the population. EPA has a responsibility to identify such risks and target our scarce resources to address them.

The workgroup's draft report has now been published. It found that data on the incidence of health effects among different race and income groupings are poor—with one notable exception, lead poisoning. A much higher percentage of African American children have unacceptably high levels of lead in their blood. Moreover, our analyses suggested, some low-income and minority communities may experience greater exposure to other pollutants.

Using what data are available, then, the task force on environmental equity has turned up only one instance of environmental contamination that correlates with race: high blood lead in African American children.

Income levels are a somewhat clearer case, although again data from systematic studies are lacking. Property values and rentals are generally higher in less polluted areas. Supply and demand EPA cannot reverse. But we can improve the overall quality of air in cities.

What about poor rural areas? A March 1990 study by Clean Sites, Inc., a private nonprofit group, identified 470 rural poor counties in the United States. Although 15 percent of all counties in the United States are rural and poor, these counties contain only 4 percent of the total sites contaminated by hazardous waste, 2 percent of the active hazardous waste storage and treatment facilities, and 2 percent of the nation's Superfund sites. The study concluded that when Superfund sites are identified in rural poor counties, they receive about the same level of federal attention as Superfund sites nationally.

EPA's workgroup on environmental equity made several recommendations to elevate and improve the Agency's

Expanding the Dialogue

response to environmental equity issues (see box). Informed decisions about environmental equity require a better database, one that should provide an objective basis for assessment of risks by income and race. The Agency should also move to integrate considerations of equity in risk assessment. EPA should employ creative measures to address equity issues and target high-risk populations. Mechanisms should be established to ensure that equity is incorporated into long-term planning. Finally, the Agency must significantly improve its ability to communicate with racial minority and low-income communities.

EPA alone cannot correct whatever imbalance has developed in the application of environmental protection. By way of example, while the Agency sets technology standards for what comes out the stacks, or what type of liner must be used to protect ground water, the siting of landfills and incinerators is largely the function of private firms, state regulators, and local zoning boards. Addressing equity issues will need the concerted efforts of state and local governments and of the private sector, as well.

EPA is not wasting any time, however, waiting on the efforts of others or even on the results of the changes we, ourselves, are making. We have active programs underway to increase the hiring of minorities and to involve minority academic institutions in environmental research. And over the past two years, each of EPA's 10 regional offices has launched one or more special projects to investigate problems of environmental inequity and to take steps to remedy them. From bringing enforcement actions to improve drinking water in migrant farm worker camps in California to assuring equitable enforcement across communities regardless of income level to targeting lead for aggressive reduction efforts, many EPA offices were well engaged in equity issues even before the task force convened. (See the article on pages 54-57.)

In the final analysis, lasting progress will depend on having the right people in the right place. In the case of environmental equity, this means having more representatives from minorities making decisions and managing programs. At EPA, we are committed to hiring and promoting minorities and to encouraging young people to pursue education and choose careers in environmental disciplines. As a start, I note that over the past three years, a time in which President Bush has proposed and Congress has provided funding to add 23 percent to EPA's personnel, new minority hirings accounted for almost 25 percent of the total. Nevertheless, only 10 percent of our managerial staff is drawn from minority groups, and in the executive

Hazardous cargo sign directs trucks through poor community in Texas City, Texas.

Findings and Recommendations of EPA's Environmental Equity Workgroup

Convened by Administrator Reilly, EPA's Environmental Equity Workgroup was asked to assess the evidence that racial minority and low-income communities bear a higher environmental risk burden than the general population and to consider what EPA might do about any identified disparities.

The workgroup prepared a report to the Administrator which was submitted to him in February 1992 and made public. The report reviewed existing data on the distribution of environmental exposures and risks across population groups. It also examined EPA programs with respect to racial minority and low-income populations.

It should be stressed that the findings and recommendations in the workgroup report—summarized below—constitute only a first step in the Agency's response to environmental equity concerns. They are intended to contribute to the national dialogue on environmental equity and to suggest further steps for EPA. There is much that we still need to learn, through both internal study and public debate.

Summary of Findings

- There is a general lack of data on environmental health effects by race and income. Although there are clear differences between racial groups in terms of disease and death rates, there is an absence of data to document the environmental contribution to these differences. For diseases known to have environmental causes, data are not typically disaggregated by race and socioeconomic group. The notable exception is lead poisoning. (See story on page 42.)
- While there are large gaps in data on actual health effects, it is possible to document differences in observed and potential exposure to some environmental pollutants by socioeconomic factors and race. Exposure is not the same as health effects, but this finding is nevertheless a clear cause for concern.
- Environmental and health data are not routinely collected and analyzed by income and race. Nor are data routinely collected on health risks posed by multiple industrial facilities, cumulative and synergistic effects, or multiple and different pathways of exposure. Risk assessment and risk management procedures are not in themselves biased against certain income or racial groups; however, improvements can be made in data collection procedures.

ranks minorities are just 4 percent. We have a long way to go.

To achieve better results in the future, our Minority Academic Institutions Task Force, comprised of senior managers and presidents of Historically Black Colleges and Universities (HBCUs) and Hispanic Associated Colleges and Universities (HACUs), has developed an action plan to strengthen EPA's relationships with their institutions. (See separate article on page 58.) In line with the task force's recommendations, EPA's undergraduate scholarship program

- Great opportunities exist for EPA and other government agencies to improve communication about environmental problems with members of low-income and racial minority groups. The language, format and distribution of written materials, media relations, and efforts in two-way communication all can be improved. In addition, EPA can broaden the spectrum of groups with which it interacts.

- EPA's program and regional offices vary considerably in terms of how they address environmental equity issues. Case studies of EPA program and regional offices reveal that opportunities exist for addressing environmental equity issues and that there is a need for environmental equity awareness training. A number of EPA regional offices have initiated projects to address high risks in minority and low-income communities.

- Native Americans are a unique racial group with a special relationship with the federal government and distinct environmental problems. Indian tribes often lack the physical infrastructure, institutions, trained personnel, and resources necessary to protect their members.

Summary of Recommendations

Despite data gaps, the workgroup believes that enough is known with sufficient certainty to make several recommendations to the Agency. These recommendations are also applicable to other public and private groups engaged in environmental protection activities. The job of achieving environmental equity is shared by everyone.

Our working principle in developing the following recommendations was succinctly stated in a memorandum from the Administrator: "The consequences of environmental pollution should not be borne disproportionately by any segment of the population."

- EPA should increase the priority that it gives to issues of environmental equity.

- EPA should establish and maintain information which provides an objective basis for assessing risks by income and race, commencing with developing a research and data collection plan.

- The Agency should incorporate considerations of environmental equity into the risk assessment process. It should revise its risk assessment procedures to ensure, where practical and relevant, better characterization of risk across populations, communities, or geographic areas. In some cases it may be important to know whether there are any population groups at disproportionately high risk.

- EPA should identify and target opportunities to reduce high concentrations of risk to different population groups, employing approaches developed for geographic targeting.

- Where appropriate, EPA should selectively assess and consider the distribution of projected risk reduction in major rule makings and Agency initiatives.

- EPA should selectively review and revise its permit, grant, monitoring, and enforcement procedures to address high concentrations of risk in racial minority and low-income communities. Since state and local governments have primary authority for many environmental programs, EPA should emphasize its concerns about environmental equity to them.

- The Agency should expand and improve its communications with racial minority and low-income communities and should increase efforts to involve them in environmental policy making.

- EPA should establish mechanisms to ensure that environmental equity concerns are incorporated in its long-term planning and operations.

—Robert M. Wolcott and
Reina Milligan

has been expanded, and a new graduate fellowship program has been added for students from HBCUs and HACUs pursuing advanced degrees in environmental fields. The first of these multi-year, $20,000-a-year fellowships is being awarded in the spring of 1992. In the current fiscal year, EPA has allocated $1.4 million—$1 million more than was available last year—to provide 40 new minority graduate fellowships each year, starting with the school year that begins next September, and to encourage employment at EPA after graduation.

Another effort that warrants attention is our new Environmental Science and Management Fellows Program. In 1990, EPA awarded National Urban Fellows a planning grant to establish a mid-career program for a Masters of Environmental Science Management degree that includes a year at Tufts University in Massachusetts and a 12-month mentorship at either EPA or another environmental organization. In addition to fully paid tuition, students receive stipends during the two years of the program. EPA will spend approximately $80,000 for each fellow. Already enrolled are the first eight students at Tufts; this year, another 10 start the program, with 15 more joining the team next year. In another program, an Environmental Science Scholarship of $120,000 was granted to the American Indian Science and Engineering Society for awarding competitive scholarships to Native Americans interested in following studies in the environmental sciences. The interest is strong: Over 450 students attended the first conference on career opportunities for minority students that EPA co-sponsored at Howard University in 1990. Last year, a second conference in Oakland, California, attracted 300 participants; this year, another was held in March in Atlanta, Georgia.

Meanwhile, we are trying to improve the opportunities for those already in the workforce. Since 1986, EPA has awarded almost $3 million in grants to the National Association of Minority Contractors to train firms run by minorities and women in the fields of hazardous waste removal and management, asbestos abatement, removal of leaky underground tanks, and radon mitigation and remediation. This year, the Agency will start a new training program in the removal of lead-based paints. And, acting through its small and disadvantaged business office over the past two years, EPA has awarded more than $915 million in contracts, grants, and cooperative agreements to companies owned by minorities. This program provides jobs in minority-owned firms to help clean up the environment, and it constitutes a singularly effective, practical, and tangible way to broaden the constituency for environmental improvement.

It is also undeniable that minorities usually benefit from—are, indeed, sometimes the chief beneficiaries of—more general efforts to protect the environment. New pesticide regulations, for example, will soon be in effect to protect farm workers and others exposed to these compounds from unsafe uses and storage practices. In 1991, we issued a final rule reducing the amount of lead in drinking water, with the highest risks being targeted for treatment first. We expect that neurological threats to over 20 million children will be reduced and that about 100,000 additional children will avoid detrimental effects. This year, EPA will propose banning lead solder and limiting lead in plumbing fixtures. We also expect to propose tightening the national ambient air quality standard for lead in the atmosphere.

The border zone between the United States and Mexico is an environmental hot spot, and the inevitable result is a rather severe set of environmental threats to the Hispanic populations there. Dysentery and hepatitis levels are high. In fact, these areas may be among the highest risk environments in the country. According to a new bilateral plan for the area, EPA and its Mexican counterpart are jointly expanding efforts to ensure adequate wastewater treatment and drinking water facilities where none now exist in poor border settlements, commonly called "colonias." Mexico is committed to providing $460 million over the next three years to environmental improvements in the region. In the next fiscal year, EPA, in addition to its substantial sewer and water projects (see article on page 61), will invest over $200 million implementing the border plan.

The whole country, meanwhile, stands to reap enormous health benefits from the historic Clean Air Act of 1990, which promises cleaner, clearer skies for all Americans—and especially for those who live in our largest and smoggiest cities. According to the South Coast Air Quality Management District in Los Angeles, California, children in the smoggiest areas suffer a 10- to 15-percent reduction in lung function compared with those in less polluted areas. Some 15 million African Americans (50 percent of the total) will be winners because of EPA's efforts to bring the most severely affected areas into compliance. Over 8.5 million Hispanics (60 percent of the total) will similarly gain from a vigorously implemented Clean Air Act.

Failures to achieve perfect equity in environmental matters are woven, along with other threads of triumph and defeat, into the full tapestry of American history. They are, in fact symptomatic of larger patterns of industrial growth and neglect and of sad legacies of inherited poverty and discrimination. It will take time and hard work to mend the fabric. Restrained by resources, jurisdiction, and knowledge, a government agency is necessarily limited in its capacity to affect larger cultural and social trends. Yet, within its domain, an agency of the United States government—situated as it is in long traditions of governance that compel close attention to questions of equity—must make every possible effort to redress obvious wrongs. At EPA, although we have just begun, we are well begun. □

THE ENVIRONMENTAL JUSTICE MOVEMENT

by Dorceta Taylor

No Shortage of Minority Volunteers

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Grass-roots activists in Louisiana take to the streets to protest pollution in their neighborhood.

For decades, many researchers and environmentalists argued that minorities were not involved in the environmental movement because they placed a low priority on environmental issues or they were not as knowledgeable as whites about the environment. However, minorities have changed that debate.

Since the late 1980s, large numbers of minorities have become involved with the environmental movement.

(Dr. Taylor, Ph.D graduate of the Yale School of Forestry and Environmental Studies and the Yale Department of Sociology, has written often on the environmental justice movement.)

They are participating in a sector of the movement called environmental justice. Why are minorities participating so actively now? Why do they participate in the environmental justice sector and not in the traditional or well-established sectors of the movement? What have been the effects of minority activism? Are minorities likely to participate in large numbers in the traditional and well-established sectors of the movement?

Several factors account for the surge in minority environmental activism. Here are some of the most important ones:

- The discovery of toxics in many minority communities
- The publication of research linking race, class, and disproportionate exposures to toxins
- The revelation that minority communities were targeted for the siting of hazardous environmental facilities
- The revelation that minorities were more likely to suffer from life-threatening environmental health problems than whites
- A response to NIMBYism, which said "not in my backyard" without asking whose backyard the problem ended up in
- The organization of conferences and

workshops on the issue of environmental and social justice

- A redefinition of what issues were considered "environmental"
- The linkage of civil rights issues with environmental issues
- The emergence of committed activists and leaders.

As many communities woke up to the reality that they were contaminated or had hazardous facilities in them, some organized to prevent further exposures and sitings. About the same time, research revealed that black, Hispanic, Native American, and Asian communities not only were more likely to have hazardous facilities, but that the facilities were deliberately sited in these communities because they were seen as "paths of least resistance." As minorities began paying increased attention to health risks and disproportionate exposure, environmental activism intensified.

This increased activism manifested itself in the call for environmental and social justice for people of color and the poor. It linked civil rights with environmental rights and re-introduced civil rights campaign strategies into environmental campaigns. So, although many researchers have argued that minorities are too busy struggling to meet basic needs to be concerned with environmental issues, minorities have redefined environmental issues as survival issues and have been organizing around them at unprecedented rates.

The environmental justice movement is a sector in which blacks, whites, Native Americans, Hispanics, and Asians from various social classes and ethnic groups unite to fight a wide array of issues that affect humans, flora, fauna, and the physical environment locally, nationally, and internationally. It is a movement which recognizes that injustices have occurred in the past that stem from racism and discrimination. Such practices have put communities of color at risk. The movement seeks remedies for these past injustices and seeks to promote fairness in future environmental actions.

In contrast to the traditional and well-established environmental groups, environmental justice groups rely heavily on volunteer support to carry out daily operations. They have few, if any, paid staff. They are kept going by the strong moral and political commitments of their members and by the personal zeal that volunteers bring to the cause. They tend to be informal and to have a limited hierarchical structure. These groups, which are often small in size, rely heavily on membership donations and on contributions of time and other nonmonetary resources like phone lines, space to store materials, food, housing for visiting organizers, and supplies. They run highly symbolic campaigns in which members and supporters participate in demonstrations, picketing, petition drives, boycotts, and nonviolent obstructions. Recruiting is not done from national mailing lists; people, on the spur of the moment, recruit friends, families, or coworkers to participate.

People of color feel comfortable participating in the environmental justice movement because it is a movement founded on the principles of fairness and justice.

People of color feel comfortable participating in the environmental justice movement because it is a movement founded on the principles of fairness and justice. It is a movement committed to building race and class coalitions. It is driven by grass-roots activism, and there is a strong articulation of civil rights and social justice. The movement provides the political space to articulate and work on issues relevant to minority communities in ways that encourage and respect minority participation. In the environmental justice movement, minorities can take a leadership role or they can be equals with whites interested in the same issues.

Minority participation has had a profound effect on the whole environmental movement. It has provided the environmental justice sector with the best and brightest minority environmental activists, leaders, scholars, and policy makers. It has provided the race, class, and ethnic diversity so sadly lacking in other sectors of the movement, and it has provided a platform from which to articulate the goals and concerns of a broad-based grass-roots movement.

In the larger environmental movement, minority participation has broadened the debate to include many issues which were being ignored. Minority participation has also forced a dialogue about race, class, discrimination, and equity. Because of minority participation, the plight of minority communities has been brought to the forefront. Minorities have also brought a new perspective to the movement and will be a part of any future environmental agenda that is being charted. By participating, minorities have also been able to show how distanced most traditional and well-established environmental organizations have become from the grass roots and the environmental concerns they have.

I predict that large numbers of minorities will continue to join the environmental justice sector because those who already belong are committed to mobilizing more minorities around environmental issues. I also predict that very few minorities will join the other sectors of the environmental movement. Unless the traditional and well-established sectors make radical changes to their agenda, their attitudes towards minorities, their coverage and support of issues affecting minority communities, their hiring policies, their analysis of how and which communities are impacted by environmental hazards, then few

minorities will find these organizations attractive enough to join.

A few predominantly white environmental organizations, like Greenpeace and the Center for Environmental Intern Programs (CEIP Fund, Inc.), have taken up the challenge from minority environmental activists and have collaborated on many projects with minority groups or have worked on the issue of job preparation and placement. For the most part, however, most environmental organizations not a part of the environmental justice sector are devoid of minority members, staff, or board members. They complain that they can't find "qualified" minorities to fill positions in their organizations. However, such claims have to be questioned because there seems to be no shortage of such minorities in the environmental justice sector.

Although there has been some unease between minorities and the traditional and well-established sectors of the movement, there are signs that both groups might be able to work together in the future. Many nonminority environmental groups sent observers to the First National People of Color Leadership Summit last October, and the number of collaborative projects is growing. Both minority and nonminority environmental groups have strengths that each can benefit from, but if these two different groups are to develop a meaningful relationship, many radical changes are required. □

THE MAINSTREAM ENVIRONMENTAL MOVEMENT

by John H. Adams

Predominately White Memberships Are Not Defensible

The statistics are plentiful and they are frightening. Three out of four toxic waste dumps are sited in predominantly African American or Latino communities. Two million tons of radioactive uranium tailings have been dumped on Native American lands. Three hundred thousand Latino farm laborers suffer from pesticide-related illnesses. This is a national disgrace.

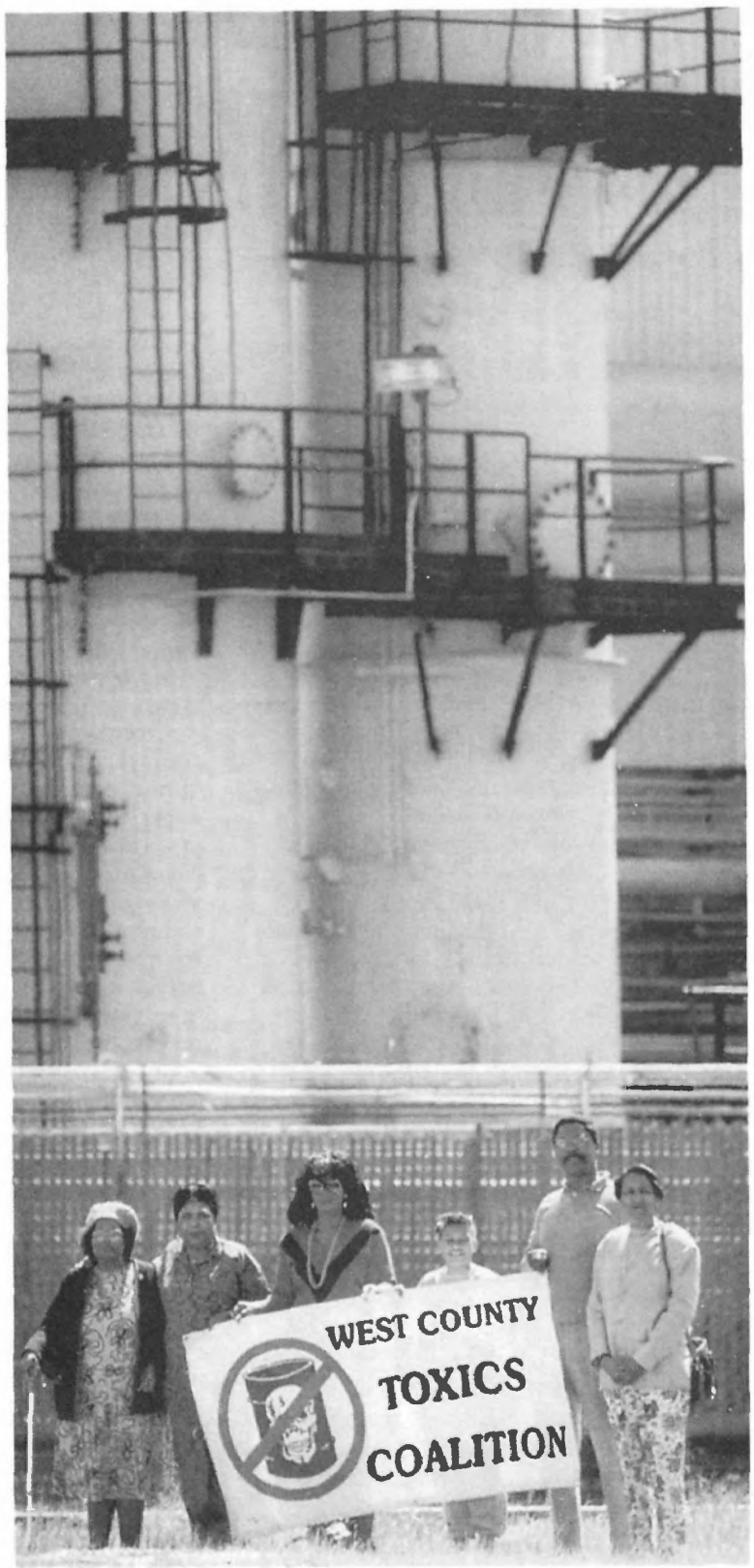
Statistics like these reflect a nationwide pattern of disproportionate environmental impact on people of color and the poor. This pattern stems from a profound flaw in the structure of the U.S. economy: Polluters do not absorb the costs of the environmental degradation they create, and society as a whole does not confront the problems and solve them. Instead, the problems are displaced. It is easier for a company to locate its factory or waste facility in eastern St. Louis than in the Upper East Side of Manhattan; it is cheaper for state governments to disregard the lead poisoning of poor children than to test and treat them as federal law requires. What this means is that we are building our economy on the backs of people of color and the poor.

Not to recognize this syndrome is to ignore one of the driving forces of environmental degradation in this country. The fact of disproportionate impact demands a disproportionate effort. Federal and state governments must direct a disproportionate share of clean-up funds and other environmental funding to these communities. The national environmental organizations must devote a disproportionate share of their resources to the public health problems affecting them.

But this alone is not enough. The environmental justice movement that has arisen to address the concerns of these communities is one of the strongest new forces for environmental reform to emerge in years. If we are to remain truly effective, the national environmental groups must strive to become allies of this movement and of the communities it represents.

This alliance will not take place overnight. It will require a great deal of work on the part of the national groups. We have been criticized by environmental justice activists, and there is much to criticize—the predominantly white staffs, the cultural barriers that have damaged and impeded joint efforts with activists

(Adams is Executive Director of the Natural Resources Defense Council, headquartered in New York City.)



Fighting back. The environmental justice movement is one of the strongest new forces for reform.

Kurt Rogers photo. San Francisco Examiner.

of color. The history is well documented: The mainstream environmental movement grew out of a white, middle-class effort to preserve the world's natural wonders. It is still true that the staffs of the major national organizations are disproportionately white and middle class, and it is not defensible.

It is critical that the national environmental groups listen to people of color on their own terms.

Environmental justice activists have also criticized the priorities of the mainstream environmental movement. The movement began with wilderness conservation, and there is no question that, in its early life, its work and vision only rarely encompassed the protection of human beings. But there is also no question that this is a movement that has matured far beyond its origins. I speak for NRDC, and I know I speak for many others, when I say that for mainstream environmentalists today the two critical issues—environmental violation of the Earth and environmental violation of its human inhabitants—are inextricably intertwined.

The record speaks for itself. It is a record of commitment to clean air, clean water, land that is safe to live on and work on. These are not abstract values or values limited to national parks and wildlife preserves. They are values that have led NRDC to dedicate the bulk of our resources to the very public health problems that impact communities of color disproportionately.

For two decades, we have been working to clean up the smog that concentrates in the inner city and that can cause long-term lung damage. We have been striving to end toxic pollution of drinking water supplies. Our efforts helped lead to the phaseout of leaded gasoline, which was

poisoning the air in inner cities and the children who breathed it, and we are still fighting to end lead poisoning from every source. We are striving to end unsafe incineration and landfilling, which can contaminate the water people drink, the land their homes are built on, and the air they breathe. We are working to reduce pesticide use and eliminate the most toxic pesticides, so that people can eat safe food and farmworkers will not be poisoned.

This is not to say that there is no room for improvement. The point is that the two movements are not so far apart as to be irreconcilable. The possibility for partnership exists, and not only in the arena of public health, but also in that of conserving natural resources. Many of the ethnic cultures of this country have deep and longstanding traditions of reverence for the natural world and an abhorrence of the exploitative practices that the mainstream environmental groups are fighting.

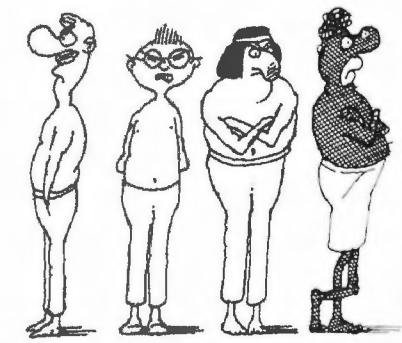
And such partnerships can be enormously effective. The environmental justice movement has vital site-specific information, tremendous organizing ability, and expertise on questions of social justice. The national environmental groups have substantial technical, legal, and lobbying experience in environmental advocacy. The combination of these complementary skills can create a powerful synergy.

Some recent examples from NRDC's experience: Joint efforts with the Mothers of East Los Angeles and Concerned Citizens of South Central Los Angeles effected the cancellation of plans to build California's first large-scale toxic waste incinerator in a low-income, primarily Hispanic community. Our work with West Harlem Environmental Action regarding foul odors emitted by a nearby sewage plant has helped build press attention to the problem, and we expect soon to file a lawsuit.

With the Cree nation of northern Quebec and with other organizations, we are beginning to articulate to the public and decision makers that the James Bay II hydroelectric project, which would flood an area in Quebec the size of Vermont, is unnecessary and vastly more expensive than the energy-efficiency alternatives. With People United for a Better Oakland, the NAACP Legal Defense Fund, the ACLU, and the National Health Law Program, we won a commitment from the state of California to establish a state-of-the-art mandatory lead testing program for poor children.

What this means is that we are building our economy on the backs of people of color and the poor.

All of us in the national environmental groups need to broaden and deepen our alliances with the environmental justice movement. To accomplish this, we must do two things. First, we must diversify our staffs to better reflect the heterogeneity of environmentalism in its totality, and of humankind itself. The fact of disproportionate impact means that different communities experience the environment in different ways—and therefore have differing insights and objectives. To the degree that our staffs are limited in their economic, cultural, and ethnic origin, the perspectives they bring to their environmentalism will also be limited. Our work is the poorer for it.



Petricic. Reprinted with permission. Cartoonists & Writers Syndicate.

Second—but by no means second in priority—the national groups must listen to the environmental justice activists and engage them as partners. Their priorities and perspectives must be among the factors shaping our agenda. The issues of racism, poverty, and environmental degradation are intertwined, and we cannot solve one without addressing the others. What this means is that the mainstream environmental movement must learn from those who have experience in social justice issues where we are novices. Moreover, we must come to recognize and respect the traditions of reverence for the Earth that so many communities of color have fostered, and learn from them to enrich our own perspective. And we must support the continuing growth of the environmental justice movement by sharing our resources in technical analysis, legal work, lobbying strength, and fund-raising capability.

And so our most urgent need is for dialogue. It is critical that the national environmental groups listen to people of color on their own terms. Correspondingly, my plea to the environmental justice movement itself is for continued communication and participation in this dialogue. We stand ready to work with you. We have made mistakes and no doubt we will continue to make them, but we are willing to learn and trying to change. If our two movements can join forces effectively on our common issues, we will be a formidable force for genuine and lasting protection of the human environment. □

A CHALLENGE TO EPA

by Deeohn Ferris

An Environmental Justice Office is Needed

The environmental justice movement forged by activists such as the Gulf Coast Tenants Association, the Southwest Organizing Project, the Panos Institute, the United Church of Christ, and other grass-roots organizations impels governments, environmental groups, and social justice organizations to question the effects of their programs and policies on people of color. EPA should not only join this dialogue but, in partnership with these groups, assume a leadership role in correcting the status quo.

The keystone of this quest for justice is equal protection, *not* equal pollution. To adopt this justice agenda, EPA must revise its policies in the interest of protecting everyone's quality of life. Addressing the impact of lead on African American children and the effects of pesticides on Chicano farm workers is no less important than addressing Alar residues on apples eaten by middle-class kids.

Whether or not government programs are intended to foster disproportionate impact on people of color, the results are the same. EPA should recognize that harm perpetuated by benign inadvertence is as injurious as harm by purposeful intent. Regardless of guilt, blame, or politics, EPA should seek justice by initiating an Agency-wide priority investigation to reveal which practices, programs, and policies nurture inequality. Based upon these findings, the Agency can establish a major effort to remedy data gaps, establish long-term plans to minimize levels of exposure in communities of color, and institute environmental protection for everyone.

(Ferris is Director of Environmental Quality for the National Wildlife Federation.)

Latinos, Native Americans, Asian Pacific Islanders, African Americans, Chinese Americans, other people of color, and people with low incomes constitute the broadest and most complex constituency that the Agency has to serve. What they have in common, what unites them, is that they are systematically subjected to higher doses of pollution than are other segments of society. Remedying this disparity is the foremost challenge that the Agency confronts.

Consider the example of Richmond, California, a heavily minority community where nearly 400 industrial facilities store and release into the environment over 200 hazardous and toxic chemicals. According to one grass-roots group, Citizens for a Better Environment, annual air emissions from these plants total 800,000 pounds, and annual hazardous waste production totals 179,000 tons. African American and Latino residents who live closest to these facilities have organized with the goal of reducing emissions and improving monitoring and health risk assessments, but there has been no meaningful federal response to aid their efforts.

Last summer, a railway-car herbicide spill in the Sacramento River, which killed several thousand fish, received more attention than the estimated 300,000 farm workers, most of whom are people of color, who may be poisoned every year by pesticides. Migrant workers face the toxic triple threat of pesticides, dump sites, and contaminated drinking water. Meanwhile, EPA's long-awaited farm-worker protection rules continually are postponed.

Louisiana residents located in the heavily minority corridor between New Orleans and Baton Rouge have experienced the inequitable distribution of pollution since plants were built up and down the river beginning in the 1950s. The water is contaminated soup, the air is fouled, ailments and disease levels are high. Since many residents depend on the companies for their livelihood, they suffer the combined consequences of exposure both inside and outside the plants. For decades, this dual environmental contamination has threatened their quality of life without respite, but government has paid no attention.

Across the nation, similar circumstances continue unabated. Clearly, EPA and other federal agencies need to form a partnership to address the relationship between pollution and minority communities—from lead risks associated with paint, drinking water, and combustion to those risks caused by polluting industries, whose operations and discharges cause enormous harm to human health, wildlife, and the environment.

EPA can develop a model program, and the time for action is now. The first step is to establish a high-level Office of Environmental Justice with functional responsibilities and a budget sufficient to implement them. EPA spending should match its commitment to parity.

As a principal objective, this office could develop an environmental policy that creates a presumption of justice by requiring equity impact analyses as part of the process for promulgating major regulations, issuing key policies, and conducting programmatic reviews.

The Office of Environmental Justice would integrate its theme into EPA's operating guidance and strategic plans, as well as the Agency's research and data collection agendas. The office could spearhead formation of consortiums with academic institutions for people of color, including Historically Black Colleges

Everyone's quality of life is at stake.

Copyright Sam Kittner.

and Universities (HBCUs), focusing on risk assessments, research, and development needs.

Widespread changes are needed in EPA's institutional focus. Working closely with community leaders and building bridges to grass-roots groups, the office could facilitate the Agency's progress in relieving the enormously high environmental impact experienced by people of color. Under the auspices of this office, EPA should embark on an aggressive outreach effort centered on education, information exchange, and problem solving.

The Environmental Justice Office should also have an active role in states' implementation of delegated programs, reviewing state/EPA agreements to ensure that these relationships will be administered in a socioeconomically race-neutral manner that results in equal protection. Compliance and enforcement initiatives should target facilities and sites that foster the adverse conditions occurring in minority communities.

EPA's current guidelines for cancer risk assessment, and the way that they are used in many programs, protect the average white adult male but ignore populations that are more at risk because of increased exposure or special vulnerabilities, such as Native Americans who fish to put protein on the table and nursing mothers. The Agency needs to adopt risk assessment guidelines that consider economic status, cultural factors, synergistic effects of exposure to multiple sources of pollution, and other distinctive characteristics that, cumulatively, can result in disproportionate impact.

In the routine course of seeking amendments to improve environmental statutes, EPA can support provisions that ensure adherence to an evaluation process that would preclude any single area from being burdened with an undue share of polluting facilities or sites. Pursuant to these amendments, EPA would authorize only those state programs that are designed to remedy disproportionate effects.

An integral component of any Agency plan to execute these changes in direction is overcoming the perception commonly held by people of color that EPA values corporate interests and white middle and upper classes over the lives of people of color. Inevitably, for example, EPA's response in relocating residents of dioxin-contaminated Times Beach and Love Canal invites contrast to the action taken by the Agency when subsistence anglers in communities of color around this nation were discovered to be eating fish contaminated by dioxin from nearby pulp and paper mills. Instead of becoming directly involved and taking preventive action to end the pollution, EPA adopted a hands-off attitude, deferring action to the states. This laissez faire approach allows states to take actions that are often contradictory and, at best, do no more than simply warn these people not to eat the fish.

Integrating the concerns of people of color into the Agency's regulatory process will lessen the sense that EPA pursues a biased approach to resolving risk. A key element of this integration involves recruitment and promoting workforce diversity. Segregation in the EPA workforce fosters bias in decision making.

What is ultimately at stake in the environmental justice debate is everyone's quality of life. The goal is equal protection, not equal pollution. Daily, Americans are subjected to harmful contamination—sometimes at highly toxic levels—wildlife is disappearing, and entire ecosystems are being destroyed. In the metaphor of a rapidly sinking ship, we're all in the same boat and people of color are closest to the hole. EPA and other federal agencies must concentrate foremost on saving those around the hole; then, plug the leak and save us all. □

A CHALLENGE TO CONGRESS

by Representative
Ronald V. Dellums

The Need for New Legislation

I find it very interesting that when Americans discuss the issues of the environment, we tend to mean the pristine air of Montana, the beautiful waters of Crystal Lake, and the spiraling mountains of the High Sierras. Still others may think about the impending effects of global warming, the necessity of recycling, or preserving ancient forests as the critical environmental issues of our time. Conspicuously absent from the discussion are the issues that concern minority communities throughout America.

African Americans and other minority peoples are now suffering severely from the effects of environmental degradation. Recent studies indicate a sharp rise in health problems caused by polluted air, ingestion of lead, and polluted water; they point to cancers possibly caused by toxic and hazardous wastes. At the same time, minority communities suffer from other environmental problems. The problems of drug abuse and poor housing must be addressed.

As America moves into the 21st century, environmental concerns become an imperative for constructive legislative and citizen action. I am dismayed by the fact that, although Americans are very concerned with environmental policy in general, insufficient attention is paid to the environment and its effects on minority communities.

In light of these circumstances, last October in Washington, DC, the first National People of Color Environmental Leadership Summit was organized to focus specific attention on environmental problems and their effects on "people of color." The conference was the culmination of work and research that started with the release of the report called *Toxic Wastes and Race*, published by the Commission for Racial Justice in 1987. As described in earlier articles, this report revealed several startling statistics which indicated that minorities were disproportionately affected by environmental problems. The report, in turn, was followed in 1990 by the published *Proceedings of the Michigan Conference on Race and the Incidence of Environment Hazards*, which further revealed that little attention was given to the environmental concerns of minorities.

The conveners of the conference, known as the Michigan Group, subsequently approached my office to suggest that the Congressional Black Caucus (CBC) convene a workshop at its annual Legislative Weekend to discuss problems of the environment and its impacts on the minority community. I agreed, along with Representatives Towns of New York, Conyers of Michigan, and Lewis of Georgia, to sponsor a workshop to begin the process of finding strategies to combat situations that exist in minority communities across America.

Simultaneously, the Michigan Group approached EPA, requesting that the Agency establish an initiative to address environmental justice (equity) issues. Upon learning of the Michigan Group's effort, I joined several of my CBC colleagues in a letter to Administrator Reilly, requesting that he respond favorably to their request.

For many years I have expounded my belief that environmental concerns are not solely the interest of white, middle-class America. Toxic waste and pollution, like nuclear weapons, are equal-opportunity killers. Unfortunately, minorities are now coming to believe that the environment is of interest because of the disproportionate impact it is having in our communities. I look at report after report that outlines the health problems faced by minorities because of lead poisoning, toxic and hazardous waste problems, polluted air, and pesticides. I am now encouraged because many efforts to correct the prevailing situation are being undertaken. Grass-roots organizations throughout the country are also raising issues of environmental improvement. EPA's February 1992 report on environmental equity is only a first step toward examining and resolving these critical issues.

I believe that Congress must act now to ensure that the disproportionate impact of environmental degradation upon minority communities is addressed. The reauthorization of the Resource Conservation Recovery Act (RCRA) provides an excellent opportunity to strengthen the country's toxic and hazardous waste law. There are additional proposals that will further strengthen toxic and hazardous waste laws. The Community Right to Know More Act of 1991 would amend RCRA to expand public reporting on toxic chemical use and emissions and require companies to develop use-reduction plans. The Pollution Prevention, Community Recycling, and Incinerator Moratorium Act would amend RCRA to place a moratorium on the construction of new incinerators until waste prevention programs are fully implemented. I support both these bills because I believe that they can help reduce the incidence of environmentally related health problems in minority communities.

In addition, I have introduced the Emergency Climate Stabilization and Earth Regeneration Act of 1992. This bill provides a new impetus to develop a U.S. integrated jobs program covering social, pollution, and climate

(Dellums (D-California) is Chairman of the Committee on the District of Columbia and a member of the Armed Services Committee and the House Select Committee on Intelligence.)

Leaders rally on Capitol Hill during the First National People of Color Environmental Leadership Summit.

Robert D. Bullard photo.

emergencies. It would also reduce the level of carbon dioxide in the Earth's atmosphere through a massive jobs program that would address all areas of pollution in America.

I will also consider supporting or introducing legislation to address the issue of the disproportionate numbers of toxic and hazardous waste facilities located in or near communities of color. I am currently in the process of examining several proposals that will suspend the placement of toxic waste facilities in minority communities.

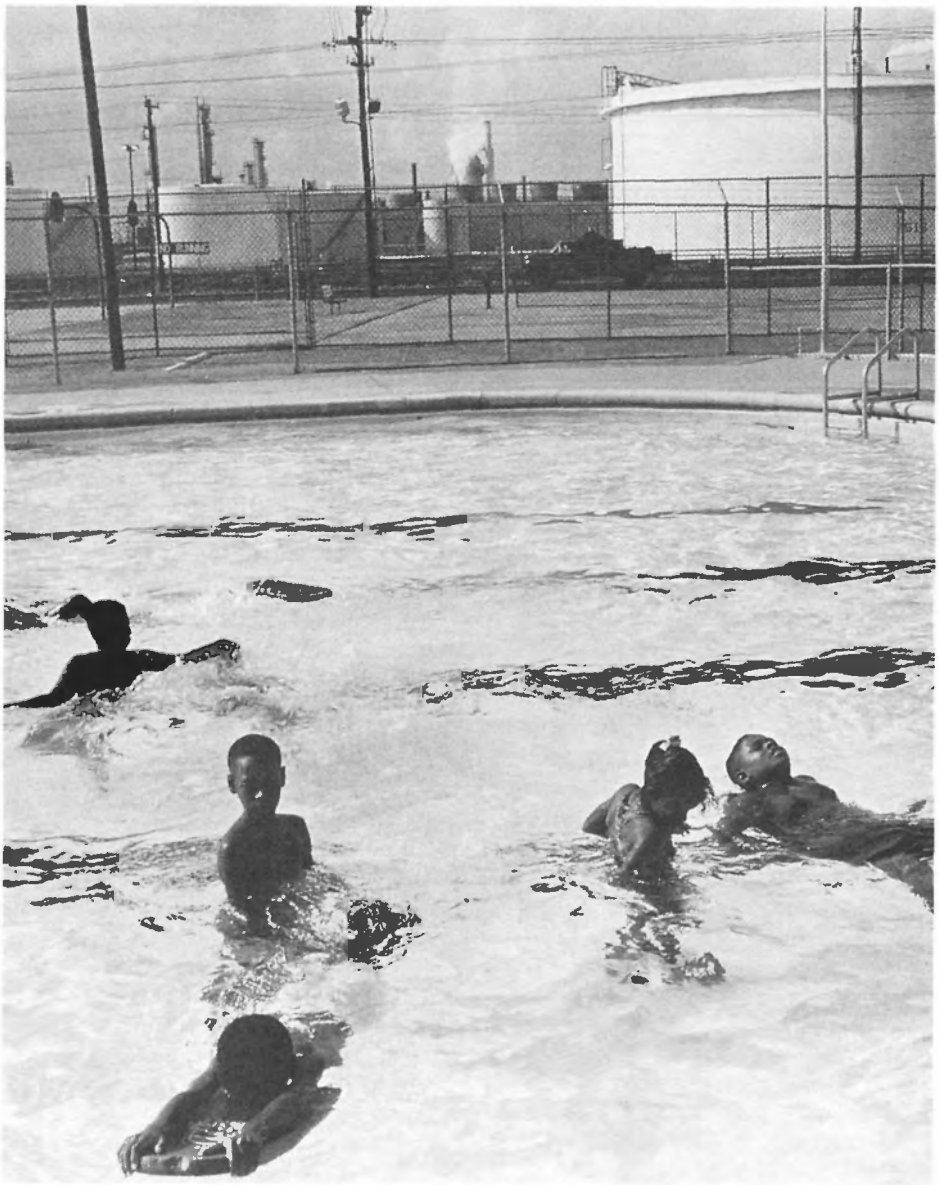
We must allocate funds to problems where they are most severe. I support efforts to expand Technical Assistance Grants that encourage the growth and expansion of grass-roots organizations which provide education and information on environmental hazards to communities of color. Grants should also be made available to Historically Black Colleges and Universities to foster research and development in areas of concern and for other purposes.

It is imperative that EPA establish a department-level office that can coordinate and enforce the issues of environmental equity. The Agency announced in its recently released report that the issues of environmental equity are a priority. If so, then adequate funds should be requested to set up an office that can be responsible for issues of environmental concern.

As I said earlier, the issues of the environment are among the most critical for our nation as we approach the 21st century. We are all familiar with the problems of global warming, climate change, clean air, clean water, and safe drinking water. It is time the nation woke up to the reality that minority communities are suffering greatly at this moment from the adverse effects of pollution, unrestrained development, and false progress.

America has a serious job to do if it is to ensure that all of its citizens benefit from efforts to enhance environmental quality. We must begin immediately to address all the problems caused by environmental degradation. I am calling upon all the major environmental organizations to get involved in the environmental justice movement so that we can ensure a healthy, sound America for all citizens. I am hopeful that one day soon the term "environment" will no longer be considered just a term of, and for, white middle-class America. □

HAVE MINORITIES BENEFITED ...? A FORUM



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Some observers argue that the environmental movement in the United States has not only failed to include the participation of people of color but also has failed to provide them with an equitable share of its benefits. Others maintain that the laws enacted in the wake of Earth Day 1970 are colorblind, that the efforts to clean up the air and clean up the water have benefitted everyone equally. EPA Journal *asked a number of individuals to respond to the following question: Have minorities benefited equitably from the gains made by the environmental movement? Their answers follow.*

Michel Gelobter

The answer is clearly no.

There are at least three ways to measure the benefits of the environmental movement to people of color: socially, economically, and environmentally.

- The social aspects of the environmental movement have, almost without exception, systematically excluded people of color. People of color are underrepresented at managerial and decision-making levels of both governmental and nongovernmental environmental organizations, including my own. Academic "feeder" programs in environmental science and policy fail to recruit and retain people of color, and environmental organizations fail to hire those who do pursue such studies

(primarily Chinese- and Japanese-Americans). Finally, the jobs and contracts generated by environmental activity have fallen primarily to white workers and contractors.

- The economic effects of environmental policy are almost always regressive (in that they fall more heavily on low-income groups than on people in middle- and high-income brackets). The lack of attention to the distributive consequences of environmental policy also disproportionately impacts people of color.

- Finally, the existing evidence points to great disparities in the *incidence* of environmental quality. People of color have radically less access to this country's natural areas, and, in our urban environments, face greater pollution. Most disturbing is the evidence that government regulation *exacerbates* rather than reduces these inequities. In both my own research on air pollution and the Commission for Racial Justice's work on toxic waste sites, regulatory activity—in its efforts to control and improve the environment—seemed to shift the remaining burden of pollution more heavily on the backs of communities of color.

People of color are a majority on the globe we all want to save. The environmental movement must radically retool its approach to understand, to share, and to address all our needs.

(Gelobter is Assistant Commissioner of Environmental Quality for the Department of Environmental Protection of New York City.)

Michael Fischer

It is an incontestible fact that people of color and the poor of America have borne the brunt of suffering from polluting industries and other undesirable development. Whether intended or not (and too often it has been intended), economic growth and land use decisions have been based on environmental racism. Civil rights have been violated; the quality of human life in urban communities has been degraded; adjacent communities and downstream ecosystems have been egregiously damaged.

We at the Sierra Club *do* know how to make a difference at the local, state, and national levels. For 100 years, the Sierra Club has honed citizen action skills to pressure polluters, elected officials, and government agencies to pass and enforce environmental protection laws. The time, though, for patience, compromise, and "balance" is long gone.

Thousands of community-based grass-roots organizations, led by people of color, have been established in recent years. They possess a deep and righteous anger not seen since the beginning of the civil rights movement. It is a just passion which now must drive the Sierra Club and other organizations of the established environmental movement. Our mission has been broadened, and we have been pushed to new heights of commitment and effectiveness in order to meet the challenges of environmental injustice.

The environmental movement of the 1990s will be multicultural. It will continue to revere and protect natural and scenic beauties of the Earth. And it will be driven by a quest for environmental justice, or it will become irrelevant. We at the Sierra Club are committed to beginning our second century with increased, not decreased, relevance for *all* the people of this nation.

(Fischer is Executive Director of the Sierra Club.)

Juana Beatriz Gutiérrez

No, minorities in East Los Angeles have not benefited from the environmental movement. Although the Mothers of East Los Angeles participated in the 20th anniversary of Earth Day, our own environmental movement is just beginning. The amount of environmental abuse suffered by residents of our barrios is just too great. And the abuse continues. High lead levels and high concentrations of carbon monoxide are directly attributed to those freeways so enthusiastically built for "progress."

Virtually every family in Los Angeles can claim a tragedy of one form or another. Asthma, leukemia, lingering coughs, and more serious illnesses are now believed to be a direct result of our environment, even though the government will not admit to it. Closer to home, three young women experienced miscarriages in the last two years—one of them my

daughter, another my daughter-in-law. And the uncle of my daughter-in-law succumbed to a brain tumor—his residence was directly next to a "Superfund" toxic clean-up site.

Only recently have we begun to educate ourselves about the horrors of environmental racism. With recent assistance from environmental groups such as Greenpeace and other "traditional" pro-active organizations, we have begun a crash course on environmental impact statements, risk assessments, public hearings, etc. This knowledge has helped us the last few years and will be invaluable as we try to right the wrongs of the past. The fact that this commentary is written in English and not Spanish is an indication of the exclusive nature of the environmental movement, but we are striving to change that.

(Gutiérrez is President of the Santa Isabel Chapter of the Mothers of East Los Angeles.)

Gail Small

Since 1492, little has changed in terms of the non-Indian's concept of the environment. What they have failed to learn over 500 years is that there is a profound spiritual dimension to the environment. Religion, culture, spirituality, environment are one and the same to Indian people.

Existing environmental laws are not being implemented to protect the sacred places of Indian tribes. Indeed, we often find ourselves fighting environmentalists to protect our ancestral lands and treaty rights. In order to protect our sacred places, we are now asking Congress to amend the Indian Religious Freedom Act, and the environmental movement should be fighting this battle with us.

My home, the Northern Cheyenne Indian Reservation, is being surrounded by this country's largest coal strip mine. The Cheyenne people have had to forego basic services, such as schools and roads, because our few dollars have been used to fight for the environment of southeastern Montana. In 1982, when Secretary of Interior James Watt permitted the largest federal public coal sale in the history of America, where were the big 10 environmental groups? Perhaps it was because only a few thousand Cheyenne Indians lived in this area that none of the "big 10" challenged this giveaway of public coal.

White ranchers who proclaim themselves environmentalists sit on the same bank board that refuses to provide Cheyennes with loans for economic alternatives to the strip mining of our lands. These white environmentalists want Cheyenne water and land to expand their ranches. And the coal companies—they just want our coal.

And where is our federal trustee, the EPA? It's still trying to figure out whether Indian tribes have the jurisdiction to protect their homelands. That's like asking the Cheyenne who won the Custer Battle. Such it is in Cheyenne Country in 1992.

(Small is the Director of Native Action, a nonprofit organization to benefit the Northern Cheyenne.)

Alex Varela

My answer to this question is the same now as it was in the May 1988 issue of *EPA Journal*, when several EPA employees wrote a letter to the Editor identifying major inequities in EPA policies. With the advent of a major national summit conference in Washington in October 1991 on environmental equity (which EPA declined to attend) and a House hearing by Henry Waxman, the question is now beyond my opinion, or any other, in the *Journal*.

This issue is now at a juncture where it will become a *moral* issue for the Agency if EPA declines to acknowledge the problem, change inequitable policies and priorities, and implement appropriate action. If EPA decides merely to pursue attempts to co-opt legitimate civil rights organizations, offer grants to minority academics, and spin-control the issue, we will continue to end up in an ethical struggle on the wrong end of the scales of environmental justice. I believe our Agency has more sense than this.

(Varela is in EPA's Office of Enforcement Policy.)

Terry Ow-Wing

My first reaction to the question is to pose another: Have minorities shared equitably in any situation where there is a majority and a minority culture? The answer is an obvious no. However, dwelling on the negative is not where the real answer lies. Rather, we must take action to try to make life better for all of us.

From my own story, I decided to contribute my talents to Chinatown, feeling that few outsiders cared about her. In 1976, through a University of California at Berkeley community design course, I interned with the

Committee for Better Parks and Recreation in Chinatown. My first contact with Sierra Club was through its support for a new Chinatown park. The Club's participation was not earth-shattering, but it showed a serious commitment to the urban environment in which the minority community lived.

Recently, I became involved with Sierra Club because it has political clout, which I intend to use to benefit Chinatown, and because many Sierra Club members care about the urban environment. Further, I wanted to make important changes within the organization.

The long road of change for Sierra Club is not only in its membership, which is mostly white upper-middle class, but in how it handles issues. The environmental movement needs to take into account the needs of the entire population. It must not shirk responsibility for a particular community's environment on the grounds that "they need" the jobs. Although it is true that the movement did not begin with equal concern about "wild" versus urban environments, I am pleased to find that some mainstream environmental groups are now working with communities to eliminate toxins in urban areas. Because the air we breathe is shared equally by all, we must work together to cleanse our Earth for everyone and not waste energy on past inequities. How we respond to this challenge will determine whether we preserve the lifeline of the Earth.

(Ow-Wing, an architect, is co-chair of Sierra Club's Ethnic and Cultural Diversity Task Force and on the Committee for Better Parks and Recreation in San Francisco's Chinatown.)

Senator Daniel K. Inouye

The civil rights movement gave birth to laws intended to grant minorities the same powers, privileges, and protections accorded other Americans. The environmental movement inspired statutes meant to benefit all Americans, regardless of race or income. Despite these progressive laws, inequities remain. A case in point: American Indians lack the power and means to deal with solid waste disposal problems on their own tribal lands.

Like state and local governments across the country, tribal governments are confronted with a mounting crisis in solid waste disposal. In Indian territory, there are currently 650 solid waste disposal sites. Of these, 108 are tribally owned landfills that were constructed before Congress established current standards for landfills under the Resource Conservation and Recovery Act (RCRA); as a result, only two of these 108 are presently in compliance with EPA requirements under RCRA.

Based on a preliminary estimate made in 1990, at least $68 million would be required to upgrade these tribally owned landfills to meet current requirements. In addition, another $45 million would be required to either upgrade or close, as appropriate, other solid waste disposal sites on Indian lands.

A bill is now before Congress to amend RCRA and empower tribal governments to manage solid and hazardous waste on Indian lands. It is important to note that other federal statutes include provisions stipulating that tribal governments should receive the same treatment as states, whereas RCRA currently does not. The proposed amendments to RCRA would not only recognize tribal governments' authority but also make them eligible to receive funds to assist them in developing solid waste management regulations. Such regulations would accomplish several things: provide for the management of waste generated on reservations; authorize the cleanup of open and unauthorized dump sites; and enable the development of regulations governing the operation of commercial solid waste projects on Indian lands.

It is my hope that Congress and the nation will act to rectify this and other environmental inequities in the United States.

(Senator Inouye (D-Hawaii) is Chairman of the Select Committee on Indian Affairs.)

Suzanne Olive

In its issue commemorating the 20th anniversary of Earth Day, *EPA Journal* spoke volumes about the state of affairs in 1970. The only people of color in the entire issue were a lone American Indian and the inhabitants of a Chinese village. Change has come slowly. While the environmental laws

may be colorblind, many of the conditions which gave rise to the disparate impact of environmental problems on minority communities are not. Colorblind solutions will not solve these problems.

The focus of the civil rights enforcement effort, from about 1970 until recently, was on problems of equal access and nondiscriminatory administration of federally assisted programs. Although the term was not in use, the environmental equity issue was nevertheless there. In the wake of much criticism, certain federal agencies began to address, within their areas of jurisdiction, the issue of disparate impacts of federally funded programs on minority communities—e.g., the Department of Transportation and the location and impact of the interstate highway system; the Department of Housing and Urban Development and the location of low-cost and subsidized housing projects.

Until the mid 1980s, EPA's primary concern in terms of civil rights enforcement was the construction grants program and the racial composition of the communities to be served by wastewater treatment systems. The problem of minority communities' exclusion from that program due to geographical or political boundaries was largely eliminated some time ago. However, other problems, affected by a wide range of EPA programs, remain.

As people become more sophisticated about environmental issues, they are also becoming more aware and more critical of the disparities in the benefits of environmental programs. As a result, EPA is now looking at the environmental equity issue and the impact of environmental programs from a broad policy perspective. EPA's Office of Civil Rights has a role to play in exploring ways to use the crosscutting civil rights statutes to address the inequitable effects of environmental policies on minority communities and bring about significant change.

(Olive is Acting Director of EPA's Office of Civil Rights.)

Beverly Wright

Just recently, I was asked by the U.S. Commission on Civil Rights to testify at an environmental equity hearing conducted by the Louisiana Advisory Committee to the commission. My charge was to present an overview of social justice issues related to the environment in Louisiana. I was asked specifically to respond to the question whether hazardous waste storage, disposal, and treatment practices impacted with greater frequency and intensity on minority communities. The difficulty in answering this question—indeed, the fact that the question was being asked—reflects the relative lack of attention government has given to possible environmental effects on minority communities.

A similar dilemma presents itself when I attempt to answer the question posed for this forum: Have minorities shared equitably in the benefits resulting from the environmental movement? If the answer lies in the present state of affairs for minority communities as to exposure to toxics in the environment, the answer must be a resounding "NO."

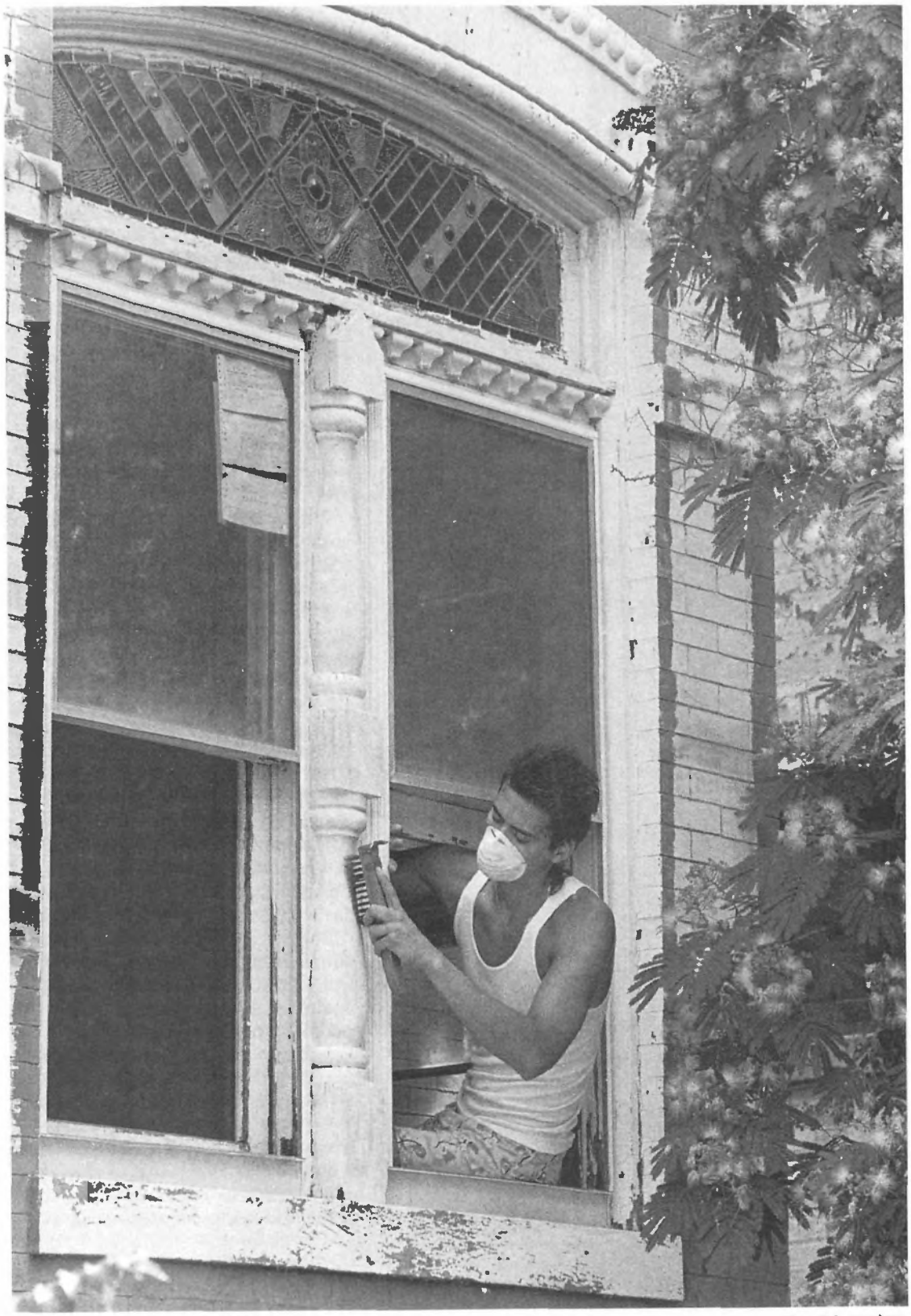
As most of us are already aware, the 1983 General Accounting Office report and the 1987 study conducted by the United Church of Christ strongly suggest that minorities (blacks and Hispanics) are disproportionately impacted by the siting of hazardous waste landfills. It does not take an extraordinary intellectual effort to surmise that this pattern may be indicative of patterns for other environmental pollutants. For a very long time, minority and poor communities have been the prime targets for undesirable byproducts of industrial society. These neighborhoods are seen as the paths of least resistance for such things as bridge or highway buy-outs, toxic waste and solid waste landfills, incinerator and chemical plant locations, to name a few. Unlike the middle and upper socioeconomic strata, who possess the resources to effectuate their opposition to the placing of pollutants in their neighborhoods, poor communities have been less likely to forge successful battles of resistance against federal, state, and local agencies and industries who target their communities for the siting of undesirable "but necessary" polluting facilities.

A review of the history of mainstream environmental organizations and their programs fails to produce any significant involvement by them of minority groups or individuals and almost no attention to pollution problems specific to minority populations. Only recently have we seen minority groups and communities embraced (with some difficulty) and allowed to have a voice in areas related to the environment. The results have been that minorities have not shared equitably in the benefits resulting from the environmental movement.

It is now time to forge an Agenda for Action. A highly innovative approach for dealing with equity issues has emerged from a number of minority researchers and scholars independently investigating equity issues. They have proposed the development of a National Agenda on Environmental Equity and the establishment of Environmental Equity Regional Centers to deal with research and policy, community assistance, and education. This would represent a positive step toward the development of a "clean" environment for all, with the ultimate goal being *Environmental* justice.

(Dr. Wright is an environmental sociologist with the Sociology Department of Wake Forest University, North Carolina.)

What's Known, What's Not



Inner-city residents may experience elevated exposures to environmental hazards.

Steve Delaney photo.

CAUSE FOR IMMEDIATE CONCERN

Minorities and the Poor Clearly Are More Exposed

by Ken Sexton

EPA toxicologist examines trout at Duluth, Minnesota, research lab.

Roger LePage photo. ASci Corp.

The suggestion that social class or race plays an important role in determining the degree to which people are exposed to environmental hazards, as well as in influencing the effects of those hazards on health and well being, is a disturbing, albeit all too plausible, hypothesis. It does not take much imagination to speculate that poor people, a disproportionate share of which are minorities, routinely encounter elevated levels of pollution in the air they breathe, the water they drink, and the food they eat.

Within the field of environmental health, there are two groups generally considered to be at higher risk: those who experience the highest exposures, and those who are more biologically susceptible to the effects of a given exposure. The subgroup at highest risk is made up of those individuals who are both biologically susceptible and who also come into contact with the highest pollutant concentrations.

Currently, very little data exist on differences between races according to biological susceptibility to environmental pollutants. There is certainly evidence of biological differences, but their relationship to susceptibility is not well understood.

Further, it is difficult to separate the effects of class (socioeconomic status) from the effects of race (ethnicity) on environmental health risk. Poor people, typically, are less well informed about environmental health issues, lack adequate health care, have a substandard diet, and are more likely to have stressful and unhealthful lifestyles. Minority populations may be at higher risk as a result of their genetic makeup, cultural beliefs and practices, and social behaviors. The

(Dr. Sexton is Director of EPA's Office of Health Research.)

situation is complicated by the fact that minorities are statistically more likely to be disadvantaged in terms of their income, education, and occupation than their white counterparts. Consequently, although there is substantial anecdotal and circumstantial evidence suggesting that class and race, taken together, affect exposure levels, we do not now have sufficient data to differentiate between the two.

The calls for public action to mitigate environmental inequities present policy makers with a familiar dilemma. In the face of substantial scientific uncertainties, they must decide whether inequities exist, how serious they are, what are the causes, and what are the most cost-effective mitigation strategies.

As documented elsewhere in this issue of the *Journal*, there is clear evidence that certain groups—as, for example, subsistence fishermen, migrant farm workers, and residents of inner urban areas—experience elevated exposures to hazardous environmental pollutants. It is unclear, however, whether these exposures account, in part, for the higher overall rates of death and disease observed among disadvantaged groups and ethnic minorities.

There are clear and dramatic differences between ethnic groups for both disease and death rates. Age-specific death rates, for example, are higher for African American males and females than for their white counterparts in all age groups from 0 to 84 years of age. Furthermore, overall death rates from cancer are greater in blacks than whites for both males and females. For other ethnic minorities, the overall cancer mortality is lower than for whites. There is, however, substantial variation in the mortality rates associated with different types of cancer.

Surprisingly, very little data are available on disease and death rates categorized by important socioeconomic variables. Closer examination reveals that the United States is the only western country with a high standard of living whose government does not collect mortality statistics by class indicators, such as income, education, and occupation.

Recently, there has been an academic debate about whether the differences in cancer rates between blacks and whites can be explained by the effects of poverty. Some scientists believe that if the differences in socioeconomic characteristics could be eliminated, then blacks would actually have a lower overall cancer rate than whites. Others suggest that while poverty and lifestyle can explain part of the difference, there is still a significant amount of variation that can only be explained by race.

With the notable exception of lead, there is a paucity of data relating class and race to specific environmental pollutants and associated health effects.

The observed differences in the rates of disease and death among ethnic groups are undoubtedly caused by a combination of factors, including economic, social, cultural, biological, and environmental variables. Although some of the differences are dramatic, as with cancer rates, for example, the contribution of environmental pollution is unclear.

With the notable exception of lead, there is a paucity of data relating class and race to specific environmental pollutants and associated health effects. In the case of lead, the evidence is unequivocal: A higher percentage of black children than white children have elevated blood lead levels. All socioeconomic and ethnic groups have children with lead in their blood high enough to cause concern about adverse health consequences; however, a significantly higher percentage of black children compared to white children, regardless of socioeconomic strata, have unacceptable levels of lead in their blood.

In general, it is not possible based on the existing scientific evidence to link class and race directly to differences in the rates of environmentally induced disease or injury. There is evidence, however, as mentioned earlier, to suggest that exposures to some environmental pollutants vary according to socioeconomic and ethnic variables. These differences in exposures result from the fact that disadvantaged people, including ethnic minorities, tend to come into contact with higher pollution levels because of where they live, what they eat and drink, and how they earn their living. The available scientific basis for evaluating the equity question, although meager, is sufficient to raise serious and immediate concerns for researchers, risk assessors, and risk managers. Owing to the complexity of environmentally induced disease, it is often difficult or impossible to establish a direct causal link with pollutant exposures. Nevertheless, the evidence suggesting that poor people and ethnic minorities experience higher exposures to many environmental contaminants is compelling. □

RESEARCH DIRECTIONS

The Public Health Service Looks at Hazards to Minorities

by Cynthia H. Harris and Robert C. Williams

The Agency for Toxic Substances and Disease Registry (ATSDR) is a U.S. Public Health Service agency headquartered in Atlanta, Georgia. ATSDR was created to implement the health-related measures mandated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (the "Superfund" law). As part of its response to this charge, ATSDR established a minority health initiative to address the health impact of hazardous waste on minority communities. The initiative focuses on four areas: demographics, health perspectives, health communication, and health education.

Demographics

To determine the proximity of hazardous waste sites to minority communities, ATSDR will utilize the Geographic Information System (GIS). A pilot of five National Priorities List (NPL) sites has been tested using both manual and computerized methodologies for determining population densities and demographics. In addition, ATSDR is currently using GIS to evaluate a randomly selected set of 30 NPL sites. As a result of our pilot tests, we have determined the GIS to be the best methodology for identifying potentially impacted minority populations.

In the future, ATSDR will focus on determining the relative proximity of minority communities to all sites on the NPL. Data for each site can then be integrated into a larger database and analyzed using descriptive and inferential statistical techniques. An important data source for that integration is the 1990 Census of Population and Housing, which includes 100 percent population and housing counts and characteristics. Other possible sources of data that will be tapped include city directories (the city directory often lists occupation and is broken down alphabetically by name and also by street address), plat maps in rural areas (plat maps indicate ownership of land), the county courthouse (mortgage and other housing information might help establish the variable length of residence), and planning commissions (building permits).

Health Perspectives

Health status and access to adequate health care may contribute significantly to the impact of environmental contamination on minority communities. Significant data gaps exist regarding the relationships between low-level exposures and effects. For example, lead is a pervasive contaminant that has disproportionately affected minority communities; however, additional research is needed to determine its bioavailability in various media (water, soil, slag) and to further define effects that may result from low-level exposures (blood lead levels of less than 10 micrograms per deciliter (μg/dl)).

Through an extensive literature search and the establishment of a strong environmental health data base, we have confirmed the paucity of information specifically linking pre-existing health factors and increased risk to environmental contamination. ATSDR is therefore sponsoring a substance-specific research program through the Association for Minority Health Professions Schools (AMHPS). ATSDR's public health studies have identified specific sites adversely impacting minority communities. The impact of lead in soil (as high as 20,000 parts per million (ppm)) on a predominantly Hispanic community in Colorado resulted in ATSDR's issuing a public health advisory. In addition, ATSDR and the state of Colorado collected samples of blood to detect lead levels in potentially exposed susceptible populations (i.e., children, pregnant women).

ATSDR is currently conducting various pilot and epidemiological health studies for Native American communities. Mercury contamination in fish is a primary concern in the Everglades (Florida), in Fond-du-lac (Minnesota), and with the Puyallup tribe (Washington). The prevalence of PCBs in the breast milk of Native American women of the St. Regis Mohawk tribe (of New York) was discussed during ATSDR's National Minority Health Conference held in December 1990. Consequently, a health study is being sponsored by the Agency. In addition, ATSDR has signed an interagency agreement with the Indian Health Service to address the public health needs and concerns of Native Americans as they relate to the release of hazardous substances into the environment.

Lifestyle and culture can play important roles. In conjunction with the Connecticut Department of Health and the Hispanic Health Council, ATSDR helped identify the prevalence of the use of elemental mercury (azogue) for ritualistic purposes (Santeria). Specific botanicas that sold azogue were identified in the Hartford area, and it was found that the most prevalent users were within the Hispanic community. The Connecticut Department of Health is determining

(Dr. Harris is Chief of the Community Health Branch and Williams is Director of the Division of Health Assessment and Consultation at the Agency for Toxic Substances and Disease Registry in Atlanta, Georgia.)

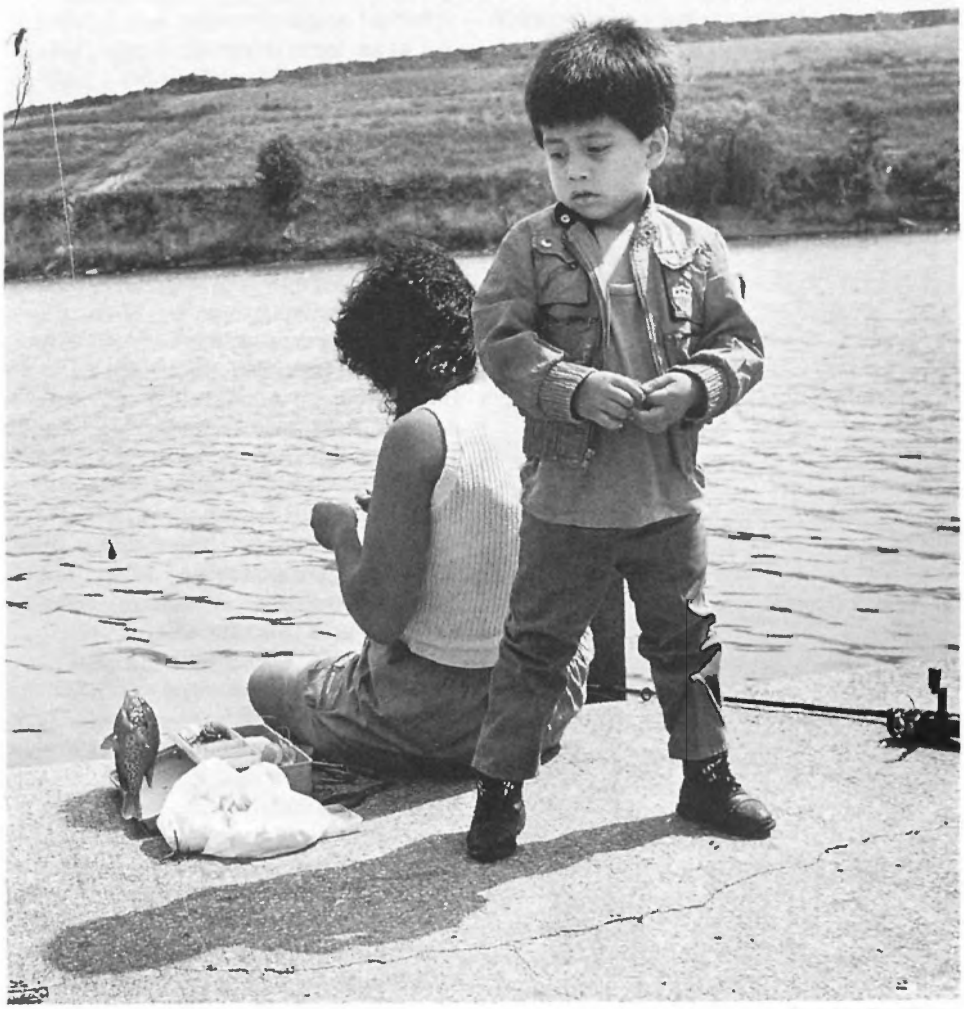
how best to convey information regarding the potential health hazards associated with the use of the material.

Health Education and Communication

The toxic effects of environmental contamination and environmental health issues must be communicated to minority communities. Such communication can be aided by training minority health care providers in how to address environmental health concerns.

ATSDR is attempting to meet those training needs and has developed and implemented several health education activities. For instance, ATSDR is working closely with AMHPS schools to identify and conduct pertinent environmental substance-specific research. ATSDR has also assisted in establishing a doctoral program in environmental toxicology at Florida A&M University in which ATSDR staff serve as advisory board members. In many rural communities, pharmacists are the first line of health care, so ATSDR has identified minority pharmacists as local health professionals responsible for identifying populations at risk and communicating that risk to their communities. The National Medical Association (NMA) is one of the oldest minority health care professional organizations. ATSDR has become an active participant in NMA activities by conducting environmental health workshops at regional NMA meetings and presenting at national NMA meetings.

ATSDR also realizes that communities want to be informed and involved and has established Community Assistance Panels (CAPs) in several communities. The purpose is to provide a forum for exchanging information between ATSDR and the affected community during the preparation of a public health assessment or conduct a health study. For example, a CAP has been established to address concerns regarding environmental contamination in the Southeast Chicago area. The CAP members have been active in assisting ATSDR determine community concerns, identify contamination sources, and disseminate information about ATSDR's programs and activities. For that site, CAP meetings will be held quarterly throughout the public health assessment process. □



Fishing opposite a dump in south Chicago. Inner-city residents may find environmental risks at every turn—including, here, a possible dietary risk from contaminated fish.

LEAD: EXAMPLE OF THE JOB AHEAD

Inner City Children Suffer Most

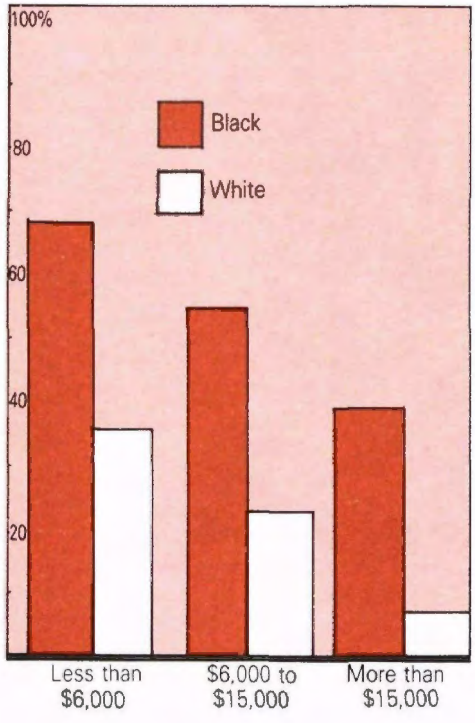
by Joel Schwartz and Ronnie Levin

To some extent, everyone is exposed to lead because industrialized society has widely contaminated the environment with it. Sophisticated geochemical analyses show that lead contamination in the United States is hundreds of times higher than in pre-industrialized times. Moreover, lead contaminates every part of the environment—air, surface and ground water, soil—and each medium serves as a potential pathway of human exposure. Current body burdens of lead, on the average, are estimated to be 1,000 times higher than in prehistoric humans. Lead exposure and uptake are particularly problematic in children, who may suffer irreversible effects, including learning impairment, as a result.

But while everyone is exposed to some lead, lead has a very skewed profile of exposure and uptake by race and social class—probably more so than any of the other major pollutants to which the general population is exposed. Lead also differs from most pollutants in another, more positive respect: In the last two decades, we've made the greatest progress in reducing overall lead exposure. Still, while exposures have been reduced overall, minority and lower income children retain a higher risk of elevated blood lead levels, a disparity that has been in evidence for decades.

In the Second National Health and Nutrition Examination Survey (NHANES II), conducted between 1976 and 1980, the average blood lead level for children aged 6 and under was found to be 16 micrograms of lead per deciliter of blood (μg/dl)—which is the most commonly used standard measure of blood lead concentrations. For black children, however, the average blood lead level was 21 μg/dl; for children in the lowest fifth of family income, 20 μg/dl. Blood lead levels were notably elevated for children living in inner city areas. Poor black children in the inner city had an average blood lead level of 23 μg/dl.

Urban Children 0.5-5 Years Old with Elevated Blood Levels, by Race and Income

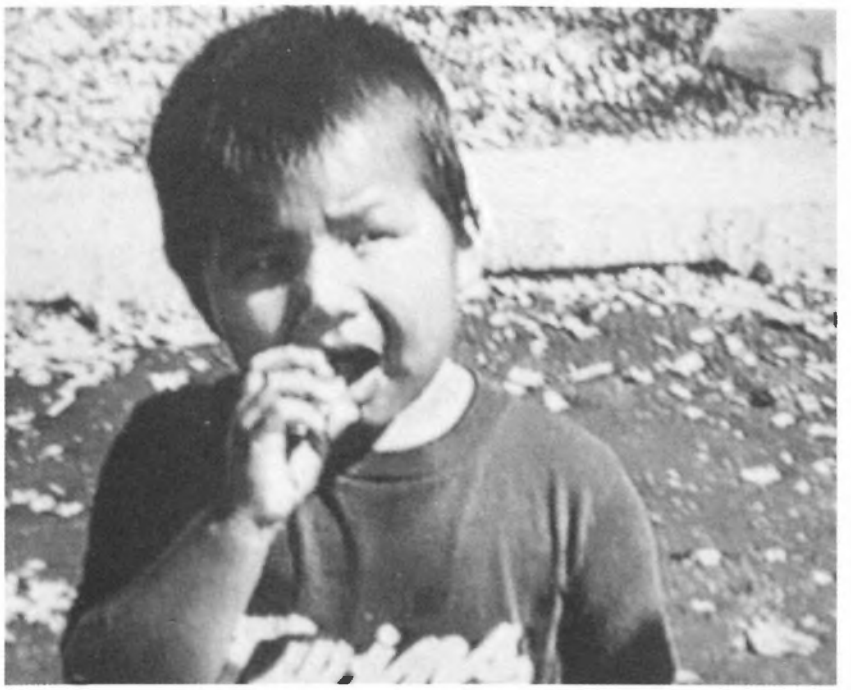


To put this latter figure in perspective, consider that the Centers for Disease Control recommended in the 1980s that any child with a blood lead level of 25 μg/dl or higher be given a full-day test to determine whether hospitalization was needed. An even more dramatic comparison: Recently, a child with a blood lead level of 144 μg/dl died from massive brain damage. In other words, poor black children in inner city neighborhoods in the 1970s had *average* blood lead concentrations amounting to over 15 percent of a potentially fatal dose. For no other toxic substance in modern times has the average exposure for a large group been so close to the fatal dose.

Fortunately, a great deal of progress has been made in reducing blood lead levels in the United States, due in no small part to restrictions on lead in gasoline. More than half of the average blood lead level in U.S. children in the 1970s was attributable to lead in gasoline emissions. When unleaded gasoline was introduced and the amount of lead limited in leaded gasoline, those emissions declined dramatically. Lead in gasoline today is less than half a percent of what it was at its maximum, and it will be banned entirely in 1996.

Other actions to reduce lead exposures have also had a significant impact, and continued improvements are expected. For example, the Food and Drug Administration (FDA) has taken steps to substantially reduce the use of lead solder in canned food,

(Schwartz is a Senior Scientist with EPA's Office of Policy, Planning, and Evaluation. Levin is Chief of the Water Staff, Office of Technology Transfer and Regulatory Support, in the Office of Research and Development.)



Normal hand-to-mouth activity of small children can poison them.

Lead Free Kids photo.

formerly a significant source of lead exposure. At present, average blood lead level in American children is estimated to be under 6 μg/dl, considerably lower than found in NHANES II.

In addition, EPA recently issued rules requiring water suppliers to make their water less corrosive. Lead contaminates drinking water when the water corrodes the materials of the public water system and the plumbing within the home; also when lead is leached from the lead solder used to join copper pipes, from lead pipes and connections, and from faucets and other plumbing fixtures. Therefore, reducing the corrosivity of the water is expected to significantly reduce lead levels in drinking water.

To date, the overall improvement has been dramatic in that blood lead levels in every age, race, sex, and income category have decreased throughout the country. Ironically, however, the general decline appears to have increased the disparity in blood lead levels by race and social class. While income and especially race have always been important variables of exposure, we expect that the continuing decline in the blood lead levels in the general population will make race and income even better indicators now than previously of the likelihood of elevated blood lead levels.

The obvious question is, Why? Gasoline, of course, was a lead exposure source that affected the entire population. Most of the lead particles emitted from car tail pipes are quite small, and their distribution across urban areas is relatively uniform. Everyone breathes the air, and everyone benefitted when lead was curtailed in gasoline. Similarly, most of the population benefitted when the use of lead solder in canned food was eliminated.

In contrast, exposure to lead paint, a major remaining exposure pathway, is much less uniform. Housing built before 1950 is most likely to contain paint with high concentrations of lead. After 1950, the lead content of paint declined substantially, and the use of lead paint for houses was banned in the 1970s. Survey data from the U.S. Department of Housing and Urban Development (HUD) indicate that 90 percent of housing built before 1940 contains some lead paint, as does 62 percent of housing built between 1960 and 1979. The survey assumes that virtually no housing built after 1980 contains lead paint.

Furthermore, older houses tend to have paint with higher lead concentrations: 75 percent of the pre-1940 housing had paint lead at concentrations higher than 2 mg/cm^2 (double the level commonly defined as indicating the presence of lead paint), compared to only 18 percent of houses built between 1960 and 1979. Therefore, the presence of lead paint—and the concentration of lead in the paint—varies widely from house to house.

But the mere presence of lead paint or even the concentration of lead in the paint does not tell the whole story. For one thing, the condition of the paint is critical. Lead paint that is well covered with non-lead paint, and in good condition, results in much lower lead exposures than exposed paint in poor condition. Everyone knows about children being poisoned by eating lead paint chips. But that's not really common. In fact, most cases of lead paint poisoning seem to occur from the ingestion of common household dust that has been contaminated with lead. The normal hand-to-mouth activity of small children results in their ingesting enough contaminated dust to raise their blood lead levels and even to poison them.

In homes with lead paint in deteriorated condition, the concentrations of lead in the dust are likely to be high. Adults as well as children are exposed to dust—dust that settles on plates and glasses, dust that contaminates carpets and furnishings, dust that we breathe, etc. More dust can mean higher lead exposures. Simply put, for the same presence of lead paint on the wall, the degree of risk presented can vary widely depending on how much exposure there is—how deteriorated the paint is, how much lead infiltrates the house dust, how much dust is present, and what the activity patterns

What's Known, What's Not

For no other toxic substance in modern times has the average exposure for a large group been so close to the fatal dose.

are for children and other family members.

For all these reasons, exposure to lead from paint, unlike lead from gasoline, is highly variable. Some houses have lead paint; some don't. Some buildings have lead paint in poor condition. The more dilapidated the housing, the higher the lead exposures are likely to be. Housing condition is largely a function of income.

Lead-contaminated soil is another source of exposure, but again the degree of potential exposure is highly variable. Decades of lead emissions from gasoline now contaminate urban soils, along with some deposition from other sources of lead. In older residential areas, more than a century's use of lead in exterior house paint has raised soil lead levels.

Soil contaminated by lead can be a significant exposure source, especially for children. And once more, the exposure of poor and minority children is likely to be higher, both because lower income and minority groups are more heavily concentrated in older urban areas and because their yards are more likely to have exposed soil—in other words, less likely to have ground cover, lawn furniture, swing sets, or other barriers to the soil. So, again, even for the same contamination level in the soil, lower income children are likely to have higher actual exposures. Of course, higher lead levels in soils and more exposed soil also increase the likelihood of introducing lead into interior house dust, another pathway for lead exposure.

There are still other lead exposure sources that disproportionately affect lower income and minority groups. One is occupational exposure. Several surveys suggest that both groups are heavily represented in jobs at risk of having high occupational lead exposures. These occupations include construction, primary and secondary smelting, automobile repair, welding, and salvage work. Occupational exposures in adults are often linked with elevated lead levels in other family members, especially children. Unfortunately, occupationally exposed workers have not shown the same overall decrease in blood lead levels that has been seen in the general population over the past 15 years.

Certain consumer products also represent exposure sources that are likely to affect specific ethnic groups. Several studies have indicated that some traditional medicines, cosmetics, and foods from a range of cultures can contain high levels of lead. These goods, along with ethnic and handmade potteries that leach high lead levels, can all be sources of increased lead exposure and even toxicity. Brass and especially bronze are used for cooking and eating utensils in several cultures; both alloys can contain and leach high levels of lead.

It is important to note that while FDA has been successful in working with the U.S. food processing industry to eliminate the use of lead solder in cans produced domestically, imported cans are not currently regulated in this way. Some ethnic groups consume significant quantities of imported canned foods, and they are at risk of higher lead exposure from this source.

These last points raise a difficult issue. Children or adults may have elevated blood lead levels both because of higher environmental exposures and because of behavior patterns that increase intake. The use of certain traditional remedies or canned foods with lead is one such behavior pattern. The degree of hand-to-mouth activity or the frequency of hand washing can modulate exposures. Many other factors can also affect a child's exposure to and uptake of lead from the environment, including nutritional status, eating habits, adult-to-child ratio, etc. To be fully effective, successful intervention programs must target behavior as well as the physical environment.

Because of the factors discussed in this article, we expect that blood lead levels have probably fallen by a smaller than average percentage in poor inner city neighborhoods and among certain ethnic racial groups. Equity considerations are a major concern with lead exposure, in part because such exposure is associated with increased risk of compromised cognitive development and abilities and resulting substandard school performance. The inequity of imposing such a burden on children of lower socio-economic status and/or children from disadvantaged ethnic or racial groups is obvious: It compounds their burden by leaving them with fewer skills to overcome the disadvantages that face them.

By design, EPA regulations and programs have thus far aimed primarily to reduce the general population's exposure to lead. The Centers for Disease Control and other federal agencies are now developing a nationwide strategy to address lead paint exposure, which is currently the most important exposure source. This strategy specifically targets lead exposures predominantly affecting children who are already disadvantaged.

EPA is participating in the development and implementation of the strategy in several ways: by helping to design training programs for lead paint abatement workers, by conducting research on innovative approaches that can reduce the cost of lead paint abatement, and by providing technical assistance to CDC and HUD in designing their programs. If fully implemented, these initiatives should reduce the disparity in lead exposures among the U.S. population. □

Grass-Roots Groundswell

In Detroit, neighborhood organizations plant trees in remembrance of young people who have been killed in street violence.

AN INTRODUCTION

by Norris McDonald

The environmental status of minority communities in America can be defined by the effects of the dominant culture's practices of consumption, competition, and conquest. The dominant culture conquered the Native Americans, enslaved Africans, and competed among its members for ownership and exploitation of natural resources, thus setting the tone for minorities' environmental circumstances today. This is the context in which minority communities have experienced and continue to face disproportionate impacts from environmental problems.

Historically, America's dominant culture has exerted ecological dominance over minorities including African Americans, Native Americans, and Latino Americans. The record of this dominance is familiar. Moreover, the general public is becoming increasingly aware of the environmental aspects of this legacy. Environmental racism and equity issues are being articulated, researched, and documented. The challenge lies in where minority communities go from here.

In recent decades, minority groups have competed successfully for some civil liberties. This achievement significantly increased their freedom of movement and opportunity. However, African Americans are still reeling from the effects of hundreds of years of degradation. African Americans lead the nation in virtually every health risk category. American society is as segregated as ever: There is a white side and minority side of town in virtually every major city in the United States.

Minority communities have been

and remain, in short, environmental dumping grounds. Will the dominant culture, which has not been known to redistribute natural resources to the benefit of minority groups, relinquish its control of such resources? Will the dominant culture clean up minority communities? Will it redirect the nation's vast resources in a massive environmental reclamation program in minority communities? Will it embrace minority cultures as its own and thoroughly integrate itself into these communities? History provides no precedent for such occurrences. Therefore, minority communities will have to take the initiative to eliminate environmental pollution by whatever means necessary.

Some 20 years ago, comedian and nutritionist Dick Gregory noted that "America is insecure .... Americans will permit the continuation of a polluted system which makes billions of dollars through reckless pollution." Jazz musician Miles Davis addressed environmental issues in his autobiography: "[P]ollution is everywhere. Polluted lakes, oceans, rivers; polluted ground, trees, fish everything. I mean they're just ... so greedy. I'm talking about whites who are doing this ... [to] the ozone layer."

What can minority communities do to reclaim their environmental destiny? Ultimately, minority communities have one of two choices for cleaning up their environments: (1) replace the dominant culture; or (2) clean up their own environments. The first choice is probably not practical or possible. The second choice is imminently practical and definitely possible. In fact, minority communities must lead the way in cleaning up their own communities. To the extent that the dominant culture is willing or able to assist, so much the better. However, minority communities cannot afford to wait for the dominant culture to "get environmental religion," so to speak.

What will this minority environmental clean-up campaign look like? Minority communities need to implement an all-out effort, comparable to but larger than the civil rights movement of the 1960s, to clean up the air, water, food, land, toxic wastes, and toxic behavior. In addition to cleaning up the neighborhood, this effort will provide development, employment, and economic power within minority communities.

Many urban minority communities are located in areas that are consistently in violation of the Clean Air Act. Asthma is killing African Americans in unprecedented numbers. Black males in urban areas are five times as likely to die from asthma as whites in the same settings. Minorities must eliminate ground-level ozone and otherwise clean the air in their communities. Lead poisoning is causing tragic disabilities among minority children: The sources of this lead contamination must be removed. Minorities must clean up polluted drinking water in their communities in both urban and rural areas. They must clean up the land and neutralize toxic waste sites. Minority communities must alter their food consumption patterns to improve health. Toxic behavior—drug killings, addictive drug use, and crime—must be significantly reduced.

Minorities do not own the refineries or chemical facilities that have produced the pollution dumped in their backyards. Since they do not have a vested interest in these companies, minority communities are in a unique position to lead the nation toward implementation of appropriate energy and manufacturing technologies. There is an opportunity to play a leadership role in fostering a nonpolluting, innovative, competitive economic renaissance.

Environmental justice will be attained as minority communities rid themselves of pollution problems. Environmental racism will become irrelevant as environmental solutions are adopted and maintained by minority communities that are now disproportionately polluted.

There really isn't an alternative. The very health and existence of some of these communities are on the line. The time has come to seize the environmental initiative and clean up minority communities by whatever means necessary. The stories that follow provide some examples of what can be achieved when community groups take the initiative on behalf of their own environment. □

(McDonald is President of the Center for Environment, Commerce, and Energy in Washington, DC.)

Leslie J. Smith, Jr. photo, USA Today.

The author is pictured at the Anacostia River in Washington, DC.

THE KETTLEMAN CITY STORY

By Jane Kay

Kettleman City, California. When a small group of Latino farm workers refused to go to the back of a hearing room to get testimony translated into Spanish, they took a first step in combating environmental racism.

Like many other minority communities around the nation, they got angry and they got even. To anyone who would listen, they argued that if a little town with a 95-percent Latino population was expected to accept the state's first commercial hazardous waste incinerator, then government and industry could damn well provide the environmental reports in Spanish.

On December 31, 1991, they won a civil rights lawsuit filed a year ago in the Sacramento County Superior Court by a public-interest anti-poverty law firm, the California Rural Legal Assistance Foundation. Judge Jeffrey L. Gunther ruled that Kings County, in the heart of the Central Valley, failed to follow California law when it prepared an environmental report on Chemical Waste Management Inc.'s proposed incinerator and rushed approval through the board of supervisors. The county didn't properly analyze the impacts on air quality, agricultural crops, and grazing, nor did it analyze the cumulative environmental and health effects from the proposed incinerator, highway traffic, and other sources, the judge ruled.

It was a strong victory for the little community: The court agreed that the Latino community had been left out of the process that led to county approval, the first step in siting the incinerator.

"The residents of Kettleman City, almost 40 percent of whom were monolingual in Spanish, expressed continuous and strong interest in participating" in the review process for the Chem Waste facility, "just four miles from their homes," the judge wrote. "Their meaningful involvement in the review process was effectively precluded by the absence of Spanish translation." Kings County was told to do the report over, this time following the law.

The decision could delay the project at least a year, even if the county or Chem Waste appeals it. The facility still must get state and federal permits.

"This just goes to show that Latino farm workers can be heard," said Mary Lou Mares, a leader of El Pueblo para el Aire y Agua Limpio (People for Clean Air and Water), when she heard the news. "The next step is a voting drive to flex our muscles and get some of these supervisors turned out of office."

Kings County assistant planning director Bill Zumwalt was shocked over the court decision. "The legislature has never passed a law that requires environmental documents to be prepared in languages other than English," he said. But times are changing, and in many parts of the country the days of empty hearing rooms and uncontested decisions are over. In California, Mothers of East Los Angeles and Concerned Citizens of South Central Los Angeles—Latino and African American groups—support the Kettleman City protest, as do the National Toxics Campaign and Greenpeace, which first alerted the community to the hearings on Chem Waste's proposed incinerator. In March, Kettleman citizens hosted residents of Tijuana who came for information and support. Kettleman's El Pueblo backs the Mexicans' opposition to Chem Waste's opening a new hazardous waste incinerator across the border in Baja California this spring.

Armed with studies, minority activists say they're bearing the greatest brunt of the nation's toxic waste. And because they're powerless and many times poor, they don't have the clout to keep it out of their neighborhoods or anyone else's. The town of 1,500 has a 95-percent Latino population. In 1980, the average family income was $13,714.

Chem Waste spokeswoman Sylvia

Latino farm workers display signs.

Vickers in Kettleman City says the waste sites are chosen because they're environmentally sound and not because of social conditions. "An understanding of the hazardous waste business shows that all of our facilities are based on environmental reason. Kettleman is one of the most ideal locations. It doesn't come in contact with usable ground water," Vickers said.

The company's three other incinerators are located in poor, black neighborhoods—Chicago's South Side, Sauget, Illinois, and Port Arthur, Texas. It also owns the nation's largest hazardous waste disposal and treatment facility, in Alabama's Sumter County—nearly 70 percent black, with more than a third living in poverty.

The fourth burner would be built here in Kettleman City to take up to 100 million pounds of chemical wastes a year.

Much of the opposition stems from Kettleman City's already playing host to the nation's fourth largest hazardous waste landfill, which is also operated by Chem Waste. Last year, Kettleman City residents were disappointed and angry when EPA approved a big expansion of the facility.

The people feel they've taken their share of toxic garbage. "We don't feel that EPA is looking out for our interests," said Mares. "They come around all cooperative and seem very sympathetic. But the EPA is the one that's pushing incineration. They don't stop giving out permits. So how can we believe them?" □

(Kay is the environmental writer for the San Francisco Examiner. In April 1991, she wrote a four-part series entitled "Toxic Racism.")

THE TOXIC AVENGERS

by Linda R. Prout

They are named after a celluloid character of comic proportions, but for the Toxic Avengers there is nothing funny or fanciful about their fight to clean up their Brooklyn, New York, neighborhood.

For the last four years, this group of Latino and African American high school and college students has waged a very real battle to rid Williamsburg, considered one of New York's most polluted communities, of hazardous materials and of a company that harbors them. They have lectured, marched, and rallied and, in the process, inspired other Williamsburg residents to become environmental activists.

"The movement is going strong," reports 16-year-old Benny Vasquez, a dedicated member of the Toxic Avengers. "A lot more people are getting involved in environmental issues."

The Toxic Avengers' main target has been the Radiac Research Corporation, a company which stores and transports toxic waste and low-level radioactive and flammable materials. Their

Students in Brooklyn, New York, are waging war on hazardous wastes.

(Prout is a free-lance journalist based in New York.)

demonstrations against Radiac have attracted hundreds of participants.

Radiac has been in Williamsburg for more than two decades and has consistently received a clean safety report from the state's Department of Environmental Conservation. But Williamsburg residents have criticized its location next to a public school playground. The Toxic Avengers contend that Radiac's presence in their inner city neighborhood is an example of environmental racism.

"Most toxic sites are in poorer, mostly minority communities," says Vasquez.

Williamsburg is a working class neighborhood that shares a peninsula in northeast Brooklyn with the community of Greenpoint. Once predominantly Jewish, today most of Williamsburg's 40,000 residents are Latinos from the Caribbean and Central America.

According to a report released three years ago by the Community Environmental Health Center at New York's Hunter College, at least 28 facilities in the Williamsburg-Greenpoint area stored large amounts of toxic waste. Eleven of these facilities housed substances classified by EPA as "extremely dangerous" in quantities exceeding government recommendations.

Adding to the health risks is Williamsburg's location. The neighborhood is crisscrossed by the expansive Williamsburg Bridge and an elevated highway, two roadways jammed day and night with cars emitting toxic fumes.

The Toxic Avengers meet in the shadow of that expanse, at a community center called "El Puente" (Spanish for "the bridge"). The group grew out of a course in environmental science that Jose Morales, a lifelong Williamsburg resident, was teaching there in 1988. Sent into the streets to research a class project, Morales' students discovered an empty lot littered with drums oozing toxic liquids. Environmental agencies were called in to clean up. But there was much more work to be done. Morales invited other students to participate, and the Toxic Avengers were born. He named the group after a movie character who fell into a vat of slime and emerged a mutant crusader against polluters.

The group varies in size from a previous high of 12 to its current eight members. But the young activists, aged 16 to 20, are constantly recruiting and steadily taking on new projects. They recently started a recycling program at El Puente and soon will take that campaign throughout the neighborhood. They are starting workshops to teach community members that combating pollution should be a priority just like fighting against drugs and crime.

And they have taken their message on the road. These "environmental ambassadors" have traveled to conferences around the country, conducting workshops and serving as role models for other inner city youth.

"What we try to tell other young people is that they have power, they have the ability to change things," stressed Rosa Rivera, 21, a college student and original member of the Toxic Avengers.

Group members are heartened to see more people of color becoming involved in the environmental movement. It wasn't always that way.

"The movement has been very white," explained Rivera. "We would go to conferences and be the only Latinos there. But slowly that is changing."

The Toxic Avengers have helped that change come about in their own community by printing all their literature in both English and Spanish. For their efforts, they have received public service awards from the Citizens' Committee for the City of New York and from the *New York Daily News*.

"Groups like the Toxic Avengers can make a significant difference," said Democratic state legislator Joseph Lentol, who represents the Williamsburg-Greenpoint area.

By educating their own community and motivating residents to become active in environmental issues, they already have. □

THE PELE DEFENSE FUND

by Rick Carroll

Named for Hawaii's volcano goddess and sworn to protect the islands, the Pele Defense Fund is a fiery, grass-roots organization with impact mighty as its namesake.

It has thwarted the Aloha State's effort to tap a live volcano and harness its steam in a $4 billion, federally funded experiment in a rain forest on Hawaii, the largest tropical island in the Pacific.

Pele (pay-lay) is the legendary Hawaiian fire goddess who causes volcanoes to erupt. Despite 170 years of Christianity, many Hawaiians not only believe in Pele's power, they still worship her—and for good reason.

Since January 3, 1983, Madame Pele, as she is known, has thrown up enough red hot lava, it is estimated, to build a four-foot wide, four-inch deep sidewalk from Honolulu to New York every two days.

The eruptions, still in progress, began soon after the first drills pierced the east rift zone of 13,679-foot Mauna Loa; one eruption inundated 10,000 acres of the original site with lava. Madame Pele was angry, Hawaiians said.

A dozen outraged islanders first took up Madame Pele's defense in 1982 only to be dismissed as pot-smoking hippies by the local media.

"Nobody took us seriously at first,"

(Carroll, author of Great Outdoor Adventures of Hawaii *(Foghorn Press, San Francisco) covers Hawaii and the Pacific for United Press International.)*

Grass-Roots Groundswell

said Ralph Palikapu Dedman, the founding president.

Their cause was not immediately understood even in Hawaii, where fewer than 20 percent of the population is Hawaiian, because it recalled arcane Hawaiian religious rites many thought abandoned.

"We worship nature gods, like Pele," Dedman said.

This native Hawaiian belief, Dedman claims, has been "ongoing for thousands of years"—much like rites of native American Indians who find spirituality in nature.

"The forest is to us like a cathedral to Christians," he said. "To poke holes in Pele is sacrilegious."

In 1988, the Pele Defense Fund brought its cause to national attention in full-page ads in the *San Francisco Chronicle* and the *New York Times*.

Claiming Hawaii would become an "industrial slum," the ads stressed the importance of native religious rites and deplored the geothermal plant in the 27,000-acre Wao Kele O Puna rain forest as "Ugly, Toxic, Costly & Sacrilegious." An illustration showed a "new" Hawaii jammed by high rise hotels, its landscape marred by thousands of 10-story electrical towers; a geothermal plant pumps out volcanic steam to chill Waikiki's 50,000 air-conditioned tourist hotel rooms 150 miles away.

Their mouse roar focused media attention on the struggle in the rain forest between native Hawaiians who worship a fire goddess and wildcat drillers from Wyoming trying to plumb the world's most active volcano for steam.

"It really changed the awareness," Dedman said. "We are five thousand strong now. People from all over the world support our cause."

Ecology groups like the Sierra Club, Greenpeace, EarthFirst, and the Rainforest Action Network took up the defense of the Wao Kele O Puna (it means "green forest"), which is home to endangered Hawaiian birds, insects, plants—and on occasion humans.

"As native Hawaiians, we are part of the ecosystem of these islands," Dedman said. "If we are as important as an endangered tree, environmental groups should chain themselves to us as much as they would a tree."

Brad Lewis photo.

Rick Carroll photo.

Struggle in the rain forest. Ralph Palikapu Dedman: "To poke holes in Pele is sacrilegious."

For Pele worshippers the battle to save what the *New York Times* called "the last big tropical rain forest in the United States" is still being fought in state and federal courts.

With legal aid from the Sierra Club, they won a federal court decision last summer requiring an environmental impact report before "a single penny of federal money can be spent," Dedman said.

The U.S. Department of Energy study may take up to two years.

The Pele Defense Fund called for a boycott of Hawaii's products and its $8 billion-a-year visitor industry in 1988.

Anti-geothermal protests in Hawaii draw many supporters.

The boycott fizzled, but the hypocrisy issue—the United States condoned the demise of Hawaii's rain forest while condemning Third World nations for similar destruction—surfaced on the desk of Hawaii's governor in the form of *Good Housekeeping Magazine's* "Thumbs Down" award. "We delivered it personally," Dedman said. "He was a little embarrassed."

An advocate of geothermal for oil-starved Hawaii, the governor lost political face again when his own state health director called geothermal "the stupidest thing we could possibly be doing . . . in the forest."

Last summer, a test well exploded and sent people fleeing noxious gases; the hazardous conditions forced the state to shut down operations.

It was the latest setback for the haunted geothermal project. Or was it—as Dedman and other native Hawaiians believe—only Madame Pele voicing her displeasure once again? □

THE WATCHDOG

by Michael Novick

In March 1990, Dr. Russell Sherwin, a pathologist at the University of Southern California in Los Angeles, reported a study of autopsies on 100 youths, mostly black and Latino, who had died from nonmedical causes. Eighty percent had "notable lung abnormalities"; 27 percent had "severe lesions." Had they lived, in 15 years they would have been candidates for lung disease.

According to Sherwin, "the danger is above and beyond smoking or even respiratory viruses . . . much more severe, more prevalent. These were pretty young people . . . running out of lung." Sherwin tried to factor out other elements that would have contributed to the lesions besides the quality of the air. "The majority lived in central L.A.," he noted, "a lower socio-economic area that might present other [contributing] factors."

But the Labor/Community WATCHDOG, a grass-roots, multi-racial, working class L.A. group focusing on air pollution, thinks you can't isolate chemical factors from other conditions facing communities of color and working people. They just published *L.A.'s Lethal Air: New Strategies for Policy, Organizing, and Action*, showing how class, race, and gender oppression intersect with toxic air-borne chemicals and smog to put the greatest burden of pollution on the worst off.

Recently, the WATCHDOG put together the Social Equity Coalition to seek amendments in regulations of the South Coast Air Quality Management District (AQMD). The AQMD, a regional agency operating under state and federal mandates to clean up L.A.'s air, adopted a regulation requiring employers to limit the number of individual drives to work by employees. This "trip reduction" regulation was meant to reduce smog from auto emissions. How would this laudatory goal be reached? Many large employers would simply impose parking fees, on the theory that the "market" would force workers to carpool (while producing a tidy income for the employer).

The Social Equity Coalition proposed requiring employers to consider the differential impact of their plans according to race, gender, and income. Saying that fixed parking fees to discourage driving placed a disproportionate burden on lower income employees, especially women and minorities, they called for crafting programs, like employer-provided vans and on-site child care, which would be more equitable yet more effective in reducing unnecessary trips.

At a hearing in December 1991, the coalition arrived with about 75 demonstrators and close to 20 witnesses. Thanks to months of previous lobbying by the coalition, AQMD staff recommended adopting part of the amendment, focusing on income criteria. The coalition pressed for the full package, giving worker groups defined by race and gender the standing to appeal discriminatory "trip reduction" plans. Despite opposition from employers and from other environmental groups, the AQMD Board, composed of representatives of local governing bodies throughout southern California, adopted the entire proposal on a nine-to-two vote.

Eric Mann, director of the Labor Community Strategy Center, of which the WATCHDOG is a project, attributes the victory to working simultaneously on "inside" and "outside" tracks. "We had a mass demonstration in March, the first big, noisy rally at the AQMD's headquarters. Then we knocked their socks off when we went inside and presented articulate, scientifically sound testimony from a broad array of groups. The AQMD realizes that even with its regulatory powers, it depends

(Novick is Los Angeles Bureau Chief for the Guardian News Weekly.)

on the voluntary compliance of millions of individuals to make these regulations work. Our coalition is the only force organizing at the grass roots around air pollution."

The WATCHDOG wants corporations which have profited from pollution to pay to restore the air. It wants the communities affected by such economic decisions to have a say in making them. The project grew out of the effort to keep General Motors from closing its plant in Van Nuys, California. According to Chris Mathis of the WATCHDOG, his experience as an auto worker led him to see the need to revitalize the labor movement with a broader social agenda that spoke to his full identity as a black person, a worker, and a community resident. Mann and Mathis were led to focus on air pollution by the realization that as auto workers, they were involved in the release of toxics and other destructive chemicals. The WATCHDOG sees dealing with the issue as a civic responsibility and as a steppingstone to the empowerment of workers and communities of color.

According to Lisa Duran, Coordinator of Education Services, they "put forward a new organizational model, based on conscious, well-trained organizers who will mobilize people into a multi-racial membership organization" around a long-range view. Duran emphasizes they're organizing people around broad social concerns, not just a desire to keep toxics out of their own backyard. "People move off a sense of justice as well," she says. The group is taking on the sense of powerlessness which can grip oppressed communities. "We emphasize to people that we can make a difference," says Kikanza Ramsey, Coordinator of Youth Outreach.

Mathis concurs. "We don't have to tell communities of color, or women, how they're discriminated against. They're well aware of that. We're trying to change people's sense of what they're capable of, that people can participate in the decisions of production. By developing the abilities of working people and communities of color to understand politics and science in all their complexity, we're expanding their sense of possibility." □

Watchdog photo.

Multi-racial group in Los Angeles won decision against discriminatory plan for reducing commuter traffic.

DETROIT SUMMER

by Grace Lee Boggs

Most Americans picture Detroit today as a wasteland. Once a thriving metropolis, it now resembles the capital of a Third World nation. In some sections near downtown, not a single house still stands.

Over the last years, hundreds of thousands of factory jobs have been exported to Third World countries, where labor is cheaper. So young people who might otherwise have been working and making enough money to raise families have been reduced to hustling for a living. As a result, the numbers of teenage pregnancies and single-parent households have soared. Also, since the invention of crack in 1985, thousands of young people have become part of the "drug economy," bringing a tremendous increase in violence.

But out of the depths of a city in crisis, a new spirit of struggle and solidarity is stirring at the grass roots. The turning point was in 1986-87. In 1986, 43 children were killed and 365 children shot in street violence. As a result, wherever people got together informally in the black community, the discussion eventually got around to the question, "What is happening to our young people?"

Out of this discussion came the formation in January 1987 of SAVE OUR SONS AND DAUGHTERS (SOSAD) by Clementine Barfield, whose 16-year-old son had been killed in the summer of 1986. With the goal of creating a movement to do for our period what the civil rights movement did for the 1950s and 1960s, SOSAD organizes memorial services, marches, rallies, and cease-fire vigils. It also organizes conflict resolution

(Boggs is active in grass-roots neighborhood efforts in Detroit.)

Young activists urge The Detroit News *to recycle newsprint.*

workshops and urban farm training programs for young people. Because SOSAD mothers refuse to be defeated by adversity, because they refused to see themselves only as victims of racism, because they have been organizing programs for positive change for young people, they have helped to empower other grass-roots Detroiters.

Soon other activities to reclaim our city began to emerge. In the fall of 1988, a citywide network of neighborhood organizations calling itself WE-PROS, or WE THE PEOPLE RECLAIM OUR STREETS, began carrying on weekly, anti-crack marches to break the cycle of fear in our communities. Consisting mostly of older Detroiters determined not to allow their homes and neighborhoods to be destroyed by crack dealers, WE-PROS marchers beat drums and chant slogans like "UP WITH HOPE, DOWN WITH DOPE!" and "HEY DOPE DEALERS, YOU BETTER RUN AND HIDE; PEOPLE ARE UNITING ON THE OTHER SIDE."

To reaffirm the resilience of human beings in the midst of devastation, SOSAD, WE-PROS, and the DETROIT GREENS plant trees at sites where young people have been slain. On Earth Day 1990, they sponsored a mass planting on Belle Isle in honor of all children who had been killed in the last decade.

Meanwhile, all over the city grass-roots organizations and individuals have been "rehabbing" abandoned homes. In the process, they have been helping to beautify neighborhoods, revive the work ethic, restore the city's tax base, and give hope to our young people. One of the most moving example of this housing rehabilitation is the Lawton Street Project between Muirland and Puritan on the Northwest side, where 19 houses were recently renovated through the combined efforts of residents, the city, and business.

On November 16, DETROITERS UNITING organized a Peoples' Festival at the Majestic Theatre to celebrate the new spirit of people "putting our hearts, minds, hands, and imaginations than 40 community organizations participated, and more than 500 people attended this joy-filled, hope-filled event. In election years, DETROITERS UNITING also organizes town meetings where the people speak, and the candidates are invited to listen.

Now a broad-based coalition of Detroiters is organizing DETROIT SUMMER '92, a project to bring young people from all over the country to work with Detroit youth on community-based projects, such as rebuilding homes, planting urban gardens, and building community parks. Through workshops and cultural events, participants will have the opportunity to learn from and contribute to the rich cultural and ethnic diversity of Detroit. Here's what the call for participants says:

> In the spirit of Mississippi Voter Registration Project of 1964, DETROIT SUMMER '92 will draw national attention to "recivilizing" our cities as the number one priority of our period. It will encourage young people at the local and national level to take responsibilities for our communities, our cities, and our country. It will create a fellowship between generations and make clear that the devastation of American cities is not "their" problem but "ours." It will let the world know that together we can overcome. □

Steps at EPA

IN THE REGIONS:

Issues of environmental equity, like other fairness issues, suggest that government can and sometimes does exacerbate situations where certain groups of people are left with a lower quality of life than the mainstream. As government institutions review their policies as to whether their effects may be discriminatory, it is important to remember that basic issues of fairness come down to how people treat or forget to treat other human beings.

Confronting and responding to environmental equity concerns—there lies a challenge for EPA's 10 regional offices and the state and local officials that EPA regional personnel work with: All have key roles to play in ensuring that communities subject to multiple environmental stresses receive fair treatment. The challenge involves being responsive to citizens expressing concerns about environmental hazards in their communities, and it involves taking action to enforce environmental regulations in communities where underprivileged citizens may not know how or where to express their concerns. The challenge involves being open to a wide range of approaches, including community outreach and education, in cases where environmental problems can't be neatly solved with traditional regulatory tools.

Nearly every EPA region, working in concert with state and local environmental officials, has special initiatives underway that focus on minority and/or low-income communities and are intended to promote environmental equity in some way. Following are snapshots of three of these EPA Regional projects.

—Deb Martin, Chief
Regional and State
Planning Branch

Innovative Housing in Atlanta

Low-cost houses are difficult enough to find in American cities; low-cost homes that are also energy-efficient virtually do not exist. EPA's Atlanta office is helping to fund a nonprofit developer who will build houses that are both; they will be built in minority neighborhoods.

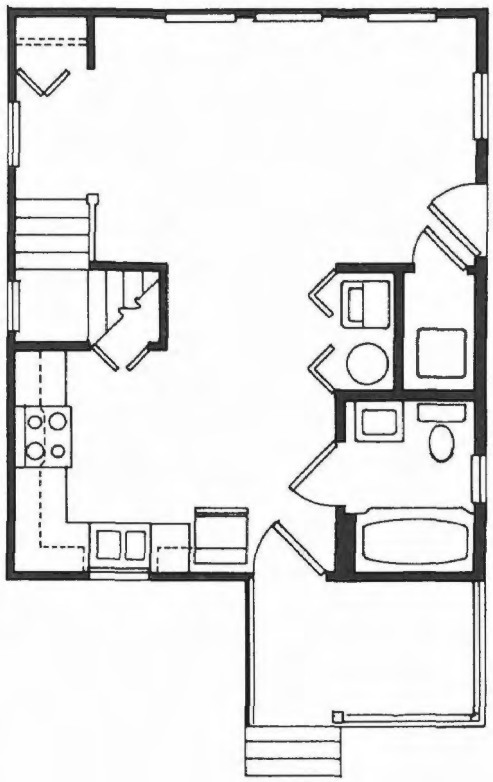
Southface Housing Development Corporation has designed a cottage home for families whose income ranges from $8,500 to $18,000 a year. Ownership will run $270 to $320 a month, including principal, interest, insurance, and taxes.

Projected energy use is 325 to 425 kilowatt hours per month, for an additional $30. This compares to $60 to $100 per month for standard low-cost housing units.

The cottage home is small—about 580 square feet; however, it can be expanded to 900 square feet. It has a vertical profile, simple trim, and a generous porch, all of which give it a traditional appearance.

The porch enters on an open first floor (20 feet by 20 feet) with a living room, eat-in kitchen, and a full bath. Space is set aside for a coat closet, linen closet, and a laundry. The first floor is accessible to people with physical disabilities.

A staircase leads from the living room to a second floor sleeping loft. This loft extends over the kitchen and dining area but allows the living room to rise 16 feet to the ridge. Care will be



This low-cost home is also energy efficient. Southface photo.

taken in siting the houses to provide this space a southern orientation, so that it will be airy and sun-filled, giving the house effective daytime-lighting and improving its passive solar performance.

A second bedroom can be added by extending the loft into a complete second floor, or additional bedrooms can be attached to the rear of the house.

The aspect that makes the cottage home especially distinctive and affordable is its energy efficiency. Energy efficiency often drops out of the scheme in most affordable housing programs. The concern for initial costs that brings this about is understandable, but the result is often decreased affordability.

The energy strategy for the cottage home includes the following measures:

- Full ceiling, wall, floor, and slab insulation
- The Airtight Drywall Approach and other measures to reduce air leaks and moisture problems
- Efficient heating and cooling equipment with well sealed and regulated duct work
- Double-pane metal windows with a thermal break
- Insulated entry doors
- Ceiling fans for improved ventilation
- Energy-efficient lighting: compact fluorescent lights inside and for porches; high pressure sodium lights for yard lighting
- Energy-efficient water heating
- Water conservation features including low-flow fixtures and low-volume toilets
- Passive solar design and window shading measures

The first cottage home has been completed, and eight more are planned this year. The Southface cottage home project will not only provide affordable housing to low-income families while, at the same time, conserving energy, it will reduce to a minimum the environmental effects usually associated with low-cost housing development. Savings on carbon dioxide emissions should average 10,000 to 15,000 pounds per year. Nitrogen oxides and sulfur oxides emissions will also be at reduced levels. Smaller lot size will promote mass transit, reduce automobile travel, and help stem urban sprawl.

IN THE REGIONS:

Lead Cleanup in the Midwest

Lead poisoning of children is considered by many to be a national epidemic. EPA estimates that 15 percent of the children in the United States have elevated blood lead levels—i.e., levels above 10 micrograms per deciliter of blood (10 µg/dl). The U.S. Public Health Service has said that poor, minority children in inner cities, who are already disadvantaged by inadequate nutrition and other factors, are particularly vulnerable to lead poisoning. (See story on lead page 42.)

As part of an Agency-wide effort to rank environmental problems according to their effects on human health and the environment, EPA's Chicago office conducted a comparative risk study of the region and selected lead exposure as one of its priority concerns. The resultant Project LEAP (Lead Education and Abatement Program) is designed to prevent and abate lead exposure in six states—Illinois, Michigan, Wisconsin, Minnesota, Ohio, and Indiana.

Project LEAP has four components: data analysis and targeting, pollution prevention, education and intervention activities, and abatement. The targeted population is children under seven years and women of child-bearing age (as surrogates for the fetus). Sixty Metropolitan Statistical Areas (MSAs)—representing 83 cities—are included. The project will take three years to complete.

The first component of Project LEAP (data analysis and targeting) has recently been completed. Computer modeling was used to estimate the percentage and number of children in each city who are expected to have elevated blood lead levels based on a combination of real and estimated contamination levels in air, drinking water, food, soil, and household dust. The computer model primarily used for this work is called the Lead Uptake Biokinetic Model. Geographic Information Systems technology was also used to analyze demographic data.

The table lists and ranks those 10 cities in the six-state region estimated to have the highest numbers of children under age seven with elevated blood lead levels. In addition to the percentage and number of children in each city anticipated to have excess lead in the bloodstream, the table shows how many of these children are estimated to be either African American or Hispanic.

As the table shows, Chicago is estimated to have the greatest number of children with blood lead levels over 10 µg/dl: 40,370, considerably more than half being either African American or Hispanic. In Chicago, projected lead exposures come primarily from contaminated soil and dust; lead levels measured in Chicago's drinking water and ambient air are low.

By far the greatest estimated percentage of children with elevated blood lead levels is the estimated 85 percent projected for the small city of Eau Claire, Wisconsin. Wisconsin was found to differ from the other states in the region in that several communities, including Eau Claire, had high measured levels of lead in drinking water. Thus, in Eau Claire, lead in drinking water occurred in conjunction with high estimated soil and dust concentrations associated with older housing, resulting in a very high percentage estimate of children with blood lead levels of concern. Eau Claire is something of an anomaly in that so few of the children estimated to be at risk are minorities.

In the 83 cities under study, the total population of children under age seven was 1,429,000 in 1988. EPA's analysis indicates that 12 percent of these children, or 166,000, could have blood lead levels of concern. This includes 56,000 African American and 12,000 Hispanic children.

In addition to community education and intervention initiatives to reduce risks to children from lead exposure, EPA's Chicago office will be proceeding with pollution prevention and lead abatement activities under Project LEAP.

Top 10 Midwest Cities by Number of Children with Elevated Blood Levels

City	%	Children (All Groups) < 7 Years Old	African American Children < 7 Years Old	Hispanic Children < 7 Years Old
Chicago, IL	13	40,370	18,712	7,888
Detroit, MI	14	19,142	12,409	555
Milwaukee, WI	20	13,878	4,225	781
St. Paul, MN	13	12,152	785	138
Cleveland, OH	15	9,396	4,022	360
Cincinnati, OH	13	5,415	1,939	41
Indianapolis, IN	7	5,223	1,740	52
Minneapolis, MN	15	4,611	379	59
Toledo, OH	12	4,515	1,157	182
Eau Claire, WI	85	3,650	8	13

Note: Percentages and numbers of children with blood lead levels greater than 10 µg/dl are computer-generated estimates.

Enforcing the Law in California

Individuals or companies who supply drinking water to 25 or more people for at least 60 days a year must meet federal standards of water quality. For years, EPA's San Francisco Office of Drinking Water Compliance and Enforcement has taken pains to make sure that small drinking water systems meet the standards. During the past year, the office focused on migrant labor camps' drinking water systems in California. Officials knew that migrant farm workers were especially vulnerable to environmental hazards, and they were concerned that the camps shared many, if not more, of the problems they'd found with small systems throughout California.

From a list provided by the state of more than 1,000 labor camps, EPA sorted out over 300 that might be operating drinking water systems as defined by the Safe Drinking Water Act. They were spread throughout 41 of California's 58 counties. Some of these camps, it was discovered, were no longer in existence; a few were served by larger, regulated public water systems.

Further investigation of the camps that were operating water systems meeting the definition of a small public water system revealed 191 to be in violation of the law. They served more than 8,500 people in 20 counties. Of the 191 systems in violation, EPA found that 141 were not recognized by the state as public water systems and, as a result, weren't tracked or monitored for any potential violations.

EPA found that most of these systems were not sampling their water sufficiently for contaminants. Some had often exceeded limits for coliform bacteria, and some exceeded limits for nitrates. The presence of coliform bacteria in drinking water indicates that organisms may be present that can cause diseases such as typhoid, cholera, infectious hepatitis, and dysentery. Coliform bacteria also can indicate that parasites are present. Nitrate, which derives from sewage, fertilizers, and feedlots, poses a threat of "blue baby syndrome," a potentially life-threatening anemic condition in babies up to six months of age.

More than one county contact warned that strict enforcement of the drinking water regulations might result in the closure of many labor camps, creating additional housing, welfare, and social burdens for county administrators, taxpayers, and camp residents. According to these contacts, labor camp owners have often chosen to close their camps rather than comply with regulations.

On September 6, 1991, EPA issued notices of violation to the 191 labor camp owners and the California Department of Health Services, Office of Drinking Water. The notices warned the owners either to come into compliance with the Safe Drinking Water Act or to face further enforcement action and penalties. The maximum civil penalty is $25,000 per day per violation for each day a system is in violation.

With full cooperation from the state and counties, 49 systems are now reported to be in full compliance. Another 79 are in the process of permit application and/or conducting the required sampling under supervision from their counties. Nine labor camps have stopped operating, eight of them permanently, since September 1991. It is not clear how many of the closures were related to EPA's enforcement. The remaining systems were not actually public water systems due to misinformation, originally received from the counties, regarding numbers of people housed or length of occupancy.

EPA will continue to work with the state Office of Drinking Water and the affected counties to identify and ensure that all applicable migrant labor camp water systems are inventoried and monitored for compliance with the Safe Drinking Water Act. □

USDA photo.

Migrant farm workers are especially vulnerable to environmental hazards.

HELPING MINORITIES HELP THE ENVIRONMENT

The MAI Task Force Recruits Minority Professionals

by Clarice E. Gaylord and Robert Knox

In an article entitled "Shortfall in the Workforce" that appeared in the September/October 1991 issue of *EPA Journal*, Maureen Delaney cited alarming statistics that "labor needs in science, engineering, and technology are growing, while at the same time, there has been a dramatic reduction in the numbers of students preparing to meet the demands of these vital occupations." By 2010, according to National Science Foundation projections, the United States could suffer a shortfall of 560,000 science and engineering professionals.

Unfortunately, the prospects for minorities joining science and engineering professions are even more discouraging. In 1988, the total number of minorities enrolled in four-year colleges and universities was 19.6 percent, compared to 80.4 percent for nonminorities; minority enrollment in graduate school was 11.6 percent, compared to 88.4 percent for nonminorities. And only 4 percent of 8,262 Ph.D.s awarded in all natural sciences and engineering went to minorities.

Worse yet are reports from the Department of Labor indicating that members of minority groups are much less likely to be employed as scientists and engineers than nonminorities. In 1988, only 4.4 percent of the 4.5 million people employed as scientists and engineers in the United States were minorities. Yet minority groups are among the fastest growing segments of the U.S. population. By the year 2,000, according to the same report, blacks, Hispanics, and Native Americans are expected to comprise 47 percent of all school-age students (up from 25 percent in 1988) and 42 percent of the new entrants into the workforce.

In 1987 Congress established the President's Task Force on Women, Minorities, and the Handicapped in Science and Technology to address this emerging national problem. After holding several public hearings around the country, the Task Force produced two reports which identified serious problems with science education and predicted severe shortages of scientists and engineers in the future—due in part to changing U.S. demographics. To quote from one of their reports, "The factors—racism, sexism, and prejudice against people with disabilities—that have limited opportunities for many in America are also narrowing access to science and engineering careers." Recommendation: "Each federal agency should provide stable and substantial support for effective intervention programs that graduate quality scientists and engineers who are members of underrepresented groups."

In response to the findings and recommendations of the President's Task Force, EPA created the Administrator's Workgroup on Women, Minorities, and the Handicapped in Science and Technology to assess EPA's workforce needs and to develop a comprehensive strategy for action. In its 1990 report, the workgroup verified that EPA has an increasing demand for scientific and technical professionals. More than one-third of its 18,000-strong workforce consists of scientists and engineers, a proportion which has been constant over a 10-year period. Moreover, EPA is likely to lose a significant percentage of its technical professionals by the year 2000: The annual turnover rate is 11 percent for scientists and engineers, and EPA's scientific and engineering personnel are older than the rest of the workforce (averaging 50 years versus the Agency average of 39 years of age). The workgroup identified a number of proactive and preventive measures that EPA needs to take.

Worse yet are reports from the Department of Labor indicating that members of minority groups are much less likely to be employed as scientists and engineers than nonminorities.

One of these recommendations was to establish a Minority Academic Institutions (MAI) Task Force, comprised of senior managers and selected presidents of Historically Black Colleges and Universities (HBCUs) and Hispanic Associated Colleges and Universities (HACUs), to design and implement an action plan to enhance EPA's interaction with

(Gaylord is Deputy Director of EPA's Office of Human Resources Management. Knox is Ombudsman for the Office of Sold Waste and Emergency Response.)

Morgan State photo.

Graduation at Morgan State University, Baltimore, Maryland.

minority institutions. The MAI Task Force's action plan, issued in May 1991, is intended to support the capacity of MAI's to conduct environmental research, sponsor environmental fellows and interns, deliver scientifically trained personnel, and provide public education and outreach activities.

One broad initiative fostered by the MAI action plan was to build technical knowledge and support not only for students but for MAI faculty and mid-career minority professionals as well. In this connection, the task force stressed the importance of providing continued support to minority students as they progress in the educational pipeline from high school through graduate school. Early and sustained intervention is essential to develop the diverse scientific background students need to prepare for environmental careers.

A program to address this "pipeline" problem was piloted in summer 1991. The Coop-Progression program, a modified version of the Office of Personnel Management's Cooperative Education program, recruits 10th and 11th grade minority students to be employed part-time at EPA while receiving training in science and math from a local minority institution. On their graduation from high school, EPA pays up to $5,000 a year college tuition and employs the students as co-ops during undergraduate and graduate training. Noncompetitive conversion to federal employment is offered at the completion of college. This program is being expanded to include EPA's laboratories and regional offices during 1992.

Retaining minority students in undergraduate and graduate environmental programs requires long-term financial and mentoring support. The MAI Task Force recommended expanding the undergraduate scholarship program and creating a new graduate fellowship program for students from HBCUs and HACUs pursuing advanced degrees in environmental areas. These new multi-year $20,000 per year fellowships will be awarded in spring 1992.

Faculty from minority academic institutions are encouraged to participate in EPA's Faculty Fellows program, where they may spend four to six months in research facilities working on priority environmental projects. The objective is for faculty, enriched by this experience, to return to their home institutions to continue relevant research and to mentor and encourage students in environmental studies. This program accommodates 15 to 20 faculty from HBCU and HACU campuses a year.

Another new program is a two-year Environmental Science Management Training program based at Tufts University. The program offers midcareer minority professionals an opportunity to earn a master's degree in environmental science management and to gain work experience at EPA. Eight participants are currently enrolled in this program, which is in its first year.

A second broad initiative stemming from the MAI Task Force action plan is to build research capacities at minority institutions. From its review, the task force found that past funding levels for research assistance at MAIs had not been adequate to build research activities in environmental

The environmental equity movement has made environmental careers more attractive and more relevant to minorities.

areas, to develop curricula in sciences and engineering, or to encourage faculty participation in these fields. Recommended remedies included increasing research dollars to MAIs, providing technical assistance in the development of research grants and environmental curricula, and purchasing "state-of-the-art" instrumentation through a proposed new equipment acquisitions program. For example, laboratory devices such as ultracentrifuges, advanced computer technology, and lasers would help make MAIs more competitive for research funding.

Strengthening the environmental-science research center capability at minority institutions was definitely a challenge. Prior to 1990, there was only one EPA-funded research center at an MAI: at Howard University in Washington, DC, as part of a Hazardous Substance Research Center Consortium with the University of Michigan and Michigan State University. Since the action plan was issued—and due primarily to a 1991 Congressional appropriations bill—two new Academic Centers of Excellence have been established. Clark Atlanta University in Atlanta, Georgia, has a research/training center where faculty and students can participate in Superfund emergency remedial-response research. Funds have been appropriated for a second center at Southern University in Baton Rouge, Louisiana, to begin a statistical research component in hazardous waste research. And funds have been appropriated for a consortium of the University of Texas at El Paso, Arizona State University, New Mexico State University, and the University of Utah to study air, water, and hazardous waste problems along the U.S.-Mexican border.

The task force also realized the importance of an effective recruitment strategy, and this is reflected in a third broad initiative. While more and more predominately majority schools are recruiting minority students and faculty into their science and engineering programs, HBCUs and HACUs still graduate more than half the minorities who receive college degrees. Therefore, these institutions are viewed as the best resources for increasing minorities' access to environmental careers and research opportunities.

EPA has strengthened its Agency-wide recruitment strategy by establishing a National Recruitment Advisory Committee. One of the recommendations of this committee was to establish college relations programs on several HBCU and HACU campuses. Senior EPA officials are now serving as Campus Executives, coordinating recruitment activities, and fostering linkages between these adopted institutions and EPA.

As part of its new campus-relations program, EPA initiated a Memorandum of Understanding with Morgan State University in Baltimore. This comprehensive agreement encourages personnel exchanges, curriculum development in environmental areas, research support, technical seminars, etc. The Morgan State program serves as a model for other MAI/EPA cooperative arrangements.

Successful environmental programs at MAIs can help entice minority students to enter environmental fields. Moreover, the environmental equity movement has made environmental careers more attractive and more relevant to minorities. A recent survey conducted by the Panos Institute found that "environment-related issues have become a high priority among culturally diverse communities ... because the movement takes a more holistic approach by integrating the environment into a broader agenda that emphasizes social justice and equity issues ...." Professor Robert Bullard, author of *Dumping in Dixie: Race, Class and Environmental Quality*, explaining why black minorities have joined environmental grass-root groups in record numbers, states, "Black communities, because of their economic and political vulnerability, are routinely targeted for the siting of noxious facilities, locally unwanted land uses and environmental hazards .... For blacks this is a life-or-death issue."

Just possibly, MAI college students could serve as role models in their communities and perhaps involve high-school and junior-high-school inner city youths in environmental initiatives, thus fostering an even younger generation of future environmentalists who have a sense of environmental ethics and responsibility for the community. Students concerned about the health of their communities could be motivated to learn the skills necessary to take air and water samples and to help monitor nearby industrial facilities. Many MAI students are products of environmentally troubled communities and have a special cultural sensitivity to these communities' concerns. They have great potential to be employees of public/private environmental organizations or to be future environmental policy and decision makers with a keen understanding of community sensitivities on environmental issues.

In short, supporting minority academic institutions by enhancing the knowledge and skills of their students and faculty, building their research capabilities in environmental areas, and having an effective recruitment program will help meet future demands for a technical workforce. □

THE U.S. COLONIAS: A TARGET FOR AID

Border Shantytowns Are Separate But Unequal

by Jack Lewis

Welcome to the Weslaco colonia in Hidalgo County, Texas, 30 miles upriver from Brownsville, a city of 125,000 people, and an equal distance down the Rio Grande from McAllen, a town of 100,000. Weslaco itself has a population of 25,000 within its city limits, which currently exclude the 2,500 Hispanic Americans who live mostly without urban amenities in a fairly typical "colonia"—a Spanish term for a neighborhood or community—on the outskirts of town.

Seventy percent of the colonia inhabitants live without access to any utility—neither fresh water nor sewage hookups, neither gas nor electric power—and their community (largely flat without drainage infrastructure) has unpaved roads that flood frequently, swamping outhouses, cesspools, and primitive septic tanks. Houses are self-built shelters constructed of scrap lumber and other shoddy supplies, and though tiny, they are home to large families of mostly Spanish-speaking farm workers, who face seasonal unemployment rates as high as 20 percent and unnaturally high incidences of dysentery and hepatitis A.

Texas now has laws to prevent new colonias from cropping up, but the existing ones—created by unscrupulous land developers—are still an eyesore and a burden on the conscience of Texas and the nation. For decades these unincorporated rural slums near the Rio Grande have provided substandard housing to tens of thousands of people, most of whom are U.S. citizens whose families have been in this country for generations. Offering no paved roads, little safe drinking water, few sewer or power lines, no fire protection facilities, and only a few community services, these unplanned, unhealthy shantytowns exist today in a shadowland far removed from mainstream America.

Colonias residents have always been too poor to take the initiative on the problems just listed, and the counties in which they live have also been too poor—or too prejudiced—to care. Nearby cities have been all too willing to wash their hands of colonias problems, saying, "They fall outside our jurisdiction." Finally, at long last, state government has intervened in a big way, and so has the federal government.

On February 25, 1992, EPA released a comprehensive plan for the cleanup of pollution along the entire U.S.-Mexico border that will involve an expenditure of well over $1 billion over the next several years by the United States, Mexico, the border states, and private industry. The federal government's share in fiscal year 1993 will be approximately $241 million, of which $75 million has been earmarked for drinking water and sewage disposal improvements in the Texas and New Mexico colonias. EPA will administer $50 million for sewage treatment improvements in these colonias, while the U.S. Department of Agriculture's Rural Development Administration devotes $25 million to improving water supply infrastructure.

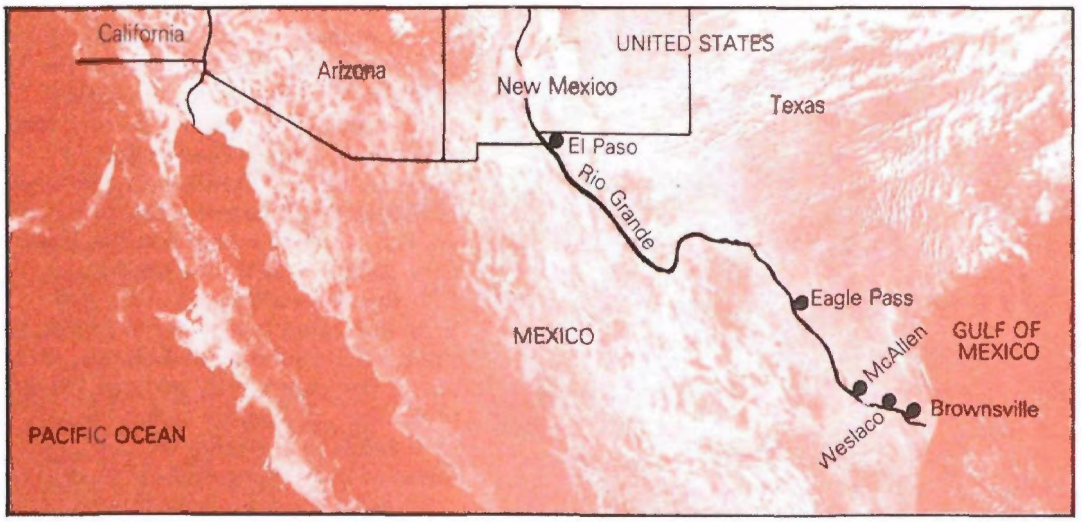
Commenting on EPA's task in the colonias, EPA Administrator William K. Reilly said, "I don't think there are higher risks to health anywhere in the United States than in these unsewered communities .... The health of thousands of people is at risk in the colonias due to the absence of environmental safeguards that most Americans take for granted. We intend to correct this."

The state of Texas has already made a major commitment of its own. In

City of Weslaco photo.

Typical colonias house comes equipped with outhouse privy.

(Lewis is an assistant editor of EPA Journal.)



November of 1989, Texas voters permitted the Economically Distressed Areas Program to fund its operations by issuing $100 million in bonds for construction, acquisition, or improvements to water supplies, and/or wastewater collection/treatment works, including all necessary engineering work but not maintenance or ongoing expenses. In 1991, Texas amplified that bond issue fund by $150 million, creating a total pool of $250 million for water works in the Texas colonias.

Another resource that should be mentioned here is the $15 million EPA put into a Colonia Plumbing Loan Program back in 1990; the first applicants for these internal plumbing and house hook-up loans are now awaiting the ruling of the Texas Water Development Board, which will also manage whatever colonias millions Congress appropriates in the fall. (New Mexico's colonias effort is dwarfed by that of Texas; from 1972 to 1990, the state's Environment Department gave out only $12 million in grants and loans for drinking water and wastewater work in the New Mexico colonias.)

Discouragingly, some experts have estimated that extending sewage treatment to all Texas colonias residents would cost at least $500 million, while further improvements in the drinking water supply would cost $250 million. In other words, total resolution of the problem, in its present scale, is still beyond our grasp. Part of the rationale for tackling it gradually is that local institutions do not yet exist in most of the 918 colonias housing 215,000 Hispanic farm workers in sixteen Texas and New Mexico border counties. Until local governments form or local water utilities show more initiative to handle sewage treatment, it will be difficult to "micro-manage" large construction projects.

Significantly, Lull, Texas—the first colonia to receive construction money from the state's Economically Distressed Areas Program account—was recently annexed by an adjacent city, Edinburg, Texas. In August 1991, the Texas Water Development Board and the Edinburg City Council approved the use of a $565,000 loan and an $885,000 grant to finance water improvements and construction of a wastewater system for the Lull colonia. Lull is a Hispanic community in Hidalgo County with nearly 1,300 inhabitants—all U.S. citizens in good standing—and a history dating back to the 1920s.

In Lull, as throughout the U.S. colonias, few current citizens now have access to sewage treatment, except in the form of archaic, overcrowded, overworked septic tanks, while roughly 80 percent have some kind of amateur fresh-water hookup, for cooking and bathing, but not necessarily for drinking and not necessarily within the home itself. The dwelling can range in quality from a handsome stucco house with several bedrooms to a broken-down hovel built from cinder blocks, tin sheets, scrap lumber, plastic, and cardboard. Most residents use outhouse privies that flood every time rains inundate the undrained, muddy streets and fields of the colonias, where children and animals are frequently seen playing the same day.

Some colonias residents—all of whom own cars or trucks, and many of whom own their own land and dwellings—drive as much as 30 miles to buy bottles of fresh drinking water. The poorest of the poor, however, drink directly from outdoor taps or from the wells feeding those taps, and the ground water that comes from these sources is contaminated with fecal coliform as a result of the repeated sewage floods. Outbreaks of dysentery and hepatitis A are commonplace in the colonias, even though in the rest of the United States these severe water-borne afflictions are considered Third World diseases.

Some 16 other colonia-related water and wastewater projects are now in the Texas Water Development Board pipeline, which will grow wider and wealthier in the fall. Six applicants with completed facility plans have, like Lull, recently been awarded cash. These projects include Socorro in El Paso County ($1.6 million); Cameron Park in Cameron County ($6.4 million); Granjeno and Madero in Hidalgo County ($2.89 million); areas outside Eagle Pass in Maverick County ($11 million); Westway in El Paso County ($100,000); Sebastian and Lasara in Willacy County ($3 million). The Hacienda Gardens colonia in Cameron County has a completed facility plan that is now being evaluated, while five other counties are now preparing their engineering facility plans. □

ON THE MOVE


McCallum


Reich


Smith


Oge

Administrator William Reilly has announced the creation of an Environmental Appeals Board which will replace the current Judicial Officer function in hearing appeals. The new Board, a three-judge panel of senior Agency attorneys, will make final Agency decisions in appeal cases contesting the adjudicatory decisions of Administrative Law Judges and Regional Administrators. The Administrator has delegated to the Board the authority to decide appeals under all the major environmental statutes, including the Clean Air Act, Clean Water Act, Toxic Substances Control Act, and Resource Conservation and Recovery Act (RCRA). At the request of the Administrator, the Board will also handle special assignments where extra assurance of the objectivity of the decision-making process is essential.

To date, two judges, **Ronald L. McCallum** and **Edward E. Reich**, have been appointed to the Environmental Appeals Board; the third member has not been announced.

Until recently McCallum served as the Chief Judicial Officer in the Office of the Administrator. McCallum was promoted to the position of Chief Judicial Officer in 1984 after having served as the sole Judicial Officer since 1978.

McCallum came to EPA in 1974 as an attorney-advisor in what was then the Pesticides, Toxic Substances, and Solid Waste Management Division of the Office of General Counsel. In 1977, he was named Senior Trial Attorney at the conclusion of an extended pesticide cancellation hearing.

Prior to coming to EPA, McCallum was an associate attorney for over four years in a major law firm in Indianapolis, Indiana, specializing in corporate real estate and tax matters.

McCallum is a graduate of Indiana University in Bloomington, Indiana, where he received his A.B., M.B.A., and J.D. degrees. While attending law school, he served on the Law Journal as a Junior Writer.

Edward E. Reich's most recent position was Legal Advisor to the Administrator. Previously, he was the Acting Assistant Administrator and Deputy Assistant Administrator in the Office of Enforcement where he was responsible for management and oversight of enforcement litigation under the various statutes administered by the Agency.

Before his appointment as Deputy Assistant Administrator, Reich was Associate Enforcement Counsel for Waste, with responsibility for civil enforcement litigation under RCRA and the Comprehensive Environmental Response, Compensation, and Liability Act. He has been actively involved in the enforcement of environmental laws since 1968. He received his J.D. from Georgetown University Law Center in 1968 and is a member of the bars of the Commonwealth of Virginia and the District of Columbia.

Bradley F. Smith has been named Director of the Office of Environmental Education. While assuming his new duties, he will continue coordinating activities for the National Environmental Education and Training Foundation until a president is hired.

Prior to EPA, from 1983 until 1991, he served as Executive Director for the Jennison Nature Center and Tobico Marsh National Refuge of Michigan's Department of Natural Resources. He was also a professor in both the Political Science and Biology Departments at Delta College in Michigan from 1975 until 1991.

Smith was a program administrator for the Department of Environmental Protection, City of Grand Rapids, Michigan, from 1972 until 1975.

His extensive related professional experience includes participation on several advisory boards, such as member of the International Advisory Board of the 1992 Environmental Education/United Nations Conference in Toronto, Canada, and a past member of EPA's National Advisory Council for Environmental Policy and Technology Transfer from 1989 until 1991. He also chaired the Agency's National Pollution Prevention Education Advisory Board in 1990 and currently is a continuing advisor of the United Nations Environment Programme.

Smith has authored and co-authored several textbooks, including the recently published 4th edition of *Environmental Science: The Study of Interrelationships*, a work used by many colleges and universities throughout the country.

Smith received a B.A. in political science and international relations in 1972 and an M.A. in 1974 in political science and public administration from Western Michigan University. He holds a Ph.D. (1981) in natural resource policy and management from the School of Natural Resources at the University of Michigan.

Margo T. Oge is the new Director of the Office of Radiation Programs. The Office oversees radiation protection programs that implement provisions of the Clean Air Act, the Superfund Amendments and Reauthorization Act, the Radon Gas and Indoor Air Quality Act, and the Atomic Energy Act. The programs span a wide gamut of responsibilities that include environmental monitoring and surveillance, radiation protection standards and guidelines, compliance activities, and development of public information.

Oge, with EPA since 1980, has specialized in policy and regulatory development. From 1982 to 1985, she served as Section Chief of the New Chemical Section under the Office of Toxic Substances. In 1985 and 1986, she was Legislative Aide to Senator John Chafee of Rhode Island, the ranking minority member on the Senate Environment and Public Works Committee. She also served as Deputy Division Director of the

Goodman

Van Heuvelen

Homoki

Economics and Technology Division under the Office of Toxic Substances from 1986 though 1988. Prior to her current position, she was Director of the Radon Division, Office of Radiation Programs, from 1988 to 1991.

Oge earned her M.S. degree from Lowell University in 1975 and her B.S. degree in chemical engineering from Lowell Technological Institute in 1972.

Laurie D. Goodman, the new Associate Administrator for the Office of Regional Operations and State/Local Relations, comes to EPA after more than four years with the U.S. Senate. There, she served as Deputy to the Chief of Staff in the Office of Senator Alan K. Simpson (R-Wyoming). As Legislative Assistant, she was involved in areas of energy, environment, science, commerce, transportation, public lands, and public works.

During 1986, Goodman developed and managed right-of-way acquisition for the municipal water delivery pipeline as a consultant for the Board of Public Utilities in Cheyenne, Wyoming. She coordinated and negotiated extensively with rural landowners, corporations, and county, state, and federal agencies, finalizing the project without a single condemnation.

From 1984 to 1986, she owned and managed her own firm which researched mineral and surface ownership on private and publicly held lands and negotiated oil and gas leases in the Rocky Mountian states. She also monitored state and federal regulation compliance during lease acquisition and performed surface inspections on proposed drilling sites.

In 1984, she was consultant to the A & W Production Company, where she participated in force-pooling hearings at the Oklahoma Corporation Commission. She also designed and organized the company lease records system and devised a draft payment system that coordinated bank records, land department data, and budget figures.

Goodman received her B.S. degree from the University of Oklahoma in 1983. She has had additional studies at the American University in Washington, D.C., and the University of Haifa in Haifa, Israel.

Robert Van Heuvelen is the new Acting Director of the Office of Civil Enforcement. For the past two years, he served as Deputy Chief of the Environmental Enforcement Section, U.S. Department of Justice (DOJ), which litigated nearly 1,000 environmental enforcement cases referred by the federal government in 88 of the 94 U.S. federal district courts.

Van Heuvelen, who joined the DOJ in 1980, served as a trial lawyer until 1985 and as Assistant Chief of the Environmental Enforcement Section from 1985 to 1989. He was Acting Chief of the Environmental Enforcement Section from October 1990 to April 1991. While at the DOJ, Van Heuvelen served as lead counsel in environmental enforcement litigation under all major federal environmental statutes.

Prior to his service at the Department, Van Heuvelen was Assistant Counsel to the U. S. Senate Subcommittee on Environmental Protection from 1977 until 1980. He was Legislative Assistant to Senator Quentin Burdick (D-North Dakota) from 1975 until 1977.

He graduated cum laude from Macalester College with a B.S. in political science in 1972. He earned a J.D. from George Washington University in 1979 and an M.A. in public policy from the University of Minnesota in 1974. He is a native of Bismarck, North Dakota.

Zeda (Zee) Anne Homoki is the new Special Assistant to the Administrator and White House Personnel Liaison for EPA. She is responsible for coordinating special projects, implementing policy and procedure, and distributing and following up on all White House information to the 60 noncareer appointees now at EPA.

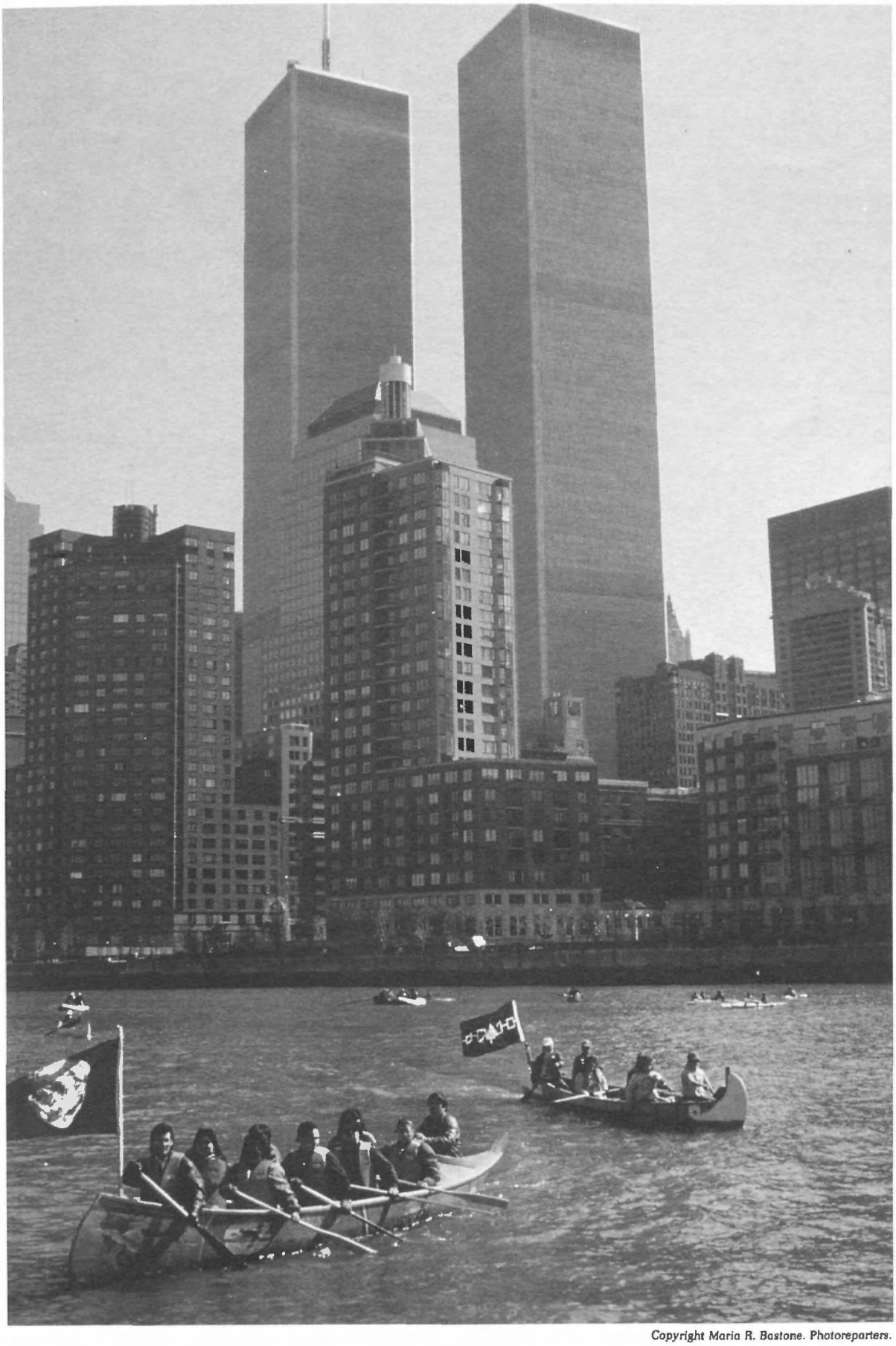
Prior to coming to EPA she served as the Associate Director for Intergovernmental Affairs and Deputy White House Liaison for personnel at the Interstate Commerce Commission (ICC).

Before joining the ICC staff, she was the Special Assistant to the Director of Congressional Affairs and State Liaison at the Federal Energy Regulatory Commission.

In 1989 she was detailed to the White House Liaison Office in the Office of the Secretary, Department of Interior. She served as Legislative Assistant for Representative Bill Archer (R-Texas) from 1986 until 1988.

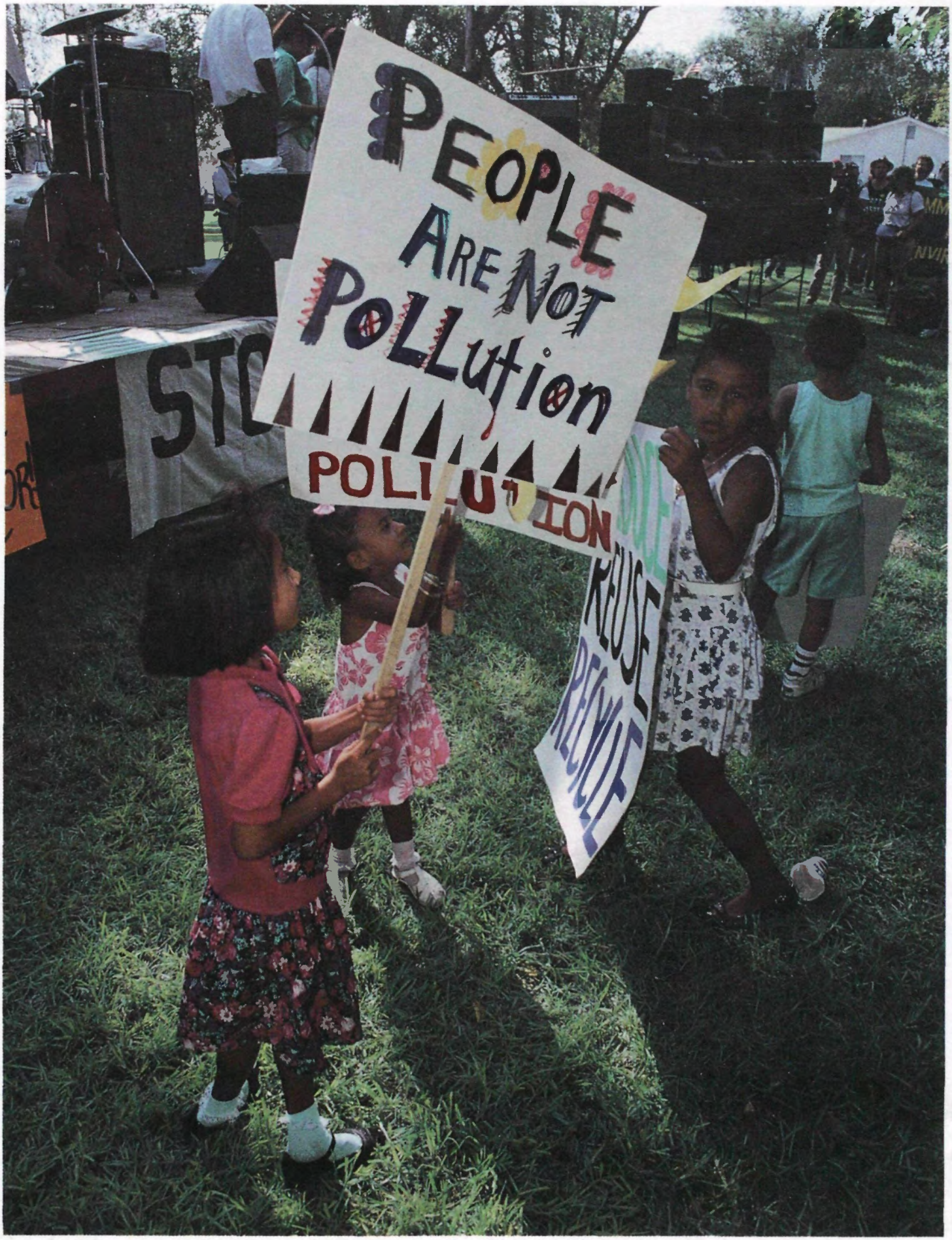
Homoki taught first grade at the Department of Defense Dependent Schools in Germany from 1979 until 1981, where she received the "Sustained Superior Performance Award." She has also done extensive volunteer work.

A native Texan, she received her B.S. degree from the University of Houston. She has lived in Europe and Asia and now resides in Burke, Virginia, with her husband, Steve. Their daughter Elizabeth is a sophomore at Sweet Briar College. □



Earth Day 1990: Cree Indians and Eskimos paddle to Battery Park, New York City, to protest construction of hydroelectric system in Quebec. New York State has recently canceled $17 billion contract for hydroelectric power from Quebec.

Back Cover: October 1991 rally in Kettleman City, California, protesting proposed hazardous waste incinerator. See article on page 47. Copyright John W. Emmons.


PEOPLE
ARE NOT
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