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The Urban Environmental Education Report

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The Urban Environmental Education Report

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for
The National Advisory Council on
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THE URBAN ENVIRONMENTAL EDUCATION REPORT

EXECUTIVE SUMMARY

The Urban Environmental Education Report is the summary of two research projects which were conducted during the latter part of 1990 by a group of interns for the Education and Training Committee of the National Advisory Council for Environmental Policy and Technology (NACEPT). Carried out in two stages, this project included an examination of what EPA, and the Federal Government as a whole, is doing to provide environmental education and training programs that are targeted toward inner-city minority populations, an assessment of the availability and efficacy of local grass-roots efforts, and finally, through research of select urban areas nationwide, an assessment of the availability and efficacy of similar efforts across the country. The areas of the country which were studied, were selected in an effort to represent a cross-section of urban minorities throughout the United States.

The *Urban Environmental Education Report* was submitted to the Education and Training Committee of the National Advisory Council for Environmental Policy and Technology (NACEPT). The Committee was very impressed with the quality of this research and with the variety of concrete suggestions regarding the potential for EPA to play an active role in assisting efforts to provide quality targeted urban environmental education and training. At their October meeting, the Committee voted unanimously to endorse these recommendations for consideration and potential adoption by NACEPT.

"*The Washington, DC Urban Environmental Education Report*", which is Chapter 1 of the *The Urban Environmental Education Report* is a summary of research conducted by Rory E. Verrett of the Patricia Roberts Harris Public Affairs Program, Howard University. Mr. Verrett researched environmental education and training programs in the District that either specifically targeted urban minorities or general environmental programs that included strategies transferable to an urban minority audience. The methodology of the research included data analysis, personal and telephone interviews, as well as actual participation in some of the environmental programs. The wide variety of research methodology used in this project enabled Mr. Verrett to gain a highly accurate understanding of the opinions held by the District's urban minority population regarding environmental education and training programs. The recommendations of this report reflect this understanding.

The Report on Environmental Education for Urban Poor and Minority Populations, which is Chapter 2 of the *The Urban Environmental Education Report*, is a summary of research conducted by Charles Gaboriau, Donna Roesing, and David Small, a intern team from Worcester Polytechnic Institute. The scope of their project was to investigate in a broader, national way, environmental education and training programs targeted to urban minorities. To accomplish this, they investigated efforts in five ethnically diverse cities across the country: Boston, Massachusetts; Atlanta, Georgia; Chicago, Illinois; Austin, Texas; and Sacramento, California as well as environmental education and training programs in other cities (not necessarily urban) that included strategies transferable to an urban audience. During the spring of 1990, while still in residence at Worcester Polytechnic Institute, the students developed and disseminated several hundred organizational/school surveys intended to determine the extent of environmental education efforts of a given organization/school and whether any of these efforts were targeted to minorities. Upon coming to EPA in September and October 1990, the team followed up this effort with a data analysis of the survey results and telephone interviews. The recommendations of this report reflect this national perspective.

It is important to note that although these two projects employed differing research methodologies to assess effective environmental education and training efforts directed to the urban sector, they produced similar conclusions. These conclusions agree that there is:

- minimal federal activity on urban environmental education training;
- significant grassroots work being done to educate urban minorities of environmental risks in their community;
- duplication of environmental education programs in many urban communities across the country;
- distrust on the part of urban minorities of environmental organizations, particularly federal agencies like the EPA;
- differing perspectives of "environmentalism" between mainstream and minority environmentalists.

Similarly, both reports offered similar recommendations regarding the potential for the Environmental Protection Agency to assume an active role in urban environmental education and training. The reports included suggestions concerning:

- partnerships between federal agencies/urban/minority institutions
- the EPA, as a clearinghouse of information on environmental education programs;
- participation of EPA regional offices;
- EPA public relations with urban communities;
- production of environmental materials suitable for an urban minority audience;
- research funding to minority colleges and universities.

CHAPTER 1

The Washington, D.C. Urban Environmental Education Report

by:

**Rory E. Verrett
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INTRODUCTION:

Purpose:

This report assesses the environmental education efforts in Washington D.C. that are sponsored by various sectors of the community including the federal government, non-government organizations, and community groups. This report represents the first segment of a national project that will assess environmental education and training programs in several urban areas across the United States. These cities, intended to represent a cross-section of ethnic and geographic diversity, will be similarly studied. By first taking a microscopic view of environmental programs in one community, the report will identify some effective methods for urban environmental education and training, and thus serve as a starting point for similar studies in the other urban areas.

The complete Urban Environmental Education Report will serve as a tool for discussion for the Education and Training Committee of the National Advisory Council on Environmental Policy and Technology (NACEPT). With the report as a starting point, the Committee can discuss methods for successfully reaching out to urban/minority communities and other currently disenfranchised groups with environmental and training programs. Ultimately, the report should provide the Committee with some basis for adopting recommendations to the Administrator of EPA concerning what role the Agency should play in urban environmental education and training on a national level.

Definition:

The ultimate goal of any environmental education program is the formation of an enlightened citizenry that is committed to preserving and protecting our natural environment. Ideally, it would be desirable to have pervasive environmental education efforts both longitudinally as well as laterally; that is, environmental education that reaches from our youngest to our senior citizens and spans every cultural, ethnic, and socio-economic level. To achieve this, environmental education programs must be as innovative as they are comprehensive and as easily understandable as they are profound in their treatment of environmental issues. To be sure, organizations concerned with urban environmental education must be willing to abandon traditional methods of education and training for more innovative techniques. Moreover, urban communities must be made to realize the connection between local environmental concerns and global environmental issues. Environmental education and training programs must, however, meet the specific needs of the particular community. Therefore, any attempt to educate or train an urban/minority community toward responsible environmental stewardship mandates the establishment of effective linkage mechanisms--ones that link the local issue to the global perspective, the community organizer to the environmental policymaker.

This linkage process, however, is tremendously enigmatic. As community concerns reach up the ladder of influence and national policies attempt to embrace the disenfranchised, the realization of this often distant relationship is hazy, ambiguous, and ineffective decisions from which neither side truly benefits. Government still seems to operate from an ivory tower and community concerns dissolve before they reach policymakers. The environmental crisis plaguing our urban communities requires not only prioritized attention, but demands clarity and consistency in this linkage process. No longer can the environmental movement confine itself to certain ethnic and economic constituencies while claiming to chart a global campaign to save the planet. Seemingly, those most impacted by environmental hazards are those least affected by environmental policies and programs. The Urban Environmental Education Report seeks to link the government to the urban community by assessing successful strategies in environmental

education and training. The report has, as its primary focus, the realization of the Environmental Protection Agency's role in urban environmental education and training.

Scope:

As it is enigmatic to define what is and what is not to be considered environmental education, so too is it problematic to define "urban environmental education." There exists a broad array of activities that are intended to promote the responsible stewardship of urban minorities toward the environment. Yet, this report does not intend to be too narrow nor too general in its classification of urban environmental education. While a minority internship program at a national science observatory might introduce minority students to research careers in geology, it may not be *appropriate* to include such (nonetheless worthwhile) educational programs in an assessment of Washington, DC urban environmental education and training programs. Contrastingly, it would be appropriate to consider a music video about global warming, which was produced by a District environmental organization for minority communities, as an example of an urban environmental education program. For definitive purposes, an effort will be considered "urban environmental education or training" if it satisfies one or more of the following stipulations:

- it informs an urban minority audience about the specific environmental risks in their particular community;
- it educates an urban minority audience on global environmental issue(s) or establishes a connection between local and global environmental issue(s);
- it suggests specific actions that can be taken by community residents to affect/change their immediate and/or global surroundings.

Moreover, when such a definition is placed in context of existing programs in the Washington DC area, this report establishes clear parameters for the classification of urban environmental education and training. Only programs with strategies transferable to an urban minority audience (Washington DC, for instance) will be similarly included.

Content:

The Washington D.C. Urban Environmental Education Report intends to answer the following questions:

1. Is the D.C. community actively seeking ways to educate minorities on local and national environmental concerns? What organizations are involved? Are there any coordinated efforts among organizations? Are there any national programs (outside of the District) that could be considered?
2. Do the existing programs address all of the minority community's environmental concerns?
3. Do the existing programs administer to all of the community's needs for the successful implementation of the program? Is training provided? Are the programs offered in languages other than English?
4. What are some suggestions for improving urban environmental education efforts in the Washington D.C. community? What role should the Environmental Protection Agency play in urban environmental education in Washington D.C.?

WASHINGTON, DC URBAN ENVIRONMENTAL EDUCATION REPORT

Outline

I. What Is Needed: An Urban Perspective on Obstacles and Issues

A. Obstacles

B. Issues

- 1. Energy Conservation**
- 2. Water Quality**
- 3. Air Pollution**
- 4. Toxic Waste**
- 5. Toxic Chemicals in Homes**

II. What Is Being Done: Samples of Urban Environmental Education Programs

A. Federal Government Programs

B. Non-Federal Programs

III. What Can/Should Be Done: EPA's Role in Urban Environmental Education

AN URBAN PERSPECTIVE ON OBSTACLES AND ISSUES:

In order to be truly successful in urban environmental education, interested groups must first gain an understanding of the vantage point from which an urban population views the environment. Similarly, it is crucial to grasp how these communities perceive the environmental movement, as well as certain environmental organizations, including the EPA. Before any suggestions can be offered concerning the role of the EPA in urban environmental education, these key perceptions held by many urban residents should be first considered. They are not necessarily viewpoints of Washington DC residents only, but reflect a somewhat national consistency of urban perceptions of the environmental movement, issues and participants. Once these perceptions are fully understood, the Agency will be able to effectively organize an appropriate strategy in urban environmental education that is truly beneficial and productive to all parties involved.

Obstacles:

Many of the perceptions of urban residents on the environment are rooted in their inability to meet some of the basic requirements for normal living. That is, the environment, as a separate issue, is not embraced until the essentials of health, housing, food, and safety are met. Unfortunately in many urban communities, many of these basic needs remain unfulfilled. Poverty, racial discrimination, poor housing, financial insecurity, and violence are all barriers to the achievement of what is considered a normal standard of living. Thus, the environment is viewed as a superfluous topic; other topics, which are viewed as more important than environmental issues, occupy the daily agendas of urban residents. Moreover, the seemingly evident environmental crises facing these urban communities--problems of lead poisoning, weatherization, and asbestos--are not confronted as environmental problems; rather, they are realized as health and housing issues. Thus, many organizations that address the environmental concerns of these communities are often organizations such as housing agencies or social justice groups, reflecting the growing sentiment in urban communities that the current status of the urban environment is a result of racial and socio-economic injustice.

These community organizations have taken on tremendous responsibilities as voices of urban residents, providing numerous mobilizational measures including protests, marches, boycotts, community meetings, and local, as well as national lobbying. These organizations are quite confident of their own ability to address the community's concerns. This community self-reliance is a result, organizers say, of the resource mobilizational strength of community organizations. For instance, social justice groups that organize out of churches point to the fact that the church provides a consistent audience through worship services and offers facilities that are readily available to the community. Few, if any, organizations can claim to have a more consistent assembly than a church, community residents claim. Sermons, they add, are effective mechanisms to instill environmental awareness; ministers urge environmental protection as one of mankind's responsibilities to the Creator. As a result of these and other mobilizational strategies, organizers argue, community organizations are "in the trenches," and constantly aware of the needs of urban/minority citizens. Comparatively, government agencies are perceived as operating from an "ivory tower," far removed the immediate urban crises. This perceived contrast in the proximities of government versus community organizations to urban environmental needs is one of the central obstacles that must be overcome if the development of a productive, working relationship is to occur between these groups. Certainly then, these perceptions deserve elaboration.

Community Perceptions: Federal Government

As many local organizations feel confident in their ability to meet the community's needs for environmental programs, these groups view some of the environmental education attempts by the federal government with disdain and caution. Community leaders are skeptical of the motive behind government environmental education programs. Organizers propose that the government is suddenly reaching out to embrace urban environmental concerns now that the environment is a popular issue; that the recent attention directed toward urban environmentalism is political in nature and is not necessarily rooted in genuine concern. Many community leaders recanted incidents in which the federal government attempted to "introduce" environmentalism to urban residents through short-lived programs that appeared to fulfill a bureaucratic mandate rather than realistically educate minorities on environmental protection. Thus, community organizations largely feel that they must bear the responsibility to educate the community.

These are not the only reservations that the urban community has with the government. Some minority communities that have battled against the siting of toxic facilities in their communities allege that the EPA is allied with many toxic polluters. This government--industrial complex has, they maintain, led to the placement of many toxic facilities in minority areas. Community leaders point to emerging studies which hold that the racial composition of the community is the greatest common denominator of communities near hazardous waste sites. With scarce numbers of minorities at the EPA and few, if any, on local toxic waste site boards, many in minority communities conclude that the growing number of toxic sites in minority communities is no coincidence. To guard against the disproportionate numbers of hazardous waste sitings in minority areas, community leaders urge agencies like the EPA, as well as national environmental groups, to increase minority recruitment.

Having significant numbers of minorities employed at these environmental organizations will do more than protect minority communities from toxic waste placement, these organizers argue: it would hopefully be one significant step in catapulting urban environmentalism to the national forefront. Specifically, community organizers hold that national environmental organizations need "translators" that will be able to *effectively* communicate with urban minorities. One of the biggest obstacles to community organizations educating urban citizens is the lack of technical information on the environment. Moreover, to many minority communities, national policymakers are seemingly unaware of urban environmental needs. These translators could facilitate the effective exchange of information between, for instance, the EPA and an urban minority community. In this manner, the government would be constantly aware of urban environmental concerns while offering concrete assistance toward urban environmental education.

Issues:

Therefore, to fully comprehend the environmental crises facing an inner-city community, it is necessary to confront the issues from a non-traditional perspective. Too often, analyzing urban environmental concerns from a bureaucratic vantage point yields a perspective that is both narrow and shallow. It becomes increasingly difficult to grasp the complexity, if not the origin, of urban environmental problems when the issues are treated separately, apart from their relationship to other urban frustrations. To be sure, the environmental issues in the inner-city cannot be studied unless the complex entirety of inner-city life is embraced. That is to say, the issues of economics, race, health, education, and environment are all inextricably bound.

The inner-city resident does not view a problem like poor water quality as an environmental issue--it is realized as a mixture of many issues--health, economic, and educational to state a few. The resident initially confronts the quality of his/her water when usage/consumption becomes unhealthy. The issue is addressed when, for instance, a family member, say a small child, develops an adverse reaction to the water. Further, if adopting the necessary measures to improve the quality of water were financially feasible, and if the tenant were aware of the means to correct his condition, then he/she would probably change the situation. However, with limited financial means, little, if any, education on the hazardous effects of lead-ridden water and what can be done to improve it, the urban resident is powerless. Thus, to equip the urban resident with environmental education is to catalyze individual behavioral changes that will ultimately instill a sense of environmental stewardship toward an individual's immediate and global environment. Consequently, effective urban environmental education programs should:

- 1) Inform the resident about the specific environmental risks in the particular community;
- 2) Establish a connection between local and global environmental issues;
- 3) Suggest specific actions that can be taken by community residents to affect/ change their immediate surroundings.

Though environmental needs differ from community to community, there are certain common environmental concerns that are prevalent in many of the District's urban areas:

A. Energy Conservation:

Most of Washington's urban population live in houses that are over fifty years old. Many urban families cannot afford necessary weatherization measures, such as energy efficient doors and windows, to insulate homes from Washington's harsh seasonal temperatures. As a result, these urban families face uncomfortable living conditions as well as abnormally high energy bills. Proper efforts must be undertaken to provide these residents with a comprehensive strategy to weatherize their homes.

B. Water Quality

Dilapidated plumbing systems in Washington homes carry poor quality water that contains abnormally high levels of lead and other toxic chemicals. A study issued by the Agency for Toxics and Disease Registry reported that an alarming 44% of urban African-American children are at risk from lead poisoning--four times the rate of Caucasian children. Low-level lead intoxication is known to have caused a range of impairments, including IQ reduction and mild mental retardation. Since a significant number of District residents in urban areas do not own their homes, they heavily rely on landlords/building managers to renovate the dilapidated water systems. Efforts must be made to educate these residents on the importance of quality water sources, as well as measures to promote the consumption of alternative water sources until efficient plumbing systems can be constructed.

C. Air Quality

Due to the proximity to factories and intense automobile congestion, urban communities are most impacted by industrial and vehicle emissions. Unable to drift farther away, these toxic gases become concentrated between buildings and create a carcinogenic breeding ground in the District's urban areas. While environmentalists urge residents to use public transportation to decrease the volume of vehicle emissions, urban residents are

confronted with a troubling dilemma. Since the District's Metro subway transportation system seems to have bypassed service to many urban/minority areas of the city, increasing numbers of District residents are forced to use automobiles more often, which, in turn, contributes to the toxic air quality that is daily ingested. It is imperative that urban/minority residents be informed of measures to improve air quality. Of particular importance is the formation of a working strategy to encourage individual efforts to improve air quality.

D. Toxic Waste

Some recent studies have shown that the racial composition of the particular community, rather than any other factor, including income level and property value, has been the prevailing common denominator in communities near hazardous waste facilities. (W. Wilson, 1989). To worsen matters, these communities are rarely informed of the hazardous dangers that they face as residents living near a toxic waste site. Contrastingly, Northwest Washington residents recently organized, with the help of several community organizations, a resistance to the siting of the Pepco Benning Road incinerator. In this case, educational information was provided beforehand on the possible dangers of the toxic waste site. Once cognizant of the toxic potential of such a facility, area residents were able to organize to oppose the siting. The Benning Road case provides an excellent example of the merits of urban environmental education. Specifically, it illustrates the resource mobilization strength of an urban community once an educational foundation has been provided.

E. Toxic Chemicals in Homes

Lead buildup in soil, resulting from old, chipped household paint and gasoline, is another silent hazard that plagues many urban District residents. Moreover, many are unaware of the toxic makeup of their yards and nearby playgrounds. Educational efforts, as well as programs designed to improve the soil quality, are greatly needed. Such projects could serve as excellent opportunities for local residents to actively interact with their immediate environment in an effort to establish and maintain healthy land areas.

Asbestos fibers from insulation dissolve into dust particles that become part of urban residents' air content. This is a common situation in the District; the heavy reliance on poor quality construction materials, such as the insulation found in many homes, contributes to a hazardous atmosphere. Residents need to be informed as to what individual measures can be taken to reduce the ingestion of asbestos. As well, organizations with such technical information could supply data on potential alternative sources of insulation.

URBAN ENVIRONMENTAL EDUCATION: The Federal Government

Over the past two decades, environmentalism has evolved from an issue into a global crisis. Environmental advocates, who quickly realized the potential, irreparable effects of rapid technological expansion and resource mismanagement, theorized that one of the most effective ways of protecting our environment was to educate citizens on environmental issues--to demonstrate how "special interest" issues like smog, ozone depletion, wildlife preservation affected every citizen. Thus, as the environmental movement has expanded in its scope and constituency, so have environmental education and training efforts.

Recently, the Center for Environmental Quality produced a report, "Environmental Education in the Federal Government: An Assessment of Activities and Strategies." The report outlined how the federal government has engaged in a plethora of environmental education efforts including pilot projects, academic grants/internships, technical assistance to curriculum-based programs, and youth projects. However, when compared to other environmental education programs, there seems to be little effort directed specifically toward urban environmental education and training. The compendium of nearly 50 federal environmental education efforts contained only two programs that specifically targeted urban minority audiences (Appendix A). While the Washington DC Urban Environmental Education Report discovered slightly more federal activity in urban environmental education than the CEQ Assessment, it still appears that while general environmental education programs have steadily increased in number and scope over the past two decades, *the amount of comparative federal activity toward urban environmental education and training has been minimal.*

The proposed Office of Environmental Education, as well as the National Environmental Education and Training Foundation would increase attention to environmental education generally, and certainly boost education and training programs for minority/urban populations. Both projects have measures that outline strategies for environmental education and extension for urban minority audiences. Below is a **sampling** of some various types of federal environmental education and training programs that specifically target minority/urban populations or programs that include strategies that could be transferable to a minority/urban audience. Included at the end of the report is a more comprehensive catalog of Minority Support Programs within the Environmental Protection Agency's Office of Research and Development (Appendix B).

Department of Interior : Take Pride in America

Take Pride in America is a national campaign to increase awareness of the need for wise use of the nation's natural and cultural resources, encourage an attitude of stewardship and responsibility toward public resources, and promote volunteerism. Supported by a partnership of 12 federal agencies, 48 states, and many private sector organizations, the campaign annually sponsors a national awards ceremony to recognize those who have made outstanding contributions to protecting and enhancing public resources. Award categories are: constituent organizations; businesses and corporations; youth groups, civic and citizen organizations; media; educational institutions; individuals; public-private partnerships; local governments; state governments; federal agencies; and, private lands.

US Department of Agriculture: Cooperative Extension System

CES sponsors youth education and 4-H programs to teach rural and urban youth about natural resource conservation in summer camps around the country. Additional emphasis is placed on global climate change education.

US Department of Agriculture: The National Arboretum

The National Arboretum created the Urban Gardening Demonstration on its grounds in Washington, DC. Funded by Friend of the National Arboretum (FONA), the *National Country Garden* is a three-acre demonstration area that shows people how to grow their own food and flowers in such unlikely places as roofs, decks, and vacant lots. The demonstration garden, which reached over one million people between 1984 and 1986, illustrates many techniques useful for urban beautification.

The US Fish and Wildlife Service

The US Fish and Wildlife Service developed and produced a series of educational packages to provide teachers and other educators with factual information about wildlife, habitat, and resource management. The material was designed for use in fourth through seventh grades.

Department of the Army: Corps of Engineers

The Army Corps of Engineers conducts a variety of special events, programs, and projects at Crooked Creek Lake in Ford City, Pennsylvania. There are numerous environmental educational programs and resource conservation activities to encourage citizens to accept their responsibility as public land owners. The Corps' staff influences thousands of citizens each year from pre-schoolers to senior citizens, and encourages active participation from all segments of the population. The variety of special events has resulted in a local populace keenly aware of the environment and their responsibility toward it. The lands reclaimed and recreation areas created are a result of cooperative volunteer efforts and have instilled a pride of "ownership" in area residents.

US Department of Health and Human Services: Public Health Service--Agency for Toxic Substances and Disease Registry (ATSDR)

ATSDR proposed a minority environmental health initiative to examine current science issues in three main areas: demographics, health perspectives (e.g., nutritional status, lifestyle and socio-economic influences, and psychosocial impacts), and health communication/health education. With this conference, ATSDR will bring together knowledgeable experts to discuss these areas. The objectives of this conference are to:

- present information on the public health implications of exposures to environmental contamination
- identify data gaps or problems associated with determining/evaluating and disseminating such information
- recognize the challenges of addressing the health concerns of minorities living and working near hazardous waste sites or other sources of environmental contamination

ATSDR invites submission of papers that focus on the main conference topics: demographics, health perspectives, and health communication/health education. The conference will also sponsor a student poster/essay competition. Ten poster competition finalists and five essay competition finalists, selected from the students submitting abstracts on their research, will receive awards covering travel and per diem (lodging/meal) expenses.

US Environmental Protection Agency/Cook College: Discovery Program

Discovery is an academic enrichment and apprenticeship program designed to offer minority and disadvantaged students with academic promise an introduction to college study and careers in science and technology. *Discovery* is a comprehensive and residential five-week summer program for rising high school juniors and seniors. It includes academic, apprenticeship, and residential components, which offer students a range of activities including SAT preparation, hands-on research experience, and cultural perspective seminars. The US EPA, which financially supports the program, provides

student apprenticeships that involve water sample collection, activities from boats and helicopters, sample analysis in sanitary chemistry and microbiological sample analysis.

US Environmental Protection Agency/Backus Junior High School

In the Fall 1988, EPA headquarters formed a partnership with Bertie Backus Junior High School in Washington, DC, a predominantly minority school. The objectives in the partnership are:

- to stimulate students' interest in studying mathematics and science at the high school level and beyond;
- to inform students about careers at EPA and elsewhere for those with appropriate scientific and technical training; and
- to educate students about environmental issues that impact their daily lives.

Programs included:

- a recycling project for white waste paper;
- classroom participation by 20 members of the EPA's Speaker Bureau in which specialists in forestry, computers, toxic waste, air pollution, and other fields addressed as many as three classes a day on environmental issues;
- selection of three Backus teachers and two students for summer internships at EPA;
- a "mentor shadowing" experience for 10 students who observed Agency managers in action;
- frequent visits to the school by the EPA chorus and steps toward creating a Backus chorus;
- Participation by 30 students in the Agency's observance of the Martin Luther King, Jr. federal holiday.
- a "town meeting," in which students were made aware of conflicting forces in environmentally-related decision-making in the development of a community.

US Environmental Protection Agency: Minority Institutions Assistance Program (MIA)

The US EPA, through its Office of Exploratory Research (OER), operates a special assistance program to provide federal assistance to minority institutions. The *Minority Institutions Assistance Program* was initiated in 1981 in response to an Executive Order to increase support for eligible minority institutions and to provide fellowships for students attending these institutions. The objectives of the program are:

- to identify existing and potential environmental research capability within minority institutions and to assist them in participating in EPA research activity;
- to help minority institutions to become more competitive with other institutions for federal funds;

- to provide an opportunity for minority students to gain research experience in environmental science fields; and
- to promote good working relationships between the Agency and participating institutions.

US Environmental Protection Agency/DC Public Schools: Superfund Seniors Summer Enrichment Project

Superfund Seniors is a joint venture between the EPA and DC Public Schools that attempts to foster career awareness and student involvement in science and technology fields. The Summer Enrichment Project is a pilot 6 week summer program for 10 gifted high school juniors to learn about environmental issues and the role of Superfund in toxic waste cleanups. Students produce public awareness campaign lecture and support materials (videos, pamphlets, coloring and comic books, etc.).

US Environmental Protection Agency: Region II (New York)

The EPA's Region II held a "Rap and Rock" contest for students in grades 7 through 12 in both New Jersey and New York. Music and lyrics were all developed around the contest's theme, "Pollution Prevention: You Can Make a Difference." Winners were honored at Region II's Earth Day Festival in late April.

US Environmental Protection Agency: National Network For Environmental Education

The Agency is working to expand the National Network For Environmental Education (NNEE), a network of interactive centers across the country serving as regional centers for teacher training, community outreach, and environmental research. As the Network reaches its full potential, these centers will serve as environmental education and information resources for grass-roots America. EPA is now working with other government agencies and departments interested in contribution to and accessing the Network.

Smithsonian Institution: The Oakland Museum

The Oakland Museum, a Smithsonian member, sponsors the *ScienceReach Program*, which consists of a visit to the Oakland Museum's Natural Sciences Gallery, a discussion with a professional in the field of resource conservation, and a classroom slide show. The program attempts to familiarize high school students to concepts such as adaptation, community, and interdependence. Of particular importance is the efforts of the *ScienceReach* program to make minority students aware of how issues like animal extinction affect urban residents.

US Department of Energy/Center For Environment, Commerce, and Energy: Urban Weatherization Project

The Center For Environment, Commerce, and Energy and the Department of Energy have established a partnership to weatherize 40 urban District homes. As of July, 1990, 20 homes have been weatherized with energy-efficient doors and windows.

URBAN ENVIRONMENTAL EDUCATION:

District Programs, Curriculum-Based Programs, Environmental Advocacy Organizations, Community Organizations:

While the federal government is currently expanding its role in urban environmental education, there exists a multitude of organizations that have been engaged in urban environmental education for some time. Many of these organizations are community-based, organizing and educating large numbers of urban minorities toward establishing an environmental ethic. In many of these urban communities, there exists no formal grievance machinery to represent local residents' needs. As a result, these urban citizens resort to churches and housing agencies--groups with which urban minorities are in frequent, if not constant contact, to voice their concerns. These local groups, often understaffed organizations with limited financial resources, are, nonetheless, engaged in a myriad of mobilizational activities including boycotts, marches, letter-writing campaigns, and lobbying.

The rising grassroots environmental movement is also beginning to embrace the area of urban environmental education. Indeed, there are a rising number of environmental advocacy groups that specifically target urban minority issues. As well, these newly-established organizations offer some of the most innovative strategies for urban environmental education. Below is a **sampling** of some types of urban environmental education programs that are sponsored by various organizations.

District Government:

District of Columbia Asbestos Removal Program

The District reviews demolition and renovation plans to ensure asbestos will be removed in a way that will protect the health of the construction workers and the public. Asbestos removal must be done by qualified workers, and their safety equipment is inspected before removal begins. To protect the public, access to the building is limited. The District monitors disposal of asbestos to make certain it is properly packaged and sent to an approved disposal site. Approximately 372 asbestos removal projects were completed in the District in 1987.

District of Columbia Soil and Water Conservation District

The Soil and Water Conservation District provides educational materials to the public, such as the "Homeowners Urban Guide on Ground Maintenance for Washington, DC." This guide ~~discusses soil erosion~~, drainage, and landscaping and is available at libraries, garden clubs, and the SWCD.

District of Columbia Soil and Water Conservation District: Thomas L. Ayers Outdoor Classroom Program

The Thomas L. Ayers Outdoor Classroom Program is designed to integrate various curricula such as science, geography, mathematics, social studies, and language arts in an outdoor setting. This experience offers urban youth a hands-on approach to learning activities. The District is one of three co-sponsors of the Ayers Program. The two remaining co-sponsors are the DC Public Schools-Science Department, and the Soil and Water Conservation Society-DC Chapter.

Environmental Advocacy Organizations:

Center For Environment, Commerce, and Energy: Minority Environmental Internship Program

In 1988, the Center For Environment, Commerce, and Energy Minority Environmental Internship Program sponsored fourteen (14) interns and one volunteer at thirteen (13) environmental organizations and Maryland Governor Donald Shaefer's Environment Office. The objective of the program is to increase the number of minority participants in the environmental sector. The program is also intended to provide students with the analytical and technical skills necessary to better their understanding of the environmental policy-making processes through a paid internship with various environmental, energy, wildlife, and natural resource organizations.

Environmental Action Foundation

Environmental Action, Inc. is a national membership-based organization which works for strong state and federal environmental laws. The Foundation uses its educational, legal, technical and organizing capabilities to promote environmental protection and assist grassroots organizations. Environmental Action:

- promotes alternatives to incineration and landfills through waste reduction programs that minimize waste production and maximize recycling and composting;
- champions energy efficiency as the most immediate and cost-effective response to global warming;
- helps citizens learn about toxic hazards;
- educates citizens on alternatives to chemical pesticides and helps them oppose the use of chemical pesticides in their communities.

The Morning Star Foundation

The Morning Star Foundation is a non-profit, tax-exempt organization promoting Native American cultural rights. In 1989, the Foundation established a headquarters office in Washington, DC, and developed an in-house program of educational and cultural advocacy. The Foundation also provides organizational sponsorship for Native Children's Survival, which is international in scope and devoted to youth education and participation in environmental protection. Native Children's Survival is sponsoring a series of music videos; the first two of the series deal with missing children and the world environment.

The Natural Guard

The Natural Guard is a new national, non-profit, environmental education, service, and advocacy organization designed for school age youth. Through education and involvement, the organization hopes to inspire young people to recognize and solve environmental problems. The *Natural Guard's* five major goals are to:

- Instill in young people a better understanding of and appreciation for the local environment and, in turn, the world around them;
- Generate service projects--such as recycling, pollution patrols, litter clean-up, energy conservation, wildlife habitat enhancement, tree-planting, park and monument

caretaking, urban trailbuilding--designed to protect and enhance the environment, provide benefits for the entire community, and develop leadership skills in young people;

- Instill a sense of advocacy, and teach the skills necessary to achieve the goals of environmental protection and enjoyment;
- Institute a supervised exchange program among chapters that provides opportunities for outdoor exploration of different environments; and
- Emphasize career opportunities in the environment, conservation, and related fields.

Within the next twelve to eighteen months, the *Natural Guard* plans to establish a chapter in Washington DC, as well as several other urban areas. The organization hopes to appeal to young people from many geographic, economic, and ethnic backgrounds. Special emphasis will be placed on communities that are not being reached by other environmental education programs. The newly established environmental advocacy group plans to target the increasing number of communities where the primary language is Spanish; accordingly, appropriate staff, educational materials, and brochures will be bilingual.

National Toxics Campaign

The National Toxics Campaign, headed in Boston, Massachusetts, is a grassroots organization that helps to organize citizens in toxic neighborhoods to win relocation, cleanup and fair compensation. A coalition of over 1000 grassroots groups, NTC publishes "Fighting Toxics," a 500-page manual for protecting citizens from toxic hazards.

National Wildlife Federation: Cool It! Programs

The National Wildlife Federation's *Cool It!* programs encourage college students to launch local projects that attack the pollution causing global warming. Some campus projects may double or triple the size of existing recycling programs. Other campuses may promote public transportation, energy efficiency, bike paths and walkways, or try to persuade local food establishments to switch from plastic packaging to biodegradable paper cups and plates. *Cool It!* emphasizes supporting projects initiated by culturally diverse groups. Organizers are assisting college students from diverse communities who are not traditionally active in environmental issues to play an active role in solving environmental programs.

Curriculum-Based Programs:

Greenpeace Environmental Education Pilot Project

The Greenpeace organization produces a student-directed, process-oriented curriculum that is used in 18 schools across the world, two of which are predominantly minority schools in the US. The curriculum focuses on the environmental issues of the local community, rather than environmental science in general. Instead of the traditional textbook learning method, the students coordinate research and site visits with local environmental organizations and agencies. After field research, the students initiate their own projects that are designed to encourage responsible environmental behavior.

Thames Science Center: Watershed Worlds

Watershed Worlds is an environmental science program for teacher enhancement and development of teaching materials. Based on a pilot project, the program (grades 6-10) will be developed and disseminated in a three-year project involving 495 teachers and their students at 65 pilot sites in the nation. An additional 1350 teachers will be introduced to the program through in-service programs. The curriculum aims to engage teachers' and students' interest in a series of investigatory activities exploring current environmental problems and concerns. At the same time, participants explore concepts and theories of the planet's environmental systems and analyze the cumulative human impact upon them. These scientific investigations are highly relevant to the students' everyday lives as they employ and compare local and global databases. The *Watershed Worlds* curriculum offers a thematic and sequential presentation of science concepts that crosses boundaries in all science disciplines normally taught in secondary schools. It is designed to serve all students.

Community Organizations:

The Center For Community Action: Robeson County, NC

The Environmental Protection and Policy Project of the Center For Community Action was formed in 1984 in order to develop creative strategies for the promotion of environmental protection in Southeastern North Carolina. The Center seeks to:

- organize citizen participation in environmental concerns among the majority Native American and African-American populations of Robeson County; and
- provide programs and trainings to increase public education and analysis on issues of hazardous and solid waste management, facility site selection processes and the role of race and economics in the selection process, waste reduction and disposal methods, recycling, landfill contamination, and the role of religious communities in environmental protection.

Christadora Foundation: Manice Education Center

The Christadora Foundation operates in the city of New York as a grant-giving institution. The Foundation's grants focus on environmental education. The common ground of all Christadora grants is that they enable underprivileged city children to better understand and value the environment that surrounds them. Funded programs often bear an essential relationship to the *Manice Education Center*. The primary goals of the Center are to:

- introduce students to the world of nature, stimulating their enthusiasm for learning in the outdoors;
- nurture sensitivity to and understanding of the human place within natural ecosystems;
- develop students' capacity for leadership, self-reliance, and group cooperation;
- instill in students an appreciation for the natural world, the value of conservation and to help promote minority participation and leadership in the conservation movement and in the sciences in general.

Students and classes are carefully selected from New York City public schools, grades 6-10, to attend the Center.

*The United Methodist Church: General Board of Church and Society:
For: Our Children Video*

The United Methodist Church's General Board of Church and Society, a member of the Eco-Justice Working Group, a network of community environmental justice organizations, produces a video, "For: Our Children" and an accompanying 40 page manual that discusses grassroots environmental organizing and issues. The video, which is about a half-hour long, contrasts community points of view with corporate concerns in an attempt to demonstrate the problematic nature of commercial incineration of hazardous waste. It also raises the fundamental question of mankind's relationship to nature. The video packet is intended to promote discussion of the presented topics and is suggested for use in adult or youth Church classes.

The United Methodist Church: The Greenhouse Crisis Foundation

The Eco-Justice Working Group of the National Council of Churches and the Joint Strategy and Action Committee produces a guide on ways that individuals and church congregations can begin to take to save the earth. The "101 Ways to Help Save the Earth" manual presents specific actions that individuals can take to change their daily habits. It also includes a section, "52 Weeks of Congressional Activities to Help Save the Earth" that urges activities from tree donation drives to energy efficiency seminars.

RECOMMENDATIONS: The Environmental Protection Agency's Role in Urban Environmental Education

As a result of the research gathered for the Washington, DC Urban Environmental Education Report, the following recommendations for the US Environmental Protection Agency's role in urban environmental education have been developed:

Partnerships:

Some of the most effective environmental education programs in the Washington, DC community are partnerships between various organizations. This working relationship provides organizations with the opportunity not only to pool resources, but to share perspectives on environmental issues and strategies.

Action: The Environmental Protection Agency may consider expanding existing partnerships and establishing new ones with urban schools, as well as environmental advocacy groups and local community organizations that are involved in urban environmental education.

Technical Assistance:

A significant obstacle to the success of many urban environmental education programs (ones not sponsored by government agencies) is the lack or deficiency of technical information on environmental issues. Moreover, while many local organizations represent community concerns when a crisis situation results (e.g. the siting of a hazardous waste facility leads to the formation of a hazardous waste prevention organization), many times these groups need to be able to "translate" technical information on the environment into understandable terms to an urban audience.

Action: The EPA may consider publishing fact sheets on urban environmental issues like air pollution, energy efficiency, and hazardous waste placement which are targeted to minority populations. They could be translated into other languages, such as Spanish, or they could use easy to understand English vocabulary. These handy information sheets could provide easy insertion into existing curricula, while also promoting adult literacy on environmental issues that directly impact urban areas.

Recognize/Award Existing Programs:

Much of the effective work on urban environmental education goes unnoticed, resulting in the duplication of many environmental programs. Furthermore, organizations concerned with urban environmental education should be aware of successful programs so that similar efforts may be considered in their particular community.

Action: The EPA may consider instituting an environmental awards program (similar to the Department of Interior's *Take Pride In America* program) that recognizes and applauds the variety of environmental education programs that are produced by environmental advocacy groups, local community organizations, and other governmental agencies.

Teacher Recognition:

One tremendous barrier to the implementation of environmental curricula in schools is the reluctance of teachers, either because of time constraints, lack of interest in environmental issues, or poor reception by school administrators, to undertake environmental education in their schools. Those teachers that do decide to participate in environmental education programs should be rightfully acknowledged as innovators in education.

Action: EPA may consider instituting an Environmental Education Award specifically for teachers who initiate or actively encourage environmental education in their respective schools.

Act as Clearinghouse/Coordinator for Environmental Education Programs:

There are many strategies and programs that operate in a vacuum; that is, successful methods for urban environmental extension are often not shared, but rather localized to specific communities. There is a strong need for a national organization to act as networking center to facilitate the exchange of information among groups, as well as existing as a catalyst for the formation of partnerships between various organizations.

Action: Through the newly created National Environmental Education and Training Foundation which is in a unique position to act as a national clearinghouse, the EPA should carry out a clearinghouse effort for the sundry environmental education programs that currently exist. The Foundation may consider extensively researching urban environmental education programs that currently exist so that it may provide concerned organizations with appropriate program information and contacts. As well, the Foundation may consider coordinating federal efforts at urban environmental education en route to establishing an comprehensive strategy for federal participation in urban environmental education.

Establish Pilot Programs:

One of the most innovative strategies in environmental education is the hands-on approach of environmental education pilot programs. Urban youth are more likely to become interested in environmental issues if programs allow actual participation and provide information and solutions to issues that directly impact their daily lives. Many urban youth do not realize the interconnectedness of many environmental issues. As a result, they are unlikely to devote much attention to programs that discuss "foreign" topics. Developing innovative urban pilot projects could be tremendously effective in introducing and instilling an environmental ethic in today's urban youth.

Action: EPA may consider developing pilot projects that are geared specifically toward urban minority children and the issues that directly affect them. Also, programs that connect global environmental issues to local concerns would bring environmentalism "closer to the urban home."

Regional Publications:

EPA Headquarters cannot bear the responsibility of investigating urban environmental concerns for every urban community in the country; EPA Regional offices, located in cities with significant minority populations, could bear some of the responsibility for localizing urban environmental education efforts.

Action: Regional offices may consider expanding their liaison activities between the local urban minority communities in the Region and EPA Headquarters. In this role they could provide detailed information to relevant Headquarters Offices and become the active interpreters of the specific current environmental concerns of those communities.

Historically Black College and University (HBCU) Research Budget:

Most, if not all of our nation's Historically Black College and University and Minority Institutions (HBCU-MI) HBCU-MI's are active in great numbers of community service projects, many of which include environmental education programs for minority communities. To support these institutions with significant funding is to feed money into these already existing environmental education programs.

Action: EPA may consider increasing research funding to HBCU's that are engaged in urban environmental education. Moreover, the Agency may seek to initiate programs through partnerships at universities without environmental education projects.

APPENDIX A

Center for Environmental Quality Report Environmental Education in the Federal Government

EXECUTIVE SUMMARY

There is a growing network of teachers, government agencies, non-profit organizations and corporations who are developing and sharing environmental education programs.

Many Federal agencies whose missions encompass environmental issues have some environmental education programs for higher education, for the community, for the workforce and for elementary and secondary education -- the focus of this paper. The focus is on elementary and secondary education because that is where some of the greatest opportunities are to develop environmental literacy and an environmental ethic.

Federal agencies are sponsoring programs ranging from providing materials to guiding students and teachers in developing action plans. Although coordination has not always been effective in the past, there are organizational proposals which would ensure more effective use of limited funds and a wealth of creative ideas.

The following issues and recommendations reflect the current thinking and trends shared by the federal agencies as well as various non-profit organizations, education professionals and students:

- o The most critical focus for environmental education should be developing environmental literacy and an environmental ethic at the K-12 level, when individuals are forming values for life management.

Further, consideration should be given to targeting limited resources at those communities which are affected disproportionately by pollution. For example, the special needs of inner city schools might be addressed first.

- o Overlapping programs should be linked where possible.

The National Advisory Council on Environmental Technology Transfer has recommended the formation of a new Interagency Council on Environmental Education to replace the Subcommittee on Environmental Education of the Federal Interagency Committee on Education.

- o More funds should be specifically allocated for environmental education.

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ENVIRONMENTAL EDUCATION
IN THE FEDERAL GOVERNMENT:

AN ASSESSMENT OF ACTIVITIES AND STRATEGIES

Overview

The state of the world's environment has become one of the most pressing topics of the late 20th century. It will likely remain a pressing topic in the 21st century. The twentieth anniversary of Earth Day underscored the importance of individual action to prevent pollution. Environmental education is the key to instilling an environmental ethic in society, and perhaps the most important group that this ethic must reach is our children. Establishing environmental literacy in America's school age population will contribute to developing this ethic. Successful programs have been developed at all levels of government, by non-profit organizations, and in private industry. The question this paper seeks to address is the state of environmental education programs in the Federal government.

Nearly every Federal agency has a project or a program dedicated to environmental education. Lacking to date has been a coherent Federal strategy and coordination of activities, although successful work has continued in spite of this. A strategy has been emerging in an ad hoc fashion, and agencies recognize that more coordination and structure are necessary to target efforts and reduce unnecessary duplications of effort. In examining the range of environmental education activities, most if not all also support the Administration's goals for elementary and secondary education and complement many existing efforts such as the Department of Energy's initiative in math and science education.

The Council on Environmental Quality is charged with coordinating Federal environmental efforts. It is consistent with CEQ's charter to take a leading position in the coordination of Federal environmental education initiatives, since educational and environmental concerns cut across many jurisdictional boundaries in the Federal government. It is not, however, the intention of CEQ to dictate educational policy, or exert authority over the many excellent and innovative programs underway in Federal agencies.

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Federal Activities

Nearly every Federal agency has some type of ongoing environmental education program, under the broadest definition of environmental education. Focussing on elementary and secondary levels does not significantly decrease this number. Most Federal environmental education activities can fall into one of the following categories, although the traditional emphasis has been on producing and distributing educational materials to local school districts and educational organizations:

- o Curriculum Development and Guidance
- o Educational Materials (including software and videos)
- o Teacher Training and Instruction
- o Field and Laboratory Learning Opportunities
- o Educational and Research Institutes
- o Learning Networks
- o Mentoring Programs
- o [Awards/Recognition Programs]

Many agencies are becoming increasingly proactive in their approaches to environmental education through these types of activities. Most agencies focus on their area of particular expertise, e.g. the U.S. Geological Survey's emphasis on earth sciences. Only one agency, EPA, has a cross-cutting national focus on the environment, and its efforts reflect this charge. The Tennessee Valley Authority has demonstrated a similar effort on a regional basis and has developed a model educational program, to mention just one agency effort. The following brief sketches of Federal environmental education activities are organized by agency:

Environmental Protection Agency

EPA has convened an Agency-wide Environmental Education Task Force, under the Office of Communications and Public Affairs, to develop a comprehensive strategic plan by late June and to sponsor the Youth Environmental Action Forum, which took place May 20 - 23. Major activities are also underway in the Office of Cooperative Environmental Management (OCEM) in conjunction with the National Advisory Committee on Environmental Technology Transfer (NACETT). The Agency has supported S. 1076, the National Environmental Education Act. Specific EPA environmental education activities include the following:

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- o The Office of Communications and Public Affairs (OCPA) has developed a curriculum package in a cooperative venture with General Motors. Titled "I Need the Earth and the Earth Needs Me," it will provide fourth grade teachers nationwide with a videocassette plus instructor's guide.
- o OCPA has coordinated the distribution of educational materials for K-12 from across the Agency by compiling a resource guide titled, "Environmental Education Materials for Teachers and Young People (K-12)".
- o The Office of Solid Waste and Emergency Response (OSWER) has prepared a curriculum to promote recycling and to increase general awareness of waste in cooperation with national education and teacher associations.
- o EPA's Hazards in Schools Committee was organized to coordinate the effort to reach teachers, school administrators, and parents about environmental hazards in schools. While strictly speaking this does not target K-12 students, it does directly deal with the education of that group. The Committee has held workshops and is developing a handbook entitled "Environmental Hazards in Your School."
- o The Partners In Education Program, which operates at both the Headquarters and Regional levels, pairs EPA offices with selected schools. Activities performed by EPA personnel include tutoring, career guidance, and the provision of hands-on learning opportunities.
- o Various regional offices have undertaken activities on their own initiative such as working partnerships with schools, poem and poster contests, speaker's bureaus, and information dissemination.
- o Regions 3 (Philadelphia), 6 (Dallas), and 9 (San Francisco) administer Environmental Institutes, providing a variety of educational services.

- o The Student Conservation Association (SCA) program will be encouraged to expand opportunities for high school students-at-risk, and minority populations.
- o All National Park Sites will be presented to schools as "Learning Laboratories," and will assist in curriculum development and media presentations. A videotape entitled "National Parks--Our Learning Laboratories" will accompany teacher packets on using park areas as classrooms and classroom materials. Materials included focus on Biological Diversity, Clean Air, Global Change, and Endangered Species.

Bureau of Mines

- o Through films, videos, posters, and postcards, the Bureau seeks to increase awareness of the indispensability of minerals. Many of these materials are targeted at school-age groups, and the Bureau has been experimenting with new formats for presenting information on mining and minerals.

U.S. Geological Survey

- o The Joint Education Initiative (JEDI) is being developed in association with NASA, NOAA, the Smithsonian Institution, and others, to strengthen the teaching of science in elementary and secondary schools by sharing scientific data through the storage medium of CD-ROM. Teachers are being instructed in how to use the system, which will have readers connected to PCs.
- o USGS cooperates in the Center for Excellence in Education's annual Research Science Institute for bright high school students.
- o USGS participates in American Geological Institute's grant program which funds teachers to work at AGI temporarily.
- o ~~USGS~~ participates in the Partnership In Education Program, conducting science and career fairs, classroom presentations, and traveling exhibits.
- o The Teacher Assistance Program is comprised of science/teacher workshops, hotline for science teachers, teacher-oriented earth science publications, displays, posters, films, and computerized teaching materials, distributed free of cost.

- o SCS coordinates the USDA/Boy Scouts of America Council Conservation Awards program, now in its 30th year.

Department of Energy

DoE has undertaken a major math and science education initiative in support of the President's goal of leading the world in math and science. A major component of this effort includes a focus on global climate change. DoE is also concerned with education about energy efficiency.

- o The Science Teacher Research Association Program (TRAC) provides teachers with hands-on laboratory research related to various aspects of global climate change.
- o Summer institutes beginning in 1988 at the Lawrence Livermore National Laboratory for middle and high school science teachers have developed interdisciplinary curriculum about global climate change for grades 6-12.
- o A collaborative effort between Lawrence Livermore and the University of California, Berkeley has led to the development of a Macintosh "Hypercard" pilot project, based on the tree of knowledge concept, where the trunk is the topic "Global Climate Change" and the branches are science technology and society issues. The roots are the scientific and technical disciplines.

Department of Defense

DoD's primary efforts in environmental education reside in the operation of its school system - the sixth largest public school system in the world, with 160,000 students. As part of an on-going environmental education effort, roughly \$300,000 per year is spent to provide students with the opportunity for wilderness trips and school camping events. A teacher institute in environmental education is conducted each summer. A teacher's manual has been developed in-house for use in grades K-12.

Department of Commerce

The National Oceanic and Atmospheric Administration is involved in two areas of environmental education: global climate change and marine and estuarine protection.

- o The Office of Climate and Atmospheric Research (OCAR) is developing pilot projects to bring global climate education to the local level; this will include newsletters to keep teachers up-to-date on scientific and technological developments.

- o TVA is developing a comprehensive energy education program for K-12. "The Energy Sourcebooks" for grades K-5 have been completed, and Sourcebooks for grades 6-12 will be completed in 1993.
- o TVA is beginning to develop a waste education program for schools as well as the general public. A set of supplementary classroom materials for high school use - "Waste: The Hidden Resource" - is being distributed nationally by Keep America Beautiful.
- o TVA is addressing land stewardship questions through producing integrated resource management materials for middle school use - "TVA - A World of Resources."
- o The Land Between the Lakes (LBL), an inland peninsula, offers interpretive sites and special programs for K-12 students.

National Science Foundation

The NSF's Committee on Earth Sciences, which includes NASA, DoE, and USDA, is sponsoring a Global Change Education and Training Program, which, as part of its overall program activities, will provide approximately 100 summer research internships for high school students in 1991. The Division of Teacher Preparation is also spending approximately \$200,000 on proposals for curriculum development in grades K-12.

Council on Environmental Quality

CEQ is reviewing, beginning with this paper, and assessing the success of Federal environmental education programs with an eye towards improving effectiveness through coordination and sharing ideas.

CEQ has proposed a new initiative, the "Presidential Awards for Excellence in Environmental Education." This program would award up to \$5,000 to each of two recipients from each state and one each from the District of Columbia and Puerto Rico. Criteria would include creativity and transferability of teaching methods, effectiveness in increasing environmental awareness, and the positive impact of the teacher on students.

Other Programs

This summary, with its focus on Federal agency activities, only alludes to the vast array of activities that are on-going in other sectors. Several states have developed model environmental education programs. Wisconsin, for example, requires instruction

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in environmental protection, its renewed commitment to improving American education as articulated in the President's six goals for education, and its ability to bring resources to bear in a field in which small amounts can achieve large results.

As activities continue, the issues of coordination, resource allocation, and educational content and methodology remain. All are closely linked.

Coordination

The environmental education community has, de facto, established a loose confederation of organizations with similar goals. Since several Federal agencies have jurisdiction over different aspects of environmental protection and conservation, a number of separate but thematically related programs for environmental education have been developed.

Efforts are under way to link and coordinate these activities without extinguishing the initiative and commitment that individual agencies have already demonstrated. It is not the intention of the Federal effort to limit the number of players in this emerging field, but clearly some duplication is occurring, so wherever possible it makes common sense to coordinate and thus reduce needless expenditures of resources. In addition, overlapping programs in the private and public sectors, should be, wherever possible, linked for the same reasons. The nature of this linkage will, by necessity, vary on a case-to-case basis, but at a minimum should involve the exchange of information. The Federal government should take an active role in learning from and promoting examples of successful state and non-profit programs.

The National Advisory Committee on Environmental Technology Transfer, through its Committee on Education and Training, has recommended formation of a new Interagency Council on Environmental Education to replace the "passive" Federal Interagency Committee on Education Subcommittee on Environmental Education. This council would be chaired by EPA's new Office of Environmental Education and Training (OEET), in the Office of the Administrator, and would assert EPA as the lead agency for environmental education. OEET would develop national policy and implementation plans, and produce an annual report on environmental education. This proposal has received the support of the FICE Subcommittee and EPA.

The continuity and linkages between the work of FICE, NACETT, and the Alliance for Environmental Education (AEE) are key components to the success of the Federal effort. In a field where cooperative ventures are the norm, AEE has linked many of the relevant participants in environmental education together in the expanding ERIC system, providing a nationwide network of environmental and educational professionals. Overlapping systems

as they should be. Increased communication and coordination will enhance the ability to relay a complete message on the environment and thereby support the larger goals of producing an informed and enlightened citizenry.

The "what" of environmental education is perhaps not so important as the "how". Teachers have repeatedly indicated that they need no additional materials, preferring that resources be directed at teacher training and action-oriented student programs. Increased Federal involvement and coordination can lead, in effect, to more workshops for teachers who in turn learn about complex subjects from the experts; more effective and more accessible learning materials for teachers to choose from; more opportunities for hands-on learning experiences; more exchange of successful curricula; more incentives for teachers and students, such as CEQ's proposed Presidential awards for teachers and EPA's youth awards programs; and more commitment through the integration of environmental education goals and practices in institutions.

Conclusion

Environmental education for elementary and secondary students will remain largely in the hands of classroom teachers, as it should. The Federal role, and one which it has undertaken with creativity, enthusiasm, and, recently, commitment, is one of empowerment -- empowerment of teachers, students, and parents through grants, guidance, forums and training -- to achieve environmental literacy and the development of an environmental ethic. Federal agencies have undertaken a vast array of projects and activities, often on their own initiative. With a renewed sense of environmental awareness in American society, this effort can be directed to complement the many activities underway in environmental education.



EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

June 1, 1990

The Honorable J. Danforth Quayle
President
United States Senate
Washington, D.C. 20510

The Honorable Thomas S. Foley
Speaker of the House of Representatives
United States House of Representatives
Washington, D.C. 20515

Dear Mr. President and Mr. Speaker:

Please accept the enclosed proposed legislation for consideration by Congress. The Presidential Awards for Excellence in Environmental Education would establish a high level program, administered by the Council on Environmental Quality, to recognize and stimulate excellence in environmental education in elementary and secondary schools.

Pollution prevention, rather than after-the-fact clean up, is the long-term solution for our environmental problems. Education plays a key role in prevention. Teachers can lay a strong foundation in tomorrow's adults by teaching environmental awareness and means to prevent and minimize pollution. Further, outstanding teachers often work without the recognition they deserve. This proposal addresses both concerns.

The President proposes to stimulate environmental education by establishing Presidential awards to recognize excellent teachers. The awards are one small, but important, component of the solutions to protecting our resources and environment for future generations.

The Office of Management and Budget has advised that there is no objection to the presentation of this legislative proposal to Congress, and that its enactment would be in accord with the program of the President.

My staff or I can provide additional information as required.

Thank you for your consideration.

Sincerely,

Michael R.

Michael R. Deland
Chairman

A BILL

To establish a Presidential awards program, administered by the Council on Environmental Quality, to recognize and stimulate excellence in environmental education in Grades Kindergarten through 12.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.

(a) **TITLE.** --This Act may be cited as the "Presidential Awards for Excellence in Environmental Education Act".

(b) **TABLE OF CONTENTS.** --

- Sec. 1. Short title and table of contents,
- Sec. 2. Findings.
- Sec. 3. Definitions.
- Sec. 4. Presidential Awards for Excellence
in Environmental Education.
- Sec. 5. Authorization.

SECTION 2. FINDINGS.

The Congress finds that--

- (1) Environmental protection, to be effective, must include pollution prevention as well as pollution control.
- (2) Pollution prevention depends in large part on changes in individual behavior--changes which can best be brought about through education.
- (3) The education of youth, and through them their parents, can foster greater understanding of the need for environmental protection, and consequently can bring about the modifications in behavior which will be necessary to improve the future health of our natural resources and environment.
- (4) Recognition and support must be given from the highest level to those best qualified to provide students with accurate information about environmental choices and consequences to the environment--teachers.
- (5) The Federal government, acting through the Council on Environmental Quality, should recognize and stimulate

innovative and effective environmental education at the elementary and secondary level by providing deserving teachers from each State, the District of Columbia, and the Commonwealth of Puerto Rico with Presidential Awards for Excellence in Environmental Education.

SECTION 3. DEFINITIONS.

For the purposes of this Act, the term--

- (1) "Chairman" means the Chairman of the President's Council on Environmental Quality;
- (2) "Council" means the Council on Environmental Quality and the Office of Environmental Quality.
- (3) "Presidential award" means the Presidential Awards for Excellence in Environmental Education established under this Act.

SECTION 4. PRESIDENTIAL AWARDS FOR EXCELLENCE IN ENVIRONMENTAL EDUCATION.

(a) The Chairman of the Council on Environmental Quality, on behalf of the President, is authorized to administer an awards program which recognizes elementary and secondary education teachers who demonstrate excellence in advancing environmental education through innovative and effective programs.

(b) The Chairman is authorized to develop an awards selection process and to establish an annual timetable for the awards process. The selection criteria should include, but not be limited to:

- (1) creativity of the teaching method or project;
- (2) transferability of the teaching method or project to other teachers;
- (3) effectiveness of the teacher in increasing students' understanding and appreciation of the environment; and
- (4) positive impact of the teacher on students, parents, and other teachers.

(c) The Chairman is authorized to provide cash awards of up to \$5,000 directly to Presidential award recipients on an annual basis.

(d) Presidential Awards for Excellence in Environmental Education of equal value are to be given annually to two teachers from each of the United States, to one teacher from the District of Columbia and to one teacher from the Commonwealth of Puerto Rico.

(e) Only teachers at public or private schools with primary assignment to classrooms at the primary or secondary level (grades Kindergarten - 12) are eligible. Prior Presidential award recipients are not eligible for subsequent awards under this section.

(f) Each State is to nominate four finalists. The District of Columbia and Puerto Rico are to nominate two finalists each.

(g) The Chairman shall work with the Environmental Protection Agency, the Department of Education, the Department of Health and Human Services, the National Science Foundation and other Federal agencies and existing national, State and local environmental and education organizations to the maximum extent possible to identify potential Presidential award recipients.

SECTION 5. AUTHORIZATION

(a) There is hereby authorized to be appropriated to the Council on Environmental Quality to carry out this act an amount not to exceed \$549,000 for each of fiscal years 1991, 1992, and 1993.

(b) Amounts made available pursuant to paragraph (a) of this section shall be available for making cash awards under this act, for administrative expenses including award certificates and printing, for necessary travel costs and per diem expenses incurred by teachers selected as Presidential award recipients, and for special activities related to carrying out this act.

(c)(1) The Council is authorized to accept financial contributions, goods, or services from other Federal, State or local agencies and from non-governmental entities (including for-profit and non-profit organizations) in furtherance of the objectives of the Presidential awards program.

(2) The Chairman shall establish by regulation guidelines setting forth the criteria the Council will use in determining whether to accept such financial contributions, goods, or services. The criteria shall take into consideration whether the acceptance of the financial contributions, goods, or services would reflect unfavorably upon the Council's ability to carry out its responsibilities

or official data in a fair and objective manner, or would
compromise the integrity of the appearance of the
integrity of a government program or any official involved
in the program.
in (b)(3) program.
in (b)(3) program.

SECTION-BY-SECTION ANALYSIS

Section 1 provides the title -- "Presidential Awards for Excellence in Environmental Education Act" -- and a table of contents.

Section 2 presents findings emphasizing the importance of teachers educating youth to prevent pollution and to protect the environment.

Section 3 provides relevant definitions.

Section 4 authorizes the Council on Environmental Quality to administer the Presidential awards program and to provide cash awards of up to \$5,000 directly to each of 102 teachers, two from each State and one each from the District of Columbia and the Commonwealth of Puerto Rico.

Section 5 authorizes the Council to use appropriated funds for the Presidential awards program, including the costs of travel and per diem for recipients, cash awards, printing, and other related expenditures. This section also authorizes the Council to accept outside cash contributions, goods, or services in furtherance of the program, and requires the Council to implement regulations governing their acceptance.

APPENDIX B

U.S. Environmental Protection Agency
Office of Research and Development
Catalog of Minority Support Programs

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

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CATALOG of MINORITY SUPPORT PROGRAMS within ORD

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PROGRAM MATRIX

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

This is a general overview of the existing and planned minority support programs within ORD. Many of the programs exist within each ORD office or laboratory. If, within a given program, a specific point of contact is not listed for a particular office or laboratory, please contact the Office or Laboratory's Program Operations Office to locate the individual who has local responsibility for the program.

RECRUITING EFFORTS

TITLE: Annual Puerto Rico Recruiting Effort

DESCRIPTION: ORD actively supports the annual EPA recruiting trip to Puerto Rico. ORD offices and laboratories provide specific job opportunities, primarily scientist and engineering positions, for which the ORD representative can make employment offers to qualified candidates during the recruiting trip. ORD has recruited nineteen Puerto Rican scientists and engineers during the past two years.

PARTICIPATING

ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT:

ORD:	Sandra Wells, ORPM, 382-2585
Local:	Dee Hutchings, ERL Ada, 743-2227
	Maxine Kellum, ERL Athens, 250-3517
	Sandra Bowman, HRMD Cincinnati, 684-7801
	Nancy VanMeter, CERL Cincinnati, 684-7394
	Diana Irwin, EMSL Cincinnati, 684-7485
	Diana Guzman, RREL Cincinnati, 684-7953
	Pam Taylor, ERL Corvallis, 420-4651
	Sherry Linder, ERL Duluth, 780-5543
	Robert Menzer, ERL Gulf Breeze, 228-9011
	Richard Garnas, EMSL Las Vegas, 545-2568
	Patricia Gant, ERL Narragansett, 838-6005
	Shirley Bowens, HRMD RTP, 629-4381

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CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Recruitment of Scientific/Technical Personnel from Underrepresented Groups

DESCRIPTION: In December 1989, ORD implemented a program to encourage the active recruitment of scientists and engineers in underrepresented groups, which includes women, minorities and the handicapped. This program sets aside twenty-six positions per year for recruiting qualified scientists and engineers from these underrepresented groups. The Assistant Administrator provides funding for salaries and expenses during the first two years for any individual recruited under this program. In the third year, the recruiting office or laboratory must fund the expenses associated with the positions.

PARTICIPATING

ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT:

ORD:	Art Payne, QRPM, 382-7462
Local:	Dee Hutchings, ERL Ada, 743-2227
	Maxine Kellum, ERL Athens, 250-3517
	Sandra Bowman, HRMD Cincinnati, 684-7801
	Linda Schwaegerle, ECAO Cincinnati, 684-7535
	Diana Irwin, EMSL Cincinnati, 684-7485
	Pam Taylor, ERL Corvallis, 420-4651
	Sherry Linder, ERL Duluth, 780-5543
	Robert E. Menzer, ERL Gulf Breeze, 228-9011
	Richard Garnas, EMSL Las Vegas, 545-2568
	Art Sandoval, HRMD Las Vegas, 545-2414
	Lucy Garedo, ERL Narragansett, 838-6008
	Terri J. Burrell, HRMD RTP, 629-4359

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CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Recruitment of the Physically Handicapped

DESCRIPTION: HRMD Cincinnati has an active recruitment program for the physically handicapped. HRMD notifies the Ohio Vocational Rehabilitation Office of all vacancy announcements. All the facilities in Cincinnati are easily accessible by the physically disabled and all major telephone exchanges have been adapted for the hearing impaired. The physically disabled represent approximately 8 percent of Cincinnati's workforce.

ERL Narragansett is implementing a similar program in conjunction with the Rhode Island Vocational Rehabilitation Office. The staff at Narragansett is striving to make their entire facility easily accessible by the physically disabled as funding becomes available.

ERL Duluth is implementing a similar program in conjunction with Minnesota Vocational Rehabilitation Office. All the facilities at ERL Duluth are easily accessible by the physically disabled.

ERL Gulf Breeze has a similar program with the Penniscola Junior College. Many of the facilities at ERL Gulf Breeze are easily accessible by the physically disabled.

HRMD RTP is considering re-establishing this program at the RTP Center. All the facilities in RTP are easily accessible by the physically disabled and all major telephone exchanges have been adapted for the hearing impaired.

PARTICIPATING

ORGANIZATIONS: ORD Offices and Laboratories

CONTACT: Local: Sandra Bowman, HRMD Cincinnati, 684-7801
Sherry Linder, ERL Duluth, 780-5543
Mary Merredith, ERL Gulf Breeze, 228-9246
Art Sandoval, HRMD Las Vegas, 545-2414
Brenda Laing, ERL Narragansett, 838-6021
Randy Brady, HRMD RTP, 629-3071

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Minority Recruitment Activities and Job Fairs

DESCRIPTION: ORD representatives have participated in numerous minority-sponsored recruitment activities and job fairs. The primary purpose is to identify potential candidates for employment by providing information concerning ORD missions, programs and career opportunities.

PARTICIPATING ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT: ORD: Art Payne, ORPM, 382-7462
Local: Zandra Kern, OHRM (HQ Offices), 382-2973
Linda Exum, ERL Athens, 250-3145
Sandra Bowman, HRMD Cincinnati, 684-7801
Sherry Linder, ERL Duluth, 780-5543
Mary Merredith, ERL Gulf Breeze, 228-9246
Brenda Laing, ERL Narragansett, 838-6021
Terri J. Burrell, HRMD RTP, 629-4359

TITLE: Training the Recruiter

DESCRIPTION: Both HRMD Cincinnati and HRMD RTP conduct programs to train senior scientists, engineers, supervisors and managers within ORD laboratories and offices to use effective recruiting methods when participating in job fairs. This training program includes the identification of specific targeted markets (such as women, minorities and the handicapped) to be considered during the recruitment process.

PARTICIPATING ORGANIZATIONS: Cincinnati and RTP

CONTACT: Local: Sandra Bowman, HRMD Cincinnati, 684-7801
Terri J. Burrell, HRMD RTP, 629-4359

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CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: EPA Faculty Fellows Program (Minority Summer Faculty Intern Program)

DESCRIPTION: This program was established in 1981 to provide opportunities for faculty members from accredited minority institutions to work in Agency laboratories and offices during the summer. This provides a unique opportunity for the faculty members to actively participate in ORD science and engineering research activities in order to share these experiences and information concerning career options with the students and faculty at their respective colleges and universities.

PARTICIPATING ORGANIZATIONS: All ORD Offices and Laboratories.

CONTACT: Agency: Le'Ontyne Buggs, OHRM, 382-3266
ORD: Art Payne, ORPM, 382-7462
Local: Sandra Bowman, HRMD Cincinnati, 684-7801
Jessie Burdett, RREL Cincinnati, 684-7514
Grady Neely, ERL Corvallis, 420-4684
Robert E. Menzer, ERL Gulf Breeze, 228-9011
Shirley T. Bowens, HRMD RTP, 629-4381

TITLE: Recruitment Databases

DESCRIPTION: Most of the ORD Offices and Laboratories have developed either manual or automated recruitment databases which are used as mailing lists in recruiting women, minorities and the handicapped for scientific, engineering and support positions.

PARTICIPATING ORGANIZATIONS: ORD Offices and Laboratories

CONTACT: Local: Zandra Kern, OHRM (HQ Offices), 382-2973
Dee Hutchings, ERL Ada, 743-2227
Rosemarie C. Russo, ERL Athens, 250-3134
Sandra Bowman, HRMD Cincinnati, 684-7801
Pam Taylor, ERL Corvallis, 420-4651
Sherry Linder, ERL Duluth, 780-5543
Mary Merredith, ERL Gulf Breeze, 228-9246
Art Sandoval, HRMD Las Vegas, 545-2414
Brenda Laing, ERL Narragansett, 838-6021
Terri J. Burrell, HRMD RTP, 629-4359

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CATALOG of MINORITY SUPPORT PROGRAMS within ORD

EDUCATION

TITLE: Historically Black Colleges and Universities (HBCU) Linkages

DESCRIPTION: Senior scientists and engineers in ORD laboratories have been named as adjunct professors in their areas of expertise and provide laboratory work experience for science and engineering students in Historically Black Colleges and Universities. This program also provides a source for minority recruitment.

PARTICIPATING ORGANIZATIONS: RTP and ERL, Athens

CONTACT: Local: Linda Exum, ERL Athens, 250-3145
Terri J. Burrell, HRMD RTP, 629-4359
August Curley, HERL RTP, 629-2729

TITLE: HBCU Lecture Series

DESCRIPTION: A lecture series has been initiated to strengthen ties between the Agency and HBCUs. These lectures have been designed to provide a forum for discussion on the role of minorities in science and engineering as a key to national strength in research and development.

PARTICIPATING ORGANIZATIONS: RTP

CONTACT: Local: August Curley, HERL RTP, 629-2729
Dianne Laws, AOCR RTP, 629-4249

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CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Minority Engineering Program

DESCRIPTION: This is a cooperative agreement with the University of Nevada at Las Vegas to provide engineering students with training projects and assignments associated with environmental issues and research problems.

PARTICIPATING ORGANIZATIONS: EMSL Las Vegas

CONTACT: Local: Anders Denson, EMSL Las Vegas, 545-2577

TITLE: Stay-in-School Program

DESCRIPTION: This program provides scientific, professional, technical and clerical assistance to ORD offices and laboratories by providing student hires working on a part-time basis within these organizations. The program is limited to students meeting financial aid requirements. In several ORD facilities, a specific percentage of the available opportunities are set aside for minority and female applicants.

PARTICIPATING ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT: ORD: Art Payne, ORPM, 382-7462
Local: Dee Hutchings, ERL Ada, 743-2227
Maxine Kellum, ERL Athens, 250-3517
Sandra Bowman, HRMD Cincinnati, 684-7801
Pam Taylor, ERL Corvallis, 420-4651
Sherry Linder, ERL Duluth, 780-5543
Mary Meredith, ERL Gulf Breeze, 228-9246
Art Sandoval, HRMD Las Vegas, 545-2414
Brenda Laing, ERL Narragansett, 838-6021
Shirley Bowens, HRMD RTP, 629-4381

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Adopt-a-School Program

DESCRIPTION: ORD facilities participate in the Agency-sponsored "Adopt a School" Program by sponsoring activities for local minority schools. The program is designed to foster an interest in sciences and engineering at junior and senior high school levels. Individuals from the laboratories sponsor school activities; provide tours of EPA facilities; judge school science contests; sponsor environment-related public awareness activities; collect coupons/receipts to support the school's participation in education bonus programs [e.g., Giant apple computer program]; and set aside a certain number of "Stay-in-School" positions as employment opportunities for students of the "adopted" schools. Cincinnati laboratories have instituted a "shadow" program which will allow 10 children from the "adopted" school to follow a volunteer scientist in the ORD laboratory for a day.

PARTICIPATING ORGANIZATIONS: ORD Headquarters Offices
Cincinnati

CONTACT: ORD: Art Payne, ORPM, 382-7462
Local: Sandra Bowman, HRMD Cincinnati, 684-7801

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: School Outreach Program

DESCRIPTION: All of the ORD facilities participate in outreach programs at the local elementary schools, high schools, colleges and universities, including the minority schools, to cultivate an interest in the environmental sciences and engineering. Individuals from the laboratories sponsor school activities; provide tours of EPA facilities; judge school science contests; sit on school panels; sponsor environment-related public awareness activities; and participate in science fairs and career days. Many of the EPA employee associations donate money for local school science awards/prizes and scholarship funds.

PARTICIPATING

ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT:

ORD: Art Payne, ORPM, 382-7462
Local: Dee Hutchings, ERL Ada, 743-2227
Robert Ryans, ERL Athens, 250-3306
Sandra Bowman, HRMD Cincinnati, 684-7801
Pam Taylor, ERL Corvallis, 420-4651
Robert Drummond, ERL Duluth, 780-5733
Betty Jackson, ERL Gulf Breeze, 228-9011
Marianne Carpenter, EMSL Las Vegas, 545-2168
Brenda Laing, ERL Narragansett, 838-6021
Billie Hudson, OSORDO RTP, 629-4303

TITLE: Women and Minorities Honors Program

DESCRIPTION: This program will provide scholarships through the University of West Florida to scholarly women and minorities as an incentive to enter graduate-level training in the marine sciences.

PARTICIPATING

ORGANIZATIONS: ERL Gulf Breeze

CONTACT:

Local: Raymond Wilhour, ERL Gulf Breeze, 228-9011

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Minority Institution Assistanceship (MIA) Program

DESCRIPTION: The MIA Program was initiated in 1981 to increase research support for eligible minority institutions (Historically Black Colleges or Universities, and Hispanic Association of Colleges or Universities) by providing fellowships for their students.

The MIA Program has three separate components: a Research Assistance Program for faculty; an Undergraduate/Graduate Fellowship Program; and a Summer Intern Program for students who have completed the Student Fellowship Program.

The objective of the Research Assistance Program is to promote environmental research capability within minority institutions and to provide an opportunity for minority students to gain research experience in the environmental sciences. Eight research grants totaling \$800K are funded in FY 1990.

The Student Fellowship and Summer Intern Program is intended to encourage students to develop careers in environmental research. Approximately \$6K per student for one academic year is provided to pay for tuition, fees, books and a monthly stipend. All fellowship recipients are required to serve a three month summer internship at an EPA facility which allows them to apply their newly acquired skills to real-world environmental problems. Twenty-three fellowships and ten summer internships totaling \$200K are funded in FY 1990.

PARTICIPATING

ORGANIZATIONS: ORD-sponsored program

CONTACT: **ORD:** Virginia Broadway, OER, 382-7445
Alvin Edwards, OER, 382-7445
Local: Dee Hutchings, ERL Ada, 743-2227
Maxine Kellum, ERL Athens, 250-3517
Sandra Bowman, HRMD Cincinnati, 684-7801
Diana Irwin, EMSL Cincinnati, 684-7485
Grady Neely, ERL Corvallis, 420-4684
Sherry Linder, ERL Duluth, 780-5543
Mary Merredith, ERL Gulf Breeze, 228-9246
Evelyn Clay, EMSL Las Vegas, 545-2326/2536
Robert Mosley, EMSL Las Vegas, 545-2326/2536
Brenda Laing, ERL Narragansett, 838-6021
Billie Hudson, OSORDO RTP, 629-4303

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Minority Research Apprenticeship Program (MRAP)

DESCRIPTION: Cincinnati has participated in the MRAP since 1980. The MRAP is an eight week program where students participate in ongoing research projects to gain work experience and exposure to scientific and engineering careers. Thirty-five minority students from Cincinnati area high schools and colleges participate in the program each year. EPA scientists and engineers volunteer to be mentors and work on a one-to-one basis with the students.

ERL Duluth has three programs under the auspices of the MRAP: an eight-week summer session for high school students; the NISHOU program in cooperation with the University of Minnesota; and a six-week hands-on training session with the students from Staples Technical Institution at Cloquet, Minnesota. In each of these programs EPA scientists and engineers work on a one-to-one basis with the students as mentors. Currently there are three students enrolled in the high school program, two students in the NISHOU program and three students in the technician program.

RTP is establishing a MRAP in cooperation with Shaw University. During the academic school year the high school students will participate in weekend sessions at Shaw University in addition to an eight-week summer session during their freshman and sophomore years. These students will then be assigned to work with an EPA mentor at RTP for an eight-week summer session during both their junior and senior years in high school. RTP plans to initially enroll 16 students in FY 1990 and expand the program to 32 students in FY 1991, rotating 16 new students each year.

PARTICIPATING

ORGANIZATIONS: Cincinnati, RTP and ERL Duluth

CONTACT: Local: Johnny Springer, RREL Cincinnati, 684-7529
Andrea Tanner, OSORD Cincinnati, 684-7771
Diana Irwin, EMSL Cincinnati, 684-7485
Sherry Linder, ERL-Duluth, 780-5543
Millard Thacker, HRMD RTP, 629-4356

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Equipment Donation Program

DESCRIPTION: An OARM Pilot Program has been established to donate excess physical plant property to HBCUs. It is anticipated that this program, if successful, will reduce the Agency's excess equipment inventories and provide useful laboratory and office equipment for use by minority institutions. The current recipient of the equipment is Benedict College in Columbia, South Carolina.

Cincinnati has a similar program to donate excess equipment to the University of Cincinnati. ERL Duluth is implementing a program to donate their excess equipment to local area schools.

PARTICIPATING ORGANIZATIONS: Cincinnati, RTP and ERL Duluth

CONTACT: Local: Bob Carr, OSORDO Cincinnati, 684-7966
Jeffrey Denny, ERL Duluth, 780-5518
Dianne Laws, AOCR RTP, 629-4249
David Westmoreland, FMSD RTP, 629-2162

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TRAINING AND DEVELOPMENT

TITLE: Mentoring Program

DESCRIPTION: Guidelines were established two years ago for a laboratory mentoring program for newly-recruited Puerto Rican scientists and engineers (See "Annual Puerto Rico Recruiting Effort") to help ensure the successful transition of these newly recruited members of ORD's workforce to adjust to their new careers. HRMD Cincinnati has expanded on this idea to develop an orientation and mentoring program for all new employees, including special provisions for new minority hires.

The Mentoring Program includes six segments:

- (1) a "sponsor" is assigned to all new hires;
- (2) a formal "human resources" presentation and orientation is provided;
- (3) a presentation has been developed to provide an overall view of the laboratories and offices;
- (4) an orientation checklist, which emphasizes the individual's role in the office or laboratory, has been developed;
- (5) a three-month feedback interview identifies any shortfalls in the orientation process; and
- (6) a research mentor, where appropriate, is assigned on a voluntary basis.

PARTICIPATING

ORGANIZATIONS: All ORD Offices and Laboratories (Guidelines)
Cincinnati (6-phase mentoring program)

CONTACT: ORD: Sandra Wells, ORPM, 382-7462
 Local: Sandra Bowman, HRMD Cincinnati, 684-7801
 Jeff Denny, ERL Duluth, 780-5717
 Martha Daniel, AEERL RTP, 541-2922

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Federal Women's Program

DESCRIPTION: ORD participates in the Federal Women's Program at both the local and national level. Greater Leadership Opportunity (GLO), which has been part of the Federal Women's program, is an active career development program throughout ORD. Women in Science and Engineering (WISE) is very active in the recruiting, development and education programs throughout ORD. In Cincinnati, WISE members have compiled a vacancy announcement distribution list which consists of organizations whose members include women in science, engineering and technical fields. WISE members have also volunteered to act as mentors under the newly initiated mentoring program in Cincinnati.

PARTICIPATING ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT: ORD: Art Payne, ORPM, 382-7462
Local: Dee Hutchings, ERL Ada, 743-2227
Linda Exum, ERL, Athens, 250-3145
Sandra Bowman, HRMD Cincinnati, 684-7801
Kathy Martin, ERL Corvallis, 420-4654/4599
Liz Durhan, ERL Duluth, 780-5515
Virginia Snarski, ERL Duluth, 780-5556
Betty Jackson, ERL Gulf Breeze, 228-9011
Faye Cromar, EMSL Las Vegas, 545-2566
Sandra Baksi, ERL Narragansett, 838-6162
Suzanne Lussier, ERL Narragansett, 838-6083
Jewel Morris, OSORDO RTP, 629-4303

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Management Training

DESCRIPTION: HRMD Cincinnati has conducted several management training sessions on the findings of Presidential Commission Workforce 2000 Study. This study concludes that the number of women and minorities entering the workforce during the next twenty years will increase, while the number of professionals with postgraduate degrees in science and engineering will decrease. This training provides management personnel with relevant information concerning the future of the ORD community. The briefing is presently scheduled to be given to the OMMSQA Program Operations Directors.

ERL Athens has expanded the Zenger-Miller Management Program to include employees at the GS-12 level who have demonstrated supervisory or managerial potential. They have also targeted four women and minorities below the GS-12 level who have displayed supervisory potential to participate in the program to enhance their career potential.

PARTICIPATING

ORGANIZATIONS: Cincinnati, RTP and ERL Athens

CONTACT: Local: Maxine Kellum, ERL Athens, 250-3517
Sandra Bowman, HRMD Cincinnati, 684-7801
Randy Brady, HRMD RTP, 629-3071

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Secretarial Career Management Program

DESCRIPTION: ORD is sponsoring a pilot program for secretaries and support staff to provide career enhancement opportunities. The program includes title changes, as appropriate, and an evaluation process that places emphasis on developmental assignments, assessment of existing support requirements, and a training plan which focuses on the career goals of the individual.

PARTICIPATING ORGANIZATIONS: ORD-sponsored program

CONTACT: ORD: Sandra Wells, ORPM, 382-7462
Local: Carolyn Taylor, ERL Ada, 743-2228
Joan Price, ERL Athens, 250-3134
Sandra Bowman, HRMD Cincinnati, 684-7801
Pam Taylor, ERL Corvallis, 420-4651
Nancy Novy, ERL Duluth, 780-5708
Bonnie Clayton, ERL Gulf Breeze, 228-9011
Robin Shoemaker, EMSL Las Vegas, 545-2525
Ina Taylor, ERL Narragansett, 838-6011
Randy Brady, HRMD RTP, 629-3071

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

COMMUNITY AWARENESS

TITLE: Training Grants for the Native American Tribes

DESCRIPTION: These grants are made in support of curriculum development for environmental concerns relating to Indian Reservations and the dissemination of the curriculum through workshops and seminars. Additional grants are provided to assist Indian tribes in their understanding of how tribal governments can participate in the intergovernmental task of protecting the environment. Grants have been made to:

- National Congress of American Indians
- Council of Energy Resource Tribes
- Great Lake Intertribal Council
- Minnesota Chippewa Tribe
- Michigan Intertribal Council
- Oneida Tribe
- S. Regis Tribe
- Americans for Indian Opportunity

**PARTICIPATING
ORGANIZATIONS:** EPA Program

CONTACT: ORD: Patricia Powers, OER, 382-2573

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Special Observances

DESCRIPTION: ORD Headquarters and each of the laboratories and field offices observe special events (e.g., Black History Month, Martin Luther King's Birthday, etc.) with local programs.

PARTICIPATING

ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT: ORD: Art Payne, ORPM, 382-7462
 Local: Chursey Fountain, ERL Ada, 743-2210
 Ava Ivery, ERL Athens, 250-3467
 Art Turner, EEO Cincinnati, 684-7941
 Grady Neely, ERL Corvallis, 420-4684
 Judy Rudman, ERL Duluth, 780-5585
 Emile Lores, ERL Gulf Breeze, 228-9011
 Evelyn Clay, EMSL Las Vegas, 545-2326/2536
 Robert Mosley, EMSL Las Vegas, 545-2326/2536
 Lucy Garedo, ERL Narragansett, 838-6008
 Diane Laws, AOCR RTP, 629-4249

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

CONTRACTS AND GRANTS

TITLE: Minority Contracts, Cooperative Agreements and Grants

DESCRIPTION: Throughout ORD, every effort has been made to ensure minority-owned small businesses receive an opportunity to participate in the contracting process. There are a variety of contracts and agreements in place which provide ORD laboratories and offices with a variety of services, including laboratory and clerical support.

Minority procurement workshops are conducted to assist minority and women-owned environmental firms in competing for EPA-funded procurements at the State and local level.

Since FY 1985 the Center of Environmental Research Information (CERI) has maintained a Minority 8-A Set-Aside contractor to provide technical support services to include the development of seminars and user oriented handbooks and manuals. A three year cost plus fixed fee contract for \$1.5 million per year was awarded effective 1/1/90 to provide technical support services to any ORD activity with technology transfer activities relating to Hazardous Waste Control.

PARTICIPATING ORGANIZATIONS: All ORD Offices and Laboratories

CONTACT:

ORD:	Colleen Lentini, ORPM, 382-7462
	Patricia Powers, OER, 382-2573
Local:	Jerry D. Davis, ERL Ada, 743-2209
	Annie Smith, ERL Athens, 250-3129
	Clarence Clemmons, CERI Cincinnati, 684-7358
	Betty Livingstone, ERL Corvallis, 420-4654
	Arlene Shelton, ERL Duluth, 780-5540
	Frank Wilkes, ERL Gulf Breeze, 228-9011
	Anders Denson, EMSL Las Vegas, 545-2577
	Patricia Gant, ERL Narragansett, 838-6005
	Jerry Dodson, CMD RTP, 629-2249

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Senior Environmental Employee (SEE) Program

DESCRIPTION: The SEE Program, authorized by the Environmental Programs Assistance Act of 1984, allows EPA to enter into assistance agreements with select organizations in order to obtain the services of Americans, age 55 years or older, to provide technical assistance to EPA. These organizations include:

- American Association of Retired Persons (AARP)
- National Caucus/Center on Black Aged, Inc.
- National Council of Senior Citizens
- National Pacific/Asian Resource Center on Aging
- National Urban League
- National Council on the Aging, Inc.
- National Association for the Hispanic Elderly
- Green Thumb, Inc.

In FY 1990, EPA participation in the SEE program is expected to encompass 70 agreements and 1100 SEE employees totaling \$33M. The Office of Exploratory Research manages the SEE Program; however, each EPA program office is responsible for funding its own grants. Although the majority of agreements are with AARP, the remaining organizations constitute 20 percent of the SEE agreements, many of which are minority organizations. Although women, minorities and the disabled are employed through the SEE program; the extent to which these groups are represented is uncertain.

PARTICIPATING ORGANIZATIONS: EPA Program

CONTACT:

ORD:	Patricia Powers, OER, 382-2573
Local:	Jimmie L. Kingery, ERL Ada, 743-2226
	Maxine Kellum, ERL Athens, 250-3517
	Diana Irwin, EMSL Cincinnati, 684-7485
	Jessie Burdett, RREL Cincinnati, 684-7514
	Grady Neely, ERL Corvallis, 420-4684
	Kimberly Johnson, ERL Duluth, 780-5544
	Mary Meredith, ERL Gulf Breeze, 228-9011
	Marianne Carpenter, EMSL Las Vegas, 545-2168
	Brenda Laing, ERL Narragansett, 838-6021
	Shirley Bowens, HRMD RTP, 629-4381

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: "2+2" Environmental Education Program

DESCRIPTION: Congress provided additional funding in FY 1990 for Academic Training. The "2+2" Environmental Education Program, which was initiated in FY 1989, will result in a national model for cooperative technical and vocational competency-based education programs between community colleges and high schools. Its goal is to increase the number of hazardous material technicians nationally to meet a critical need. The program encourages high school counselors to promote the environmental field as a viable career choice for women and minorities.

PARTICIPATING ORGANIZATIONS: EPA Program

CONTACT: ORD: Patricia Powers, OER, 382-2573

TITLE: Small Business Innovation Research (SBIR)

DESCRIPTION: Public Law 97-219 requires EPA to devote 1.25 percent of its extramural budget to SBIR. OER manages EPA's SBIR program and provides contract funding for small businesses with ideas relevant to EPA's mission. The program focuses on projects in control technology or process instrumentation development. Proposals are solicited in the fall of each year for Phase I research, which consists of feasibility studies that are funded up to \$50K. The best Phase I studies are selected for product development in Phase II and are funded up to \$150K. Results from the SBIR Program are expected to lead to commercial development of a product or process used in pollution control. The FY 1990 SBIR budget is approximately \$2.5M R&D and \$.7M Superfund. Women and minority owned businesses are encouraged to participate in this program.

PARTICIPATING ORGANIZATIONS: EPA Program

CONTACT: ORD: Donald Carey, OER, 382-7445

5/29/90

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

TITLE: Hazardous Substance Research Centers (HSRC)

DESCRIPTION: Authorized by the 1986 amendments to the Superfund Act, the HSRC program supports five university-based research centers across the country. The HSRCs are required to commit approximately 10 to 20 percent of their funding to the development of an active technology transfer program. Howard University, the University of Michigan and Michigan State are equal partners in the HSRC consortium which focuses on organic bioremediation research. Howard University receives a proportionate share of the Center's \$2.0M start-up funding and the \$1.0M annual funding for up to eight years.

**PARTICIPATING
ORGANIZATIONS:** EPA Program

CONTACT: ORD: Karen Morehouse, OER, 382-5750

CATALOG of MINORITY SUPPORT PROGRAMS within ORD

PLANNED MINORITY PROGRAMS

TITLE: Engineering Traineeships for HBCUs

DESCRIPTION: An FY 1992 budget proposal will support several traineeships in engineering at approved HBCUs. Approximately \$1.7M would fund graduate research in hazardous waste reduction, and \$3.3M would fund undergraduate and graduate education in engineering disciplines supporting Superfund issues. The proposal will include criteria for distribution of the monies to participating minority institutions.

PARTICIPATING ORGANIZATIONS: ORD-sponsored program

CONTACT: ORD: Roger Cortesi, OER, 382-5750

TITLE: Pilot Program to Incorporate Minority Institutions into the Gulf Coast Hazardous Substance Research Center (GCHSRC), Lamar University, Beaumont, Texas

DESCRIPTION: This program would involve minority institutions in joint research projects with the eight major universities which comprise the GCHSRC. The goal is to share faculty, students and laboratories leading to an enhanced capability in minority institutions. It is envisioned that the program can be expanded to include community colleges and magnet schools to encourage the early involvement of women, minorities and the handicapped in the sciences and mathematics. During phase one the University of Central Florida will develop a partnership with the HBCUs in the State of Florida. Upon successful development of the Florida framework, this approach would be expanded to the other Gulf Coast states.

PARTICIPATING ORGANIZATIONS: Office of Environmental Engineering and Technology Demonstration

CONTACT: ORD: Darwin Wright, OEETD, 382-4073

5/29/90

MINORITY SUPPORT PROGRAMS within ORD

	HQ	ADA	ATHENS	CINCINNATI *	CORVALLIS	DULUTH	GULF BREEZE	LAS VEGAS	NARRAGANSETT	R T P **
RECRUITING EFFORTS:										
Annual Puerto Rico Recruiting Effort	X		X	X	X	X	X	X	X	X
Recruitment of Scientific/Technical Personnel from Underrepresented Groups	X	X	X	X	X	X	X	X	X	X
Recruitment of the Physically Handicapped	X				X		X	X	X	X
Minority Recruitment Activities & Job Fairs	X			X	X		X	X	X	X
Training the Recruiter					X					X
EPA Faculty Fellows Program	X				X	X		X		X
Recruitment Databases	X	X	X	X	X	X	X	X	X	X
EDUCATION:										
HBCU Linkage				X						X
HBCU Lecture Series										X
Minority Engineering Program									X	
Stay-in-School Program	X	X	X	X	X	X	X	X	X	X
Adopt-a-School Program	X				X					
School Outreach Program	X	X	X	X	X	X	X	X	X	X
Women & Minorities Honors Program								X		
Minority Institution Assistance Program	X	X	X	X	X	X	X	X	X	X
Minority Research Apprenticeship Program					X		X			X
Equipment Donation Program					X		X			X

* includes SORDO, CERI, ECAO, EMSL and RREL

** includes SORDO, AEERL, AREAL, ECAO and HERL

MINORITY SUPPORT PROGRAMS within ORD

	HQ	ADA	ATHENS	CINCINNATI *	CORVALLIS	DULUTH	GULF BREEZE	LAS VEGAS	NARRAGANSETT	R T P **
TRAINING & DEVELOPMENT:										
<u>Mentoring Program</u>		X			X		X			X
<u>Federal Women's Program</u>		X	X	X	X	X	X	X	X	X
<u>Management Training</u>				X	X					X
<u>Secretarial Career Management Program</u>		X	X	X	X	X	X	X	X	X
COMMUNITY AWARENESS:										
<u>Training Grants for Native American Tribes</u>		X								
<u>Special Observances</u>		X	X	X	X	X	X	X	X	X
CONTRACTS & GRANTS:										
<u>Minority Contracts, Agreements & Grants</u>		X	X	X	X	X	X	X	X	X
<u>Senior Environmental Employee Program</u>		X	X	X	X	X	X	X	X	X
<u>"2+2" Environmental Education Program</u>		X								
<u>Small Business Innovation Research</u>		X								
<u>Hazardous Substance Research Centers</u>		X								
PLANNED MINORITY PROGRAMS:										
<u>Engineering Traineeships for HBCUs</u>		X								
<u>Pilot Program to Incorporate Minority Institutions into the Gulf Coast NSRC</u>		X								

* includes SORDO, CERL, ECAO, EMSL and RREL

** includes SORDO, AEERL, AREAL, ECAO and HERL

APPENDIX C

*Environmental Action
"Beyond White Environmentalism"*



RE:SOURCES

High cancer rates, miscarriages, polluting chemical companies and toxic dumpsites drew people to the Louisiana Toxics March.



Beyond White Environmentalism

Minorities & The Environment

THAT ENVIRONMENTAL CONCERN IS A WHITE THING is a common myth in America today—one which falls apart quickly upon exam. Reality is more complex.

Black, Native American, Chicano, Hispanic—social justice advocates in all these communities are fighting so their people may live and work free of debilitating pollution. Many of these struggles have raged for years. Honoring and preserving the environment is intrinsic to Native American and other land-based cultures.

Yet the national environmental groups are undeniably white in leadership, staff and image. And activism against environmental threats—grassroots, regional, national—is too often divided, by culture and habits of oppression, along ethnic lines. Each segment is largely ignorant of the others' struggles and the common ground they might share.

Here again, generalizations distort. Conscious efforts to explore and build links between the civil rights and environmental communities have been attempted since the early 1970s. Many top priorities of national environmental groups, white though they may be, have a direct bearing on minority communities—like air pollution, where radioactive waste is disposed and giving communities the "right to know" about toxic threats. The "environmental movement" is not a monolith. Love of Earth does not belong to one people.

This Re:Sources section is devoted to exploring some of the places that minority and environmental priorities cross paths. We set forth aware of these issues' tre-

mendous complexity and the fact that we are the white editorial staff of an environmental magazine. Many approaches could have been taken. Rather than concentrate on national efforts to explore and bridge gaps between communities, we chose to focus on efforts that are growing from the ground up.

What follows is divided into three parts. The first explores some of the ways that environmental pollution is devastating minority communities. The next section profiles the environmental efforts of five minority activists. And, in the final "viewpoint" section, several authors point to conflicts, controversies, shortcomings—and even promising directions.

Minorities At Risk

BY HAWLEY TRUAX

It has been over 20 years since the Kerner Commission delivered its potent message: "Our nation is moving toward two societies, one Black, one white—separate and unequal."

There have been changes since. Black political power has clearly grown; workplaces are far more integrated; the Black middle class has prospered economically. But, as figures generated for the Kerner report's 20th anni-



versary reveal, the overall situation has not changed, and may in fact have worsened. In 1988, Black unemployment was more than double that of whites—the same was true in 1968. In 1988 Blacks' median income hovered at around 58 percent that of whites—again, the same level as 1968. Some sociologists assert that membership in a "permanent underclass" is the fate of a growing number of African-Americans, Hispanics and Native Americans. To daunting poverty are added high illiteracy rates, infant mortality, housing scarcity and drug-related violence.

Poor and minority communities struggling to survive must also shoulder another burden—environmental pollution. In many cases, environmental risks are inextricably linked to poverty and racism—caused by them, worsened by them, solutions impeded by them.

In the workplace, minorities continue to be concentrated in low-paying, high-risk blue collar occupations—jobs that tend to have health-threatening environments and a ready supply of "replacement labor."

On the home front, inadequate low-income housing and housing discrimination play a key role in concentrating Black and Hispanic populations in inner city neighborhoods and other areas where health risks from industrial and auto pollution are often extreme. There, the older, deteriorating housing increases risk through exposure to lead and asbestos—not to mention higher energy bills. In releasing a May 1989 report, the National Consumer Law Center concluded that the energy crisis never ended for those in poverty.

Lead Poisoning—The Silent Epidemic

Lead poisoning provides a textbook example of an environmental problem that disproportionately affects the Black community, and of the ways in which pollution problems are tied to other threats to minorities.

Lead contamination is most prevalent in the inner city, with its most widespread source being chipped and flaking housepaint, followed by lead buildup in soil (in turn resulting from old housepaint and gasoline exhaust—see Sep/Oct 1988). Studies have found that risk of lead poisoning increases for low-income children because deficiency of iron, calcium and other nutrients can raise the rate of lead absorption and retention.

In July 1988, a landmark study on lead poisoning in children from the federal Agency for Toxic Substances and Disease Registry reported that 44 percent of urban Black children are at risk from lead poisoning—four times the rate of white children.

U.S. population, by race

	White, non-Hispanic	Spanish origin	Black	Other races
1965	78.3%	7.3%	12.2%	2.7%
1970	76.8%	7.9%	12.5%	3.0%
1980	75.6%	8.7%	13.0%	3.3%
2000	74.2%	9.4%	13.3%	3.5%
2010	71.5%	10.9%	14.1%	4.1%
2020	68.9%	12.3%	14.9%	4.6%

Note: Figures do not total 100 per cent because people of Spanish origin may be of any race.

SOURCE: U.S. CENSUS BUREAU

Industries that still process and reprocess this lethal material (such as battery manufacturing, plating and secondary smelting) are highly populated with minority workers. According to occupational health expert Daryll Alexander, a disproportionate number of minority workers have been found to have blood lead levels above workplace safety standards in California and Texas—the



Farmworkers have the highest rate of toxic poisoning of any workplace group.

only two states that designate race on their lab forms for lead screening. Not only are these workers at risk, but they can take these poisons home to their families.

In a May 1989 commentary in the *American Journal of Public Health*, childhood lead specialist Dr. Herbert Needleman theorizes that lead's known physical damages may contribute directly to the deadly cycles of crime and alienation in the inner city. He writes: "It is at the same time a reasonable conjecture that the disordered thinking, impaired muscle control, reduced verbal skills, and the demonstrated increase in school failure that are a known product of lead exposure may increase the probability that some individuals will adopt antisocial responses to the challenges of society."

Farm Poisonings—Counting the Uncounted

According to the U.S. Department of Labor, our nation's three to four million farmworkers have the highest rate of exposure to toxic poisoning of any occupational group in the United States. The source of this poisoning is, of course, pesticides.

National figures on the frequency of such poisoning—or even educated guesses—have not been compiled. Some information, however, has been gathered on the state level. Using California data, back in 1984, epidemiologist Molly Coye estimated that as many as 313,000 farmworkers in the U.S. suffer effects of pesticide-related illness each year.

Eighty to 90 percent of the migrant workforce is Chicano—of Mexican descent; African-Americans comprise the next largest group, with a smaller number of Haitians, Filipinos, Vietnamese and others.

According to Michelle Mentzer of the Evergreen Legal Services in Washington State (which has the fourth largest migrant farmworker population in the country), Chicano migrant workers are typically illiterate in English. Those who work as pesticide applicators generally cannot read safety instructions on their own, and farm owners and foremen don't fill in.

In a 1986 survey of migrant farmworkers by Evergreen Legal Services, two-thirds of those who regularly

applied pesticides to crops said they had never received any education or instruction in safety precautions. Nor is the risk limited to sprayers. Forty-three percent of the 460 farmworkers surveyed by Evergreen reported that pesticides had been sprayed directly upon them, or had drifted upon them, while they were working. For most, this had happened multiple times. Half of those sprayed reported feeling ill effects. Of those, less than 10 percent sought medical attention. Workers are also at risk if they re-enter fields too soon after pesticides are sprayed. While national "re-entry standards" exist, they are too weak and enforcement is almost non-existent.

Mentzer says workers don't bring up their safety concerns for fear of being discriminated against—or fired outright. "Most migrant farmworkers don't complain," she concludes. "The rashes, the headaches, dizziness, the nausea—it happens so often. They are used to it. They think of it as part of their job."

Siting Toxic Facilities—The Race Factor

In 1982, mainstream civil rights groups first focused national attention on an environmental issue: State efforts to site a PCB disposal facility in Warren County, North Carolina. Prominent Black leaders from around the country joined the largely Black local community to protest the facility—culminating in a nonviolent civil disobedience campaign and over 500 arrests. In July 1982, the NAACP—National Association for the Advancement of Colored People—requested a preliminary injunction to prohibit placement of PCBs in the landfill on the basis of racial discrimination.

The landfill was built, but a movement had begun.

The District of Columbia's non-voting delegate to Congress, Walter Fauntroy (who had been arrested in Warren County), requested a report from the General Accounting Office on where commercial hazardous waste landfills were located in eight Southern states.

The report, issued in July 1983, marked the first official recognition of a phenomenon long suspected. It found that Blacks made up the majority of the population around three of the four commercial landfills in the region. In addition, at least 26 percent of each community had income below the poverty level.

The GAO report paralleled the conclusions of a different sort of report. Cerrell Associates was commissioned by the California Waste Management Board in 1984 to advise the state on how to overcome political obstacles to siting mass-burn garbage incinerators. The report, published as one chapter of a lengthy technical series, concludes that the state is less likely to meet resistance in a community of low-income, blue collar workers with a high school education or less.

"All socio-economic groupings tend to resent the nearby siting of major facilities," advises the report, "but the middle and upper socio-economic strata possess better resources to affectuate their opposition."

While the category of race was conspicuously absent from Cerrell's demographic analysis, the report has been widely criticized for targeting vulnerable sectors of the population, especially minority communities, for further environmental harm.

The first national analysis of these issues came in 1987 when the Commission for Racial Justice, an arm of the United Church of Christ, released its report, "Toxic Waste and Race in the United States." The report's statistical analysis concluded that race was the most significant of several variables in determining the location of

commercial hazardous waste sites in residential areas—even more significant than socioeconomic status. The Commission for Racial Justice attributed these disturbing findings to an "insidious" form of "institutional racism." Commission staffer Charles Lee sees the report as a starting point. He calls for further research into the risks to minorities, and the underlying causes for these patterns. In one step in this direction, the Centers for Disease Control is organizing a scientific forum for fall 1990 where academics and regulators will examine how environmental contamination at hazardous waste sites is affecting minorities.

For 10 years, sociologist Robert Bullard (now with the University of California-Riverside) has been researching pollution sites in minority communities through household surveys, interviews and other research means. Bullard, who has just finished a book, *Dumping on Dixie*, agrees that—even when you control for socioeconomic factors—a disproportionate number of hazardous sites are located in Black communities.

In this as in other areas, says Bullard, "You can't speak about the condition of the Black community without acknowledging racism as a factor."

Protection Quandry In Indian Country

BY GAIL E. CHEHAK
and SUZAN SHOWN HARJO
Morning Star Foundation

Central to all Indian religions and cultures is protection of Mother Earth. Indian people are increasingly disadvantaged, however, in the modern struggle to protect our countries from the excesses of western civilization and fulfill our traditional duties, which do not stop at reservation borders. Today Indian people are the poorest people in America, the richest country in the world, and we are dependent upon a federally based economic system.

Tribal leaders must try to develop environmental



In 1978, Native Americans protested in Carlsbad, N.M. plans to truck nuclear wastes through their lands.



programs when they lack healthy tribal economies.

Forced to rely on federal funds to develop programs and pressured by outside forces to consider such economic ventures as hazardous waste dumps, Indian nations are fighting a battle of priorities with insufficient money, technical help or successful models, and little federal or state cooperation. Issues of air and water quality affect each of us.

For Indian nations, these questions assume even greater significance, because tribal cultures, traditions and religions are site-specific and require that water or land remain in a natural, pristine state.

In exchange for millions of acres, the United States promised to protect Indian resources and environment. The Environmental Protection Agency (EPA) is responsible for administering federal programs to protect the U.S. environment. Because the first federal laws were silent on the role of tribal governments, EPA ignored its overall federal trust role and chose to ignore tribes. Despite a promising Indian policy statement issued in 1984, EPA officials continued to interpret statutes in the narrowest and most exclusionary sense, refusing to provide funding or assistance to tribes. In 1986 and 1987, the Safe Drinking Water, Clean Water and Superfund Acts were amended to require EPA recognition of the authority of Indian tribal governments over environmental programs on Indian lands.

Even with the new laws, EPA is properly criticized for moving too slowly to publish regulations and to fully include tribes in various programs. Indian leaders complain that EPA's regional and program offices seem to see Indian programs as optional or discretionary. EPA, with its history of working closely with states, now faces state opposition to sharing financial resources and empowering tribes.

Thus it is tribal governments who confront the difficult task of developing regulatory and enforcement programs to prevent environmental degradation within Indian country and stop further pollution from outside. For some tribal leaders, environmental protection

means the refusal to develop their valuable resources. For too many, poverty and the lack of control over resources has meant development resulting in abandoned mines, radioactive mill tailings, polluted water and erosion from timber cutting and overgrazing.

In recent years, tribes have been approached by energy and hazardous waste companies promising riches and employment in exchange for allowing hazardous waste sites to be located on their land. The Cortina Indian Reservation bordering California operated an asbestos dump until recently. Without environmental personnel to accurately evaluate the potential cultural and environmental impacts of such ventures, it is possible that more projects such as this may occur.

Tribal rights are still challenged by states and organized anti-Indian organizations in their continuing effort to separate Indian people from our lands. In 1989, the Wisconsin delegation to Congress introduced a bill that would abrogate federal treaties with the Chippewa Tribes. The delegation now threatens to stop any federal funding for tribes in their state because the tribes refuse to sell their fishing and hunting rights.

Rather than challenging and trying to limit the practical application of tribal sovereignty, tribal governments need support from federal, state and private entities to run their own programs. Indian peoples also need help from the environmental action community to amend and clarify the Clean Air Act, RCRA and other statutes that have served to exclude tribes from needed funding and technical assistance. Support is also needed to convince EPA to reallocate existing funds immediately to meet the greatest emergency situations and to request realistic appropriations for tribal needs that will soon become urgent. Rather than taking either of these direct-to-tribes steps, EPA persists in funding ivory-tower projects of third parties to think about the problems and barriers, which tribes already have identified. This is not the help Indian country needs.

Gail Chehak (Klamath) is associate director, and Suzan Shown Harjo (Cheyenne and Creek) is president/director of Morning Star Foundation, set up to protect the cultural and traditional rights of American Indian nations and people.

PROFILES: ENVIRONMENTAL ACTION IN MINORITY COMMUNITIES

BY CLAUDE ENGLE

Richard Moore PUERTO RICAN

*Director, SouthWest
Organizing Project*

"Yo, we're an endangered species. We're being killed in the workplace and killed in the community," cries Richard Moore, a Puerto Rican.

"Until the environmental movement is prepared to discuss the question of race and class, there will never be minorities in large numbers involved," declares Moore, executive director of the multi-issue, multi-racial

SouthWest Organizing Project (SWOP) in Albuquerque.

The 41-year-old has been environmentally active for 23 years. He grew up in a ghetto in Harrisburg, Pa., wondering "why are we being forced to live in these conditions?" Later in Albuquerque: Why did the city ignore for 18 years the complaints of poor residents living near the Ponderosa Products sawmill of constant "snow" in the air, contaminated water and noise that cracked their adobes? Why did GTE simply move its plant from Albuquerque to Mexico when 70 Chicano workers—contaminated on the job by highly carcinogenic solvents—sued the company in 1984? A number of the workers died before the suit was settled.

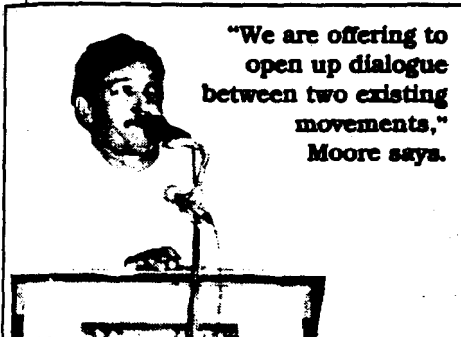
"When you grow up in the ghetto, you just know

there are a lot of things that don't have to be the way they are." Moore doesn't believe it's coincidental that the victims in these cases were poor people of color. That is why he co-founded SWOP in 1980, which organized the sawmill residents into a chorus Ponderosa Products had to spend \$2 million dancing to. It is Moore's hope and vision and belief that the workplace can be safe and beauty restored to the environment one community, one GTE at a time. In 1986, SWOP drafted a "Bill of Rights" enumerating eight rights that citizens have in relation to industry (for example, the right to decide whether an industry can be in their community in the first place).

Minorities don't care? He's heard it before, answers Moore, but it's not true: "We don't see apathy in the

communities. What we encounter is lack of organization." As its name states, SWOP's forte is organizing. Communities have an incredible amount of resources. You don't go in and drain them, but go in and strengthen them.

"We are offering to open up dialogue between two existing movements," Moore says.



Moore spells out SWOP's purpose as "putting poor people in control of the decisions that affect their destinies, future and culture." In 1984, the Chicano community of Mountainview outside Albuquerque discovered that nitroglycerin contaminated a number of private wells. The low-income residents were forced to buy water from the city—as water hook-up charges jumped from \$556 to \$1,350. SWOP organized Mountainview—including a voter registration drive—and succeeded in rolling back the hook-up cost. Now SWOP is working to hold those who polluted the water responsible. The prime suspect? Kirtland Air Force Base.

Moore says environmental groups have often barged into an area without doing their homework. To protect petroglyph rock paintings, one environmental group worked to designate some New Mexico land as a national monument. The area was Atrisco Indian land. "This happens enough to be a problem," says Moore.

"If environmental groups want to involve minorities, there's going to have to be a give and take on both sides," says Moore. Traditional groups and people may have to get involved in new issues. Rapport must be established and purely environmental groups must acknowledge racism and classism.

In September, SWOP held "Inter-Denominational Hearings," during which GTE workers and others testified to leaders from the National and World Councils of Churches about horror stories on the job. Now Moore has a new project: The SouthWest Training Center. It will be a center in Albuquerque "to train Third World people in a multi-issue approach to environmental justice problems." If national environmental groups really want to find qualified minority staff members, says Moore, they should financially support the project.

"We don't want to be a part of the environmental movement," Moore concludes. "We are offering to open up dialogue between the two existing movements, then we can move to greater obstacles."

Jessie DeerInWater

CHEROKEE

Founder, Native Americans for a Clean Environment

She didn't have a summer internship at an environmental group in Washington. She did not take Organic Chemistry or even Evolution and Extinction at Oklahoma's state university. She didn't go to college. But, Jessie DeerInWater did found a grassroots group, Native Americans for a Clean Environment (NACE).

"I consider myself an activist trying to protect my family, my family's family and myself from death and cancer," the 46-year-old Cherokee says.

DeerInWater's town of Vian, Okla. (population 1,500) is home to Sequoyah Fuels, Vian's largest employer and deadliest threat. Sequoyah Fuels, until recently a subsidiary of Kerr McGee, processes uranium ore for bombs and nuclear reactors.

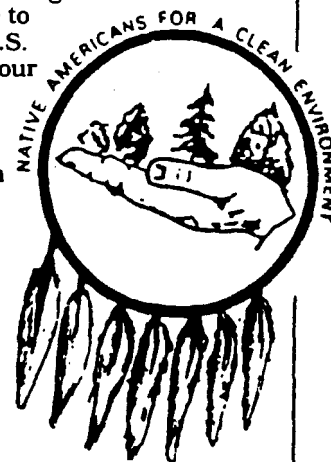
In 1984 DeerInWater discovered that Kerr McGee was discretely planning an injection well at Sequoyah Fuels that would inject radioactive waste deep into the earth between two fault lines. She immediately started spreading the word. Most Vianians couldn't believe such a threat possible. Her fellow Cherokees believed her, and NACE was formed to meet the challenge.

DeerInWater points out that among native Americans "you don't have to overcome the delusion that the U.S. government is watching out for your best interests." NACE is now multi-tribal and multi-racial.

The battle to protect Vian's health and environment has been lopsided: The Sequoyah Fuels plant employs one-sixth of Vian, and the Kerr name is big in Oklahoma. Former U.S. Senator Robert Kerr founded the company. Robert Kerr Jr. chairs the state's Water Resource Department and his son, Robert Kerr 3rd (a self-proclaimed environmentalist), is Lt. Governor.

DeerInWater cites one incident when Kerr McGee spilled tons of toxic waste; the accident report was mysteriously misfiled at Oklahoma's Department of Health. NACE's mail would get lost more often than not. The local newspapers wouldn't print a word against the neighborhood's radioactive provider, and when DeerInWater started spreading the word about Kerr McGee, she was fired from her hairdressing job (only spurring her to become an activist fulltime).

In the dawn of DeerInWater's activist career she recalls, "Everyday I would find out something I never wanted to know." Then again, she says, "Once you see how these people operate, how can you just walk away? How can you stop caring?" DeerInWater recalls how a Kerr McGee official once told her that the area's economically depressed state was considered in sitting the



Sequoyah facility 20 years ago. DeerInWater believes NACE's scrutiny of Kerr McGee safety violations, illegal practices and mismanagement has had some success. She notes that the company decided to sell the Sequoyah Fuels plant to General Atomics in spring 1989. Presently, NACE is embroiled in a campaign to halt the "raffinate" program. Under Kerr McGee and now under General Atomics, Sequoyah Fuels disposes of tons of radioactive and toxic waste by converting it to a fertilizer, or raffinate. A nine-legged frog was found on land where the "fertilizer" was regularly sprayed.

Still active in NACE, DeerInWater is now in college, preparing to go on to study law so she can take her activism to a new level. And she remains optimistic about the future. "Look at any sidewalk or broken street and through the cracks you will see little seedlings of grass coming up. Mother Earth can take care of herself, if we only let her."

Cora Tucker AFRICAN-AMERICAN

When you say environmental, you're tapping into a lot of issues. Everything is connected." Cora Tucker is a modern-day Pied Piper whose entourage of children respond to her call: "Citizens for a Better America. Forward march."

In 1975, the Winns Creek Youth Group outgrew Tucker's basement in the southern Virginia town of Halifax. From 20 kids gathering informally in her home, their numbers had grown to 200. Tucker and the youth group tried to build a recreational center, but county funds were approved, then disapproved when some Halifax denizens discovered the center was to be for Black and white children.

That year, the group changed its name to Citizens for a Better America (CBA) and, under Tucker's inspired auspices, the children started a series of surveys on local hiring, bank lending and business policies. Asking innocent questions of family friends and neighbors yielded an

unpleasant surprise for the racially mixed group—this thing called racism was alive and well in their town. After CBA filed complaints with the feds, Halifax County was ordered to clean up its hiring act or lose federal revenue-sharing funds.

"You have to do something to influence the children in whatever you do," Tucker says. Though Tucker did not go beyond high school, she believes education to be

a salvation. "We ask the children, 'What do you want to do? What do you want to do?'" The next step, says Tucker, is to discuss what must be done to realize that dream. You want a recreational center, build one. You wonder if that's true? Investigate.

Her earliest followers are now adults, and CBA has over 7,000 members in four East Coast cities. "A good organization works on all the issues," says Tucker, who heads the Halifax-based chapter. CBA has worked on voter registration, organizing a union, reforming employment habits and a slew of environmental issues. In the county of 30,000 people, Cora recalls, 8,000 showed up for a public hearing CBA organized to prevent Halifax from becoming a nuclear repository. "We had to ask people to leave." When the mother of seven wanted to illustrate the need for recycling, she asked the children to save all their garbage for one week. This past December at CBA's prompting, Halifax County began a study for a county-wide recycling program.

She is well acquainted with the woes of pesticides and intimate with devotion. Tucker's father was a sharecropper who died when she was three, leaving her mother to raise nine children. "There wasn't a choice" whether to become active, she says. At age six she joined the NAACP. CBA campaigned for a pesticide-user licensing bill that Virginia's Assembly just ratified.

"I consider myself an environmentalist and a few other things, too." She sits on the board of the National Toxics Campaign and the National Health Care Campaign, visits nursing homes and works personally with "children at risk." CBA is now organizing and filming hearings in communities threatened by toxics.

In Halifax, Tucker says, whites and Blacks have worked well together when the issue was education—a tutoring program, for example—or an environmental threat. But the going gets rough, she says, when the issue is race, discrimination, civil rights. "Racism is a big factor in a lot of environmental issues," Tucker says. "Most of the time I go to these traditional environmental meetings, and I'm the only Black person there." These traditional groups "ask me what to do. I tell 'em, then they go and do the opposite thing."

From 20 kids to 7,000 active Citizens for a Better America; there's something here that can't be denied. "It doesn't have anything to do with me personally. It's just the time has come when people want to take control of their lives," Tucker says.

Over the challenges, under the successes and through the threats Tucker's love perseveres. "As difficult as things get, I am always optimistic. I believe God will open that door no matter what we've done."

Francisca Cavazos CHICANO

Director, Maricopa County
Organizing Project

On October 3, 1977, a nightmare came true for the agribusiness executives of Arizona's citrus "sweat-shops": Their predominantly undocumented workforce went on strike for the first time in U.S. history. One of the citrus owners was Barry Goldwater's brother. The heroes of the successful two-year strike

"I go to these traditional environmental meetings, and I'm the only Black person there," says Tucker.



were the Mexican nationals who knew this meant instant deportation: the master mind, the Maricopa County Organizing Project (MCOP).

At the time, Francisca Cavazos was a student volunteer fundraising for the strike. Both of her parents, farmworkers who belonged to the United Farm Workers union, voluntarily supported the strike in any way they could. A lot of support was needed, after all it was Third World proletarian v. Arizona's noblesse.

"We do have a Third World in the United States," says Cavazos. "All you have to do is go in the ghettos, go out into the farmlands and you'll see it." Before the second-generation Chicana was pushed into college by a high-school counselor, she had worked for two years as a farmworker. Tilling in the grape, lettuce, onion and cotton fields, she saw the atrocious conditions that brought on the strike: No sanitary facilities, drinking water laden with carcinogenic pesticides, workers who hadn't been given a raise in 15 years.

In 1987, Cavazos became director of MCOP, which focuses on civil rights, pesticide regulation, safe working conditions, immigration policies and more. "You can't make structural changes in society with a single issue group," argues 32-year-old Cavazos. An ingenious gain from the strike was the creation of Cooperativa Sin Fronteras, whereby employers contribute 20 cents per

hour per worker to support agriculture projects back in the migrant workers' homeland.

Since organizing the Arizona Farm Workers Union for the 1977 strike, MCOP has revamped the state's sanitation laws

and created the Centro Adelante Campesino (a farmworker's service center). The group is training doctors to deal with pesticide poisoning. And a lobby campaign is pushing for state laws obligating farmers to document what, how much, where and when they spray pesticides.

MCOP's artful approach is illustrated by the group's effort to overthrow the grower-dominated state Board of Pesticide Control. Instead of trying to elect a worker representative into a "captured" agency, MCOP launched a two-prong attack. First, MCOP filed a lawsuit claiming the board violated the "equal protection" requirement of the U.S. Constitution by not allowing farmworker membership. Second, they organized a statewide coalition to get an initiative on the ballot calling for the overhaul of Arizona's water quality and pesticide laws. Fear of the initiative by agribusiness and chemical companies brought the governor and state legislature to the bargaining table.

"[People] may not have political power, clout or anything, but they have hope. You must capitalize on that.

"You have to continually keep the community involved in something. When people's minds are active, it empowers them," says Cavazos.

Does Cavazos think she's an environmentalist? "Certainly, yes. [We] work to protect the environment from perpetual poisoning.

"[Chicanos] come from a long history of harmony with nature. We believe in progress, but not at the expense of our most vital resources."

June/July 1990, RE:SOURCES



Tobacco and booze companies have targeted minorities as a "growth" market.

RE:SOURCES

Alberta Tinsley-Williams AFRICAN-AMERICAN

Founder, Coalition Against Billboard Advertising of Alcohol and Tobacco

W

hen Alberta Tinsley-Williams organized a march against a large semi-nude "Wild Irish Rose" billboard next to a church and house for runaway children, she brought national publicity to the issue of targeting of minority neighborhoods for such ads.

It was her second billboard target. Shortly after her 1987 election as a commissioner for Wayne County, Tinsley-Williams organized a letter-writing campaign against a billboard noticed by her four-year-old daughter that told its inner city

audience to "Reach for the Top" and use Tops rolling papers: Tinsley-Williams calls

BY CYNTHIA TAYLOR

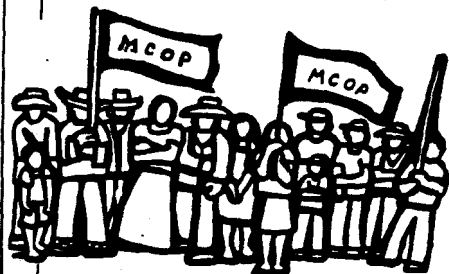
the ad a thinly veiled promotion for rolling marijuana joints (there "are no cowboys left in Detroit," she notes). The offending billboard came down, but the councilwoman was moving on the larger issue.

"The issue is not Black and white," she says. "The issue is the haves vs. the have-nots, because poor people, I don't care what color you are, suffer in this country. All we want is a level playing field for poor children. As far as I'm concerned, billboards are 24-hour pushers of legal drugs." A city planning commission survey instigated by Tinsley-Williams revealed that, in the five poorest zip codes, 55 to 58 percent of billboards advertised alcohol or tobacco. In the five zip codes with the highest incomes, only 34 to 43 percent of billboards touted these products.

"I'm just sick about all the alcohol and tobacco billboards in our community. It makes no sense when people are dying," Tinsley-Williams says. She notes statistics showing that low-income Black and Hispanic populations are most affected by alcohol and tobacco-related illness and death.

To organize the urban community on the issue, Tinsley-Williams founded the Coalition Against Billboard Advertising of Alcohol and Tobacco (CABAAT). Initially concerned about the message, Tinsley-Williams now says the medium—the billboard itself—is an unwarranted intrusion on the urban community.

"The most significant thing about the work of Detroit citizens has been educating people who have been conditioned to accept things as they were. That consciousness gives them real power," she says. "People in Detroit are more attuned to their environment because of the billboard debate."



PERSPECTIVES:

WORDS FOR ENVIRONMENTALISTS,
WHITES & MINORITY COMMUNITIES

Grammar for Ecologists

BY RICHARD GROW

Too much of the writing and speaking found within ecologically oriented media and gatherings reflects an outlook which is quite unecological and white supremacist or, to put it a bit less provocatively, Euro-centric.

What is it in the language and expression of the movement that offends?

Sloppy use of pronouns, especially "we."

Statements that start with "if we are to survive, we must..." are usually describing changes that must be made by modern industrialized, predominantly white,



Environmentalists may want to "preserve" the very land that a Native American or other land-based people needs for economic survival.

culture. Most of these statements would sound absurd if made, for instance, to a South American Indian who for 20 years has been defending his homelands, which we (?) refer to as "rainforests." Is the ecology movement just a bunch of industrialized white people talking to each other? And if it's not, then who is this "we" that keeps showing up in the movement's writings?

White superlatives. Environmental writing is too liberally spiced with superlatives like "the most important thinker of the entire century." Written off in such a statement are all the "thinkers" who don't speak (or haven't been translated into) the author's language, and all the members of cultures who haven't been, or have been unwilling to be, converted (reduced?) to the written word.

It is also notable that, almost without exception, environmental writing describes Native Americans only in the past tense. "Among the nature-based people there was no separation..." Thus are Native Americans reduced to footnotes, cited in support of white theoreticians who ignore the fact that these "primal peoples" are still with us, still vital and have not converted to the new industrial megastate religion.

White people discovered the earth. The age-old presumption of white supremacy shows up in more forms than can be enumerated here, but in general terms is present whenever somebody proclaims yet another "new" discovery by the ecology movement. Expressions such as "new paradigm," "new breed of ecologists," "new perspectives" would be simply embarrassing for their inaccuracy, arrogance and naivete if they weren't so deadly. All of the tendencies described before come together here. All of them liquidate the centuries-old, but continuing, ecological struggles by land-based peoples all over the world.

Excerpted from Raise the Stakes: the Planet Drum Review, Volume 15, Fall 1989.

Protect and Preserve, Or Protect and Survive?

BY LYNDA TAYLOR

Southwest Research and Information Center

If an environmentalist is asked, "What is most important to you beyond your family and friends?" the answer typically is, "Protecting and preserving our environment." If the same question is asked of a Native American, Chicano or other person from a land-based community, the answer is usually, "Water and land, which are the basis of the community, culture and survival."

Those answers might appear to be saying the same thing since they both demonstrate a deep concern and respect for the natural world. There is, however, a philosophical difference that needs exploring. In the eyes of land-based people, the environment is an ecosystem in which people exist as one part of a harmonious whole, deriving food and materials, as needed, for their continued social, cultural and economic existence. In the eyes of environmentalists, the same land may represent an area that should be protected for its own sake, for its beauty, for wildlife habitat or recreation. Neither view is inherently "right" or "wrong," each exists for valid reasons, each is necessary.

In my view, some conflict between environmentalists and land-based people is almost inevitable, though not unreconcilable. That is because both groups are looking at essentially the same lands, i.e. "public lands" maintained by the Forest Service and the Bureau of Land Management, and both groups have had successes in influencing how those lands are used.

Over the last decades, the courts have restored a number of tribes' "sovereignty" rights relating to water, hunting, fishing, religion, taxation and, in particular, land. When an environmental group pushes for a wilderness area or park, the land in question may well be the very land claimed by an Indian tribe as its ancestral

home, or land the tribe or community uses for basic needs (grazing, fishing, gathering fuelwood, etc.) or depends upon economically (for logging, mining, etc.).

One example involving the Inuit tribe of Canada is worth noting here. Animal rights and environmental groups recently waged a successful campaign to ban the importation into Great Britain of baby seal pelts from Canada. The ban, aimed primarily at Russians, was designed to prevent the brutal killing of young seals. After the ban, the entire market for the fur dried up, devastating the economies of the Inuit communities that depended on the seal trade.

Says an Inuit leader: "Unemployment, drug and alcohol abuse, and teen suicides all shot way up in the wake of the ban. We can't grow corn up here. Seals are our life."

Observes a leader of the animal rights groups that coordinated the ban: "The social and economic status of Canadian natives is appalling. The answer is education. Give them the choice to leave the bush and be assimilated into the economy."

Says the Inuit, "We have a word for assimilation: It's genocide."

Excerpted from the July-September 1988 issue of The Workbook, an environment-social change quarterly published by Southwest Research and Information Center.

Getting Beyond "C-ERA"

BY JAYDEE HANSON
United Methodist Church

"What's this 'C-ERA' Club? I don't think we have them in my city." It was the third day of a national church leadership training event focusing on the church's response to communities facing toxic threats. The speaker, a Black intellectual and activist, was concerned about the problems of toxic waste in poor communities, but had never seen or heard of the Sierra Club. Indeed, neither the Sierra Club nor any of the other major environmental organizations were active in the politics of his community. After hearing of the work of the major environmental organizations, the minority community organizers present at the church conference were impressed with that work's scope, but wondered why they had not been sought out more by these large groups. Why did it seem that the environmental groups had so little appreciation of the environmental activist potential of the minority community?

The major environmental groups have recently begun efforts at broadening their membership and staff base, but these efforts are too modest. If the national environmental groups were Fortune 500 companies, the churches would be requesting meetings with their CEOs asking them to explain why their recruitment of minorities and even women falls so short.

The task will not be easy. Voluntary associations like the "Gang of Ten" environmental groups rely on informal networks for recruiting both members and staff. Moreover, these groups were historically, not just white, but groups of upper class professionals. In the language of the church, these folks aren't people you would send in to evangelize in a poor inner city neighborhood, even

How the Congressional Black Caucus Voted

From the League of Conservation Voters

		LCV '85/'86	LCV '87/'88	LCV average
William Clay	Mo.-1st	91	81	86
Cardiss Collins	Ill.-7th	82	81	82
John Conyers	Mich.-1st	97	88	93
George Crockett	Mich.-13th	69	75	72
Ronald Dellums	Calif.-8th	95	94	95
Julian Dixon	Calif.-28th	66	81	74
Mervyn Dymally	Calif.-31st	72	63	68
Mike Espy	Miss.-2nd	na	50	50
Floyd Flake	N.Y.-6th	na	88	88
Harold Ford	Tenn.-9th	50	72	61
William Gray	Pa.-2nd	80	69	75
Augustus Hawkins	Calif.-29th	53	75	64
Charles Hayes	Ill.-1st	71	88	80
John Lewis	Ga.-5th	na	75	75
Donald Payne	N.J.-10th	na	na	na
Kwesi Mfume	Md.-7th	na	100	100
Major Owens	N.Y.-12th	77	81	79
Charles Rangel	N.Y.-16th	74	94	84
Gus Savage	Ill.-2nd	79	88	84
Louis Stokes	Ohio-21st	74	81	78
Edolphus Towns	N.Y.-11th	69	63	66
Alan Wheat	Mo.-5th	79	81	80
Black Caucus Average		75	79	78
Congress Average		50	54	52

na = not in office

if they wanted to go there.

Thousands of small local environmental groups have sprung up to work on local environmental problems. Feeling that the major national groups either don't care about their problems, or are too busy compromising with Washington politicians, these groups often rely on networks developed among themselves to share information and develop strategies. Farmers, housewives, angry academics and minority activists are found on these organizations' boards. In short, the environmental movement as a whole has grown faster and much broader than the major environmental groups.

Despite the rapid growth of alternative voices defending the human and natural environment, the major environmental groups should be expected to use their resources to bring more of the community-based activist groups to the political table. Gone are the days when a few lobbyists from a few well-funded organizations can cut deals to save the environment. That approach may work to save a wilderness area, but it isn't working on clean air, toxics, garbage and a host of other problems that confront people in their daily lives. Failure to mobilize greater numbers of persons from all walks of life, all races and all classes will mean the environmental consensus we get out of Washington will continue to be too little, too late.

Jaydee Hanson directs the Department of Environmental Justice and Survival, General Board of Church and Society, the United Methodist Church in Washington, D.C.



Embracing Diversity

BY MARGO ADAIR
AND SHARON HOWELL
Tools for Change

Those of us who identify as environmentalists know that diversity is vital to nature's well-being. Yet we find ourselves reflecting only a narrow segment of society—the white, middle class. We need to ask ourselves why.

This is particularly perplexing when it is the least powerful among us most directly affected by environmental crisis. Native Americans' land is desecrated for uranium and coal mining; farm workers are poisoned as they care for our food; neighborhoods in our inner

POWER PATTERNS

from "Embracing Diversity"

An Individual From The...

Dominant Group

Defines parameters, judges what is appropriate, patronizes.

Assumes responsibility for keeping system on course. Acts unilaterally.

Presumptuous, does not listen, interrupts, raises voice, bullies, becomes violent.

Initiates, manages, plans, projects.

Sees problems and situations in personal terms.

Often needs to verbalize feelings.

Thinks own view of reality is only one. Disagreements result from lack of information, misunderstandings, personalities.

Turns to others' culture to enrich humanity while invalidating it by calling it exotic.

Oppressed Group

Feels inappropriate, awkward, doesn't trust own perception, looks to expert for definition.

Blames self for not having capacity to change situation.

Finds it difficult to speak up, timid, tries to please. Holds back anger, resentment, rage.

Lacks initiative, responds, deals, copes, survives.

Sees problems in social context, results of system, "them."

Sees no point in talking about feelings.

Always aware of at least two views of reality, their own and that of the dominant group.

Uses humor, music, poetry, etc. to influence situation and celebrate collective experience. Sees these forms as being stolen.

The monoculture is upheld by patterns that cause us to duplicate the very roles we are trying to transform. These patterns permeate our every interaction from the intimate to the occasional. It is these patterns that keep us separate from each other, unable to appreciate what each of us has to contribute. Alliance building is close to impossible.

The behavior we aspire to, what is accepted as normal, is that of the dominators. But our society's hierarchical and competitive nature gives everyone plenty of opportunities to experience both sides.

Power exists as a relationship. Altering either side of this dynamic forces change on the other. Changing our own tendencies toward domination or submission cultivates a context of trust and cooperation that includes everyone's contribution.

cities are used for toxic dumps and giant incinerators.

The common solution is "outreach." This usually means getting people different from ourselves to work with us. We are oblivious to the fact that we have defined the problems and the resulting agenda without any awareness that the agenda itself would be altered if other perspectives were included from the beginning.

Then, to create a comfortable atmosphere in which everyone feels included, we minimize all differences. We say "we're all people." But this backfires. People justly feel their experiences are then invisible. There is no reason to believe these organizing efforts will change the painful and dehumanizing aspects of their own life and the lives of those with whom they identify. Instead of our diversity making us strong, we have only created one more arena in which we are alienated.

Sustaining work together across our differences will be uncomfortable because we are continually learning unfamiliar ways of being. There is no quick fix to this situation. The accompanying box shows some of the "power patterns" that we try to reveal and alter in workshops on race and sexism.

Creating relationships of trust, in which everyone's contributions are honored, means breaking some of the most powerful taboos in our culture. It means consciously acknowledging the real power differences that exist among us. Those of us with privilege have the responsibility of naming the price others have had to pay for the privilege we enjoy. For example, when we state as a simple fact that we are living on stolen land, Native American struggles are no longer invisible. The death-courting monoculture breaks down and the life-sustaining customs from all our diverse groups weave the fabric of a resilient culture capable of protecting the sanctity of life.

Excerpted from an essay in the upcoming *Earth Island Institute* book, *A Call to Action: Handbook for Peace, Justice and Ecology*, to be published by Sierra Club Books in spring 1990.

A Lily-White Achilles Heel

BY PAT BRYANT

Gulf Coast Tenant Leadership Development Project

The Achilles heel of the environmental movement in the United States is its whiteness. Especially in the Deep South, it is locked up in traditions of liberal do-gooding and racial inequities that make it very difficult to build a mass-based movement that has the power to change the conditions of our poisoning. The key to building a multi-racial drive against toxic pollution is to—first—have people of color talking and organizing amongst ourselves. Very important work in this direction is underway in southern Louisiana and along the gulf coast of Mississippi.

A leader in this movement is Janice Dickerson. Janice is African-American. She grew up in Revilletown, a community founded by ex-slaves after the civil war across the Mississippi River from Baton Rouge. Janice doesn't live in Revilletown anymore. The entire



Blackbirds fly from boarded-up Reville town, contaminated by the Georgia Gulf plant at rear.

community was poisoned by vinyl chloride emissions loosed from Georgia Gulf's manufacture of plastics. Georgia Gulf bought their homes and resettled them.

At a candlelight vigil last year in which Black and white environmentalists mourned the death of Reville town, Janice said racism and corporate greed were at the heart of the poisoning of Reville town.

"I really think white politicians thought years ago that the ill effects of Georgia Gulf would be contained in Reville town," Janice said then. Janice's concerns are supported by the 1987 United Church of Christ study that cites race as the most important variable in the location of poisonous sites.

Les Ann Kirkland—a progressive white environmentalist in the area—agrees that "racism is rampant" and discusses it if somebody "brings it up." But she worries that if color is made a central issue, environmentalists will not be able to take on a broader organizing agenda. And she does not agree that race is the most important variable in the siting of toxic facilities.

It is very easy to postpone dealing with questions of racism until later. That seems to be the strategy of leaders of major environmental organizations. These groups cannot reach out to African-Americans and people of color as long as they are nearly all white.

The understanding of Janice and other African-Americans that the environmental movement is a critical place to fight against racism is a bright light for the future. Janice is involved in a two-state organizing effort through the Gulf Coast Tenant Leadership Development Project, a predominantly African-American organization. The primary focus of the project is to encourage Blacks in schools, churches and communities to organize around environmental concerns and to provide those Blacks with the organizational support to nurture their development as environmentalists.

Weekly meetings are held in Baton Rouge in which Black activists and Black environmentalists openly discuss inter-relationships between community poisoning, racism, environmentalism, housing and other issues. Staff from New Orleans, Baton Rouge and Gulfport counsel members and visit leaders in their towns.

One of the tenant leaders' first efforts is to confront major industrial powers over the poisoning of Monte Santo Bayou. The bayou meanders from the all-Black Scotlandville section of Baton Rouge, through many

communities, past Exxon's refinery and chemical plants, to empty like a sewer into the already poisoned Mississippi River. When the river is high in the spring, a backwash reverses the poisons upstream past a public housing complex called Monte Santo Village.

Crawfishing is a favorite springtime activity here. Black children from the housing projects wade and swim in the bayou too. But Sharon Lewis wants these activities curtailed until she is convinced the bayou is safe. Sharon is the mother of three children and vice-president of the Monte Santo Tenants Organization. Since Sharon has been attending the Black envi-

ronmental meetings, she's gotten strength and support from Janice and others. And she and her community, at least for now, have Exxon's tiger by the tail.

Both Sharon and Janice know their effort to clean up the bayou will take years of struggle and a strong movement that has the power to join whites and Blacks under the leadership of Black communities that suffer most. They know building that movement will take time. They believe their work has realized significant accomplishments that can be models for multi-racial organizing around environmental issues elsewhere.

Pat Bryant is director of the Gulf Coast Tenant Leadership Development Project. In 1988, he directed the Louisiana Toxics Project, which coordinated the Great Louisiana Toxics March. Another version of this article appeared in *Social Policy*.

Living Up To Responsibilities

BY THOMAS ATKINS
Environmental Action

I address my words to African-Americans. At a time in our history when government has seemed to abandon the struggle for full equality, when minority and poor families are being destroyed by drugs and structural faults in the American economy, when a life-threatening disease plagues our people, and when our capacity to act is threatened by environmental degradation in our communities, now more than ever we need to assess our priorities.

Many of my colleagues in the environmental community, however, are still holding on to myths that separate and alienate humankind. As a minority, this reality presents a cumbersome burden—a constant struggle of educating and sensitizing my white colleagues about the need to promote dialogue on environmental issues among diverse constituencies and helping my colleagues to understand how environmental sanity cannot be achieved without the full participation of all people.

The environmental movement is still young. And it

still has much to learn about building diversity in its ranks. But ignorance is not an excuse, especially for environmental "experts." And I didn't come to work for a national environmental group just to educate white folks. I feel my primary responsibility is to learn as much as I can about environmental problems—and solutions—so that I can integrate this knowledge into minority communities' campaigns for justice.

Whether the concern is toxics, pesticide poisonings, groundwater contamination or nuclear waste, minorities and the poor are affected disproportionately by environmental pollution. We cannot—and should not—look to some white knight to come and rescue us.

Minority communities have problems; we must address them. We must make environmental pollution a priority on our social justice agenda, along with housing, jobs, the military buildup, drugs and illiteracy.

For example, the South is a toxic dumping ground. The South is also home to the highest proportion of Black elected officials—on the state, local and national level—and the bastion of Black higher education. I look to all our leaders, whether in the political, academic, media or industrial realm, to inspire us and make environmental concerns a part of our life.

Yes, "environmentalists" must fulfill their responsibility to combat environmental problems wherever they strike—including across racial, ethnic and economic barriers. However, minority communities must continue to hold our elected officials accountable.

In grassroots struggles for environmental justice across the U.S., we are building a new generation of leaders, just as we did through the civil rights movement. A few are profiled in this section; scores of others are not. From these new leaders come strength and vitality. And—even though they may not call themselves environmentalists—they also provide the greatest hope for the future of the environmental movement.

RESOURCES: MINORITIES AND THE ENVIRONMENT

Local Groups

The following are just a few of the many local and regional groups that include environmental issues on their generally broad agendas.

Alabamians for a Clean Environment. 491 Country Club Road, York, Ala. 36925. (205) 392-7443. Kaye Kiker.

Focuses on Emelle hazardous waste dump.
Center for Community Action. PO Box 723, Lumberton, N.C. 28359. (919) 739-7851. Richard Regan.

Targets GSX hazardous waste facility in Warren County.

Citizens for a Better America. PO Box 356, Halifax, Va. 24558. (804) 476-7757. Cora Tucker.

See profile, page 24.

Commission on Religion in Appalachia (CORA). PO Box 10867, Knoxville, Tenn. 37939-0867. (615) 584-6133. Tena Willesma.

Ecumenical coalition of 40+ groups in 13 states. Works to empower communities.

Gulf Coast Tenants Leadership Development Project. PO Box 56101, New Orleans, La. 70156. (504) 949-4919. Pat Bryant. Baton Rouge office, (504) 387-2305. Sharon Lewis.

See article, page 28.

Highlander Center. Rt 3, Box 370, New Market, Tenn. 37820. (615) 933-3443. Paul DeLeon.

Offers research internships and workshops for grassroots activists.

Maricopa County Organizing Project. 5040 S. Central Ave. C-1, Phoenix, Ariz. 85040. (602) 268-6099. Francisca Cavazos.

See profile, page 24.

Native Americans for a Clean Environment (NACE). PO Box 1671, Tahlequah, Okla. 74465. (918) 458-4322. Vickie McCullough.

See profile, page 23.

Puerco Valley Navajo Clean Water Association. PO Box 155, Fort Wingate, N.M. 87316. (602) 688-9928. Rita Begay.

Focuses on the massive uranium spill in 1979 at Untied Nuclear.

SouthWest Organizing Project (SWOP). 1114 7th Street N.W., Albuquerque, N.M. 87102. (505) 247-8832. Richard Moore.

See profile, page 22.

Tools for Change. PO Box 14141, San

Francisco, Calif. 94114. (415) 861-6838. Margo Adair.

An institute offering racism workshops, and education, mediation and consultation services.

National Groups

Citizens Clearinghouse for Hazardous Waste. PO Box 926, Arlington, Va. 22216. (703) 276-7070. Will Collette.

A national organization devoted to helping grassroots groups fight toxics and waste.

Eco-Justice Working Group of the National Council of Churches. 474 Riverside Drive, New York, N.Y. 10115. (212) 870-2483. Dean Kelly.

Coalition of grassroots justice and church groups focusing on environmental issues.

Migrant Legal Action Center. 2001 S Street N.W., Suite 310, Washington, D.C. 20009. (202) 462-7744. Shelley Davis.

Works on farmworker health and safety issues, pesticide regulation and compensation.

Human Environment Center. 1001 Connecticut Ave. N.W., Suite 827, Washington, D.C. 20036. (202) 331-8387. Andrew Moore.

Sponsors minority internship and conservation corps programs.

National Toxics Campaign. 37 Temple Place, Boston, Mass. 02111. (617) 482-1477.

Helps communities and citizens fight toxics.

Scenic America. 216 7th Street S.E., Wash. D.C. 20003. (202) 546-1100. Joan Moody.

Protects scenic landscapes. Includes focus on billboards in minority communities.

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Marketing Booze to Blacks. Available from the Center for Science in the Public Interest (CSPI). 1501 16th Street N.W., Washington, D.C. (202) 332-9110. \$4.95.

Report on how alcohol companies are targeting the Black community. Another report looks at "Marketing Disease to Hispanics."

Dumping in Dixie: Race, Class and Environmental Quality. By Robert D. Bullard. To be published in spring 1990 by Westview Press, 5500 Central Ave., Boulder, Colo. 80301. (303) 444-3541. \$37.95.

Sociological study of the emergence of environmental activism in Black communities.

Richmond at Risk: Community Demo-

graphics and Toxic Hazards from Industrial Polluters. Citizens for a Better Environment. 942 Market Street, Suite 505, San Francisco, Calif. 94102. (415) 788-0690. 1989.

Detailed study of the toxic hazards in one heavily industrialized city.

Toxics & Minority Communities. Center for Third World Organizing. 3861 Martin Luther King Jr. Way, Oakland, Calif. 94609. (415) 654-9601. 1986.

A Q&A summary of dumping in minority communities, uranium mining, pesticides, lead. Includes resources and contacts.

Toxic Waste and Race in the United States. Produced by the Commission for Racial Justice. United Church of Christ. 105 Madison Ave. New York, N.Y. 10016. (212) 683-5656. Charles Lee.

First nation-wide report documenting the disproportionate presence of hazardous waste sites in ethnic communities.

Pesticide Exposure and Health: A Study of Washington Farmworkers. Issued by Evergreen Legal Services. Farm Worker Division. 120 Sunnyside Ave., PO Box 430, Granger, Wash. 98932. Michelle Mentzer. (509) 854-1488. 1988.

The first study of farmworkers' exposure to pesticides in Washington State.

Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities. U.S. General Accounting Office.

Key 1983 report on demographics at the four commercial landfills in southeastern states.

"The Workbook." Southwest Research Information Center. PO Box 4524, Albuquerque, N.M. 87106. (505) 262-1882. \$12/year.

Quarterly journal with indexed sources of information about environmental, social and consumer problems. Regularly covers Native American and minority issues.

"The Egg: A Journal of Eco-Justice." Write CRESP, Anabel Taylor Hall, Cornell Univ., Ithaca, N.Y. 14853. (607) 255-4225.

Quarterly journal of the Eco-Justice Working Group and Cornell's Center for Religion, Ethics and Social Policy.

"BEYOND WHITE ENVIRONMENTALISM"

1 - 9	\$2.50 each
10 - 49	\$1.75 each
50 -	\$1.00 each

APPENDIX D

Status of Women and Minorities in Supervisory Positions in EPA

***Status of Women and Minorities in Supervisory Positions in EPA
(as of 11/88)***

		Minorities		Non-minorities		TOTAL
		Women	Men	Women	Men	
GM-13	#	46	55	162	499	762
	%	6.0	7.2	21.3	65.5	100.0
GM-14	#	30	60	211	763	1064
	%	2.8	5.7	19.8	71.7	100.0
GM-15	#	14	32	128	537	713
	%	2.0	4.5	17.9	75.6	100.0
SES	#	1	10	32	202	244
	%		4.1	13.1	82.8	100.0
Across Levels	#	91	157	533	2003	2784
	%	3.2	5.6	19.2	72.0	100.0
By Race	#	247		2536		2783
	%	8.9		91.1		100.0
By Sex	#	Total Male 2160		Total Female 623		2793
	%	77.6		22.4		100.0

Women and minorities currently fill 28% of GM and SES positions

APPENDIX E

Contact List

CONTACT LIST

GOVERNMENT:

Department of Agriculture
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Washington, DC 20090
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Natural Resource Management
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20 Massachusetts Ave., SW
Washington, DC 20314
Darrell Lewis
Tel: (202) 272-0247

Army Corps of Engineers
Ecomeet Program (Pittsburgh)
Pete Colangelo
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Bureau of Indian Affairs
Education Office
Tel: (202) 208-6175

California Department of Water Resources
1416 Ninth St.
PO Box 94236
Sacramento, CA 94236
Tel: (916) 445-8228

Commission on Civil Rights
1121 Vermont Ave., NW
Washington, DC 20425
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Department of Defense
~~Environmental Education Office~~
The Pentagon
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Education and Training Committee
National Advisory Council for
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Regina Langton
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Office of External Affairs
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Take Pride In America
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National Institute of Health
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Bethesda, MD 20894
Tel: (301) 496-4000

Public Health Service

5600 Fishers Lane
Rockville, MD 20857
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COMMUNITY ORGANIZATIONS**Center for Community Action**

PO Box 723
Lumberton, NC 28359
Stony Locklear
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Center for Environment, Commerce, and Energy

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Washington, DC 20003
Norris McDonald
Tel: (202) 543-3939

Center for Third World Organizing

Francis Calpotura
Tel: (415) 601-0158

Christadora, Inc.

666 Broadway - Suite 515
New York, NY 10012
Dr. Robert Finkelstein
Executive Director
Tel: (212) 529-6868

Citizens Clearinghouse for Hazardous Waste

PO Box 926
Arlington, VA 22216
Will Colette
Tel: (703) 276-7070

Commission on Religion in Appalachia

PO Box 10867
Knoxville, TN 37939-0867
Tena Willemsma
Tel: (703) 835-8219

Gulf Coast Tenants Leadership Association

PO Box 56101
New Orleans, LA 70156
Pat Bryant
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Migrant Legal Action Center

2001 S Street, NW - Suite 310
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Native Americans for a Clean Environment

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Vicki McCullough
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Southwest Organizing Project

1114 7th St., NW
Albuquerque, NM 87102
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United Methodist Church of Christ

Environmental Justice
100 Maryland Ave., NE
Washington, DC 20002
Jaydee Hanson,
Director
Tel: (202) 488-5601

or

Maria Paz Artaza
Assistant Director
Tel: (202) 488-5649

ENVIRONMENTAL ADVOCACY GROUPS**Alliance for Environmental Education**

10751 Ambassador Drive, Suite 201
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Environmental Action

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Environmental Consortium for Minority Outreach

Jerry Stover
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Morningstar Foundation

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Washington, DC 20003
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National Association of African-American

Environmentalists
Suleman Al-Mahdi
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National Toxics Campaign

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National Wildlife Federation

Cool It! Program
Yewande Dada
Cultural Diversity Coordinator
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Ocean Alliance

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San Francisco, CA 94123
Margaret Elliot
Tel: (415) 441-5970

Worldwatch Institute

1776 Massachusetts Ave., NW
Washington, DC 20036
Tel: (202) 557-9859

MUSEUMS/EDUCATIONAL INSTITUTIONS

Association of Science Technology Centers

Bonnie Dorn
Tel: (202) 371-1171

California Museum of Science and Industry

Ann Muscat
Tel: (213) 744-7532

National Science Foundation

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Washington, DC
Ed Brian
Environmental Systems
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Roosevelt Calbert

Minority Research
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Lola Rodgers

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New York Academy of Science

Talbert Spence
Director of Educational Programs
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The Oakland Museum

1000 Oak St.
Oakland, CA 94607

Smithsonian Institution

Office of Environmental Awareness
Judith Gradwohl

Director

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Vanderbilt University

Student Environmental Health
Program (STEP)

Hubert Dixon

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CHAPTER 2

The Report on Environmental Education for Urban Poor and Minority Populations

by:

Charles Gaboriau, Donna Roesing, David Small
Worcester Polytechnic Institute

EXECUTIVE SUMMARY:

Historically, environmental education has been directed toward studying nature, primarily in rural areas. However, because of the increasing number of complex environmental issues and the growing concern for protecting the environment, the field of environmental education has broadened its scope. The American public has come to recognize the importance of education in order to enhance environmental awareness. Nevertheless, when compared to general environmental education efforts, there appears to be little effort specifically targeted to urban poor and minorities, now a large percentage of our country's population.

Urban poor and minority groups are frequently uninformed about the environmental risks in their area, as well as of their role in the environmental movement. Because many inner city residents may be faced with the immediate concerns of poverty and unemployment, they may be diverted from the necessity to protect their environment. The National Advisory Council on Environmental Policy and Technology (NACEPT) Committee on Education and Training has recognized the need to appropriately address these groups. The Committee requested this project group to assess what is being done nationally in environmental education and training efforts which are targeted to disadvantaged and minority urban populations. The results of this project will assist the NACEPT Environmental Education and Training Committee to develop recommendations for the Administrator of the EPA as to how the EPA can positively influence and establish networks for existing efforts in this area.

In order to provide the Committee with an assessment of urban environmental education efforts, this project defined two objectives: to examine a sample of environmental education programs targeted to urban poor and minorities; and to make recommendations as to what role the Committee should play in assisting these efforts. These objectives were accomplished through a combination of written surveys and phone interviews. Both methods were used to gather information concerning urban environmental education programs initiated by various organizations and departments throughout the United States.

The results of this project are in the form of currently existing programs that are considered effective and that can possibly serve as model programs in other regions of the country. In addition, the following conclusions have been developed concerning urban environmental education:

- There is an apparent need for more environmental education targeted to urban poor and minority populations.
- There appears to be a limited amount of federal and state activity directed toward urban environmental education.
- The results of this report indicate that grassroots organizations need adequate funding in order to be truly effective.
- Much of the work done by grassroots organizations seems to go without notice by governmental groups, environmental organizations, as well as the general public.
- There appears to be a need for more communication between grassroots organizations and the EPA.
- The findings of this study support the need for more minority students to become educated in science and engineering fields.

Also, through research and responses collected from phone interviews, the following recommendations were made to the NACEPT Environmental Education and Training Committee:

- The EPA could encourage each of its regional offices to conduct research studies on urban environmental education.

- The EPA regional offices could improve their information distribution methods to better assist organizations involved in urban environmental education.
- The EPA could serve as a role model to others by employing minorities.
- The EPA could support and become more directly involved with urban environmental education programs.
- The EPA could create a networking system through which organizations sponsoring urban environmental education programs can communicate.
- The EPA could support or participate in more environmental initiatives with two-year colleges in which there are high concentration of minorities.
- The EPA could advocate and produce materials that are easily understood by all minorities and urban poor on all levels and in all necessary languages.
- The EPA could enhance its public relations in order to appropriately address urban audiences.

INTRODUCTION

In the United States, there is developing concern about the lack of adequate environmental education directed toward urban poor and minority communities. Increased awareness of environmental degradation in urban areas has caused both grassroots organizations and environmentalists to increase efforts in this direction. The objective of this project is to assess national environmental education and training efforts targeted to disadvantaged and minority urban populations. After such an assessment has been made, the report will suggest ways that the United States Environmental Protection Agency can assist in urban environmental education and training on a national level.

Environmental education is the learning process that deals with people's relationship with their surroundings and includes such issues as pollution, conservation, and regional planning in the total human environment (Minton, 1980). During the past few decades, the field of environmental education has grown. The American public has come to recognize that our survival as a planet depends on the environmental responsibility of citizens. Environmental issues are also becoming more complex. Crises are occurring at an alarming rate, pressures on the ecosystem are increasing, and competition for natural and financial resources is becoming more intense. Although there have been many notable environmental success stories that have addressed these issues in both the public and private sectors, such programs geared for urban and minority populations have been the exception rather than the rule (Cooper & Smith, 1989).

Research has shown several reasons for the apparent low priority given to environmental education in the urban areas of the United States. Limited funds, limited community support, and a lack of sufficiently trained educators in the field of environmental education are just a few. Yet, it seems the major reason is that historically the design and approach of most environmental education programs has been inappropriate for urban minority groups.

Traditionally, concern for our environment has been reserved to the middle and upper classes. These groups not only constitute a low percentage of the urban population, but have different environmental concerns than low-income minorities. Congestion, traffic, noise, air pollution, lead paint, solid waste, and asbestos are some of the difficulties that residents in urban areas confront on a daily basis. While the majority of this population tends to consist of low income families, these families may not become involved in protecting or improving their environment due to the exigencies poverty and unemployment (Cooper & Smith, 1989).

It would be ideal to have environmental education that reaches every cultural, ethnic, and socioeconomic level. To achieve this ideal, environmental education programs must be easily understandable and must stimulate interest in their treatment of environmental issues. Urban communities must be made to realize the connection between local environmental concerns and global environmental issues. Environmental education and training programs must inform residents about the specific environmental risks in their particular community, as well as suggest actions that can be taken by community residents to change their immediate surroundings (Verrett, 1990).

The National Advisory Council on Environmental Policy and Technology (NACEPT) Committee on Education and Training realizes that there is a need for more information about the programs that are directed at addressing cultural differences and urban environmental needs. As its primary focus, this report will examine successful strategies in urban environmental education and training and make recommendations to the Committee as to what role the EPA should play in facilitating these efforts.

In conducting this study, we chose five urban communities in the United States as target groups. These target cities-- a community in the Northeast (Boston), one in the upper Midwest (Chicago), another in the Southwest (Austin), and still another in the West (Sacramento)-- insured a cultural cross-section of the country, each with a unique environmental concern. We examined the environmental programs and strategies for urban poor and minority groups in these communities through a combination of written surveys and phone interviews. We also contacted relevant organizations and departments throughout the country to collect additional information about possible existing programs directed at urban poor and minority populations at a grassroots level.

In order to accomplish the project's main goal of examining urban environmental education and training efforts and recommending ways for the Administrator of the EPA to assist these existing programs, we took the following course of action. By evaluating a sample of urban environmental education programs that are sponsored by various organizations, we were able to determine which programs were effective by how well they addressed the specific needs of a particular community. In addition, we determined which programs were transferrable and could be initiated in different areas of the country. Our results consist of a list of these successful programs that the EPA may use as "models" in its effort to form a national network of environmental education and training programs for minority and disadvantaged urban populations.

METHODOLOGY

The purpose of this project is to examine the environmental education efforts in the United States that are directed at urban poor and minority groups. Also, this report will provide recommendations for their consideration to the Education and Training Committee of the National Advisory Council on Environmental Policy and Technology (NACEPT) concerning the potential role of the EPA in urban environmental education and training on a national level. Our project group mailed written surveys and conducted phone interviews to accomplish these objectives. This specific methodology was chosen because it allowed our group to gather information about urban environmental education programs that could not be obtained through research due to the very limited amount of literature on this relatively new topic. Also, surveys could provide an effective assessment of what is being done nationally in environmental education and training throughout the country. In general, written surveys and phone interviews provided the most appropriate means of collecting information from the vast area of the country that we intended to study.

~~We initially~~ focused our study on five urban communities located in different regions of the United States-- the Northeast, the South, the upper Midwest, the Southwest, and the West. These target cities were Boston, Atlanta, Chicago, Austin, and Sacramento-- because each of these cities were found to have a diverse minority population and serious environmental concerns (See Appendix B). However, to represent a more accurate cross-section of ethnic and geographic diversity (Verrett, 1990), we later expanded our research into a national study which would include several other urban areas across the country.

In preparation for our work in Washington, D.C., we sent written surveys to various school departments and organizations in the urban areas of our original focus. Before this step, we developed our survey sample by using environmental education directories provided by the Environmental Protection Agency. After accomplishing this task, we called those on the "mailing list" to discover if these contacts were still involved with environmental education and also to insure that these people would be willing to respond to our survey.

We prepared two forms of evaluative surveys, one for organizations to determine if environmental education is a part of their efforts, and the other for school departments to determine if environmental education is included as part of their curriculum. Both types were created to obtain direct and open-ended responses. The purpose of the survey for organizations was to collect general information concerning environmental education and training programs. For example, the questions in the surveys were designed to elicit responses concerning the issues that these programs addressed and the specific groups, if any, that these programs targeted. The surveys for school departments used questions that examined the way in which schools were teaching environmental education, the materials that were included in their curriculum, and their efforts, if any, that addressed urban poor and minority populations. To insure that these questions were clear and easily understood, we pretested our surveys in schools and organizations in our communities. Because the basic format of our surveys was designed to obtain general information, we conducted follow-up phone interviews to those organizations and school departments that were providing some form of urban environmental education. The phone interviews provided detailed descriptions of the programs and enabled us to determine if they were appropriate for urban audiences.

We also contacted relevant organizations throughout the United States to collect additional information about programs directed at disadvantaged and minority urban populations. Since this was done in Washington, D.C., we did not have time to send surveys out to these organizations. For this reason, we used unstructured phone interviews for this part of the study. Instead of following a specific set of questions, we chose to interact with these organizations in a more personal manner. This step was important because most of these groups are at a grassroots level and are sometimes hesitant about talking to the EPA, especially if they feel that they are being investigated by the federal government. From these phone interviews, we not only discovered a sample of environmental education efforts that are being directed at urban populations across the country, but also obtained suggestions of ways the EPA could assist these efforts. Also, whenever possible, we requested written material from these organizations and departments that could further explain their environmental education programs.

Both the written surveys and the phone interviews were effective tools in collecting data about the existing environmental education and training programs that are directed at minority and urban communities. The written surveys provided information about environmental education primarily at a federal government or state level. In contrast, the information gathered from phone interviews involved programs at a grassroots level. In order to assess what is being done nationally in urban environmental education, we evaluated this sample of programs that our written surveys and phone interviews discovered.

We evaluated environmental education and training programs on the basis of their effectiveness in providing education for urban poor and minority groups. The written surveys were designed to make these evaluations easily. A specific question on the survey determined whether the programs sponsored by organizations or the material used in schools are directed at urban populations [Refer to Appendix C (organization survey) and Appendix D (school survey)]. The efforts that address different cultural and socioeconomic backgrounds suited the needs of our project and are, therefore, considered appropriate for urban population groups.

However, if programs are not specifically targeted to disadvantaged and minority urban populations, they could still be considered appropriate for the sample we were studying. A question on our survey determined what issues these organizations address in their programs. Programs that address such issues as pollution, lead paint, or solid waste

could be effective in educating people who live in urban areas because these are the environmental problems that inner city dwellers may confront everyday. Other survey questions looked into the affordability of educational materials and the languages in which these materials are offered. Since a majority of the urban population are low income families, programs that provide free or inexpensive environmental education materials are more appropriate for urban residents. Also, materials written in different languages will better inform minority groups in communities in which that language is spoken. We concluded that a program that addresses environmental concerns of urban areas and/or provides affordable material and/or offers material in different languages is considered to be appropriate in educating urban poor and minority groups. Such programs are then evaluated for their effectiveness.

We evaluated the programs we discovered through our written surveys, as well as through our phone interviews in the following way. If a program was determined appropriate for urban populations by the above standards, it was further evaluated by using a set of criteria of what an effective environmental education program should be. An effective urban environmental education program should satisfy one or more of the following criteria: informing residents about specific environmental risks in their particular community, establishing a connection between local and global environmental issues, and suggesting actions that can be taken by community resident to affect or change their immediate surroundings (criteria from Verrett, 1990). In addition to how well it addresses the specific needs of a particular community, an effective environmental education program should also be transferrable. A program that is truly effective should be able to be initiated in several different areas of the United States.

The results of this project are in the form of a list of currently existing programs that we felt were effective programs, ones that could possibly serve as model programs in other regions of the country. Accompanying this list is a brief description of each program and the names, addresses, and phone numbers of the people we contacted. It is from this list that we based our recommendations to the NACEPT Education and Training Committee.

From the results of our surveys and phone interviews we provided the EPA with some recommendations as to what role it should play in working with these organizations. We hope that the outcome of our report will supply the Environmental Protection Agency with helpful information to positively influence or establish networks for existing efforts in environmental education for urban poor and minority populations.

URBAN ENVIRONMENTAL EDUCATION: The Federal Government and State level programs

Over the past two decades, the field of environmental education has grown considerably. Environmental advocates, who have come to realize the potential, irreparable effects of the rapid industrial and technological advances of our society, determined that one of the most effective ways of protecting our environment was to educate citizens on environmental issues. The recognition that environmental concerns such as smog, ozone depletion, and resource conservation affect every citizen has expanded the environmental movement into a global effort. Thus, environmental education and training programs have broadened their scope to help increase environmental awareness and establish a strong "environmental ethic" in citizens throughout the world (paragraph paraphrased from Verrett, 1990).

"The federal government has engaged in a plethora of environmental education efforts including pilot projects, academic grants/internships, technical assistance to curriculum-based programs, and youth projects. However, when compared to other environmental education programs, there seemed to be little effort directed specifically toward urban environmental education and training efforts" (Verrett, 1990). This was also found to be true of programs initiated at the state level also. The written surveys, which were sent primarily to federal and state organizations, discovered a limited number of urban environmental education programs. In fact, after conducting follow-up phone interviews with these organizations, our team found only eight organizations out of the 127 organizations that responded to the surveys are currently involved in programs that may be appropriate for urban poor and minority groups. Three of the eight organizations sponsor urban environmental education programs at the state level. (These programs appear with an asterisk before their names in the list that follows this section.)

While our sample included environmental education programs in several cities across the United States and was not a complete representation of all the existing urban environmental education efforts, it is still apparent that, at a federal or state level, general environmental education programs outnumber those environmental education efforts that are directed at urban poor and minority populations. Below is a sampling of some various types of federal and state environmental education and training programs discovered in our study that specifically target minority and urban groups. These programs, considered appropriate for urban poor and minority populations, satisfy one or more of the following criteria: informing residents about specific environmental risks in the particular community; establishing a connection between local and global environmental issues; and suggesting actions that can be taken by community residents to affect or change their immediate surroundings (criteria from Verrett, 1990). In addition, these environmental education programs may include strategies that could be transferrable to minority and urban audiences. The list of these "model" programs is accompanied by a brief description that was obtained from brochures and other literature received in the mail. (Contacts for these programs may be found in Appendix D.)

Federal:

US Environmental Protection Agency/ City of Lowell, Massachusetts: Youth in the Environment Initiative

The City of Lowell, Massachusetts and the US EPA co-sponsored summer employment/training opportunities for Lowell high school students. The city, through its existing assistance program for disadvantaged youth, hired at the minimum wage 10-12 qualifying Lowell high school students (age 16-21 years, from low income families, etc.) to work at the City of Lowell's wastewater and water treatment plants during an eight week period in the summer of 1990. The students worked on a rotating basis under a city co-worker's supervision at various work stations at the two plants, with some off-site sampling work. The New England Interstate Water Pollution Control Commission (NEIWPCC) provided transportation for the students, to sampling sites and on weekly day-trips to various sites in New England designed to expose the students to career opportunities in the environmental field including drinking water, hazardous materials management, solid waste management, air pollution and wastewater treatment ("Summer Employment Opportunities- Lowell Wastewater Treatment Facility." US EPA Region 1, 1990).

**US Environmental Protection Agency/ Cook College:
Discovery Program**

Discovery is an Academic Enrichment and Apprenticeship Program designed to offer minority and disadvantaged students with academic promise an introduction to college study and careers in science and technology. Discovery is a comprehensive and residential five-week summer program for rising high school junior and seniors. Sponsored in part by the US EPA, the program includes classroom instruction, as well as apprenticeship opportunities at Rutgers University/Cook College, the College of Engineering, the United States Environmental Protection Agency, and the New Jersey Department of Environmental Protection. The Discovery Program consists of cultural perspectives seminars, field trips, career exploration, and hands-on experience that addresses many of the complex problems today in the environmental and life sciences, biotechnology, and agriculture ("The Discovery Program." Rutgers University/Cook College).

State-Level Programs:

*** California Air Resources Board**

The California Air Resources Board (CARB) is an example of an organization that is involved in environmental education in California. CARB runs a community based project called CHICANITOF (Little Children) Science Project. CARB tries to inform children about environmental issues and give them suggestions as to how they can help. They also take kids from MESA (Minority Education Society of America), an organization which recruits minority science and engineering students, and places them with professionals to help encourage students to pursue fields in the environment. Some of their efforts include doing shows for kids in schools and producing materials in Spanish. CARB definitely makes a positive impact on urban communities.

*** State of California. Department of Health Services**

The California Department of Health Services has a large program on environmental and occupational health hazards involving toxics. The department has published "The Toxics Directory", a 120-page directory designed to help concerned individuals and communities find the information and resources they need on toxics. The department also produces videos and textbooks that address environmental concerns at home, such as lead poisoning, and at the workplace, such as the use of pesticides. These particular environmental issues are common to most urban areas. In addition, the California Department of Health Services develops some written material on toxics in Spanish in order to address non-English speaking communities.

California Energy Extension Service: Energy Award Program for Student Energy Projects

This program encourages students, K-12, to become involved in environmental issues by awarding those students who create special energy projects. Not only do the students develop an understanding of their environment, but they also learn how they can actually make a difference by increasing the awareness of others. Although the program is initiated throughout the state of California, there is a greater participation by minority students. Some examples include African American cheerleaders from San Diego who invented energy and recycling cheers and minority students from Fresno who built dinosaurs operated by reusable energy that were later displayed at a local zoo (phone interview, Ms. Bonnie Cornwall, California Energy Extension Service, September, 1990).

*** California State Water Resources Control Board**

California State Water Resources Board is an organization that is interested in getting minorities involved in environmental fields. They developed the Hispanic Advisory Commission in order to encourage more hiring of Hispanic scientists. They also helped organize a community college course to bring Hispanic populations into environmental fields. California State Water Resources Board is also very active at the Hispanic Expo, an

event that takes place at California State University at Sacramento involving 35 Hispanic students.

State of Delaware Department of Natural Resources and Environmental Control/Division of Parks and Wildlife

The eleven state parks in Delaware which contain thousands of acres of woodlands, wetlands, meadows, and seashores, provide a variety of recreational as well as environmental education activities. The Delaware Department of Natural Resources and Environmental Control serves many communities around the state including the city of Wilmington.

Nature's Classroom: Nature's Classroom is a series of outdoor environmental learning experiences provided at the Brandywine Creek State Park Nature Center for pre-school through sixth grade age groups aimed at increasing a child's understanding of and appreciation for the natural world and man's relationship to it ("Nature's Classroom at Brandywine Creek State Park." Delaware Department of Natural Resources and Environmental Control, 1987).

Beach Studies: Beach Studies are a group of environmental learning experiences taught in a "classroom without walls" - Cape Henlopen State Park. These programs are provided year-round for adults as well as children. Beach Studies encourage an environmental ethic and stress small group interaction ("Beach Studies at Cape Henlopen State Park." Delaware Department of Natural Resources and Environmental Control, 1990).

Massachusetts Department of Environmental Management: Household Hazardous Waste

The Massachusetts Department of Environmental Management provides educational programs and technical assistance to communities and individuals interested in the proper disposal of household hazardous waste. The programs describe what happens to the environment if household hazardous waste is disposed of improperly, and also the correct and proper way to dispose of the waste.

Although these programs are not specifically targeted to urban poor or minority populations, they are indeed included in the programs focus, for everyone has some type of household hazardous waste ("Household Hazardous Waste." Massachusetts Department of Environmental Management).

Mass ReLeaf: Boston, Massachusetts

This program encourages the planting of shade trees as a means of combating global warming. The Commonwealth and its citizens can take a small but important step toward fending off global warming and at the same time help to improve the quality of life in the neighborhoods.

The brochures describe how trees absorb carbon dioxide, help conserve energy and cut energy costs by providing shade, and take some of the heat out of urban "heat islands." Trees also provide color and wildlife habitat in urban as well as suburban areas. This program is open to all populations of the Commonwealth. Though funded by ENVest, the program is carried out by the local tree warden ("Mass ReLeaf." ENVest, 1989).

URBAN ENVIRONMENTAL EDUCATION: Curriculum-Based Programs, Environmental Advocacy Organizations, and Community Organizations

Urban environmental education is being implemented in a wide variety of organizations at a local and grassroots level. There is an increasing number of environmental advocacy groups that target urban minority issues, as well as community groups that inform urban residents of their role in protecting their environment. This knowledge was supported by the information gathered from phone interviews.

For the purposes of this study, the information collected from the phone interviews proved to be of more use than the information obtained from the written surveys. These phone interviews, which were conducted with various groups and organizations around the country, supplied the team with an array of environmental education programs appropriate for urban audiences. In comparison, out of the eight "useful" written surveys, we discovered only two environmental advocacy organizations, one group that implements curriculum-based programs, and two community organizations that are currently involved in urban environmental education. (The programs sponsored by these organizations are denoted by an asterisk in the list immediately following this section.)

Below is a sampling of some types of urban environmental education programs sponsored by various non-government and community organizations. These programs, considered appropriate for urban poor and minority populations, satisfy one or more of the following criteria: informing residents about specific environmental risks in the particular community; establishing a connection between local and global environmental issues; and suggesting actions that can be taken by community residents to affect or change their immediate surroundings (criteria from Verrett, 1990). These programs may also include effective strategies that could be transferrable to minority and urban audiences. Each program includes a description that was provided by brochures and other written information that was received through the mail. (Contacts for these programs may be found in Appendix D.)

Environmental Advocacy Organizations:

Agency for Toxic Substances and Disease Registry (ATSDR): Minority Health Initiative

This program tries to identify minority populations living near or working on hazardous waste sites and to address those populations special health concerns and unique requirements for health communication.

The Minority Health Initiative seeks to define public health issues concerning:

- demographics of minority populations in proximity to hazardous waste sites
- minority health perspectives, including nutritional status, lifestyle and socioeconomic influences, and psychosocial impacts
- methods of effective communication and dissemination of environmental health information to minority communities

In December, 1990, the ATSDR will sponsor the National Minority Health Conference to discuss implications, concerns and data gaps of the Minority Health Initiative ("Minority Health Initiative." The Agency for Toxic Substances and Disease Registry, 1988).

*** Greenpeace**

Greenpeace, over the years, has been one of the most vocal environmental activist groups. Greenpeace has also done a lot to include urban poor and minority populations in their efforts. One of the many things they do is produce fact sheets on such things as toxic waste. They also have some material, specifically on hazardous waste, that is translated in Spanish. Videos, which portray Afro-Americans, Native Americans, etc., are one of many tools Greenpeace uses to spread their message. Perhaps the most unique thing they do is go into Afro-American communities to speak to the residents and inform them about environmental hazards in that community and refer them to other activists that they can contact for more information.

National Toxics Campaign

The National Toxics Campaign, headed in Boston, Massachusetts, is a grassroots organization that works to implement citizen-based preventive solutions to the nation's toxic and environmental problems. NTC publishes "Toxic Times", a newsletter with information and support from the National Toxics Campaign Fund. NTC Fund is an educational and research organization that shares NTC's policy objectives. The National Toxics Campaign Fund provides material on ozone layer protection including "Fighting Toxics", a manual for protecting citizens against toxic hazards ("Toxic Times." National Toxics Campaign, 1990).

National Wildlife Federation: Cool It! Programs

"The National Wildlife Federation's Cool It! Programs encourage college students to launch local projects that attack the pollution causing global warming. Some campus projects may double or triple the size of existing recycling programs. Other campuses may promote public transportation, energy efficiency, bike paths and walk ways, or try to persuade local food establishments to switch from plastics packaging to biodegradable paper cups and plates. Cool It! emphasizes supporting projects initiated by culturally diverse groups. Organizers are assisting college students from diverse communities who are not traditionally active in environmental issues to play an active role in solving environmental problems" (Verrett, 1990).

New York Academy of Science: Career Orientation and Internships in Environmental Education for Minority Youth

This summer leadership internship program is an attempt to increase the representation of minorities in the field of environmental education. It provides real life experiences which may lead minority high school students to seek careers in environmental education or environmental studies. It also tries to develop opportunities for North American Association for Environmental Education (NAEE) members and affiliate organizations to benefit from participating in a structured minority outreach program.

In 1988, six minority interns were chosen from New York City to work with three environmental education orientated organizations. Each intern participated in various projects of the organization and were exposed to many diverse activities and opportunities to learn new skills and knowledge enhancing their understanding of possible career choices in the environmental sciences (Iozzi & Shepard, 1988).

PBS: Operation Earth

A year-long project consisting of 35 hours of new environmental specials and series, Operation Earth was designed to connect local viewers with environmental issues in their own backyard. Series will involve issues such as global warming, deforestation, and energy use, while emphasizing the need to preserve our ecology. Working with advisory committees drawn from local environmental organizations, PBS stations will plan activities such as radio forums and youth contests for the best essay, song, video, or photo about the

environment. Through bodies like the National Education Association, Operation Earth booklets, buttons, and posters will be distributed to thousands of schools across the United States ("Operation Earth." PBS, 1990).

*** Sierra Club, Georgia Chapter**

The Sierra Club is an organization which has been concerned about the environment for many years. One of the programs they are involved in is a inner-city outing. This is a relatively new program (2 years) which takes inner-city kids into the woods. The main goal of such a program is to teach children about camping and to show the importance of the environment to the existence of the earth. Although this outing is a new program, it shows very good promise and has very good participation.

Curriculum-Based Programs:

American Water Works Association

The American Water Works Association publishes a 82-page catalog of everything to know about water. "The Water Education Package" includes teacher's guides for grades K-3, 4-6, and 7-9. "The Story of Drinking Water" is a 16-page illustrated book that describes the history and modern workings of drinking water and is available in English, Spanish, or French. "Water Fun for You" is an action-packed workbook on water for students in grades K-3 ("The Texas Water Education Network Directory." The Texas Water Development Board, 1990).

BOCES Outdoor/Environmental Education Program

In cooperation with SCOPE (Suffolk County Organization for the Promotion of Education), BOCES has developed a variety of outdoor/environmental education programs. These programs are designed to help school districts meet their particular needs at a number of different sites, primarily in New York. Financial arrangements are also available; BOCES Outdoor/Environmental Education Programs are affordable for any district.

Day-Use Program: This BOCES/SCOPE program uses a multi-disciplinary approach to strengthen and broaden existing school curricula. The objectives of the Day-Use Program are:

- to develop in teachers and students a greater awareness, understanding, and respect for the natural environment
- to integrate environmental concepts into the instruction of English, math, social studies, science, and the arts
- to gain an understanding of basic ecological concepts and the interdependence of all living things
- to create an understanding of the need to conserve and preserve natural and historic resources
- to coordinate and utilize available land and water resources for the instruction of students and the training of teachers

("Day-Use Program." BOCES Outdoor/Environmental Education Program)

Residential Programs: While living together in an outdoor setting, teachers and students in the residential outdoor/environmental education program pursue the series of activities that relate the natural environment to the school curriculum. The objectives of residential programs are:

- to provide a stimulating educational environment emphasizing interdisciplinary and multi-sensory learning
- to integrate environmental concepts into the instruction of English, math, social studies, science, and the arts

- to provide experiences that develop the attitudes, values, and behavior necessary for the wise use of natural resources
- to develop self-confidence by enhancing the student's opportunities for individual achievement
- to offer activities that develop conceptual, communicative, and computational skills
- to prepare students to solve problems through independent as well as cooperative learning situations
- to provide a comprehensive living experience that permits time for in-depths learning

("Residential Programs." BOCES Outdoor/Environmental Education Program)

WALDEN Program: The WALDEN Program, the alternative environmental education program for secondary students, provides opportunities for young people to "learn by doing." This experience combines community service projects and other outdoor education programs with academic learning. Students participating in this program have a history of difficulties which have negatively affected school performance. The benefits of the program include:

- improved student moral and involvement in learning
- a reduced dropout rate through early intervention
- improved self-esteem
- a path provided for high school graduation-- essential to higher education, a job, and a career ("The WALDEN Program." BOCES Outdoor/Environmental Education Programs)

California State University: Environmental Education as Dropout Prevention Teacher In-Service Program

The goal of this program is to infuse environmental education into the curriculum in order to motivate "at-risk" students in school.

Twenty-six 4-12th grade teachers volunteer to participate in the in-service program. Some of the teachers come from elementary schools with alternative programs, and some from alternative high schools. The objectives of the program are to:

- target environmental lessons to needs of specific at-risk students while planning for entire class
- infuse environmental activities which reflect content of texts
- teach appropriate definition of environmental education for grade level/subject
- use the out-of-doors at least once a week as part of school-based implementation of environmental education
- consider extending or modifying an environmental concept to link it with at-risk student problems related to personal characteristics and school, family, and other factors
- if possible, include home activity to involve parents

The in-service program used well-known environmental curriculum guides such as Project Wild and Project Learning Tree (Engelson & Disinger, 1990).

California State University, Hayward: Environmental Education Laboratory

The Environmental Education Laboratory is an environmental education resource center that has been funded for twelve years by Environmental License Plate grants from the California State Department of Education. The EE lab is open to everyone and provides a comprehensive collection of published and unpublished curriculum material for environmental education. Some curriculum material is bilingual and addresses such urban issues as urban ecology, solid waste, and multicultural studies. In-service and student teachers are trained in environmental education through environmental workshops. Many other leaders are trained through this university program to work in parks, museums, non-

profit organizations, and government agencies ("Environmental Education Laboratory." California State University, Hayward).

*** Clark Atlanta University: Atlanta, Georgia**

Clark Atlanta University offers a research program that trains minority graduate students in the field of environmental science. This program utilizes both the classroom and research laboratory to address environmental concerns including acid rain, urban ozone, and air pollution.

CYO-Caritas: San Francisco, California

This five day summer camp for inner-city 4-8th grade students includes pre- and post-camp classroom work. The program emphasizes the interdependence of people and nature by exploring redwood forests, grasslands, and fresh water ecology ("Ecology Center Newsletter," Ecology Center, 1990).

Delta College: Localized Topic Video/Curriculum

This premature project will link local PBS affiliations with universities and community colleges in an effort to promote an awareness of local environmental issues. The project will provide curriculum material and videos for teachers to present to their classes. The material is geared toward urban high school students and involves concerns of the particular area. For example, Delta College faculty and a PBS station in Saginaw, Michigan may develop an environmental education package specifically targeting this city's high school audience. The college faculty will work together with high school teachers so that Saginaw students may be informed of the need for wetland preservation. A similar project in Houston may include material in Spanish in order to appropriately address the Spanish students in Houston of their role in protecting their environment (phone interview, Dr. Brad Smith, September, 1990).

Division of Fish & Wildlife: Phoenix, Arizona

The Division of Fish and Wildlife has offered wildlife programs in the form of teacher training workshops and hands-on activities for children since 1969. The Division's environmental education has had an excellent response with Native American teachers, a large part of the population served by the Division of Fish and Wildlife, because the training methods used are specifically geared for those groups (phone interview, Mr. Kevin Baldwin, Division of Fish and Wildlife, September, 1990).

Hawthorne Year Round School/Oakland Unified School District: Environmental Day Camp

This summer day camp gives teachers a place to introduce the environment to 120 inner city students in kindergarten through third grade. The five-day day camp takes place on the break of the students' year round school schedule ("Environmental Education Grant Program." California State Department of Education, 1989).

Heart of the Earth Survival School: Minneapolis, Minnesota

This school is an alternative school for Native Americans. It was founded because of high drop-out rates of Native Americans, and racial problems in public schools. The school stresses environmental education and awareness through the Indian culture's respect for the land and their view of the land as Mother Earth. They incorporate various environmental practices through the curriculum of the school (phone interview, Bill Means, 1990).

Historically Black Colleges and Universities and Minority Universities (HBCU/MI): Research, Education, and Technology Transfer (RETT) Plan

HBCUs/MIs which have the strongest academic training and research track records in the science, mathematics, and engineering preparation of African Americans, Hispanic

Americans, and Native Americans for the environmental restoration and waste management, have demonstrated their knowledge of minority manpower needs. The RETT Plan acknowledges the roles to be played by both the majority and minority institutions, National Department of Energy laboratories, federal agencies and labs, and the waste management industry in developing minority manpower to address these critical needs. The HBCU/MI Consortium targets its program to the development of minority human resources in the following and other areas:

- environmental impact-- quality analysis and testing of air, water, soil; health monitoring
- environmental restoration-- site characterization for restoration; modeling environmental contamination to determine remediation needs; remediating contaminated soils and groundwater; decontaminating and decommissioning inactive facilities
- waste management-- remote monitoring; robotics; waste minimization; development of new process; waste treatment; heavy metal recovery; recycling ("The RETT Plan in ER/MI." The HBCU/MI Hazardous Materials and Waste Management Consortium, 1990)

Hunter College of the City University of New York

The college has been very active in the environmental education movement. Its projects' activities have generated dramatic results from both teachers and students: more interest in science, enhanced abilities to solve problems, a deeper concern for their peers and teachers, and a better awareness of environmental problems.

An Urban Environmental Program for Middle and Junior High School Teachers:

Under a grant from the National Science Foundation, this interdisciplinary teacher training program was developed to promote the teaching of environmental science in middle and junior high schools. In the summer of 1989, fifty New York City teachers- the majority of which were members of minority groups- met daily for three weeks for workshops and lectures conducted by leading academic scientists and specialists from industry and government. The program also included a weekend stay at the Pocono Environmental Education Center to compare the urban environment to that of a rural setting (Niman, 1990).

The Diamond Project: A mathematics, science, and technology program for "youth-at-risk" and their teachers, the Diamond Project involved 140 minority students between the ages of 9-14, and 28 teachers in an innovative educational experience consisting of : a residential program at the Pocono Environmental Education Center; science workshops at the Educational Technology Center of Hunter College; and field trips to urban sites. The PEEC experience introduced inner city students and their teachers to the natural elements and lifestyles of a rural environment. The workshops focused on hands-on problem-solving activities in math and science (Niman, 1990).

Local Government Commission, Inc.

This organization distributes K-3, 4-6, 7-8 curriculum entitled "Toxics In My Home? You Bet!". Available in both English and Spanish, this school curriculum identifies toxics in the home environment, methods for reducing exposure to household toxics, unsafe circumstances involving toxic products, and safer alternatives to using such products ("Household Hazardous Waste Publications." Golden Empire Health Planning Center).

Manomet, Massachusetts Bird Observatory

Museum Institute for Teaching Service (MITS): The observatory has a collaborative effort with eleven museums to provide a summer institute, follow-up training, and a magazine subscription for 100 teachers state wide. The teachers are trained in environmental education at their own school about biological diversity and habitat destruction. The observatory also holds outreach, on-site, and public programs. The

programs use slide shows, curricula guides, and posters. Some of these efforts are specifically targeted to minority or urban poor populations.

Care for Coastal Birds: The objective of this program is to help teachers and students understand the fragility of wetlands using birds as environmental monitors. Other groups, as well as minority and urban poor populations, participate in this program. (information received from Janis Albright-Burton, 1990)

Massachusetts Water Resources Authority (MWRA): School Programs

The Massachusetts Water Resources Authority has developed school education materials to :

- increase understanding of water as a limited resource
- improve awareness of personal water use
- instill positive water conservation attitudes
- improve water use habits

"Water Wizards" introduces basic environmental principles and concepts of water supply to third and fourth grade students. "Water Watchers" is designed for seventh and eighth grade science and social studies classes and includes lessons that call for active student involvement in classroom and home assignments. "Water Wisdom" consists of 24 stand-alone activities on water supply and water conservation in a variety of disciplines for high school students. Classroom activities on wastewater treatment and household hazardous waste are now being developed. These will help students understand the effect of wastewater on Boston Harbor and the plans to rebuild the treatment plant at Deer Island. All materials and services of the MWRA School Programs are available on request at no charge ("MWRA School Programs." Massachusetts Water Resources Authority, 1990).

Murray State University: Center for Environmental Education

Since 1976, the Center for Environmental Education has provided quality programs and materials to area schools and Murray State University faculty and students. The Center has grown and expanded with the financial support of the Tennessee Valley Authority, the college of education of Murray State University, and the West Kentucky Environmental Education Consortium. It offers the following services: Resources Room- a lending library of curriculum materials; Environmental Education Van- a mobile unit that travels to area schools and provides environmental education programs in cooperation with classroom teachers; graduate course and workshops; and in service programs such as Project Wild, Project Learning Tree, Power Switch, and Energy Sourcebook ("Center for Environmental Education." Murray State University).

Navajo Community College: Navajo Nation, Arizona

Though not an environmental education program as a whole, the college does educate about the environment to its Native American students. The Navajo educational philosophy, based on Navajo culture and tradition, places human life in harmony with the natural world and the universe. This philosophy is integrated into the college curriculum at Navajo Community College, especially in subjects such as agriculture, biology, education, geology, social science, and Navajo studies ("General Catalog 1990-1991." Navajo Community College, 1990).

Ocean Alliance

Ocean Alliance was formed by a merger of the San Francisco Chapter of Oceanic Society and the Whale Center. Ocean Alliance's education programs provide tomorrow's decision-makers with a marine conservation ethic.

Project OCEAN: Using the ocean as a central theme, Project OCEAN helps elementary and middle schools bring an "oceanful of science" into the classroom by

providing teacher training; education material; Ocean Weeks, a week-long program in which the whole school becomes a integrated laboratory for studying the ocean; and follow-up programs. For students with special needs Project OCEAN provides:

- a content-based language acquisition program which promotes simultaneous learning of English language and sophisticated science concepts
- enhanced second language acquisition through hands-on activities, multi-media visual supports, bilingual materials, cooperative learning, and sheltered English strategies
- greater classroom participation and self-esteem
- multicultural sharing of ocean heritage, careers and lifestyles-a culturally sensitive curriculum ("Project OCEAN." Ocean Alliance)

Sea Camp: Sea Camp introduces children to the marine environment. Campers explore rocky tidepools and other aquatic habitats, conduct science experiments, and enjoy and learn from a host of other hands-on activities (Sea Camp." Ocean Alliance).

Ohio Department of Natural Resources/Division of Litter Prevention and Recycling: Super Saver Investigators

Super Saver Investigators is an interdisciplinary environmental studies activity guide book about solid waste, recycling, and natural resources for grades kindergarten through eighth. The "Super Saver Investigators," a group of kids, minorities represented, appear throughout the guidebook. The hands-on activities allow students to investigate environmental problems as well as learn how to actually save their environment ("Super Saver Investigators." Ohio Department of Natural Resources, 1988).

Oklahoma State University (OSU)/Center for Environmental Education: High School Summer Academy for Environmental Science

The OSU's Summer Academy is an extensive four-week program of study with follow-up activities for thirty, tenth, eleventh, and twelfth grade high school students interested in and qualified to study environmental science. Underrepresented minority groups and females across the state are sought as participants. The staff of the Academy are primarily minority and female environmental Ph.D. and master's graduates of the OSU Environmental Science Degree Program. The Summer Academy is designed in two phases. The first phase takes place on the OSU campus and includes classroom, laboratory, and field instruction. The second phase, follow-activities, involve the students in conducting home and school analysis of use patterns for energy, water, toxics, solid waste/recycling, transportation. The overall goal of the Academy is to make a select group of high school students:

- aware of major environmental issues and problems
- knowledgeable about the ecological concepts that connect the issues and problems
- able to identify the exciting opportunities they have to deal with these problems in the future("High School Summer Academy for Environmental Science." Oklahoma State Regents for Higher Education, 1990)

Project Wild

Deadly Links: "Deadly Links" is just one of the programs from the Project Wild collection. It deals with the idea of having a world-healthy body. This idea is then applied to alcohol and drug abuse. Though not specifically targeted to any one group, this program would be relevant in all walks of life.

Habitat Lapsit: Habitat components are food, water, shelter, and space in a suitable arrangement. What happens when a component is missing? How are students like the components? This curriculum-based activity shows how each student contributes vitally to his/her own class, family, and world. This activity teaches the individual student about how he/she affects his/her own immediate environment, as well as the global environment (Engelson & Disinger, 1990).

Refuse Industry Productions, Inc.

Refuse Industry Productions, Inc., a wholly-owned subsidiary of Grass Valley Disposal, Inc., produces a complete waste management curriculum, "Garbage in America," for grades K-12. The curriculum includes information on all waste management issues including landfills, recycling, household hazardous waste, natural resources and the environment, and waste-to-energy. "Garbage in America" comprises nine individual envelope packs, one for each grade. The curriculum uses multicultural characters as "recycling friends" in the K-4 packs. New characters, a Native American family, are introduced in grade five. Math, science, art, and English are incorporated into all the lessons so that they can easily be integrated into a teaching schedule. In addition to curriculum materials, Refuse Industry Productions, Inc. also distributes educational aides such as videos and coloring books, and supplementary items such as litterbags and mini-trash cans ("Garbage in America" A K-12 Solid Waste Management Curriculum." Refuse Industry Productions, 1988).

Schlitz Audubon Center of the National Audubon Society: "Living Lightly"

The "Living Lightly" book series help students develop an awareness and appreciation of the natural and built environment. They will recognize our interdependence with the natural world. Students will gain knowledge of ecological concepts and will recognize how humans can have an impact on the environment. They will also develop problem-solving skills and take action for environmental responsibility.

"Living Lightly in the City" targets K-6 graders while "Living Lightly on the Planet" is specified for 7-12 graders. The programs all use audio-visual materials, hands-on experience, and discussions. An example of one of the activities included in the K-3 curriculum is the program that challenges the students to learn about and explore their neighborhood environment. Another program included in all of the curriculums is the program which shows how the natural world can be made relevant to urban students (Gross, Wilke, & Passineau, 1989).

Science Oriented Learning: Science Alive!

Science Oriented Learning, a non-profit affiliate of the Earth Island Institute, has developed an innovative science and social studies program designed for grades 3-6.

Science Alive! has:

- hands-on activities that require few materials and little preparation time
- standardized student worksheets in English and Spanish
- cooperative learning strategies built into the activities
- problem-solving, democratic decision-making and critical analysis emphasized in experiments and projects
- been adapted for use by teachers and youth leaders indoors as well as outdoors
- been designed in an easy to understand step-by-step format ("Science Alive!" Science Oriented Learning)

Southern University at Baton Rouge/Center for Energy and the Environment

Minority Undergraduate Training for Energy Related Careers (MUTEC): The center offers research and internship programs for minority undergraduates in science and engineering. The Center for Energy and the Environment hopes to baptize more minorities into the field of environmental science.

Environmental Restoration in Waste Management: This program is done in conjunction with the Department of Energy to get Historically Black Colleges and University (HBCU) students to undertake professional careers in environmental education (phone interview, Dr. Robert L. Ford, 1990).

The University of Michigan/School of Natural Resources: Rouge River Project

"With approximately 1.5 million residents in its mostly urban watershed, the Rouge has been identified as one of the worst of 42 pollution hot spots in the Great Lakes Basin." The Interactive Rouge River Water Quality Monitoring Project is an innovative program that raises students' awareness of their surroundings while they take steps to clean-up the river. It has produced a computer communications network in which hundreds of students from not only the Rouge basin, but riversheds across the United States and in a growing list of other countries, can discuss their concerns, strategies, and courses of action to improve water quality. The program's technology helps override socioeconomic and racial boundaries to forge strong links among the students. In Saginaw, the Rouge runs through the center of the city, creating a gap between the minority and the white middle class communities. The Rouge River Project helps bridge this gap between suburban and inner-city students in the connection between themselves and the environment ("Recovering the Rouge... or the River as Classroom." Beebe, A.).

Community Organizations:

*** American Lung Association: Sacramento, CA**

The American Lung Association develops environmental education material for the general public and for 120 urban public schools. Videos and brochures, which are sometimes written in Spanish, are used to address the environmental concern of air quality.

Camp Esteem: Fresno, CA

Camp Esteem is an environmental education program for "at-risk" middle school kids. Combating the problem of high drop-out rates, this outdoor camp for young people from Fresno develops positive self-images, encourages interest in academics, creates awareness of the environment and man's role as steward of the environment, provides positive role models, and discourages the abuse of alcohol and other drugs. Funded by local sources, the two-week Camp Esteem is an ongoing program that has about 200 seventh and eighth grade students participating each year. Selection is determined by Fresno Unified School District personnel who attempt to choose those students who are at risk of becoming involved in substance abuse and who are potential dropouts. The program draws students from throughout the city; all social, economic, and ethnic groups are represented ("Camp Esteem-- Environmental Education Program for 'At-Risk' Middle School Kids." Fresno Unified School District).

Christodora Foundation: Manice Education Center

The Christodora Foundation operates in New York City as a grant-giving institution. The Foundation's grants focus on environmental education. The common ground of all Christodora grants is that they enable city children to better understand and value the environment that surrounds them. Funded programs often bear an essential relationship to the Manice Education Center, an environmental center situated in the Berkshire Mountains of Northwestern Massachusetts ("Christodora, Inc." Christodora Foundation). The primary goals of the Center are to:

- introduce students to the world of nature, stimulating their enthusiasm for learning in the outdoors
- nurture sensitivity to and understanding of the human place within natural ecosystems
- develop students' capacity for leadership, self-reliance, and group cooperation
- instill in students an appreciation for the natural world, the value of conservation and to help promote minority participation and leadership in the conservation movement and in the sciences in general ("Manice Education Center." Christodora-Manice Education Center)

East Bay Regional Park District: Tilden Regional Park Junior Rangers

The Junior Ranger Program is run by naturalists from the Environmental Education Center in Tilden Regional Park. Jr. Rangers gain the skills and confidence to develop a lifelong environmental ethic. Because enrollment is limited to thirty children, interested boys and girls, nine to twelve years old, are given short, informal interviews. Selections are made by lottery with priorities given toward maintaining a balance of ages, sexes, and races ("Tilden Regional Park Junior Rangers." East Bay Regional Park District, 1988).

Ecology Center, Berkeley, California: Ecology Center Newsletter

The newsletter is a guide to Bay Area Environmental Education Resources. This monthly publication also prints written statements and art by young children on environmental issues. The Ecology Center Newsletter also prints editorials on specific environmental action topics.

The guide is a chart listing the Bay Area Environmental Education programs geared toward assisting parents and teachers. The available resources are divided into seven categories; camps, curricula, day trips, general information, materials, mobile resources, and teacher information/workshops. There is a brief synopsis about each program describing prices, age groups, times, phone numbers, and programs ("Ecology Center Newsletter." Ecology Center, 1990).

General Land Office: Austin, Texas

In an effort to promote a generally sound environment, the General Land Office organizes programs that address environmental issues such as recycling and household toxics. Adopt-a-Beach is one of their effective projects in which organizations "adopt" a mile sector of the gulf coast beach to clean up. When publicizing their programs, such as Adopt-a-Beach, the General Land Office translates the material into Spanish to better accommodate the large Spanish population in Texas (phone interviews, Mr. John Hamilton & Mr. Don Cook, General Land Office, September, 1990).

Greater Newark Conservancy

The Greater Newark Conservancy is a non-profit organization that addresses environmental, urban horticultural, and revitalization issues. GNC publishes a newsletter, "City Bloom," which brings a greater awareness to Newark residents of the need to become better informed about our changing environment. As a part of the Greater Newark Conservancy's effort to reach the city's Hispanic population, it uses the media-- an interview on a television show that serves the Hispanic community. Topics covered included recycling, air and water pollution, the greenhouse effect, global warming, the need for active involvement of citizens and how these issues affect the Hispanic and urban communities ("City Bloom." The Greater Newark Conservancy, 1990).

Los Angeles Conservation Corps: Clean and Green

This program employs approximately 300, generally minority, junior or senior high school students to work four days a week doing environmental educational related projects. Three regional coordinators find projects through community groups for the workers.

The one day they do not work, they receive environmental education through environmental hands-on activities and skills (phone interview, Anne Savage, 1990).

Mount Clair State College: Jersey City Program

The Jersey City Program is a year-long camp that has been in existence for approximately ten years. Many of the teachers and children in the camps are minorities from cities around New Jersey. The Jersey City Program provides an interaction between cultural groups while teaching an appreciation for the environment. Children are involved

in hands-on activities including field work and studies on water ecology (phone interview, Dr. John Kirk, August, 1990).

Newark Office of Recycling

In its efforts to promote recycling and "precycling" (making environmentally sound decisions at the store), the Newark Office of Recycling offers recycling guides and provides, free of charge, containers for Newark residents in which to store their recyclables. In addition, they distribute recycling calendars written in Portuguese and Spanish to inform members of non-English speaking communities about the need for waste reduction (Newark Office of Recycling, 1990).

Oakland Museum

Science Reach Program: The Oakland Museum uses this program to teach middle school "at risk" children who have English as a second language about environmental education. Literature and slide shows are used by the teacher to familiarize the class with the museum and its programs before they visit. When they get to the museum they will participate in two "classroom" type environmental education activities, and tour the museum. They will also be addressed by people of color, who work at the museum, about environmental education.

African American Professionals in the Sciences Program: African Americans in science fields guest lecture to the children about their specific science profession. This program is an attempt to teach "at risk" children about the environmental sciences, and hopefully to attract more of the minority population to the environmental staff.

Species and Communities At Risk Program: The object of this museum program is to link children to the concepts of the community environment. The children discover the diversities within their families, communities, and the world. These activities are followed up by being addressed by community activists.

Family Science: This programs focus is to achieve equity in science education targeted to black families.

Interface Institute: Interface Institute is an afterschool program that targets people of color in middle school. It is involved with enrichment activities in math and science. The institute also tries to provide environmental education resources to those who need it. (phone interview, Sandy Bredt, Oakland Museum, 1990)

"Passport Earth" Project: Palo Alto, California

This program was started at the Earth Day 1990 Festival. It is concerned with everyday environmental problems, but its main focus is to raise awareness of the value of the natural Bay Area in the Palo Alto area.

This program is aimed at children in grades K-6 from the largely minority populated Palo Alto and East Menlo. The purpose of the program is to reward a child for the completion of an environmental activity with a stamp in their "passport." Some of the activities were concerned with environmental issues such as wetland conservation, pollution, and recycling. The goal of the children is to complete as many environmental activities as possible in order to collect stamps in their "passport." After a certain amount of stamps, they are rewarded with prizes (phone interview, Emily Renzel, 1990).

Pocono Environmental Education Center (PEEC): Summer Enrichment Program for New York City Youth at Risk

PEEC, in cooperation with the National Park Service, is a self-supporting, non-profit organization that is committed to the education of individuals, minorities, people with

special needs, and social communities. The PEEC Summer Enrichment Program is a residential environmental studies component of the New York City Division of High Schools Summer Chapter One program for incoming high school students. This school-based summer program serves to facilitate the development of at-risk youth in the use of field experiences which provide experiential learning. The program is designed to improve the chance of school success for incoming ninth and tenth grade students who often lack first hand knowledge of the world beyond their immediate environment other than school-based experiences. The PEEC Summer Enrichment Program includes activities that :

- enhance self-esteem
- create positive attitudes toward learning
- foster psychological growth
- increase the feeling of responsibility for our environment ("Summer Enrichment Program for New York City- Youth at Risk at the PEEC." Pocono Environmental Education Center, 1990)

Project USE (Urban Suburban Environments)

Project USE is a private, non-profit educational corporation. During this past year, Project USE has operated two programs for youth-at-risk for the New Jersey Division of Youth and Family ("Friends of Project USE." Project USE, 1989).

Trek Program: The Trek Program is a 60-day wilderness program designed for at-risk youth, from Newark, New Jersey, who are in need of support services. The program includes wilderness experiences, counseling and community service projects. A similar program has been run by Project USE for the past six years (letter received from Phillip Costello, Executive Director, Project USE, 1990).

Division of Youth and Family Services: For the past seven years, Project USE has conducted 7-day outdoor courses with youth-at-risk, who are under the care of the Division of Youth and Family Services, from about twelve different New Jersey communities (letter received from Phillip Costello, Executive Director, Project USE, 1990).

"Skipping Stones": Cottage Grove, Oregon

This periodical expresses sensitivity toward and creative interaction with nature. It expresses that "environmental activities are best when they include sensory interaction, critical thinking, and creative expression. Activities that lead to further questioning, synthesizing, and exploration allow us to feel comfortable with the complexity of our living systems."

The magazine prints writing and artwork by children and young adults that will increase cultural awareness and encourage reader participation. It especially encourages submissions by children from under-represented populations. The writings may be in any language as long as there is also an English translation. "Skipping Stones" has featured:

- environmental games and puzzles in Spanish and English
- a special bilingual issue in Spanish
- writings and artwork from children in Russia, India, Nicaragua, Ethiopia, Japan, China, and Taiwan ("Skipping Stones.", 1990)

Slide Ranch: Muir Beach, California

Slide Ranch is a non-profit demonstration teaching farm. It operates as a Park Partner with the Golden Gate National Recreation Area and has been offering educational programs since 1970. Slide Ranch:

- teaches principles of ecology using the farm, wildlands, and ocean environment through interactive learning experiences
- expands the opportunities of multi-ethnic, inner city, and physically or mentally disadvantaged Bay Area residents for contact with farms and wildlands

- introduces the wonders of the natural world in a non-threatening manner
- provides responsible stewardship for the land and the natural communities
- develops teaching and professional skills of residential environmental interns ("Slide Ranch." Slide Ranch, 1990)

*** University of Illinois**

The University of Illinois has developed a program which includes urban students called ROAR (Recycle Our Available Resources). Through the use of music, they try to teach kids about recycling.

Action Speak: This program, which is more targeted for urban youth 7 years old and up, tries to show the impact these students can have on the environment. One of the activities that is stressed the most is having students read material on current environmental issues.

Plastics: This program is strictly for high school students. Some of the activities of "Plastics" are the same as those of "Action Speak", but perhaps, the most interesting activity is making playground equipment from recycled plastic.

ROAR is a program which has been very successful in reaching out to urban students to inform them about environmental issues. There have also been follow-up studies of the students that have been involved in ROAR each year that have shown that these students have a higher tendency to recycle and to become more involved in their respective communities.

University of Rhode Island: Environmental Education Center

The center works toward increasing awareness and knowledge of one's surroundings and how we can work toward a better environment. Their concerns are mainly water quality, wildlife conservation, and sustainable land use and development. They work in their local area, but not exclusively.

The center is involved with a camp for 8-12 year olds. The foci of the camp are farmsteading and ecology. There is also a summer teen expedition for 13-16 year olds. Both of these programs offer scholarships for disadvantaged populations to cover the cost of the fee.

The center is also involved with schools through environmental education programs. They are concerned with forest and freshwater ecology, farmsteading and gardening, Native American studies, and Rhode Island and rural New England cultural history. Also involved with the school are their teacher training workshops. They offer graduate and internship programs in environmental education.

The center also loans out videos and books on environmental topics to aid environmental education (information received from Martha Cheo, 1990).

Young Growers Produce

Young Growers Produce is a young and growing company which was founded and is operated principally by the youth and young adults of North Richmond, California. Through the sponsorship of Neighborhood House of North Richmond, Dr. Shelby Givens, of Oakland, designed and implemented the program. Young Growers Produce is now administered through a non-profit organization cofounded by Dr. Givens and Patricia Hicks, President of Hicks and Associates, Management Consultants, also of Oakland. Young Growers Produce has become a fully functioning business enterprise that provides urban youth and young adults with training in urban agricultural production and the

development of entrepreneurial skills ("Young Growers Produce." Young Growers Produce).

ANALYSIS OF RESULTS

As the results of this report indicate, there are an increasing number of environmental education efforts that appropriately address urban poor and minority populations. The majority of the programs discovered in this study are initiated at a grassroots level and are geared toward educating the youth in America, suggesting a trend in environmental education. Environmental education is sometimes integrated into school curricula, in teacher training workshops, and in youth camps. Although this sample is not conclusive of a trend across the entire United States, it is apparent that our country has recognized the importance of increasing the environmental awareness of the youth today in order to preserve our world for the future.

The urban environmental education programs examined in this project appear to follow a general pattern. The common ground of many youth-oriented programs is that they enable inner city children to better understand and value the environment that surrounds them. Hunter College of the City University of New York, for example, sponsors projects for young minority students and their teachers that introduce them to the natural elements and lifestyles of a rural environment-- an environment many of them may never have seen before. Many programs such as these provide activities to compare the urban environment to that of a rural setting in hopes that what inner city children take away from their experiences will later be incorporated into their own urban environment.

The objectives of these programs are accomplished in various ways. Outdoor camps, workshops, field trips, and school programs are a few of the successful methods for educating youth discovered in this study. An increasing number of school programs are being developed to strengthen and broaden existing curricula by integrating environmental concepts into the instruction of English, math, social studies, science, and the arts, creating an understanding of the environment in both teachers and students. Outdoor youth camps, also found to be a popular means of providing urban environmental education, generally offer hands-on activities and field trips that involve active participation in solving environmental problems. Camps appear to be very effective in stimulating enthusiasm for learning in the outdoors, and as a result, are being implemented throughout the country. For example, *Sea Camp* introduces children to the marine environment in California, while *Nature's Classroom* provides outdoor environmental learning experiences at the Brandywine Creek State Park Nature Center in Delaware.

In addition, programs targeted to urban poor and minorities often include activities that increase self-esteem and promote leadership in the environmental movement and in the sciences in general. This goal is important because underrepresented groups frequently receive little encouragement to pursue education, and may have negative attitudes toward learning. The Christodora Manice *Education Center*, an excellent example, introduces students from the city to the world of nature, while developing their capacity for leadership, self-reliance, and group cooperation.

There also appears to be a rising number of colleges and universities that are providing opportunities for urban poor and minority populations to study environmental science. Oklahoma State University's *High School Academy* is designed to make a select group of high school students aware of major environmental issues and problems such as energy conservation, toxics, solid waste, and recycling. Through the use of classroom, laboratory, and field instruction, underrepresented minority groups and women become knowledgeable about the ecological concepts that connect the issues and the problems,

while learning of their role in dealing with these problems in the future. The *High School Academy*, as well as programs similar to it, not only actively seek minorities as participants, but also are designed to specifically target the environmental concerns of these underrepresented groups. Urban environmental education efforts like these can clearly be considered effective efforts at instilling an environmental ethic in urban communities. In fact, all the programs listed in the previous results section are considered to be effective in providing urban environmental education. Each program satisfies all the criteria geared to determining its effectiveness: informing residents about specific environmental issues; establishing a connection between local and global environmental issues; and suggesting actions that can be taken by community residents to affect or change their immediate surroundings (criteria from Verrett, 1990).

After examining the programs, it became obvious that although many different methods are used, the final product is the same; these programs seem to have a positive impact on urban poor and minority communities. For instance, school curricula designed to inform urban students of the need to recycle in order to conserve natural resources uses a different approach from that of a water quality monitoring project where students become aware of their surroundings while they take steps to clear up a water source. However, both are examples of programs that may effectively address urban poor and minority populations.

While all the programs discovered in this study are felt to be effective, a few appear to stand out among the others. It was felt that these programs offer some of the most innovative strategies for urban environmental education.

The Pocono Environmental Education Center provides a number of programs that introduce inner city students to a rural environment. The *Summer Enrichment Program for New York City Youth At-Risk*, as just one example, is a summer program for New York City high school students who often lack first hand knowledge of the world beyond their immediate surroundings other than school-based experiences. Designed to improve the chance of academic success, the activities of the *Summer Enrichment Program* increase self-esteem, create positive attitudes toward learning, and inform of the necessity to protect the environment. The program uses field experiences which provide hands-on outdoor activities as a means of investigating environmental problems in order to increase environmental awareness.

Delta College's *Localized Topic Video/Curriculum*, although still being developed, should prove to be very effective in addressing urban poor and minorities all over the country. Local college faculty and PBS affiliations will develop curriculum material and videos for urban high school teachers to use in their classroom to inform their students of the environmental problems in their particular area. This educational "package" has a basic design which can be adapted to appropriately address different urban areas so as to include the environmental concerns of those areas. For example, a package to be developed for a high school teacher in Houston, Texas may address the problem of marine debris and include material in Spanish to better accommodate the Hispanic students in that school. Because curriculum material is frequently not specifically targeted (ie. a video of environmental problems of Newark, New Jersey shown to a class in Sacramento, California), *Localized Topic Video/Curriculum* offers a new approach that will enable students to understand the environmental concerns in their own area. As a result, students may be encouraged to become actively involved in protecting or improving their environment. Since this project is transferable to any urban area in the country, it seems that this idea could expand other existing efforts in urban environmental education.

The University of Michigan's *Rouge River Project* is an innovative water monitoring project that has already been successful in expanding the urban environmental

education movement. It has produced a computer communications network in which hundreds of students from not only the Rouge basin, but watersheds across the United States and even in other countries, can discuss their concerns, strategies, and courses of action to improve water quality. In Saginaw, Michigan, the Rouge runs through the center of the city, separating the minority and white middle class communities. The *Rouge River Project*, and similar projects in other areas in the country, encourage students to immerse themselves in their efforts to evaluate and understand their environment. In addition, these programs help override socioeconomic and racial boundaries to forge a link between suburban and inner city students in the connection between themselves and the environment.

Although some of the programs found in this study appear extremely successful in their urban environmental education efforts, including the examples above, others examined did not specifically target minority and urban audiences at all. However, it was felt that these programs include strategies that could appropriately address these groups. Some programs are developed in urban areas where there is a large concentration of minorities; others address environmental issues such as solid waste, pollution, and lead paint which are most evident in urban areas; and some even provide material in languages other than English that accommodate minorities who are non-English speaking. As a result, these programs are reaching urban poor and minorities without specifically targeting their efforts.

An example is the *Energy Award Program for Student Energy Projects* which is sponsored by the California Energy Extension Service. Although it is conducted throughout California and is not specifically targeted to any particular group, there is generally greater participation by minority students. Another example is the school curriculum produced by Refuse Industry, Inc. The material, which includes information on waste management issues, uses multicultural characters as "recycling friends" and incorporates a Native American family into its lessons. While this curriculum is developed for an entire school, its approach will appropriately address all audiences, urban minorities included.

In summary, there appears to be many positive accomplishments in the area of urban environmental education, particularly at a grassroots level. Although this study produced only a small sample of all the existing efforts in our country, it is apparent that our society has recognized the need for everyone, especially those in urban communities where environmental concerns are most evident, to become environmentally literate in order to effectively protect our environment. If the programs discovered in this study are any indication of the total urban environmental education effort, it appears that we are definitely on the right track in helping to establish a strong environmental ethic in our country.

CONCLUSIONS

As a result of this study, the following conclusions have been developed concerning urban environmental education:

CONCLUSION: There is an apparent need for more environmental education targeted to urban poor and minority populations.

A large percentage of our society now resides in urban areas--a majority of which is low income and minority. It is no secret that urban environmental problems are extensive and include such issues of congestion, pollution, lead paint, asbestos, and solid waste. However, because many inner city residents are frequently faced with the more immediate concerns of poverty and unemployment, they may be unaware of the necessity to protect their environment. Urban residents are also frequently unaware both of the environmental risks in their area, and the relationship between local environmental concerns and global environmental issues. It is therefore imperative that we not only appropriately address the environmental concerns of urban America, but that we also empower this community through environmental education. Only through education can urban poor and minority populations learn how to enhance their role in protecting and improving their environmental health.

CONCLUSION: There appears to be a limited amount of federal and state activity directed toward urban environmental education.

The results of this study support the findings of a previous EPA report in confirming that there are a limited number of urban environmental education and training efforts initiated at the federal and state level. Federal and state organizations provide services for a large audience consisting of a wide variety of population groups. Therefore, many of these organizations feel that while they develop environmental education programs to inform the general public, it is inappropriate to specifically target urban poor and minority groups. Thus, most environmental education and training programs sponsored by the federal government or by state governments and organizations address the needs of the entire nation or an entire state instead of targeting the particular needs of one community.

CONCLUSION: Grassroots organizations need adequate funding in order to be truly effective.

There are a rising number of innovative urban environmental education programs that are being developed by grassroots organizations. Many of these organizations are community-based and are able to specifically target their environmental education efforts to urban poor and minority groups. Urban grassroots organizations have close contact with the local community and thus become aware of the specific environmental risks facing that community. They can, therefore, appropriately target their programs to address these issues.

Unfortunately, many grassroots organizations lack the funding needed to provide truly effective programs. Some may be in need of more staff; some may need new equipment, or even new office space. Limited funds, always a problem for small grassroots organizations, may indeed force the closing of initiatives that are innovative and successful. With adequate funding, grassroots organizations could continue and even expand their efforts to provide programs that include effective strategies for reaching community residents with practical and targeted environmental education initiatives.

CONCLUSION: Much of the work done by grassroots organizations seems to go without notice by governmental groups, environmental organizations, as well as the general public.

This study discovered several grassroots organizations that are actively involved in environmental education targeted to urban poor and minority populations. However, the team concluded that there may be a multitude of grassroots organizations that remain undetected because much of the work done by these groups seems to go without notice.

There appears to be little communication among individual grassroots organizations and even less between these groups and federal or state organizations. Because of the limited amount of networking between organizations, many organizations never learn of other successful urban environmental education programs. Also, many organizations, particularly small community groups, do not publicize their efforts. Some organizations do not possess the needed funds to publish literature and others do not feel that written material appropriately addresses the audiences that they target. Such organizations may prefer to use a "word-of-mouth" method to inform urban poor and minority communities about environmental issues.

CONCLUSION: There is a need for more communication between grassroots organizations and the EPA.

While organizations at the grassroots level need to better understand the EPA's role in urban environmental education, the EPA also needs to learn of effective urban environmental education efforts that are being developed by grassroots organizations. There appears to be a need for more inter-communication between these two groups.

In general, it was found that most grassroots organizations are skeptical of environmental education attempts of the Environmental Protection Agency. They often believe that the EPA is only concerned with regulating or taking control of existing urban environmental education programs. Moreover, local groups feel that the EPA is unaware of local urban environmental needs and is unable to address the needs and concerns of urban poor and minorities at a level which these groups can understand. Because of this communication gap, grassroots organizations may not recognize that the Environmental Protection Agency has a genuine interest in assisting on-going, successful environmental education efforts which are targeted toward urban poor and minority populations.

CONCLUSION: There is a need for more minority students to become educated in science and engineering fields.

America is changing demographically, particularly in the composition of its young people. Minorities now make-up a large percentage of this population and so are increasingly entering the workforce. However, the number of minorities preparing for careers in science and engineering is minimal. Many minority students are frequently never given real encouragement to enter technical fields and thus, never fully develop a long-term interest in math and science fields.

Most of our country's experienced scientists and engineers recruited after Sputnik will be retiring in the 1990's, creating a void of science and engineering professionals. At the same time, the workforce is increasingly becoming comprised of minorities and women (The Task Force on Women, Minorities, and the Handicapped in Science and Technology, 1988). For this reason, it is imperative that we encourage minority students to become more literate in mathematics and science. If we are to continue as an advanced industrial society, many must enter science and engineering careers. As environmental issues

become more complex, the need arises for those in technical fields to study environmental problems and become active in environmental organizations. It is apparent that decision makers in all fields must become environmentally literate if we are to effectively protect our environment.

RECOMMENDATIONS

One of the goals of this research project was to formulate and present a set of recommendations to the Education and Training Committee of the EPA's National Advisory Council for Environmental Policy and Technology. The Committee will consider these recommendations regarding how the Environmental Protection Agency can best assist environmental education efforts for urban poor and minority populations. These recommendations will lay the groundwork for its effort to develop recommendations to be forwarded to the EPA Administrator which address this issue.

Below is the set of eight recommendations formulated by this research team. Each one was formulated by either one or both of the following procedures:

- Through a literature review and data search
- Through phone interviews with environmental educators or faculty

BACKGROUND RECOMMENDATION 1:

Because EPA is recognized as the central organization in environmental protection across the United States, smaller programs and organizations look to it for assistance. Although ready to help, the EPA may not always be able to because it is already overwhelmed by requests for information. For example, at the EPA Headquarters in Washington, D.C., the EPA operates a hotline which is manned by 30 operators who are overwhelmed with requests for information. A great deal of the information requested from this hotline may also be available at the regional offices. Since many who use the Headquarters' hotline are calling from regions outside of Washington, D.C., they may be able to obtain the information they need through their respective regions.

RECOMMENDATION 1: The EPA regional offices could improve their information distribution methods.

A regional hotline set up at each regional office would not only alleviate the pressure on Headquarters, but would also allow the EPA to better distribute its information.

Another way regional offices could improve their distribution methods would be to organize regional directories. The public could have access to updated information concerning regional environmental education programs, including phone numbers, addresses, and program descriptions. Although the total fulfillment of this idea may be difficult, it does have some merit. For instance, regional studies on environmental education would be less difficult if regional catalogs existed.

BACKGROUND RECOMMENDATION 2:

The limited amount of effort directed at urban environmental education may be a result of the inadequate representation of urban poor and minorities in the field of environmental science. Without their input and involvement in this field, it is difficult to

develop programs that appropriately address urban environmental needs and concerns. It appears that there are not enough minorities in the environmental sciences to affect change.

In the near future, minorities will make up a large part of our society. If we are to continue to improve our environmental situation in the future, we need to educate this population.

RECOMMENDATION 2: The EPA could serve as a model by employing minorities as interns, researchers, or employees.

This recommendation was introduced to us through contacts during our phone interviewing. One program director suggested that grassroots organizations could steer minorities to the EPA who could, in turn, offer them apprenticeships or other job opportunities. If the EPA takes the initiative to introduce minorities to the environmental sciences, other organizations may follow its lead. In the long run, this could increase minority involvement in the environmental field.

BACKGROUND RECOMMENDATION 3:

Environmental education and training on all levels and in all areas have traditionally been underfunded. This can be attributed to the tradition of such programs being undervalued. Proactive environmental programs that aim to achieve long-term results do not seem to receive the priority of prevention programs that produce immediate results.

During our phone interviewing, we asked the respondents about their opinion regarding how the EPA could best assist the existing efforts in environmental education and training for urban poor and minority populations. The overwhelming responses were grants and staff assistance.

RECOMMENDATION 3: The EPA could support and become more directly involved with urban environmental education programs.

The EPA may consider offering grants to certain model urban environmental education programs. The non-profit programs would be selected through an application process. These programs would then be considered EPA "model" programs. Not only would this process act as an incentive to many programs, but it could also help support effective programs that lack the proper funding needed to expand their efforts.

BACKGROUND RECOMMENDATION 4:

In our research, we found some successful environmental education and training programs. Unfortunately, there is little communication among the various sponsors of these programs. There appears to be no network through which these sponsors can communicate.

This idea of networking was also one of the top responses given to us in regard to our question: How can the EPA best assist existing efforts in environmental education for urban poor and minority populations?

RECOMMENDATION 4: The EPA could create a networking system through which organizations sponsoring environmental programs can communicate.

Because of the lack of a networking infrastructure, the sponsors of programs may be unaware of relevant work done in a particular area. As a result, a program may be

implemented in one area that has already been unsuccessful somewhere else, wasting precious time and money.

With an adequate network system, environmental organizations could be exposed to the best and most up-to-date environmental education and training methods, materials, and data bases.

BACKGROUND RECOMMENDATION 5:

Through our extensive information search, we found a number of programs that in one way or another work with four year colleges or universities to improve environmental education for minorities. It was pointed out to us during our phone interviewing that a larger concentration of urban poor and minorities may be found at the two year community college level.

RECOMMENDATION 5: The EPA could support or participate in more urban environmental education programs with two year community colleges.

Specifically targeted environmental education programs for the urban poor and minority populations may have better participation in a place where more minorities and urban poor students are located.

BACKGROUND RECOMMENDATION 6:

When creating our surveys, we tried to think of a few reasons why some environmental education programs may be attractive to minorities and urban poor populations. A few of these reasons include cost, availability, and the language barrier. With this in mind, we formulated questions to gain information from programs concerning these topics. From a combination of survey information and phone interview information, we determined that written communication may be a problem between the EPA and minority and urban poor communities. It is sometimes difficult for urban poor and minorities to understand the EPA's material, which is often used in urban environmental education programs. If the problem was not a foreign language barrier, it was a technical language barrier.

RECOMMENDATION 6: The EPA could advocate and produce materials that are easily understood by all minorities and urban poor on all levels and in all necessary languages.

BACKGROUND RECOMMENDATION 7:

Our last recommendation came as a direct result from the opinions expressed by our phone interviewees. By speaking with many of our contacts, we discovered that the smaller environmental education groups feel out of touch with the EPA. Some of the contacts feel intimidated and uneasy about working with the EPA.

RECOMMENDATION 7: The EPA could enhance its public relations.

The EPA should let the public know that it is there to help. Some suggestions would be to produce a few public service announcements, make on-site visits with environmental educators, and engage in more guest-lecturing to schools. Not only could these suggestions improve public relations, but also they could serve to advocate environmental protection.

APPENDIX A

Target Cities

Target City	Total Population	Percent Black	Hispanic	Environmental Problem(s)
Boston	641,000	22.4	6.4	water pollution air pollution
Atlanta	495,000	66.6	1.4	soil pollution toxic waste
Chicago	3,369,000	39.8	14.0	lead in water pesticides
Austin	254,000	12.2	18.7	asbestos vapor release
Sacramento	257,000	13.4	14.2	garbage/recycling

(United States Department of Commerce, 1989)

APPENDIX B

Organizational Survey

Your Name: _____
Name of Organization: _____
Location: _____

1.) Do you offer materials for environmental education as part of your usual efforts?

Yes No (circle one)

2.) If yes, what sort of material(s) do you offer?

(you may circle more than one)

- a.) films
- b.) videos
- c.) workbooks
- d.) textbooks
- e.) slide shows
- f.) computer software/programs
- g.) other _____

3.) Are the materials you offer specifically targeted at the environmental concerns of your organization in the geographic area where you are located?

Yes No (circle one)

3a.) If yes, what are your environmental concerns?

4.) Are your materials targeted at specific population groups such as urban populations or minorities?

Yes No (circle one)

4a.) If yes, what population groups?

5.) If you don't offer educational materials, do your efforts involve the environmental education of urban poor/minority communities?

Yes No (circle one)

Sometimes

6.) Do you offer your environmental education materials in a language other than English?

Yes No (circle one)

Sometimes

6a.) If yes, what other language(s)?

7.) Why does your organization develop environmental education materials?

- a.) for use in schools
- b.) for the general public
- c.) other _____

8.) Do you offer training in the use of your material(s)? (ie. does a member of your organization show the user of your material(s) how to use it(them))?

Yes No (circle one)
Sometimes

8a.) If yes, is this training voluntary?

Yes No (circle one)

8b.) If no, is the training mandatory as a requirement for using the material(s)?

Yes No (circle one)

9.) What sort of training do you offer?

10.) Is there a charge for your training?

Yes No (circle one)

11.) Is the training provided at the user's site (ie. at the school)?

Yes No (circle one)

12.) Is your material updated periodically?

Yes No (circle one)

12a.) If yes, how often is your material updated?

After receiving your completed survey, we will be conducting follow-up phone interviews in order to obtain more detailed information. If you would like to participate please fill out your name and telephone number on the following section of this survey. Thank you.

Name _____
Position in Organization _____
Address _____
Telephone number ()- _____
Best time to contact you _____

Do you know other experts or possible contact people we should contact who might complete this survey? (please list names, addresses, and phone numbers)

Do you know other organizations or institutions we should contact? (please list names, addresses, and phone numbers)

APPENDIX C

School Survey

School or School District name _____

1.) Is environmental education currently part of your curriculum?

Yes No (circle one)

Not sure

2.) Do you intend to include or continue to include environmental education as part of your curriculum in the future?

Yes No (circle one)

2a.) If not, why? (please explain)

3.) Do your students express concern about their urban environment?

Yes No (circle one)

Sometimes

3a.) If so, what issues concern them? (please explain)

4.) What type of materials(s) do you use to aid in educating your students about environmental issues?

(you may circle more than one)

a.) films

b.) videos

c.) workbooks

d.) textbooks

e.) slide shows

f.) computer software/
programs

g.) other _____

4a.) which of (a-g) is used most frequently? Why? (please explain)

4b.) Out of the items listed which do you feel will work the best for your students? Why? (It may be different from response in 4a.)

4c.) Are you familiar with environmental education materials available from: (circle one)

Project Wild	Yes	No
Project Learning Tree	Yes	No
National Wildlife Federation	Yes	No
ERIC	Yes	No
EPIE	Yes	No
Water Pollution Control Federation	Yes	No
National Geographic	Yes	No
TVA	Yes	No
ECONET	Yes	No
Environmental Clearinghouses	Yes	No
Universities' Schools of Education	Yes	No
Environmental Studies	Yes	No
Your state departments of health, environment, education	Yes	No

4d.) If yes, please circle the names above that you are most familiar with.

5.) Do your students have access to personal computers?

Yes No (circle one)

6.) Is the material that you use appropriately targeted to your students?

Yes No (circle one)

7.) Is this material written at an appropriate age level?

Yes No (circle one)

8.) Does this material acknowledge the ethnic differences among your students?

Yes No (circle one)

Sometimes

9.) Is this material targeted to an urban population?

Yes No (circle one)

10.) Does this material address the environmental concerns of your geographical area?

Yes No (circle one)

Sometimes

11.) Do you find the appropriate material readily available?

Yes No (circle one)

Sometimes

12.) Is there any form of training offered/available in the use of these materials for those administering the program?

Yes No (circle one)

Sometimes

12a.) If yes, is the training easily accessible?

Yes No (circle one)

12b.) If no, would the program work more effectively with some type of training?

Yes No (circle one)

Not Sure

13.) How is the training provided?

a.) by trained professionals

b.) by volunteers

c.) other _____

14.) How effectively is environmental education integrated into your total curriculum?

1

2

3

4

5

not integrated

totally integrated

15.) Could you please list some of your criteria for effectiveness?

16.) Do you believe environmental education should be integrated into existing courses, or should it be a separate course? (please explain your answer)

17.) How did you find out about the materials available to aid you in your environmental education curriculum?

18.) Do you have a budget that will allow you to purchase materials that are necessary for environmental education programs?

Yes No (circle one)

18a.) Is there a fee for materials?

Yes No (circle one)

19.) Do you find appropriate material readily available?

Yes No (circle one)

20.) How do you access environmental materials (ie. on loan from the library, purchased, provided free from the organization)?

20a.) Please list contacts if possible and describe the way you go about getting material.

After receiving your completed survey, we will be conducting follow-up phone interviews in order to obtain more detailed information. If you would like to participate please fill out your name and telephone number on the following section of this survey. Thank you.

Name _____
Position in school system _____
Address _____
Telephone number ()- _____
Best time to contact you _____

Do you know other experts or possible contact people we should contact who might complete this survey? (please list names, addresses, and phone numbers)

Do you know other organizations or institutions we should contact? (please list names, addresses, and phone numbers)

APPENDIX D

Contact List

The following list of contacts are of those we interviewed over the telephone. Although their information was not appropriate for our study, it may be of some use to the Environmental Protection Agency. The contact names are listed in alphabetical order.

Lisa Abbot
Student Environmental Action Coalition
Campus Y
University of North Carolina at Chapel Hill
CB# 5115, rm. 102 YMCA Bldg.
Chapel Hill, NC 27599-5115
(919) 962-2084

Howard Adams
The National Center for Graduate Education for Minorities
(219) 287-1097

American Council on Education
Office of Minority Concerns
(202) 939-9395

Carl Anthony
Earth Island Institute
(415) 547-1794

David Baker
National Wildlife Federation
(202) 797-5472
(716) 877-2004

Dr. John Baker
Agriculture and Natural Resources
4H(Boston)
(413) 545-4800

Rachel Baker
San Francisco Conservation Corps.
(415) 826-7800

Clyde Belcourt
(612) 872-7812

Tom Benjamin
FUND Consultants, Inc.
(703) 335-1816

Dr. Bernard Benson
University of Tennessee
(615) 755-4237

Dr. Richard Berne
Western Carolina University
Center for Environmental/Energy Education
(704) 227-7476

Jack Bond
City Manager, Durhant, NC
(919) 560-0000

Dr. Kofi Bota
Clark Atlanta University
(404) 880-8597

Lester Brown
World Watch Institute, Pres. CEO
(202) 452-1999

Miles Brown
Department of Environmental Protection
(617) 292-5500

Steve Brown
Council of State Governments
(606) 231-1866

Richard Brown
Dir., Office of Environment and Energy
(202) 708-2894

Bunyan Bryant
University of Michigan, School of Natural Resources
(313) 763-2470

Pat Bryant
Gulf Coast Tenants Leadership
(504) 949-4919

Care Butler, Program director
Opening Doors to the World
The Fresno County Office of the Superintendent of Schools
2314 Mariposa
Fresno, CA 93721
(209) 488-3337

Cal. State Univ. at Hayward
(415) 881-3016
(415) 881-3361

Dona Canales
National Audubon Society
(212) 832-3200 NY
(202) 547-9009 DC

Dr. Zerle Carpenter
Natural Resources, 4H (Austin)
(409) 845-7967

Bill Carter
Ecology Action
(512) 474-6247

Center for Environmental Management
(617) 381-3486

Center for Third World Organizing
(415) 654-9601

Dr. Ben Chavis
United Church of Christ
Commission for Racial Injustice
(212) 870-2077

Marsha Chen
CEIP
(617) 426-4375

Ed Chiosso
County Office of Education
(415) 363-5400

Jack Clifford, Program Analyst
Office of Water
Washington, D.C.
(202) 382-5684

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