Environmental Justice 2002 Biennial Report

Constructive Engagement and Collaborative Problem-Solving

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Executive Summary

EPA's mission is to protect the environment and human health. Through the leadership of the Office of Environmental Justice, EPA is working to ensure all communities enjoy the same degree of protection from environmental risks and health hazards and have equal access to the decision-making processes. Environmental justice is about real people facing real problems, and designing, with other stakeholders, practical solutions to address challenging environmental, public health, and quality-of-life issues.

Over the last several years, EPA has promoted the development of partnerships among and between the stakeholders to address a range of environmental justice issues facing communities. For this reason, the theme of this report is "Constructive Engagement and Collaborative Problem-Solving." The partnerships described in this document are meant to enable all stakeholders to learn from each other and identify ways and means that environmental justice can be secured.

This report is organized into seven chapters: (1) Office of Environmental Justice Initiatives; (2) Environmental Justice Integration at the Federal Level; (3) Addressing Environmental Justice Problems; (4) Public Participation and Training Initiatives; (5) Outreach Initiatives; (6) Assessment Methodologies, Assessment Guidance, and Community Assessments; and (7) Targeting, Environmental Health, and Exposure Studies. In each of these chapters, projects and activities that were conducted collaboratively and in partnership with our stakeholders are highlighted. To help readers find particular areas of interest to them, a Table of Contents is provided, which identifies the key subject areas discussed within each chapter. Within each subject area, the projects and activities with a national focus are described first, followed by those conducted at the regional level.

It has been said that poverty will not be stopped solely by people who are not poor. If poverty is stopped, it will be stopped by poor people and others working in collaboration. It also is clear that environmental justice cannot be achieved without collaboration and partnerships among all stakeholders. This report can be used to increase public awareness of the significant environmental justice activities under way across the nation and to identify opportunities for all interested parties to work together to effectively address environmental justice issues. As we move further into this new millennium, EPA will continue to seek opportunities to build partnerships with stakeholders and work constructively to address the extraordinary environmental justice challenges that exist, challenges that we are determined to confront and overcome.

Barry E. Hill
Director
Office of Environmental Justice

Chapter 1

Office of Environmental Justice Initiatives

The Office of Environmental Justice (OEJ) provides leadership and overall coordination of the Agency's environmental justice efforts. In particular, 2002 was a banner year for OEJ, with many projects coming to fruition and new initiatives beginning.

OEJ continues to chair the Interagency Working Group (IWG) on Environmental Justice and is responsible for coordinating the IWG's revitalization projects. Much progress has been made in the area of environmental justice training and stakeholder dialogues, with the cooperation of various EPA Regional and Headquarter offices. Created through cooperative agreements and contracts with independent, renowned organizations, various reports and studies identify possibilities for integrating environmental justice at all levels of government, as well as in public participation and industry-based initiatives. OEJ also has invested in the development of training materials and other valuable resources for promoting practical applications of environmental justice. Progress on these and many other continuing initiatives are described below.

Environmental Justice Action Plans

In April 2002, the Agency's Environmental Justice Executive Steering Committee (comprised of the deputy assistant administrators, the deputy regional administrators, and the director of OEJ) determined that all EPA Regions and Headquarters offices would develop Environmental Justice Action Plans to strategically integrate environmental justice in all EPA policies, programs, and activities, with measurable results. OEJ developed the instructions and template for completion of the Action Plans, which each office submitted by the end of September 2002. In Fiscal Year (FY) 2003, each Regional and Headquarters office would begin implementing those strategies identified in the Action Plans. The key elements of the Action Plans are: management accountability, internal/external stakeholder involvement, data collection/management, training, environmental justice assessment, and evaluation. Action Plans not only offer flexibility for each office, but also provide a consistent and holistic approach to environmental justice integration. OEJ's role is to provide direction and feedback to the regional and headquarters offices on their implementation strategies and results.

IWG Revitalization Projects

The IWG on Environmental Justice is chaired by OEJ and comprised of various federal agencies. The IWG embarked on the first round of national demonstration projects in FY 2001. In just 2 years, these 15 projects have made significant achievements, as discussed in Chapter 2. As a result of these projects, a multi-stakeholder collaborative model is emerging to address environmental justice. An EPA report on these projects, *Environmental Justice Collaborative Model: A Framework to Ensure Local Problem-Solving*, is now available at: <www.epa.gov/compliance/environmentaljustice>. Also, the International City/County Management Association (ICMA) convened a national forum last year called Collaborative Models to Achieve Environmental Justice to examine these projects.

In Fall 2002, the IWG solicited nominations for a second round of demonstration projects, also referred to as Environmental Justice Revitalization Projects. The goal of this second round of projects is to develop a fully mature, multi-stakeholder collaborative model to address the multiple environmental, health, economic, and social concerns of communi-

ties disproportionately and adversely affected by environmental pollution. The selected revitalization projects will be announced in Spring 2003.

Regional Listening Sessions

In 2002, EPA's Regional offices agreed to conduct listening sessions to engage participants in active discourse on topics ranging from general to specific areas of common concern, and to work effectively toward mutually beneficial solutions. OEJ developed basic guidelines for the Regions to ensure interactive, solution-oriented dialogues with the community, and in partnership with federal, state, tribal, local, and municipal government representatives. Each Regional office should plan and conduct its listening sessions in a way that best advances the strategic goals of the environmental justice program, in particular, and the Region, in general. These dialogues are intended to demonstrate EPA's responsiveness in addressing environmental, health, and quality-of-life concerns. Specific details on listening sessions that have occurred in 2002 are discussed in Chapter Five.

Environmental Justice Training

The Fundamentals of Environmental Justice Workshop explores the origins of the environmental justice movement, perceptions and definitions of environmental justice, and environmental laws pertaining to environmental justice. It provides an overview of Geographic Information Systems (GIS) and other analytical tools to help understand, address, and integrate environmental justice issues.

The workshop's goals are to identify and address environmental justice issues, and participants learn to effectively engage in productive dialogue around environmental justice issues and promote constructive and collaborative problem-solving techniques. Equally important is the goal to integrate aspects of environmental justice into the participants' work on a daily basis. These training sessions are a means to consistently integrate environmental justice into environmental programs.

The workshop is a product of the Environmental Justice Training Collaborative (EJTC) and is led by OEJ. The EJTC began in 1998, when EPA's western Regions responded to the growing need for a better understanding of environmental justice. In the early stages, members developed a basic curriculum and worked with other partners to identify training needs and plan train-the-trainer events. More than 100 partners, including federal, state, academia, tribal, industry, and community groups, have formed an electronic listserver to stay connected on training matters.

Over the past 2 years, more than 1,500 people across the country have been trained, including participants from federal, state, and local governments; grassroots organizations; business; and academia. The EJTC received an EPA bronze medal in 2002 for its outstanding work to help integrate environmental justice into the daily operations at EPA and across the country. OEJ is preparing additional training modules for permit writers and inspectors. Information on specific training activities throughout EPA is featured in Chapter Four.

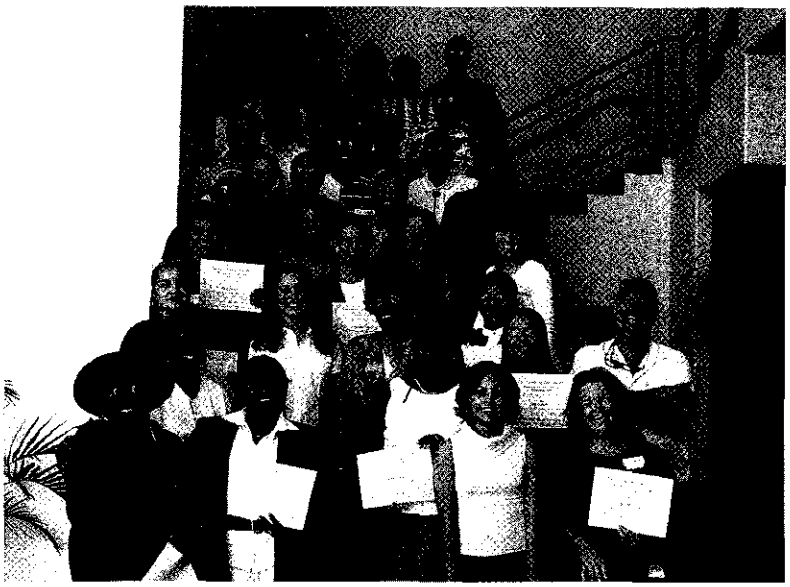
Alternative Dispute Resolution (ADR) Training for Communities.

In September 2002, OEJ sponsored a pilot training session in El Monte, California. Thirty community representatives participated in this ADR training to learn about basic dispute resolution techniques. The goal is to increase the communities' awareness of collaborative problem-solving as an alternative to litigation. The course was developed through a cooperative agreement with the Consensus Building Institute (CBI), in conjunction with Justice & Sustainability Associates. EPA Region 9 staff participated in the session and were instrumental in the outreach to communities interested in attending the session in California. CBI also is developing six environmental justice dispute resolution case studies as a supplement to the training. Thanks to the success of this pilot session, a similar ADR training is being planned for Region 4 community representatives. The ADR training is scheduled to take place in Memphis, Tennessee, in September 2003.

Environmental Law Institute (ELI) Studies

ELI published *Opportunities for Advancing Environmental Justice: An Analysis of U.S. EPA Statutory Authorities*, an in-depth look at the major environmental laws governing air and water quality, waste management, pesticide and chemical regulation, and public right-to-know. The report also identifies specific statutory authorities for promoting environmental justice in the full range of EPA program functions: standard setting and permitting, enforcement, delegation of program authority to states, information gathering, and financial assistance.

Subsequently, ELI published *A Citizen's Guide to Using Federal Environmental Laws to Secure Environmental Justice* as a "plain English" resource to familiarize communities with federal statutes and find opportunities for meaningful public involvement in environmental decisionmaking. These studies were made possible through a cooperative



agreement with OEJ. ELI, in conjunction with the Southwest Network for Environmental and Economic Justice and the United Church of Christ, are developing a video based on the Citizen's Guide. The video will be completed by September 2003. OEJ is planning a wide distribution of this video to all stakeholders.

National Academy of Public Administration (NAPA) Studies

NAPA issued a trilogy of reports through a cooperative agreement with OEJ. The reports encompass environmental justice at the federal, state, and local/municipal government levels. *Environmental Justice in EPA Permitting: Reducing Pollution in High Risk Communities Is Integral to EPA's Mission* (December 2001) examines practical areas for integration into site-specific air, water, and waste permits. In *Models for Change: Efforts by Four States to Address Environmental Justice* (June 2002), NAPA examines several crosscutting and innovative approaches by four distinct states as they address environmental justice concerns. The third report, to be released in Summer 2003, will focus on the role of local land use and zoning practices in creating, addressing, and/or alleviating environmental justice issues.

Business/Industry Best Practices Report

OEJ commissioned a study to assess industry-based perspectives on environmental justice. The purpose of the study was to examine how environmental justice can be more effectively integrated into the corporate decisionmaking process. A draft report was released in December 2002. The final version, due in Spring 2003, will highlight best industry practices that various businesses have adopted to address environmental justice issues when siting and permitting their facilities.

National Environmental Justice Advisory Council (NEJAC) Reports on Fish Consumption and Pollution Prevention

Three years ago, NEJAC shifted the focus of its national meetings on broad public policy issues with the goal of providing effective advice and cogent recommendations to EPA. Since 1999, NEJAC has focused on the following issues: the permitting process, community-based health research models, federal agency environmental justice implementation, and fish consumption and water quality standards. Delivering salient advice and recommendations to the Agency on any given public policy issue requires NEJAC's executive committee to convene a diverse, multi-stakeholder workgroup devoted to examining a specific policy issue and deliberating with NEJAC on that issue.

With the assistance of the Fish Consumption Workgroup, NEJAC published its findings and recommendations in *Fish Consumption and Environmental Justice* in 2002. NEJAC also recently developed a draft report entitled *Advancing Environmental Justice Through Pollution Prevention*, which was released for public comment. This NEJAC report focuses on several approaches (such as source reduction, waste minimization, sustainable development, and other innovative approaches) to systematically reduce, eliminate, and/or prevent pollution.

GIS Workgroup

The Environmental Justice GIS Workgroup was established to assist in the development of a national, GIS-based environmental justice assessment tool. Once completed, this tool will provide a robust set of indicators relevant to environmental justice and will greatly assist EPA in decisionmaking. The emphasis will be to consider which communities are disproportionately and adversely impacted by environmental risks; understand the social, economic, health, environmental, and other factors associated with these risks; and develop approaches to address the communities' environmental justice issues. The Workgroup consists of representatives from both GIS and environmental justice staffs from all EPA Regional offices and several Headquarters program offices. It is co-chaired by OEJ and the Office of Environmental Information (OEI).

Environmental Justice Small Grants Program

Each year, hundreds of applicants eagerly await the Environmental Justice Small Grants process. Administered by OEJ since 1994, the program provides financial assistance to community-based/grassroots organizations and tribal governments working on solutions to local environmental problems. Funds can be used to develop a new activity or substantially improve the quality of existing programs that have a direct impact on affected communities. All awards are made as grants not to exceed 1 year.

The program has grown from a $500,000 budget and a $10,000 limit per award, to a $1.3 million program in FY 2002, with awards of $20,000 each. To date, the program has awarded approximately $16.4 million to 973 grant recipients.

Small Grants projects continue to address an array of environmental and human health issues, such as childhood asthma, farm worker pesticide protection, fish consumption, indoor air quality, drinking water contamination, and lead prevention. The types of projects include research, education, and outreach, and the program has added focus on fish consumption, water quality, and innovative technologies for pollution prevention. The 2003 Small Grants application period closed December 18, 2002. Grants will be awarded in Summer 2003. For additional information, *Emerging Tools for Local Problem Solving*, 1st and 2nd editions, highlight more than 100 successful and creative grants addressing solutions to local environmental problems.

Environmental Careers Organization (ECO) Internships

ECO has been working with EPA to foster environmental opportunities ever since OEJ opened its doors in 1992. Students receive practical experience working in fields such as science, engineering, law, computer science, and political analysis. To date, more than $36 million has been invested in this program, called "Furthering Environmental Careers," which has given more than 2,200 students opportunities for on-the-job training and community involvement. By nurturing these students, OEJ also hopes to ingrain the concept of environmental justice in the next generation of environmental professionals. This program is now ubiquitous in EPA; nearly every office has had an ECO intern. OEJ further maintains its commitment by hiring at least two interns for the immediate office and provides additional funds for three interns to work in each of EPA's 10 Regional offices. The success of the EPA/ECO partnership has spawned another program with a direct benefit to communities. Since OEJ launched its Community Intern Program in 2000, more than 60 students have gained working experience at the grassroots level. This program has allowed students to assist community organizations on environmental issues. To learn more about the program, visit <www.eco.org>.

10th Anniversary of OEJ

On November 20, 2002, EPA celebrated the 10th anniversary of the creation of OEJ. Ten years ago, OEJ (then the Office of Environmental Equity) was established to promote environmental protection for all people, including those in minority and/or low-income communities. EPA marked this occasion with a special program that highlighted the Agency's progress toward integrating environmental justice in all policies, programs, and activities, as affirmed by EPA Administrator Christine Todd Whitman in her memorandum dated August 9, 2001.

Speakers included Eileen McGinnis, EPA chief of staff (on behalf of Administrator Whitman); J.P. Suarez, assistant administrator for EPA's Office of Enforcement and Compliance Assurance (OECA); Robert Varney, regional administrator for EPA Region 1; Stan Meiburg, deputy regional administrator for EPA Region 4; Mike Shapiro, deputy assistant administrator for EPA's Office of Water (OW); and Barry E. Hill, director of OEJ. The speakers echoed their continuing commitment to implementing their environmental justice strategies in years ahead.

Chapter 2

Environmental Justice Integration at the Federal Level

Over these past 2 years, federal agencies have made significant strides in working collaboratively to address the range of environmental, public health, and economic issues facing communities. With support from OEJ, IWG was re-established and soon after developed an Action Agenda. Progress has been immediate and visible due to the success of several of IWG's interagency demonstration projects.

This chapter will highlight the various efforts of federal agencies to work in partnership with state, tribal, and local governments; other federal agencies; and various other stakeholders to provide environmental justice for all communities.

Interagency Working Group (IWG) on Environmental Justice

In FY 2000, IWG developed 15 model projects on environmental justice to demonstrate the benefits of interagency cooperation and collaboration to address the range of environmental, public health, and economic needs of communities. Over the past 2 years, these extensive projects have resulted in:

- Partnerships among more than 150 organizations and 11 federal agencies.
- Commitments of more than $5 million in public and private funding to address issues ranging from children's health to economic revitalization.
- Support for brownfields redevelopment to enhance quality-of-life and economic redevelopment in diverse communities.
- Utilization of ADR and consensus-building to address contentious issues.
- Identification of core elements of successful integrated and collaborative problem-solving partnerships.

As a result of these projects, a multi-stakeholder collaborative model is emerging to address environmental justice. An EPA report on these projects, *Environmental Justice Collaborative Model: A Framework to Ensure Local Problem-Solving*, is now available and can be found at: <www.epa.gov/compliance/environmentaljustice>. Also, ICMA convened a national forum last year, called Collaborative Models to Achieve Environmental Justice, to examine these projects.

In Fall 2002, IWG solicited nominations for a second round of demonstration projects, also referred to as Environmental Justice Revitalization Projects. The goal of this second round of projects is to develop a more comprehensive, multi-stakeholder, collaborative model to address the multiple environmental, public health, economic, and social concerns of communities that are disproportionately and adversely affected by environmental pollution.

Evaluation of the Interagency Federal Environmental Justice Demonstration Projects

To better assess the value of the IWG collaborative model, and to capture lessons learned to benefit future partnerships, the federal agencies that supported the demonstration projects committed to the development of an evaluation methodology and report.

At the request of IWG, EPA's Office of Policy Economics and Innovation (OPEI) established an evaluation team to develop six case studies of these projects. The case studies seek to identify lessons learned in a number of important areas in order to gain a better understanding of the effectiveness of multi-stakeholder collaborative partnerships to address environmental justice issues; the effectiveness of the federal interagency approach as a component of these partnerships; and the key factors contributing to project successes and challenges. Once complete, all results and case studies will be made available in a single report.

These efforts are significant in many different ways. First, the case studies will provide much needed data to federal agencies on how to improve partnerships in the future and enhance their role in these partnerships. Second, the research will lend insight into the actions and activities that add value to those projects selected for review. In addition, the case studies may even help current project partners fashion solutions to barriers that may be hindering project success. Finally, the case studies will produce a template or evaluation framework that individual projects, as well as others seeking to apply this collaborative model, can use to complement their own self-evaluation efforts in the future.

A working paper, *Strategy for Evaluating the Environmental Justice Collaborative Model* (July 2001), describes the guiding principles for evaluation, the evaluation framework, and other additional information related to the evaluation. The strategy was developed with input from members of EPA's NEJAC, project participants, agency managers, and practitioners experienced in program evaluation. IWG believes that through careful consultation and involvement of project participants in the evaluation effort, the results may benefit a wide range of audiences, including projects partners; communities; industry; and federal, state, tribal, and local governments. The strategy is a working document and is periodically updated to reflect changes in the guiding principles and evaluation framework. For additional information, go to the following Web site: <www.epa.gov/evaluate>.

Examples of Existing Demonstration Projects

Region 4

Cleanup and Revitalization through Collaborative Partnerships, Arkwright and Forest Park Community

EPA Region 4 is working jointly with regional stakeholders as the lead federal agency on the IWG demonstration project in Spartanburg, South Carolina. This pilot is aimed at bringing the community and various local stakeholders together in the Arkwright and Forest Park area to revitalize neighborhoods in south Spartanburg County. The proposed revitalization will include an affordable housing component, community and job develop-

ment strategies, and a community-owned and operated health clinic. At the center of this project are two sites that are being addressed by the Region's Superfund program. The committee for this pilot is chaired by Re-Genesis, a community-based group, and is engaged in a process of stakeholder education, structured dialogues, and planning charettes to create short- and long-term development strategies. The committee, which consists of community groups, federal and state agencies, business, industry, non- governmental and academic organizations, and elected officials, is coordinated by representatives from the City of Spartanburg, Spartanburg County, and Re-Genesis.

Key stakeholders include Re-Genesis, the city of Spartanburg, Spartanburg County, the Spartanburg Development Council, the South Carolina Department of Health and Environmental Control, the South Carolina Economic Development Administration, the National Institute for Environmental Health Sciences, the Agency for Toxic Substances and Disease Registry (ATSDR), the Department of Transportation (DOT), the Department of Housing and Urban Development (HUD), the Department of Energy (DOE), a number of local businesses and banks, and a number of federal, state, and local elected officials.

Region 7

New Madrid Environmental Justice Demonstration Project

Howardville, Lilbourn, and North Lilbourn are three small, rural, low-income and/or minority communities clustered in the Bootheel region of Missouri. All three communities lack a sustainable economic base, leaving residents to live in poverty and substandard housing. The New Madrid Environmental Justice Demonstration Project focuses on the protection of children's health in these communities through the Tri-Community Child Health Champion Campaign. With more than $100,000 in financial assistance, the project was able to identify and mitigate children's environmental health hazards and risks. The overall approach used to address risks involved a combination of education, capacity building, and proactive measures, such as health fairs and risk-specific workshops, childhood lead poisoning screening, and drinking water sampling for insecticides. The partnership achievements include: (1) an increased awareness of lead poisoning issues, (2) an increased community capacity to address children's health issues through community teamwork, and (3) reduced exposure to water-related contaminants and disease vectors through storm ditch cleaning. Partnering organizations include the Natural Resource Conservation Service, Great Rivers Alliance of Natural Resource Districts, Missouri Department of Public Health (DPH), Headstart, Missouri Department of Natural Resources (DNR), Bootheel Nurses, and Lincoln University Cooperative Extension.

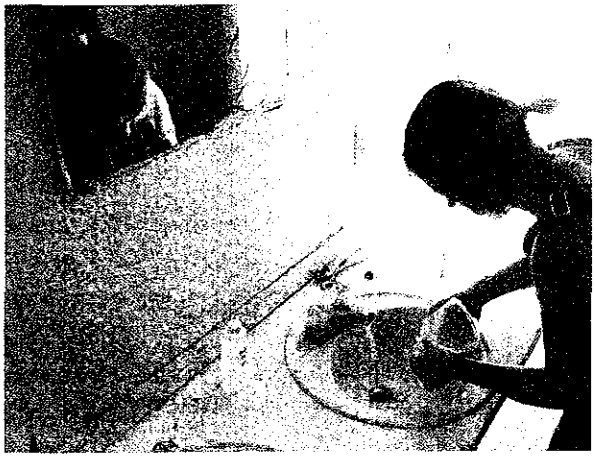
Top Left: Girl being screened for lead poisoning.
Top Right: Informational booth at Tri-Community Child Health Champion Campaign Health Fair.
Bottom: House in New Madrid County.

Region 8

Migrant Farm Worker Drinking Water Project

This demonstration project strives to bring together farm workers, environmental and community groups, and government agencies to work collaboratively to assess the safety of drinking water sources for migrant farm worker communities in Colorado.

Migrant farm workers in the United States need to cope with a number of health problems related to their working environments. One area of particular concern is the safety of drinking water in migrant farm worker communities. A variety of contaminants can affect drinking water sources in these communities, including organophosphates and other pesticides from agricultural runoff, chemicals from nearby industrial facilities, and lead and biological contaminants resulting from structural sources such as defective plumbing and sewer lines. Drinking water sources for migrant farm worker camps often are unregulated and untested because they are not known to state and federal regulators, or because of their small size. In addition, since the labor force tends to be transient, contractors and growers who maintain the camps are generally reluctant to participate in Safe Drinking Water Act (SDWA) regulatory requirements.



Testing water at migrant farm worker camp.

Region 8 and the Colorado Department of Public Health and Environment conducted a voluntary study of drinking water in selected camps housing migrant farm workers in Colorado. This offer was extended to any owner, operator, or lessee no matter how large the camp. If the study indicated that the drinking water could cause a risk to the health of the people who use the water, EPA worked with the grower to find a way to correct the problem. Then, at a later date, the water was retested to confirm that it was safe. EPA provided information on the human health effects of the contaminants tested to those who requested the information.

Region 9

Barrio Logan Task Force—San Diego, California

This pilot was selected to demonstrate community-led efforts on environmental justice that encourage collaborative problem-solving. A multi-stakeholder task force comprised of 20 community, business, academic, and governmental organizations formed a partnership to identify and address primary community concerns. The efforts are focused on community planning, pollution prevention, and diesel emissions reduction. Stakeholders include the local Air Pollution Control District, American Lung Association (ALA), Nascco Shipbuilders, and Environmental Health Coalition.

The task force is leveraging funds for community planning and pollution prevention, including a community workshop targeted at the auto repair shop sector, local grants for diesel retrofitting activities, and a sampling program to determine the type and extent of contamination in the neighborhood. As the efforts of the task force shift from strategic planning to implementation, and the national pilot winds down, Region 9 and the Barrio Logan task force are jointly developing a transition strategy that will empower the task force to assume the lead role, which is currently held by EPA.

Other Interagency Cooperative Efforts

Region 7

2001/2002 Federal Partners Meeting

EPA Region 7 hosted its second and third annual Federal Partners Meetings in October 2001 and July 2002. The purpose of the meetings is to bring together federal agencies to identify opportunities for coordination and collaboration to achieve environmental justice in federal programs and activities. The meetings are a valuable tool for each agency to move forward in understanding and addressing areas of environmental justice and to better coordinate federal efforts to meet the needs of regional stakeholders.

South Lawrence Trafficway

Region 7 staff have provided environmental justice comments on the draft environmental impact study submitted to EPA by the Army Corps of Engineers regarding the South Lawrence Trafficway. The comments request a more in-depth environmental justice assessment and enhanced community involvement strategy to ensure meaningful involvement of the significant Native American population that could be affected by the proposed project.

Region 9

North Richmond Task Force, Federal Regional Council

The North Richmond task force of the Federal Regional Council previously focused on non-environmental issues, such as development of a community-based transportation plan, road improvements and streetscaping, financial literacy, housing issues, and rehabilitation of the Verde School library. The focus now is being redirected to environmental issues, beginning with developing contacts with local environmental and environmental justice groups. Region 9 hopes to link revitalization goals with the public health concerns and environmental justice concerns of the North Richmond community. Environmental Justice Training Assessments are being conducted with the county/city to determine if environmental justice fundamentals training is needed.

CALFED Bay-Delta Program

CALFED is a consortium among California state and federal agencies with management and regulatory responsibility in the Bay-Delta Estuary. The partnership was formalized in June 1994 with the signing of the framework agreement, whereby the state and federal agencies pledged to work together in four areas of Bay-Delta management: (1) water quality standards formulation, (2) coordination of the State Water Project and Central Valley Project, (3) operations with regulatory requirements, and (4) long-term solutions to problems in the Bay-Delta Estuary.

Recent activities include the formulation of an environmental justice subcommittee and the development of an environmental justice work plan. Region 9 continues to work with the environmental justice communities to meet commitments made in an earlier Record of Decision (ROD). These commitments include identifying and mitigating activities that may cause disproportionate adverse impacts on minority and disadvantaged communities, developing positive environmental justice program goals for each of the CALFED program elements, and establishing ways to monitor and respond to environmental justice issues as CALFED implementation proceeds. The Environmental Justice Subcommittee of the California Bay-Delta Advisory Committee met several times in 2002, and is, among other matters, addressing integration with CALFED program elements, such as drinking water quality, watersheds, and water use efficiency. CALFED also will hire an environmental justice coordinator in the near future. Region 9 will continue to assist the CALFED process with its implementation of a recently adopted CALFED Environmental Justice Strategy. This

will involve addressing issues raised in a series of workshops conducted in 2001, such as improving water quality, converting farmland to habitat, and gaining community access to watershed improvement grants and other funds. CALFED will use the input from these workshops to develop a comprehensive Environmental Justice Workplan (which the agencies will be asked to adopt) across all areas of the CALFED program.

National Environmental Policy Act (NEPA) Implementation

Region 1

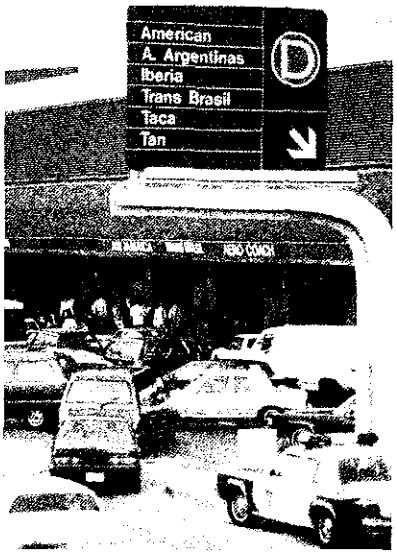
North Shore Transit Improvements Project

A project has been proposed to improve transit service along the densely populated corridor between Revere and Salem, Massachusetts. The improvements are intended to help residents gain better access to primary employment centers along the corridor. The goals of the project are consistent with two important environmental goals of EPA: improving air quality and promoting smart growth. Some of the alternatives under consideration could have significant impacts on the environment, including wetlands, aquatic ecosystems, and other areas of ecological value. In addition, several potential areas of environmental justice concern are located in portions of the study area. Region 1 encouraged the Massachusetts Bay Transportation Authority (MBTA) to conduct a full range of potential environmental impacts of project alternatives (both positive and negative) to support sound decisionmaking in its Environmental Impact Statement (EIS). Region 1 also prepared maps to identify potential environmental justice areas of concern, including Chelsea, Lynn, Revere, and Salem. Because of potential vulnerabilities in these areas, Region 1

strongly advised the MBTA and Federal Transit Administration to evaluate the proposed project in light of these concerns.

Logan Airside Improvements Planning Project

The Logan Airside Improvements Planning Project is a proposed unidirectional runway to increase airfield efficiency, decrease taxiway delays, enhance safety, and reduce current and future levels of aircraft and passenger delay at Logan International Airport in Boston, Massachusetts. Delays at Logan Airport generate costs to airlines, passengers, and residents of surrounding communities. After a careful review of the environmental implications of the proposed action, including the impacts to potential environmental justice areas of concern, a final EIS was issued.



During the draft EIS and supplemental draft EIS phases, Region 1 suggested that additional information was needed to assess the project, including information about noise impacts on surrounding communities, strategies for addressing these mitigating impacts, and the degree to which

the project would achieve its purpose. The additional information was particularly important due to concerns about impacts on surrounding minority and low-income populations.

EPA recommended including a comparison between impacted neighborhoods and the general population in the environmental justice analysis. The Federal Aviation Administration (FAA) agreed to be more specific in explaining the impact of this project to the affected community.

Region 3

King William Reservoir, King William County, Virginia

The Regional Raw Water Study Group (RRWSG), a consortium of local governments on Virginia's Lower Peninsula, are proposing the construction of a dam, fresh water reservoir, and pumping station in rural King William County, Virginia. The proposed project could impact the social structure and sense of community of the Mattaponi, Upper Mattaponi, and Pamunkey Indian tribes. The reservoir would be located between the tribes' reservations.

Construction of the reservoir and its potential secondary impacts (such as residential development) raise issues related to the preservation of the cultural, spiritual, and archaeological integrity of the tribes. The tribes are contending that if the reservoir is allowed to be built, they will lose a vital part of their cultural heritage. The Mattaponi maintain that the reservoir will threaten its historical use of the river and the land within the Cohoke watershed. Both tribes rely heavily on the land and water as a source of food, economic benefit, and spiritual identity.

Region 3 submitted comments to the Army Corps of Engineers encouraging the Corps to consider the environmental justice impacts of the project. In a memorandum dated July 2, 2001, to the Corps' North Atlantic Division, the colonel for the Norfolk District Army Corps of Engineers recommended denial of the Clean Water Act (CWA) Section 404 permit for the King William Reservoir. The colonel based his recommendation to deny the permit on two key factors: (1) the absence of a demonstrated need for projected additional water supply, and (2) the combined adverse environmental impacts to wetlands, wildlife habitat, and water quality, as well as disproportionately high impacts to Native Americans in the area.

Region 7

Omaha Tribe of Nebraska—Concentrated Animal Feeding Operations (CAFOs) Assistance

Region 7's Environmental Justice Program continues to provide support to the National Pollution Discharge Elimination System (NPDES) and NEPA programs in addressing the concerns raised by the Omaha Tribe of Nebraska regarding the need for EPA assistance in regulating CAFOs. In April 2002, members of the Omaha Tribe of Nebraska raised environmental justice concerns related to the unregulated operation of several CAFOs being operated on Indian land by non-Indians. Under EPA's trust responsibility, Regional staff are working to permit each of the facilities. EPA staff are developing an Environmental Assessment (EA) in order to consider the broader implications of establishing permit conditions. The staff conducted informational meetings and availability sessions with the impacted populations, as well as

CAFOs near Omaha Tribe, Macy, Nebraska.

the CAFO owner/operators. EPA is working to ensure that permits are issued, environmental controls are enforced, and that the concerns regarding environmental burden and health-related issues are addressed. Environmental justice concerns will be taken into consideration through the NEPA process.

Region 8

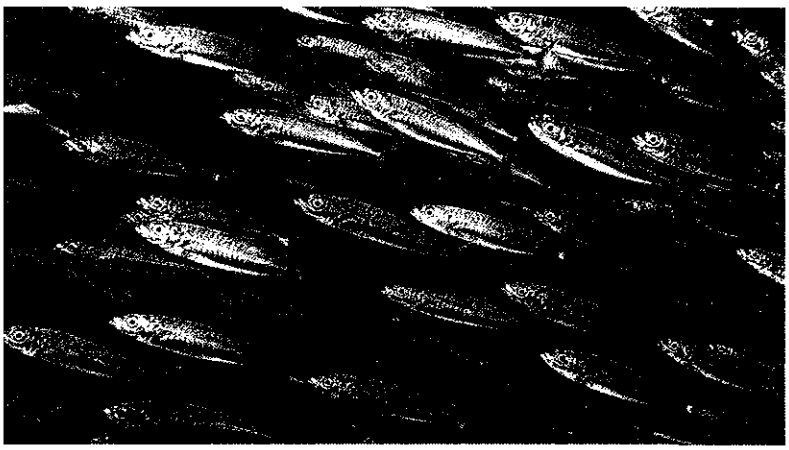
Weatherman Draw NEPA Review

Region 8 staff reviewed an EA on a proposed exploration well for oil and gas development on public land managed by the Bureau of Land Management (BLM) in south-central Montana. In conjunction with the Advisory Council on Historic Preservation, EPA expressed concerns about the significance of the proposed project's impacts to a unique complex of Native American rock art in the area. EPA voiced these concerns in a letter to BLM. This, in turn, led to the transfer of the oil and gas exploration project to another location.

Region 9

Coral Reef Ecosystem Fisheries Management Plan

In collaboration with the National Marine Fisheries Service, Region 9 participated in the development of the final EIS for the fisheries management of coral reef ecosystems in the western Pacific region. The goal was to develop a plan for the western Pacific region consistent with management measures in the newly designated Northwestern Hawaiian Islands Ecosystem Reserve and several national wildlife refuges. The final EIS considers the protection needed in fishing areas off coral reef resources. The final EIS on the fishery management plan excludes the Northwestern Hawaiian Islands Ecosystem Reserve areas from the geographic boundaries of the fishery plan and makes the plan compatible with the regulations for national wildlife refuges. As such, fishery restrictions, which are significantly more protective of the marine environment, have now been incorporated into the Coral Reef Ecosystem Fisheries Management Plan.



Region 10

Liberty Development and Production Plan

EPA and the Army Corps of Engineers participated in an effort led by the Mineral Management Service (MMS) to develop the Liberty Development and Production Plan. Other agencies involved in the EIS development were the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service, the Alaska State Pipeline Coordinator's Office, and the Alaska Division of the Governmental Coordination. Environmental justice issues centered around subsistence consumption of birds, fish, and marine and terrestrial mammals, including Bowhead whales, by the native communities in the vicinity of the proposed project on the north slope of Alaska. In particular, the EIS assessed potential impacts that construction and production would have on subsistence activities, as well as impacts from oil spills. Consultation with the native communities resulted in proposed mitigation measures that would offset the impacts on subsistence activities.

Cross-Base Highway, Pierce County, Washington

Region 7 commented on the Cross-Base Highway draft EIS developed by DOT, Federal Highway Administration (FHWA), Washington State Department of Transportation, and Pierce County Public Works and Utilities Department. To comply with FHWA's environmental justice guidelines, residents of American Lake Gardens, who could be impacted by the project, were effectively informed of the potential impacts, including residential displacements, fragmentation, noise, air pollution, visual impacts, traffic congestion, impacts to schools and recreation areas, and impaired access to community services for the disadvantaged. Residents also had opportunities for their concerns to be heard and addressed. At a meeting with the project proponents in April 2002, EPA provided specific suggestions for information and actions needed for FHWA to meet its environmental justice responsibilities. Information gathered from these actions and how this information is incorporated into decisionmaking should be disclosed in the final EIS.

Chapter 3

Addressing Environmental Justice Problems

Environmental justice issues are quite varied and require a range of approaches to be addressed effectively. This chapter will discuss how EPA, in partnership with various stakeholders, is working to effectively address environmental justice problems that have been either identified by the Agency or, more commonly, by the communities actually facing the environmental justice issues. This chapter is not intended to describe all of the Agency's environmental justice projects or activities. It is intended to provide an overview of the range of issues and approaches EPA is taking to address these important issues.

Air Problems and Solutions

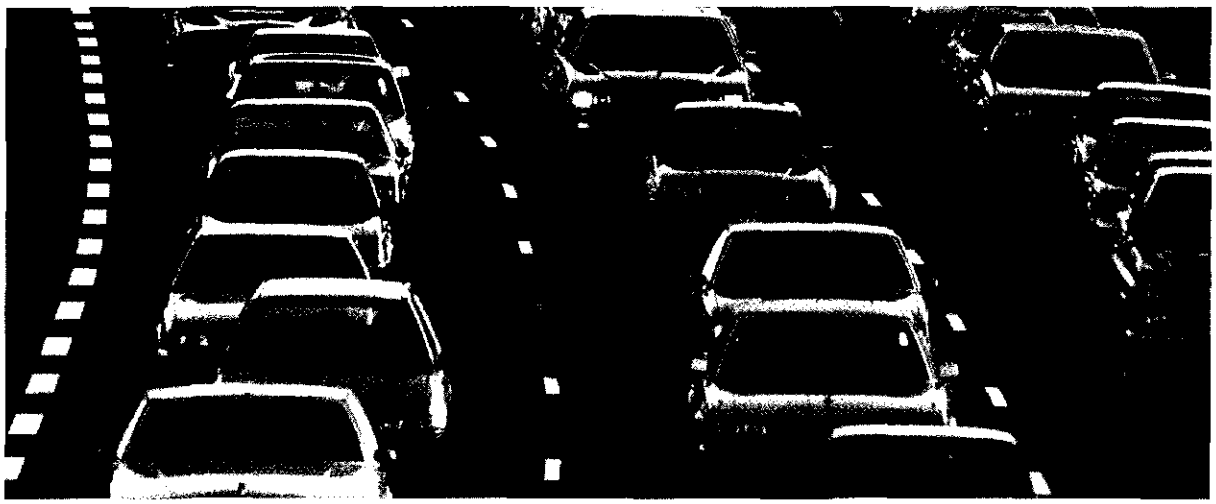
Promoting Transit-Oriented Development (TOD)

TOD has the potential to expand the supply of housing and services in close proximity to low-cost transit, and provide a more balanced means to achieving regional growth by communities. As such, it represents an opportunity to assist low-income and minority communities isolated from centers of commerce, job opportunities, and services. As a part of a Region's approach to growth, TOD has the potential to create wealth and facilitate investment in formerly blighted pockets of poverty throughout the community. It also can use existing transit lines to better connect residents of those areas with jobs, education, and services that were out of reach previously.

The District of Columbia has committed its resources to the creation of a Mayoral Task Force on TOD with the objective of creating standards and recommendations to increase TOD in the city, and EPA is supporting the District in that effort. The process will result in more development directed to areas surrounding existing metro stops and bus corridors as a means to better accommodate the burgeoning growth of the city, thereby improving the region's air quality, and create more economic opportunity in the city's poorest communities. The model will serve as a national example of how to use TOD to better include low-income and minority communities in the economic growth of the region.

Diesel Retrofit Program

Many people have seen first hand the pollution and soot that can come from the exhaust pipes of trucks,



busses, and construction equipment. This pollution can contribute to asthma and other respiratory illnesses. EPA's Voluntary Diesel Retrofit Program is a non-regulatory, incentive-based program designed to reduce pollution from diesel engines. The program addresses pollution from diesel construction equipment and heavy-duty vehicles on the road today. It is designed to pursue reductions in hydrocarbons, nitrogen oxides, carbon monoxide, and particulate matter using pollution-reducing technology.

Urban Bus Retrofit/Rebuild Program

The Urban Bus Retrofit/Rebuild Program is a regulatory-based program to reduce pollution from urban buses on the road today. This mandatory program is designed to ensure particulate matter emissions are reduced for 1993 and earlier model year urban buses at the time of engine rebuild or replacement. The regulations apply to metropolitan areas with 1980 populations of 750,000 or more. Forty-nine urban areas across the United States are covered by these regulations. EPA is also working directly with communities and tribes to reduce children's exposure to diesel exhaust from school buses.

EPA's Office of Air and Radiation (OAR) and Region 5 have established a school bus retrofit project in Northwest Indiana. Here, advanced emissions control equipment will be installed to reduce the pollution from the existing fleet. In addition, EPA is working in partnership with the Puyallup Tribe in the state of Washington to retrofit its school buses with pollution-reducing technology and cleaner diesel fuel.

Idle Reduction Program

To reduce air pollution and conserve fuel from idling trucks and locomotives, OAR established the Idle Reduction Program. As part of this program, regional coalitions of communities, state and local governments, and trucking and truck stop companies are organizing to install idle reduction systems along major interstate corridors, such as I-65 in the Midwest and I-95 in the Northeast. The criteria for identifying locations includes areas with low-income and/or minority populations with a disproportionate amount of facilities nearby. Two such locations include a large truck stop in Gary, Indiana, which received a $125,000 grant for the installation of truck stop electrification infrastructure, and a locomotive switch yard which received a $60,000 grant for anti-idling devices.

Reducing Air Emissions at Airports

The majority of the nation's busiest airports are located in urban areas that struggle to meet air quality standards. EPA shares concerns about how airport-related emissions impact surrounding communities and recognizes the challenges that airport activities pose on state and local efforts to achieve and maintain healthy air quality. OAR staff are currently participating as advisors for a federal/city partnership to enhance the lives of the residents of Los Angeles.

EPA convened several interagency meetings to dialogue with organizations having responsibility, authority, and technical expertise concerning issues involving airport operations to develop the framework for a comprehensive study to determine the contribution of air emissions from the Los Angeles World Airport to the surrounding communities. Because airport-related environmental justice issues are not unique to Los Angeles, this study also provided the opportunity for federal interagency cooperation to develop methodologies and guidance that could serve as a model for future studies throughout the country.

National Designations and Implementation Workgroup

OAR formed the National Designations and Implementation Workgroup to help tribes understand and comment on the implications of the National Ambient Air Quality Standard (NAAQS) for ozone and particulate matter. OAR is providing technical training and support to ensure that the tribes have early and meaningful involvement in rulemaking and program development efforts.

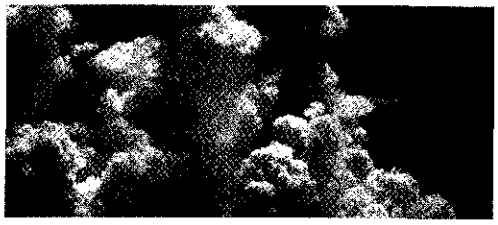
Region 1

Asthma Regional Coordinating Council (ARC)

ARC is a partnership of federal, state, and private agencies that has developed a comprehensive, aggressive plan for reducing the asthma epidemic in New England. New England asthma rates, as reported by the Centers of Disease Control and Prevention (CDC), rank among the highest in the nation. Members of ARC include Region 1 Department of Health and Human Services (HHS); HUD; state environmental, health, housing, and education agencies from Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont; the Conservation Law Foundation; Boston Medical Center; and the Boston Asthma Coalition. The *Asthma Action Plan developed by ARC identifies* four targeted areas for action to address the environmental aspects of asthma: (1) surveillance, (2) outreach and education, (3) exposure reduction in homes and schools, and (4) exposure reduction in the community.

Mystic Station in Everett, Massachusetts

The Mystic Station in Everett, Massachusetts, is an oil-fired power plant owned and operated by Sithe Energies, Inc. The plant has experienced a long history of opacity (visible emission) air violations. Region 1 had received numerous complaints over the years about Mystic Station from residents living near the plant. The communities immediately surrounding the plant, including Chelsea, Everett, Revere, Lynn, East Boston, the South End, Roxbury and Dorchester, are largely made up of low-income and minority residents. EPA decided to determine the impact of opacity violations and associated particulate loading from Mystic Station on the residents of these communities.



EPA modeled the ground-level impacts of opacity violations from the plant on local air quality. This analysis was helpful in indicating a significant impact on potential environmental justice areas, and helped convey the importance of an enforcement action. Following an order issued by EPA and signed by Sithe in March 2002, Sithe installed new ignition equipment on three of Mystic Station's older generators and switched these generators to a lower sulfur fuel. Sithe also agreed to conduct an extensive opacity monitoring and testing program for all four generators at the site, which will help determine if other compliance measures are needed.

Region 2

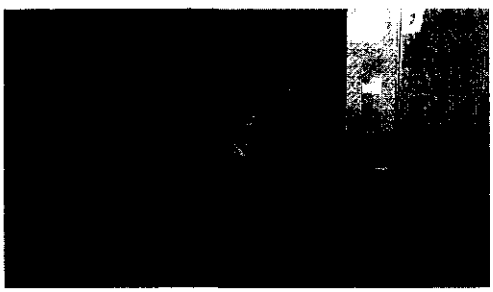
Using the Permitting Process to Reduce Impacts

In 2002, Region 2 worked with the states to resolve issues where impacts on low-income and minority communities were identified. For example, a draft permit was issued to the New York Power Authority (NYPA) - Poletti plant whereby the permit contained a provision that NYPA could not receive a final permit until the adverse impacts were resolved. The adverse impacts were mitigated (mostly by a neighboring facility, Orion, in conjunction with the NYPA) and the permits were finalized.

Region 3

Improving Indoor Air in City Public Schools

Training was provided to heating, ventilating, and air conditioning workers in the Baltimore's public schools that helped to improve indoor air quality in the schools by improving the efficiency and operation of school heating and cooling systems. This training was followed by a pilot study in several area schools. After the pilot, the program was expanded across the city, and is currently being implemented throughout the public school system.



Ozone Pollution Program

Funding provided by Region 3 allowed the Maryland Department of Environment (MDE) to develop an Ozone Pollution Program for citizens that utilize an ozone pollution map broadcasted by TV-13 in Baltimore and TV-4 in Washington, D.C. The weather forecasts now provide at-risk citizens with information that will allow them to take appropriate action during days when ozone levels are high.

Region 5

Cleveland Air Toxics Pilot Project

Region 5 and the City of Cleveland, Ohio, are working together on a new approach to air toxics control that will serve as a model for communities nationwide. EPA targeted the Broadway-Slavic Village and St. Clair-Superior neighborhoods in Cleveland, which have a mix of industry and low-income and minority populations. A central component of the pilot project was the development of a committee comprised of representatives from interested neighborhoods, organizations, businesses, and federal, state, and local government agencies. The committee will guide the project, evaluate the overall process to help improve the ongoing project as it moves forward, and capture key lessons and findings to ensure the success of future projects in other cities. The planning began in 2000, with three goals: (1) reduce air toxics in Cleveland within a year; (2) ensure the project is sustainable over time within the community; and (3) ensure the approach can be replicated in other cities across the United States. The project will address pollutants from many sources, both indoors and outdoors.

Region 5 originally funded the project at $600,000, but in June 2002, an additional $133,000 was added in order for more projects to be performed.

Diesel trucks, buses, and construction equipment became the main focus of the program. Therefore, the committee set aside $248,000 for projects that will promote cleaner-burning fuels, retrofit vehicles so they emit less pollution, and support an anti-idling campaign. The committee created the Cleveland Clean Air Century Campaign and set aside $147,000 to open a one-person office. ALA was awarded a grant and signed a cooperative agreement with Region 5 to oversee the project for the next 2 years and disburse the money.

For projects aimed at businesses and homes, $36,000 has been set aside to help electroplaters and auto body shops find ways to cut their emissions. Another $150,000 will go to an in-depth study of the county's air so specific pollutants can be identified and cleaned up.

The Greater Cleveland Regional Transit Authority (RTA) has received $25,000 for the purchase of an ultra-low-sulfur, clean-burning diesel fuel for community circulators in the Broadway-Slavic Village and St. Clair-Superior neighborhoods. These circulators are smaller than the regular buses, and they generally operate in dense residential areas. By using ultra-low-sulfur in community circulators, emissions

will be reduced by 3.45 tons annually in these neighborhoods. This grant will pay for a 1-year project. During 2002 and 2003, greater Cleveland RTA will receive a total of 225 new buses to use the ultra-low-sulfur diesel fuel, if the project is successful.

In addition, the Cleveland schools will get $150,000 to clean up diesel-fueled buses so they emit less pollution. The Cleveland Municipal School District is willing to work with the committee to put together a high-level administrative team. It is interested in using Tools for Schools, instituting anti-idling measures, developing pamphlets about the buses, and addressing asthma and other environmental and health concerns.

The Village of Cheshire and American Electric Power's (AEP) Gavin Plant

The Village of Cheshire is located in the southeast part of Ohio, along the Ohio River in Gallia County. It has 220 residences, with 67 percent of the residents falling into the low-to-moderate income range. The center of Cheshire is less than a half-mile from AEP's Gavin Power Plant.

In August 2000, EPA conducted the first of several inspections to investigate complaints made by residents of Cheshire. EPA issued AEP a Notice of Violation for Gavin's violations of opacity, particulate emissions, and nuisance rules. Shortly after, Region 5 and Ohio EPA's air enforcement and air monitoring team installed an air monitor network system to measure heavy metals and particulates. The team also installed a sulfur dioxide monitor in the village town hall to record levels instantaneously.

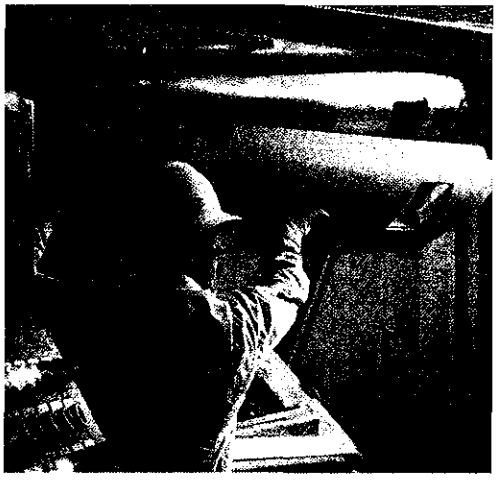
In February of 2002, ATSDR issued a final Health Consultation that concluded that some pollutant levels were of concern. In January 2002, AEP held a press release announcing steps to address the sulfur trioxide and sulfuric acid problems. In May 2002, Region 5, Ohio EPA, and AEP signed a cooperative agreement to control sulfuric acid emissions and other air pollutants from AEP's Gavin Plant.

Asthma Activities at South Bend Housing Authority (SBHA)

Region 5 is working in partnership with the Chicago Health Corps to implement the Grand Boulevard Federation Asthma Peer Education Model at SBHA, in South Bend, Indiana. SBHA is located in a low-income, high-minority community in northwest Indiana. The first collaborative meeting was held in May 2002. This resulted from a Chicago Asthma Prevention Initiative between HHS and Region 5. Through this partnership, it is anticipated that the project will recreate the successes of the Grand Boulevard Federation Asthma Peer Education Project carried out in Chicago.

Ford Good Neighbors Group

At the request of a community environmental justice group and others, dialogue has been ongoing among Ford Motor Company, Region 5, the Illinois EPA, and a number of community and environmental groups. The purpose of the Ford Good Neighbors Group dialogue is to present environmental concerns resulting from the operation of Ford's assembly plant on the southeast side of Chicago, and to encourage Ford to go beyond the pollution control measures needed to minimally comply with environmental regulations. Ford is also encouraged to implement pollution prevention where feasible. Ford's auto assembly plant is a large emitter of volatile organic compounds (VOCs) and hazardous air pollutants. Ford has agreed to reduce VOC emissions from its solvent clean-up operations and has also reduced VOC and hazardous air pollutant emissions from its painting operations. Ford is also developing a supplier park that will have a small environmental



impact (through low emissions and green building design) and investing in substantial ecological improvements to the southeast side of Chicago. In addition, Ford has coordinated neighborhood cleanups the past 2 years.

Region 6

Houston/Galveston Citizen Air Monitoring Project

The Texas Commission on Environmental Quality (TCEQ) and EPA are collaborating with local governments and citizens on the Houston/Galveston Citizen Air Monitoring Project. TCEQ and Region 6 met extensively to establish roles and responsibilities, set ground rules, and define citizen participation. Meetings were held with the Harris County Department of Pollution Control and community members to clarify the project and define roles. A joint public meeting was also held to elicit support for the project.

After holding training on the proper use of air sampling equipment, citizens took ambient air samples that were analyzed by EPA's Houston lab. Data, including data interpretation, are being published on the Internet.

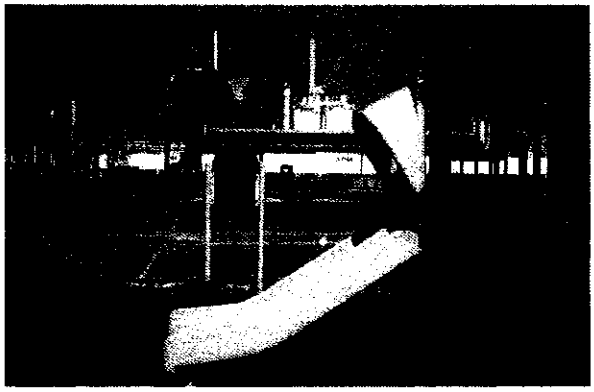
This has been an excellent example of how TCEQ and EPA can work with citizens on a mutually beneficial project. Citizens and government are full partners in this effort, with all entities having a voice in the decisionmaking regarding monitoring, sampling, analyzing the samples, publishing results, holding public meetings, and generally making the project work.

Episodic Release Reduction Initiative (ERRI)

ERRI is an innovative voluntary effort among Region 6, the Louisiana Department of Environmental Quality (DEQ), TCEQ, and 13 members of the petroleum/chemical industry to evaluate the causes of unpermitted emissions. Facilities were identified using the Emergency Response Network System database and input from the states. ERRI was organized in response to concerns about the number of episodic releases and their impact on the surrounding communities.

ERRI partners committed to work together to identify ways to reduce the number of releases and quantity of chemicals released. The workgroup developed a four-phase process to reduce emissions: (1) analyze trends, (2) identify current practices and programs, (3) analyze the effectiveness of programs and practices, and (4) prepare the report.

Within 15 months, a total reduction of 28 percent in the number of reported releases and a 48 percent reduction in the quantity released was achieved. The process is ongoing and is expected to result in further reductions.



Region 8

Air Monitoring Near Rocky Mountain Steel Mill, Colorado

Homes in the neighborhoods surrounding the Rocky Mountain Steel Mill in Pueblo County, Colorado, are exposed to continuing emissions from the mill's arc furnaces and associated operations. Preliminary Region 8 air modeling results suggest that the mill's operations may present a threat to the health and safety of the nearby residents.

Region 8 obtained funds from EPA's Office of *Enforcement and Compliance Assurance* (OECA) to monitor this potential air quality threat to the neighborhoods. Working with the Colorado Department of Public Health and Environment, Region 8 has installed one air monitor and one meteorological station in a neighborhood location suggested by the prevailing wind patterns. EPA will monitor the air for 6 months with chemical analysis of filters for arsenic, cadmium, chromium, lead, mercury, plus episodic organic sampling to look for dioxin. The results will be analyzed and integrated into EPA air models to determine the nature and extent of contamination and potential human exposure.

Rocky Mountain Steel Mill, Pueblo, Colorado.

Alternative Dispute Resolution (ADR)

Region 1

Hartford Landfill/Title VI Mediation

A community group filed a claim under Title VI of the Civil Rights Act against the State of Connecticut regarding the permitting of a waste disposal site and its adverse impacts on the minority population. Despite significant progress in the negotiations, several key parties were at impasse and settlement was questionable. Region 1 introduced and funded an experienced, well-respected environmental mediator. The mediator assisted with bringing the parties back to the negotiations and worked with them to develop a resolution.

Asphalt Plant Emissions Facilitation

A series of contentious, unfocused conference calls relating to emissions testing procedures for asphalt plants had taken place among a geographically diverse coalition of concerned citizens, asphalt plant representatives, EPA staff, and various technical consultants. The integrity and rigor of these procedures was of particular concern because asphalt plants are often located in low-income or minority neighborhoods. Region 1 provided a team of in-house facilitators to allow for more constructive dialogue. A series of facilitated conference calls, followed by 3 days of in-person meetings and subsequent mediated interactions resulted in agreements relating to citizen involvement protocols to be used by EPA in future emissions tests.

Region 9

Community Use of ADR

Region 9 conducted a forum that encouraged communities that had filed Title VI complaints to consider using ADR to reach settlement on their claims. As a result, three complainants agreed to use the mediated approach. The complaint filed by Don't Waste Arizona against Maricopa County has been successfully settled. It is the second Title VI complaint nationally, and the first Region 9 complaint to be resolved using ADR. Region 9 may hold a second community forum to encourage complainants to use ADR.

Children's Health Problems and Solutions

Region 1

Children First

One of the main goals of the Children's Health Initiative is to reduce the environmental factors that cause asthma in children. Region 1 launched a coordinated campaign called Children First to reduce asthma, lead poisoning, and other diseases that are prevalent among children and have an environmental basis. This campaign focuses on creating healthier environments in the three places children spend most of their time: at home, in schools, and outdoors.

The campaign was launched in September 2000 with a Safe Schools initiative to create healthier and safer classrooms, science labs, and playgrounds. It continues with the Healthy Homes agenda, designed to limit children's exposure to lead-based paint and second-hand smoke, as well as indoor air pollution that aggravates asthma. Finally, the campaign is dedicated to a cleaner outdoors, achieved by reducing the pollutants that contaminate the air children breathe, the ground they play on, and the water they drink.

To accomplish these goals, EPA is working with ARC, a multi-stakeholder, federal, state, and private partnership that addresses the environmental factors that affect asthma in children; the Massachusetts DPH; and the Northeast States for Coordinated Air Use Management (NESCAUM).

Region 5

Chicago Lead Poisoning Prevention Partnership Activities

The city of Chicago has very high childhood lead poisoning rates, and low screening rates prevail despite Chicago DPH's guidance that healthcare providers practice universal screening. In addition, serious disparities in lead poisoning exist in Chicago. The percentage of children screened for elevated lead poisoning is 7 percent for Whites, 14 percent for Hispanics, and 30 percent for non-Hispanic Blacks. In some poor community areas, more than 50 percent of the children are lead poisoned.

Region 5 has worked in partnership with Chicago DPH for several years to identify community areas where lead poisoning rates are high and/or screening rates are low, using a GIS mapping approach. In addition, Region 5 awarded a grant to Loyola Child Law Center, Loyola University, to facilitate the development of a strategic working plan to reduce elevated blood lead levels in Chicago.

The Loyola team has held a city-wide meeting with stakeholders to initiate the project, and has subsequently facilitated a series of meetings in three Chicago neighborhoods. Each of these high-minority population, low-income neighborhoods has exhibited extremely elevated blood lead levels and low screening rates. Each neighborhood grouping is presently in the process of strategic planning to develop and implement culturally and geographically appropriate strategies aimed at reducing the burden of childhood lead poisoning in their communities. Through the efforts of these partnerships, each community area will identify primary and secondary strategies that will work to eradicate childhood lead poisoning, and will identify funds necessary to implement these strategies.

Gateway/Metro East Lead Collaborative Partnership

The St. Clair County region of Illinois is an area littered with idled smelters, junkyards, and defunct industry. It has numerous abandoned, contaminated lots that serve as play areas for the communities' youth and as illegal dumping grounds. Many communities in the Metro East area have high percentages of minorities and low-income residents who often bear a disproportionate impact from these environmental conditions. Community groups; local hospitals; and federal, state, and local agencies in St. Clair County are collaborating to implement a comprehensive strategy to improve children's health by reducing lead poisoning caused by these problems. The project addresses both lead-based paint hazards and uncontrolled lead releases to surface soil.

Funding for this project has come from a variety of sources. By leveraging funds through this successful partnership, and because of the remediation that will be occurring, there will be a healthier environment for the 145,000 children and 400,000 adults who live in the three-county area. In addition, the area will experience economic gains because of the training and other capacity-building activities.

Region 6

Children's Health Program—SunWise Computer Game

Region 6 staff developed an animated, interactive computer game to educate children in grades 4 to 8 about sun safety. The game, available on CD-ROM, challenges children to learn facts about the sun (to earn 1,000,000 points). The game has both Spanish and English language versions.

Children's Health Program—Play and Learn Technology Project

Fourteen surplus government computers loaded with interactive environmental educational games were donated to schools for use at "in-school clinics" and parent resource centers. Children can play computer games while they wait to see their doctor, nurse, or principal. The games promote the use of technology and educate children about the environment and increase knowledge of environmental hazards.

Children's Health Program—Environmental Resources for Schools Symposium

Region 6 conducted several cross-media educational symposia for school administrators and facilities staff in north Texas and Louisiana. These symposia integrated diverse regional programs (ENERGY STAR®, Tools for Schools, water quality, asbestos, lead, mold, mercury, indoor air quality, and Integrated Pest Management (IPM) into a day-long program to increase the knowledge and understanding of varying environmental concerns in schools. The symposia meet school administrators' needs by providing the tools to identify and remove environmental hazards in schools attended by low-income populations. Symposium attendance and participant satisfaction exceeded expectations. The program is in demand in other locations including Arkansas, and other major Texas and Louisiana cities.

Cesar Chavez High School (CCHS)

During the construction phase of CCHS, concerns were raised that the east Houston school was being built within 1/4 mile of four grandfathered chemical manufacturing facilities and within 1 1/4 miles of the Geneva Industries Superfund Site. The site is in close proximity to the Highway 225 industrial complex (Lyondell Chemical, Goodyear, Texas Petrochemical, and Exxon Mobil Chemical). Toxic release inventory (TRI) data indicated that over 5 million pounds of TRI pollutants are released from these grandfathered facilities each year.

A local community group, Unidos Contra Environmental Racism, asked EPA to conduct a risk assessment on the CCHS site. EPA determined that a risk assessment was not appropriate and recommended an alternate collaborative process, which would involve development of a qualitative conceptual model.

EPA conducted a series of meetings with community stakeholders, including community leaders, business leaders, school district officials, government representatives, and elected officials. During the meetings, all stakeholders cooperatively and qualitatively identified concerns and issues regarding environmental health and safety of students and staff at CCHS. The first "scoping" phase is complete, and the implementation or "empowerment" phase is currently underway.

Participating stakeholders organized six workgroups operating under the charge of a steering committee. These workgroups are developing recommendations for mitigating risk to students and staff in the following general areas: emergency preparedness and response, air quality, water discharges, pedestrian access, and pipeline safety. The city of Houston, Houston Independent School District, Texas Railroad Commission, and community environmental activists have volunteered to chair these workgroups.

Region 7

Children's Health Presentation to Migrant Mothers

In August 2002, Region 7 gave a presentation in Lexington, Missouri, on children's health issues to a young mothers' group affiliated with the Migrant Farm Workers' Project, a non-profit organization. Through assisted Spanish translation, the presentation offered simple steps to prevent lead poisoning and pesticides exposure. The group then watched a short video on pesticides awareness and asked several questions pertaining to their families' health risks. Many were not aware of the potential pesticide and lead hazards that they or their children could face. Almost all of the young mothers were Spanish-speaking immigrants from Mexico who travel to Lexington in the summer to pick apples. Most of the women and their families also live in old houses that are directly across from the orchards, making their families more susceptible to possible pesticides exposure.

Region 9

California's Schools Siting Program

Many proposed school siting locations in California are on or near former industrial facilities. Many of the school siting locations are also in environmental justice communities. In January 2000, two new state laws became effective that require the California Department of Toxic Substances Control (DTSC) to be involved in the environmental review process for the proposed acquisition and/or construction of school properties utilizing state funding. These new laws address concerns raised by parents, teachers, local communities, and the legislature over school site properties that are or may be contaminated by hazardous materials and may pose a health threat to children and school faculty.

In response to the new laws, the state formed a Schools Division whose purpose is to ensure that properties are properly evaluated and remediated prior to redevelopment as schools. Region 9 worked with state managers to formulate a strategy to help develop the new program and provided grant funding to frame and implement it.

Young mothers' group learning to prevent lead poisoning and pesticides exposure.

Region 9, DTSC, and the Los Angeles Unified School District held a risk communication workshop to facilitate team building among the various agencies and to provide techniques and tools for staff involved in the program to communicate potential risks to parents and the school community. In combination, these efforts have played a significant role in the success of the program and contribute in a major way to the environmental health and safety of school-aged children.

Protecting Children's Health in High Risk Areas of Las Vegas

In an effort to reduce children's exposure to hazardous waste, Region 9, in partnership with the Nevada Division of Environmental Protection (NDEP), is conducting a community-based compliance initiative in Las Vegas. This project focuses on evaluating compliance in areas of high population density and high facility density. Facilities located near schools and other locations where children gather will be targeted.

As part of this initiative, Region 9 is promoting community awareness of the initiative, as well as increasing the community's awareness of neighborhood facilities that are regulated under the Resource Conservation and Recovery Act (RCRA) and the related facility-specific information that is publicly available. This community-based project was selected in a growing urban area in Nevada with a combination of high population density and a high number of hazardous waste handlers.

Region 10

Childhood Asthma Project—Toppenish, Washington

The Toppenish Childhood Asthma Project involves a culturally diverse, impoverished, rural community possessing many risk factors associated with childhood asthma. The project has demonstrated culturally appropriate approaches for working with families. The goal is to reduce the need to access healthcare for preventable asthma exacerbation in children under 5 years of age through home visits, asthma education, and training for childcare providers and others; education of parents of asthmatic children; and broad-based education for the Toppenish community. EPA's partners included the Yakima Valley Farm Workers clinic and the Toppenish Childhood Asthma Community Team.

Communities with Multiple Problems

Region 1

Urban Environmental Initiative (UEI)

UEI was first launched as a pilot program in 1995 in Region 1 to address environmental and public health problems in the targeted cities of Boston, Massachusetts; Providence, Rhode Island; and Hartford, Connecticut. To mark the first 5 years of the initiative, a report entitled *Agents of Change: Making the Vision a Reality* was published and released in 2001 to document UEI's measurable results, resource investments, community development model, unique program elements, and case studies in each city. UEI was the first coordinated effort in Region 1 to respond to urban environmental problems in a holistic way by connecting urban

residents with resources to improve their environment, health, and quality of life. In 2002, Regional Administrator Robert W. Varney made the pilot a permanent program, with primary objectives to: (1) restore and revitalize the environment or urban neighborhoods, and improve public health, (2) build local capacity to assess, address, and resolve environmental problems, and (3) promote sustainable economic development that does not compromise environmental quality and public health.

The UEI team coordinates with hundreds of partners from community groups; non-profit organizations; corporations; colleges and universities; and federal, state, and local government entities. UEI team members attribute much of their success to the community development model they created, which uses a bottom-up approach to produce results and build sustainable infrastructure to ensure community involvement and sustained progress. For details, visit <www.epa.gov/ne/eco/uei>.

Region 8

Northeast Denver Environmental Initiative (NDEI)

The citizens of northeast Denver live in a highly industrialized area fragmented by three major transportation corridors. According to EPA's databases, nearly 500 regulated facilities are located in the area, including over 200 facilities permitted under the Clean Air Act. Local trucking companies house nearly 5,000 diesel trucks in the area. One active and two previous Superfund National Priorities List (NPL) sites also lie within this area. As such, northeast Denver residents constitute the first line of contact with the pollutants that derive from industrial facilities, commercial land uses, old housing stock, and traffic.

Citizens representing the six northeast Denver communities have voiced numerous environmental concerns, such as air pollution, odor, noise pollution, and exposure to toxic substances. Citizens also described concerns about negative health effects, such as asthma, breathing difficulties, thyroid problems, elevated blood lead levels, cancer, and skin irritations, which they believe to be the result of the prevalence of industrial, mobile sources, and other pollution-generating activities in the area. Additionally, 16 percent of children tested in the area show elevated blood lead levels.

Region 8 has begun a process of working with these neighborhoods and developing partnerships with communities and governmental entities to find new ways to address the concerns of the communities and the environmental issues. The NDEI project envisions the development and demonstration of a model of government that better meets the needs of environmental justice communities. This project seeks to improve coordination among government agencies, community organizations, and industry to reduce existing and prevent future health risks in northeast Denver.

The parties are working on issues collaboratively and have the ability to redirect the focus of the project as new issues or concerns arise. Region 8 has coordinated successfully with community groups to develop a list of supplemental environmental projects (SEPs) for a large enforcement settlement. Region 8 also organized and hosted two regional environmental justice listening sessions and community meetings. As a result of the focus on children's blood lead issues, the Region developed a lead resources handbook.

Pueblo County, Colorado

Pueblo County is a largely rural area in southern Colorado, with ranches and farms surrounding the relatively small city of Pueblo. The County's population is 38 percent Hispanic or Latino, and the median household income is just over $29,000. More than 25 percent of the children in the county live below the poverty level.

Region 8 is currently working with this community to address two environmental challenges: the Pueblo Chemical Depot and the Rocky Mountain Steel Mill. The Pueblo Chemical Depot, east of Pueblo, is home to stockpiles of chemical weapons that the federal government must, by international treaty, decommission. These "assembled chemical weapons" contain both chemical agents (like mustard gas or sarin) and explosives, and their destruction has the potential to threaten the air, water, and soil quality in Pueblo County. Pueblo County has also been threatened by emissions of hazardous and criteria air pollutants from the Rocky Mountain Steel Mill, which has operated in south Pueblo for more than a century. Region 8 recently fined the Mill for non-compliance with the Clean Air Act (CAA) and required it to commit funds to the community for SEPs.

As part of its effort to address these environmental justice issues in Pueblo County, Region 8 collaborated with a variety of groups to ensure that community and environmental needs are met. With regard to the Pueblo Chemical Depot, Region 8 worked with community groups, the Colorado Department of Public Health and Environment, and the Department of Defense (DoD) to find a mechanism for decommissioning the weapons and monitoring the decommissioning process that minimizes the threat that decommissioning poses to the people, environment, and livelihoods in Pueblo.

Region 8 has also worked with community groups, the Colorado Department of Public Health and Environment, and the Rocky Mountain Steel Mill to see that surrounding communities and the environment benefit from the SEPs, such as studies on lead hazards in Pueblo homes, asthma education programs, habitat improvements along the Arkansas River, and beautification of neighborhoods around the mill. Collaborative efforts like these among community groups, government agencies, industry, and Region 8 have fostered environmental protection, community involvement, and an appreciation for the advantages of cooperative negotiation that will leave a lasting impact in Pueblo County.

Region 9

Transportation Planning and Land Use

Region 9 is working to improve urban air quality through reductions in motor vehicle use and sprawl, and promotion of mixed-use development that supports and enhances the quality of life in the Region's communities. Region 9 is developing partnership/collaborative efforts with multiple programs/divisions within EPA and external stakeholders, environmentalists, and federal, state, and local government agencies to develop and implement these strategies to improve urban air.

Drinking Water Problems and Solutions

Drinking Water State Revolving Fund (DWSRF)

EPA's OW, in collaboration with states, helps communities finance infrastructure projects needed to comply with federal drinking water regulations and protect public health. According to a recent General Accounting Office (GAO) report, 31 states have established programs to assist disadvantaged communities. Of the states with programs, 29 states have provided $618.9 million of assistance to disadvan-

taged communities. Twenty-four states have provided subsidies in form of principal forgiveness and/or extended loan terms. Sixteen states have provided subsidies of $93.2 million in principal forgiveness.

Region 6

Myrtle Grove Trailer Park

Myrtle Grove is a small residential mobile home community of about 58 homes. Routine sampling by Louisiana Department of Health and Hospitals (LDHH) of the small private drinking water system servicing this community in February 2001 revealed the presence of vinyl chloride (VC) at 11.2 parts per billion (ppb). Subsequent samples taken in March 2001 showed VC levels at 10.4 and 13.8 ppb respectively. The maximum allowable concentration level for VC is 2.0 ppb.

In March 2001, the community was tied into the nearby Plaquemine public water system, and contaminated wells were taken off-line. VC manufacturing facilities exist near the facility, including Dow Chemical, Diamond Plastics, and Shintech. Subsequent investigation revealed that VC was detected in the drinking water supply as early as 1997 at 4.9 and 6.3 ppb; however, no action was initiated to address the violation.

After the 2001 sampling, and upon much public outcry over the inaction by the LDHH up to that point, LDHH conducted several community meetings, issued an apology and made a verbal commitment to provide medical screening and treatment for the trailer park residents for VC-related illnesses. LDHH also gave citizens an opportunity to see a contracted LDHH environmental physician.

Residents were concerned that the response did not address all of their concerns. Subsequently, in response to a citizens' petition, ATSDR completed a Health Consultation. In addition, ATSDR conducted a local physician education symposium and stress symposium for citizens.

Region 6, in partnership with the Louisiana DEQ, LDHH, and ATSDR, as well as industrial and community-based stakeholders, will utilize all appropriate oversight, technical, and enforcement authority available to ensure that the system breakdown that led to this situation is prevented in the future and to ensure that the human health and environmental effects of the VC contamination are mitigated.

Region 7

Haywood City Drinking Water Compliance Assistance

In an effort to assist the small rural agricultural community of Haywood City, located in the Bootheel region of Missouri, Region 7 and Missouri's DNR have been working collaboratively to address drinking water compliance and water system integrity and safety issues. Due to the community's lack of sufficient infrastructure and reporting capabilities, the city failed to comply with drinking water regulations required by EPA. Region 7 and Missouri DNR are providing compliance assistance, and will assist the community in conducting water quality sampling to ensure the drinking water is safe.

Federal Facility Problems and Solutions

Region 3

Former Nansemond Ordnance Depot—Suffolk, Virginia

The former Nansemond Ordnance Depot located in Suffolk, Virginia, encompasses 975 acres and is situated at the confluence of the James and Nansemond rivers. The use of the property before 1917 is not known; however, local historians claim that the Confederate Army had an artillery battery on the site during the Civil War. During the next 50 years, the site was used as an ordnance depot and a Marine Corps Supply Forwarding Annex. In June 1960, the Navy split the facility into a number of parcels, some of which were sold to private parties and designated for a variety of uses. The site was placed on the NPL in early 2000.

EPA work at the site had commenced years earlier, however. In 1995, EPA performed a removal assessment of the site to determine the possible extent of munitions contamination, including buried ordnance. Further EPA investigations uncovered additional ordnance items and munitions debris throughout the site. During intrusive work, in 1999, to remove the buried ordnance and munitions items from a beachfront disposal area located along the James River, workers unearthed the remains of what appeared to be a member of the Nansemond Tribe.

Because of this issue, combined with the historical significance of the site location, the Virginia State Historic Preservation Officer (SHPO) wrote to Region 3 in March 2000 requesting that all work at the site stop until compliance issues with the National Historic Preservation Act were discussed. As a result of these events, Region 3 negotiated a programmatic agreement with the Virginia SHPO, the Army Corps of Engineers, and other consulting parties to cover all site activities. The programmatic agreement was finalized in May 2001. As a result, the archeological remains have been removed from the site by the Army Corps of Engineers, and have been sent to Radford University for evaluation.

Region 6

Kelly USA

Minority residents of Kelly Gardens and other communities adjacent to the former Kelly Air Force Base (AFB) in San Antonio, Texas complained to EPA about base-generated contamination that migrated onto residential properties. Kelly AFB officially closed on July 13, 2001. However, neighboring residents believe that Kelly has failed to adequately clean up contaminated soil and ground water that resulted from its operational practices. Region 6 is overseeing corrective actions being conducted under a RCRA permit issued by TCEQ in June 1998. EPA provides technical assistance to TCEQ and Kelly AFB as a member of the Base Realignment and Closure and Base Cleanup Team.

Currently, all perimeter interim ground-water containment systems are running. The Air Force is continuing the investigation of soil and ground-water contamination and developing remediation alternatives, and has greatly increased contact with the local government and community with an expanded community outreach program, initiated in February 2000. ATSDR has completed all but one of the scheduled public health assessments for the base area. The assessments are currently being translated into Spanish.

Region 6's OEJ serves as a liaison between the community, EPA, and other federal and state programs. Efforts have included meetings between the parties to clarify issues and concerns and to follow up on citizen inquiries and requests. Recently, an environmental justice training session involved Kelly USA,

the Kelly redevelopment agency, contract personnel, elected officials, and residents. Southwest Public Workers Union, a community-based organization, is sponsoring a series of three community roundtables, the first of which was held in October 2002.

Region 8

Pueblo Chemical Depot

The Pueblo Chemical Depot located east of Pueblo, Colorado, is an Army storage depot for chemical weapons that is currently being decommissioned under Base Realignment and Closure. Multiple solid waste management units are located on the site with some off-site migration of explosives in ground water impacting the drinking water supply for nearby Avondale. The destruction of 780,000 rounds of chemical munitions is planned for the site.

The community is predominantly Hispanic and low-income. The nearby community of Boone is concerned about the integrity of its drinking water supply well, the potential air contamination issues presented by the proposed chemical demilitarization, and the potential economic impacts on farming from disposal of hazardous wastes from the chemical demilitarization process.

Region 8 has been working closely with both groups to facilitate a dialogue wherein common ground might be established. As a result of EPA's activity, meetings have been convened between the Army and various community stakeholder groups. These meetings have led to the initial plans to incorporate community needs into the cleanup and demilitarization processes. An example of such work is the planning for a sampling and monitoring plan responsive to agricultural community needs.

Rocky Mountain Arsenal, Colorado

A review of the effectiveness of a Superfund cleanup is conducted every 5 years after implementation of the cleanup if there is some type of ongoing management of wastes on site. For the arsenal's 5-year review, Region 8 requested an analysis of the impact of the remedy on low-income and minority communities adjacent to the arsenal. This is a significant step for the integration of environmental justice into Superfund activities, since it was the first time in Region 8 that an environmental justice analysis was included in a 5-year review. The review was completed in July 2002. It concluded that the remedy has contributed to an overall reduced risk to human health, biota, and the environment.

Fish Contamination Problems and Solutions

National Risk Communication Conference

The first national conference on risk communication to address the risks of consuming chemically contaminated fish was held in Chicago, Illinois, in May 2001. The conference was convened by EPA's Fish and Wildlife Contamination Program in OW and the Minnesota Department of Health (DOH). The conference provided risk communication information and recommendations that will enable EPA to promote environmental justice for populations that are particularly susceptible to health risks caused by contaminants in fish.

Conference participants from across the United States were invited to share information on risk

communication methods that are effective for populations exposed to chemical contaminants in fish, especially those who may have difficulty receiving, understanding, or accepting risk information. Conference participants developed recommendations on risk communication techniques that effectively reach specific audiences and inform them of the risks associated with eating contaminated fish.

The conference was organized around six primary steps of risk communication: (1) identify and get to know audiences, (2) determine what audiences need and want to know, (3) choose and develop message content, (4) choose the medium for the message, (5) implement the communication program, and (6) evaluate the risk communication program. These components of risk communication were explored and discussed through a variety of session formats at the conference.

The conference sessions provided recommendations for identifying and reaching audiences that may not speak English or have only a limited command of the language, may be geographically isolated, or may be suspicious of agencies delivering advisory information. Focusing on needs according to the audience, some sessions focused on women's health issues, gender issues, culture, geographic isolation, native languages, subsistence on fish (urban and rural poor), and sport angling activity. Sessions also suggested that messages be specific to the cultural and socioeconomic characteristics of target audiences, and that a range of communication channels be used to reach target audiences of different ages, genders, races/ethnicities, and incomes. Recommendations also were provided on methods for targeting diverse audiences through activities such as classroom training workshops, meetings, storytelling, field trips, visits to laboratories, production of translated materials, radio announcements, and videos.

Development of Internet-Based Fish Consumption Risk Communication Guidance

EPA's Office of Science and Technology (OST) has begun developing dynamic, Internet-based guidance for communicating the health risks associated with consuming chemically contaminated fish. This guidance will provide Internet users with quick access to the most appropriate information for effective communication of risk to specific subpopulations.

The Internet-based system will incorporate recommendations from an EPA-sponsored national conference on risk communication, as well as links to available information and risk communication tools. Using this system, a risk communication strategy can be developed to meet the specific needs of various user groups. The system will quickly guide users through a case-specific assessment of risk communication needs. The system will then provide case-specific examples of risk communication approaches and methods for evaluating the effectiveness of communication strategies. Hypertext links will enable users to jump to sections that are most appropriate to their needs. The system will also provide users with access to information on existing Internet Web sites, such as EPA's fish advisory Web site.

The guidance will be accessible to a wide range of fish consumption advisory programs and groups that issue fish consumption advisories. The guidance will be audience-specific, not generic, and it will incorporate modules of interest to specific subpopulations. The guidance will enable users to develop risk communication strategies that are issue-oriented rather than process-oriented. To complete this guidance, EPA is working closely with a group of risk communication experts representing the views of a range of stakeholder groups.

Fishers' Brochure Translations

OST published *Should I Eat the Fish I Catch?* in English, Spanish, Hmong, Korean, and Vietnamese. This brochure provides information for sport and subsistence fishers on methods for catching, cleaning, and cooking fish to reduce exposure to chemical pollutants in fish tissue. The brochure discusses how fishers can find out if waters are polluted, whether some fish contain more pollutants than others, how fish can be cleaned and cooked to reduce potential health risks, and other steps fishers can take to reduce health risks from eating fish containing chemical pollutants.

Region 1

Contaminated Shellfish Exposure

The Casco Bay Estuary Project (CBEP) received a $20,000 Environmental Justice Small Grant from Region 1 in 2000 to determine whether people, especially low-income and Southeast Asian populations, were harvesting shellfish in contaminated areas of Casco Bay in Maine. In 1990, Casco Bay was designated an "estuary of national significance" and included in the EPA's National Estuary Program, which was established in 1987 to protect nationally significant estuaries threatened by pollution, development, and overuse.

Following this designation, CBEP was formed with the mission of preserving the ecological integrity of Casco Bay and ensuring compatible human uses of its resources through public stewardship and effective management. CBEP works to maintain the health of the 985-square mile watershed through a community-based, cooperative effort that involves concerned citizens; businesses and industries; academic and research institutions; and local, state, and federal government agencies.

Local shellfish officers noted that subsistence shellfishing in closed clam and mussel bed areas takes place in Casco Bay, and that low-income families and immigrant populations from the Asian community appear to make up the majority of these subsistence shell fishers. CBEP surveyed the Southeast Asian community in Portland about its seafood harvesting and consumption patterns. Vietnamese, Cambodians, and Filipinos are the largest groups of Southeast Asians in the community, so CBEP distributed surveys in Vietnamese, Khmer, and English. Because a high fraction of individuals in the community fish, it is possible that increased activity around Portland would be observed in the future.

Tribal Contaminated Fish Study

Tribes in Region 1 are working collaboratively to assess the risk of consuming fish contaminated by chemicals (such as dioxins and furans from paper mills and industry), pesticides, and fertilizers. The tribes are conducting consumption surveys, analyzing accumulated toxins in fish and shellfish traditionally consumed by tribal members, and assessing air toxins from deposition so that they can advise their members on how to mitigate risk from practicing subsistence lifestyles.

Because the tribes subsist on fishing and gathering seafood near rivers, lakes, and ocean shores that place restrictions on eating contaminated fish and shellfish, tribal members are forced to decrease subsistence, and many now rely on an unhealthy diet as a substitute to traditional lifestyles.

The Penobscot Nation has retrieved, organized, summarized, and analyzed water quality data from the past several years for use in developing recommendations to the Maine Department of Environmental Protection (DEP) for reclassifying rivers and streams within the Penobscot watershed. The goal of reclassification is to increase protection of the habitats of salmon and other species.

EPA's assistance has been pivotal in all the water quality control programs with the tribes, including installation of new laboratories and other infrastructure to support drinking water programs. The Agency is also providing support to three tribes that are implementing best management practices to reduce pollution from run-off and other non-point source water pollution. The tribes are testing water quality and monitoring the wetlands and watersheds to pinpoint the sources, types, and amount of pollution to better understand the baseline environmental conditions of Indian country in Region 1. This information will enable the tribes to build environmental capacity to properly manage and assess the impacts from persistent bioaccumulative toxins.

Tribal Fish Consumption Survey

The Wampanoag Tribe and EPA coordinated a training session in May 2002 for Region 1 tribes on how to conduct a survey so that is non-biased and defensible. This was the first in a series of training to be conducted at the reservation level for tribal members who will be conducting tribal fish consumption surveys.

Region 2

Polychlorinated Biphenyl (PCB) Cleanup in the Hudson River

In 1984, a 200-mile portion of the Hudson River was declared a Superfund site because of widespread PCB contamination. The PCBs were deposited over a 30-year period from two General Electric plants in Fort Edward and Hudson Falls, New York. PCBs have bioaccumulated in fish and pose a potential health risk to people who eat them.

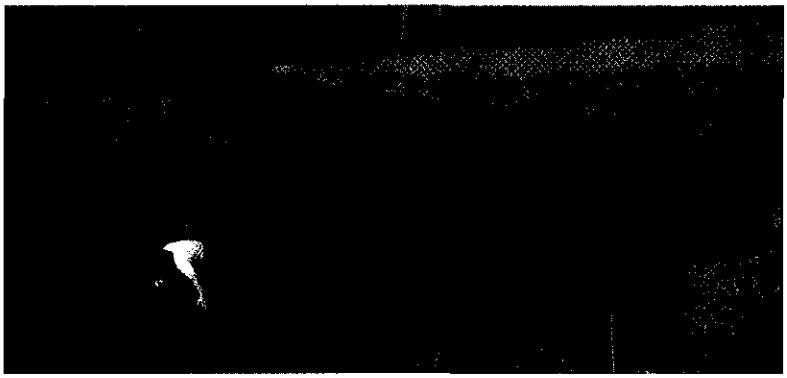
EPA has provided funding to expand New York state's efforts to educate the public about the state's advisories against eating PCB-contaminated fish from the Hudson River, and to assess the need for an enhanced education campaign for communities eating fish from nearby waters.

The New York State DOH and Department of Environmental Conservation (DEC) have used the funding to support multilinqual education and outreach along the Hudson River from Hudson Falls in Washington County to Battery City Park in Manhattan. The outreach has taken into account the demographics of the impacted communities and fish consumption patterns. The funds have also been used to assess the need for additional outreach activities in New York Harbor and the marine waters of Westchester and Nassau counties.

In addition, two full-time environmental educators and six seasonal "Health Rangers" have been hired with the funding to better inform people who may be eating Hudson River fish about the state's health advisories and to assess the effectiveness of the outreach efforts. Health advisory brochures have been reprinted in English and Spanish, and a Russian brochure also has been developed.

New York's DOH and DEC work with local communities to identify the most effective ways to educate targeted audiences about the state's fish consumption health advisories. The educational campaign has reached beyond anglers to include the diverse cultural/ethnic populations who consume fish taken from the Hudson River.

The final ROD on a plan to clean up the river was signed in February 2002, after years of scientific study and with extensive public input. EPA received more than 70,000 comments on the proposed



cleanup plan. EPA also reaffirmed its commitment to a full public process that encourages meaningful discourse on critical issues that could impact Hudson River communities. The final cleanup plan calls for dredging 2.65 million cubic yards of contaminated sediment from a 40-mile stretch of the upper Hudson to remove an estimated 150,000 pounds of PCBs.

Before dredging can begin, EPA must prepare a design for the project. This design phase, which will include the development of performance standards and the siting of dewatering facilities in consultation with a broad range of stakeholders, is expected to take about 3 years. Affected stakeholders are helping to develop the community involvement framework. In May 2002, an independent evaluation of best practices for involving stakeholders in remedial design and remedial action activities at the Hudson River PCBs site was released and in July, regional stakeholders were consulted to identify the best approach for public participation, including communication, input, and information sharing methods.

Region 3

Baltimore Harbor Fish Consumption Study

Region 3 provided financial assistance to the MDE to conduct a comprehensive fish consumption survey of subsistence fishers in Baltimore Harbor. The survey data, collected by MDE through the cooperative efforts of Sojourner Douglass College and the University of Maryland at Baltimore's Environmental Justice Project, are being used to develop education and outreach strategies for the area regarding subsistence fishing and fish consumption, as well as to provide valid fish consumption data for risk estimates.

Region 6

Lake Pontchartrain, Louisiana

There were four major swimming beaches in Lake Pontchartrain near New Orleans only 30 years ago. These beaches were closed in the 1960s due to the presence of fecal coliform bacteria from effluent discharges. Since then, significant increases in development and industrialization have further contributed to water quality problems in the New Orleans area.

Over the past 10 - 15 years, Region 6, in partnership with the Louisiana DEQ has initiated enforcement actions against the major cities responsible for the contamination. These actions have required spending nearly a billion dollars for new sewage treatment facilities and improved sewage collection and treatment. The elimination of shell dredging by Louisiana DEQ has also had a significant beneficial impact. Some of these actions are ongoing and will continue through 2015.

The infrastructure improvements, in conjunction with extensive inspections by Louisiana DEQ, and compliance assistance (funded by the Lake Pontchartrain Basin Foundation) are now beginning to have significant impacts on improving water quality in Lake Pontchartrain. The 2001 monitoring data show that one beach had no violations, and monitoring for all others (except the north shore beaches) has shown compliance with the standard for most of the year.

In addition, in the consent decree for Baton Rouge, the $1.125 million SEP requires elimination of poorly operated, privately owned sewage treatment plants in five subdivisions. In the New Orleans consent decree, the $2 million SEP requires the city to create wetland areas adjacent to Lincoln Beach that will enhance the area's fishery and serve to filter storm water runoff. Lincoln Beach is a beach that was historically used by the African American community in the New Orleans area. Ongoing water

quality improvements will continue to draw residents back to the area as opportunities for fishing and swimming continue to grow.

Region 8

Cheyenne River Sioux Fish Consumption

Region 8 has facilitated the support of several EPA programs to help the Cheyenne River Sioux address a problem with mercury contamination of fish. EPA's Superfund program assisted the tribe in developing capacity to sample water and fish tissue for mercury. The tribe surveyed members on fish consumption practices and issued a fish advisory.

Recognizing that restricted use measures are not sufficient to deal with potentially disproportionate health impacts, Region 8 initiated a series of actions to address the situation. The Agency convened meetings of regional programs to address the challenge of going beyond the fish advisory to fixing the mercury problem.

EPA staff from the air, water quality, Superfund, TRI, and air modeling programs met with the tribe and the United States Geological Survey (USGS) to share information and discuss possible actions. In addition, Region 8 supported a proposal to EPA's Office of Research and Development (ORD), which was asked to research the source of the mercury and develop best management practices for ponds on the reservation.

Region 9

The Ma'at Youth Academy

The Ma'at Youth Academy leveraged a Region 9 grant to obtain seed money from the California Endowment. For this funding, the students secured the technical assistance of two medical physicians to design a fish consumption survey to be administered at the Richmond Marina and San Pablo Reservoir, and published and distributed a public health advisory to caution individuals about the danger of methlymecury in fish caught from the San Francisco Bay.

Region 10

Temperature Criteria Guidance Development Project

Region 10, in collaboration with representatives of the Pacific Northwest tribes, National Marine Fisheries Service, FWS and the states of Oregon, Washington, and Idaho, has initiated a project to establish regional temperature criteria guidance for the Pacific Northwest. The project will develop water temperature criteria guidance to meet the biological requirements of native salmonid species for survival and recovery pursuant to the Endangered Species Act and the CWA. Geographically diverse thermal regimes, hydrogeological constraints, zoogeography, and salmonid life history patterns will be reviewed in the development of the criteria guidance.

Columbia/Snake River Temperature Total Maximum Daily Loads (TMDLs)

Historically, the Columbia and Snake Rivers and their tributaries teemed with salmon and steelhead. These fish are imbedded in the culture and heritage of the Native American tribes who continue to rely upon them nutritionally, commercially, and spiritually. Today, the Columbia River Basin is home to 14 different species of threatened or endangered salmonids and resident fish. Various federal agencies, states, and tribes (and, increasingly, regional and local governments) have invested heavily in fish recovery efforts.

EPA's work related to fish recovery focuses primarily on water quality. Enforceable water quality standards

are based upon beneficial uses, which across the basin include the provision of healthy conditions (e.g., adequate available cool or cold water) for the spawning, rearing, and migration of salmon and resident fish. EPA is working with the states through its review and approval of TMDLs, which are allocations of allowable pollutant discharges, for the tributaries. In addition, EPA is working more closely with the states and tribes on the actual development of these allocations for temperature and dissolved gas for the mainstem Columbia and Snake Rivers. Once developed, the TMDLs provide the foundation for defining actions to achieve the water quality improvements necessary to provide healthy conditions for fish and other aquatic species.

Broad fish recovery and water quality protection efforts have specific implications for anyone who relies upon the fish of the region for sustenance (including subsistence) or income. In addition to the many issues related to abundance, there are questions about risks from consuming fish that may accumulate contaminants over their lifetime.

As Region 10 proceeds with its water quality work, the Agency will seek to be mindful of the federal government's treaty obligations and trust responsibilities to the tribes to better align policies, practices, and regulatory programs to meaningfully take into account the impacts on Native Americans and their culture.

International Problems and Solutions

Technical Assistance to Strengthen Pesticide Regulatory Programs in Central America

Under an agreement between EPA and the U.S. Agency for International Development (USAID) to provide environmental technical assistance to the Central America region, EPA's Office of Pesticide Programs (OPP) is coordinating activities in the area of pesticide regulation. The objective of this program is to assist countries of the region to implement international chemical agreements (e.g., Stockholm Convention on Persistent Organic Pollutants and the Rotterdam Convention on Prior Informed Consent) through strengthening regulatory processes.

In 2002, staff from OPP participated in workshops with the Central America Commission for Environment and Development and pesticide regulatory officials from the region to review the status of each country in meeting the treaty obligations and to identify priority technical assistance needs. Currently, EPA and its partners in the region are designing training programs to assist regulatory officials in accessing and exchanging scientific and technical information on chemicals and in evaluating the risks and benefits of pesticides utilizing information from EPA and other international organizations. These outreach and training efforts will strengthen cooperation between EPA and the Central American countries and will promote the sound management of chemical risks throughout the region.

Chemical Information Exchange Network (CIEN)

In a partnership with the United Nations Environment Programme (UNEP), EPA is providing Internet access and training to chemical management officials in Africa and Central America. OPP contributes to this program by providing staff and expertise for training courses in both regions.

Africa and Central America are regions with low Internet connectivity and a high need for training in using the Internet to access regulatory information. Internet capability will assist countries in implementing international chemical conventions, obtaining access to technical information on best practices and alternative pest control approaches, and identifying funding opportunities for supporting strong chemical management programs. The

CIEN will also promote regional cooperation for the exchange of information and chemical expertise.

National Foundation for Integrated Pest Management Education (NFIPME) Grants

Under a cooperative agreement with OPP, NFIPME distributes grants to support the overall goal of reducing risks to the environment and human health from the use of pesticides in agricultural and non-agricultural settings in the United States. A grant was awarded to the Rainforest Alliance to develop IPM Education in the Tropics: Dissemination of Best Practices. The Rainforest Alliance was funded in 2001 and 2002 to widely disseminate IPM guidelines and manuals to small farmers throughout the Tropics. The project will distribute, via training workshops and the Rainforest Alliance's award-winning Web site, tools for helping small farmers in the Tropics achieve sustainability through IPM. IPM guidelines and manuals will be shared throughout the Sustainable Agriculture Network with farming communities and non-government organizations in Colombia, Brazil, Ecuador, Costa Rica, Honduras, Guatemala, Mexico, Belize, and El Salvador. The initiative is designed to make IPM work with small producers more efficient, lasting, and replicable.

Region 6

U.S./Mexico Border Contingency Planning Activities—United Response 2000 Exercise

In November 2001, the McAllen, Texas, Fire Department, along with the Protección Civil and Heróico Cuerpo de Bomberos of Reynosa, Mexico, held a binational emergency response exercise, called United Response 2000. The purpose of the exercise was to test the sister cities' emergency response plan.

The exercise took place during a five-state conference and involved local emergency planning committee members from Texas, New Mexico, Oklahoma, Arkansas, and Louisiana. The emergency exercise consisted of three simulated events. During the exercise, nearly 10,000 persons were evacuated from their residences and work sites. This was the largest mass-scale evacuation practice in Mexico outside of Mexico City, and the largest recorded land crossing of U.S. firefighters. Planning and preparation for this exercise required the coordination and cooperation of multiple agencies from both sides of the U.S./Mexico border.

United Response 2000 allowed McAllen and Reynosa to test their cross-border contingency plan. Issues were raised related to medical access in the border region, and the exercise helped assess communication vulnerabilities among geographically diffuse and governmentally diverse sites in Mexico City, Ciudad Victoria, and Reynosa in Mexico, and Washington, D.C., Dallas, and McAllen in the United States. United Response 2000 also demonstrated how a response governed by an incident-management system called United Command would operate. The primary focus of United Command is to combine and coordinate the efforts of local response and support agencies in safeguarding human life, property, the environment, and the area's economic infrastructure.

The exercise confirmed the need for additional and ongoing cross-border coordination, training, and local resource management, with a special emphasis on environmental protection and transboundary issues. The exercise also stimulated interest in Reynosa regarding the incorporation of *maquila* (assembly plants in Mexico that are primarily owned

by U.S. companies) brigades as an environmental protection resource. At the federal level, United Response 2000 provided a forum for communication between EPA's on scene coordinator in Dallas and the state director of civil protection in Mexico. Internationally, it served the purposes of two international organizations, the United Nations (UN) and the World Health Organization (WHO). The exercise demonstrated the United Nations' Awareness and Preparedness for Emergencies at the Local Level process, which was developed by the UN to demonstrate how to effectively handle technological accidents and emergencies. United Response 2000 was a unique and invaluable experience and demonstrated the ability of environmental issues to generate high levels of cooperation among local, region, state, and federal officials.

Electronic Assistance to the Border Regulated Community—Border Compliance Assistance Center

Region 6 is working jointly with OECA and the National Center for Manufacturing Sciences to develop a Web site designed for businesses to easily find online information to help understand and comply with regulatory requirements for handling and transporting hazardous waste/hazardous materials across the U.S./Mexico border. This initiative was announced in 2001 at the United States/Mexico Binational Commission meeting. Other partners include the U.S. Customs, DOT, four border state agencies (TCEQ, New Mexico Environmental Department, Arizona DEQ, and California EPA), and Mexico's Agency for the Environment and Natural Resources.

Nationally, 10 compliance assistance centers are currently operating, addressing the needs for sector-related small businesses (such as agriculture, auto repair shops, metal finishers, printers, and local government) to get comprehensive, easy-to-understand compliance information targeted specifically to the industry.

Region 8

Devils Lake Outlet, North Dakota

The Army Corps of Engineers is proposing a federal project to construct an outlet to control flooding from Devils Lake in North Dakota over lands belonging to the Spirit Lake Nation and private citizens. EPA is working on a NEPA analysis of the Devils Lake Emergency Outlet. Issues that are currently being addressed are water quality modeling, biota transfer, mitigation, and International Boundary Waters Treaty compliance.

Issues of concern to the affected communities involved include the lack of an environmental justice analysis in the EIS, lack of communication with the communities, lack of analysis of cultural issues, and no specific analysis of the human health and risk factors relevant to the affected populations identified in the EIS. Comments and treatment of these environmental justice concerns are currently being considered by the Corps and others on the team.

Region 9

U.S./Mexico Border

Region 9 led the development of the Federal Regional Council Border Committee for more than a year before Executive Order 13122, Interagency Task Force on the Economic Development of the Southwest Border, was issued. In this role, the Region elevated the issues of border communities and Region 9 as a whole to the agencies that now comprise the Federal Regional Council.

Once the Executive Order was issued, Region 9 played a key leadership role with the Treasury Department in establishing the institutional infrastructure and interaction model to implement the Executive Order. This work resulted in a community conference on colonias organized with HUD, setting up pilots in communities as stated in the Executive

Order, establishing a positive leadership role for EPA among other federal agencies active in the border region, and increased positive interaction between human service agencies and national resource agencies in the border region.

Current Region 9 efforts involve working with Department of Labor (DOL) and Department of Agriculture (USDA) staff to conduct a resource analysis for the two border pilot programs in Imperial Valley, California, and Nogales, Arizona. DOL and USDA are the lead agencies for the pilots in California and Arizona, respectively.

Mexico Environmental Management Systems (EMS)

In cooperation with USAID and EPA's OW, Region 9 is supporting implementation of EMS at three Mexican municipalities in Nogales (Sonora), Piedras Negras (Coahuila), and Zapotlan El Grande (Jalisco). As a condition of participation, each municipality has agreed to design and implement a comprehensive EMS within 2 years, adopt measurable performance objectives for their EMS to address regulatory compliance, reduce impacts from unregulated activities, adopt appropriate pollution prevention practices, conduct continual improvement of the performance of the EMS over time, communicate with relevant local stakeholders, and share information with all stakeholders, as well as EPA and USAID, as their EMS is developed and implemented.

U.S./Mexico Border Hazardous Materials (HazMat) Response Coordination Project

The U.S./Mexico Border HazMat Response Coordination Project provides funding for equipment and training to improve incident response and multi-agency coordination along the U.S./Mexico border. The project complements the national and state attention placed on strengthening the relationship between the United States and Mexico.

Region 9 provided a $50,000 grant to the city of Calexico for the purchase of emergency response equipment and a hazardous material trailer. Region 9 and California's DTSC worked with local agencies, specifically county HazMat programs along the U.S./Mexico border to enhance local capacity to respond quickly to hazardous materials incidents at several border crossing stations.

Calexico needed specialized equipment to respond to border hazmat incidents. Captain Navarro stands in front of Calexico's brand new rig, which bears a binational logo. In September 2002, Region 9 supported a hazmat exercise in Mexicali where the new hazmat rig was on display.

This approach afforded EPA and the state, through the grant relationship, greater entry to existing mutual aid efforts, thus maximizing the local agencies' existing relationship with their Mexican counterparts, their presence on the border, and their bilingual/bicultural staff.

Additionally, this project has supported a broader Agency effort to develop binational "sister city" hazardous material response plans between California and Baja California, Mexico. Region 9 fostered a collective effort to provide training to firefighters in Calexico and meet critical equipment needs, which both Imperial and San Diego counties would have been unable to meet otherwise. This project allowed agencies to work together to reduce fragmentation of effort, to maximize available resources, and to enhance problem identification and resolution.

Lead Problems and Solutions

Region 1

Affordable Lead-Free Housing

In 2000 and 2001, The Way Home, Inc., a non-profit social service organization that helps low-income families obtain and keep safe, affordable housing, received two Environmental Justice Small Grants totaling $30,000 from Region 1. These grants are to protect children from health hazards in their homes.

With a population of 102,000, Manchester, New Hampshire, is the largest city in the three northern New England states and is the state's epicenter for lead poisoning. A large concentration of pre-1950, multi-family dwellings with lead-based paint are located in the city's center. Much of this older housing stock is in need of repair and is likely to contain cockroaches, dust mites, rodents, and mold, which can trigger asthma episodes. Designated as a preferred refugee resettlement area, Manchester has a diverse and growing minority population (reflected by the more than 70 languages spoken in its schools). The city's center neighborhoods are largely made up of low-income and minority residents who confront numerous roadblocks to securing safe housing.

Peer Education as a Model for Environmental Justice is focused on identifying and reducing lead poisoning among children in Manchester. Staff from The Way Home's Healthy Home Services, the Manchester Health Department, and the New Hampshire Minority Health Coalition collaborated to go door-to-door every Thursday beginning in July 2001 to identify children most likely to be at risk for lead poisoning. Through the project, a licensed lead abatement contractor also worked with landlords and property management companies throughout Manchester on low-cost techniques to reduce potential lead hazards through preventative maintenance. The Way Home also began building a working relationship with the Manchester Building and Health Departments by setting up meetings and looking for opportunities to help each other.

The Way Home also initiated the creation of the Greater Manchester Partners Against Lead Poisoning coalition, which is made up of a pediatrician and nurse case manager from Child Health Services, a health officer and program staff from the Manchester Health Department, a representative from the city's Building Department, the president of a local landlord association, and representatives from The Way Home.

Lastly, The Way Home used GIS to create maps showing areas of high lead risk in Manchester to help community and health care providers address these health concerns. The data for the maps were collected between 1999 and 2000 through EPA's Child Health Champion Pilot Project, which funded $135,000 worth of activities in the Manchester area by a consortium of organizations.

Emergency Authority for Lead Cleanup

In September 2001, Region 1 ordered an immediate cleanup of lead contamination at a commercial property in Fall River, Massachusetts, that houses several businesses, including a dance studio for

approximately 50 children and adults. Between 21.7 and 29.3 percent of Fall River families with children under 18 years of age live below the poverty level, and the school attracted some students from low-income families in the area. The building is a three-story former mill building that is now rented for a variety of commercial operations. During renovations, a contractor sandblasted lead-based paint without taking proper precautions, allowing lead-contaminated dust to spread throughout the building. Preliminary results from EPA's sampling and a private lab showed high levels of lead in the dust from the sandblasting.

When contacted by EPA, the property owner agreed to immediately hire a licensed lead abatement firm to remove lead dust from the building. During that time, EPA staff restricted access to the building, so that children would not be exposed to the lead dust. EPA formalized the agreement with an administrative order for the cleanup using its emergency powers under federal hazardous waste laws, and the property was quickly remediated.

Lead-Free Boston

In November 2001, a summit entitled Let's End It Here brought together Region 1 staff; members of city, state, and federal agencies; citizens; and activists to create a blueprint to eliminate childhood lead poisoning in Boston by 2005. In May 2002, the Lead Action Collaborative's report, Blueprint to End Childhood Lead Poisoning in Boston by 2005, was released.

The blueprint outlined several primary goals: (1) develop a "Lead-Safe Home" campaign to educate the public about the dangers of lead poisoning, (2) design a database of communities at high risk for lead exposure, (3) improve services for lead-poisoned children and their families to provide better access to health care and medical insurance, (4) provide outreach programs to at-risk populations to increase awareness and screening rates, and (5) advocate for affordable housing construction and rehabilitation to provide access to lead-safe housing for at-risk populations.

Region 1 is fulfilling a crucial role in the development and execution of the blueprint. To locate high-risk housing units, EPA staff will design a GIS mapping tool and database to be used throughout the community. As a critical partner, EPA will also collaborate with local realtors and owners to develop and market lead-safe approved homes to at-risk families.

Region 2

Lead Program

Region 2's lead program coordinates with HUD on lead-based paint hazard response. In 1997, Region 2 initiated enforcement as per the Disclosure Rule of the Residential Lead Based Paint Hazard Reduction Act of 1992. An example of interagency coordination includes the exchange of inspection candidate information with HUD on a quarterly basis.

The lead program is responsive to all communities via tips and complaints and via the priority to address the environments of children under 6 years of age and when elevated blood lead levels are reported. By the nature of the problem, the lead program is particularly responsive to environmental justice populations and communities as enforcement and response action is taken to ensure safety in environments where pre-1978 housing stock and low-income neighborhoods are likely indicators of potential hazard.

Faith-Based Forum to Address Hazards of Lead-Based Paint

The majority of the housing stock in Patterson, New Jersey, was built prior to 1950. These units consist primarily of multi-family dwellings, of which over

90 percent can pose health-related risks to its residents from the prior application of lead-based paint.

The Congress of National Black Churches/Paterson, New Jersey Affiliate and Churches United for Community Outreach of the Paterson Task Force conducted a work forum to address the hazards of lead-based paint in Paterson.

The goals of this initial forum were to: (1) educate local community leaders; faith-based organizations; and state, local, and federal government officials from the environmental, health and housing sectors of the hazards; (2) seek and expand on partnerships between participants; and (3) identify resources to address lead-based paint issues. Region 2 participated in the event by providing information concerning the Agency's role in lead abatement and outreach and in environmental justice activities, including grant resources (e.g., Environmental Justice Small Grants Program). In addition, Region 2, staff from the New Jersey DEP, and HUD provided presentations to the audience. The inaugural meeting was held in August 2001, with subsequent meetings held on either a bimonthly or quarterly basis.

Region 3

Lead Awareness in Baltimore

Residents living in areas at high risk for lead-based paint exposure in Baltimore received more than 5,000 lead dust cleaning kits and appropriate training to increase awareness of lead poisoning risks. Two lead education and awareness videos also were provided to health care agencies in 24 subdivisions. These videos continue to be used for educational purposes in the health clinics around the state.

Abex Superfund Site, Portsmouth, Virginia

The Abex Corporation Superfund site is located in the eastern section of Portsmouth, Virginia, and centers around a 2-acre property containing a former brass and bronze foundry. The primary contaminant of concern is lead; however, other contaminants are present as well. The site includes the former foundry as well as adjacent contaminated soils. The largest residential area impacted is a portion of the Washington Park Public Housing Project, which was home to approximately 160 predominately African-American families.

Under an EPA Consent Order, in August 1986, Abex excavated and removed contaminated soils from the Abex property and adjacent properties, including the Washington Park Housing Project and other residential areas. In 2001, an agreement was reached where by all of the residents of Washington Park would be relocated. Those relocations have now been completed. The Washington Park housing Complex is slated for demolition, but demolition of the units has yet to occur.

The site is one of the more complex sites in Region 3. Concerns about elevated blood lead levels in children led Region 3 to bring in both CDC and ATSDR to provide information, consultation, and support regarding lead poisoning and other public health issues. ATSDR and CDC participated with the EPA in a series of public meetings and information sessions for the residents. These agencies reviewed and assessed blood lead test results, which were collected and analyzed by the Commonwealth of Virginia.

EPA also brought HUD into the case, first because of questions regarding permanent relocation of Washington Park residents, then due to temporary housing issues, and finally because of renewed concern for permanent relocation. HUD assumed the lead on the relocation issue. The Army Corps of

Engineers assisted EPA with the temporary relocation of residents during the remedial cleanup of the site, including finding lodging for the residents during their temporary relocation. The Department of Justice (DOJ) provided significant legal assistance during the hearing process. The complex nature of this site makes it clear that the engagement and involvement of all the appropriate federal partners is vital in addressing the range of environmental justice issues that can be associated with a site.

Lead in Logan Community, Philadelphia, Pennsylvania

The Logan section of Philadelphia is a predominately African-American community. For years, many of the homes were sinking due to construction on top of a filled-in streambed. Eventually these homes were condemned and the residents relocated. The city of Philadelphia tore down many of these homes in a 17-block area. Sampling by Region 3 found soil in the now vacant lots to have unacceptable concentrations of lead. Region 3 and the city entered into a Memorandum of Agreement (MOA) in October 2000, whereby the city would perform the necessary soil removal and other activities, with Region 3 performing an oversight role. The community has been very active in pursuing a remedy for the lead problem.

The city has removed and disposed of the top 12 inches of soil from the six designated areas characterized as having elevated lead levels. These areas were then backfilled with 11 inches of clean fill and 1 inch of topsoil. Excavation was completed in less than a month in December 2000. The arrival of clean fill began on January 3, 2001, and the last load of topsoil arrived on January 11, 2001. The city of Philadelphia continues to control the site.

Lead Initiative—Chester, Pennsylvania

As part of Region 3's Chester Initiative, supported by community organizations, work was conducted on the Chester Lead Poisoning Prevention Project funded by a SEP. The SEP attempted to complete a children's blood lead level survey, educate citizens about the dangers of lead poisoning, and reduce the levels of lead to which children could be exposed in homes participating in the study. The SEP also included the removal of lead contamination from homes. This project has now come to an end.

Region 5

Lead Poisoning Awareness Campaign

The incidence of childhood lead poisoning is particularly high in Detroit due to the high concentration of older housing stock and disproportionately low socioeconomic status. In 1999, almost 5,000 children were identified with elevated blood lead levels even though only 22 percent of children considered at high risk were screened for lead poisoning.

Health department estimates show that at least 18,000 children in the city of Detroit have some level of lead poisoning. In order to increase awareness of the social, economic and medical aspects of lead poisoning and increase preventative and abatement measures in the effected community, 12 productions of the play *Jimmy's Getting Better* will be showcased to various community audiences. This project is expected to increase awareness of the social, economic, and medical aspects of lead poisoning and increase preventative and abatement measures in the affected community. Partners supporting this effort include the city of Detroit, Detroit Children's Hospital, Detroit Public Schools, HUD, Region 5, Wayne County, and Wayne State University.

Chicago Transit Authority (CTA) Lead Poisoning Prevention Advertising Campaign

Region 5 conducted an 8-month transit ad campaign from July 1999 through February 2000. During this period, some 1,300 lead awareness posters were displayed on four separate bus routes

and four separate subway (train) routes. Bus and subway routes selected were those that service a high proportion of minority and low-income families. The ads urged readers to call the National Lead Information Hotline where they would be referred, if appropriate, for information on childhood lead screenings in the Chicago area. Anecdotal information from this campaign indicated that it led to increased lead screening in these communities.

A similar campaign was repeated in 2002, leveraging funds from Region 5 and Chicago DPH, and in-kind services from CTA. This advertising campaign increased awareness of the hazards of lead to young children in high-risk communities, especially high-minority and low-income communities. A local telephone hotline number will be utilized rather than the national hotline number. Use of a local telephone hotline will facilitate a better evaluation of the effectiveness of the project.

Chicago EPA/HUD Lead Enforcement Activities

Late in 1998, an enforcement team comprised of Region 5, DOJ, and HUD began a project to identify large property management companies with histories of lead-poisoned children within the city of Chicago to monitor these companies' compliance. Chicago DPH provided names of entities that had been issued multiple lead-based paint abatement orders.

Using these data, the enforcement team focused on four large property management companies with the greatest number of abatement notices and therefore the greatest number of children with elevated blood lead levels. Over several years, more than 300 abatement notices were issued to these four entities with multiple abatement notices often issued, over time, to different apartments within the same building and sometimes to the same apartment. Based on the recurring abatement notices and the fact that buildings would likely have the same paint history, it was apparent that these buildings had widespread lead-based paint contamination problems and represented a significant health risk to young children.

Region 5; DOJ; HUD; and Illinois, Chicago, and Cook County health officials have entered consent decrees with three of these property management companies who failed to warn their tenants that their homes may contain lead-based paint hazards as required by the Residential Lead-Based Paint Hazard Reduction Act of 1992. The fourth property management company declined to participate in a consent decree and has been issued a civil administrative complaint alleging 2,600 counts of violations of federal regulations on lead-based paint and its hazards.

Under the terms of the consent decrees, the property management companies will test for and conduct cleanup activities to make these units lead-safe following HUD guidelines in their nearly 10,000 apartments in Chicago. The testing and cleanup activities will be conducted over 6 years and are estimated to cost several hundreds of thousands of dollars. The three companies will also pay a total of $90,000 in penalties.

In addition, one of the companies agreed to pay $100,000 to fund a children's health improvement project, which will entail abatement activities such as window replacement and elimination of other lead-based paint hazards in low-income housing not owned or managed by this firm. Another of the three companies will give $77,000 to a community-based health center to provide free blood lead testing for children in Chicago and south Chicago.

Northwest Indiana Lead Outreach

In Spring 2001, Region 5 conducted a targeted lead outreach project in partnership with the Northwest

Indiana Lead Task Force, a broad coalition of health- and community-based organizations serving the needs of two northwest Indiana counties. Northwest Indiana covers Lake, Porter, and La Porte counties in Indiana. Mailing lists were assembled for churches, physicians, preschools and daycare centers in three select communities, and these parties were each mailed a package of information concerning lead poisoning prevention resources and contacts. The Task Force later followed up with these parties to offer further assistance. A state legislative luncheon and press conference were among the outcomes which helped to raise awareness of lead poisoning in northwest Indiana and the need for screening and intervention activities.

Region 6

Lead-Based Paint Poisoning Prevention and Lead Hazard Awareness in Houston

Region 6 provided grant funding to the Houston Childhood Lead Poisoning Prevention Program to improve lead poisoning prevention efforts and lead hazard awareness. Another goal was to enhance screening and treatment rates among medical providers in selected target areas of the city.

The city of Houston identified 10 high-risk zip code areas within the city, based upon historical prevalence of lead poisoning, high-risk age group (1- and 2-year old children), poverty level, age of housing unit (pre-1950), and racial (non-white) and ethnic (Hispanic) minority status. The city of Houston developed a pamphlet entitled *The ABCs of Lead Screening for Children: A Quick Reference for Medical Providers* and an educational program to increase health care providers' knowledge regarding prevention of lead poisoning, awareness of blood lead screening guidelines, followup treatment of poisoned children, and utilization of community resources for lead poisoning prevention efforts.

Lead-Based Paint Poisoning Prevention and Lead Hazard Awareness in Dallas

Region 6 provided grant funding to the city of Dallas Childhood Lead Poisoning Prevention Program to improve followup testing rates for confirmation of elevated blood lead levels in children in the city. The city identified five zip codes where little or no followup occurred by health care providers for children with blood lead levels equal to or above 10 ug/dl. One of the major findings of the project was that 76 percent of the parents were not told by physicians/clinics about the need for followup testing, and 86 percent of the parents who received such information related to blood lead poisoning did return to the clinic for followup. Approximately 90 percent of the parents of children with elevated blood lead levels who did not receive appropriate information related to blood lead poisoning did not return for followup confirmation testing. The project has allowed the city of Dallas to identify the factors contributing to the poor blood lead level confirmation testing rates in the city.

Region 8

Lead Information Booklet

Region 8 is supporting the work of partnerships to abate the health risks of lead-based paint. The northeast Denver housing stock is some of the oldest in the city, and indeed, the West. Partnerships have formed among local, state, and federal agencies and community organizations to bring together the resources to test children's blood, identify the source of contamination, find funding for abatement, and clean up the residences. While existing partnerships are committed and effective, Region 8 is working to further support these partnerships to provide widespread testing, identify consistent long-term funding for testing and abatement, and educate health care professionals and community residents about the importance of testing for lead.

To understand how lead-based paint poisoning issues were addressed in the area, Region 8 conducted a series of interviews with most of the parties working on these issues. It compiled the information and collected and assessed the level of involvement and cooperation among the parties. The Region discovered that the parties that participated in workgroups concerning lead issues had a high degree of cooperation with certain entities, but did not have complete information about the activities of everyone involved.

As a result, Region 8 developed a booklet with information about all of the entities working on blood lead testing and abatement activities for distribution among the various parties. After the distribution of the booklet, the parties will evaluate its effectiveness and determine whether additional coordination will be necessary.

North Dakota Children's Blood Lead GIS Project

Region 8 is developing a project to utilize GIS applications to identify environmental justice areas of concern using children's blood lead levels as one factor. The state of North Dakota and EPA are using health data on children's blood lead levels in North Dakota for this project. The information gathered will be mapped at the census block group level. The locations of the children with elevated blood lead levels will then be analyzed in relationship to their proximity to environmentally regulated facilities and Superfund sites. The analysis will provide direction for targeting inspections and other types of EPA activities. EPA and the state will also conduct outreach/communication activities to educate people who live in the areas with elevated blood lead levels on how to reduce or eliminate the hazards.

Region 10

Lead Hazard Reduction Through Outreach and Enforcement

Region 10's involvement with county and state-wide lead-based paint issues has resulted in a significant increase in inspections and outreach to targeted communities. Outreach has been enhanced by a MOA between Region 10 and the Oregon Public Health Services (OPHS), and Oregon Legal Services. OPHS is providing information about Region 10's lead-based paint enforcement program to families identified with elevated blood lead levels. Region 10 also funded the purchase of three portable blood lead analyzers, two of which are used by the OPHS and one by the Oregon Child Development Coalition, a Migrant Head Start Program in Oregon.

Permit Problems and Solutions

Region 3

Bartram Gardens

Region 3 engaged in discussions with various representatives of the city of Philadelphia government, citizens groups, organizations in the area surrounding Bartram Gardens, local politicians, and the Pennsylvania DEP regarding the issuance of a setback waiver for the Philadelphia Waste Services Construction Debris Recovery Center in the Bartram Gardens area.

State permit requirements required a setback of 300 yards from parks and schools for facilities such as this one. The Philadelphia Waste Services facility was less than 300 yards from Bartram Gardens (the oldest formal garden and park in the United States). As a result, no permit could be granted without a waiver.

Region 3 learned through discussions with stakeholders in Bartram Gardens that the community had concerns relating to a waiver of the 300-yard setback requirement for the Philadelphia Waste Services facility permit. These concerns included truck traffic, stress to community infrastructure (truck traffic on local streets and bridges), impacts on area businesses, public safety concerns, access to public parks, mobile source air emissions, and various quality-of-life issues.

The facility would have brought as many as 375 additional trucks per day into a community that already had a trash transfer station and other construction debris recovery facilities. In addition, streets, bridges, and other infrastructures were already under considerable stress, and would be even more seriously stressed by additional truck traffic.

The community suggested the possibility of filing a Title VI complaint if the waiver was granted. It felt that the granting the waiver would allow a land use to occur that would not be possible without the waiver.

EPA met with citizens, Pennsylvania DEP, the city, and representatives of the company regarding the various issues, and conducted tours of the area so that the stakeholders would have the opportunity to gain insight. Ultimately, the city of Philadelphia denied the waiver, and the state then denied the permit.

Region 4

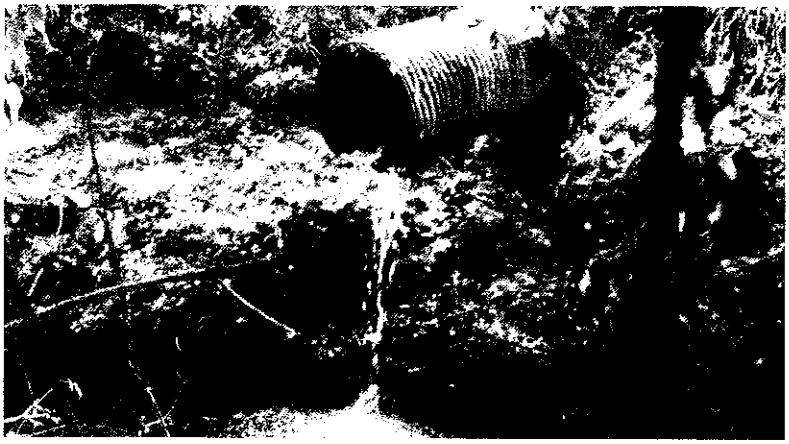
City of Atlanta Combined Sewer Overflow (CSO)

In 2001, a coalition of more than 20 local environmental justice and environmental groups, led by the Southern Organization Committee, held four listening sessions with EPA, Georgia state officials, and city of Atlanta officials to discuss Atlanta's Combined Sewer Overflow Remedial Measures Report. Concerns were raised about the affordability analysis prepared by the city, and the impact of the additional cost on low-income residents of the city. The coalition called for the city to consider total separation of the city's sewage and storm water systems. The coalition also raised a number of concerns with technical issues related to the city's proposed remedial actions.

As a result of the concerns raised by the environmental justice coalition, EPA issued conditional approval to the city, which required additional measures to be undertaken. The city also agreed to move one of its proposed locations out of a potential environmental justice area. These collaborative efforts gave community stakeholders an opportunity to discuss environmental justice and technical concerns as they pertained to the city's remedial measures report and demonstrated that citizens' involvement can contribute to the protection of public health and the environment.

Federal Inspections of Facilities

During 2001, nine facilities in Anniston, Alabama, received multimedia inspections from Region 4 and the state of Alabama. These inspections reviewed the air, waste, and hazardous waste management operational procedures of the facilities to determine whether the facilities were operating in compliance with their permits. As a result of these inspections, many issues were resolved, such as storm water runoff, air releases, and hazardous waste management.



Pesticide Problems and Solutions

Urban Pesticide Initiative

The wide misuse of the highly toxic agricultural pesticide, methyl parathion, in low-income communities around the country has resulted in significant public health risks to residents, especially children and other sensitive populations. Emergency response and enforcement actions to deal with this crisis have been an enormous resource cost.

Investigators are finding residues of methyl parathion sprayed indoors at levels more than 10-fold the action level set for evacuation of residents from their homes. Possible deficiencies in regulatory, enforcement, and outreach programs, including Certification and Training programs, inadequate attention to urban and rural communities; vulnerability of residents to misapplications, and how agricultural pesticides are sold and distributed, may have contributed to this situation.

While the Agency and industry have taken significant measures to prevent further misuse of methyl parathion, remaining deficiencies must be identified and corrected to prevent future misdirection and use of this pesticide and other highly toxic agricultural pesticides/toxic substances in communities.

There is an immediate need to focus on risks from pesticide use in and around homes. Of the 95 million households in the United States, approximately 75 percent have used, stored, and applied pesticides in their homes and workplaces. There are approximately 35,000 to 40,000 pest control firms and 344,000 commercial certified applicators in the United States In 1995, approximately 74 million to 100 million pounds of pesticides were used in and around homes. Nationwide there are hundreds of millions of applications per year.

As reported to the Poison Control Center, approximately 16,000 poisonings per year are associated with non-occupational use of pesticides. Reports also indicate that children account for about 50 percent of emergency room visits due to pesticide poisonings. In 1995 alone, 100,000 children were involved in common household pesticide-related (including chlorine bleach) poisonings or exposures.

To minimize the future misuse of pesticides in and around homes, EPA and state lead agencies are targeting all types of communities (urban, suburban, and rural), with a focus on sensitive populations such as children and others in low-income and minority communities, contributing to the Agency's commitment to provide environmental justice and EPA's goal that communities, homes, workplaces and ecosystems will be safe from pollution. The goal is to empower citizens to make informed decisions about the use of pesticides and toxic substances in order to protect their own and their children's health. Broad partnerships are forming to accomplish this mission, including EPA, other federal agencies, state and local agencies, and the private sector.

EPA has drafted a national program addressing pesticide misuse in general, in response to the emerging pattern of incidents involving the application of restricted use agricultural products for structural pest control indoors. EPA's draft enforcement program, to be implemented primarily by state pesticide enforcement grantees, has three goals: (1) detection of any diversion of restricted use pesticides from the agricultural sector into communities for illegal use indoors; (2) identification of any ongoing structural application of restricted use agricultural pesticides in urban and other communities, and pursuit of appropriate enforcement actions to deter such actions; and (3) prevention of future diversion and structural application through compliance assistance and education, particularly in areas with vulnerable populations, especially children. To achieve these goals, the

Agency is finalizing a national enforcement program in cooperation with state lead agencies, public health agencies, and other organizations, consisting of both proactive and reactive approaches.

Tribal Medicine Project

The Tribal Medicine Project (TMP), a cooperative agreement between EPA and George Washington University, was initiated in FY 2001 and renewed by OPP in FY 2002. This project funds a team of experts on pesticide exposure risks and symptoms to foster greater tribal awareness of pesticide health hazards in Indian country. The effort provides important training to tribal environmental program managers and health care providers on the prevention, recognition, and treatment of human toxic exposures.

In 2001, five pesticide and health training sessions were held that provided continuing medical education credits through George Washington University. In total, about 125 attendees attended the sessions, including representatives from 12 tribes, states, regions, agricultural extension services, growers, and farm worker organizations. The training was so well received in the Southwest that the InterTribal Council of Arizona now is including similar workshops as part of its pesticide curriculum. During the second phase of the project, which is just beginning, OPP plans to provide similar training opportunities to tribes in other parts of the country.

National Pesticide Medical Monitoring Program (NPMMP)

The NPMMP is a cooperative agreement between Oregon State University and EPA that provides information and assistance to the public in cases of suspected human pesticide exposure. The investigators have extensive experience in clinical toxicology, public health, and regulatory issues, and they are capable of translating complicated scientific and technical information to the layperson as well as professionals.

Low-income and minority communities are at higher risk of workplace and residential exposure to pesticides. NPMMP investigators play an important role in identifying and reporting cases in these communities where inadequate education, training, or other unique circumstances lead to an unnecessary exposure.

In addition to identifying and reporting such cases, the investigators provide additional assistance by directing individuals to appropriate health care and enforcement resources, and by serving as an ongoing source of information to others who may become involved in the inquiry. NPMMP investigators can also provide laboratory assistance in the clinical and environmental investigation of pesticide-related inquiries in cases where other resources cannot provide them. This is a very valuable service to individuals who otherwise would not be able to afford costs associated with laboratory testing.

In addition to providing a service to the public, NPMMP investigators are also active members of and consultants to professional organizations dedicated to improving occupational and environmental health of high-risk communities. Through involvement and participation on the Migrant Health Task Force, the NPMMP recently assisted the American College of Occupational and Environmental Medicine in its efforts to provide EPA with comments relating to proposed pesticide regulations that would impact agricultural workers. NPMMP investigators also are actively involved in EPA's National Strategies for Health Care Providers: Pesticides Initiative, an effort to improve the recognition, diagnosis, and management of pesticide- related health conditions.

Alaskan Natives Dietary Risk from Lindane

Lindane is a chemical that persists in the environment and can be transported long distances. As a result, Lindane is deposited in cold regions, such as the Arctic, where the compound becomes less volatile. Since Alaskan Natives rely heavily on game for their food source, OPP analyzed chronic dietary risks to Lindane and conducted risk assessment for these lifestyle diets. For Alaskan Natives, the chronic dietary risks are generally not of concern. The highest chronic estimate was based on highly conservative assumptions that probably overestimate dietary risk. The Agency also made a risk management decision on acute dietary exposure based on limited residue data that indicate acute dietary risks are not of concern.

Regulatory Protections for Farm Workers

The reregistration process for older chemicals has significantly reduced risks posed by agricultural pesticides to migrant and seasonal farm workers. Examples of risk reduction, achieved through work with the regulated community, include extending restricted-entry intervals, reducing maximum application rates, and canceling certain uses that pose very high risks to workers.

Farm-Based Education and Training

OPP, in cooperation with states, is developing a pilot program for hazard communication to farm workers. Working with state lead agencies, state cooperative extension services, key workers' advocacy groups, and health care provider networks, OPP intends to develop and deliver a worker training program that would combine pesticide safety training with pesticide-specific hazard communication/right-to-know information, workers' rights information, and children's health protection information.

OPP is initiating a pilot train-the-trainer program for pesticide worker safety trainers in migrant stream states. This training program will include a focus on children as a vulnerable population and will address the serious concerns raised by NEJAC and other stakeholders.

OPP will continue an aggressive communication campaign to broadcast pesticide safety information messages oriented to farm workers, farm working mothers, and farm workers' children. The communications campaign will be aided by OPP's current grant relationship with the Hispanic Radio Network.

OPP has expanded its AmeriCorps grant for worker pesticide safety training to add a focus on pesticide safety training for farm worker families. Also, OPP has awarded a grant to the Young Farm Workers Academy in Texas to teach children of farm workers how to protect themselves and their families from the risks of pesticides.

Region 7

Informing People on Pesticides (IPOP) Special Initiative Project

Region 7's Environmental Justice Program, in collaboration with other EPA programs, is researching the migrant and seasonal farm worker population using baseline population data from 1990. This information will be used in addition to current available data (e.g. demographics, crops grown, and pesticides used). This information will be mapped using GIS in an effort to visually capture the migratory patterns and/or popula-

tion pockets that exist within EPA Region 7. This research will enhance the Agency's ability to identify areas where migratory populations exist and where assistance can be targeted.

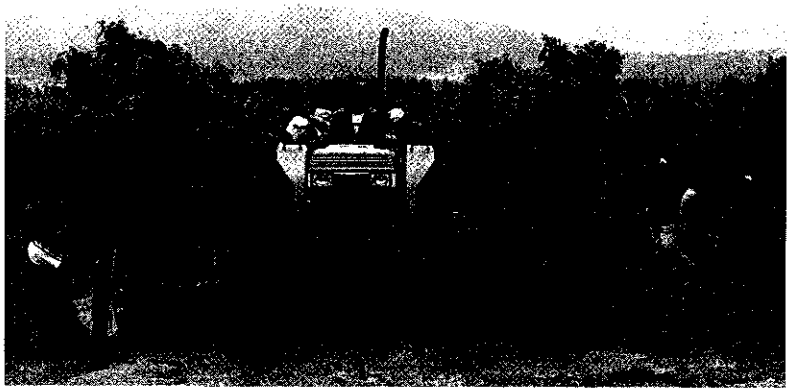
In addition to ongoing research, Region 7 has partnered with Harvest America Corporation (HAC) to educate migrant and seasonal farm workers in southwestern Kansas on pesticide safety and pesticide exposure risks. HAC received a grant of $30,000 for the IPOP project over a 1-year period.

The nature of farm work in Kansas has evolved over the years, and it continues to evolve as agricultural practices change. The types of farm work where pesticides are used and where exposure to these chemicals is a risk for the workers reflects the changes of agricultural practices. In the western and central areas targeted by HAC, pesticides may be used in feedlots for insect control. Workers in these operations will also be targeted. Farm workers are engaged in all levels of vegetable production and greenhouse operations which also rely on the use of chemicals for a variety of pest controls.

Region 8

Worker Protection Standards (WPS) Compliance

During Summer 2001, EPA conducted inspections at approximately 18 facilities (vegetable farms, sod farms, and others) to determine each facility's compliance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and, specifically, with the WPS. One area of interest involved proper training requirements for the use and application of pesticides by employees of these facilities, as well as whether the employer provided their workers with adequate personal protective equipment, adequate areas for washing with soap and water (decontamination), and adequate access to emergency care, if needed. A second area of interest involved a similar



set of requirements for workers in the field conducting tilling, preparation, and harvesting of crops.

Many of these field staff are migrant farm workers who do not speak English. Facility owners have an obligation to provide these workers with the same information in their native tongue.

Visits to these facilities involved an evaluation of the practices as they related to the WPS requirements, such as appropriate record keeping of training information; availability of information to all workers on type of pesticide used; pesticide safety information; emergency (hospital) contact information; and other appropriate information. EPA also conducted field surveys to determine the appropriateness and condition of field decontamination units. During the field surveys, workers were interviewed to determine the owner's compliance with WPS requirements. EPA provided special accommodations for the farm workers by employing fully bilingual staff to conduct these interviews.

At the end of each visit, EPA provided the facility owner with feedback on areas of concern, guidance on correcting these areas, and, if necessary, materials to assist them meet their obligations to the workers under WPS. As a result of these inspections and compliance assistance activities, approximately 1,200 workers should be protected appropriately.

Region 9

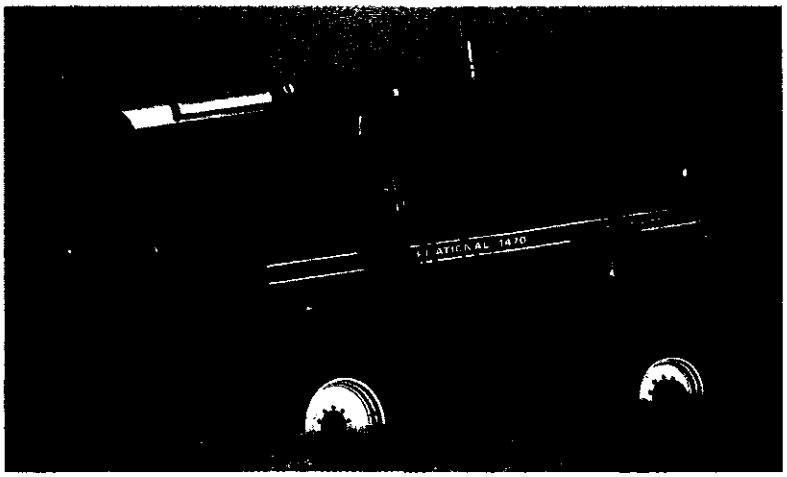
Pesticide Regulatory Programs

Region 9 provided technical assistance and more than $4 million in grant support to states and tribes for the development and enforcement of pesticide regulations. As in years past, a particular focus is to support tribes in building the infrastructure they need to maintain credible pesticide regulatory programs. In addition to this work, the pesticide enforcement team will maintain a federal field enforcement presence and take appropriate federal enforcement actions.

In supporting these efforts, Region 9 obtains: (1) a better understanding of tribal needs for pesticide programs based on additional information about tribal agriculture and pesticide use, and stronger tribal pesticide regulatory programs; (2) enforcement cases strategically targeted to address national priorities related to anti-microbial products and unregistered pesticides; and (3) inspections focused on regional priorities that are likely to include oversight of experimental use permits for biotech products and dealers who are distributing products that could be potential terrorist targets.

Sustainable Agriculture

Working in partnership with USDA and the state of California, growers, commodity groups, and other agriculture stakeholders, Region 9 delivered technical assistance and more than $600,000 in grant funding to support projects on IPM and biologically-based farming methods in cotton, stone fruits, grapes, strawberries, prunes, walnuts, and citrus. Region 9 is continuing to support pest management strategic planning activities for an additional 10 minor crops. This work is being accomplished through a major grant program sponsored by the University of California and through small grants that are coordinated with the USDA's Pest Management Center and other partners in the agricultural sector.



These efforts will yield measurable reductions in the use of organophosphates and other toxic pesticides, decreases in or prevention of pollution of water bodies, and adoption of integrated pest and soil management methods. These projects also contribute to the protection of public health and sustainability of farming systems.

California Indian Basket Weavers

The Yurok Tribe in Del Norte and Humboldt counties used Region 9 grant funds to conduct a study to influence growers in its community. As a result of the publicity and awareness generated by the study, which showed impacts on potential drinking water supplies, growers have not conducted aerial spraying for the last two seasons.

In the past, aerial spraying impacted up to 5,000 acres of land and the drinking water of 1,100 tribal members. The growers now voluntarily share their ground-level spraying schedule with the community, which provides notification that was previously not available.

Risks to Tribes from Forestry Uses

Hexazinone is an herbicide primarily used on forestry sites for woody plant and weed control. In some forested areas where hexazinone is applied, Native Americans gather plant materials for use in

their diets, for making traditional basketry, for medicinal purposes, and in ceremonial activities. OPP worked closely with Region 9 staff to determine effective protection of Native Americans from exposure to hexazinone.

Region 9 is working with the California Department of Pesticide Regulation (DPR), the U.S. Forest Service (USFS), and Native American tribes in California to determine their potential exposure to forestry herbicides (including hexazinone, glyphosate, and triclopyr) that may be occurring through their use of forest plant materials. In response to the health concerns raised by the Native American communities, Region 9 and DPR launched a risk assessment effort in 1997. This effort includes five steps: (1) measuring plant residue and surface water levels following herbicide application; (2) assessing the total exposures and risks involved using, where appropriate, the monitoring data collected; (3) informing tribal physicians of state regulations requiring pesticide illness reporting; (4) participating in mediated meetings with Native American communities to determine the key issues surrounding herbicide use; and (5) developing a video production about inadvertent exposure to herbicides.

In addition, USFS is working with local Indian tribes, and have established "no spray" zones where plant materials may be gathered free of pesticide residues. They are also working to reduce pesticide usage, prevent runoff, and minimize exposure by posting application sites and providing bulletins alerting the public where applications have or will occur.

Regional Initiative Grant for Korean Farmers

The Regional Initiative Grants Program supports pollution prevention projects that are important to and complement ongoing efforts in EPA's regional offices. One of the grants supports a project that provides pest management and pesticide training for at-risk Korean farmers in Hawaii.

Hawaii is home to many Asian farmers with limited English and literacy skills, who cannot read pesticide labels properly or benefit from pesticide training programs offered in English. A program has been developed on the island of Oahu to teach basic pesticide safety and pest management to some of these farming communities. There is a strong need to expand this program to neighboring islands.

Farm Worker Safety Initiative

Farm worker health and safety remains a priority issue in Region 9 and throughout the nation. Beginning in 1998, with Region 9 Environmental Justice Small Grant Program seed funding, the Environmental Center of San Luis Obispo (ECOSLO) initiated the Farm Worker Safety Initiative to conduct a survey of farm worker health. Since then, the project has grown into a broad-based and unique collaboration among non-traditional partners, including representatives from local, state, and federal government; university representatives; environmental and labor advocacy representatives; and the local agricultural industry. EPA pesticides staff have been overseeing the technical portion of the grant, which was leveraged to garner additional funding from a variety of other sources (County of San Luis Obispo, the California Department of Pesticide Regulation, the California Endowment).

The survey indicated that farm workers are concerned about the adequacy of pesticide safety training. This finding is consistent with other surveys taken throughout the nation and has contributed to national policy discussions on pesticide safety training.

Region 10

For Healthy Kids

For Healthy Kids focuses on preventing children's exposure to pesticides by educating agricultural workers on preventing "the take home pathway" for pesticide residues.

A baseline survey encompassing more than 570 households in the Yakima Valley was conducted in 1999. An agricultural field worker and a child under the age of 6 lived in each household. The study analyzed the presence of pesticide residues in household dust and human urine.

Twelve communities in the Yakima Valley will receive "intervention" programs of media messages, community-wide health fairs, and individual outreach. An additional 12 neighboring communities will serve as control groups and will not receive targeted education programs. Following 2 years of intervention, a final survey will be conducted, and urine samples will be collected from field workers and their children to examine changes in exposure with educational intervention. EPA partners include Fred Hutchinson Cancer Research Center, University of Washington Center for Child Environmental Health Risks Research, and the National Institute for Environmental Health Sciences.

WPS Enforcement Strategy

In 2001, EPA Region 10 implemented its WPS Enforcement Strategy in conjunction with the Oregon Department of Agriculture, Oregon Occupational Safety and Health Administration (OSHA), and U.S. Attorney's Office. Community representatives also were consulted to address the specific issues identified by farm worker advocacy groups and to meet the following objectives: (1) conduct comprehensive WPS inspections in the state of Oregon, (2) increase field presence on farms, (3) improve monitoring/oversight of WPS implementation, (4) reach agreement on what constitutes a serious violation and the appropriate penalties, (5) support current Oregon OSHA WPS enforcement actions, and (6) fully assess the WPS program.

This project resulted in the development of a detailed targeting strategy and inspection blitz in Oregon consisting of 60 unannounced, comprehensive WPS inspections, including farm worker interviews and 50 sanitation inspections with WPS components (central location, training, decontamination).

Farm Worker Training

Region 10 supported a Washington State Department of Agriculture (WSDA) Hispanic farm worker education program during 2001 and 2002 through EPA's cooperative agreement discretionary funds. WSDA has found that the majority of Hispanic farm workers responsible for handling pesticides are inadequately trained. They have limited knowledge about the toxicity of the pesticides they are using.

EPA, in partnership with WSDA, continues to address this issue by supporting Spanish-language farm worker training programs. The programs provide farm workers with WPS worker and handler training. Hands-on training with the equipment that handlers use on the job to protect themselves from pesticide exposure and residues also is conducted. Farm equipment dealers provide the necessary equipment.

WSDA also has partnered with a farm worker advisory group to help direct the training program. Advisory group members consist of farm workers, service organizations, community colleges, growers, agricultural processors, and the state cooperative extension service staff. Several members of the advisory group have served as trainers during the hands-on training sessions, which have several small group training stations.

Solid and Hazardous Waste Sites/Brownfield Cleanup Problems and Solutions

RCRA Brownfields Initiative

In April 2001, EPA announced the selection of five pilot projects to showcase the combined use of RCRA cleanup reforms and brownfields tools to encourage cleanup and reuse. The selected pilots proposed the field testing of innovative approaches such as leveraging state funds for demolition, using multiple legal authorities to deal with a bankrupt site, and ensuring community involvement in future land use decisionmaking. The RCRA Brownfields Prevention Initiative responds to concerns raised by cities, industries, and communities who have recently begun emphasizing the importance of looking beyond Superfund to address issues at brownfields sites in a more comprehensive manner.

Under this new initiative, EPA's goal is to help state and local governments and site owners adopt integrative approaches to cleanups and sustain future reuse of properties subjected to cleanup obligations under RCRA. EPA has internally allocated additional resources that pursue holistic approaches to expedited cleanups that protect public health and the environment. The second round of pilots includes a facility in Region 2, Union Carbide Caribe Inc., in Guayanilla, Puerto Rico.

Region 1

Cleanup and Cultural Resource Protection at Superfund Site

Between 1999 and 2001, Region 1 coordinated the cleanup of the Eastern Surplus Company Superfund site, an abandoned junk yard in Maine that was filled with hazardous materials. Throughout the cleanup, EPA employees carefully mitigated any impacts to cultural resources, including Native American artifacts

over 9,000 years old, by working collaboratively with the Passamaquoddy Indian Tribe, Maine DEP, and the Maine Office of Historic Preservation.

As part of the cultural resource protection, EPA hired professional archaeologists to excavate a portion of the site to document the cultural resources, funded a cultural study of the artifacts by the Passamaquoddy tribe, provided internships for several members of the Passamaquoddy tribe to participate in the archaeological investigations and studies, and agreed to develop outreach exhibits to educate the local community and the Passamaquoddy about the environmental cleanup and cultural resources at the site.

The project resulted in the discovery and documentation of an important cultural site for the Passamaquoddy, and also led to the creation of a preservation agreement for the site. The project also provided employment opportunities for several members of the Passamaquoddy tribe. Tribal members were taught archaeological investigation and interpretive techniques, and some members were employed in the cultural study. EPA also trained several members of the Passamaquoddy tribe in groundwater and soil sampling techniques.

The project resulted in collaborative efforts among EPA, some state agencies, the Passamaquoddy tribe, and the local residents regarding future site use and educational outreach activities. The major lesson learned was to involve the Native American community at the earliest possible time in the cleanup process to allow them to be fully involved in all phases of the cleanup.

Woonasquatucket River Greenway

Riverside Mills is a brownfields site located on 6 acres of land in the Olneyville neighborhood of Providence, which is one of the poorest communities in the United States. The city of Providence is working to clean up the Riverside Mills site so that it can be used as part of the Woonasquatucket River Greenway Project. Riverside Mills is a complex of four buildings that were abandoned in 1989 following a fire that consumed three of the four buildings.

After years of abandonment, the lots lay strewn with debris and contaminants of concern. Plans are underway to return the complex to beneficial use, revitalize distressed areas along the river, restore green space, and stimulate economic investment in the area. Future uses of the site were determined through a community planning process, and include a bicycle path and recreational opportunities.

Since the site will be reused for outdoor purposes, both the city and the state have decided to clean the site to the highest residential standard. Partial remediation was completed where there were underground storage tanks, and debris on the ground has been removed. The project is a collaborative effort among the Providence Plan Woonasquatucket River Greenway Project, the city of Providence Department of Planning and Development, the Rhode Island Department of Environmental Management, the Rhode Island DOH, and Region 1.

New Bedford Brownfields Environmental Job Training Program

Since 1998, the city of New Bedford, in partnership with New Directions and Bristol Community College, has offered a Brownfields Environmental Job Training Program funded, in part, with a $200,000 EPA Brownfields Job Training Grant. The program offers a 17-week Environmental Tech Aide training program twice each year to provide underemployed area residents with the tools necessary to work in the assessment, remediation, and redevelopment of brownfields and hazardous waste sites, and to provide a local labor force that can be employed in assessing and remediating such sites.

The training program includes the study of sampling, analysis, and site remediation through the use of innovative technologies. The program provides an education in technical expertise, as well as professional and life skills development, to residents living in communities impacted by brownfields.

Prior to entering the program, many of the students were unemployed, underemployed, welfare-to-work, or otherwise disadvantaged. Many of the graduates are now employed fulltime and earning living wages with full benefits. Many graduates will have opportunities through their employers for further education. Some graduates reported the desire and means to earn an Associates or Bachelors degree based on the skills and confidence gained through their experience in the program. Due to project's success, EPA awarded the New Bedford Job Training Pilot an additional $75,000 to continue the program.

Region 2

Puerto Rico Brownfields Program

Brownfields issues are a significant issue throughout Region 2 and pose particular challenges in Puerto Rico. Region 2's Brownfields Program works closely with agencies in Puerto Rico to address brownfields and provide coordinated assistance to communities. Partnership activities include participation in regular meetings and assistance workshops with communities. In addition to active partnerships, EPA assistance for state brownfield programs includes funding for program development.

More than 40 states have developed Voluntary Cleanup Programs (VCPs) to facilitate brownfields cleanup. Community stakeholders, as well as municipalities, developers, investors, and property owners in Puerto Rico, have expressed the need for a clear, predictable, and efficient hazardous waste site voluntary cleanup program with liability relief.

Supported by EPA brownfields funding, the Puerto Rico Environmental Quality Board (PREQB) is creating a VCP to stimulate the remediation and reuse of brownfields sites with low to moderate levels of contamination, such as former industrial properties and adjacent sites. EPA funds are being used to research VCPs and create the framework for a program through a participatory process.

The PREQB has developed an outline for the VCP. The actual VCP program structure, which includes regulations, financial incentives, and liability relief measures, is being developed in collaboration with legislators, state agencies, and the regulated community. Community organizations will be fully involved in the decisionmaking process. The goal is to provide private parties and others with a streamlined hazardous waste site cleanup process in Puerto Rico.

Currently, PREQB is forming an interagency committee to draft regulations and develop technical guidelines. The goal is to coordinate the activities of all appropriate offices and to ensure that there are no conflicts with other regulations. PREQB is gathering public input by conducting structured interviews with municipalities, banks, insurance companies, private owners, and environmental groups throughout the island. The results of this study will be presented at several broad stakeholder meetings. The first meeting for key stakeholders and legislators was held in Fall 2002.

Crane Brownfields Site—Trenton, New Jersey

The Crane site is one of four sites targeted by the EPA-funded Brownfields Assessment Demonstration Pilot in Trenton, New Jersey. Region 2 previously conducted a removal action to address hazardous materials left on site. EPA funded the community involvement activities and loaned a hazardous waste site remediation expert to the city who works from the city offices.

The 11 acres of industrial property, formerly the site of Crane Pottery, is located in a primarily low-income and minority residential community. The site was abandoned in the late 1960s, and was vacant for 30 years. The largest brownfield site in Trenton's inventory, the city acquired the property and demolished the buildings in 1972. For decades, this large site was a blight in the neighborhood, attracting dumpers and other criminals, and draining the city's funds.

The city partnered with Isles, a local community development corporation, to help organize the community surrounding the site; build consensus around reuse issues; provide a conduit for information regarding the site's development; and serve as a liaison among residents, business owners, and developers, all of whom participated in community meetings. In partnership with the community, which includes several churches and community centers, the city and developer were able to design a site plan and business recruitment strategy that has directly benefitted the community.

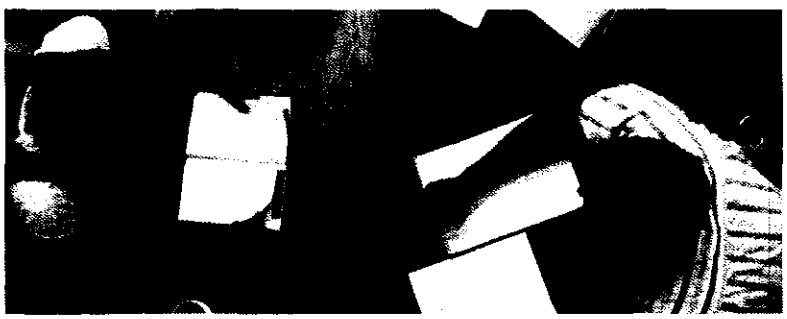
The property is now home to an 11-acre industrial park located in the U.S. Route 1 Commerce Center, which opened the first of its buildings in early 1998 and is now home to six prominent manufacturing companies. More business is planned, and additional manufacturing space is under construction. The Commerce Center redevelopment has stimulated investment in adjacent parcels. The redevelopment has brought innumerable benefits to the surrounding mixed-use area, which includes other industrial properties as well as public institutions, commercial facilities, and residences.

Through the efforts of the city, the state of New Jersey, the community, L&F Urban Renewal Properties (a private developer), and others, this site is now a bustling center of industrial and retail activity.

Region 4

PCB Landfill—Warrenton, North Carolina

Region 4 awarded a job training grant in 2001 to the Warren Family Institute in Warrenton, North Carolina entitled Environmental Jobs Training. The Institute is working jointly with numerous stakeholders to develop a curriculum of courses on hazardous materials handling and safety, construction safety, and innovative treatment technologies that will lead to enhanced employability of participants in the environmental remediation field. Course graduates will be listed in a database that will be available to employers statewide. The graduates will receive continuing education credits.



This project is a collaborative effort among the Warren Family Institute, Vance-Granville Community College, Warren County Community Advisory Board, North Carolina Employment Security Commission, Kittrell Jobs Corps Center, Warren County Board of Commissioners, North Carolina Department of Environment and Natural Resources, Warren County Department of Social Services, Kerr-Tar Council of Governments, and IT Corporation.

This area is well known for its watershed event in the environmental justice movement in the 1980s, whereby hundreds of residents and civil rights leaders protested the siting of the PCB landfill. Since early 2001, North Carolina has committed $13.4 million to detoxify this landfill.

Teachers Environmental Institute

Region 4 has awarded grants to 14 regional colleges and universities during 1999-2002 to sponsor Teachers Environmental Institutes for middle or high school teachers whose schools are located near waste management sites. The Institutes are designed to inform, promote, facilitate, and expand middle and high school teachers' knowledge in environmental areas, to promote the exchange of information and ideas, and to develop strategies for integrating environmental perspectives into curricula, research, and community outreach. The grants were awarded under RCRA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

These Institutes offer teachers an opportunity to learn about environmental research data collection by federal and state agencies, as well as practical suggestions for involving students and other community members in using this information for pollution prevention and environmental protection. During the 2001-2002 school year, three Institutes were held by the following colleges and universities: Spelman College, Georgia, 2001; North Carolina State University, 2001; and Mississippi Valley State

University, 2001 and 2002. The grants have enabled hundreds of teachers to learn more about environmental and public health topics and pass on this knowledge to thousands of students from the potentially affected communities.

Region 6

Training on Interagency National Tribal Open Dump Solicitation

The Tribal Solid Waste Interagency Workgroup is soliciting proposals for its fourth year for the Tribal Open Dump Cleanup Project. The workgroup members include representatives from EPA, the Bureau of Indian Affairs (BIA), Indian Health Service (IHS), the BLM, USDA, DoD, HUD, and the National Oceanic and Atmospheric Administration (NOAA). The workgroup identified four new proposals to solicit funding: (1) proposals that characterize/assess open dumps, (2) proposals to develop tribal integrated solid waste management plans, (3) proposals that develop and implement solid waste management activities/facilities for a tribe, and (4) proposals that clean up, close, and develop post-closure programs for open dump waste sites.

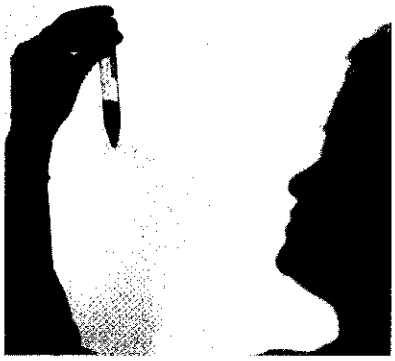
In December 2001, Region 6 solid waste staff provided grant writing training to more than 31 tribes in Ponca City, Oklahoma. Region 6 is the first EPA region in the country to initiate this type of technical training to promote effective integrated solid waste management planning and to close open dumps in Indian country.

Tar Creek Superfund Site

The Tar Creek Site located in Ottawa County, Oklahoma, encompasses the towns of North Miami, Picher, Cardin, Quapaw, Commerce and other areas within Ottawa County. From the 1900s through the 1970s, the site was mined primarily for lead and zinc. When major mining operations ceased in the 1960s, so did dewatering activities. This allowed mines to fill with ground water. Highly acidic mine water containing high concentrations of heavy metals began discharging into Tar Creek from natural springs, bore holes, and abandoned mine shafts.

A remedial investigation was conducted in 1982 and 1983, resulting in the construction of a new drinking water well and the flushing of existing city lines in 1984. An ROD was issued to stop surface water from entering the collapsed mine shafts utilizing dikes and diversion structures. Approximately 66 abandoned wells were also plugged to prevent the downward migration of acid mine water into the Roubidoux Aquifer.

A second ROD was issued to address contaminated soil on residential properties in 1997. The remedy included excavation and remediation of approximately 1,542 lead-contaminated residential properties. Approximately 80 percent of the land in the mining area is owned by the Quapaw Tribe and its members. In addition, 30,000 people live in the surrounding area. IHS testing in 1994 indicated that 35 percent of the Indian children in the area had elevated blood lead levels. These concerns and others were brought to the attention of EPA in 2000.



From October 2001 to May 2002, 105 Indian-owned properties were remediated, and remediation of eight schools and school properties (seven in Miami, one in Picher) were completed in August 2002. Remediation of 457 residential properties began in Fall 2002. Recent independent studies comparing data collected in 1997 to data from 2000 show an approximately 50 percent decrease in the number of children living in Picher and Cardin between the ages of 1 and 6 years old with blood lead levels equal to or greater than the standard

set by the CDC. This reduction in the number of children with elevated blood lead levels is attributed to the residential yard cleanups and extensive educational efforts by federal, state, tribal, and county entities.

Region 8

Centennial Park Brownfields Partnership

The citizens of Englewood, Colorado, proposed an extension of Centennial Park in place of the city's plans to build a waste transfer station across the street from an existing transfer station. The community approached the city with its idea, and the city agreed. As a result, Englewood acquired the property (an old landfill) and utilized its brownfields assessment grant, awarded by Region 8, to do the environmental assessment.

Project Beginning

Finished Project

Having determined that methane gas generated at the site and groundwater contamination from proposed lawn watering were problems, the city approached the Colorado Brownfields Revolving Loan Fund Program for cleanup funding. Englewood borrowed $705,000 to cap the site and install a methane collection system as required by its VCP plan. The Colorado Rockies professional baseball team gave the city $70,000 for the creation of a "Field of Dreams" little league field. Today, the landfill has been successfully remediated and is being enjoyed by the community as a park.

Region 9

New Landfill for Saipan

A new landfill will help to address historical water quality issues on the island of Saipan, in the Commonwealth of the Northern Mariana Islands. Currently, the drinking water on Saipan is unreliable. During most hours of the day, no water comes out of the tap. When it does, it is not drinkable because of the salt content. As a member of the Drinking Water Task Force, a partnership including various government entities in the Northern Mariana Islands, Region 9 will participate in the development of a strategic plan to fix these problems.

Groundbreaking for the new Marpi Landfill in Saipan began in February 2002 along with construction of a new transfer and recycling center. This landfill will be the first fully compliant non-military landfill in the Pacific. The landfill is scheduled for completion in January 2003. At that time, the existing dump, which currently leaks leachate directly into the sea, will be closed.

Region 10

Brownfields Project—Junction City, Washington

Aberdeen, Washington, received a brownfields grant for work to be conducted in Junction City, Washington, a low-income community in unincorporated Grays Harbor County. The Grant involved cooperative work among the city of Aberdeen, Grays County Harbor, Washington State Department of Ecology, Junction City residents, and Region 10 to assess and remediate environmental impacts from two former landfill sites. The work included assessing the areas, determining the extent of contamination, and remediating the sites.

Supplemental Environmental Projects (SEPs)

Region 1

Chelsea Creek

As part of the proposed consent decree between Region 1 and Waste Management of Massachusetts,

Inc., Waste Management has agreed to implement two SEPs in urban areas totaling $2.6 million and pay a civil penalty of $775,000. The settlement stems from violations of the CAA and its provisions. According to a civil complaint, between 1997 and 1998, Waste Management was illegally crushing refrigerators and air conditioners in its hydraulic packer trucks, resulting in the probable release of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). Waste Management is now making separate trips to gather the appliances and dispose of them accordingly.

One of the proposed SEPs will revitalize 4.5 acres of contaminated waterfront parkland the city along the East Boston side of the Chelsea Creek bought in 1979. The Chelsea Creek community, predominantly low-income minority families, has been advocating for this park project since 1975. The opening of the park, called the Condor Street Wild, in 2003 will provide the first public access point to the creek and needed green space for the city.

The other SEP is a diesel pollution reduction project involving the retrofitting of 150 school buses with pollution control devices, as well as providing low-sulfur diesel fuel at the Readville bus depot in Boston. The retrofitted buses will service the inner city communities of Roxbury, Dorchester, and Mattapan, where asthma rates are as high as 178 percent above the state average.

Region 6

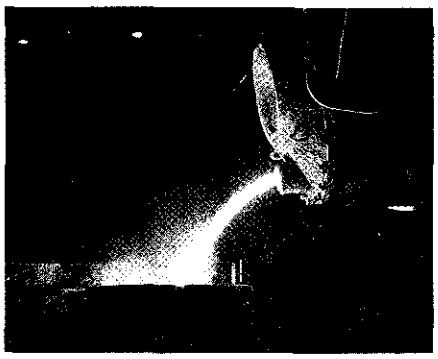
Using SEPs to Benefit Communities

Region 6 leads the nation in using SEPs to benefit communities and the environment. In FY 2001, Region 6 enforcement actions resulted in 41 SEPs. Examples of past SEPs include lead abatement in residences; replacement of equipment 8 years earlier than the expected useful life to reduce pollution; a fenceline monitoring system installation with data feedback to nearby residents within 24 hours of a request; use of recycled wastewater to significantly reduce the use of an aquifer; and re-establishment of a fisheries habitat near a historically African-American recreational beach. A Region 6 SEP bank has been established to allow citizens to recommend potential SEPs. The bank can be accessed via the Internet at: <www.epa.gov/Arkansas/6en/6en-sep.htm>.

Region 8

Rocky Mountain Steel Mill

Region 8 successfully concluded negotiations with the Rocky Mountain Steel Mill for violations of the CAA. Concurrently, the state of Colorado also reached a settlement with the mill for CAA violations. One of the results of each of these settlements was a requirement that the company fund projects designed to provide environmental benefits to the surrounding neighborhoods.

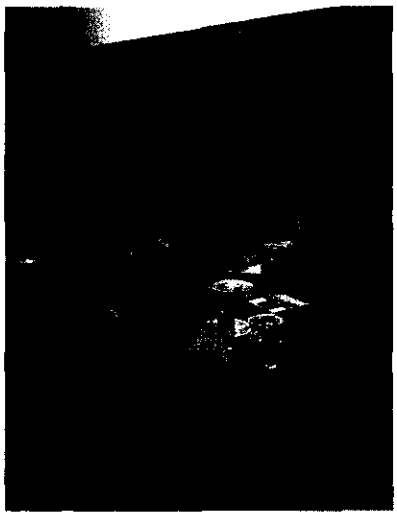


The projects negotiated include asthma education and screening, lead testing for children, habitat enhancement, and health screening and education. Region 8 facilitated the dialogue with the company and interested community members to develop appropriate SEPs proposals.

Region 8 and the state of Colorado are cooperating closely in the design and implementation of these projects. The federal and state SEP processes will proceed sequentially, with Region 8 proceeding first. As a result of this cooperation, the EPA-approved projects will serve to meet a certain set of community needs. Subsequently, given the differences in federal and state guidance, the state-approved projects will serve additional, complementary needs.

Conoco Oil Refinery

In 1999, EPA began a nationwide focus on oil refineries and their compliance with the CAA. In 2000, EPA contacted Conoco to obtain information about its refineries, discuss potential violations, and determine appropriate changes that could be implemented to better meet the requirements of the law. Conoco agreed to work with EPA and the states to develop a fair and equitable resolution that would benefit both the environment and the company.



Conoco SEP Meeting.

In 2001, a team of people from Conoco, EPA, and the states in which Conoco had facilities, reached an agreement. Conoco would implement certain changes to reduce air pollution and pay penalties relating to the alleged violations of the CAA. However, for the Colorado refinery, Conoco, the state of Colorado, and EPA agreed to spend more than $2 million in supplemental environmental improvements. A significant portion of that amount (approximately $500,000) was set aside to go directly into community-based projects, while the rest would be used to further reduce Conoco's impact on the environment.

To collect public input on appropriate and needed environmental projects, Region 8 organized two public meetings. It identified and solicited the participation of community organizations, leaders, and citizens to help publicize the meetings and provide feedback on the types of projects most useful to the communities.

As a result of the meetings, Conoco received dozens of requests for funding for specific projects estimated at over $1 million. The proposals ranged from simple efforts by local schools to learn about the environment to studies of air pollutants in the area. Conoco and EPA are currently evaluating the project requests in light of the feedback received at the public meetings.

State Efforts to Address Problems and Find Solutions

Region 1

Massachusetts

In June 2001, the final amendments to the Massachusetts DEP Site Assignment Regulations were issued. The amendments address concerns about the cumulative impacts of solid waste management facilities and other potential sources of pollution on public health. Specifically, a criterion was added to allow the Massachusetts DEP and Boards of Health to consider the impacts of a proposed facility in relation to the impacts of other existing sources of contamination or pollution within the area. The Massachusetts DEP published *Interim Risk Evaluation Guidance Document for Solid Waste Facility Site Assignment and Permitting,* which explains how to implement this new provision. This criterion has profound implications for environmental justice since it allows the state agencies to examine cumulative risks.

In January 2001, the Massachusetts Senate overwhelmingly passed an a bill to establish an environmental justice designation program. The bill directs the Massachusetts Executive Office of Environmental Affairs (EOEA) to develop statewide policies that recognize and protect areas of critical environmental justice. The bill is expected to be reintroduced into the Massachusetts House of Representatives. In the meantime, the state is working on finalizing its Environmental Justice Policy. The policy emphasizes that environmental justice is to be an integral consideration in the implementa-

tion of all EOEA regulations, policies, programs, enforcement, and decisionmaking regarding the siting of waste and energy facilities, and the provision of access to open space.

Rhode Island

The Rhode Island DEM compiled an Environmental Equity Progress Report, released in July 2002. The progress report includes an explanation of the GIS analysis that has been done.

In August 2001, the Rhode Island DEM developed a Draft Environ-mental Equity Policy. Although it has not been finalized, Rhode Island DEM has begun implementing several strategies, including compiling environmental and demographic data in GIS to analyze the distribution of environmental burdens and benefits throughout the state. Other strategies to be implemented include: (1) conducting environmental equity education and training for Rhode Island DEM staff; (2) committing staff and resources to partner with other agencies and organizations to further research environmental equity issues, and (3) expanding public participation and outreach efforts.

Connecticut Department of Environmental Protection

The Connecticut DEP, in partnership with Hartford 2000 and the Neighborhood Training Institute, received a $40,000 EPA grant to fund the development of a smart growth training program for urban leaders. Community and business leaders active in urban environmental justice neighborhoods were trained in the opportunities and obstacles to smart growth initiatives in the neighborhoods. A special emphasis was placed on training and education in the areas of transportation, zoning, open space, urban runoff, river pollution, and green/healthy housing. Training products developed through this program will serve as a model that can be transferred to other urban communities. Project partners include Hartford 2000, the Hartford Neighborhood Environmental Project, and the Neighborhood Training Institute.

Region 2

New York State Policy on Environmental Justice

The New York State DEC prepared a draft policy for incorporating environmental justice concerns into its environmental permit process. The draft policy amends the New York DEC environmental permit process by, among other things, identifying minority or low-income communities; providing information on environmental justice to applicants with proposed projects in those communities; enhancing public participation requirements for proposed projects in those communities; establishing requirements for projects in minority or low-income communities with the potential for at least one significant, adverse environmental impact; and providing ADR opportunities to allow communities and project sponsors to resolve issues of concern to the community.

The New York DEC established the New York State Environmental Justice Advisory Group, which is comprised of representatives from state, local, and federal government; community groups; environmental groups; and business. The Environmental Justice Advisory Group is tasked with: (1) developing recommendations for an environmental justice permit policy for New York state, (2) recommending elements that should be included in a comprehensive environmental justice plan, and (3) prioritizing environmental justice issues and recom-

mending procedures that can be used to address these priorities.

For additional information on New York DEC's Environmental Justice Program, please visit the following Web site: <www.dec.state.ny.us/website/ej/index.html>.

New Jersey State Environmental Equity Policy

The New Jersey DEP's Environmental Equity Policy was approved by the Environmental Equity Advisory Council and established within the New Jersey DEP in 2000. The draft process is currently being refined in order to ensure that the final product can be effectively incorporated into the permitting process.

The strength of the proposed process is an up-front approach to identify and informally resolve situations that can potentially result in the filing of a complaint with EPA or in court, pursuant to Title VI of the Civil Rights Act. This up-front approach involves New Jersey DEP, the community, and industry. It also involves the utilization of an environmental equity screening tool to identify, early in the permitting process, any potentially burdened minority or low-income community.

New Jersey DEP's Environmental Justice Screening Process can be used to evaluate environmental justice issues affecting communities with regard to air, water, and solid and hazardous waste facility permits. This proactive approach would allow environmental justice issues to be identified and possibly resolved through Interest-Based Negotiations and/or ADR.

New Jersey DEP also is exploring the possibility of forming a working partnership with the affected community and the permitted facilities. The primary goal of this partnership would be to address environmental equity issues in the initial stage of the permitting process.

For additional information on New Jersey DEP's Environmental Equity Program, please visit the following Web site: <www.state.nj.us/dep/equity/index.html>.

Region 9

California EPA

The California Environmental Protection Agency (Cal/EPA) recently created the position of assistant secretary for environmental justice with the goal of developing the state's Environmental Justice Program and incorporating environmental justice principles throughout the practices of all state agencies. Region 9 is supporting this position, which is staffed by a Region 9 employee via the Intergovernmental Personnel Act.

To date, significant achievements have been made in California's Environmental Justice Program to address environmental justice concerns. Cal/EPA has: (1) supported six environmental justice-related laws, (2) helped define environmental justice in statute, and made environmental justice a priority within the Agency and its six boards, departments, and offices, (3) established an Environmental Justice Program and recruited for an Assistant Secretary for Environmental Justice, (4) articulated environmental justice as one of the overarching strategic goals in Cal/EPA's strategic vision document, (5) established an IWG on environmental justice made up of the heads of Cal/EPA boards, departments, and offices, and the Governor's Office of Planning and Research to guide programmatic and policy development related to environmental justice, and (6) established a 13-member Advisory Committee on Environmental Justice (made up of stakeholders from community groups, environmental organizations, businesses, local and regional planning

agencies, air districts, and certifying agencies) to provide advice and consultation on environmental justice for Cal/EPA.

California DTSC

The DTSC is the Governor's designated lead state agency for implementation of hazardous substance regulations. With the state's recent passage of environmental justice legislation, Region 9 and DTSC have identified opportunities to direct grant funding for development of DTSC's environmental justice infrastructure. The $70,000 in grant funds cover a 2 year period and will support DTSC efforts to define and implement its environmental justice program.

During 2002, DTSC: (1) formed an executive committee to develop an environmental justice policy and refine its guidance for all DTSC programs, (2) developed an environmental justice policy, (3) had a greater community involvement presence at environmental justice sites, (4) hired an environmental justice coordinator to function as the focal point for environmental justice implementation within DTSC, and to coordinate with federal, state, and local agency counterparts on environmental justice issues and concerns, (5) supported participation of all DTSC Public Involvement Program staff for the environmental justice fundamentals training delivered by Region 9, (6) developed an environmental justice Web site, and (7) translated outreach materials.

Region 10

Washington State—Environmental Justice Act

In March 2002, the Washington State House of Representatives voted unanimously to pass House Bill 1411, more commonly known as the Environmental Justice Act. This bill, developed in collaboration with community groups, holds industry responsible for releasing harmful substances into the environment. This bill requires the owners or operators of facilities that have released hazardous substances to inform members of the surrounding community. Notices must be placed in visible, publicly accessible areas, and handbills or leaflets must be issued to all the residences and businesses in the area. The bill also includes a clause mandating that notices and handbills be issued in multiple languages.

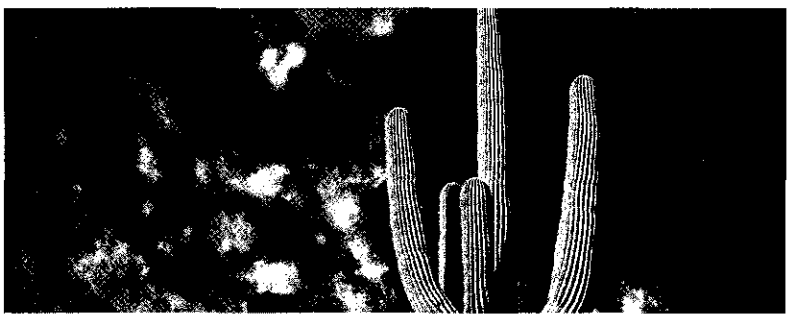
Washington Board of Health

In 2001, the Washington Board of Health developed a position paper for prioritizing board resources to address environmental justice. The paper was the product of a series of meetings with state and local agencies and the public to learn about the various environmental justice issues facing the state of Washington. Input for the position paper was also obtained through testimony from the Department of Public Health-Seattle/King County, ATSDR, Washington Department of Health, Washington Department of Ecology, Region 10, Community Coalition for Environmental Justice, ALA, Environmental Coalition of South Seattle, and residents from Washington communities. The environmental justice recommendations from the position paper were adopted by the Board of Health and forwarded to the Governor's Office.

Tribal Efforts to Address Problems and Find Solutions

National Tribal Air Association

EPA's OAR, along with tribes and other stakeholders, has formed the National Tribal Air Association

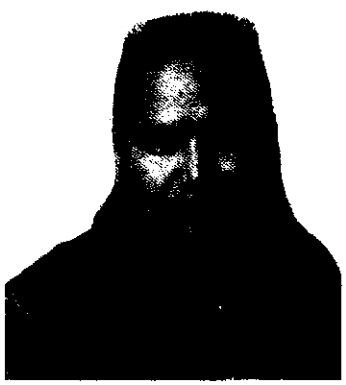


(NTAA), a tribal air quality organization dedicated to insuring that tribes set priorities and determine mechanisms for interacting with other governments on air issues. The mission of NTAA is to collectively advance air quality management policies and programs, consistent with the needs, interests, and unique legal status of American Indian Tribes, Alaskan Natives, and Native Hawaiians.

Additionally, OAR is working cooperatively with the Institute for Tribal Environmental Professionals (ITEP) of Northern Arizona University. ITEP is developing and implementing outreach and educational efforts to improve community knowledge about radiation science, the hazards of exposure to radiation, and the potential risks associated with abandoned uranium mines.

Tribal Pesticide Program Council (TPPC)

OPP provides sole funding support to TPPC, a tribal technical resource and policy development group that held its inaugural meeting in January 2000. Since then, TPPC has grown steadily in membership and influence, providing tribes across the country with a recognized forum that focuses national attention on tribal pesticide issues and concerns. TPPC assists tribes in developing their own pesticide programs; provides tribal pesticide education, training, and research; deals with a broad range of tribal pesticide-related issues; and facilitates communication among tribes, EPA, and other federal and state agencies. TPPC, which has now grown to 43 authorized members, works in close partnership with OPP to ensure that federal laws governing pesticide management and use continue to be enforced in Indian country. Ongoing efforts by members of several TPPC workgroups are expected to continue to influence a long-term strategic direction for OPP that is responsive to tribal needs and concerns.



Highlighting Tribal Wetland Protection Efforts

OW worked with 11 tribes to develop case studies highlighting tribal experiences in protecting water resources. The result, *Tribal Wetland Program Highlights* (EPA 843-R-99-002), is a milestone publication in OW's ongoing effort to support the development of comprehensive tribal wetland programs. The report's 11 case studies focus on experiences of tribal organizations, featuring program components, tools, and strategies currently employed to protect and restore wetlands and watersheds.

Supporting Culturally Appropriate Strategies for Tribal Wetland Management Efforts

EPA provided technical assistance to a tribal community through the OW's cooperative agreement with the Society for Applied Anthropology (SAA). This project focused on specific cultural challenges with regard to tribal wetland restoration efforts with the following core objectives: (1) clarifying the components of culturally appropriate strategies for natural resource management, and exploring how they inform ongoing resource management practices in relation to wetlands, and (2) identifying factors that facilitate and constrain efforts to implement culturally and ecologically sensible approaches to wetlands protection.

Region 1

Aroostook Band of Micmacs

Region 1 awarded a $290,000 grant to the Micmac Tribe for an air monitoring and public education project in northern Maine. The project will monitor air quality in real-time and make the data immediately available to the public on a Web site and through local media. The project will also use the data to generate alerts on poor air quality days, warning susceptible populations to limit outdoor activities.

Project partners include EPA, the National Weather Service (NWS), the Maine DOH and DEP, the Maine Lung Association, and local media and colleges. The program will be based at the tribal housing complex just west of Presque Isle, Maine. The program will install real-time monitors for important indicators, including nitrous oxides, sulfur oxides, carbon dioxide, fine particulate matter, ozone, ultraviolet radiation, and visibility (using a digital camera). The data will be immediately available on a public Web site, and local newspapers, radio, and TV stations have agreed to print and broadcast air quality updates using the project's information. A subscription will also be available to the public for e-mail alerts when air quality is poor.

Tribes Addressing Lead

Tribes in Region 1 have developed lead training and certification regulations to protect members of the tribal community and are expanding their capacity to identify and remedy risks posed by lead poisoning from paints and in drinking water. The Houlton Band of Maliseets Indians has established a cooperative undertaking with its Environmental, Health, and Housing Improvement Departments and the Maine Health Environmental Testing Laboratory (HETL) to determine the lead poisoning risk among their children. Blood samples have been collected and analyzed. The Penobscot Nation and the Aroostook Band of Micmacs have developed a lead hazard reduction plan. The Narragansett Indian Tribe has surveyed tribal housing, public areas, and water and soil to determine health risks. EPA has assisted by providing education and outreach to tribal families, as well as abatement certification training.

Tribes Addressing Persistent Bio-Accumulative Toxins

Due to the high cancer rates among tribal members, the tribes in Region 1 are focusing their environmental studies on determining health risks to tribal members who continue to subsist on fishing, hunting wildlife (e.g. moose and deer), drinking and using untreated water, and eating vegetation that may be contaminated from air deposition.

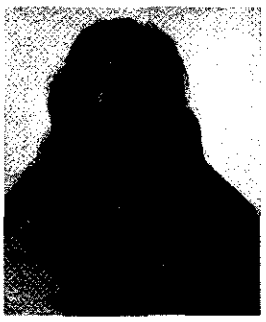
The Passamaquoddy Tribes and the Penobscot Nation collaborated in their efforts to collect moose and deer livers and analyze the livers for cadmium and other heavy metals. EPA assisted in this study by further analyzing the liver for bio-accumulative toxins.

The Houlton Band of Maliseets, Penobscot Nation, Passamaquoddy Indian Township, Passamaquoddy Pleasant Point, Wampanoag Tribe of Aquinnah and Narragansett Tribe are all evaluating the effects of mercury and other bio-accumulative toxins on their environments from air deposition. Six air monitors have been strategically located to help EPA and the tribes monitor and assess the impacts of air pollution in Indian country. The tribe's air sampling results will be posted on a national data base.

Dioxin continues to be a threat to human health despite control on these types of pollutants. River beds, and therefore fish stock, where pollutants bioaccumulate are expected to contain silt contaminants for a long time to come. BIA is studying the effect of dioxin/furans on the Penobscot River with the assistance of EPA, USGS, and the Penobscot Nation.

Tribal Head of Household Training

Region 1 has worked with the tribes to develop a training curriculum to educate tribal members on the dangers that may exist in the home. The topics of the training range from indoor air pollution, (i.e., mold, mildew, and radon) to consumption of contaminated foods, to the use of hazardous chemicals in and outside the home. The goal is to provide sufficient resources so that each tribe may conduct training for its members at the reservation. From 2001 to 2002, the following three tribal governments performed this training for its members: the Aroostook Band of Micmacs; the Passamaquoddy Pleasant Point Tribe (this training included a hands-on



demonstration on how to cut the fatty tissue from fish); and the Penobscot Nation.

Region 2

Seneca Nation of Indians Brownfields Assessment Demonstration Pilot

In 1999, the Seneca Nation successfully applied for a competitive brownfields pilot funding. The Nation is using the $200,000 EPA award for environmental investigations to inform redevelopment planning of a 100-acre former rail yard in the city of Salamanca, New York, which is at the centerpiece of its community revitalization effort.

EPA is working closely with the Nation and has assigned a staff person to provide assistance. To support the Nation's overall community development activities, Region 2 has coordinated a meeting with the brownfields IWG, which brought together Seneca Nation leaders responsible for environmental issues, public health, planning, and economic development with more than 20 federal and state agencies to strategize approaches and resources to meet local needs.

The objectives of the Nation's brownfields pilot are to conduct an environmental assessment of the rail yard and to develop site-specific remediation alternatives based on the findings. With community and partner input, the Nation is developing a comprehensive redevelopment plan to promote the reuse of the rail yard as part of an overall local and regional revitalization effort that is consistent with the cultural and economic goals of the Seneca Nation.

Remediation of St. Lawrence River, New York

The town of Massena, New York, on the St. Lawrence River is the location of three Superfund sites, all of which are directly upstream from St. Regis Mohawk tribal lands. The Reynolds Metals Company was the site of a large-scale remediation in 2001, and the General Motors (GM) facility, immediately adjacent to tribal lands, has also seen large-scale removal of contaminated sediments, soils, and sludge. Representatives of the St. Regis Mohawk Tribe's Environment Division, through a support agency assistance grant, have worked hand-in-hand with EPA's project manager and field oversight team to monitor the responsible parties' performance during the remediation. To date, working in partnership with the tribe has allowed for the removal of 170,000 tons of PCB-contaminated soils, sediments, and sludge from areas in and around the GM and Reynolds Metals facilities.

The St. Regis Mohawk Tribe has become a major partner in the EPA's technical oversight team during the remediation of these sites. The tribe provided support by taking EPA inspectors on the tribe's research and enforcement boat, so that a joint inspection of the dredging activities could be performed. The tribe has performed sampling and analysis of suspected contaminants, and coordinated the collection of air samples on tribal lands. The tribe has also done extensive community relations with local tribal residents concerning excavations near tribal lands on the Raquette River.

The cleanup plan was designed with the consideration of fish consumption by the local population. By dredging 23,000 tons of PCB-contaminated sediments from the St. Lawrence River system, the potential for continued contamination of edible fish and wildlife is reduced.

Region 6

Creek Nation Waste Tire Cleanup Project

A waste tire pile consisting of approximately 75,000 scrap tires located on Creek Nation tribal lands in rural, mideastern Oklahoma was reported by IHS in 1999. The waste tire dump was 25 years old. During the early part of this year, Region 6, in conjunction with the Inter-Tribal Environmental Council (ITEC), provided technical assistance to facilitate removal of these waste tires. The Oklahoma DEQ provided a vendor list.

Holnam Cement Kiln removed approximately 40,000 tires, which were used as tire-derived fuel (TDF). The remaining 35,000 scrap tires were removed by Frontier Recycling Company and other individual contractors of Tulsa. The tribe used funding from BIA to level the site to prevent soil erosion. It was a highly successful project, demonstrating a great example of coordination among tribal, federal, state consortia and the local tire-recycling industry.

Region 9

Tribal Capacity Building

Environmental conditions on reservations in Region 9 require significant financial and technical assistance. Compared with the rest of the United States, economic and public health conditions in Indian country are dire. Nearly one-third of reservation households are at or below the poverty level; the rate of tuberculosis is 475 percent higher than the national average; and the rate for pneumonia and influenza is 61 percent higher. In addition, 6 of every 10 reservation homes have no telephone, and 1 of every 5 homes has no plumbing, sink, or toilet. Forty percent of Navajo families have to haul their drinking water.

One of EPA's primary goals is to protect human health and the environment in Indian country and to provide assistance to tribes seeking to develop their own programs. Currently, 90 percent of the tribes in Region 9 have applied for and received assistance under the General Assistance Program (GAP), which has resulted in: (1) increased environmental capacity with 130 tribes; (2) 60 tribes with environmental plans; (3) 45 tribes with environmental codes and ordinances; (4) 60 projects to clean up landfills, construct transfer stations, and develop recycling centers; (5) closure of dumps on 13 reservations; (6) removal of abandoned automobiles on six reservations; (7) cleanup of over 2,000 used tires on four reservations; and (8) construction of 25 recycling centers.

Addressing Non-Attainment Areas

Fifty-eight tribes in the Pacific Southwest are in non-attainment areas for air pollutants. Because CAA funding is not sufficient to provide funding to all tribes with need, several tribes used EPA's GAP funds for their air programs.

To date, tribes have installed 42 air monitors at 23 sites. For example, the Bishop Paiute Tribe, which is located near a large particulate source (Dry Owens Lakebed), used GAP funds to build a monitoring station. The Yurok Tribe also used GAP funds and equipment from EPA's Las Vegas Lab to build a weather station on its northern California reservation.

Region 10

Native Village of Kivalina Granted Cooperating Agency Status

The Native Village of Kivalina (Kivalina) is an Inupiat village located near and downstream of Red Dog Mine, in the Northwest Arctic Borough in Alaska. Red Dog Mine is the largest zinc mine in the world. Kivalina residents have long-term concerns about the health effects of the mine, and have raised concerns about water quality, air quality, and toxic pollutants to EPA and other agencies.

Approximately 3 years ago, the Army Corps of Engineers and the state of Alaska proposed to expand the port that services Red Dog Mine. Kivalina was concerned that a larger and more efficient port would facilitate additional mining at Red Dog Mine as well as at other mineral reserves in the area. Kivalina asked the Corps to grant it cooperating agency status in the development of the EIS to ensure that its cultural and subsistence concerns were addressed in the document. The Corps refused. Kivalina then approached EPA and the Council of Environmental Quality (CEQ) to advocate for cooperating agency status. EPA, a cooperating agency, advocated that Kivalina also become a cooperating agency. After the request, the Corps agreed that Kivalina should be a cooperating agency because of Kivalina's extensive knowledge about its culture and subsistence resources.

Chapter 4

Public Participation and Training Initiatives

Meaningful public participation in the government's decision-making processes is a fundamental principle for providing environmental justice for all communities. This chapter focuses on some of the EPA, state, and tribal public participation and training initiatives that speak directly to or enhance efforts to address the range of environmental justice concerns.

Of particular note is EPA's initiative to train its employees by offering the environmental justice fundamentals training course. The underlying purpose of this training program is to help integrate environmental justice into the government's decisionmaking processes while recognizing that meaningful public participation is a necessity if full integration is to occur.

Public Participation Initiatives

Revision of EPA's Public Improvement Policy

EPA released its draft Public Involvement Policy in December 2000, seeking public comments through the end of July 2001. EPA plans to finalize the policy by early 2003, along with a plan to implement the policy across the Agency. When releasing the draft policy, EPA particularly requested public comments on how best to involve communities in EPA's decisions. EPA received more than 200 comments on the draft policy, and many provided suggestions on how to better involve communities that may be disproportionately and adversely affected by environmental pollution.

The draft policy recommends that all programs and offices utilize the seven basic functions of effective public involvement, which include: (1) plan and budget for public involvement activities; (2) identify the interested and affected public; (3) consider providing technical or financial assistance to the public to facilitate involvement; (4) provide information and outreach to the public; (5) conduct public consultation and involvement activities; (6) review and use input, and provide feedback to the public; and (7) evaluate public involvement activities.

To encourage additional input on the Agency's public involvement activities from a wider set of people, EPA convened an online dialogue on public

involvement in EPA decisions in July 2001. More than 1,100 individuals participated in the dialogue and provided their ideas on how EPA can better involve the public. Although the dialogue's messages were not considered formal comments, they were used to inform the implementation plan for the policy. For 10 days, the online dialogue participants discussed specific topics drawn from EPA's draft Public Involvement Policy. A revolving panel of experts, including several representing environmental justice organizations and Native American tribes, focused the conversation on the main aspects of the draft policy.

EPA plans to create informative training brochures on different aspects of public involvement based on the information provided from the online dialogue and from the public comments on the policy. The brochures will feature issues such as involving the public in permits and rules, and creating effective collaborative decision-making processes. The draft policy can be found at: <www.epa.gov/stakeholders/policy>.

Reference Guide to Public Involvement in Environmental Permits

Better public involvement across all program areas continues to be an EPA priority. The Office of Solid Waste and Emergency Response (OSWER), with the co-sponsorship of OPEI, led the production of *Public Involvement in Environmental Permits: A Reference Guide.* The purpose of the reference guide is to provide a resource for state and tribal program staff to enhance their own public participation efforts. In addition, the public can use this resource to learn more about permits and about opportunities to engage in the permitting process. Drafting the reference guide was part of the Agency-wide Action Plan for Achieving the Next Generation in Environmental Permitting (February 1999).

Users outside of the Agency have highly praised the guide, and demand for it has been strong. The guide describes both the formal, legally required steps involved in permitting and the additional steps that can be taken to make public involvement more meaningful and effective. While not specifically focused on environmental justice issues, it can be a valuable tool in situations where environmental justice concerns could arise.

The guide summarizes the major permitting programs under the CWA, SDWA, CAA, and RCRA. It also gives an overview of the core requirements for public involvement activities in these permitting programs. The reference guide also provides best practices and a model plan for implementing effective public participation activities under these programs and provides a compendium of additional resources and contacts for use in implementation.

The guide was developed in consultation with key partners, including NEJAC and the Environmental Council of the States. Environmental groups; industry; citizens' groups; state and national associations; and state and regional regulators also provided comments at two stakeholder meetings in the District of Columbia and Houston, Texas. Additional information can be found at: <www.epa.gov/permits/publicguide.htm>.

Region 1

Reconnaissance for Environmental Justice Concerns

For the past several years, Region 1 has conducted reconnaissance in communities throughout the area. Reconnaissance is a non-traditional approach of identifying and addressing environmental concerns within

a specific geographical or watershed area. Potential areas of environmental justice concern are given primary consideration when selecting a study area.

In 2001, reconnaissance was conducted in Holyoke and Chicopee, Massachusetts, between July and early November. Within the study area, the goals of the reconnaissance project were to: (1) locate point sources of pollution along the Connecticut River; (2) identify compliance, deterrence, and assistance opportunities; (3) focus Region 1's limited resources by working with communities and the state to maximize ecosystem protection; and (4) establish a relationship among local communities, the state, and EPA.

In keeping with Region 1's policy on environmental justice, the reconnaissance sought to improve communications with local citizens and stakeholders, and channel resources into a study area that includes neighborhoods with potential environmental justice concerns.

Meetings with local and regional government agencies and community-based organizations provided opportunities for citizens to voice concerns and ask questions. Issues raised during these meetings ranged from regional public health concerns related to air quality to concerns about the impact from specific facilities. The environmental concerns that were raised were tempered with concern for the economic fate of the communities and the potential impact of increased regulatory involvement.

Region 2

Public Participation in Brownfields Pilot Programs

Region 2's innovative Brownfields Assessment Demonstration Pilot Program provides a wide range of resources and assistance to the more than 50 communities that have received brownfields pilot funding as of August 2002. Many of these pilots are working with environmental justice communities and neighborhoods to create opportunities from idle and underutilized sites that undermine local environmental, economic, and social well being.

Region 2 incorporates environmental justice into the program's grant project activities. Grant recipients must submit a community involvement plan that includes environmental justice considerations. Progress is tracked and evaluation is provided in quarterly reports. Each pilot has a designated EPA liaison to provide assistance and facilitate access to EPA engineering, science, and emergency response expertise. The EPA liaison also serves as a point of contact for the community and participates in community meetings.

To set the stage for ongoing stakeholder participation, the Northeast Hazardous Substance Research Center (HSRC), funded by EPA, helps coordinate a kickoff meeting for each grantee. The meeting brings together local government offices; county, state, and federal officials; community stakeholders; residents; businesses; property owners; and other concerned parties. The kickoff meeting provides a forum for learning and sharing local brownfields issues and strategies. The meeting includes a discussion of the roles and responsibilities of stakeholders, including the relevance of environmental justice and the benefits of a participatory process.

To continue to meet information needs, communities also frequently access the HSRC Technical

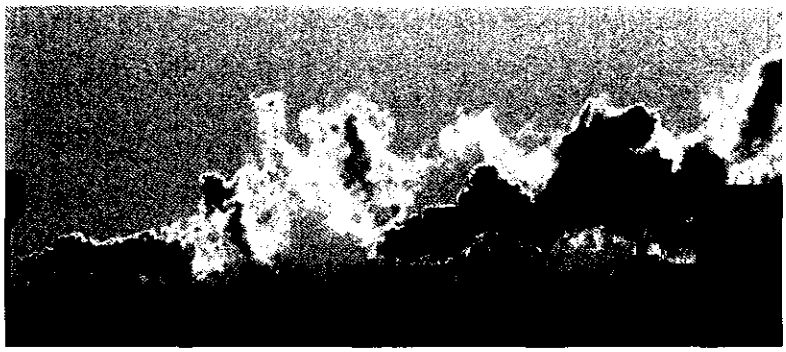
Outreach Service for Communities (TOSC) and the HSRC Technical Assistance for Brownfields (TAB), which provide customized workshops and other assistance to meet the specific information needs of the particular community. Examples of customized assistance has included meeting facilitation, role-play exercises to increase understanding among stakeholders, and meetings geared to address the concerns of private property owners.

Region 2 also publishes the *Quarterly Brownfields Community Report*, which addresses the information needs of regional stakeholders. It is distributed to approximately 3,000 local, state, and federal government officials; citizen groups; community organizations; environmental groups; and concerned citizens. The Quarterly often includes articles specific to environmental justice issues and has highlighted community organizations' proactive brownfield redevelopment activities. In addition, the Quarterly invites article submissions to better serve regional information needs.

Region 5

Good Neighbors United Initiative

The Good Neighbors United Initiative Pilot involves a highly industrialized, low-income, and minority residential area in southwest Detroit and parts of surrounding communities, including Dearborn, Melvindale, River Rouge, Ecorse, Allen Park, Hamtramck, and Highland Park. In this geographic area, public notification regarding air permits to be issued will be broadened, thus increasing public participation under Title VI of the Civil Rights Act and EPA's draft Public Involvement Policy.



The Good Neighbors forum currently includes members representing federal, state, and local government; industry; private businesses; environmental groups; citizens; and elected officials. Increased participation is being sought from various ethnic communities in the initiative's target area, and task force meetings have been held to discuss projects and attract new members.

Information also is being gathered regarding New Source Review (NSR) permit applications for facilities in the designated geographic areas. The Michigan DEQ is being consulted to develop a strategy on addressing the public notification process.

Cleveland Air Toxics Pilot Project

In March 2001, EPA launched the Cleveland Air Toxics Pilot Project to demonstrate a community-based approach to air toxics control. EPA's Office of Radiation and Indoor Air (ORIA) funded this pilot to test whether an inclusive, local-scale decision-making process can result in voluntary reductions in air toxics exposure with wide-based community acceptance and support.

The project utilizes an integrated approach to address air toxics through projects directed at stationary sources, mobile sources, and indoor sources of air toxics. Although the project is for the benefit of the Cleveland area, the pilot focused initially on two specific neighborhoods: Slavic Village and Superior-St.Clair, which are urban areas with a mix of residential properties and light to medium industries.

The three main goals of the pilot are to reduce air toxics, to ensure the project is sustainable, and to ensure that this approach can be replicated by other

communities. Due to the integrated nature of the pilot, Region 5 and other EPA offices are providing technical support.

The decision-making body for the pilot is a working group comprised of local residents, neighborhood organizations, businesses, industry representatives, representatives from local colleges and universities, and environmental advocacy groups. The Ohio Environmental Protection Agency (OEPA) and the Cleveland Bureau of Air Pollution Control also are part of the working group. This group, which has met monthly since its formation in June 2001, formed four subcommittees (Schools, Transportation, Business, and Homes) to address the integrated air toxics issues.

The subcommittees developed project proposals to reduce air toxics focusing on simple cost/benefit considerations, potential achievable air toxics reductions, expected emission reductions, expected project length, and difficulty of implementation. Projects were proposed to the full working group, and in June 2002, the working group approved the final list of funded projects through group consensus. Descriptions of the 16 approved projects can be viewed at <www.epa.gov/cleveland>, under "List of Projects."

Subcommittees for each approved project are currently developing implementation plans and implementing projects. The working group also is developing outreach strategies to continue the sustainability of the pilot, and it adopted Cleveland Clean Air Century Campaign as the official pilot title.

St. Clair-Superior Neighborhood Development Association (SCSNDA)

Region 5, OEPA, and the Cleveland Bureau of Air Pollution Control have been meeting monthly since March 2001 with the St. Clair-Superior Neighborhood Development Association (SCSNDA) to discuss environmental concerns for the neighborhood.

These monthly meetings arose in response to a request that SCSNDA presented to OEPA's director requesting action on eight items of concern. OEPA, in turn, requested Region 5's participation in this partnership.

Items discussed at the monthly meetings have included authorities, responsibilities, laws, and regulations of each agency represented at the meetings; environmental justice; the Title V permitting process as it relates to current/pending permits for facilities in the neighborhoods; NPDES and other monitoring reports for selected facilities; and previous and current inspections of several facilities within the neighborhood.

SCSNDA maintains a strong interest in environmental justice and its implications for the neighborhood. Through the monthly meetings, Region 5 and OEPA are working toward establishing stronger partnerships among themselves, local agencies, and the neighborhoods they serve. The meeting group strives to develop a streamlined process where the neighborhoods can work with the agencies to affect real environmental results.

One recent success for the group is that OEPA is reviewing the possibility of conducting hazardous waste inspections and air inspections at neighborhood facilities of concern as identified by SCSNDA. Another success includes changes in the Title V preliminary proposed permit (PPP) for a local company. These changes came about as a result of the monthly discussions, which enabled SCSNDA and its part-

ners (Sierra Club and Earth Day Coalition) to bring the long-time inactivity of some emission sources to the attention of OEPA and the Cleveland Bureau of Air Pollution Control. The inactivity of these units meant that the permit needed to be changed to require that the units comply with all applicable federal and OEPA NSR requirements and federal New Source Performance Standards (NSPS) requirements before the company would be granted authorization to operate the units again.

Smart Growth in Metropolitan Transportation Planning Processes

EPA is working with the Association of Metropolitan Planning Organizations to enhance planning and technical processes to be more sensitive to environmental implications. As a demonstration project, EPA has partnered with the Northwest Indiana Regional Planning Commission (NIRPC) to engage a large group of stakeholders to update their long-range transportation plan to ensure the broadest public participation possible. This project will bring together environmental justice groups from the Gary/Hammond area, county planners from the region, transit professionals, civic groups, and environmental organizations to develop a transportation plan with substantial public involvement. Ultimately, the plan should reflect the stakeholders' multiple goals for the region's transportation system. In August 2001, OPEI and Region 5 helped NIRPC organize the first stakeholder kickoff meeting for the project.

Region 7

Charlton Pollard Community/Industry Panel

A community/industry panel formed several years ago at the suggestion of the then-Mobil Refinery (presently Exxon-Mobil Refinery) continues to function and affect positive results in the community. Panel participants include representatives from industry and the community, elected officials, and local and state governments.

Industry has established education partnerships with community residents and schools, providing college scholarships, summer employment, and permanent employment opportunities to program participants. In addition, environmental results are routinely shared at panel meetings.

Environmental improvements include additional air monitoring and improved communication with the community in regard to safety concerns. The panel also has been instrumental in securing commitments for a new regional emergency response/community alert system.

The group also supports aesthetic improvement projects in the community, including revitalization of existing residences, new construction, crime prevention, further development of a green belt between community and industry, and construction of a community resource center. Exxon-Mobil continues to serve as a leader among the industry partners of this group.

Region 8

Public Participation Initiatives VB/I-70

Elevated levels of lead and arsenic have been found in the soils of some residential homes within the Vasquez Boulevard/Interstate 70 (VB/I-70) NPL site in Denver, Colorado. The heavy metals are likely residuals from several former smelting sites, pre-1970 lawn care products, and lead-based paint.

Early in the cleanup process, EPA formed a working group with community leaders and government agencies to discuss the site and its remediation, including the process of study, the method of decision, and the proposed plan. The working group consists of committed individuals from community and government, including residents of all impacted communities; rep-

resentatives from federal, state, county, and city governments; and local and national elected officials.

The working group succeeded in bringing about participation early in the process; however, it was conflicted over appropriate levels of cleanup. Public comment sessions on the proposed plan were heated and contentious, despite the working group's efforts to develop effective communication.

Region 8 actively participated in the working group to help both the community and government better understand each other's concerns. Region 8 conducted two listening sessions in Colorado in June 2002. The first occurred in Commerce City, and the second in northeast Denver. The listening sessions were held in conjunction with a public outreach effort relating to the availability of funds for community-based environmental projects. This funding process involved EPA, Colorado air enforcement groups, and Conoco, Inc., which owns a refinery in the area.

The listening sessions began by addressing issues relating to the source and purpose of the funds and the specific needs of the community as they relate to those funds. The listening sessions provided a unique opportunity for Region 8 to work with the state and a major corporation to improve communication with communities. Local community groups aided in the distribution of flyers about the event and provided valuable insight during the sessions.

Environmental Justice Training Activities

Region 1

Environmental Justice Training for EPA Employees

In March 2002, Region 1 began offering environmental justice training to all employees who are required to take the course as part of their core training curriculum. This thorough environmental justice training effort is a key component to Region 1's strategy to institutionalize environmental justice activities and ensure that environmental justice is factored into everyday work.

The course focuses on increasing staff knowledge and understanding of environmental justice, providing tools to identify potential areas of concern, and enabling staff to factor environmental justice into their everyday work. Skills and learning are reinforced through case studies and opportunities to meet with people addressing environmental justice on a day-to-day basis.

Highlights of the workshop include site visits conducted by community-based organizations and guest speakers, which afford participants opportunities to explore real communities, cases, or projects dealing with environmental justice.

Region 1 also has used the mandatory environmental justice training sessions as an opportunity to highlight EPA's draft Public Involvement Policy and to share examples from informal office assessments about what Region 1 is doing well with public involvement and what can be improved.

Annual Tribal Training for EPA Employees

Region 1 continues to conduct annual training for EPA employees to educate staff about the historical relationship between the federal government and the sovereign tribal nations in Region 1, so that staff can better serve the needs of the tribal community. This 2-day training is designed to introduce Native American history and federal Indian law, with 1 full day focused on tribal cultural orientation.

Region 2

Fourth Biennial Symposium on Potable Water Issues in Puerto Rico

Region 2 participated at the Fourth Biennial Symposium on Potable Water Issues in Puerto Rico, hosted by the Center for Environmental Education, Conservation and Interpretation, Inter-American University of Puerto Rico. The event, which occurred in February 2001, convened more than 250 people from local and federal agencies, university faculties, students, water surveyors, users/owners of potable water systems, and Non-Governmental Organizations (NGOs). Puerto Rican government officials also were in attendance. The conference was free of charge for the participants.

During the regulatory portion of the 2-day seminar, Region 2 provided two presentations on environmental justice (one as a general overview of the environmental justice movement in the country; the other to highlight the integration of environmental justice on a specific wastewater treatment project). In addition to Region 2, EPA's Office of Ground Water and Drinking Water (OGWDW)provided a series of regulatory, programmatic, and technical information to the audience.

Environmental Justice Training in Puerto Rico

In June 2002, Region 2 conducted a pilot training course in Puerto Rico using selected modules of the Agency's environmental justice fundamentals training curriculum. The course was held at the Inter-American University's School of Law. Attendees included grassroots organizations, local government offices, other federal agencies, academia, and industry. The course, conducted at times in both English and Spanish, was well received as participants expressed gratitude to the trainers for incorporating the lingual aspects of their culture.

Based upon feedback from the participants, the Region is certain to provide future environmental justice training sessions to stakeholders in Puerto Rico. This is a significantly positive step for Region 2. It is expected that this training will facilitate collaborative working relationships between EPA and organizations in Puerto Rico.

Environmental Impact Assessment Training

In March 2001, Region 2 hosted a 3-day training course, titled Environmental Impact Assessment. The course, which focused on NEPA topics (particularly its process and corresponding segments for conducting environmental impact analyses), included a section and discussion on environmental justice. Eighty participants attended the course, which was aimed at training New York City government officials. In addition to Region 2, a FHWA representative provided a presentation on that agency's environmental streamlining approach.

Dominicanos 2000

Dominicanos 2000 is a community-based organization established to implement projects addressing the advancement of Dominicans and the progress of Latinos and others in the United States. Dominicanos 2002 hosted its Second Annual Conference in March 2001 at the City College, City University of New York. A panel discussion, Affecting Change in Environmental Justice Areas, included representatives from Sustainable South Bronx, New York City Environmental Justice Alliance, Goldman & Goldman, and Region 2.

NEPA Environmental Impact Assessment Training

Region 2 was invited to present a course on environmental impact assessment to New York City agencies in April 2002. As part of the course, a presentation was provided on the role of environmental justice in the NEPA review process. The course was well received by nearly 40 participants.

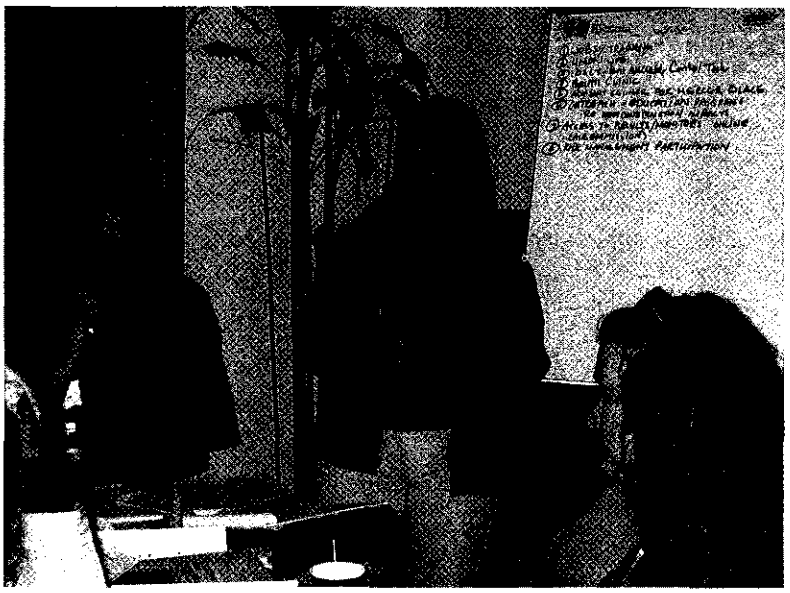
Region 4

Fundamentals of Environmental Justice Course

Region 4, in collaboration with the South Florida Water Management District, hosted the national EJTC Fundamentals of Environmental Justice course in Miami and West Palm Beach in June 2002. Participants included staff from the South Florida Water Management District, Army Corps of Engineers, Florida DEP, USDA, South Florida Ecosystem Restoration Advisory Committee, and Region 4's satellite office in West Palm Beach. A U.S. Congressional representative, community-based groups, academia, environmental consultants, college students, and interns also attended. Based on the course evaluations and actual communications with participants, the objectives of the course were met and deemed a tremendous success.

Environmental Justice Small Grants Program

Region 4 hosted its annual Environmental Justice Small Grants Workshop for FY 2001 grantees in October 2001, in Atlanta, Georgia. The workshop has been an annual event for the Region for the last 3 years. The goals of the workshops are to increase the grantees' knowledge of grant requirements, increase the grantees' ability to successfully manage an environmental justice grant, provide an opportunity for the grantees to have their questions answered, and begin a networking process among



the grantees. The workshop was a catalyst to a successful FY 2001 environmental justice grants year.

Region 5

Fundamentals of Environmental Justice Workshop

In August 2002, Region 5 hosted a Fundamentals of Environmental Justice workshop, the culmination of over 2 years of national collaboration with multiple stakeholder groups and state-of-the-art curriculum development. The workshop explores origins of the environmental justice movement, perceptions and definitions of environmental justice, and some of the laws pertaining to environmental justice. It provides an overview of GIS and other analytical tools helpful in understanding the issue. Skills and learning are reinforced through case studies and opportunities to meet with people addressing environmental justice on a day-to-day basis.

In addition to providing immediately applicable skills, the workshop teaches both the use of the analytical tools and the ability to communicate effectively around sometimes complex and controversial

subjects. While the workshop focuses on basic skills, its modular format allows easy modification to include program-specific content.

Staff from Regions 5, 7, and 9, and EPA Headquarters presented the workshop. Region 5 will continue to provide this training to EPA Regional employees, as well as to state and local governments, industry, tribes, community groups, and academia.

Fundamentals of Environmental Justice Train-the-Trainer Course

Regions 5 and 6 co-hosted a 5-day environmental justice train-the-trainer course in September 2002. The course teaches the delivery skills necessary to teach the Fundamentals of Environmental Justice workshop and provides coaching on presentation and facilitation techniques. Representatives from EPA Headquarters, Regions 5 and 6, states of Indiana and Missouri, community groups, and non-profit organizations participated in this course.

Region 6

Fundamentals of Environmental Justice Training

The Region 6 Environmental Justice Training Team has presented a number of environmental justice training sessions covering the newly developed Fundamentals of Environmental Justice curriculum. In addition to two pilot training sessions held in 2001, four other 2-day sessions, a 1-day session, and three management/staff overview/introductory sessions were held. The course has been very well received by participants.

Environmental Justice Permitting Training

Region 6 is participating in a national work group established through EPA Headquarters to develop an environmental justice permitting training module, which will address the various permitting programs. The Region is focused on the water permits and incorporating various tools from the environmental justice handbook into the water permitting process.

Region 7

Environmental Justice Training

Region 7 has played an active role in helping to develop and implement EJTC's goals and objectives both on a regional and national level. Region 7 has hosted and assisted several training sessions, including the Fundamentals of Environmental Justice training, the Introduction of Environmental Justice: Training to EPA Region 7 New Hires and Summer Interns, and Region 5's Fundamentals of Environmental Justice training. The goals of environmental justice training are to enhance the capacity of individuals, institutions, and communities to: (1) become aware of and identify environmental justice issues, (2) engage in productive dialogue around

Top Left: Brenda Brandon, EJTC training representative from Haskell Indian Nations University; Top Right: Tribal Tree timeline explaining history and connections to nature; Bottom: Walter Pierson, EJTC training representative from the Missouri DNR, speaking at the train-the-trainer forum.

these issues, and (3) determine future steps to incorporate environmental justice into programs, activities, and operations.

In addition to hosting several training sessions, Region 7 partnered with the Missouri DNR and Haskell Indian Nations University to effectively and efficiently provide environmental justice training to a wide variety of stakeholders.

Region 8

CDOT Environmental Justice Training

Region 8 staff lead a small group of DOT and FHWA staff in designing 2 1/2 days of environmental justice training. The first 1/2 day of the training consisted of environmental justice fundamentals. The remaining 2 days focused on environmental justice in the NEPA process, and included 1 day of project-specific environmental justice/NEPA consultations. A FHWA contact at the national level delivered a significant portion of the training.

Approximately 40 Colorado DOT staff, including planners and engineers of four project teams, made up the primary audience. Each of these teams is in the early stages of developing transportation projects that will likely encounter environmental justice issues. In addition, the participants included a small number of staff from FHWA, Federal Transit Administration, and Regional Transportation District.

Environmental Justice Brownbag Series

The Region 8 environmental justice program hosts presentations yearly as part of its Environmental Justice Brownbag Series. Each year a different theme is chosen. In 2001 the following Brownbags were held: (1) Tribal Environmental Health Issues, (2) Health Disparities, and (3) Wind Power in Indian Country. In 2002, the following Brownbags were held: (1) On-Line Environmental Justice Education Seminar, (2) Historical Review of Land Use Beginning in 1872 to the Present, (3) Tribal Environmental Justice: Preserving Cultural Resources in the Missouri River Basin, and (4) Pueblo Environmental Activism: Pueblo Chemical Depot.

Region 9

National Environmental Justice Training Collaborative

Region 9 continues to provide leadership in collaboration with other regions for all phases of development of 19 training modules and the development of a team of trainers. The Region has fulfilled the initial goals and objectives of the EJTC (i.e., completed the 3-day Fundamentals of Environmental Justice workshop curriculum, field tested the training in six venues nationally, and trained 34 multi-stakeholders).

Interagency Environmental Justice Training

Region 3

Interagency Environmental Justice Training

Region 3 conducted a series of environmental justice training sessions at Office of Policy and Management's (OPM) interagency Eastern and Western Training Centers through its Environmental Policy Institute. The sessions were part of the Environmental Issues Seminars.

Region 3 case studies and experiences were used as a backdrop for discussions of the origins and history of the environmental justice movement in the United States, perspectives and philosophical approaches to environmental justice issues, and policy and guidance issues related to Regional program activities. The participants were able to discuss cases with the instructors who actually worked on them. The audience for these sessions were mid-level managers from most fed-

eral agencies. Since this training began, more than 500 managers have taken the training.

GIS Demographic Mapper

The user-friendly GIS mapping tool, developed by Region 3 in 1996, continues to be refined. This Arc View-based screening tool provides vital demographic information for any address or area in question and allows the user to better understand and characterize areas in proximity to sites of concern. This screening tool allows the Region to identify and allocate appropriate resources, develop informational materials geared to the needs of a given community, understand population distribution around sites of concern, identify special needs (e.g. translation of documents into another language, targeted educational materials, lead-based paint), and locate other sites or sources of concern in the immediate area.

Demonstrations of this tool and its applications in the environmental justice arena have been made for the states of Maryland, Delaware, and Pennsylvania; the cities of Philadelphia and Wilmington; EPA Region 7; the Federal Law Enforcement Training Center; and the Republic of South Africa. Copies of the application were requested by the U.S. Department of the Interior (DOI), which has, in turn, forwarded the application to other federal agencies for evaluation and comment. Region 3 is currently reviewing the tool, and is considering updating this GIS application.

Region 10

Environmental Justice Training for FWS

In June 2002, representatives from Regions 9 and 10 conducted training on the fundamentals of environmental justice for FWS. The 2-day course provided participants with the history, theory, application, and legal aspects of environmental justice, as well as tools for facilitating the integration of environmental justice in agency programs. Other attendees included representatives from U.S. Forest Service (USFS), Portland Oregon Bureau of Environmental Services, city of Portland, Tri-Met, Oregon DOT, Environmental Justice Action Group, and Willamette River Keepers.

State Training

Region 3

All-States Environmental Justice Conferences

Beginning in 1999, Region 3 has convened annual All-States Environmental Justice Conferences with all of the states in the Region and the District of Columbia. The purpose of the conference is to create a forum for open discussion of environmental justice guidance, policies, evaluative methodologies, real-world problems, and potential solutions for those problems. These conferences also provide a forum where the experiences and knowledge gained

by group members as they address issues of environmental justice concern are shared. The 2001 conference was held in Richmond, Virginia, and the 2002 conference was held in Dover, Delaware. Due to the success of these conferences, the states have requested that they be held twice a year.

The states also requested that Region 3 hold regularly scheduled monthly conference calls to continue the dialogue, share experiences, and continue to identify potential solutions to real environmental justice issues.

Region 4

States Environmental Justice Coordinators Workshop

Region 4, in collaboration with the Tennessee Department of Environment and Conservation, hosted an EPA/States Environmental Justice Coordinators Workshop in August 2002, in Memphis, Tennessee. The purpose of the workshop was to strengthen EPA and the states' relationships in addressing environmental justice matters. In conjunction with the workshop, an environmental justice site tour was conducted with the Tennessee Department of Environment and Conservation, the Sierra Club, and the Concerned Citizens Memphis Depot.

The workshop provided state environmental justice coordinators an opportunity to: (1) share their experiences and approaches to addressing environmental justice issues and concerns; (2) interact with others who are addressing environmental justice on a daily basis; (3) learn about analytical tools that will assist in understanding environmental justice issues; (4) gain insight into the different laws used to address environmental justice; (5) discuss the basic concepts and tools of GIS; and (6) reinforce employees' skills and learning through case studies. The workshop also provided an opportunity for strategic planning and the development of a joint Region 4/state environmental justice strategic plan.

Region 8

State Training

In July 2001, more than 50 people attended training at the Region 8 EPA Conference Center to learn about environmental justice in relation to NEPA and permitting activities under RCRA and CAA at the Pueblo Chemical Depot. They came to hear how to incorporate environmental justice principles into their decision-making and day-to-day activities.

The workshop brought together an unusual group of state and federal personnel to address the destruction of chemical weapons and the associated environmental permitting in the context of environmental justice. It included not only the state and depot managers and staff involved in day-to-day regulatory and cleanup activities, but also specialized technical staff and policy makers from DoD.

The organizers pulled together to significantly improve the sharing of information about environmental justice and regulatory programs with outside groups. This was the first workshop ever presented by personnel involved with the destruction of chemical weapons.

Tribal Training

Tribal Water Quality and Pesticide Management Workshops

In July 2002, OPP renewed a 3-year cooperative agreement with Native Ecology Initiative (NEI) to support workshops that assist tribes with technical, legal, and policy issues pertaining to the impacts of pesticides on ground and surface waters. In 2002, four workshops (three intermediate and one advanced) were held in various parts of Indian country, with 67 representatives from 44 different tribes attending. Additional workshops are planned. Since OPP began supporting these workshops in FY 1998, they have drawn a total of 531 participants from 285 federally recognized tribes and tribal consortia.

Region 2

Training/Grant Opportunities for Tribal Nations

Region 2 held training workshops for tribes on air programs, wetlands, solid waste, quality assurance, and emergency response. Many of these workshops were hosted by the St. Regis Mohawk Tribe and attended by several other tribes. Also, the Region has had conference calls and meetings with the tribal contacts to discuss specific programs (e.g., water quality standards, drinking water, and enforcement capacity building).

Chapter 5

Outreach Initiatives

A new development over these past 2 years has been the establishment of Regional Environmental Justice Listening Sessions. The Agency is holding these sessions as a way to proactively engage stakeholders working to identify and address the environmental justice issues facing communities. This chapter describes some of the listening sessions held over this past year, along with other outreach initiatives.

Regional Environmental Justice Listening Sessions

Region 3

In July 2001, during the Third Annual Region 3 All-States Environmental Justice Meeting, the assembled group discussed holding regional listening sessions. MDE held the first of these meetings in December 2001, in Annapolis, Maryland. Region 3 participated in this meeting along with MDE, members of the Maryland Commission on Environmental Justice and Sustainable Communities (EJSC), state legislators, private citizens, NGOs, and community-based organizations from around the state. Topics included rubble fill landfills, facility siting, the Johns Hopkins Lead Study Project, and permitting issues. Follow-up activities are ongoing.

OEJ, Region 3, and MDE are planning a joint listening session in Baltimore in the near future, and three more around the state in 2003. Discussions and planning for additional regional listening sessions are ongoing.

Region 6

In November 2002, Region 6 and Texas Southern University (TSU) co-sponsored the first regional listening session in Houston, Texas. TSU (particularly, the Thurgood Marshall Law School Environmental Justice Clinic) worked with Region 6 to coordinate logistics in the Houston area and other planning-related tasks. The purpose of the session was to have interactive, solution-oriented dialogues with the community, and enhance partnerships among the federal, state, tribal, local, and municipal government representatives. Early in the planning process, Region 6 sought the participation and input of a variety of stakeholders who served as the planning committee for the session. The planning committee

members represented community-based groups, industry, academia, state government, EPA, and other federal agencies. The planning process included identifying major issues of concern. Subsequently, issue-specific subcommittees were formed to identify a laundry list of concerns for each topic. The list was then prioritized, and selected issues under each were identified for discussion at the session. Stakeholders from all five Region 6 states were invited to participate. EPA senior managers, the deputy regional administrator, and division directors, along with programmatic subject matter experts, participated in the sessions, which were led by certified facilitators. Extensive followup activities are being planned.

Region 9

Region 9's Pacific Southwest Office has participated in regional listening sessions in collaboration with Cal/EPA. For the past 2 years, Region 9 has been working closely with Cal/EPA to develop California's environmental justice program. Based on the passage of recent environmental justice legislation, Cal/EPA was tasked to provide public forums for communities and other stakeholders to participate in the development of the state's environmental justice strategy. In Spring 2002, Cal/EPA held a kick-off meeting to initiate the public participation process for its environmental justice strategy development. This meeting was followed by community-specific meetings in San Diego, Los Angeles, Fresno, and West Oakland. Region 9 partnered with Cal/EPA during California's preliminary listening sessions in Sacramento, San Diego, and West Oakland, which are Region 9 focus areas. These sessions provided the public the opportunity to hear about and comment on the state's draft environmental justice strategy. These listening sessions have provided Region 9 with valuable information about community needs and concerns existing in the Region's areas of emphasis, such as West Oakland, the U.S./Mexico border, San Diego, and the Central Valley. Additional community-based listening sessions will be held to unveil the state's final version of the environmental justice strategy. Region 9 will support and participate in those sessions as well.

Outreach

Industry-Based Performance Improvement Partnerships

EPA works with industry leaders in specific sectors to set performance objectives, create appropriate tools and incentives for better performance, and remove barriers that adversely affect performance. State and local governments and other constituent groups also participate in these programs. The current industry sector programs do not have projects that focus solely on environmental justice issues; however, opportunities do exist for any and all public constituencies, including environmental justice representatives, to participate in these programs.

The public can provide information and perspectives during the analytical phase of these processes (i.e., helping to identify the primary performance objectives and barriers for a given industry). Because program implementation takes place at the state and local levels, community groups can participate in these activities. There also are a growing number of tools and information sites for environmental justice representatives to learn more about the programs and how to get involved. The Center for Industry Sector

Innovation, a collaboration between EPA and the Global Environment & Technology Foundation, recently launched a new industry-focused Internet site, SectorSTAR, at <www.sectorstar.org>, which provides information on federal- and state-sector programs, tools and resources, and links to other information sources

Pesticide Incident Response Officer (PIRO)

OPP assists individuals who may have been exposed to a pesticide and suffered toxic or adverse effects, or delayed or chronic adverse effects. PIRO provides highly skilled technical assistance that can include medical consultation, laboratory analyses, toxicology and pesticide information, enforcement, and cleanup. PIRO coordinates efforts with EPA's Regional offices, other federal agencies, state and local government agencies, and the general public. Incidents can involve one or more individuals (a family, a migrant workforce, office employees, schoolchildren, or even a whole community). In the past 2 years, PIRO has responded to several incidents as described above.

IPM in Tribal Schools

In FY 2001, OPP worked with BIA to create an IPM program in several BIA schools on the Navajo reservation. The project provided school staff, including board members, educators, and janitors, with practical ways to cut pesticide applications (and budgets) while safeguarding the health of children in the school environment. Region 9 is now encouraging tribal schools to implement IPM practices.

National Pesticide Information Center (NPIC)

NPIC, supported by EPA and Oregon State University, is an information service center for both the general public and professionals regarding pesticides and pesticide-related issues. NPIC disseminates information through various media, including a toll-free hotline, e-mail, a Web site, and faxes, with the aim of providing objective, science-based

information about pesticides and pesticide-related topics, and of promoting informed decisionmaking. NPIC's toll-free number is found on pesticide labels, and the majority of phone inquiries are referred in this manner.

To encourage ethnically diverse communities to take advantage of these resources, OPP has been working with NPIC on an awareness campaign, which includes distributing radio announcements, writing articles for community newsletters, and informing consumers of NPIC and its information resources.

To better serve the Spanish-speaking community, NPIC provides services in both English and Spanish. Both English-speaking and Spanish-speaking professionals staff the toll-free number for inquiries and information.

Outreach to Public Health Clinics

OPP has provided a grant to the University of the District of Columbia's Cooperative Extension Service to work with Unity Health Care, Inc., which is the umbrella group for District public health clinics. Through this collaboration, OPP provides information to the public on the link between cockroach allergens and asthma, as well as safe pesticide use and IPM techniques for controlling cockroaches.

This campaign was launched in August 2002, and implementation is under way. Extension service staff are working at the clinics to hand out documents on pesticide safety and IPM tips for cockroach control, answer questions from the public, and conduct short training sessions. People who sign up for the training sessions receive a giveaway bag containing roach baits, sticky traps, trash bags, caulk, dish soap, and information about the safe use of pesticides.

A video tape produced by ALA; entitled *Controlling Cockroaches in Your Home: Health Tips for Those with Asthma,* also will run continuously in clinic waiting rooms. Clinic directors and their staff will receive copies of the *Community Action Kits for Pesticide Safety*, recently developed under a Consumer Labeling Initiative grant to the National Safety Council.

Washington Metro Area Transit Authority Outreach Campaign

OPP recently launched a local transit campaign with the Washington Metro Area Transit Authority, featuring posters encouraging the safe use of pesticides. The campaign began in August 2002 and ran for 1 month. OPP's posters were featured on 550 Metro buses and at 10 Metrorail subway stations in the Washington Metropolitan area, mainly in low-income, minority communities. This campaign was modeled after the EPA truck ad campaign and similar efforts in New York and Atlanta. In other efforts, a New York City transit system campaign in 2001 focused on illegal use of insecticidal chalk and "Tres Pasitos." In May 2002, a campaign in Atlanta ushered in "Pesticide Awareness Week," sponsored by the Mayor, and featured transit ads and educational activities aimed at high-risk communities.

Read the Label First

The New Mexico Family, Career, and Community Leaders of America and the New Mexico Association of Family and Consumer Sciences have been using "Read the Label First!" information and, with a new grant from OPP, will develop ready-to-use, age-appropriate, teacher-friendly learning plans and suggested classroom projects incorporating information on labels and pesticide safety. A pilot using the new materials took place in the Fall 2002 school season. Ultimately, the goal is to have the Read the Label First! message incorporated into family and consumer life sciences classes taught at the secondary school level throughout the United States.

Pesticide Listserve

OPP has developed an electronic listserve for people and groups who want to stay abreast of pesticide issues and decisions. With the help of the People of Color Environmental Groups Directory, more than 300 ethnically diverse groups are on this listserve, providing up-to-date information about pesticides.

Annual Partners for Smart Growth Conference

Each year, EPA partners with the Smart Growth Network and other organizations to organize a conference that brings national smart growth leaders together to discuss current trends, tools, and information in the field. This successful annual conference has consistently drawn around 1,000 participants. In January 2002, the New Partners for Smart Growth: Building Safe, Healthy, and Livable Communities conference built upon past successes by combining the annual Smart Growth Network conference with the Local Government Commission's Redefining Community conference. The conference focused on the use of smart growth techniques to benefit public health, public safety, community economic vitality, water quality, and other environmental concerns, as well as provide mobility for seniors, children, and economically disadvantaged individuals.

The conference featured many sessions on how smart growth can empower disadvantaged communities. These included hands-on and implementation-focused sessions covering topics such as making policy change at local levels, building partnerships and coalitions, implementing strategies in rural communities, creating affordable and mixed income housing, and improving water quality. Efforts were made to enhance the opportunity for economically disadvantaged communities to attend the conference. The Local Government Commission provided need-based scholarships and organization-sponsored scholarships to youth leaders around the country.

A variety of organizations supported the conference, including EPA, FHWA, Pennsylvania State University, California Department of Transportation, Robert Wood Johnson Foundation, National Association of Realtors, NOAA, American Society of Landscape Architects, and others.

Community-Based Environmental Protection (CBEP) Projects

CBEP seeks to address the combined causes and synergistic effects of environmental problems. CBEP supplements and complements traditional environmental protection approaches (regulatory actions, voluntary approaches, market-based incentives, etc.) by focusing on holistic approaches within a community to address all of its environmental issues and provide the economic and quality-of-life benefits of a healthy environment to all citizens.

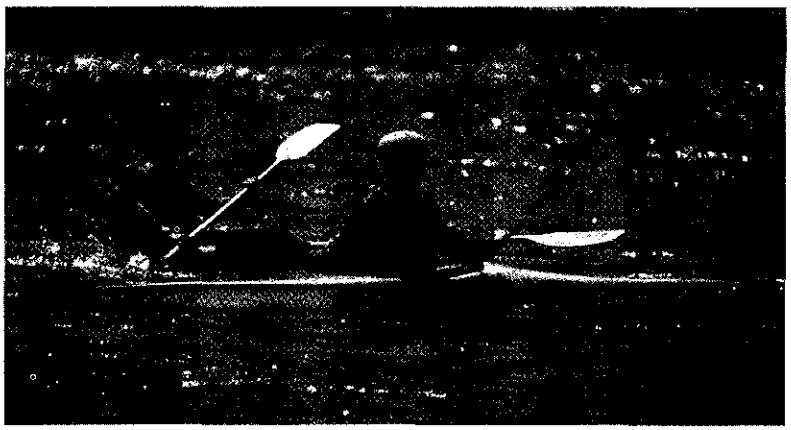
The six key CBEP principles of the community-based approach are: (1) focusing on integrated approaches within a geographic area; (2) working collaboratively with all stakeholders; (3) protecting and restoring the quality of air, water, land, and living resources in a place as a whole to address environmental risks to human health and ecosystems; (4) assisting communities in the integration of environmental, economic, and quality-of-life planning and goals; (5) taking collaborative action using the most appropriate tools; and (6) using adaptive management principles to make efforts more effective.

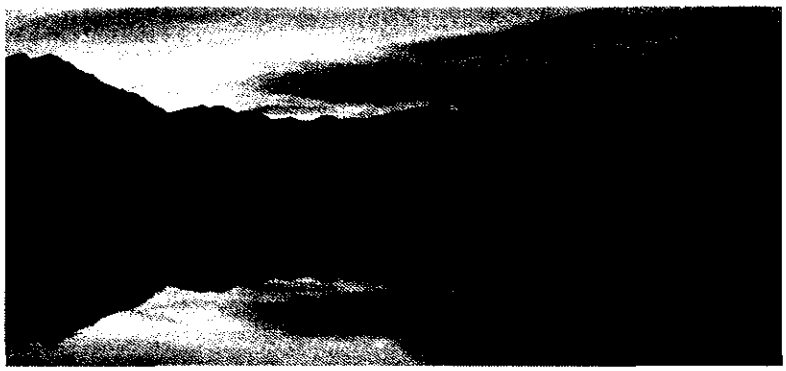
EPA's 10 Regional offices provide direct assistance through partnerships with communities, states, and tribes. EPA Headquarters' program offices provide resources for environmental and community assessments, and OPEI serves a national policy and public communications coordinating role. More than 150 regional projects are described on the Agency's Web site at <www.epa.gov/ecocommunity>. Several of these are addressing environmental justice issues, including projects in Charleston, South Carolina; St. Louis, Missouri; Omaha, Nebraska; southeastern Florida; and several places in California.

Innovating for Better Environmental Results

EPA's Project XL Program published *Innovating for Better Environmental Results: A Strategy to Guide the Next Generation* in October 2001. The guide proposes a framework with four interrelated elements: (1) strengthening EPA's innovation partnerships with states and tribes; (2) focusing on priority environmental problems; (3) diversifying our environmental protection tools and approaches; and (4) fostering a more innovative culture and organizational systems within the Agency.

Believing in the need for a focused agenda to achieve results, EPA identified specific environmental challenges where innovative approaches will be essential





for further progress. These challenges—greenhouse gases, smog, water quality, and water infrastructure—will be targeted for particular resource and creative investments. This is not an exclusive list, however, and will not limit innovative pursuits in any way. The draft strategy is the result of extensive discussions within EPA reflecting on the Agency's innovation experience of the past several years, careful consideration of a number of recent reports by outside groups, and preliminary discussions of these ideas with co-regulators. EPA has actively engaged a variety of stakeholders, including environmental justice representatives, in commenting on the document.

Project XL is a national pilot program that allows state and local governments, businesses, and federal facilities to use EPA's innovative strategies to test better or more cost-effective ways of achieving environmental and public health protection. EPA will, after careful evaluation, replace or modify regulatory requirements, policies, or procedures if the proposed XL project will produce superior environmental benefits and promote accountability to the public. To ensure these new approaches truly meet local needs and protect the environment, people from the community, environmental groups, and businesses are included in evaluating each Project XL proposal. The goal of Project XL stakeholder involvement is a collaborative working relationship between sponsors (the organizations proposing new ways of doing things) and stakeholders (people who believe they or their community could be affected by an XL project).

Several innovative pilots incorporate environmental justice issues into the overall purpose of the project. In particular, XL projects relevant to urban environmental justice challenges are under way, including brownfields redevelopment and smart growth (Atlantic Steel Project), regional air quality (Metropolitan Chicago Regional Air Quality and Economic Development Strategy), and lead-based paint removal (Lead Safe Boston). The Web site for the draft strategy is: <www.epa.gov/innovations/strategy>.

Improving EPA's Spanish-Language Web Site on Wetlands

EPA's Office of Wetlands, Oceans, and Watersheds (OWOW) places particular importance on reaching a wide spectrum of the public to inform them of wetland ecology, functions and values of wetlands, and federal regulatory and non-regulatory efforts to protect wetlands. To further this goal, EPA developed a Web site with extensive wetlands information. To address the needs of the Spanish-speaking community, during this past summer, the Wetlands Division employed a Hispanic American College and University (HACU) intern to translate information from the EPA Wetlands page into Spanish. The Spanish-language Web site has been frequently visited.

American Wetlands Month: Outreach and Education Activities for Urban Youth

May is American Wetlands Month. EPA's Wetlands Division and regional offices work with various urban youth organizations each year as part of the annual celebration. EPA sponsors a number of activities to raise awareness of the importance of wetlands in urban watersheds, to educate urban youth on activities they can engage in to protect and restore wetlands, and to improve urban watershed health through wetland restoration activities. In the Washington, D.C., metropolitan area, more than 500 children were educated about urban wetlands and the importance of wetlands in the Chesapeake

Bay Watershed. Numerous partners participated in these education activities with EPA, including the District of Columbia Department of Health, the Anacostia Watershed Society, and the premier vocational program for troubled youth in Alexandria, the Alexandria Seaport Foundation.

Five Star Restoration Program: Partnering to Protect Wetlands

EPA established the Five Star Restoration Program to support community-based wetlands restoration projects and educate the public about watersheds across the United States. The National Association of Counties (NACO), the National Fish and Wildlife Foundation, and the Wildlife Habitat Council joined together with EPA for this effort. Funding for the program is provided by OWOW and the National Marine Fisheries Service's Community-Based Restoration Program.

The Five Star Challenge Grants Program develops knowledge and skills in young people through restoration projects that involve multiple and diverse partners, including local government agencies, elected officials, community groups, businesses, schools, youth organizations, and environmental organizations. Its objective is to engage five or more partners in each project to contribute funding, land, technical assistance, workforce support, or other in-kind services that match the program's funding assistance. Consideration for funding is based upon the project's educational and training opportunities for students and at-risk youth, the ecological benefits to be derived, and the project's social and economic benefits to the community.

EPA's funding levels are modest, averaging about $10,000 per project. However, the projects provide meaningful contributions to communities when this funding is combined with contributions of other partners. At the completion of Five Star projects, each partnership will have experience and confidence with a demonstrated record of accomplishment, and will be well positioned to take on similar projects in the future. Thus far, 250 projects have been funded from FY 1999 through FY 2002 with project funding levels ranging from $5,000 to $20,000. For more information, visit <nfwf.org/programs/5star-rfp.htm>

Kingman Lake Restoration and Educational Field Trip

OWOW conducted an educational wetland restoration planting at Kingman Lake on the Anacostia River near Washington D.C. with a group of 4th and 5th graders from PR Harris Educational Center. Partners in the project included the Army Corps of Engineers; District of Columbia Department of Health, Watershed Protection Division; Izaak Walton League of America; NACO; and AmeriCorps. An award ceremony, led by EPA managers, recognized the contributions of the students to the improved health of the Anacostia River and Chesapeake Bay. The group toured Kenilworth Marsh and Aquatic Gardens, where previous marsh restoration work was highlighted. Television news coverage of the children planting wetlands plants aired on Channel 8.

Smart Growth Speaker Series

The Smart Growth Speaker Series represents one of EPA's public outlets for education and outreach on smart growth. The Speaker Series has been a forum for addressing issues such as mass transit, smart growth at the ballot box, edgeless cities, property rights and community values, and many others.

In 2001, two lectures from the Speaker Series were particularly relevant to environmental justice: Smart Growth Block-by-Block: The Role of Community-Based Organizations and Faith-Based Development:

Building the Community From the Inside Out. Both lectures examined how smart growth can address the needs of under-represented or underserved populations.

In February 2001, the executive director of the National Neighborhood Coalition and the executive director of Atlanta's Historic District Development Corporation lectured at the National Building Museum in Washington, D.C. They discussed the report Smart Growth, Better Neighborhoods: Communities Leading the Way. The report details how community-based organizations are successfully linking neighborhood redevelopment to smart growth, as well as combining historic preservation, affordable housing, and anti-displacement protections to help revitalize inner city neighborhoods.

In November 2001, a former U.S. Congressman, author, and senior pastor of Allen AME Church, discussed the roles of churches (and other faith-based institutions) in community development. His presentation shared how faith-based development corporations can fill in the gaps that are left unattended by business and government to spur economic development within neighborhoods and improve community character. He shared how the commercial and residential development projects of Allen AME's development corporation have transformed southeast Queens, New York, and helped to achieve smarter growth.

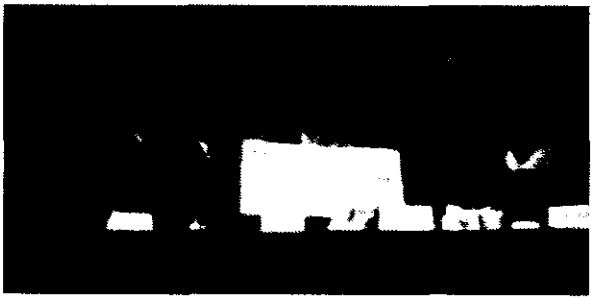
The Smart Growth Speaker Series is co-sponsored by EPA, ICMA, the National Building Museum, and the Smart Growth Network. The lectures are held monthly at the National Building Museum.

Sixth National Tribal Conference on Environmental Management (NTCEM)

EPA's sixth NTCEM was hosted by the Pyramid Lake Paiute Tribe, in Sparks, Nevada, in June 2002. Traditionally, this biennial conference serves as EPA's premier tribal event, providing an opportunity for tribal leaders, tribal environmental program managers, tribal organizations, NGOs, consultants, federal agencies, and other interested entities to share information about the wide range of environmental topics and issues of vital interest to tribes. With approximately 700 people in attendance, the sixth NTCEM received an unprecedented level of financial assistance/coordination support across multiple media programs.

Conference highlights included the EPA Senior Managers/Tribal Panel discussion and EPA Administrator Christine Whitman's keynote speech, which included the presentation of a $1.2 million grant to the Swinomish tribal community, the largest award that EPA has ever made to a tribe for environmental research (exposure through subsistence consumption of shellfish in traditional harvesting areas). The conference also included an abundant and diverse spread of water quality and watershed protection sessions and activities, including the National Tribal Watershed Listening Session and a Washoe wetland restoration site visit.

Whitman with Washoe and Paiute Chairmen



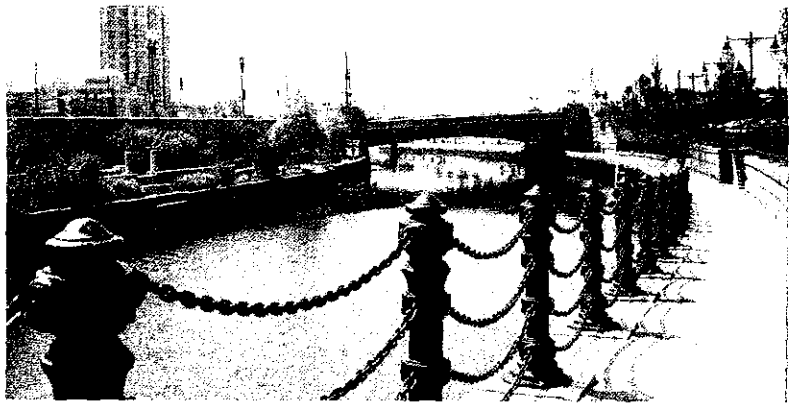
Tribal Training for Control of Nonpoint Source Water Pollution

OWOW has developed workshops to assist tribes in preparing Nonpoint Source Pollution Control Management Programs under the CWA and become eligible for obtaining program grants available to all federally recognized tribes. Workshops cover requirements for tribes in: (1) developing assessments of nonpoint source pollution impacting reservation waters; (2) defining priority projects and best management practices needed to mitigate nonpoint pollution problems; and (3) applying for treatment in a similar manner as a state. These requirements are necessary for tribes to be eligible for project grants authorized by Sections 319(h) and 518 of CWA. The workshops also include modules on funding sources and strategies for preparing proposals for competitive grants, work plans for base grants, and applications for funding Section 319 projects. The workshops also cover additional topics on monitoring, source water protection, and requirements of CWA. Since 1998, a total of 15 tribal workshops have been held, reaching most tribes in the western and eastern states. EPA's Regional offices schedule the workshops, and OWOW prepares all modules and workshop materials.

Region 1

EPA Publishes Environmental Justice News

In October 2001, Region 1 began publishing *Environmental Justice News*, a quarterly environmental justice newsletter that is distributed to a mixed internal and external audience. The first edition of the newsletter was released concurrently with issuance of a revised Region 1 Environmental Justice Policy and Region 1 Environmental Justice Action Plan for FY 2001 and 2002. The production of *Environmental Justice News* is part of a broader communications strategy outlined in the Action Plan, which aims to effectively convey information about

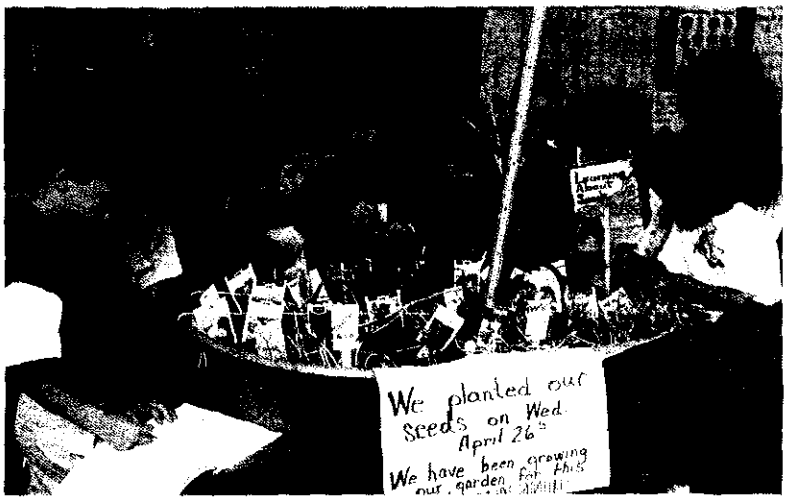


environmental justice issues, policies, programs, and results to the widest audience possible. Electronic and print versions of the newsletter are both available in order to reach many of the Region's most important stakeholders. The newsletter features environmental justice-related news items from EPA, other federal agencies, state and local agencies, community groups, and academic institutions. Visit <www.epa.gov/ne/ej/index.html> to read all of the issues that have been published to date.

Urban Earth Day Events

In 1970, more than 20 million people came together to celebrate the first Earth Day. That same year, President Richard Nixon created EPA with a mission to protect the environment and public health. Each spring, in celebration of Earth Day, the Urban Environmental Program in Region 1 sponsors Urban Earth Day events in targeted communities of environmental justice concern.

Urban Earth Day is a high-energy, youth-focused, fun-filled day of learning about the urban environment. These events provide an opportunity to foster awareness of multimedia environmental and public health risks prevalent in communities and to promote environmental stewardship among youth. Events vary each year and can include neighborhood cleanups, tree plantings, and interactive, environmental education activities. These events are often held in partnership with public schools, community-based organizations, and state and local government



agencies. Representatives from more than a dozen partner organizations serve as activity leaders and cover topics such as lead poisoning prevention, asthma, recycling, smoking prevention, urban wildlife, and hazardous waste collection. Many events are held in elementary schools or urban neighborhoods and reach more than 300 students or residents in a day.

Environmental Justice Youth Summit

In July 2002, Alternatives for Community and Environment (ACE) hosted its 7th Annual Citywide Environmental Justice Youth Summit at Northeastern University. Participants in the Roxbury Environmental Empowerment Project, which helps develop environmental justice leadership among youth in the Roxbury neighborhood of Boston, led the program.

Interns and staff from Region 1 presented a workshop on controversies and issues surrounding environmental justice. Approximately 14 youth leaders attended the EPA workshop, which ran concurrently with other youth-led workshops at the Summit. The material presented is part of the environmental justice training that is presently being rolled out to all Region 1 employees, and was developed from the EJTC. The workshop also provided EPA an opportunity to share with the public details of other environmental justice activities in the Region.

Outreach to Chinatown Residents

During the summer of 2002, the Chinese Progressive Association's Campaign to Protect Chinatown (CPC) began disseminating copies of fact sheets in English and Cantonese about a variety of environmental justice issues affecting the Chinatown neighborhood of Boston. The fact sheets and associated environmental justice curriculum modules were funded through a $15,000 Environmental Justice Small Grant and a $25,000 Urban Environmental Community Grant from Region 1.

Chinatown's 6,400 residents are primarily immigrants, half of whom have not completed high school and 28 percent of whom live below the federal poverty level. The majority of the residents do not speak English. The topics covered by the fact sheets include the role of government agencies, environmental justice, asthma and air pollution, construction waste and dust, motor vehicle exhaust, noise pollution from traffic and construction, air pollution in the home, lead poisoning, and IPM. CPC also is distributing a flyer of important phone numbers, including EPA contacts who speak Cantonese or Toisanese, and have volunteered to follow up on any of the residents' inquiries.

Industry Compliance Assistance

An assistance outreach package was mailed out during August 2002 to more than 40 auto body shops in Lawrence, Massachusetts, a working-class community where nearly 60 percent of residents identify themselves as Hispanic or Latino. Region 1 created a package that included English- and Spanish-language versions of the Massachusetts Office of Technical Assistance (OTA) Crash Course for Compliance and Pollution Prevention. This course helps shops achieve and go beyond compliance and includes a video created by EPA Region 9 entitled *Profit Through Prevention: Best Environmental Practices for Auto Repair*. The course is centered around a comprehensive, plain-language guidebook produced by OTA in 1998, in partnership with

Region 1, the Massachusetts DEP, the Massachusetts Auto Body Association, and a number of other agencies and organizations. The course is designed to help members of the Massachusetts collision repair industry understand and comply with the basic environmental, health, and safety regulations that apply to them. The program promotes the use of pollution prevention measures as a primary means for achieving compliance. The package also was sent to more than 400 Massachusetts health agents and health officers so that they have tools and resources at their disposal to assist them in conducting their code inspections and assistance outreach in auto body shops throughout the state.

Outreach on Title V

In order to promote environmental justice, Region 1 increased public awareness of the Title V operating permits program by hosting a 2-day public workshop on how to review a Title V permit. Invitations were sent out to dozens of community groups, including those on the Region's environmental justice mailing list. More than 30 people participated in this informative workshop. Speakers from Region 1 and environmental advocacy groups explained the basics of a Title V permit and the feedback mechanisms available to the public when, for example, there is disagreement on the permit content.

Between 2001 and 2002, Region 1 also increased its public education efforts by creating a Title V permitting Web site. The site provides useful information to the interested public, including names and addresses of EPA Regional and state Title V contacts, and frequently asked questions and answers. During the first 6 months of 2001, the Web page had more than 5,300 requests (averaging more than 660 requests per month).

Annual Tribal Training Conferences

Region 1 tribes host an annual tribal training conference geared toward developing cultural awareness of federal employees who are tasked with upholding the federal Indian trust responsibility to the tribal governments. These annual conferences provide a forum for tribes to meet with federal agencies to build partnerships and work together toward a common goal of protecting the environment.

The Fourth Annual Regional Tribal Conference was a 3-day meeting hosted by the Passamaquoddy Tribe of Indian Township in April 2001 in Rockport, Maine. The conference brought together tribal leaders and officials with federal agency representatives to discuss natural resource, enforcement, and cultural issues. Tribal cultural training for federal employees included an elders' panel, sweat lodges, drumming, dancing, ceremonial events, and traditional feasts. The theme for this very successful conference was For the Ancestors & the 7th Generation: Protecting Tribal Culture through Environmental Quality.

The Narragansett Indian Tribe hosted the Fifth Annual Regional Tribal Training Conference, featuring a theme of Remembering and Restoring the Relationship Between People and Mother Earth, in May 2002 in Westerly, Rhode Island. The tribes chose five topics to focus on during this 3-day conference. On each day, the session commenced with an elders' panel that communicated the tribal cultural perspective. The topics discussed included fire management and ecology, water quality and wetlands, invasive species, fish consumption and advisories, tribal fish habitat restoration, the EPA risk assessment process, and tribal historic preservation. Cultural presentations were made throughout the conference to educate the federal partners on traditional tribal values and tribal environmental stewardship.

Region 2

EPA Administrator Christine Whitman Visits the South Bronx

In August 2002, EPA Administrator Christine Whitman visited the Hunt's Point area (South Bronx, New York) to attend a clean air energy event. On hand were officials from the New York State DEC, NESCAUM, Consolidated Edison, and the NYPA. The Clean Air Communities, a non-profit organization working to bring clean air technology to urban communities, hosted the event. During her visit, the administrator met separately with representatives from several community organizations based in New York City to discuss environmental justice issues impacting their communities.

New Jersey Utilities Association 87th Annual Conference

In June 2002, the New Jersey Utilities Association conducted its 87th annual conference in Absecon, New Jersey. About 250 top executives from telecommunications, electric, natural gas, and water companies attended, as well as several representatives from state government. The conference theme was Economic Progress and Environmental Equity: A Candid Conversation. In addition to a presentation given by a New Jersey DEP official on its Environmental Equity program, a panel, comprised of representatives from Region 2, Orange & Rockland (New York state) Utilities, the Nature Conservancy of New Jersey, and the New Jersey State Planning Commis-sion, provided viewpoints on environmental equity, economic growth, and sustainable development.

Brownfields and Waterfront Development in New York City

To address commitments made at a 1999 CEQ Federal Interagency Task Force on Environmental Justice in New York City, Region 2 worked with federal, state, city, and community organization partners to hold two interactive educational forums designed to: (1) enhance stakeholder ability to engage in waterfront land use planning and development, (2) enhance stakeholder ability to promote open space, and (3) enhance stakeholder ability to revitalize brownfields in New York City. These workshops provided a forum for participants to share information, experience, and perspectives in order to *proactively set the stage for increased partnerships* and community involvement in decisions affecting the environment.

A variety of resources were leveraged for the workshop. The NY/NJ Port Authority provided funding to a non-profit for meeting materials and compiled a technical resource book. NOAA supported the travel of two of the case study speakers, and EPA coordinated the exhibit hall, which included hands-on demonstrations of available GIS tools and applications.

New York City Brownfields Workshop

Region 2 and HUD worked with a planning subgroup and convened a brownfields workshop for New York City community organizations and community development corporations in August 2000. The purpose of the workshop was to provide information on the brownfields program to community development corporations and community-based organizations that participated in the CEQ's

Environmental Justice Initiative. The Workshop provided a working knowledge of current New York State and New York City brownfields policies and relevant economic development programs.

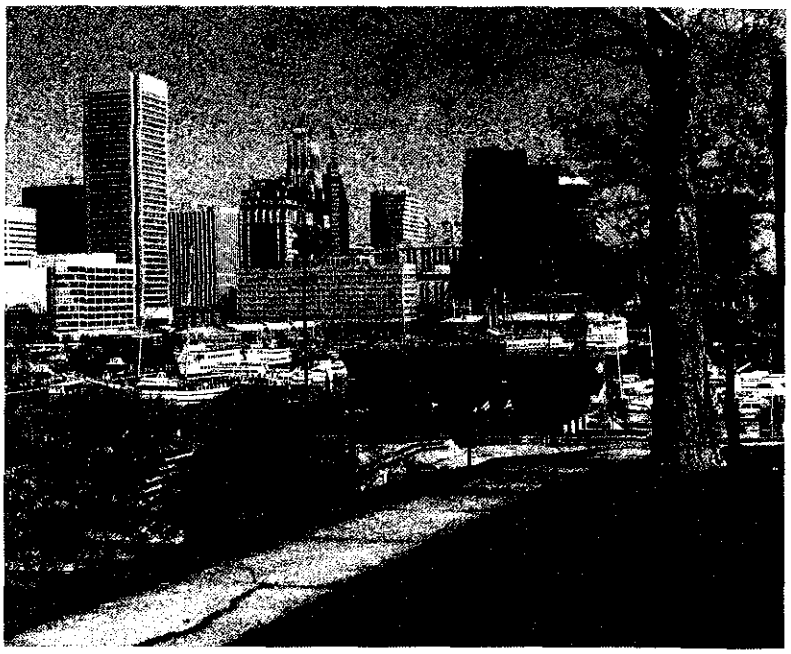
The goal was to proactively support informed community participation and engagement in brownfields redevelopment. The roundtable's discussion and resources should serve to enhance the participants' ability to assess local brownfields proposals and participate in brownfields projects in their own neighborhoods.

The agenda provided an interactive forum for federal, state, city, and community organization representatives to discuss lessons learned, challenges, and perspectives about brownfields redevelopment. Participants represented federal, state, and local city agencies, environmental organizations from throughout New York City, community development organizations, and private sector representatives from real estate development companies and financial institutions.

Region 3

Maryland Commission on Environmental Justice and Sustainable Communities

Over the past 2 years, the Maryland Commission of Environmental Justice and Sustainable Communities, made up of a diverse group of stakeholders from across the state of Maryland, has held monthly meetings in an effort to develop a state strategy for addressing environmental justice. Region 3 actively participates in these commission meetings by making presentations on a variety of issues, including cumulative risk assessment, public health indicators, and GIS. Region 3 works with the commission in support of its various activities, and provides advice and technical support to the group. Commission members; invited guests; representatives of state, local, and federal agencies; business and industry; and the public at large all attend commission meetings.



Chesapeake Bay Environmental Justice Task Force Forum

In support of the Chesapeake 2000 Agreement, the Chesapeake Bay Environmental Justice Task Force held an Environmental Justice Forum in Fall 2002. The forum focused on issues related to the harvest and consumption of fish and shellfish and on issues related to sewer and water quality in the Chesapeake Bay watershed. The forum provided information and updates on the status of activities related to the topics of discussion, and provided the community with an opportunity to discuss concerns related to these focal issues. The Chesapeake Bay Environmental Justice Task Force is made up of representatives from Region 3; NOAA; the states of Maryland, Pennsylvania, and Virginia; the District of Columbia; the Anacostia River Keeper; citizens' groups; and business and industry.

Region 4

Mississippi Statewide Environmental Justice Summit

A mississippi statewide environmental justice summit was held in August 2001 in Jackson, Mississippi. The summit, entitled Environmental Planning, Community Health & Justice Solutions was a collaborative effort between Region 4 and its stakeholders. More than 200 stakeholders were in attendance from community, industry, environmental groups, academia, and federal and state agencies. The summit included sessions on brownfields, internal operations of the Mississippi DEQ, and successful environmental justice strategies for business and local governments. A National Library of Congress mini-training and a community dialogue session also were conducted. The dialogue session yielded several constructive recommendations, which have been acted upon by Mississippi DEQ. Additionally, a tour was conducted at a brownfield pilot site in Columbia, Mississippi, to demonstrate how economic redevelopment and environmental justice can work to: (1) create jobs; (2) address health concerns; (3) educate the public; (4) rebuild abandoned and contaminated properties into reusable and productive areas; and (5) form collaborative partnerships.

The purpose and intent of the summit was to: (1) build stakeholder partnerships and coalitions, (2) promote environmental awareness and the development of just solutions to environmental issues in Mississippi, (3) enable communities and other integral stakeholders to learn, provide input, and proactively participate in understanding the issues, (4) develop an environmental justice strategy for Mississippi, (5) advance efforts on working together with key players in the state and leverage community input into the decisionmaking process, (6) focus on public and private partnerships between environmental and health agencies and the regulated and impacted communities, and (7) create a model for stakeholders as they develop and enhance working platforms to utilize the resources and knowledge gained from the summit.

Region 5

Southeast Michigan Environmental Forum

The Southeast Michigan Environmental Forum is an ongoing activity, which has been the key means of education/outreach and stakeholder involvement in southeast Michigan. By providing coordination and facilitation capability to the local regional planning authority (Southeast Michigan Council of Governments) and by working through a steering committee of a broad range of stakeholders, the project builds capacity at the local level. It allows local stakeholders to select emerging and relevant topics and to determine the most appropriate way to disseminate information to the appropriate audience for each topic. It also provides a mechanism for stakeholders to develop partnerships, collaborate on issues, and create strategies to address environmental issues to attain the ultimate goals of clean air, pure water, and safe land. Partners in this effort include federal, state, and local governments; Canadian governments; industry and business; environmental consultants; builders, planners, and developers; com-

munity groups; environmental organizations and NGOs; and citizens.

Region 6

Environmental Justice Open House

Region 6 hosted its first Environmental Justice Open House in April 2002. The event was a great success as well as being informative and fun. The open house focused attendees' attention on the newly developed Region 6 Environmental Justice Strategic Plan. Each Region 6 program office sponsored a booth and display to provide information on environmental justice activities and initiatives in their offices.

In addition, attendees had an opportunity to participate in a portion of the environmental justice training and a demonstration of the regional environmental justice GIS screening methodology. Several external environmental justice partners attended, including states, community-based groups, and industry. Region 6 took advantage of this opportunity to display its creativity and talents, including the debut of its original vocal release *Make The World A Safer Place*. Region 6 found this event to be an excellent outreach and educational tool and will likely sponsor similar events in the future.

Environmental Justice Grant Writing Workshops

In January 2002, Region 6 conducted two workshops to assist grassroots community organizations in writing grant proposals for the Environmental Justice Small Grants Program. The first workshop was held in Houston for the Vietnamese community at the Vietnamese Culture and Science Association Center. In addition to EPA's grant writing workshop, presentations on grant opportunities were made by HUD and the Department of Education. Forty attendees participated in this workshop. The second workshop was held in Albuquerque in the offices of the Southwest Network for Economic and Environmental Justice. Ten representatives of grassroots organizations took the training.

Team Houston—Asian American and Pacific Islanders (AAPI) Initiative

Region 6 strongly supports the White House Initiative on AAPIs. In June 2001, Region 6 formed Team Houston, which includes 23 federal, state, and local government entities (such as EPA, HHS, HUD, DOL, and the Equal Employment Opportunity Commission), and many others working together to support the goals of Executive Order 13216. Team Houston's goal is to increase opportunities and improve the quality of life of AAPIs. Led by Region 6, Team Houston has initiated numerous activities and strategies to address issues and concerns facing AAPI communities, such as job placements, grant workshops, employment rights, immigration services, outreach, translation networks, financial investment awareness, assisted-living housing, and small business opportunities.

In June 2002, OEJ assisted EPA's Office of Prevention, Pesticides and Toxic Substances(OPPTS) Lead Program, in cooperation with EPA Region 6, in translating a brochure entitled *Protect Your Family from Lead in Your Home* into Vietnamese. Five thousand copies of this brochure have been distributed widely to Vietnamese American communities where some families are living in substandard housing. The

translation also is posted on OPPTS' Web site at <www.epa.gov/opptintr/lead/leadvn.pdf>. Also, Region 6 conducted a grant writing workshop in Houston for the AAPI community. As a result of this effort, the Asian American Health Coalition and the Vietnamese Culture and Science Association each received an ECO internship this year. Subsequently, one of these interns secured a permanent employment position in Region 6.

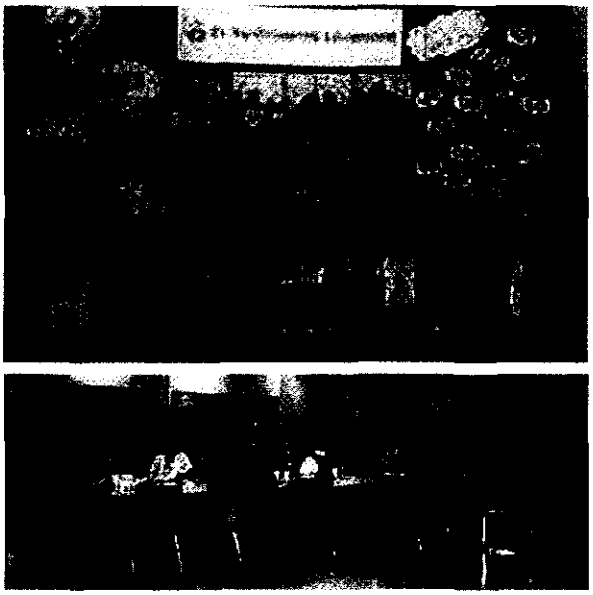
Development of Spanish-Language Environmental Justice Materials

Region 6's environmental justice brochure was updated and translated into Spanish. This brochure provides information about Executive Order 12898, environmental justice goals, and Region 6's environmental justice program and contacts. A question-and-answer fact sheet was developed and written in Spanish for use with grassroots Hispanic communities. It provides a simplified description of environmental justice, along with information about the Region 6 program and bilingual contacts. A one-page fact sheet on the Environmental Justice Small Grants Program also was written in a question-and-answer format and translated into Spanish by Region 6 staff.

Region 7

Kansas City Faith-Based Initiative Seminar

In June 2002, Region 7 hosted an informational booth at the Kansas City Faith-Based Initiative Seminar. The Seminar was attended by several other federal agencies, including HUD, DOE, and DOL. EPA's booth targeted the metro area's faith-based community, providing information on grant funding opportunities and children's health information. During the seminar, EPA focused on building collaborations and partnerships within faith-based and community-based organizations. While EPA currently does not have any appropriated funds specifically for faith-based initiatives,



"It's Your Environment, Ask Questions"—Informational booth at the Kansas City Faith-Based Initiative Seminar

information on Region 7's grant opportunities open to non-profits was presented.

2001 Environmental Justice Small Grants Workshop and Expo

In 2001, Region 7 sponsored its fourth annual Small Grants Workshop. In addition to the grants management workshop offered to new grant recipients, efforts were expanded to invite the public to learn about EPA grant opportunities within Region 7 in a

Top Left: Metropolitan Energy Center; Top Right: EPA Environmental Education Program; Bottom Left: Unified Gov't of Wyandotte County; Bottom Right: Bridging the Gap.

"How to Apply" session. The event began with an Expo featuring past environmental justice grant projects and internal EPA grant funding programs such as environmental education, brownfields, and pollution prevention. With every state in Region 7 represented, stakeholders were able to actively engage EPA staff, as well as network with other community organizations.

Civil Rights and Race Relations Summits

During the summer of 2001, Region 7 participated in two events within the Kansas City metro area: the Mayor's Summit on Race Relations and the Latino Civil Rights Summit. Both events targeted issues related to the community concerns facing minority populations. Region 7 staff served on a panel to discuss environmental justice issues and concerns facing low-income and minority populations. The panel discussions included speakers from the state health department, a local hospital, and an environmental engineer who focused on the relationship between health and the environment and the disproportionate burden on low-income and minority populations.

Kansas Public Health Association—Environmental Justice Session

In September 2002, Region 7 gave a presentation to the Kansas Public Health Association on environmental justice and the link between health and the environment. The audience included representatives from state and local government, health care providers, and academia. Afterwards, the participants expressed a strong interest in future opportunities for partnerships.

2001 & 2002 Fiesta Hispaña

Fiesta Hispaña is an event sponsored by the Greater Kansas City Hispanic Heritage Committee to promote wide recognition of the important role of Hispanics in the development of the United States, to honor and perpetuate the Hispanic heritage and culture, and to advance the level of education for

2001 Fiesta Hispaña featuring Region 7's Charlie the Chipmunk.

Hispanic youth. Region 7 supported the focus on Protect Your Family, Protect the Earth (Proteja a Su Familia, Proteja el Mundo), and participated in presentations on lead, pesticides, and environmental justice.

Region 8

Tribal Sacred Lands Protection

In October 2001, Region 8 partnered with the Natural Resources Law Center at the University of Colorado in Boulder, the Native American Law Students Association, the Advisory Council on Historic Preservation, the American Indian Program Council, the Seventh Generation Fund, and the Sacred Land Film Project to hold a 2-day Native American Sacred Lands Forum in Boulder and Denver. The purpose of the forum was to develop recommendations for a strategy to improve the protection of sacred lands. Attendees of the forum included tribes, federal and state agencies, academia, grassroots organizations, and the media. The partnership and forum were spurred by the release of the film, *In the Light of Reverence*, which debuted nationally in August 2002, on the PBS Series, *Point of View*. The film tells the stories of three tribes and the places they care for: the Lakota at Devils Tower in Wyoming, the Hopi in the Four Corners area of the Southwest, and the Wintu at Mt. Shasta in California. The forum featured two public screenings of the film.

Momentum from the forum led to the passage of a resolution calling for a coalition to protect sacred lands from the National Congress of American Indians. The forum also led to the DC Sacred Lands Forum held in Washington, D.C. in March 2002, which focused federal attention on these important issues. The film was shown at various federal agencies, including DOI, which hosted a panel discussion after the showing. In addition, the tribal representatives held a meeting with the American Indian and Alaskan Native Task Force of IWG.

A major accomplishment of the week was a commitment from staffers of the Senate Indian Affairs Committee to hold a series of oversight hearings on the implementation of cultural resource laws. Several hearings were held in Summer 2002.

Hispanic Outreach

Several projects were completed in Region 8 that raised environmental awareness and increased EPA's responsiveness to Hispanic environmental and public health priorities. The majority of these activities were carried out by Region 8's Hispanic Employment Program in partnership with the Environmental Justice Program. The following projects were carried out: (1) development of a Spanish-language information line; (2) development of bilingual Spanish information line business cards; (3) distribution of Spanish/English environmental educational materials at Migrant Appreciation Day; (4) sponsorship of a brownbag event highlighting migrant farm worker issues; and (5) translation services on field inspections and brochures.

Grants Workshops

Region 8 conducted three grant writing workshops in January and February of 2001, providing information on Environmental Justice Small Grants and Environmental Justice through Pollution Prevention Grants. Topics covered in these workshops included: (1) understanding the two grant programs and the grant application process; (2) choosing projects suitable for the grant programs; (3) writing an effective proposal; (4) completing an application package; and (5) understanding the approval process. Non-profit organizations; community groups; tribal and indigenous groups; community development organizations; tribal, state, and local governments; faith-based organizations; and academic institutions were invited to attend these free workshops held in Montana, Colorado, and Utah.

Region 9

Agriculture Initiative

Region 9 conducted a series of meetings with state regulatory partners and USDA in each of the Region 9 states to discuss issues and opportunities to strengthen the communication and understanding between the agricultural sector and environmental agencies. These initial discussions helped identify issues of mutual interest and specific high-priority issues with key external agricultural stakeholders. In order to promote planning and coordination, EPA's Agriculture Initiative Team, working with the Regional Agriculture Team, focuses on regional agriculture activities, sponsors educational events for regional staff, and strengthens the ties between agencies working on diverse agricultural issues. Theses activities acknowledge the ongoing work of local,

state, federal, and private partners and identify areas of increased collaboration. The Regional Agriculture Initiative sponsored the EPA Agriculture Sector meeting in Spring 2001 to help raise the visibility and coordination of agriculture activities across EPA.

Risk Communication and Public Involvement

Environmental actions by government agencies have largely been based on the regulation of specific pollutants. Public awareness about general environmental contamination is growing, which has raised expectation for greater government action and communication on issues such as air toxics, dioxins, PCBs, pesticides, hazardous waste cleanups, brownfields, environmental justice, and childhood sensitivity. EPA, as well as other government agencies at all levels, industry, environmental groups, and communities alike, have had to learn new strategies for working with the public and regulated community because existing regulations, practices, or policies have not been directly applicable and effective.

Region 9 is responding to this growing need and new way of doing business. It provides federal, state, and local agency managers, staff, and public stakeholders with a range of stimulating and interactive tools, including workshops, seminars, and technical assistance. The tools provide strategies for issues such as effective public communication, public involvement, risk assessment, risk management, and risk communication. The goal is to provide tools for government agencies, the private sector, and citizens to work more productively together to solve environmental problems.

United Farm Workers (UFW) Education and Outreach

UFW, in partnership with the California Department of Health Services, conducted community outreach and education utilizing Region 9 grant funds of $100,000. UFW launched an environmental education campaign for farm workers and small water suppliers in the San Joaquin Valley of California. The project entailed working directly with the small water suppliers to help address issues raised by the communities regarding poor drinking water quality. Region 9 expects to expand upon these efforts by participating in several community forums and facilitating discussions between local water providers and UFW.

Palos Verdes Shelf, California

As part of the institutional control program for this Superfund site, Region 9 developed a public outreach program to address a multilingual public that fishes for food and sells its catch in markets off the Palos Verdes Shelf and other piers. Region 9 is working with the Fish Contamination Task Force, made up of various community-based organizations and regulatory agencies, to develop information and avenues to educate the public about not eating white croaker and other fish caught off the Palos Verdes Shelf and nearby Long Beach area. The major task is translating documents and information in the dialects spoken by the majority of affected Asians and Hispanics.

Tanapag, Saipan, PCB Cleanup

Region 9 and the Commonwealth of the Northern Mariana Islands government supported oversight of the Army Corps of Engineer's on-island cleanup and treatment of PCB-contaminated soil in the Tanapag

Village in Saipan. The treatment of approximately 30,000 tons of PCB-contaminated soil began in December 2001. Even though there were significant problems, about three-quarters of the soil was treated, with the residual contaminants sent offsite to the mainland. The treatment represents a significant risk reduction to the community of Tanapag, which has lived with the PCB-contaminated soil for decades.

Region 10

Outreach to the Hispanic Community—Lower Duwamish Waterway Superfund Site

Region 10 and the Washington State Department of Ecology drafted a community involvement plan that records community concerns and describes ways the agencies will involve the community in investigating and cleaning up the Lower Duwamish Waterway site. The plan is based on interviews and other input from individuals who live or work in or represent the community around the site.

A large number of the people who live near the Lower Duwamish Waterway speak Spanish. EPA and the state have therefore prepared a complementary plan that reflects concerns of and community involvement methods for Hispanic members of the community.

The two draft plans were made available in English and in Spanish at the site information repositories and on EPA's Lower Duwamish Waterway Web site for public review. The Hispanic Community Involvement Plan was sent to everyone on a site mailing list and distribution list comprised of businesses and churches that serve a high number of Spanish-speaking people in the south Seattle area.

In August 2002, EPA and the Department of Ecology hosted an Open House/Public Meeting to discuss with the community the sites that four potentially responsible parties have proposed for early cleanup. Interpretation of the meeting into Spanish was available. The meeting was attended by 190 people. Before the meeting, Region 10 spoke on "Latinos Días," a Spanish radio program based in Seattle, to talk about the Superfund program, invite people to the public meeting, and explain the health assessment prepared by the Washington DOH for the Lower Duwamish Waterway site.

Outreach to AAPI Communities—Lower Duwamish Superfund Site

In addition to the Hispanic outreach effort at the Lower Duwamish Waterway site in Seattle, Region 10 and other partners worked to inform and involve AAPI immigrants affected by the site. The site's community advisory group, funded largely by EPA and the Department of Ecology, has met with several immigrant groups to provide information about the site. EPA arranged for the translation of the group's brochures about the site into Vietnamese, Cambodian, and Lao.

ATSDR, operating largely with Superfund appropriations, provided funding to the Washington DOH to conduct a public health assessment for the site. To get input for the assessment, the Washington DOH, with

some assistance from King County, met with Hispanic, Cambodian, Filipino, Samoan, Tongan, Vietnamese, and Hmong/Laotian community groups. The DOH continues to meet with these groups to provide assessment results and translate its fact sheets about the results into Cambodian, Hmong, Laotian, Vietnamese, Spanish and Russian. Region 10 and the Department of Ecology are considering other ways to involve AAPI's affected by the site.

South Seattle "Toxic Tour"

Region 10 participated in a tour of Seattle's South Park neighborhood, sponsored by the Community Coalition for Environmental Justice. The tour helped representatives from EPA, the Department of Ecology, and the King County Health Department to understand, from a field perspective, the current and past impacts of hazardous and toxic waste on the South Park community. This includes the recently listed Lower Duwamish Waterway Superfund Site.

South Park is comprised of low-income and minority residents. Many hazardous and toxic facilities exist in this community, closely intermingled with residential developments. The history of approving this type of land use, and the need now to address the environmental and human health consequences, raises a number of highly contentious public policy issues that need to be addressed. Region 10 and the Department of Ecology are in the early stages of developing and implementing proposals for a cleanup of the Lower Duwamish Waterway. High-quality public involvement will continue to be essential to the success of this cleanup effort.

Outreach to Farm Worker Organizations

Region 10 launched a major effort to build coalitions with local communities by working closely with farm worker organizations in Oregon in 2001. This effort was initiated in response to recommendations made by farm worker advocates in major reports and in response to new grant guidance from EPA. Region 10 and the Oregon OSHA are maintaining or establishing relationships with more than 20 organizations (i.e., Ad Hoc Task Force on Migrant and Seasonal Farm Worker Issues, Salud Medical Center, Oregon Human Development Corporation (AmeriCorps), and Centro Latino Americano).

Region 10 has met with advocates to inform them of the federal and state governments' roles in addressing farm worker issues. Some of the groups were either unaware or did not understand the roles of Oregon OSHA or EPA. EPA, Oregon Department of Agriculture, and Oregon OSHA have agreed to work closer with community-based training providers, such as the Association of Farm Worker Opportunity Programs (AFOP)/AmeriCorps to gain knowledge of what farm workers say is happening in the fields. This information will be used to continue to improve how the Region will design and target outreach and enforcement initiatives.

Lead Forum in Seattle

In February 2002, Region 10 collaborated with City Year in Seattle, Washington, and other key stakeholders in sponsoring a forum on lead issues. The goal was to discuss lead and its impact on low-income and minority communities. Another goal was to help City Year educate its administration about the potential impact of the lead policy on low-income and minority communities.

Tribal Consultation

Region 6

Region 6 Tribal Ombudsman

Region 6 recently established a Tribal Ombudsman position to assist with issues that arise in implementation of the Region's Indian Program. The ombudsman is housed in the Office of External Affairs (OEA), and reports to the director. OEA also has responsibility for implementing the Regional Native

American Program through its Regional Native American Office (RNAO). Independent of the RNAO, the ombudsman is responsible for investigating tribal complaints and helping to identify solutions. In addition, this individual has the authority to independently investigate citizens' concerns and facilitate communication that can lead to a solution. The ombudsman may make findings and recommendations for corrective action, if appropriate. However, he has no enforcement authority to carry out recommendations, nor to compel an agency to take any corrective action. The ombudsman is employed by EPA Region 6 but maintains neutrality, independence, and nonpartisanship. Complaints he may pursue can include administrative injustice or poor administration.

Tribal Elevation Process

As a part of RNAO's collaborative relationship with tribes, an "elevation process" was developed in partnership with tribal stakeholders, and is currently being implemented. The elevation process is designed to seek cooperative issue resolution with tribal partners. The overall intent of this process is to effectively raise concerns through the Region 6 management chain to achieve mutually beneficial solutions based on common goals. This process will strengthen EPA's partnership with tribes by providing a mechanism to reach a mutually acceptable solution to issues that may potentially impact grant funding.

Region 8

Missouri River

Region 8 continues to work extensively with tribal stakeholders impacted by the management of the Missouri River by the Army Corps of Engineers. EPA attended a meeting hosted by the Lower Brule Sioux Tribe that focused on cultural resource protection in the Basin. The discussion informed the development of an EIS focusing on managment of the river. The meeting was attended by tribal elders, citizens, and cultural resource coordinators of five tribes within the Basin. Region 8 encouraged a representative of the Advisory Council on Historic Preservation to participate in EPA's Missouri River team; worked with Mni Sose Intertribal Water Rights Coalition as a project officer; and reviewed and provided extensive comments on preliminary chapters of the revised draft EIS to the Corps project staff.

International Outreach

Region 1

Boston/Haifa Exchange Dialogue

In March 2002, a group of 10 environmental justice activists from Haifa, Israel, visited Boston to explore a multitude of quality of life issues that low-income and minority residents face. The Boston/Haifa Exchange on Sustainable Communities kicked off its packed schedule of meetings, networking, and information-gathering with a trip to Region 1 where a stimulating exchange took place among the Israeli activists and EPA staff and managers from a range of Regional programs, including the environmental justice, urban environmental, and ADR programs.

The Boston/Haifa program is sponsored by the Combined Jewish Philanthropies, Nature Preservation, and the Council for Preservation of Building and Sites, and is supported by Region 1. The Boston/Haifa program intentionally builds on the values and knowledge of the residents of both these urban neighborhoods to improve their lives. Specifically, the group strives to understand city policy and planning procedures and learn about people working on similar projects in Israel and abroad in order to propose projects that will improve their largely low-income Hadar neighborhood.

Region 3

Principles of Solid Waste Management Planning

Region 3's South Africa Team has actively participated in the Agency's work in the Republic of South Africa since 1997. Region 3 has most recently provided support and consultation on risk assessment, remediation, and exposure issues related to the Thor Chemical facility at Cato Ridge near Durban, and through facilitation of the Principles of Solid Waste Management Planning Training Course in Thohoyandou and Kimberly, South Africa. During recent trips to Thohoyandou and Kimberly, Region 3 facilitators provided training to South African course participants from a diverse array of stakeholder groups. In August and September 2001, a team member made followup visits to both Thohoyandou and Kimberly to help develop their respective solid waste management plans, and provided information on various environmental justice concern. In 2002, the team provided risk-related comments on plans for the remediation of the Thor Chemical facility.

Region 9

EPA and Vietnam Research Agreement

The United States and Vietnamese governments entered into a Dioxin Research Agreement in July 2001 to advance study of environmental conditions and technology transfer in Vietnam. The focus of the work is to evaluate bioassay techniques applicable to testing of dioxin-contaminated soils and sediments. These new techniques show promise as more cost-effective and rapid than traditional approaches. The project also seeks to build scientific capacity in order to expeditiously assess areas of high dioxin contamination and to apply effective remediation technologies and public health risk management strategies. Along with comprehensive hands-on training, which has been provided to Vietnamese scientists, a demonstration project is underway to evaluate a new technology for sampling and analyzing dioxins. Region 9 is equipping and setting up a dioxin laboratory in the Vietnam National Center for Natural Sciences and Technology, and setting up a field laboratory in the Danang Air Base for rapid area characterization.

Region 10

Cooperation on the Georgia Basin and Puget Sound Ecosystems—Engaging First Nations and Tribes

The joint Statement of Cooperation (SOC) on the Georgia Basin and Puget Sound Ecosystem provided a mechanism for Environment Canada and Region 10 to work together at the federal level on transboundary issues. The SOC is a non-legally binding, international federal-to-federal cooperative agreement that builds upon existing partnership initiatives. Three areas of focus include: (1) air quality (to achieve a greater understanding of transboundary air quality management in the Puget Sound/Georgia Basis Ecosystem); (2) sustainability (to provide residents and decisionmakers in the Puget Sound/George Basin region with information on smart growth by developing and/or identifying forums to share information); and (3) engaging first nations and tribes (to facilitate the participation of Canadian first nations and U.S. tribes in setting future priorities for action in the Puget Sound/Georgia Basin Area).

Chapter 6

Assessment Methodologies, Assessment Guidance, and Community Assessments

Communities across the country have cited the need for methodologies, guidance, and strategies for involving citizens in risk assessments. In addition, many questions arise with respect to assessing multiple sources of exposure, multiple stressors, and multiple sensitivities among populations (i.e., cumulative risk).

Methodologies and guidance also need to be developed to allow for the application of cumulative risk assessments. Some communities have taken steps to characterize these risks in a more comprehensive manner (including Chester, Pennsylvania, and south/southwest Philadelphia). In examining recent attempts at cumulative risk studies, however, it is apparent that in addition to developing better methodologies, better data are needed for all aspects of the assessment (e.g., chemical toxicity, population exposure, socioeconomic impacts). Better methodologies for assessing that data also are needed, especially for targeting areas for further assessment and possible intervention.

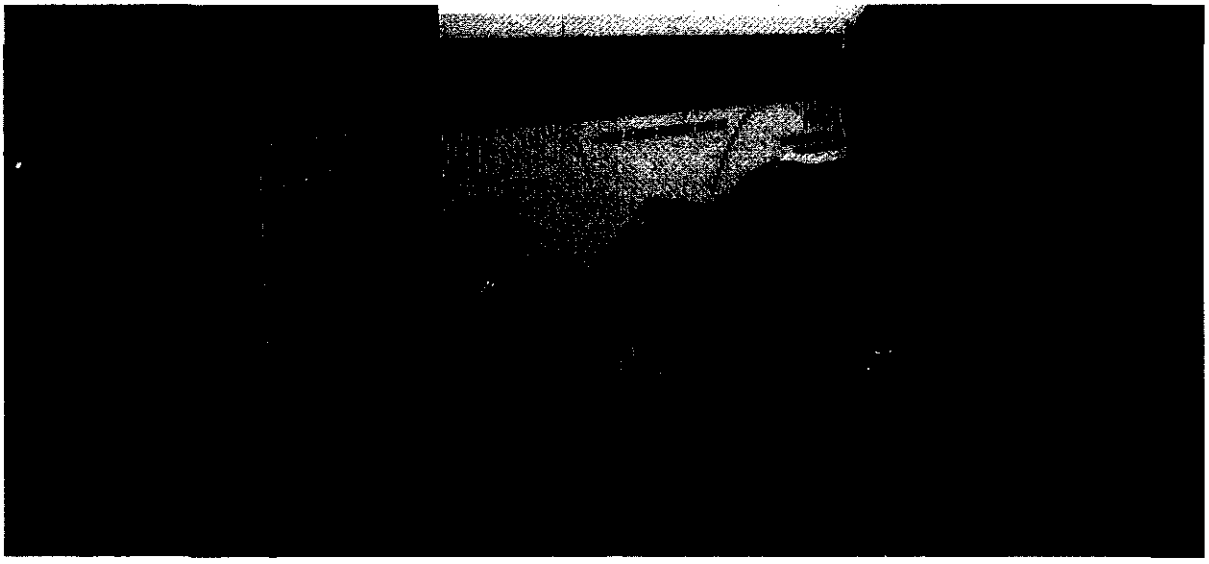
Assessment Methodologies

Assessment of Farm Worker Safety Programs

OPP, in cooperation with OECA, is conducting a national assessment of the Farm Worker Protection Program, including a review of Regional office guidance and support to the states. OPP held a series of workshops designed to engage regulators, trainers, and agricultural and farm worker advocates in projects to ensure an effective national program with consistency among states. As EPA continues to evaluate the input received during its national assessment workshops, the Agency will review the worker protection regulation to assess the need for strengthening the program to ensure protection of farm workers and their families from pesticides exposure.

Tribal LifeLine Risk Assessment Project

In 2002, OPP began an effort to modify one of its primary risk assessment tools to capture unique



exposure risks that can accompany the practice of traditional tribal cultures and ways of life. In its first year, OPP plans to focus the tribal LifeLine pilot project on modifying existing LifeLine software to enable it to model risks to tribal communities in two biogeographical areas (BGAs), one in Alaska and the other in the contiguous 48 states. During the course of the pilot, risk assessment experts from EPA and the LifeLine Group will work closely with tribal community members in the chosen BGAs to ensure that tribal lifeways are accurately captured and modeled. At the conclusion of the pilot, EPA and tribal risk assessors, as well as other interested parties, will have access to the new cumulative and aggregate tribal risk assessment software tool. The Lake Iliamna and Clark Lake region of Alaska, home to tribes in the Nilavena Consortium, has been identified as the initial geographic focus for the Alaska LifeLine project. OPP is working with tribes in the lower 48 states to appropriately locate a second focal site for the project.

Dietary Exposure Assessment Model

OPP is collaborating with USDA on the development of the Continuing Survey of Food Intakes by Individuals and Pesticide Data Program, which supply critical information used in dietary exposure assessments. These dietary risk assessments evaluate risks to vulnerable subpopulations, (for example, Hispanic children), as well as the general public.

Navajo Nation Uranium Contamination Assessment

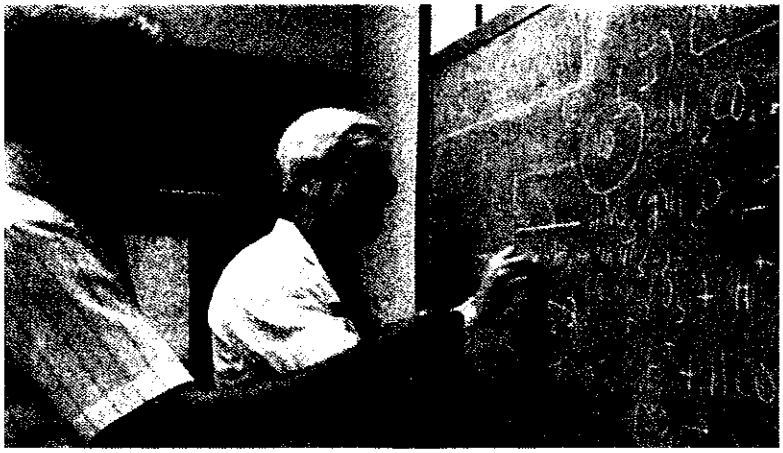
ORIA is working closely with the Navajo Nation to develop a strategy to identify homes with elevated levels of contamination from radioactive building materials. Some homes may have been built using uranium mill tailings in the mortar, uranium-bearing rocks, or building materials from abandoned mines. Once complete, this plan will be distributed for promotion and adoption by other tribal nations with similar issues.

LandScan USA

ORD is collaborating with DOE's Oak Ridge National Laboratory (ORNL) to develop LandScan USA, a high-resolution population distribution database for the continental United States. Scientists will develop a prototype of LandScan USA, and a user-friendly computer population counting tool (PCT) to estimate the number of people living near pollution point sources and/or within specified areas. LandScan USA will provide more spatially precise population and demographic information for exposure modeling, environmental justice studies, and other types of risk assessments conducted by EPA. The tool will allow users to conduct proximity analyses around point sources of air pollution to determine if certain sociodemographic subgroups (based on race/ethnicity, age, etc.) live closer to point sources of air pollution and in areas with higher concentrations of air toxics from these sources.

ORNL already has developed a similar innovative, global database, LandScan 1998 (updated in 2000 and 2001), that is the first of its kind to use satellite imagery in population distribution modeling to produce population distribution data at a much finer resolution than previously available.

As part of the overall study, ORD will use the LandScan USA data and the PCT to conduct an environmental justice demonstration study in the Texas prototype study area. ORD will provide point source locations and associated modeled air concentrations of air toxics emitted by the sources in this study area. ORD will conduct proximity analyses around these point sources to determine how demographic characteristics (e.g., race/ethnicity, socioeconomic status) of subpopulations change as residential distance from point sources changes. ORD also will use the air concentration values to determine if the population subgroups living closer to the point sources also are potentially exposed to higher levels of air pollutants associated with these facilities.



Characterizing Respiratory Effects in Children

ORD is collaborating with the National Center for Health Statistics (NCHS) to examine risk factors for respiratory effects in children. ORD is using respiratory effects/function data from the Third National Health and Nutrition Examination Survey (NHANES-III). ORD is particularly interested in examining risk factors associated with ambient air quality and urbanization, measures of ambient air pollution, population density, and road density for the geographic areas visited by NHANES-III. ORD has linked its environmental risk factor data with the NHANES-III data and is analyzing the effects of these risk factors on respiratory health and function in children. This work is relevant to environmental justice since ORD is looking at race, ethnicity, age, sex, and sociodemographics as potential risk factors.

Community Improvement Without Displacement—Smart Growth

As urban settings are being rediscovered as prime locations for housing, entertainment facilities, and retail centers, opportunities exist for turning around communities that have been economically disadvantaged. While the restoration of abandoned communities is an important goal, incumbent residents with low or moderate incomes can be displaced as property values rise and it becomes difficult to keep up with higher property taxes, housing prices, and rents.

For this reason, EPA is preparing a report to identify best practices and examples that demonstrate how communities are turning themselves around without displacing incumbent residents (or by keeping displacement levels at a minimum). Revitalizing communities maximizes and strengthens existing infrastructure, such as roads, schools, and utilities. A revitalized community that retains current residents and attracts new ones also can relieve some of the development pressures in edge areas, which helps maintain regional water quality and air quality through reduced vehicle miles traveled.

The target audience for this report includes key decisionmakers, such as community developers, municipal leaders, and planners. The three long-term goals for the report are to: (1) enable decisionmakers to consider, during the planning stage, how neighborhood improvement projects can be designed to minimize displacement of incumbent residents; (2) identify a broader set of policies/best practices that can be applied to minimize the problem of displacement; and (3) present case studies to demonstrate that minimizing displacement is an attainable goal.

Region 1

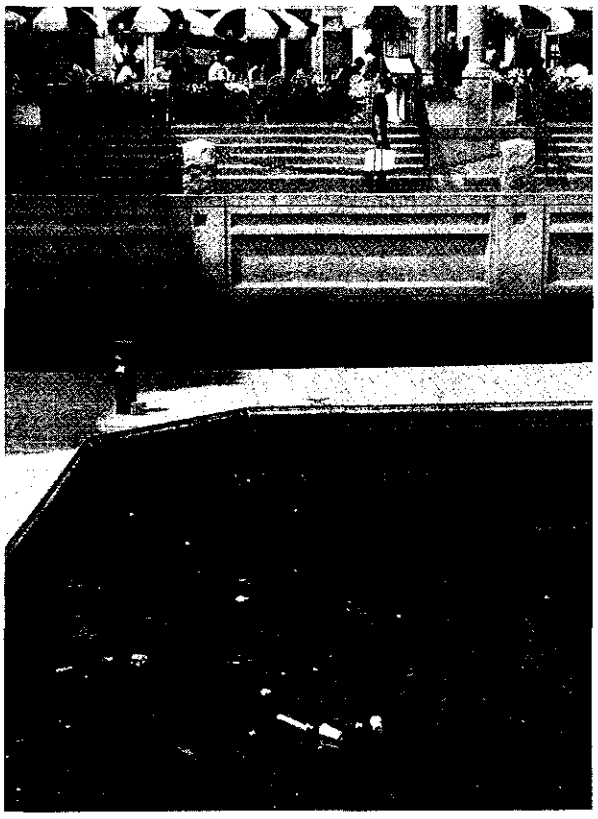
Chelsea Creek Community-Based Comparative Risk Assessment

The residents of east Boston and Chelsea, Massachusetts, have long felt that they bear an unfair burden of environmental impacts. The Chelsea River that joins the two communities is a highly industrialized Designated Port Zone that serves numerous tankers and trucks. It also is a storage site for much of the region's fuel and road salt. Accidental fuel spills and leaking tanks have contributed to the 21 state-designated environmental hazardous waste sites in the neighborhoods. Air traffic from Logan Airport and heavy road traffic from satellite parking and airport-related industries generate high volumes of air pollu-

tants. In addition, the communities suffer from a lack of open and green space.

Community activists working for the Neighborhood of Affordable Housing and the Chelsea Greenspace and Recreation Committee have worked for many years to improve the quality of life for residents. Working together as the Chelsea Creek Action Group (CCAG), the organizations undertook the Chelsea Creek Community-Based Comparative Risk Assessment (CRA) in order to involve and inform residents about environmental issues, identify and gather data on the various environmental impacts, and determine priorities to be addressed both by the community and by related state and federal agencies.

The CRA based its prioritization on community input. Residents were surveyed to determine which environmental, public health, and quality-of-life issues were most important to them. Residents also had the opportunity to participate in focus groups,



which were conducted to further prioritize concerns. The primary issues that were selected for research included water quality, traffic, air quality, asthma and other respiratory diseases, noise, and open/green space. Once these issues were identified, the project team began to collect available data.

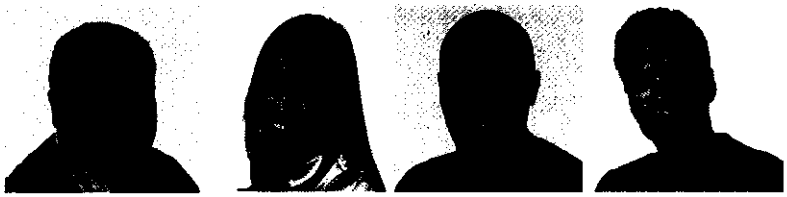
The goal of this project was to provide tools for community residents to assist in their work for improved environmental conditions. The data collected help to support and document complaints regarding disproportionate environmental burdens. Project partners created an interactive Web site, <www.tufts.edu/tie/mwc/ChelseaCreek>, which can be continually updated to store a variety of local environmental data. The project also identified a significant lack of environmental data at the local level, which demonstrates the need for agencies to invest in high-risk urban communities to better understand and quantify environmental justice issues. The next step for the community is to decide how best to use this information as they move forward toward improving their local environment, health, and quality-of-life.

Region 3

Cumulative Risk Assessment Symposia

In 2001, Region 3 began discussions with a number of interested parties to develop a cumulative risk assessment strategy. This lead to the formation of a planning committee for cumulative risk symposia.

The purposes of the symposia are to provide the opportunity for the exchange of ideas and to lay the groundwork for innovative methods to address cumulative risk to effectively protect human health. The symposia also are intended to encourage proactive, collaborative working relationships among stakeholders working to address cumulative risk.



The first symposium, held in 2002, was predominately an informational meeting. Topics of discussion for future symposia will include population vulnerability, chemical interactions, human health indicators, public health intervention, citizen assessment, and public health information use in a regulatory context.

Region 7

Environmental Justice Interim Guidance and Policy

Region 7 has begun work on developing the Regional Interim Environmental Justice Policy and Guidance. The goal of the document is to help Regional staff understand, recognize, and address potential environmental justice issues. The Region is making every effort to involve as many people as possible in the development of the document. In addition to hosting three focus group sessions with EPA staff, the Region hosted a community stakeholders meeting in November 2001 to receive public comment on the draft version of the document. Several stakeholders attended the meeting and provided valuable insight on the document and how it could be used to effectively understand, recognize, and address environmental justice issues.

Region 9

PCB Permitting Assessment Tool

Region 9 prepared one of the first environmental justice assessments for a permitting action in Region 9, requested by Lighting Resources and Earth Protection Services, Inc. As a result of this assessment and public comment, the following environmental justice considerations were added as permit requirements: (1) a plan to ensure that PCBs are not swept out of the facility; (2) monitoring for worker exposure; (3) a plan to ensure that sediments do not enter dry wells; (4) monitoring outdoor air, and (5) installing sprinklers.

Region 10

Remote Sensing Applications for Environmental Analysis in Transportation Planning

In transportation project design and development, environmental studies often occur late in the planning process. Appropriate use of environmental data can enhance the NEPA process by providing visual aids in public discussions, consistent information from planning through environmental documentation and permitting, sound analysis and modeling, and opportunities for meaningful public participation. Interstate 405 is the second most-traveled corridor in Washington State and one of the three FHWA NEPA Reinvention Pilot Project areas in the region. The primary study area extends 1 to 3 miles on either side of Interstate 405, between Seattle and Lynwood. The project will use remote sensing technology to enhance preliminary biological review, prepare the EIS, and expedite subsequent project-level environmental reviews and permits.

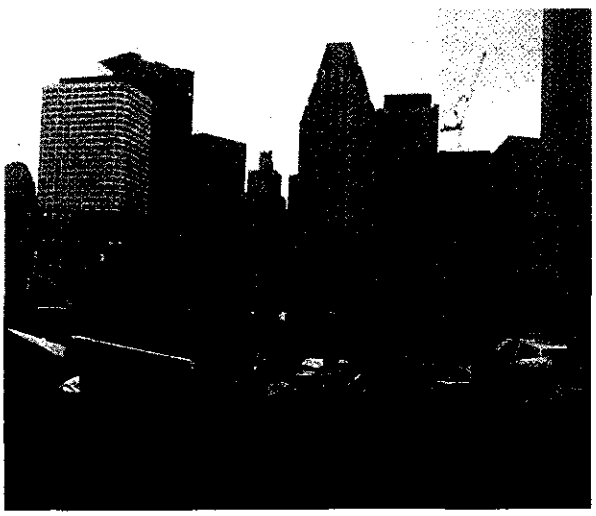
Community/Site-Specific Assessments

Smart Growth INDEX Pilot Program: A Sketch Tool for Community Planning

Smart Growth INDEX (SGI) is a software application for analyzing and mapping community land use information. The way in which the built environment is developed has great impact on the natural environment and human health. By making information about impacts more easily available and

accessible, SGI enables communities to make more informed decisions about where and how they will develop and redevelop residences, workplaces, transportation systems, parks, and other features. SGI is currently in pilot testing and has been deployed in 20 communities across the United States.

Three features of the SGI software and application settings help to address environmental justice considerations. First, SGI is intended to be used in a community involvement setting. Community members can understand existing conditions and hypothesize alternative development patterns, then see how and where those developments affect the natural environment and other indicators of community health. Second, SGI is intended to be applied with limited resources. The level of technical facility required to turn community-developed plans into environmental and other information is well within the capabilities of most local planning or community organizations. Third, SGI has been specifically designed to analyze redevelopment of abandoned or brownfield properties in urban and first-ring suburban communities. Redevelopment of such sites into parks, residences, and other environmentally positive uses can correct some of the disparate impacts that previously burdened communities. Several of the pilot sites are looking at specific redevelopment proposals, using information from SGI to attract developers and streamline local approval processes.



EPA Regional Offices 1, 2, 3, 4, 5, and 6 are currently active in this project. At least one planning or community organization participates at each site. More than 30 organizations are involved overall, including metropolitan planning organizations, NGOs, universities, and city departments of planning. For additional information, visit: <www.epa.gov/smartgrowth/index/sgi- home.html>.

St. John's Bayou and New Madrid Floodway Project

EPA had concerns about a proposed flood protection project near East Prairie, Missouri, and held meetings with representatives from a small minority community to help ensure that flood control and environmental needs were appropriately balanced. The proposed project would impact approximately 13,000 acres of wetlands, including bottomland hardwood forested wetlands, and require adequate compensatory mitigation.

The New Madrid Floodway portion of the project, as proposed, would provide flood protection to not only agricultural lands in the area, but also for the community of Pinhook. Pinhook is a small community of approximately 50 minority residents. The proposed flood protection for Pinhook would both protect the community and agricultural lands owned by community members, as well as protect important infrastructure that connects Pinhook to nearby communities. Although the environmental criteria used to review projects involving impacts to wetlands and other aquatic resources do not specifically include environmental justice considerations, EPA felt that the needs and concerns of Pinhook were an important part of project evaluation. During the review process, EPA representatives met with representatives of Pinhook to understand their perspectives.

Region 3

Lower Darby Creek Area Site Remediation

In June 2001, the Lower Darby Creek Area Site was added to the NPL. The site is located in Delaware and Philadelphia Counties, Pennsylvania. The site follows the flow of Darby Creek and its confluence with Cobbs Creek and the flow into the John Heinz National Wildlife Refuge. An EPA site investigation has found contamination in Darby Creek and at the three landfills (Clearview, Folcroft, and Folcroft Annex) that qualify the site for listing on the NPL. Now that the site has been placed on the NPL, funds are available for a Remedial Investigation. The three landfills are the probable sources of the creek contamination.

This area came into environmental justice focus in October 1999, after Hurricane Floyd caused massive flooding in the neighborhood adjacent to Clearview Landfill, known as Eastwick, an integrated, working-class neighborhood. Eastwick residents believe that the flood waters carried contaminants into their homes that affected their health. Philadelphia did not ask for, or receive, Federal Emergency Management Agency (FEMA) or EPA support during the Hurricane Floyd disaster. Delaware County did request and receive federal emergency assistance.

Many Eastwick residents believe that the Clearview Landfill is a major source of the contamination. EPA addressed this concern by conducting a focused site investigation of the property contiguous to the Clearview Landfill and certain public and residential properties that were believed to have been contaminated by landfill runoff during the flood. The Eastwick community was actively involved in determining the area to be sampled and was kept informed throughout the investigation. EPA found contamination, but not at levels high enough to authorize a cleanup under any available program. EPA will focus on this area as part of the NPL remedial action.

As a result of public health concerns in Eastwick, Region 3 entered into a contract with the University of Pennsylvania to conduct a limited community-based public health study of Eastwick. The results of this study were released during Spring 2002. The study concluded that EPA's preliminary risk assessment was accurate based upon the available data and that no immediate health hazard exists based upon available data.

Region 3 is the lead agency in addressing environmental justice concerns in the area, in coordination with the city of Philadelphia, the Pennsylvania DEP, FEMA, Delaware County, DOI, and the Citizens of Lower Darby Creek Area.

Region 4

Environmental Investigation—Richton, Mississippi

A Phase I and II environmental investigation was conducted in Richton, Mississippi, in 2001 and 2002. The investigation was requested as part of a response to an environmental justice complaint concerning the McSwain community. The residents of the McSwain community, located near Richton, indicated that their community has a high incidence

of cancer and other adverse health problems. Residents believe that the environmental conditions in their community are responsible for various health problems. Consequently, the community requested testing of the potable drinking water, surface water, and ground water in Perry County.

The Phase I investigation focused on sample collections from the nearby American Wood Treatment Plant's discharge and surrounding monitoring wells. The sampling included three municipal drinking water wells, nine private wells, one wastewater treatment plant, two ditches, and one open field. The Phase II investigation was conducted to follow up on the recommendations made in Phase I.

The communities' concerns are being addressed via a collaborative effort that includes federal, state, and local government agencies; academic institutions; and other organizations. Primary agencies include EPA, the Mississippi DEQ, ATSDR, the Mississippi DOH, and Jackson State University.

Environmental Investigation—Holly Hill, South Carolina

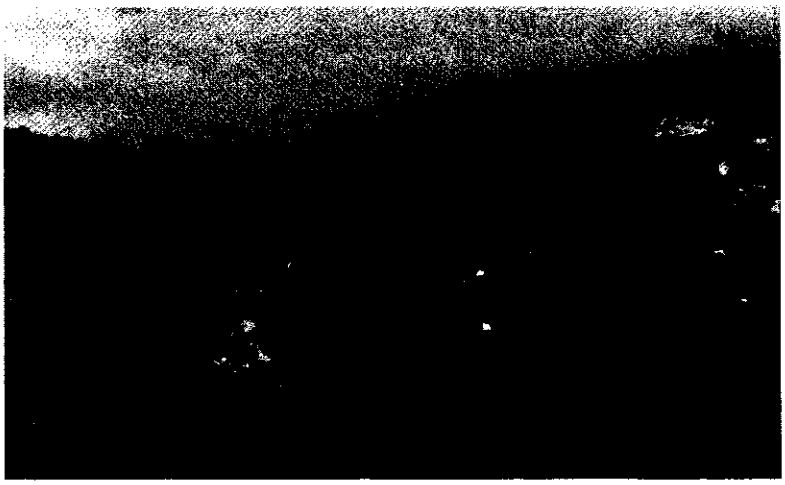
The Boyer community in Holly Hill, South Carolina, raised concerns to EPA in November 2000, alleging excessive amounts of environmental exposure from four industrial facilities. EPA collaborated with the South Carolina Department of Health and Environmental Control (DHEC), local officials, academic institutions, and citizens to address concerns raised by the community. In addition, DHEC was instrumental in assisting the residents of the Boyer community in incorporating its organization, Community Advocates for Rights and/or Privileges (CORE), and applying for an Environmental Justice Small Grant. DHEC placed air and chemical monitors in the community and tested its drinking water for bacteria and chemical contamination. EPA has researched the possibility of conducting a cumulative risk assessment in the area. EPA and DHEC continue to respond to questions from CORE regarding the facilities' permit modifications and issuances, and have reviewed and commented on proposed permits at CORE's request. Efforts are under way to interface the community's health concerns with ongoing community planning and implementation activities.

Region 6

Calcasieu Parish Ambient Air Quality Investigation

An ambient air sampling program has been implemented in the Calcasieu Parish, Louisiana, area by EPA, Louisiana DEQ, and a coalition of 23 local industries called the Lake Area Industry Alliance. The purpose of the sampling effort is to better ascertain ambient air quality in the area. The community in Calcasieu Parish is impacted by environmental justice issues and has been an integral part of the air monitoring project.

Citizen concerns, state air sampling efforts, TRI data, and results from an ATSDR blood study all indicated that the ambient air quality was potentially impacting residents of Calcasieu Parish. This collaborative project introduces an innovative approach to achieving improved environmental quality without traditional enforcement tactics. Results indicate that dioxin concentrations in Calcasieu Parish have been consistently lower than predicted concentrations for industrialized urban areas, as referenced in the dioxin reassessment.



EPA remains in contact with the citizens of Calcasieu Parish to convey and explain any and all information received. The results of the study are available on the Louisiana DEQ's Web site and also were presented in a community open forum meeting.

Region 7

Landfill—Washington County, Missouri

Beginning in July 2001, Region 7 began working to address an environmental justice complaint raised by a member of Safe Handling of Waste Managed Environmentally (SHOW-ME), regarding the permit and placement of a proposed landfill in Washington County, Missouri. SHOW-ME cited the following concerns: (1) inconsistency in the Missouri DNR decisionmaking process; (2) disproportionate environmental burden; and (3) threat of contamination of private drinking water supplies due to unsuitable geology on the proposed landfill site. Upon investigation, an EPA team, consisting of a landfill engineer, geologist, legal counsel, public affairs specialist, and environmental justice coordinator, was formed to review community concerns.

EPA staff have worked to ensure that a meaningful opportunity for community involvement has been provided and that the concerns raised, where allowable by the regulations, are considered in the decisionmaking process. At the same time, Region 7 has been sensitive to the role of Missouri DNR, which is the decisionmaking entity in this situation.

The Region conducted an assessment of the environmental justice concerns and concluded in a report that: (1) the decisionmaking processes regarding the proposed landfill were addressed through a settlement agreement negotiated between Missouri DNR and Washington County; (2) there is no evidence of disproportionate environmental burden; (3) the hydrogeological review indicates no threat to drinking water supplies; and (4) that properly placed monitoring wells will be able to monitor groundwater quality. The report also details EPA's authority to address environmental justice concerns, the methodology used to approach the concerns, a review of actions taken to address them, documentation of significant information identified through the research conducted, information on the hydrogeologic review, and conclusions.

Region 8

Pueblo, Colorado, Air Monitoring

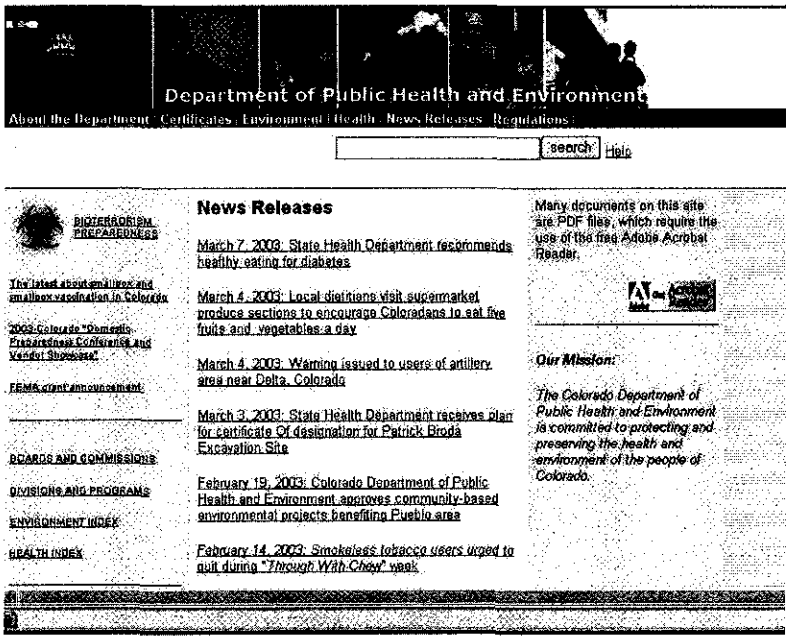
The Rocky Mountain Steel Mill is located in the south part of Pueblo, Colorado. The site is surrounded by predominantly Hispanic, low-income neighborhoods. The mill, an integral part of Pueblo's economy, has been in operation for more than 100 years. One of the nation's largest manufacturers of specialty steel products from scrap metal, the mill is believed to be a major contributor to poor air quality in the adjacent neighborhoods. For the last several years, the relationship between the community and the company was characterized by anger, fear, and distrust.

Region 8 met with the community to learn more about its concerns and initiated an air modeling project to better understand some the potential envi-

ronmental hazards associated with the plant's operations. The report suggested that emissions from the plant posed a potentially significant risk to the neighboring communities.

In response to the findings, Region 8 conducted a series of meetings with the communities and stakeholders, partnered with the Colorado Department of Public Health and Environment, encouraged more active outreach into the community, encouraged the company to create a Community Relations Plan, obtained a grant from EPA to establish an air monitoring station to assess off-site emissions, received a grant to provide technical assistance to the community, worked with the community and the company to understand the supplemental environmental projects process, assisted with the recruitment of proposed projects, and created, with community input, a Citizen's Guide to Using Online Environmental Databases.

As a result of these activities, the Pueblo communities around the plant have established lines of communication with the mill's staff and management. More importantly, these neighbors now believe that they can have a positive impact on their surrounding environment.



GIS Site-Specific Assessments

During the past 2 years, Region 8 has produced as many as 200 maps for external and internal customers. These GIS environmental justice maps reflect the continuing reliance people have on graphics as a tool to help identify potential environmental justice areas of concern. A report that lists regulated facilities within the area and demographic information accompanies the maps.

Chapter 7

Targeting, Environmental Health, and Exposure Studies

EPA recognizes the importance of compliance assistance and enforcement in preventing and reducing unlawful emissions of contaminants into the environment. EPA has long been involved in studies to identify contaminants in the environment and understand their impact on public health. This chapter discusses some of EPA's compliance efforts and specific studies to address environmental justice concerns.

Targeting Studies

Region 2

Diesel School Bus Initiative

Within Region 2's jurisdiction, approximately 86,000 diesel school buses transport more than 2.5 million students per year. Diesel exhaust contains tiny particles and other noxious gases that can affect the normal growth and development of a child's respiratory, cardiac, metabolic, and immune systems. Diesel exhaust has been found to exacerbate chronic conditions such as asthma and bronchitis. Research also shows that minority children are disproportionately affected by asthma and other respiratory conditions and live in high-traffic, industrialized areas.

Region 2 has implemented a Diesel School Bus Initiative to ensure cleaner air quality, mitigate asthma exacerbators from children's environments, and increase awareness in the community about the hazards of diesel exhaust exposure from school buses. The Region has identified a three-pronged approach to cutting down on diesel emissions: (1) reduce engine idling time, (2) use ultra-low-sulfur diesel fuel, and (3) retrofit diesel engines to reduce harmful emissions.

Based on selected criteria for this project (areas of non-attainment of air quality standards, high asthma hospitalization rates, and bus fleet characteristics) the Region used GIS to locate target areas for this program. Through this project, the Region is working with community-based organizations that are seeking to improve air quality, reduce asthma rates, and increase safety among schoolchildren and the community.

Region 3

Auto Body Initiative

Region 3 partnered with the state of Maryland and the District of Columbia on an integrated strategy and outreach project focused on auto body/repair shops in a given geographic area. Maryland chose to conduct the project in the Park Heights section of Baltimore, and the District chose to conduct the project in the city's Ward 5.

The partners developed the following list of project activities: (1) identify the universe of facilities in the geographic area; (2) conduct inspections at a statistically valid number of randomly selected facilities to obtain a compliance rate for this sector in the particular area; (3) provide compliance assistance and pollution prevention outreach to all auto body shops in the area; (4) conduct a self-certification program, and (5) measure the results of the compliance assistance efforts.

Both Maryland and the District have received grants from EPA to implement these integrated strategies. The city, state, and community groups have identified the universe of auto body shops in their target area and are developing the compliance assistance materials to be distributed.

During 2002, Region 3 conducted 46 inspections in the District and 30 in Maryland. The District is receiving an influx of calls from auto body shops seeking compliance assistance, as well as calls from citizens reporting non-compliant body shops. Region 3 will assist in coordinating the compliance assistance efforts and will work with the community groups.

With assistance from Region 3, Maryland and the District completed the checklist for inspections and wrote an environmental business performance indicator (EBPI). The EBPI will be used in the measurement phase of the project. For 2003, Region 3 will continue to assist with follow-up inspections.

Region 8

Targeting Inspections

Region 8 developed a preliminary inspection targeting tool based on county data within each state in the Region. The purpose of the screening tool is to help inspectors set priorities for enforcement activities based on environmental justice considerations.

The screening tool was used to rank the potential for environmental justice in each county based upon four types of data: (1) percentage of low-income population; (2) percentage of minority population; (3) number of regulated facilities; and (4) TRI data. For a county to be flagged as having a potential environmental justice concern, it must be at the top of at least three of four data categories. For Utah and Wyoming, which both have approximately 30 counties, the top 10 counties in each category were compared. For North Dakota, South Dakota, Colorado, and Montana, the top 15 counties for each category were compared.

Region 9

South Phoenix Initiative

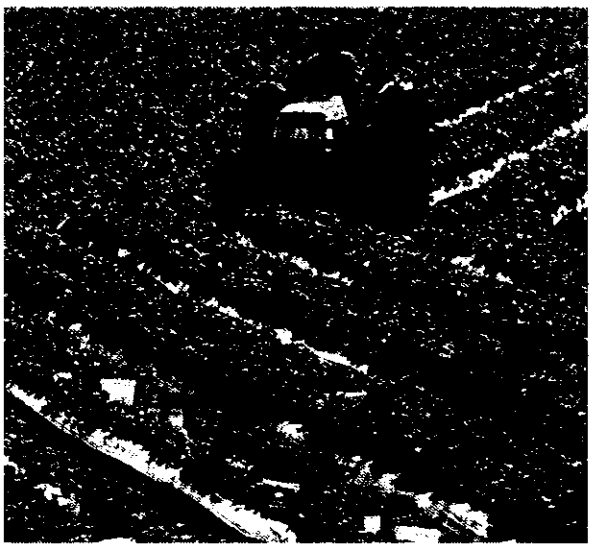
During various public meetings in the predominantly Latino south Phoenix area, many community members expressed concerns about the general quality of the environment in south Phoenix and the number of industrial facilities in and around their neighborhoods. Several requests were made for the Arizona DEQ to have a more visible presence in the area and inspect local facilities more frequently. Region 9 also was contacted with similar concerns.

In response, Arizona DEQ and EPA initiated a joint inspection project to comprehensively look at all major hazardous waste operations in south Phoenix. The agencies combined their resources and per-

formed a focused inspection sweep from March through June 2001. Sixty hazardous waste compliance inspections were conducted, and 43 enforcement actions were initiated. Most violators achieved compliance quickly; however, some more significant violators were fined or had to initiate a site cleanup. To maintain a visible presence in the community, Arizona DEQ continued inspection efforts in the south Phoenix area throughout the remainder of the calendar year and is initiating a multi-media toxics pilot study in collaboration with Region 9, under the newly formed multi-division/program working group for south Phoenix.

TRI Enforcement

The intent of the Emergency Planning and Community Right-to-Know Program is to make information on chemicals and releases publicly available to communities. In 2002, Region 9 targeted efforts in environmental justice areas. As a result of Region 9's eight enforcement settlements in these areas, the regulated facilities filed 93 additional TRI forms, with a total net reporting of 585,361 pounds of releases of TRI-listed chemicals. The public is now aware of more than 1 million pounds per year of chemicals being used in their neighborhoods. From these enforcement actions, EPA collected penalties and projects totaling more than $350,000.



Farm Worker Health

Region 9 is partnering with states and tribes to improve monitoring of WPS compliance. The Region conducted WPS training for inspectors, reviewed inspection files, and provided funding for Nevada and the Quechan Tribe to hire Spanish-speaking translators. As a result, 2002 was the first year that all states and tribes in Region 9 included face-to-face interviews with farm workers or pesticide handlers as part of their WPS inspections. The focus on improved inspections has increased state and tribal ability to document violations and strengthened enforcement actions. In addition, inspections with Spanish translators revealed problems with WPS implementation that had not previously been documented, as well as other serious violations of federal environmental laws.

AIMCO Lead Settlement

AIMCO, one of the nation's largest property management firms, disclosed violations of the lead disclosure regulations under EPA's Audit Policy for facilities that they own nationwide. This disclosure was triggered by Region 9's investigation of a complaint that an AIMCO property in Norwalk, California, failed to comply with the lead disclosure regulations. In January 2002, AIMCO signed the largest-ever settlement agreement under the Lead Program with EPA and HUD. Under the agreement, AIMCO agreed to test and clean up lead-based paint hazards in more than 130,000 apartments nationwide and pay a penalty of $129,580. Because AIMCO voluntarily disclosed violations of the lead disclosure rule, the company significantly reduced its penalty.

At the same time, EPA and HUD ensured that AIMCO's properties will be free of lead-based paint hazards so young children will not be exposed to the dangers of lead poisoning. Region 9 currently is working with AIMCO to address lead-based paint issues on the property in Norwalk.

Environmental Health Studies

Multi-Agency Workers' Compensation and Health Care Task Force

EPA and the National Institute for Occupational Safety and Health (NIOSH) have renewed their interagency agreement to work together on data collection and reporting issues for another 5 years. During the past 5 years, EPA has spent a total of $1,174,400 assisting NIOSH with its data collection and reporting capabilities. As a result of these efforts, a report highlighting the recent accomplishments of the Sentinel Event Notification System for Occupational Risk (SENSOR) program has been produced.

EPA also is working to improve pesticide data collection. CDC, ORD, and OPP each provided $100,000 for a 2-year pilot study with the Texas Health Department. This study, now midway through its second year, will help the agencies monitor pesticide illness and injury from non-occupational exposures.

EPA is participating in a number of activities to better assess the health of agricultural workers and their families to evaluate the environmental and occupational risk factors from pesticide exposure. For example, EPA and NIOSH are currently providing funding for the National Agricultural Workers Survey (NAWS), an ongoing effort by DOL. NAWS is the only national information source on the working and living conditions of U.S. farm workers. Analysis of NAWS data will help EPA address issues of pesticide exposures to farm workers and their families. Additional information on the NAWS survey is on the Web at: <www.dol.gov/asp/programs/agworker/naws .htm>

The National Cancer Institute, EPA, and NIOSH are conducting a long-term epidemiology study of

90,000 certified pesticide applicators and their families in North Carolina and Iowa. The study is looking at both cancer and non-cancer endpoints using periodic surveys of the population. Pesticide-use practices and health outcomes are being examined in detail.

The study has been under way for 7 years, and 2,112 cancers already have been reported in this cohort, impacting 57,000 pesticide applicators and 32,000 spouses. For the more common cancers (prostate and breast cancer), enough cases have been diagnosed to associate their occurrence with exposure to pesticides and several other known or suspected risk factors. Reports on the findings for prostate and breast cancer are expected in the coming year, colon and lung cancer in 2 years, and non-Hodgkin's lymphoma in 3 years.

A variety of other studies are being performed on this cohort to learn about exposure and the incidence of disease. Based on responses from farmers in Iowa, 6 out of every 1,000 farmers per year reported high exposure events, which include pesticide poisonings. Other studies are looking at birth defects, Parkinson's disease, asthma, and other disease endpoints thought to be related to pesticide exposure. As part of the Agricultural Health Study, field work in Iowa is being conducted, and over the next 3 years detailed exposure analyses on a subsample of families using various agricultural pesticides will be completed.

Some initial results for high-exposure events and effects to the eyes already have been published. A detailed listing of these studies and a number of publications already reporting the results of the *Agricultural Health Study can be found at:* <www.aghealth.org>.

Environmental Risk and Impact in Communities

Research has shown that minority, low-income, and/or educationally disadvantaged communities are at a greater risk of impact from environmental hazards. Studies have used surrogate measures of exposure because of the lack of data on actual exposures in these communities. Community-specific data is needed to address any linkages between environmental exposures and health outcomes.

Resources were awarded to the North Carolina Central University (NCCU) under a cooperative agreement to assess environmental exposures in a community impacted by environmental hazards. EPA anticipates that, through collaboration with NCCU, the Agency will gain expertise in local community exposure concerns, exposure scenarios, subpopulation activities, and environmental characteristics that EPA otherwise might not be able to access in an at-risk community. This cooperative agreement will provide NCCU with the opportunity to develop exposure expertise and faculty. The specific community to be studied under this project will be determined based on recommendations from project advisory board members.

El Paso Children's Respiratory Health Study

ORD is collaborating with the El Paso Independent School District, TCEQ, University of Texas Houston School of Public Health, Research Triangle Institute, and El Paso Border Office to determine if exposure to particulate matter and gaseous co-pollutants are associated with increased prevalence of respiratory symptoms or illness with lung function decrements in children. Each year, more than 18 million vehicles cross the international border between El Paso, Texas, and Ciudad Juarez, Mexico. Highway and border traffic congestion, in combination with atmospheric temperature inversions in the winter, provide the opportunity to investigate the health effects of particulate matter and co-pollutants in children.

In this study, the parents of 4th and 5th grade students at 53 El Paso area elementary schools (approximately 9,100 students) will receive a respiratory health questionnaire (in English and Spanish), along with a request for written permission for their child to participate in pulmonary function testing. At a subset of 23 schools, children with parental consent will be asked to perform a routine pulmonary function test to measure expiratory air flow rates and lung volume. Supplemental measures of ambient air pollutants will be collected at the time of pulmonary function testing. Schools were selected for lung function testing based on enrollment numbers in the 4th and 5th grades, school location with respect to major roadways and border crossings, and prior participation in air pollution monitoring studies.

The analysis will focus on evaluating the measure of association between air quality parameters and the prevalence of respiratory symptoms, illness, or lung function decrements. The questionnaire health data will be compared to routinely collected air quality measurements, with supplemental measurements col-

lected at schools and exposure estimates from air quality models. The lung function measurements will be compared to the same air quality measurements and to the health data from the questionnaires.

Conditions Along the Texas/Mexico Border

Texas DOH, CDC, and ORD conducted a study to establish a baseline of environmental health conditions along the Texas/Mexico border and to use the results to assess the need for environmental health education, environmental monitoring, and promotion of targeted health services. This population-based household survey was the first comprehensive description of health and environmental conditions facing Texas families living near the Mexican border.

The specific project activities included: (1) collecting existing demographic, environmental, and health data for 2,100 randomly selected households in the principal population areas of the Texas/Mexico border (i.e., Brownsville, McAllen, Laredo, Eagle Pass, Del Rio, El Paso, and Colonias); (2) collecting data on household structure, general sanitation, health conditions, and potential sources of exposure to environmental contaminants; (3) measuring blood lead levels in about 500 children from 1 to 12 years in age; (4) conducting seroprevalence of hepatitis A markers in about 500 children from 1 to 12 years in age; (5) screening for lead in ceramic pottery used for cooking and storing food; and (6) testing susceptibility for microbial contamination of drinking water kept in storage containers (chlorine residual). This survey is a model for other entities planning or conducting health studies or surveys along the U.S./Mexico border.

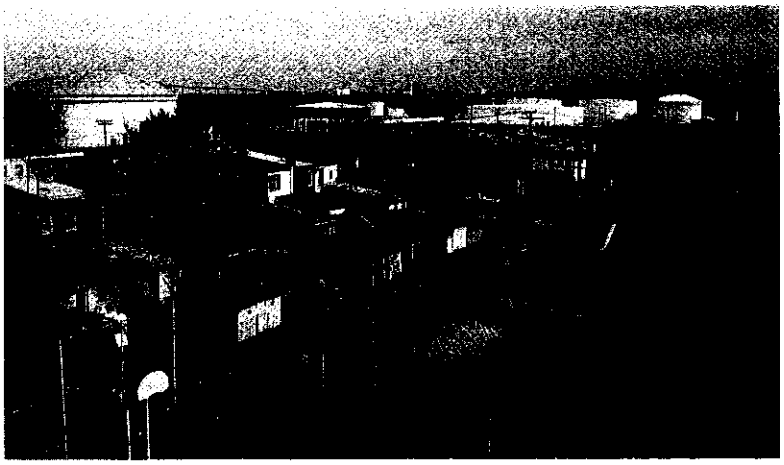
Nearly 500 blood samples from children ages 1 to 12 years old were analyzed for lead and hepatitis A. Data for 2,100 households were collected and analyzed. Comparisons were made between the three major regions of the Texas/Mexico border and in "colonias."

Measuring Neurobehavioral Effects of Pesticides in Children

This project is a pilot study designed to identify or develop a field-ready method to evaluate cognitive and/or behavioral endpoints in young children.

Although the potential neurological impact of developmental exposure to pesticides is an issue of considerable concern in the U.S./Mexico border region, research in this area has been minimal. This is due in part to the lack of appropriate assessment methods, particularly for cognitive endpoints. A suitable assessment method must be reliable, valid, standardized, sensitive to neurobehavioral impairment, applicable for use in a field setting, and applicable to a broad age-range of children.

One test system that appears to meet these requirements is the Behavioral Assessment and Research System (BARS). This system is computerized, cost-effective, portable, validated across all age groups, and available in Spanish and English. If suitable, the BARS will provide a means to obtain invaluable effects data collected in conjunction with current and planned exposure studies along the border. The present project is a pilot study designed to determine the feasibility of using the BARS to evaluate neurobehavioral function in field studies in children. It includes initial training of the investigators, evaluation of a population of children expected to exhibit a range of neurobehavioral functioning, analysis of resulting data, and preparation of a project report. Children first will be recruited and evaluated in various locations in North Carolina. If this is successful, later studies will be conducted in children recruited from populations living along the U.S./Mexico border.



Region 3

Baltimore Urban Environmental Initiative

The Baltimore Urban Environmental Initiative is a major project being conducted in cooperation with Region 3, MDE, Baltimore City Health Department, and Baltimore City Planning Department. This project is being conducted to identify and rank areas in the city of disproportionate risk in order to implement risk reduction, pollution prevention, public awareness, and other activities to minimize these risks. A two-track approach was taken to achieve these goals—an action-oriented short-term track and a long-term track that incorporates risk screening and the development of focus groups to achieve project goals. In the short-term track, grants awarded to the city of Baltimore and MDE have led to a number of projects designed to address environmental concerns in the areas of lead, hazardous materials incidents, indoor air quality, fish consumption/toxins in the harbor, ground-level ozone pollution, and air toxins.

Chester, Pennsylvania, Environmental Risk Study

Chester, Pennsylvania, is located approximately 15 miles south of Philadelphia along the Delaware River. Chester has the highest concentration of industrial facilities in Pennsylvania, including two oil refineries, a large medical waste facility, and other medical waste type facilities. The city also is the home of the Delaware County wastewater treatment plant and a large trash-to-steam facility. With a minority population of approximately 70 percent, Chester has the highest infant mortality rate, coupled with the lowest birth rate, in the state. Chester also is the poorest community in Delaware County.

Residents of Chester have long been concerned about the health effects of living and working among toxic substances. During 1995, EPA Region 3 completed the Chester Risk Assessment Project as part of an initiative with the commonwealth of Pennsylvania to study environmental risks, health, and regulatory issues in Chester. While the intent of the risk assessment was to provide a complete "cumulative risk study" utilizing exposure data for all environmental media and exposure pathways, the actual report is more of an aggregated risk study due to the largely unknown nature of the interrelated exposures. However, the findings of the report were alarming. Blood lead levels in Chester children are unacceptably high, with 60 percent of the children's blood levels above CDC's recommended maximum level. Both cancer and non-cancer risks from the pollution sources at locations in Chester exceed what EPA believes are acceptable. The report found that air emissions from facilities in and around Chester provide a large component of the cancer and non-cancer risk to the citizens of Chester.

In response to these findings, EPA recommended implementing aggressive lead-based paint abatement programs in Chester. Areas of the city with unacceptably high risk levels should be targeted for compliance inspections and any necessary enforcement actions. Also, a voluntary emission reduction program is recommended to obtain additional emissions reductions from facilities that emit the most pollutants in the areas of highest risk.

The Chester Implementation Workgroup, made up of representatives from the stakeholder groups in Chester, has been set up to address issues identified by the community relating to health, quality-of-life, and land use. Representatives from 30 different federal, state, county, or city agencies and departments, as well as citizens' groups, participated in the workgroup. The workgroup identified 50 problem areas and distilled these into four or five key areas that predominantly impact children and youth in Chester.

During 2001 and 2002, Region 3 developed a public health assessment methodology using the methods and protocols developed for the Chester risk study. As a result of an EPA enforcement action taken in Chester, a SEP was undertaken. The SEP was administrated by the Chester Residents Concerned for Quality Living.

South/Southwest Philadelphia Environmental Health Characterization

Region 3, in partnership with Johns Hopkins University, ATSDR, the commonwealth of Pennsylvania, the city of Philadelphia, academics who serve on a science advisory board, and local communities, is working to develop strategies to measure the level of primary pollutants in the environment. Citizens living in the study area continue to request that EPA address their environmental concerns, specifically the air emissions from the numerous auto body repair shops located in south Philadelphia.

Di-isocyanates, an air emission from auto repair shops, is one of the main pollutants of concern to south Philadelphia residents. Johns Hopkins University and ATSDR have recommended that further study be conducted on the potential impact of di-isocyanates on the community. The partners associated with this effort continue to work together to address concerns and serve on Philadelphia's Ad Hoc Air Advisory Committee.

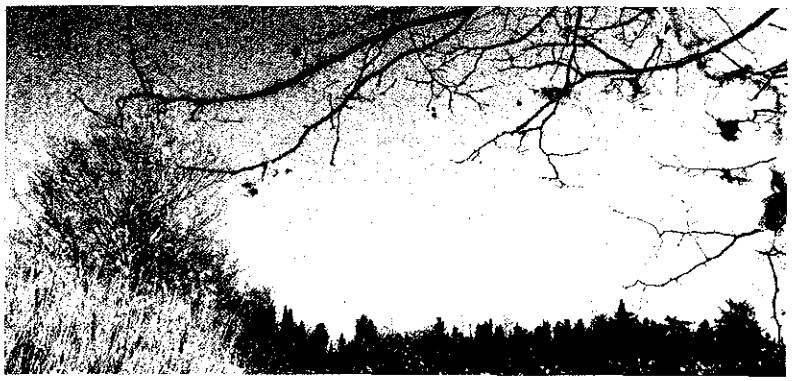
Region 4

Air Toxics Study—Chattanooga, Tennessee

Region 4 and the Chattanooga/Hamilton County Air Pollution Control Bureau have jointly completed a year-long air toxics study in Chattanooga, Tennessee. The study evaluated the potential impact of toxic air pollution on the health of Chattanooga-area residents. In January 2002, the results of the study were presented to the Bureau's board and followed by press releases.

Region 4 and the Bureau have worked with interested stakeholders throughout the study to estimate risk and to develop and implement risk management strategies. Presentations on risk assessment and risk management were made to individuals from industry, academia, communities, and government throughout the process. During this study, a risk assessment workplan and a risk management plan were developed.

Chattanooga has one of the highest concentrations of industries of any city in Tennessee. Within the last few years, several citizens' groups have expressed concern that airborne pollutants may be causing increased instances of cancer and other illnesses in the area. Region 4 and the Bureau will periodically monitor the effectiveness of the risk management plan to determine if further actions to reduce any unacceptable risks are necessary.



Region 10

Child Health Champion (CHC) Air Quality Monitoring and Education Program

EPA created the Child Health Champion (CHC) Environmental Monitoring for Public Access and Community Tracking (EMPACT) pilot program for communities where environmental data are not widely available and significant environmental health threats to children exist. An important feature of the CHC/EMPACT program is the involvement of the community in both the collection and dissemination of the environmental data.

In Toppenish, Washington, EPA provided indoor and ambient air monitoring equipment, training, and short-term technical support for establishing a weather station/air monitoring system for Toppenish School District students. Through the project students develop skills in research, data collection, analysis, report writing, and Web site management. The Toppenish School District supplied the site location, preparation, and security, plus the necessary power and internal wiring to connect the monitoring station to the classroom. KIMA-TV provided a camera for the weather tower to provide real-time views of weather conditions in the valley. KIMA-TV also uses the data for its own weather reporting. The Yakama Nation provided long-term technical support for equipment operation.

Exposure Studies

EPA's Cumulative Exposure Project (CEP)

CEP examines how much toxic contamination Americans are exposed to cumulatively through air, food, and drinking water. The objectives of the CEP are to: (1) estimate exposure levels for a wide variety of toxic pollutants; (2) characterize the national distribution of these estimated exposure levels across communities and demographic groups; (3) identify the types of communities and demographic groups that appear to have the highest exposure levels; and (4) identify potentially important emission sources and pollutants for which information is most uncertain.

Many of EPA's current exposure analyses and risk assessments are limited to a single pollutant, a single source or category of emissions, or a single environmental medium (such as air or water). However, people tend to be exposed through multiple pathways to numerous pollutants originating from a variety of sources. The CEP is part of a growing trend toward integrated assessments. Recognizing the importance of considering multiple pollutants, EPA's Guidance on Cumulative Risk Assessment states, "The practice of risk assessment within EPA is evolving away from a focus on the potential of a single pollutant in one environmental medium for causing cancer toward integrated assessments involving suites of pollutants in several media that may cause a variety of adverse effects on humans, plants, animals, or even effects on ecological systems and their processes and functions."

CEP's methodologies, which have been reviewed by EPA's Science Advisory Board, rely on existing data and methods to estimate national distributions of exposure concentrations across communities and demographic groups. The distributions assessed include outdoor concentrations of air toxins, food ingestion exposures, and drinking water ingestion exposures.

In addition to these national analyses, the project also includes a community-specific study in the Greenpoint/Williamsburg area of Brooklyn, New York. Residents of this community are potentially subject to exposure, through multiple pathways, to a large number of toxic pollutants released by a wide variety of sources. This study assesses exposure to more than 100 pollutants across multiple exposure pathways, using data from the three national studies, as well as data collected in the community through other environmental assessment efforts.

North American Free Trade Agreement (NAFTA) Border Study

Some of the residents of U.S./Mexico border communities in Arizona believe they have increased environmental exposures due to their proximity to pollution sources in Mexico. This field study is collecting exposure data for the border population that will be compared with data from a probabilistic exposure study of residents in the entire state of Arizona. The study is being conducted under a cooperative agreement with the University of Arizona.

The study participants in the border area were selected using the same probabilistic method used for the state-wide study. The same questionnaires were used, and the same analyses and media were sampled. Additional pollutants suspected to be significant in the border area also were included.

Researchers collected questionnaire data about home environments and activities. In a subset of these homes, environmental samples (yard soil, house dust, drinking water, food) and biological samples (blood, urine) were collected and analyzed for metals, VOCs, and pesticides. An exposure data set should be available on the Web in 2003.

Border Health Effects in Young Children

Research is being conducted to develop and implement an approach to examine the cumulative risks and potential health effects in children from repeated exposure to pesticides from multiple sources and pathways. The study is being conducted in the U.S./Mexico border states of Arizona, California, New Mexico, and Texas, as part of the Environmental Health Workgroup, which was developed with the passage of NAFTA.

A three-phase approach is being undertaken to address the project's objectives. Phase I will review existing environmental pesticides exposure and health data and identify/review techniques to measure exposure biomarkers in biological fluids. GIS will be used to link exposure and pesticides data to aid in the study design. A workshop on health effects assessment related to pesticides in young children was held to recommend health endpoints to be used in the survey.

Phase II will survey and screen the pediatric (infants and children less than 7 years old) population for evidence and distribution of pesticide exposures. Phase IIIa will employ a more complete monitoring of children classified as "high-end exposures" and include detailed measurements of their environmental exposures and biological monitoring of their metabolite levels. A study will then be designed to evaluate the relationship between pesticides exposures and selected health outcomes and to define specific hypotheses to be tested. An epidemiological study (Phase IIIb) will then be performed to examine the defined hypotheses about the impact of pesticides exposure on health status/outcome of children.

Ingestion of Pesticides by Children in Agricultural Communities

Through the assistance of a grant from ORD, the University of Medicine and Dentistry of New Jersey, and the Robert Wood Johnson Medical School, scientists are developing a model to describe pesticides exposure in children (ages ranging from 6 months to 4 years) living in a rural agricultural setting. The model will identify the age-related differences in

behaviors in this population, determine the possible influence of hygiene practices and nutrition on uptake of the pesticides found in these children's environment, and reevaluate existing models of pesticides exposure by comparing them to models developed in this study. This project is being conducted near Laredo, Texas, in the colonia of Rio Bravo, where more than 95 percent of the population is Mexican-American.

Casa de Salud: A Model for Engaging Community

ORD researchers will work with Casa de Salud (Health House), a community research and education effort designed to engage the residents of a majority Latino community in Lawrence, Massachusetts, in raising awareness and mitigating health impacts of exposure to environmental toxins. This research is intended to demonstrate that meetings in private homes (among residents, health care providers, and researchers) are an effective means to bridge the gap that issues of poverty, culture, and race impose on effective public health interventions. Community residents, health care providers, and environmental scientists will work together to become better informed about exposures to environmental toxins that affect public health and to develop culturally appropriate interventions to mitigate the effects of exposures.

Bioaccumulative Toxics in Shellfish

A $1.2 million research grant was awarded to the Swinomish Tribal Community, located in Washington state. Researchers will study whether the Swinomish people are exposed to contaminants when they eat shellfish from traditional harvesting areas. Scientists will study 16 shellfish harvest areas commonly used by the Swinomish people. Sediments, littleneck clams, Japanese oysters, butter clams, and dungeness crabs will be analyzed for several chemicals and heavy metals.

Researchers also will investigate effective and culturally appropriate ways to communicate any identified health risks to the Swinomish community and other nearby tribes that participate in subsistence shellfish harvesting. Results of this project will help develop and implement mitigation measures to reduce health risks from shellfish consumption. The project also will help the Swinomish tribe understand whether this exposure contributes to the high incidence of health-related problems on their reservation.

Dioxin Analytical Support for Moose/Deer Liver Study

Communities on Indian reservations in Maine are dependent on moose and deer to sustain their traditional, cultural lifeways. Moose and deer livers are important components of their food supply. In 1999, high levels of cadmium were detected in these animals' livers. In 2000, Region 1 decided to analyze the livers for other persistent priority pollutants, including dioxin.

In 2002, a pilot study was conducted on 10 livers to validate methodology and determine approximate concentrations of dioxin in this food item. The findings were shared with Region 1, and a combined strategy for writing a quality assurance project plan (QAPP) was discussed. The QAPP is currently being developed, and the analyses of the livers will begin after the QAPP is approved.

Affordable Housing and Smart Growth: Making the Connection

The National Neighborhood Coalition, with support from EPA, completed Affordable Housing and Smart Growth (September 2001). This report highlights the critical impact of development choices on low-income households. It explores the relationship between the choices that communities are forced to make with regards to affordable housing, smart growth, and proposed policies and approaches through which both can be achieved.

The policies and approaches featured include land use and planning strategies (such as zoning changes, building code modifications, reuse and renovation of vacant properties and land); tax-based strategies (tax incentives for housing, low-income housing tax credits); community strategies (design innovations, energy consumption reduction); and subsidies for affordable housing (HOPE VI, block grants). The report provides tools for community leaders to help them create affordable housing and ensure sustainable growth in a manner that places the housing needs of the poor on equal footing with other development priorities. In so doing, it helps achieve a better balance in the environmental justice concerns of low-income communities whose critical housing needs previously had been underserved.

The partners supporting this report include the Smart Growth Network members ICMA, ELI, American Planning Association, Fannie Mae, National Neighborhood Coalition, Northeast/Midwest Institute, Urban Land Institute, and other organizations such as the National Low Income Housing Coalition, the Enterprise Foundation, the Housing Assistance Council, and the National Housing Institute.

Region 4

Air Toxics Study—West Louisville, Kentucky

A 1-year air toxics study was conducted in 12 communities in West Jefferson County, Kentucky, to determine if residents were being exposed to airborne concentrations of pollutants that could pose unacceptable risks to health. The sites were monitored for VOCs, semi-volatile organic compounds (SVOCs), metals, and carbonyl samples. Six of the 12 studies were in at-risk communities. The study was conducted jointly by Region 4, Air Pollution Control District of Jefferson County, Commonwealth of Kentucky, University of Louisville, and West Jefferson County Community Task Force.

Region 4 provided training and outreach to stakeholders and technical assistance to the community, state, and local agencies. Region 4 and stakeholders hold routine risk assessment and risk management meetings to discuss project progress. Additionally, a QAPP, risk assessment workplan, and risk management plan to respond to identified risks are being developed.

Region 10

Seattle Air Toxics Monitoring Pilot Project

The Washington Department of Ecology and the Oregon DEQ have been monitoring air toxics impacting a number of at-risk communities. The Beacon Hill site is an area of high population density that reflects conditions in a "typical" urban residential neighborhood impacted by a mix of urban source categories. The Georgetown site and the northeast Portland site are located within each city's river-based industrial sanctuary. Both are surrounded by industrial, commercial, and mobile sources. Sampling includes 24-hour integrated samples of

VOCs, carbonyls, and speciated metals on a 1 in 6-day frequency.

Native American Arsenic Exposure in Washington State

The keys to evaluating the potential effects of long-term exposure to low levels of arsenic are to identify sources of exposure and to determine how much arsenic is obtained from all sources. A previous study has suggested that locally harvested shellfish, which are a component of diet for many communities in the Northwest, contain large amounts of arsenic. Recent studies have shown that urinary concentrations of inorganic arsenic (and its metabolism to organic arsenic) are excellent markers of exposure in individuals chronically exposed to arsenic in their drinking water. In the epidemiologic and exposure studies done to date, the role of high-arsenic foods in individuals chronically exposed has not been evaluated due to the lack of adequate methods to analyze the arsenic level in food. EPA has developed the ability to analyze food for arsenic. The field study was designed by Region 10 and carried out by EPA staff with support from Native Americans.

Appendix A

EPA Environmental Justice Contacts

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Appendix B

Acronyms

AAPI — Asian American and Pacific Islander

ACE — Alternatives for Community and Environment

ADR — Alternative Dispute Resolution

AEP — American Electric Power

AFB — Air Force Base

AFOP — Association of Farm Worker Opportunity Programs

ALA — American Lung Association

ARC — Asthma Regional Coordinating Council

ATSDR — Agency for Toxic Substances and Disease Registry

BARS — Behavioral Assessment and Research System

BGAs — Biogeographical Areas

BIA — Bureau of Indian Affairs

BLM — Bureau of Land Management

CAA — Clean Air Act

CAFO — Concentrated Animal Feeding Operations

Cal/EPA — California Environmental Protection Agency

CBI — Consensus Building Institute

CBEP — Community-Based Environmental Protection

CBEP — Casco Bay Estuary Project

CCAG — Chelsea Creek Action Group

CCHS — Cesar Chavez High School

CDC — Centers for Disease Control

CEP — Cumulative Exposure Project

CEQ — Council of Environmental Quality

CERCLA — Comprehensive Environmental Response, Compensation, and Liability Act

CFCs — chlorofluorocarbons

CHC — Child Health Champion

CIEN — Chemical Information Exchange Network

CORE — Community Advocates for Rights and/or Privileges

CPC — Campaign to Protect Chinatown

CRA — Comparative Risk Assessment

CSO — combined sewer overflow

CTA — Chicago Transit Authority

CWA — Clean Water Act

DEC — Department of Environmental Conservation

DEM — Department of Environmental Management

DEP — Department of Environmental Protection

DEQ — Department of Environmental Quality

DHEC — South Carolina Department of Health and Environmental Control

DOC — Department of Conservation

DoD — U.S. Department of Defense

DOE — U.S. Department of Energy

DOH — U.S. Department of Health

DOI — U.S. Department of the Interior

DOJ — U.S. Department of Justice

DOL — U.S. Department of Labor

DOT — U.S. Department of Transportation

DNR — Department of Natural Resources

DPH — Department of Public Health

DPR — U.S. Department of Pesticide Regulation

DTSC — Chicago Department of Toxic Substances Control

DWSRF — Drinking Waster State Revolving Fund

EA — Environmental Assessment

EBPI — environmental business performance indicator

ECO — Environmental Careers Organization

ECOSLO — Environmental Center of San Luis Obispo

EIS — Environmental Impact Statement

EJSC — Maryland Commission on Environmental Justice and Sustainable Communities

EJTC — Environmental Justice Training Collaborative

ELI — Environmental Law Institute

EMPACT — Environmental Monitoring for Public Access and Community Tracking

EMS — Environmental Management Systems

EOEA — Massachusetts Executive Office of Environmental Affairs

EPA — U.S. Environmental Protection Agency

ERRI — Episodic Release Reduction Initiative

FAA — Federal Aviation Administration

FEMA — Federal Emergency Management Agency

FHWA — Federal Highway Administration

FIFRA — Federal Insecticide, Fungicide, and Rodenticide Act

FWS — U.S. Fish and Wildlife Services

FY — Fiscal Year

GAO — General Accounting Office

GAP — General Assistance Program

GIS — Geographic Information Systems

GM — General Motors

GMPALP — Greater Manchester Partners Against Lead Poisoning

HAC — Harvest America Corporation

HACU — Hispanic American College and University

hazmat — hazardous materials

HCFCs — hydrochlorofluorocarbons

HETL — Health Environmental Testing Laboratory

HHS — U.S. Department of Health and Human Services

HSRC — Hazardous Substance Research Center

HUD — U.S. Department of Housing and Urban Development

ICMA — International City/County Management Association

IHS — Indian Health Services

IPM — Integrated Pest Management

IPOP — Informing People on Pesticides

ITEC — Inter-Tribal Environmental Council

ITEP — Institute for Tribal Environmental Professionals

IWG — Interagency Working Group

LDEQ — Louisiana Department of Environmental Quality

LDHH — Louisiana Department of Health and Hospitals

MA OTA — Massachusetts Office of Technical Assistance

MBTA — Massachusetts Bay Transit Authority

MDE — Maryland Department of Environment

MHETL — Maine Health Environmental Testing Laboratory

MMS — Mineral Management Service

MOA — Memorandum of Agreement

NAAQS - National Ambient Air Quality Standards

NACO — National Association of Counties

NAFTA — North American Free Trade Agreement

NAPA — National Academy of Public Administration

NAWS — National Agricultural Workers Survey

NCCU — North Carolina Central University

NCHS — National Center for Health Statistics

NDEI — Northeast Denver Environmental Initiative

NDEP — Nevada Department of Environmental Protection

NEI — Native Ecology Initiative

NEJAC — National Environmental Justice Advisory Council

NEPA — National Environmental Policy Act

NESCAUM — Northeast States for Coordinated Air Use Management

NFIPME — National Foundation for Integrated Pest Management Education

NGO — non-governmental organization

NHANES-III — Third National Health and Nutrition Examination Survey

NIOSH — National Institute for Occupational Safety and Health

NIRPC — Northwest Indiana Regional Planning Commission

NOAA — National Oceanic and Atmospheric Administration

NPDES — National Pollution Discharge Elimination System

NPIC — National Pesticide Information Center

NPL — National Priorities List

NPMMP — National Pesticide Medical Monitoring Program

NTAA — National Tribal Air Association

NTCEM — National Tribal Conference on Environmental Management

NSPS — New Source Performance Standards

NSR — New Source Review

NWS — National Weather Service

NYPA — New York Power Authority

OAR — Office of Air and Radiation

OEA — Office of External Affairs

OECA — Office of Enforcement and Compliance Assurance

OEI — Office of Environmental Information

OEJ — Office of Environmental Justice

OEPA — Ohio Environmental Protection Agency

OGWDW — Office of Ground Water and Drinking Water

OPEI — Office of Policy Economics and Innovation

OPHS — Oregon Public Health Services

OPM — Office of Policy and Management

OPP — Office of Pesticide Programs

OPPTS — Office of Prevention, Pesticides and Toxic Substances

ORD — Office of Research and Development

ORIA — Office of Radiation and Indoor Air

ORNL — Oak Ridge National Laboratory

OSHA — U.S. Occupational Safety and Health Administration

OST — Office of Science and Technology

OSWER — Office of Solid Waste and Emergency Response

OTA — Massachusetts Office of Technical Assistance

OW — Office of Water

OWOW — Office of Wetlands, Oceans, and Watersheds

PCBs — polychlorinated biphenyls

PCT — population counting tool

PIRO — Pesticide Incident Response Officer

ppb — parts per billion

PPP — Preliminary Proposed Permit

PREQB — Puerto Rico Environmental Quality Board

QAPP — *Quality Assurance Project Plan*

RCRA — Resource Conservation and Recovery Act

RMSM — Rocky Mountain Steel Mill

RNAO — Regional Native American Office

ROD — Record of Decision

RRWSG — Regional Raw Water Study Group

RTA — Regional Transit Authority

SAA — Society for Applied Anthropology

SBHA — South Bend Housing Authority

SCSNDA — *St. Clair Superior Neighborhood* Development Association

SDWA — Safe Drinking Water Act

SENSOR — Sentinel Event Notification System for Occupational Risk

SEPs — Supplemental Environmental Projects

SGI — Smart Growth INDEX

SHOW-ME — Safe Handling of Waste - Managed Environmentally

SHPO — State Historic Preservation Officer

SOC — Statement of Cooperation

SVOC — *Semi-Volatile Organic Compounds*

SWDA — Safe Water Drinking Act

TAB — Technical Assistance for Brownfields

TCEQ — Texas Commission on Environmental Quality

TDF — *tire-derived fuel*

TMDLs — Total Maximum Daily Loads

TMP — Tribal Medicine Project

TOP — Transit-Oriented Development

TOSC — Technical Outreach Service for Communities

TPPC — Tribal Pesticide Program Council

TRI — Toxic Release Inventory

TSU — Texas Southern University

UEI — Urban Environmental Initiative

UFW —*United Farm Workers*

UN — United Nations

UNEP — United Nations Environment Programme

USAID — U.S. Agency for International Development

USDA — United States Department of Agriculture

USFS — United States Forest Service

USGS — United Stated Geological Survey

VC — vinyl chloride

VCPs — *Voluntary Cleanup Programs*

VOCs — volatile organic compounds

WDOH — Washington State Department of Health

WHO — World Health Organization

WPS — Worker Protection Standards

WSDA — Washington State Department of Agriculture

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