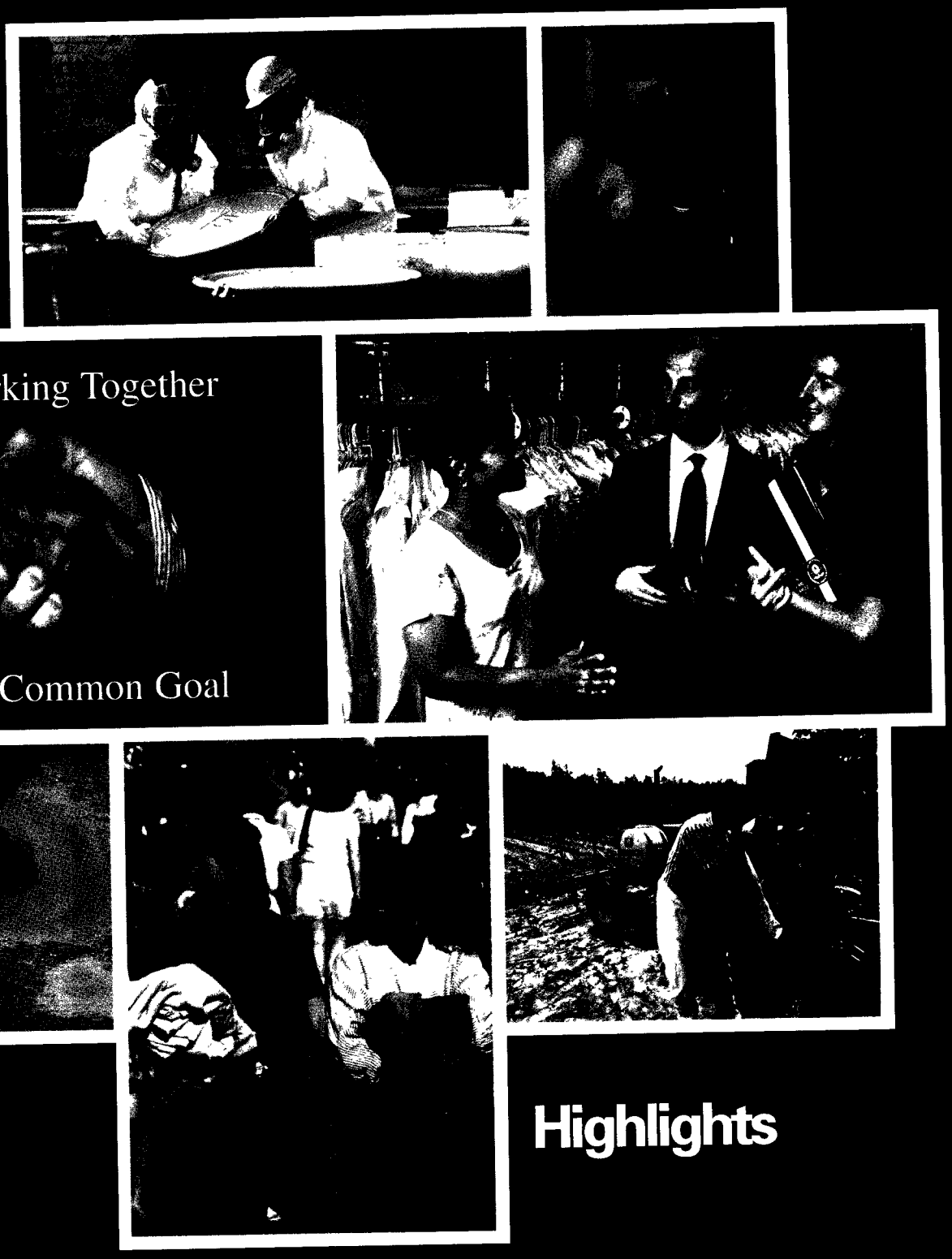
EPA/100/R-99/001

1998 Regional Geographic Initiative

Air, Water, Waste, Toxics; Integrated Solutions to Local Environmental Problems

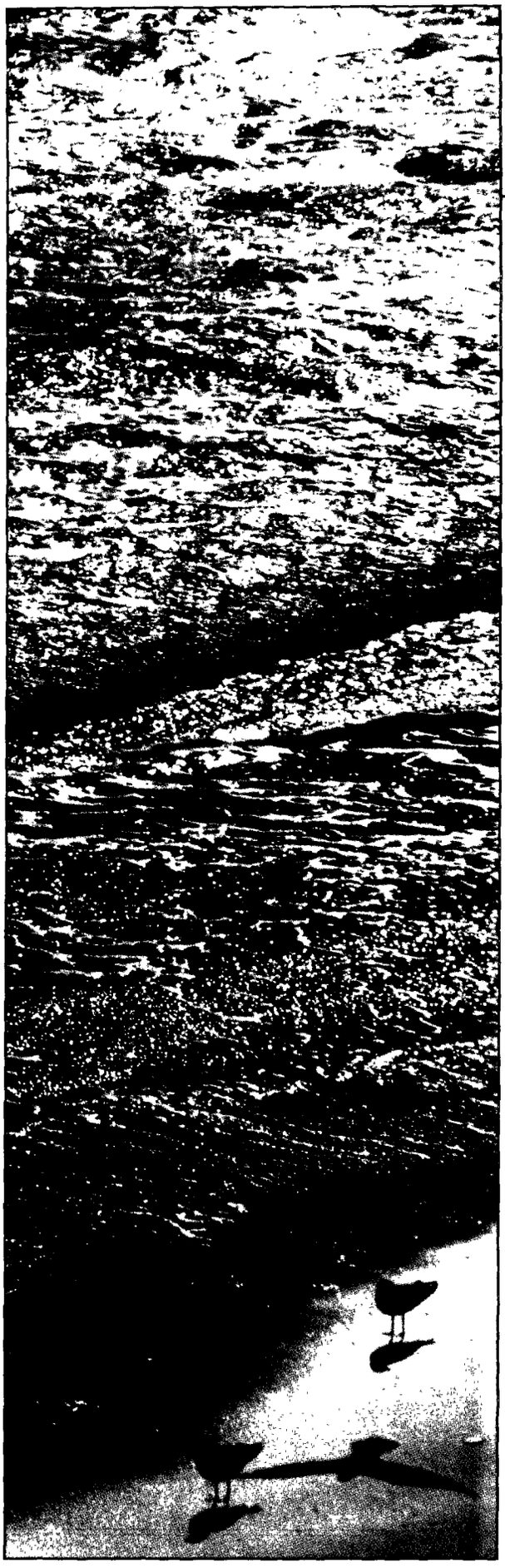


Highlights

EPA/100/R-99/001

Our communities are the building blocks so they must be strong, they must be stable, they must be long-lived -- they must be places where neighbors work together -- business owners, local planners, community leaders, government, ordinary citizens -- creating in partnership healthier, economically vibrant places to live and work and play -- not just for our lifetimes, but far into the future.

Carol Browner



The Regional Geographic Initiative Program (RGI)

A Catalyst for Environmental Renovation in All Media

The RGI Program is a grassroots approach to long-term, sustainable enviro-restoration now proving itself in diverse communities across the nation. RGI was established in 1994 to help integrate local initiatives for control of hazards to human health and ecosystems, matters often of intense state and local concern or controversy.

Many RGI projects are critical components of larger Agency programs. RGI funds have been used to complement national programs like the study of invasive species in Puget Sound. RGI provided quick start-up funds to identify sources of coal mine drainage in the Paint Creek watershed in Pennsylvania. RGI helps develop community partnerships for environmental awareness and sustainablity in various localities, e.g., North Charleston, South Carolina. RGI grants help EPA partner with neighborhoods, small communities and local governments otherwise unreachable under national programs.

The regions use RGI to further Presidential and Agency initiatives. In fact, more than 80 percent of the projects contribute to one initiative or another: Children's Health, Cleaning up Toxic Waste Sites, Clean Water and Watershed Restoration, Revitalizing Communities through Brownfields, Strengthening Partnerships with Indian Tribes, Environmental Justice, U.S./Mexico Border, Global Warming, and Improving Public Access to Information. Moreover, a number contribute to targeted Congressional directives, for example: Region 3 - Acid Mine Drainage Cleanup, Region 6 - Mexico Border projects and Region 10 - Idaho Water Initiative.

Forward

"1998 Regional Geographic Initiative Highlights" is a publication showcasing ten of the 107 projects supported in 1998, one from each Region. It would be impossible to highlight them all. These ten are a good representation of what the RGI program is all about. All of the projects support either Presidential or Agency Initiatives, contribute to at least one of the Air, Water, Waste, and Toxics environmental goals and support the overall National EPA mandates.

During the past two years I have been privileged to visit and work with all ten EPA Regions. As I traveled around the country, it became clear to me how fortunate Americans are to live in places that are so beautiful, yet different in many ways. Whether it is New York City, the Florida Everglades, Wyoming's open range, or Arizona's desert they all have their different awe inspiring characteristics. They also have their own unique environmental challenges.

The Regional Geographic Initiative (RGI) Program addresses those unique environmental challenges. It is a grassroots approach, for environmental protection tailored to the community. It is a model of government partnering with communities and industries to develop long-term solutions to environmental protection. Sustainability is built into the program.

The goal of the "1998 Regional Geographics Initiative Highlights" is not only to inform, but to inspire. With its stories, pictures and charts, it provides snapshots of how people, working together, have improved their world. I hope the stories transport you to their world so you can truly understand the virtue of the saying "Think Globally, Act Locally."

Frankee Greenberg, Director
Office of Regional Operations

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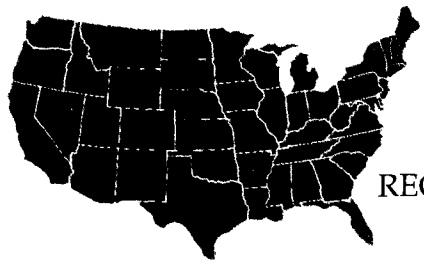
Two Communities Working Together to Improve the Chelsea Creek



REGION 1

- *Chelsea won the National Civic League's 1998 All American City Award presented by Vice President Gore*

- *Bringing technical expertise, institutional support and recognition to the community*

Location

Regional Geographic Initiative (RGI) funds have been a key source of support for the Region's New England's Urban Environmental Initiative (UEI). The Urban Environmental Initiative encompasses activities that support major national and regional priorities like children's health and environmental justice. It is also a cornerstone of New England's community based environmental protection approach focusing on certain neighborhoods in Boston, MA, Providence, RI and Hartford, CT. A UEI team works with each community, using RGI money to establish coalitions of stakeholders including neighborhood, nonprofit, academic, private sector, city, state and federal representation. The goal is to enable communities to participate better in environmental decision making, to reinforce their role as stakeholders within the environmental community, and to create sustainable infrastructure that maintains connections between residents, their community organizations and the public sector. Chelsea Creek is one of the 1998 projects that shows how important the UEI program is to the environment and the communities.

Chelsea Creek

The Chelsea River, or "Creek" as it is called by residents, is a small inlet off Boston Harbor that drains parts of Chelsea, Revere and East Boston, Massachusetts. It is a working river, navigated by large cargo ships and tankers, and a designated port area within Boston Harbor. It is a tributary of the Mystic River. There are 21 towns and a half-million people residing within the 120-square-mile Mystic Watershed.

Chelsea and East Boston are the two most densely populated communities abutting Chelsea Creek. The population of Chelsea is approximately 28,000; East Boston about 32,000. These communities are sites for seven oil storage tank farms along both sides of the Creek and other heavy industrial uses, although most of the area is abandoned, underutilized; contaminated, or otherwise problematic.

The Challenge

Chelsea and East Boston have large low-income populations and many new immigrants, people with few choices in employment or recreation. There is little public access to Chelsea Creek and, for the most part, public agencies have turned their back on this potential resource. The bottom-line? Chelsea Creek is one of the most polluted, least accessible parts of the Mystic Watershed, and adjacent to some of the poorest riparian neighborhoods.

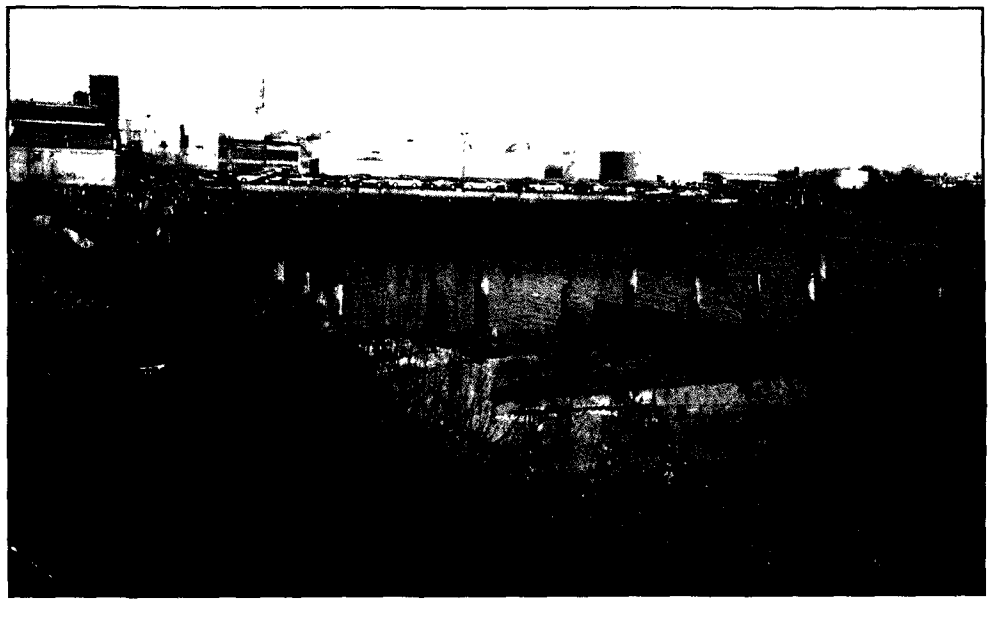
1998 Activities

For the past three years, the UEI has provided consistent support, technical assistance and partnership to the Chelsea Creek Action Group. This Group and its member organizations, Chelsea Green Space and Recreation Committee, Neighborhood for Affordable Housing, and East Boston Ecumenical Community Council, are working to build community capacity to identify, prioritize and address environmental issues and concerns on both sides of Chelsea Creek.

UEI also supports and partners with organizations that can provide technical assistance and resources to meet the needs and priorities of the people in the area. For example, UEI provides funds to the Massachusetts Riverways Program of the State Division of Fisheries and Wildlife. Riverways has in turn created an Urban Rivers Program to work with community organizations in Chelsea and East Boston, as well as residents, municipalities and the Greater Boston Urban Resources Partnership to expand public access, improve habitats, and provide recreational opportunities for residents along the headwaters to the Creek.

The Greater Boston Urban Resource Partnership, also supported by UEI in collaboration with USDA (providing the lion's share of funding), is an organization EPA hopes will be a force to sustain urban renovation. It is a coalition of 23 community organizations and agencies, businesses, and federal, state and local governments, whose mission is to help urban communities link social, economic and environmental remediation.

Chelsea and East Boston have received widespread support both locally and



Old Pansons Beach - What Could Have Been

"The Green Space Committee started out focusing on maintenance and loss of park space. Protecting the environment and open space wasn't part of the community's thinking. By having conversations with and assistance from EPA and other agencies we have expanded our vision to think of our community in environmental terms."

Gladys Vega, Former Chair of the Chelsea Greenspace and Recreation Committee

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nationally as a result of the Urban Environmental Initiative's focus on the Creek. For example, Senator John Kerry came to Chelsea to announce the Urban Resource Partnership grant and applauded the efforts of a true government /community collaborative effort. Katie McGinty of the Council on Environmental Quality toured the Chelsea River and talked with participating community, city and state organizations. Chelsea won the National Civic League's 1998 All American City Award, presented by Vice President Al Gore.

Mill Creek Wetland Restoration:

EPA, in partnership with the Massachusetts Riverways Program, is conducting a restoration assessment of the Mill Creek estuary between Chelsea and Revere. Mill Creek is the last remnant of the salt marsh that once covered much of Chelsea. EPA is providing Geographic Information Services, historical information and education outreach tours of the estuary to the community and to the Greater Boston Urban Resources Partnership. As a result, the Conservation Law Foundation and the Watershed Institute of Boston College have joined the project. The Conservation Law Foundation has a Pew Foundation Grant for urban estuary restoration. Mill Creek is one of its pilot projects.

Comparative Risk Assessment

Member organizations of the Chelsea Creek Action Group applied jointly to EPA for funding in January 1998 to undertake a comparative risk assessment. Two years ago, when this project was first proposed and presentations were made to the community, there was very little interest. The scope and magnitude of the project, like the environmental issues themselves, had overwhelmed and demoralized community residents. Outreach and support from UEI helped unite the community and empower organizations to apply for funds.

Chelsea Environmental and Educational Community Right-to-Know Project

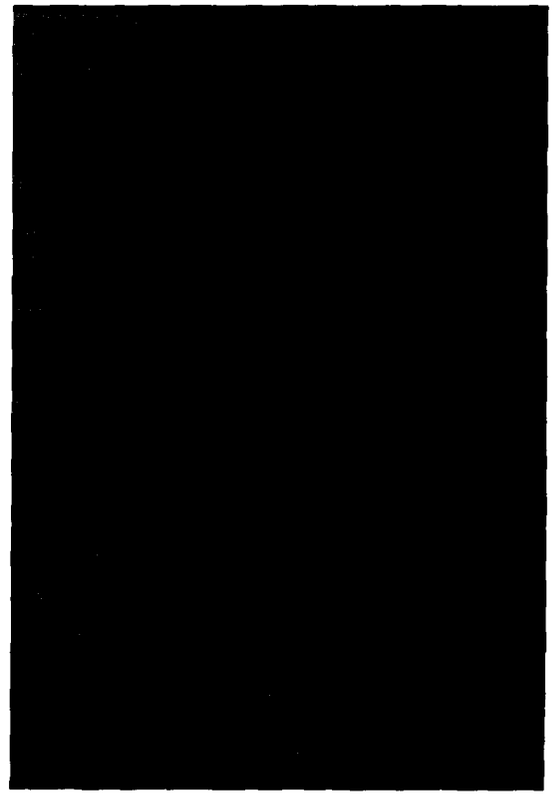
In partnership with Chelsea High School, EPA has intensified compliance under the Emergency Planning and Community Right to Know Act (EPCRA) and has computerized reporting so that local emergency responders are now able to access this information on their lap tops. As a result of their planning, preparedness has improved greatly. Chelsea small businesses in compliance have risen from nine to 60.

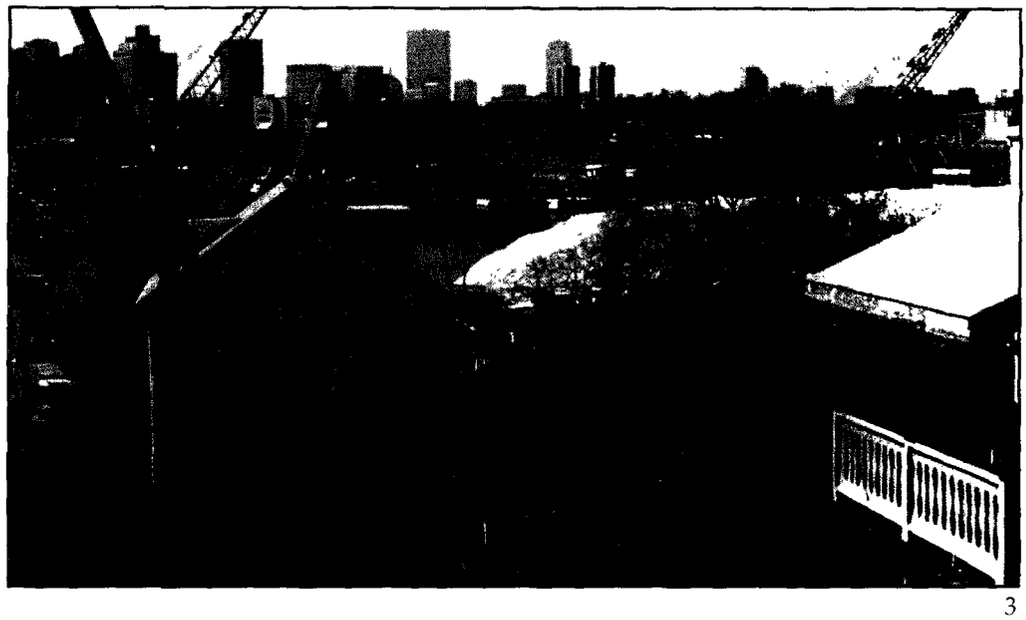
Cross-Media Compliance/Enforcement:

The Mystic River Recon project assembled technical experts from the Office of Environmental Measurement and Evaluation to perform a short-term environmental investigation of the Mystic River Watershed. The team combined interviews of local officials and environmental advocates with field reconnaissance. It identified target opportunities for cross-media compliance and enforcement actions, technical assistance, permitting, Superfund responses, and citizen volunteer monitoring and clean up. Ultimately, it aided the Agency in prioritizing and aligning resources to prevent further degradation.

Summary

UEI has been a catalyst in bringing to the Chelsea Creek community access to technical expertise, institutional support, funding and political recognition. Without such a multi-media, place-based approach, the community's efforts to organize and take action would have been confounded.





Residential / Industrial Zoning Conflict

Improving the Quality of Life for the Charleston/North Charleston Community


REGION 4

- *Initiating prevention of lead poisoning among new and expectant mothers*

- *Promoting environmental sustainability by teaching small businesses pollution prevention methods*

Location

The Charleston/N. Charleston Community Project covers approximately 17 square miles at the neck of the Charleston, SC peninsula. It is bordered on the west by the Ashley River and on the east by the Cooper. The area is an industrial corridor surrounded by 40,000 residents and abundant tidal creeks, marshes, and rivers. The community is 73 percent minority, almost 40 percent of whom live at or below the poverty level.

The Challenge

Much of the Charleston/N. Charleston area has been heavily industrialized since the 1800s, resulting in a complex combination of environmental problems. The area has both active industry and historical hazardous waste releases. The environmental concerns in the area cut across air, surface water, groundwater, sediments, and soil. The community has major health concerns, such as cancer and lead poisoning.

1998 Activities

The long-term goal of this project is to improve the quality of the land, air, water, and living resources to ensure human health, ecological, social, and economic benefits. To reach this goal, many short-term objectives have been developed through partnerships with citizens, industry, conservation groups and other stakeholders. In 1997, a Community Advisory Group (CAG) was officially formed. The CAG comprises representatives from eight neighborhoods, business and industry, local environmental and social advocacy groups, academic institutions, as well as local, state and federal government representatives. The CAG's success is such that other local organizations--the South Carolina Aquarium and the Charleston, Dorchester and Berkeley Counties Council of Governments--have requested to become partners in the project and gain CAG membership.

Regional Geographic Initiative (RGI) funding was indispensable to the early success of this project. RGI funding to the Medical University of South Carolina (MUSC) in 1997 provided seed money for creating the Community Advisory Group, initiating outreach efforts to communities in the target area and starting the data-gathering effort critical to priority setting and developing environmental indicators. The entire database will soon be accessible to the CAG and the local community. A data catalog was developed, and GIS data layers were obtained from various sources.

MUSC, the City of Charleston and the Low Country Area Director for Congressman James L. Clyburn all offered their expertise in working with communities in the area. This group, along with EPA and SCDHEC, supported organizing and capacity-building efforts related to the Community Advisory Group. EPA used a local facilitator, obtained by MUSC, to help the CAG establish operating procedures and mission and vision statements. There were briefings and training for the CAG, as well as outreach activities for residents of the target area. With coordination by EPA, SCDHEC and MUSC, an Enviro-Fair was conducted early in the CAG's development, which introduced local residents and businesses to the community-based environmental protection approach.

The CAG's first efforts included holding numerous neighborhood meetings to find out what human and environmental issues were of greatest concern. One priority that surfaced immediately was lead poisoning of children as well as lead contamination in soil. Much of the housing along the 17-mile corridor was built in the early and mid 1900s, when lead was deployed liberally. Residents were also concerned about drainage and flooding, noise, air quality, crime, jobs, aesthetics, contamination in open ditches, environmental justice and compliance with environmental regulations.

Compliance Assistance:

In light of the multitude of operating industries in the area, particularly small businesses, EPA and the South Carolina Department of Health and Environmental Control formed a partnership to address compliance assurance issues. The goals for Charleston include informing the regulated community of their compliance obligations; assisting the regulated community in understanding complex federal and/or state requirements; and motivating behavioral change (e.g., pollutants reduced, permits adopted) from on-site visits and in-depth workshops/training.

The EPA and State Compliance Assurance partnership is focusing on small businesses that traditionally have not been fully aware of their compliance obligations. Compliance assistance is being offered to the two sectors that appear to represent the greatest potential for trouble--dry cleaners and paint and body shops. The effectiveness of this assistance will be measured in terms of three indicators: behavioral change, compliance indicators, and environmental and human health improvements.

Progress in 1998:

EPA used Regional Geographic Initiative (RGI) funding to support three distinct projects in 1998. The projects were proposed and are being developed in direct response to community concerns and environmental data were evaluated by EPA, SCDHEC and MUSC.

- **Lead Poisoning Prevention Program:** The purpose of the program is to initiate primary prevention of lead poisoning among new and expectant mothers in the

"I am extremely proud of our residents, academia, civic and business leaders who have come together to foster community-based environmental protection in our community. I look forward to their continued dedication in addressing environmental concerns and setting environmental priorities for our future."

Honorable Joseph P. Riley, Jr., Mayor, Charleston, South Carolina

EPA working with the Community Advisory Group, partner agency representatives and students performing cleanup activities during the April 1998 Clean Cities Sweep at an area school.

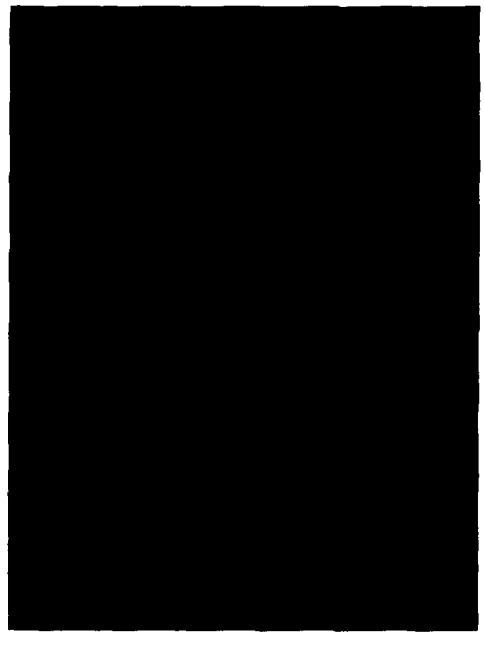
target area and institutionalize it in the community. Recognizing this, ten community members have volunteered for training by health specialists from various federal, state and local partners. Then, the lay health advisors will be further tested by health specialists to ensure they are qualified to instruct at-risk individuals. The lay health advisors will train new and expectant mothers and other family members in the target area to protect their children from lead exposure in their homes and in other child-care locations. The Community Advisory Group will inform community members, local physicians and health clinics of this effort and ask that they refer possible participants. Environmental indicators, evaluation and tracking of lead exposure data are being put in place to assist the CAG in evaluating the program.

- **Radon Initiative:** Historical phosphate operations have affected portions of the 17-mile targeted area. These operations have raised strong health and environmental concerns about the possibility of radon contamination in the community. The purpose of this initiative is to educate residents, survey the area to identify high levels of radon, provide mitigation assistance where needed, get residents assistance in solving the problem, and measure environmental results.

The Community Advisory Group will undertake a major outreach effort, disseminating pamphlets and talking with neighborhoods to educate and boost participation. The Southern Regional Radon Training Center has been engaged to provide training on how to organize and conduct radon surveys and on residential radon mitigation techniques. The training will include mitigating at least one home in the target area. Efforts are underway to incorporate the Radon Initiative into area housing rehabilitation programs generally.

- **Environmentally Friendly Small Businesses - Pollution Prevention Opportunities:** An important part of working with this community is to ensure environmental gains are sustained and amplified in the future. Small businesses are incorporating pollution prevention methods into their daily activities to promote enviro-sustainability.

Proposed activities include members of the community, as well as partner agencies, meeting with small business owners and providing information on pollution prevention. A community outreach team will be trained; some will have experienced the benefits of incorporating pollution prevention techniques in their daily business. This will be an educational/outreach activity of the community, not an extension of regulations. Additionally, a small business fair is being planned by the CAG, to provide direct access to EPA and South Carolina Department of Health and Environmental Control (SCDHEC) pollution prevention and small business assistance. Finally, the CAG will organize meetings between small businesses and communities to foster better understanding and coordination.



Environmental costs of Illegal dumping in the Great Lakes Region

- *1999 EPA Gold Medal for the Illegal Dumping Assessment and Prevention Project Team, a principle concern of the Region's Geographic Initiative*
- *Developing an economic assessment model that will be used to estimate the financial impact of illegal dumping*

Location

Throughout Northwest Indiana, Greater Chicago, Southeast Michigan, Northeast Ohio, and Gateway/East St. Louis, illegal dumping is a major problem. These urban centers range in size from 500,000 to 5 million people. They exhibit unique problems and characteristics, especially with respect to land use, population and social/economic conditions. In recent years, each of these communities took steps to address illegal dumping, but were having trouble making progress. To maintain momentum, EPA, through the Regional Geographic Initiative (RGI) Program, has established partnerships in each area to assist them.

The Challenge

Any area can become an illegal dump site. Once established, conditions only get worse as more and more trash is dumped and the perception evolves that it is OK to dump there. What starts as a few tires or old pieces of furniture may soon attract used oil, asbestos tiles or old paint, which can pose a serious health and environmental threats. Children playing near these sites may be exposed to protruding nails, glass, harmful dust or liquids. Dumping can impact drainage, making areas more susceptible to flooding, or contaminate drinking water wells and surface waters. In one Chicago suburb, illegally dumped materials clogged a creek and caused a perpetual cycle of flooding in the Spring and during storms. The basements of homes flooded, which created more waste materials such as soaked carpeting and furniture that were then dumped into the same creek, causing a "vicious cycle" of dumping and flooding. Unless something is done, a community thus abused can quickly fall apart, property values drop and the area becomes unattractive to investors. During the 1970s, East St. Louis was a vibrant community with thriving local businesses. In the last 20 years, the community has collapsed and has only one drugstore, property values have plummeted by 30% and school enrollment has dropped by 20%. Ultimately, it is the redevelopment of areas most susceptible to illegal dumping and the creation of prevention programs that eliminates the problem--together, of course, with a panoply of educational and socio-economic reforms to make the community prosperous.

1998 Activities

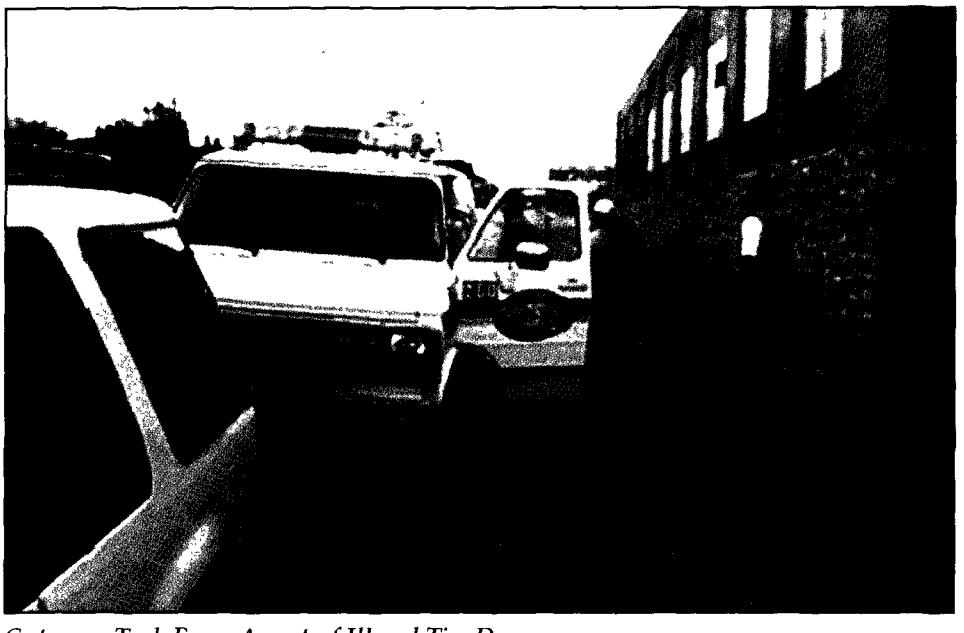
Illegal dumping is a problem where governments fail to enforce regulations, but it is impossible to conduct 24-hour surveillance in all areas where dumping could possibly take place. The most effective way to keep neighborhoods clean is for government agencies to team up with residents and local businesses, becoming part of one united effort to attack the problem. Using RGI funds, Region 5 has established partnerships consisting of residents, local governments and industries to develop common sense, community-based, collaborative approaches to solve this intractable problem. These approaches include

Dumping on an open lot in Cleveland

Chicago Outreach Materials

"I write to commend the Environmental Protection Agency... for the quick, cost-efficient and thorough cleanup of the illegal dumps throughout the Village of Ford Heights...The results of your agency's work are nothing short of spectacular...As you know, I am working hard to improve the quality of life for the residents of Ford Heights. Undoubtedly, by removing the mountains of debris and eradicating the health hazards that they posed, the EPA has helped to accomplish that critical mission..."

Congressman Jesse L. Jackson, Jr (IL)



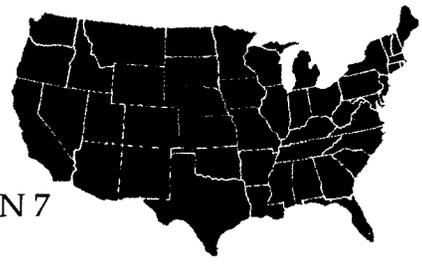
Gateway Task Force Arrest of Illegal Tire Dumper

- Preparing detailed assessments of the nature of the illegal dumping, including potential motivations, and what current efforts to combat the problem were working or not working and why
- Contacting stakeholders from the community, private industry, and government to share information and exchange perspectives and ideas for solutions
- Taking information from communities with effective programs
- Facilitating stakeholder meetings to identify target areas and priority objectives, and plan collaborative projects
- Utilizing grant agreements or other assistance mechanisms
- Documenting implementation and results of projects to share with others

Since 1995, over twenty collaborative projects are underway. These range from conducting community-sponsored clean ups and establishing site watch-dog groups to holding training programs for local police officers and establishing task forces to catch dumpers. In 1997, such task forces led to 170 arrests and 89 impounded vehicles in Detroit and another 133 tickets written and over 585,000 cubic yards of debris cleaned up by dumpers in Chicago. Approximately 1,500 local police officers have been trained in identifying, investigating and responding safely to illegal dumping sites region-wide. EPA is also working with local officials, prosecutors and judges to show the importance of prosecuting illegal dumpers. As a result of these efforts, in East St. Louis over 50,000 scrap tires have been cleared off the streets, alleys and vacant lots in cooperation with community groups and local governments and sent to a recycler for profit.

EPA's Illegal Dumping Prevention Guidebook was created to share results and lessons learned, with over 10,000 copies distributed nationwide in cooperation with Keep America Beautiful and the U.S. Conference of Mayors. EPA is also developing an economic assessment model, scheduled to be completed by Summer, 1999, that will estimate the financial impact of illegal dumping and support prophylaxis.

Strategies for Meeting St. Louis's Priority Environmental Issues



- *Demolishing/Rehabilitating abandoned asbestos and lead contaminated houses*

- *Targeting two neighborhoods for environmental improvement*

Location

St. Louis, MO lies on the banks of the Mississippi River just south of its confluence with the Missouri. It adjoins, but is independent of, East St. Louis, Illinois and the eight counties in Missouri and Illinois constituting the metropolitan area.

The Challenge

Because of its aging infrastructure, loss of half a million people since 1950, collapsed industrial base, sprawl, crime and poverty, St. Louis has more than its share of environmental and health problems. It has one of the highest rates of childhood asthma in the U.S., lead poisoning of children is seven times the national average, and it was among the 10 counties with the lowest life expectancy in the country in 1998. The City has an inventory of over 10,000 vacant or abandoned properties, and the air in the region frequently violates the National Ambient Air Quality Standards for ozone. In order to address these critical issues, Regional Geographic Initiative (RGI) funds have been crucial in addition to the traditional EPA funding.

1998 Activities

In 1997, EPA started a Community-Based Environmental Protection (CBEP) Initiative to work in partnership with citizens and state and local governments in Region 7 to identify environmental concerns at the local level; establish priorities among participants and governmental agencies; and assist residents and partners in resolving environmental issues that will improve the quality of life in their neighborhoods.

To launch the first phase of this initiative and gain information on citizen's concerns about their environment, RGI funds were used for the St. Louis Community College to conduct a series of interactive public meetings called "The Listening Tour." Every neighborhood in the city was included in one of 12 community meetings or tours. The College, in turn, organized a task force of community representatives to shape and guide the tours and contracted with a local communications firm to capture audiences and initiate candid dialogue. The 1997 fall tour was a major triumph.

During the spring of 1998, EPA and its partners compiled data from the tour, prepared a final report and video, and EPA began a series of meetings with local organizations to respond to the 10 priority environmental issues that had emerged. The issues identified most frequently were air pollution, vacant and abandoned properties, Brownfield redevelopment, lead poisoning, illegal dumping, litter and trash, lack of recycling options, urban sprawl, highway expansion, water pollution and the need for parks and playgrounds. EPA determined that the next phase should be to work with neighborhoods to design and implement strategies to meet priority environmental needs. Two key projects emerged over the course of 1998.

• The Abandoned Building Project

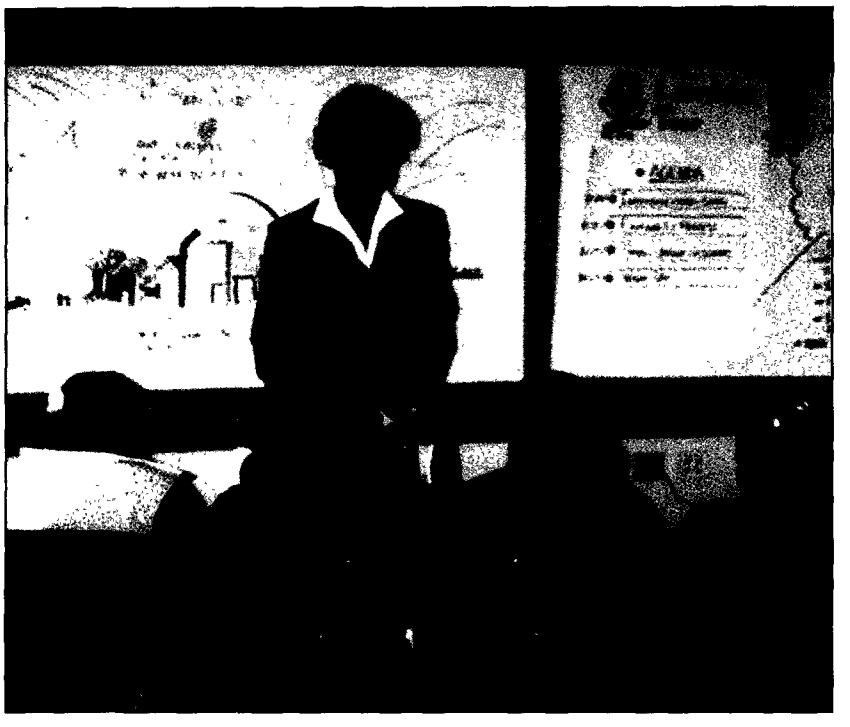
Most of the housing in the 18th ward was built in the early 1900s when asbestos was used as furnace insulation and as a component in ceiling and floor tiles; lead-based paint was also widely applied. The 10-15 houses targeted for demolition are in poor condition-- some of them crumbling from neglect, all of them owned by the city as a result of tax foreclosures. These structures pose a physical hazard as well as a threat of release of asbestos and lead. Asbestos containing materials require special handling under the federal NESHAPS rules, thus making demolition expensive--part of the reason the properties have been abandoned.

Clearing multiple abandoned houses within a single neighborhood in order to assemble parcels for redevelopment has never been attempted by the city heretofore. Following the Listening Tour, EPA met with its partners to design a pilot project, working with the alderman, residents and developers with current ward investments, to select structures for demolition. A team of federal, state and city staff will perform building inspec-

A crumbling abandoned house contaminated with asbestos and lead, which will be demolished in the pilot abandoned building project

"Thanks for EPA Region 7's support and commitment to assisting the City of St. Louis in identifying new ways to address the critical issue of asbestos and lead contaminated abandoned and vacant buildings in our neighborhoods. This project provides a unique opportunity for federal, state and local officials to work collaboratively to bring resources and expertise to a problem that is a top priority for many St. Louisans."

Clarence Harmon, Mayor



A stop on the Listening Tour, October 1997

tions to identify and quantify hazardous materials for removal. Then, using critical RGI funding the U.S. Army Corps of Engineers, through an Interagency Agreement, will design and oversee demolition. Through this process, we are seeking to create a model that neighborhoods, contractors and the city can deploy in other locations. We also plan to resolve the issues surrounding NESHAPS compliance that have strained relationships among the regulators and the city for years, and to find cost-effective, environmentally sound ways to demolish buildings en masse.

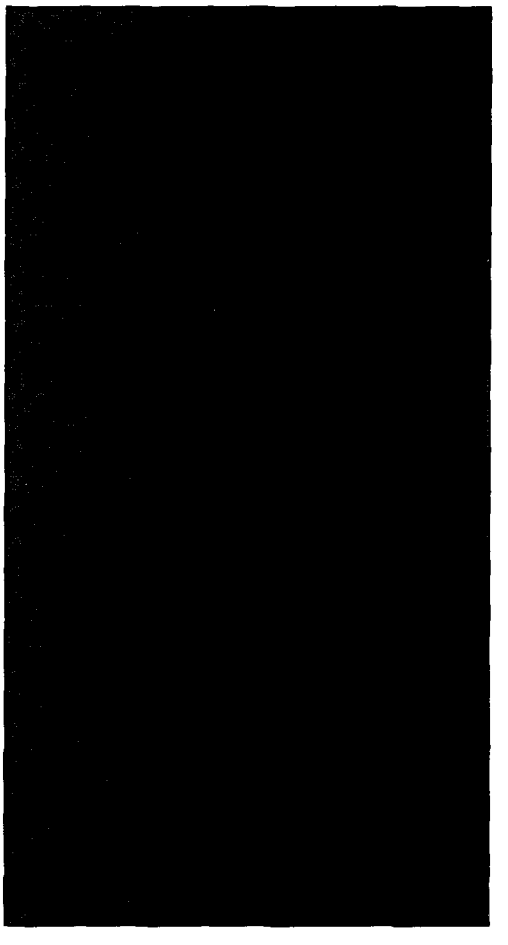
• Listening Tour - Phase II

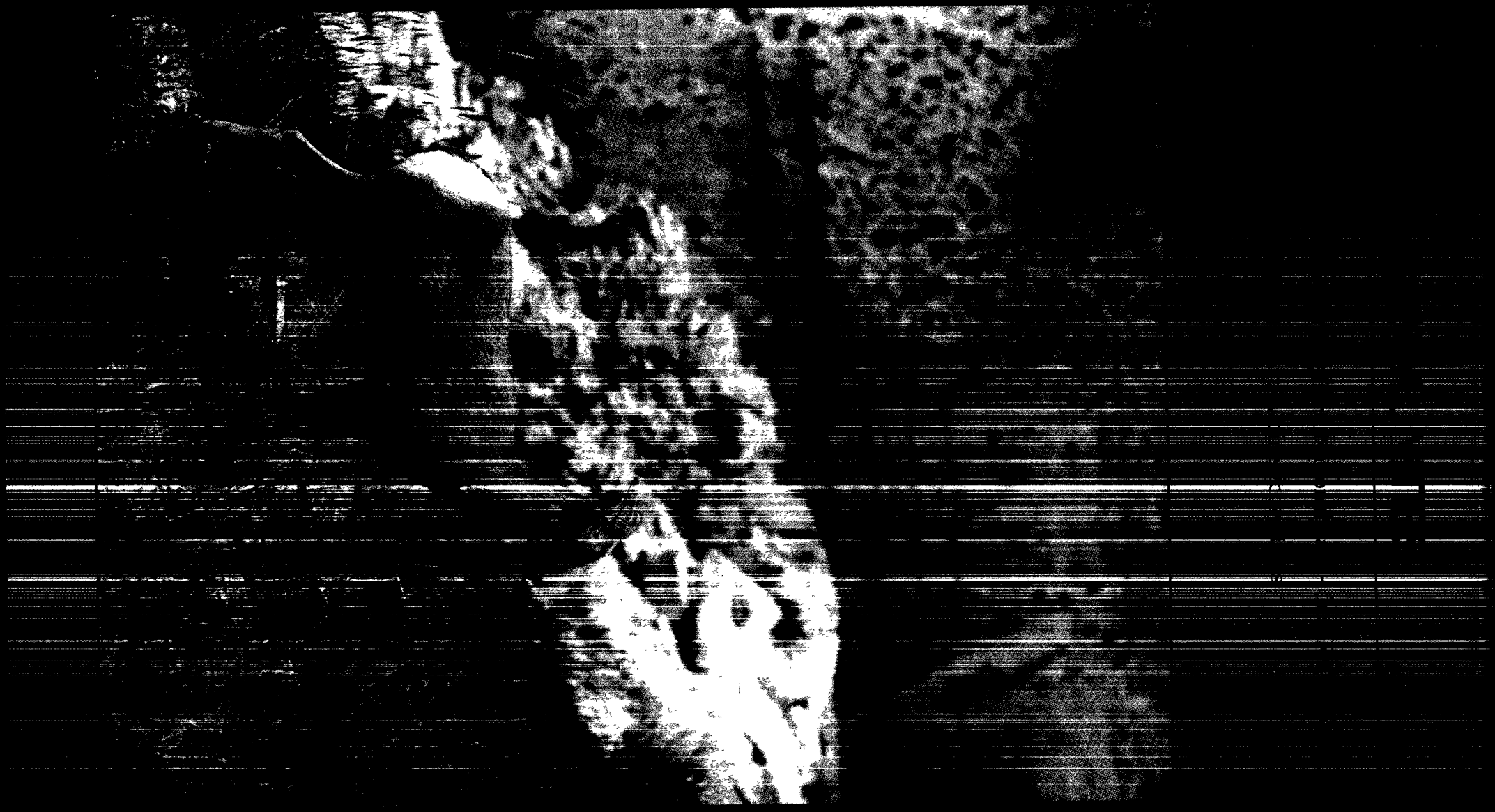
During 1998, St. Louis Community College proposed and was awarded a RGI grant for a second phase of work to amplify the public engagement launched by the Listening Tour. This second phase will enlist community residents in two neighborhoods to plan, develop and implement a project tailored to their specific environmental interests and concerns. This project will be well documented and used as a model that can be replicated in other neighborhoods as resources and citizen support come down the pipe.

Phase II will begin with five "celebration briefings" in April of 1999: one each in the north, south, east and west quadrants of the city and one at the annual Neighborhoods Conference, sponsored by the Community College. Each ninety-minute celebration will include a public showing of the award-winning Listening Tour video, a presentation of the results of Phase I, a briefing about Phase II and an explanation of how neighborhoods can compete for participation in Phase II projects.

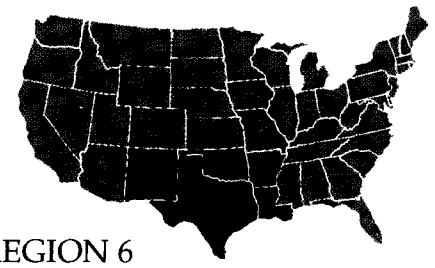
Each Phase II project will include 16-20 residents from each neighborhood. Known as the core leadership group, they will be responsible for the stewardship of the project and receive leadership instruction so they can manage this and other neighborhood projects in the future. It will include 40 hours of experiential training, a city/state government day and a final project presentation. The training will encompass group process; strategic planning; project management; asset mapping; relationship building; the art of inquiry and grant writing. The city/state government day is designed to give participants an opportunity to meet and interview key officials who will help shape their projects. The core leadership groups will select an environmental issue from among the top ten identified during the Listening Tour, learn the details of the problem and design a project to mitigate it. EPA will offer technical assistance and information on environmental topics or issues as needed.

In addition to training a cadre of neighborhood leaders, the Community College is committed to solicit and train young people in the two neighborhoods. The College will work with Team Sweep, a youth neighborhood beautification program that targets young people aged 8-14. The youth component will build capacity across generations so momentum isn't lost, encourage systemic change, and generate a diversity and energy beyond what working adults can always provide.





Combating Visibility Problems in Big Bend National Park - The BRAVO Study

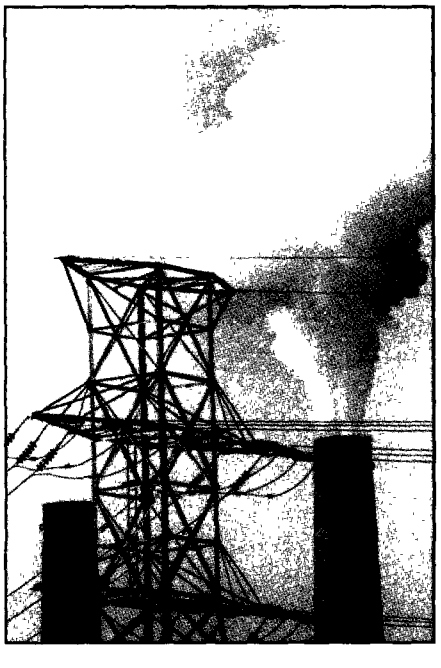


REGION 6

A Good Visibility Day at Big Bend

- *Reducing sulfur dioxide emissions to meet National Standards*

- *Reducing transboundary threats to human health and shared ecosystems*



Location

Remote southwestern Texas, where the Rio Grande makes a large U-turn along the US-Mexico border, is known as "Big Bend Country." Big Bend National Park--a 1,252 square-mile reserve--was established in 1944 and designated as a Biosphere Reserve in 1976. Big Bend is a land of contrasts: the Rio Grande, portions of which have been designated as a Wild and Scenic River; the huge Chihuahuan desert; and the Chisos Mountains, towering 2400 meters (7800 feet) above the desert sea and the Sierra del Carmen across the river in Mexico. Along the Rio Grande are deep cut canyons--Santa Elena, Mariscal, and Boquillas--alternating with narrow valleys walled by towering cliffs. It is a region of great biological diversity, containing more than 1,000 species of plants (including 65 cacti), 434 birds, 78 mammals, 71 reptiles and amphibians, and 35 fish. Endangered species include the peregrine falcon, black-capped vireo, Mexican long-nose bat, Big Bend gambusia (a fish), and three threatened cacti. Big Bend is also known and appreciated in both countries for the beauty of its scenic vistas. So remote is the Park that only 300,000 visit annually.

The Challenge

However, anthropogenic emissions-- fossil fuel combustion, petroleum refining, and smelting activities-- are ruining the park experience: visibility is perhaps the worst of any national park in the western United States. In recent years residents have reported greater frequency and severity of regional hazes. As EPA's Regional Administrator in Dallas, Gregg Cooke, noted after a recent trip to Big Bend: "I was dismayed to see how polluted the once blue skies over the park have become." Since 1993 the governments of the United States and Mexico have been investigating the causes of regional haze. Preliminary estimates of sulfur dioxide emissions from nearby power plants in Mexico were calculated at approximately 240,000 tons per year, equivalent to the second largest emitter of sulfur dioxide in the United States, and certainly the largest emitter in that region.

A binational work group was established in October 1993 to investigate the potential impacts from power plants on Big Bend's air quality. After two years-plus of study and application of atmospheric dispersion models, the group issued a joint statement in March 1996, saying the two governments should conduct a comprehensive field study to analyze all potential regional sources that might contribute to the park's air quality and visibility problems.

"It is an extremely important step forward."

Mary Kelly, Texas Center for Policy Studies

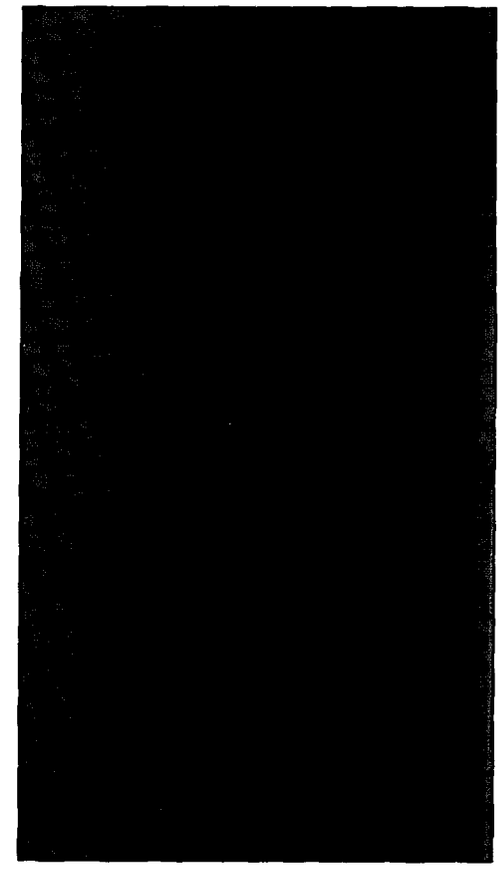
A Bad Visibility Day at Big Bend

1998 Activities

The primary goals of the Big Bend Regional Aerosol and Visibility Observational (BRAVO) Study funded in part by FY 97 and 98 Regional Geographic Initiative (RGI) are to understand the long-range, transboundary transport of visibility-reducing particles from regional sources in the U.S. and Mexico and to quantify the contributions of specific U.S. and Mexican sources (or source regions) responsible for poor visibility at Big Bend National Park, including power plants. Important aspects of BRAVO will include atmospheric tracer releases from major industrial sources and widespread atmospheric sampling throughout northern and central Mexico and the south-central U.S. The results of a preliminary study were released January 8, 1999.

The comprehensive BRAVO field study will be conducted from July through October 1999. Data will be analyzed over the next year and should demonstrate which types of sources (e.g., smelters, auto emissions, power plants) in the U.S. and Mexico are responsible for the haze. U.S. policymakers in the two countries can then devise a strategy to cut emissions.

The BRAVO Steering Committee will continue its outreach program with stakeholder groups. In June 1998 the Steering Committee held a meeting in Dallas with over 50 stakeholders, and in August 1998, EPA, the U.S. National Park Service (NPS), and the Texas Natural Resource Conservation Commission (TNRCC) participated in a public meeting in Alpine, Texas (near Big Bend National Park), which more than 150 people attended for an exchange of views. Organized groups of stakeholders include the Sierra Club-Big Bend chapter, the Sierra Club-Texas State chapter, Friends of Big Bend National Park, and the Electric Power Research Institute (EPRI).



San Miguel Community Rallies to save Alpine Ecosystems

- *Local citizens act to protect source water*

- *Local officials redefine land use codes to protect ecological values*

Location

The one-million-acre San Miguel Watershed lies within one of the largest remaining relatively undisturbed areas of Colorado and, indeed, North America. At its heart, the free-flowing San Miguel River extends for 80 miles from high alpine headwaters above Telluride, Colorado, to a desert confluence with the Dolores River. Biologists consider the basin to be one of the few remaining ecologically and hydrologically intact systems in America. The area is economically blessed but ecologically challenged, with some of the highest relocation and resort growth rates in the nation (7.3% annually). It has witnessed a five-fold increase in non-skier recreational uses in the past decade. Since 1996, Region 8 has invested Regional Geographic Initiative (RGI) funding to support community-led activities through a cooperative effort with stakeholders. Applying RGI resources to this geographic area has been critical for meeting locally set goals.

The San Miguel Watershed, located in two counties (the majority in San Miguel & the rest in Montrose), is a natural treasure house for locals and visitors. Historically, the area's economy has been based primarily upon mining and agricultural operations, which have destabilized river channels and degraded water quality. Fragile source-water is threatened by extractive industries and development in remote areas, some without waste water treatment infrastructures. Retirement communities are sprouting in the western agronomic part of the basin.

The Challenge

Communication and understanding between the upper basin (resort/second home/mining) and lower basin (ranching/farming/mining) were problematic. Over the last three years, there has been significant investment to promote collaboration in the basin. Citizens, community groups, local governments, state and federal agencies have taken a watershed approach to address increasing threats to environmental integrity and economic sustainability. Also, a unique aspect of the San Miguel Watershed effort has been its ability to work with traditional regulatory programs, such as the National Environmental Policy Act (NEPA), wetlands enforcement and source-water protection, within a Community Based Environmental Protection (CBEP) framework.

1998 Activities

RGI funds were strategically critical in providing access to flexible resources that would address the unique needs of small, resource-limited communities. The distribution of these funds has resulted in leveraging, other EPA program funds as well as other stakeholder funds and services for this important ecosystem protection and quality-of-life effort.

• San Miguel County's High Alpine/GIS Land Use Assessment and Source Water Protection

This project developed ecological assessments of 18 alpine basins, identification of sensitive aquatic ecological resources and establishment of county land-use codes that tightly restrict development. Recently, as a result of this assessment effort funded by EPA RGI, it was discovered that these pristine alpine ecosystems are impacted by regional atmospheric nitrogen deposition. The establishment of GIS resource based land-use codes in the west is controversial and precedent setting for such undisturbed alpine systems. After many community meetings and intense public discussions, ecological sensitivity maps and land use protection ordinances were passed by County Commissioners on June 3, 1998, protecting several thousand acres of pristine land from intense development. The Commissioners, the County Planning and Environmental Health Departments, the Southwestern Data Center, and The University of Colorado's Institute of Arctic and Alpine Research (INSTAAR) all received the Regional Administrator's Excellence in Environment Award in 1998.

This effort also included a voluntary local stakeholder source-water protection delineation, assessment and mapping effort by seven communities. Results include GIS maps of the source-water protection areas and local participation in source-water management planning. An interactive web site provides access to all the assessments & delineation products for the community (http://www/landuse.com/epaproject/indexhtm)

• Local Watershed Coordinator/Multi-Stakeholder Watershed Plan

This project used a CBEP approach in partnership with a broad-based community stakeholder coalition dedicated to restoration, preservation and sustainable economic development of the San Miguel Watershed. RGI funds partially supported a local watershed coordinator, leveraging an additional $25,000 from the Bureau of Land Management and the Town of Telluride. In-kind services (which equate to thousands of dollars) from local, federal and state organizations were also contributed (e.g. facilitation by the National Park Service's Rivers and Trails Conservation Assistance (RTCA) program). The Town of Telluride, in partnership with the

"Certainly, the examples of watershed environmental protection, like the Town of Norwood's desire for assistance with [its] source-water protection plan and expanding the coalition stakeholder representation to the Town of Nucla, are testaments that EPA's community-based approach is a brilliant and effective way of empowering local communities."

Linda Luther, Local San Miguel Watershed Coordinator

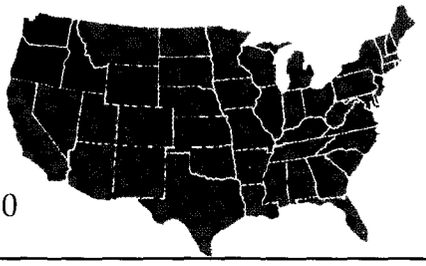
EPA Regional Administrator William Yellowtail with San Miguel county Commissioners Anna Zivian, Art Goodtimes and Jim Craft in Fall of 1998 discussions about the watershed. The county set aside thousands of acres under lowimpact use restrictions.

Watershed Coalition, focused on projects that led to completion of Clean Water Act Total Maximum Daily Load (TMDL) calculations. As a result, a locally based multi-stakeholder group formed a solid coalition for addressing watershed issues in the basin. A broadly distributed and adopted final watershed plan identifies over 300 specific on the ground projects needing attention within the basin. These include wetland and river restoration, flow studies, monitoring and ecosystem stewardship projects.

•High Alpine Phase II & Applebaugh Wetlands Restoration

These projects focus on reassessment of key alpine basins for metal contaminants, map verification and accuracy. RGI funds were also used to support development of a meteorological and atmospheric monitoring program to identify the source of regional nitrate deposition. Also, working with local high school students, a wetlands monitoring and restoration project is moving forward near the community of Placerville.

Restoring the Umatilla Ecosystem



REGION 10

- *Changing grazing practices to improve native vegetation, water quality, and fish habitat in entire subwatersheds*
- *Converting more than 15,000 acres of farmland to practices that protect groundwater, improve air quality, restore soil health, and reduce runoff to streams*

Location

The Umatilla Basin in northeastern Oregon has a population of approximately 65,000 people and covers approximately 3000 square miles of the Columbia River Basin. It is bound on the east and south by the Blue Mountains, which store most of the area's precipitation in the form of winter snowpack. Receiving only 8-12 inches of precipitation annually, the arid region below the mountains once was a shrub-steppe/grassland ecosystem, but it is used today for livestock grazing and dryland or irrigated agriculture. The primary land use of the higher elevations is forestry. The Umatilla Indian Reservation is located almost entirely within the basin. Much of the reservation is being farmed or grazed.

The Challenge

Except for a small wilderness area in the Umatilla River headwaters, most of the basin has poor water quality and declining coldwater fish populations, and has lost much of the native habitat and plant diversity. The mainstem of the river and most of its major tributaries are designated as water-quality-limited under Clean Water Act 303(d) for temperature, nutrients, flow modification, pH, and/or fecal coliform. Wild steelhead runs are diminishing and reintroduced salmon populations are limited. The once extensive shrub-steppe ecosystem has been almost entirely converted to agricultural uses; its unique flora and fauna are sparse at best. Noxious weeds have overrun appreciable areas where natural ground cover has been disturbed. Groundwater in the lower basin is highly contaminated with nitrates. Portions of the basin have significant seasonal air quality problems from windblown dust, field burning, forest fires, and winter inversions.

1998 Activities

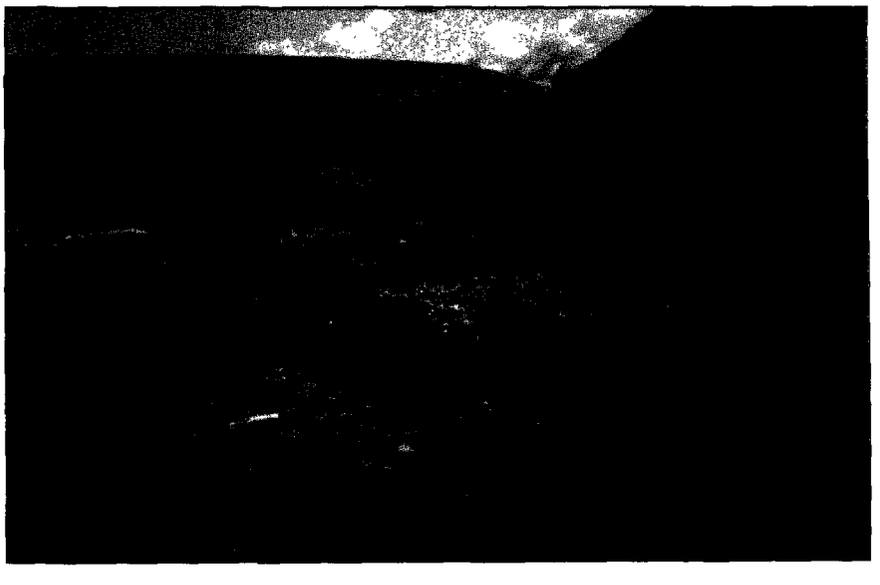
The Umatilla Regional Geographic Initiative (RGI) goal is long-term sustainability of a healthy ecosystem based on a multi-media (air/water/land), whole-basin approach, including healthy human communities. A consortium of public and private entities is working to restore and protect the valuable streams, native plants, air, soil health, and ground water in the Basin. EPA staff in the area are catalysts for broad-based partnering for local solutions. The Umatilla Initiative is involved in about fifty on-the-ground improvements, monitoring, assessment, education, and coordination projects. Following are a few examples.

Buckaroo Total Watershed Restoration
RGI funds initiated this effort, and project partners have secured additional funds from the Natural Resources Conservation Service, Bonneville Power Administration, Bureau of Indian Affairs, and CWA 319 through EPA and the Oregon Department of Environmental Quality. This is a ridgetop-to-ridgetop, headwaters-to-mouth restoration effort for a small watershed on the Umatilla Indian Reservation. Within the next two years, grazing management improvements will include forage allocations for livestock, feral horses, and wildlife; planting of vegetation in riparian and spring areas; riparian, pasture, and aspen grove boundary fencing; off-channel stock watering; livestock herding; weed management; and monitoring.

The focus is on water quality and temperature; hydrologic function; fish habitat; range and forage; noxious weeds; and native plants, especially for riparian and floodplain areas. Grazing is the most pervasive land use in the watershed. Grazing will continue, consistent with watershed recovery. Significant hydrologic modifications have been caused by development in the floodplain at the mouth of Buckaroo Creek: homes; roads, railroads, bridges; and a major, off-reservation city water supply infiltration gallery. Discussions are underway to relocate or otherwise modify these impacts.

Key Milestones: In the next five years, project managers expect to see significant decreases in grazing impacts, reductions in upland weeds, and bourgeoning native riparian vegetation. Within five to ten years, the stream should begin to respond to these changes, improving living conditions for fish and wildlife. Monitoring is planned for this project with 2003 and 2008 representing important 5-10 year milestones in measuring changes on land and in water, respectively.

Conservation Tillage/Direct Seeding
Approximately 700,000 acres of the



Buckaroo Creek

"The Umatilla RGI has strategically taken advantage of previous successes in the Umatilla Basin. Chris Kelly, the local EPA staff person, has successfully tapped into the collaborative potential and brought the diversity represented by agriculture, the Umatilla Indian Reservation, and others together to do good environmental work."

Mike Farrow, Confederated Tribes of the Umatilla Indian Reservation

Umatilla Basin is agricultural land. Umatilla County is the largest wheat producer in Oregon and the second highest producer in Oregon for total agriculture sales. The non-irrigated portion of the basin primarily utilizes a conventional wheat-fallow system, nonsustainable due to degradation of soil productivity. Environmentally, wheat-fallow lands can produce large amounts of stream sediment and windblown dust. In addition, as farm subsidies drop, the system is economically unsustainable.

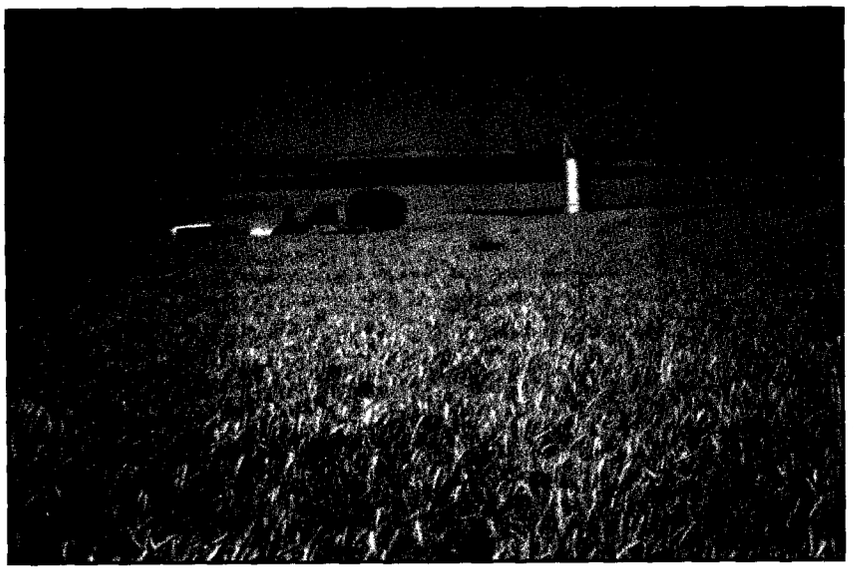
The conservation tillage project is an effort to demonstrate both economic and environmental sustainability by providing financial and technical incentives to convert conventional methods to direct seeding/annual cropping methods, along with substantial training in these nontraditional methods. Environmental benefits include less windblown dust and stream sedimentation and soil health upgrades. Through tours, press coverage, individual direct mailings to all producers and operators, and group or individual meetings, this project attracts participants who have never availed themselves of other agricultural services. Participation in the first year alone is more than three times the target.

Key Milestones: Because attempts at conservation tillage have failed in the past, project managers have been reluctant to set numerical targets. The producers instrumental in initiating the effort envision at least 30% of the dryland wheat area converted to direct seed/annual cropping systems over the next five years, provided commodity prices stay level or increase slightly. The number of acres converted to direct seed/annual cropping systems are assessed annually. Efforts are underway to define water quality and soil health improvements.

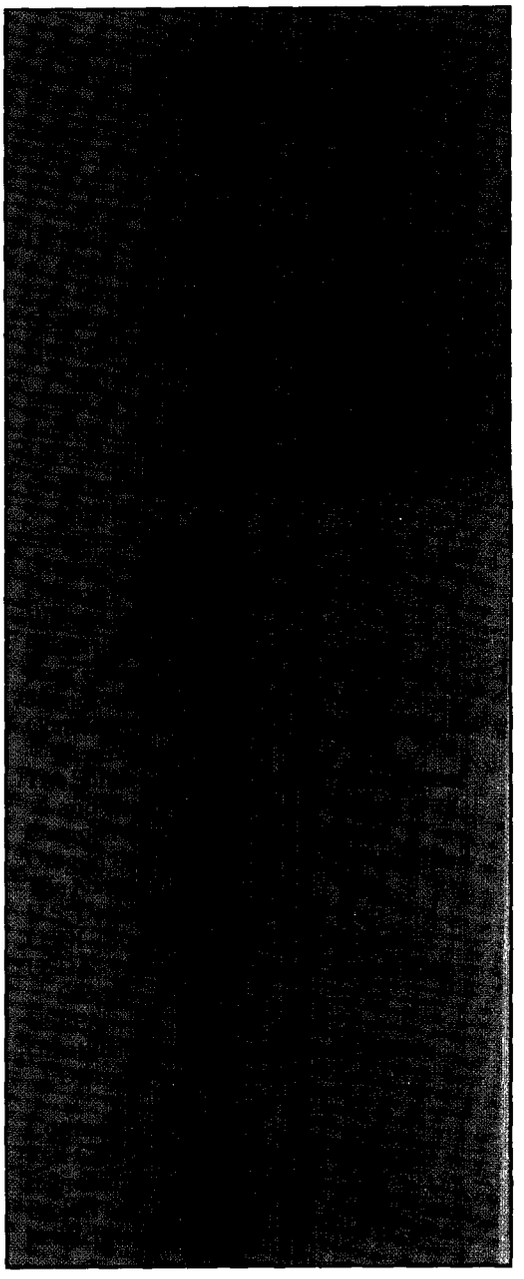
The Shrub-Steppe Ecosystem Assessment and Restoration Demonstrations
The little known yet priceless shrub-steppe ecosystem of the Columbia Plateau Physiographic Province is considered one of the most threatened ecosystems in the Pacific Northwest. Conversion to cropland has eradicated most of this ecosystem; grazing on the few intact lands has significantly degraded native plants and wildlife.

Through mapping remaining fragments and critical conservation areas, assessing biodiversity, determining wildlife uses, and identifying stressors, this project is developing a strategy to protect and restore the ecosystem. The information generated is already being used to protect intact habitat fragments and sensitive species; critical shrub-steppe lands slated for exchange out of the public domain are being retained; crucial fragments enjoy highest priority for acquisition through the BPA wildlife mitigation program; species are being reviewed for threatened status and protection; vegetation enhancement is beginning; and management of military lands is more sophisticated. Small demonstrations are restoring native habitat and controlling weeds.

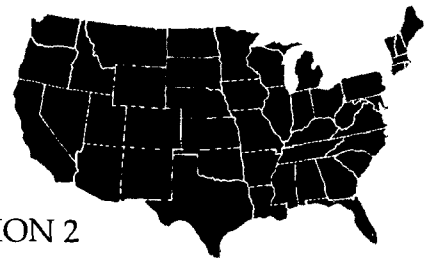
Key Milestones: Within the next year, the assessment and conservation strategy for remaining fragments will be completed. With the cooperation of interested landowners, several remaining fragments may be connected in future. As all these pieces come together, we expect that the total effort will expand existing protected shrub-steppe habitat to almost 70,000 acres by 2003, five times the present level.



About one half of Umatilla Agriculture is a traditional dry land wheat fallow system



Reducing Toxics in the New York-New Jersey Harbor



REGION 2

- *Enhancing the ability of stakeholders to utilize the Harbor's resources in an environmentally and economically sound manner*
- *Reducing Pollutants in the Harbor*

Location

The New York-New Jersey Harbor Estuary Program (HEP) is one of 28 community-based estuary protection programs under EPA's National Estuary Program. The Regional Geographic Initiative (RGI)-funded New York-New Jersey Harbor Toxic Source Reduction project is one component of the HEP, which encompasses 770 miles of waterfront. This includes the urban harbor of New York and New Jersey running south from the Tappan Zee Bridge on the Hudson River to Sandy Hook, New Jersey, and east to Jamaica Bay, New York City. It also includes the tidally influenced portions of all rivers and streams that empty into the Harbor (the Hudson, Passaic, Hackensack, Raritan and Bronx Rivers). The Region's approximately 30 million residents are concentrated in its urban areas. Close to 85% live in New York and New Jersey, mainly in the New York/New Jersey metropolitan area, and derive some benefit from the Harbor. RGI funds have been a key source of support for the New York-New Jersey Harbor Toxic Source Reduction project.

New York Harbor is a precious natural resource: its watersheds, wetlands, open waters, and other habitats support an abundance of fish and wildlife, for example, spawning grounds of the striped bass and American shad, and colonies of water birds known as the Harbor Herons. It also supports a multitude of human recreational uses including fishing, and boating. Various waterways within the Harbor are also lifelines of commerce. The Port of New York/New Jersey is the largest port on the east coast of the United States, generating $20 billion in economic activity. Approximately 120 million tons of cargo with a value in excess of $93 billion pass through the port each year.

The Challenge

The harbor continues to be degraded by point and non-point discharges of toxic pollutants, such as urban runoff, sewage treatment plants, industrial waste, household chemicals, and pesticides.

U.S. Environmental Protection Agency scientists drop a sampling device through the floor of a specially-modified Huey helicopter which is part of the Agency's water quality monitoring program along New Jersey and Long Island ocean beaches.

HEP has listed 15 chemicals of concern: arsenic, nickel, copper, mercury, PCBs, dioxin, PAHs, tetrachloroethylene and seven organochlorine pesticides. These compounds are present at levels that may cause ecological and human health risks, indeed, much of the sediments are too toxic for unrestricted ocean disposal. Levels of many toxic contaminants in the harbor are among the highest levels in U.S. estuaries, violating water quality standards, contaminating fish and generating other ecological effects.

1998 Activities

Through the New York-New Jersey Harbor Toxic Source Reduction project, trackdown of contaminants within the system has focused on the use of passive sampling devices known as PISCES (passive in-situ concentration extraction samplers), which are placed in the harbor for a period of up to several weeks. Compounds such as PCBs, DDT, PAHs in the water accumulate in the sampler, are brought back to the lab and analyzed. These devices are placed in the field at strategic locations within wastewater collection systems or tributaries, and by comparing values at different locations, the sources of loadings can be narrowed down. Sampling during 1997 and 1998 has identified significant sources of PCBs, DDT, dioxin and PAHs. The problem is determining which sources contribute the most significant loadings of priority chemicals. Reconnaissance prior to deployment greatly improves the efficiency of sampler placement.

Information from the sampling will be used to determine the appropriate action (e.g., permit enforcement, compliance assistance, pollution prevention, non-point source controls) so as to reduce loadings of toxic chemicals into the harbor, and therefore, lower concentrations of toxics in sediment, water-column, and biota. Upgrading the quality of water in the harbor estuary boosts recreational and economic opportunities

"New York Harbor is a remarkable asset, it provides fish and wildlife habitats, it sustains an important commercial fishery, it carries cargo and passenger shipping and it provides exceptional outdoor recreational opportunities for millions of people."

Governor George E. Pataki

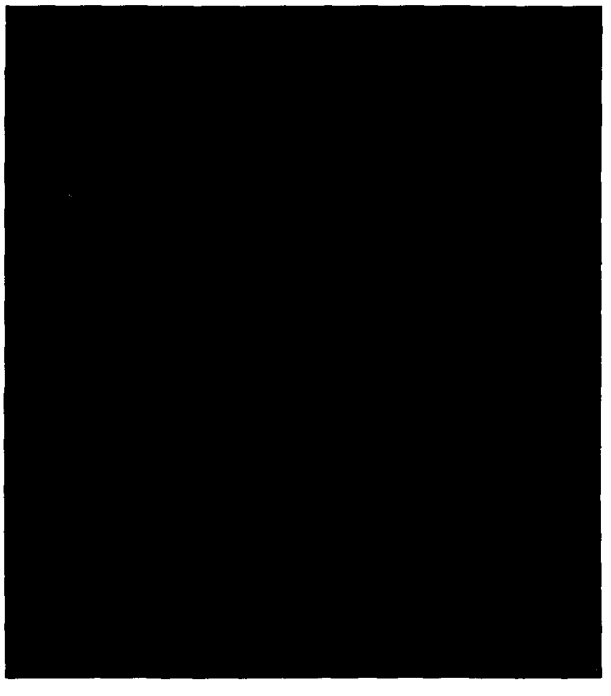
A look at the Harbor and Lower Manhattan from Governors Island

for area residents as well as purifying habitats.

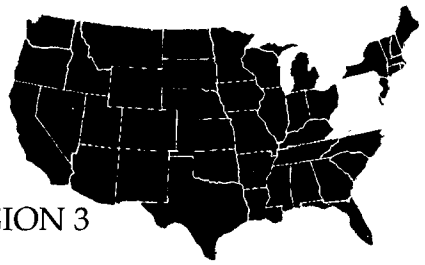
The RGI project supports the overall goals outlined in the Comprehensive Conservation and Management Plan (CCMP) developed for the New York-New Jersey Harbor Estuary. These are:

- To establish environmentally sound, economically feasible ways to dispose of dredged material.
- To control continuing sources of toxic chemicals so that all sediments entering the harbor will meet Category I criteria (acceptable for unrestricted ocean disposal).
- To restore and maintain a healthy and productive harbor/bight ecosystem, with no adverse ecological effects from toxic contamination.
- To ensure fish and shellfish caught in the Harbor/Bight are safe for unrestricted human consumption.

The New York-New Jersey Harbor Estuary is a large and complex system requiring coordination by many agencies and individuals. The bi-state NY/NJ Harbor Estuary Program is a partnership of representatives from federal government, the states of New York and New Jersey, interstate compact agencies, local governments, scientists, commercial and sport fishermen, public interest groups, environmentalists, business, industry and educators.



Restoring Chesapeake Bay Habitat



- *Opening dams and obstructions to restore historic spawning and freshwater nursery habitats*

- *Restoring natural reefs to improve the oyster resource*

Location

Chesapeake Bay has a surface area of 4,400 square miles, a length of 200 miles, and a watershed covering 64,160 square miles. The watershed supports approximately 15 million people along five major, and several smaller, rivers including two American Heritage Rivers, the Susquehanna and the Potomac, as well as the Rappahannock, York, and James. As a highly productive coastal estuary, the bay provides an array of habitats offering protection and sustenance to more than 2,700 migratory and resident animal species. They are threatened by a watershed population that may rise as much as three million by the year 2020 C.E.

The Challenge

Certain habitats--wetlands, streams, forests, and riparian corridors-- are directly and acutely affected by clearing, agriculture, and development. Nutrient, sediment, and toxic loadings to the Bay from point and non-point sources of pollution and over-harvest of fish and wildlife have degraded once productive habitats. Bay islands and salt marshes are declining due to sea level rise, shoreline erosion and regional subsidence.

The Chesapeake Bay Program is a unique regional partnership, supported by the EPA Chesapeake Bay Program Office in Annapolis, Maryland, that's been directing and conducting the restoration of the Chesapeake Bay since the signing of the historic 1983 Chesapeake Bay Agreement. The agreement was signed by the EPA Administrator, the Governors of Maryland, Virginia, and Pennsylvania, the Mayor of Washington D.C. and the Chesapeake Bay Commission. This partnership increased their dedication to the Chesapeake Bay through a second, more detailed, agreement signed in 1987. The 1987 agreement recognizes that existing habitats should be conserved and degraded habitats restored. However, most site-specific habitat restoration has not been coordinated. The development of the Chesapeake Bay Habitat Restoration Framework provides for a disciplined and streamlined approach to restoration activities in the bay watershed.

Four habitat areas were selected for attention :

- Fresh water tributaries and streams, including nontidal wetlands, as anadromous fish- spawning and nursery areas
- Shallow water areas and submerged aquatic vegetation, as refuges for juvenile fish and crabs and waterfowl feeding areas
- Open water areas for adult fish and oyster reefs
- Islands and inlands, including forested wetlands, with their waterfowl and neotropical birds.

1998 Activities

The Regional Geographic Initiative (RGI) has generated great results in most of these habitats via projects cooperatively funded by Chesapeake Bay Program (CBP) partners and other funding partnerships. RGI funds have been instrumental in leveraging partners' funding; these partnerships have been instrumental in our ability to meet the following habitat restoration goals:

Rock Hill Dam on the Conestoga River in Pennsylvania before it was removed. Shad and herring can not get over the dam to their historic spawning rivers. The dam also is a safety hazard, responsible for the loss of at least one life.

"We are thrilled that there has been such broad community support for this [Bosher's dam fishway] project from the beginning. This was a major undertaking, but we knew that it was one of the most important initiatives necessary to bring back the shad and river herring populations in the James River and in the Chesapeake Bay"

Patricia Jackson, Executive Director of the James River Association, a nonprofit watershed conservation organization

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- opening 1,357 miles of anadromous fish spawning habitat along major tributaries by 2003
- restoring 2010 miles of riparian forest buffers by 2010
- designating 11,000 acres of oyster reef habitat by 2000
- restoring habitats for migratory song birds
- achieving a net gain in wetlands acreage and function

Watershed Restorations:
Anadromous fish spend their adult lives in the ocean but spawn in fresh water tributaries and streams. In Chesapeake Bay, these species include striped bass, blueback herring, alewife, American shad, hickory shad, shortnose sturgeon, and Atlantic sturgeon. Catadromous species, on the other hand, spend their adult lives in the fresh water tributaries and spawn in the ocean. One such species, the American eel, inhabits Chesapeake Bay. Finally, there are semi-anadromous fish, such as white and yellow perch, that principally inhabit tidal tributaries of the Chesapeake Bay but spawn in the fresh water reaches.

Migratory fish are excluded from a major portion of their historic spawning and freshwater nursery habitats in the Chesapeake watershed due to dams and other obstructions. For example, well over 300 river miles are blocked in the Susquehanna River drainage and 227 miles or nearly 13,000 acres of historic spawning areas are blocked along the James.

- Maryland has inventoried 887 barriers, including 445 dams;
- Virginia has inventoried 1,496 barriers; nearly one-quarter may affect upstream passage of migratory fish
- Pennsylvania has identified 138 obstructions along the Susquehanna River
- The District of Columbia has identified five obstructions in Rock Creek

The absence of a vegetated buffer between farmland and tributaries can affect the dissolved oxygen (DO) available to critical life stages, owing to non-point source loads of nutrients, suspended sediments and contaminants. Lower DO is also caused by higher water temperatures resulting from loss of forest buffers along streams. Urban and suburban development adjacent to streams or freshwater tributaries can modify stream character through stormwater inputs, heavy metal releases, suspended solids, higher temperatures, lower DO via point and nonpoint releases of nutrients, and alteration of pH for eggs and larvae.

To enhance spawning and nursery habitat for anadromous fish, it is imperative that we take a watershed approach. Restored forest buffers along historical spawning grounds will not help shad and herring if dams block entry. Conversely, removal of dams would not restore shad populations without stocking programs, fisheries management, and stream restoration to ensure the survival of the larvae. RGI success in the Conestoga River and James River watersheds are good examples of such "simultaneous" watershed approaches .

Conestoga River Watershed - Few Pennsylvanians know that American shad once dominated the Susquehanna River and its tributaries. Man's ability to tame the river by erecting dams soon cut off their ability to reproduce. The first blockages to this migration were hundreds of mill dams erected on most tributaries of the Susquehanna, followed in the early 20th century by the large hydroelectric dams on the Susquehanna mainstem. Laws providing fish passage were largely ignored by dam owners and the technology to ensure fish passage over the large hydroelectric dams was not

The Conestoga River in Pennsylvania one year after the Rock Hill dam was removed. Already there are signs of the river restoring itself to its original size.

at hand until the latter half of the 20th century. RGI funds have been used along some of the lower tributaries to the Susquehanna to ensure free passage over abandoned mill dams.

The Conestoga is an agricultural watershed around Lancaster, PA that flows into the Susquehanna River. Under the Administration's Clean Water Action Plan (CWAP), Pennsylvania has identified the Conestoga as a high priority watershed. RGI-funded projects address living resource restoration on two fronts: from upstream, helping small communities plan for wetlands restoration and protection, and from downstream, removing blockages to anadromous fish.

In Lititz, PA, using RGI and other funds, GIS-based wetland functional evaluation protocols were developed in a pilot project as planning tools for local governments. These protocols have been tested in small watersheds in MD and VA. In each case, local governments and citizens have participated in developing the maps. Once prototypes have been completed and evaluated, this protocol will be available for any local government throughout the Chesapeake Bay watershed that wants to identify the most important wetlands needing restoration or protection.

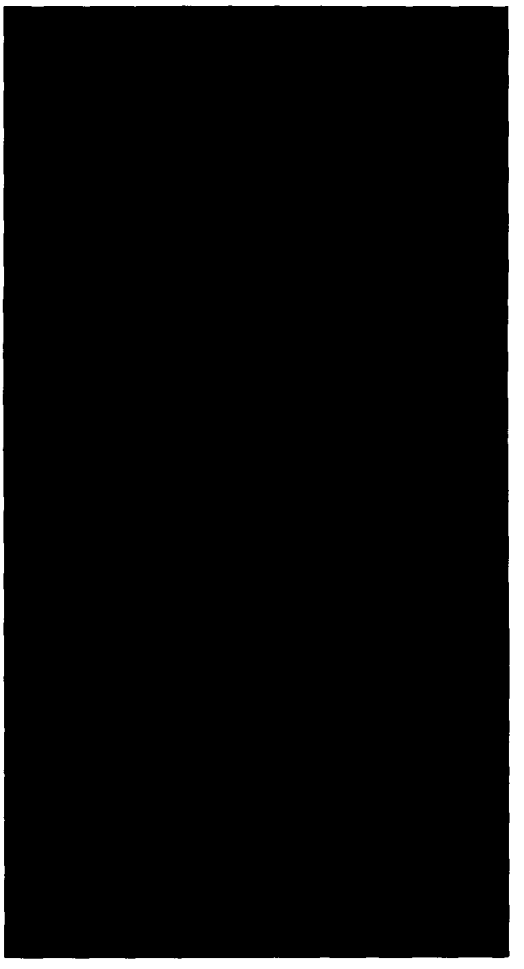
Downstream, at Conowingo Dam, RGI partially funded the operation of a fish lift that transports spawning herring over the dam, and is coordinated with lifts at two upstream dams, Safe Harbor and Holtwood. That allowed more shad and herring access to some 43 miles of habitat on the Susquehanna mainstem in 1998.

Upstream , RGI partially funded the removal of the Rock Hill Dam in 1997 and the American Paper Products Dam in 1998. RGI funding was also used to remove two dams on Lititz Run.

James River Watershed - The James River is the largest Chesapeake tributary in Virginia and historically supported large spring migrations of shad and herring. Originating in West Virginia, it flows 450 miles to Chesapeake Bay across a watershed of 10,495 square miles, approximately one quarter of the State of Virginia. Nearly two million people live within this watershed, with large increases expected. The James receives the largest nutrient loading of any Virginia river; more than two hundred miles of the mainstem have been blocked by dams. This habitat is lost to all spawning anadromous fish; but it could support 1.2 million American shad and 13 million river herring.

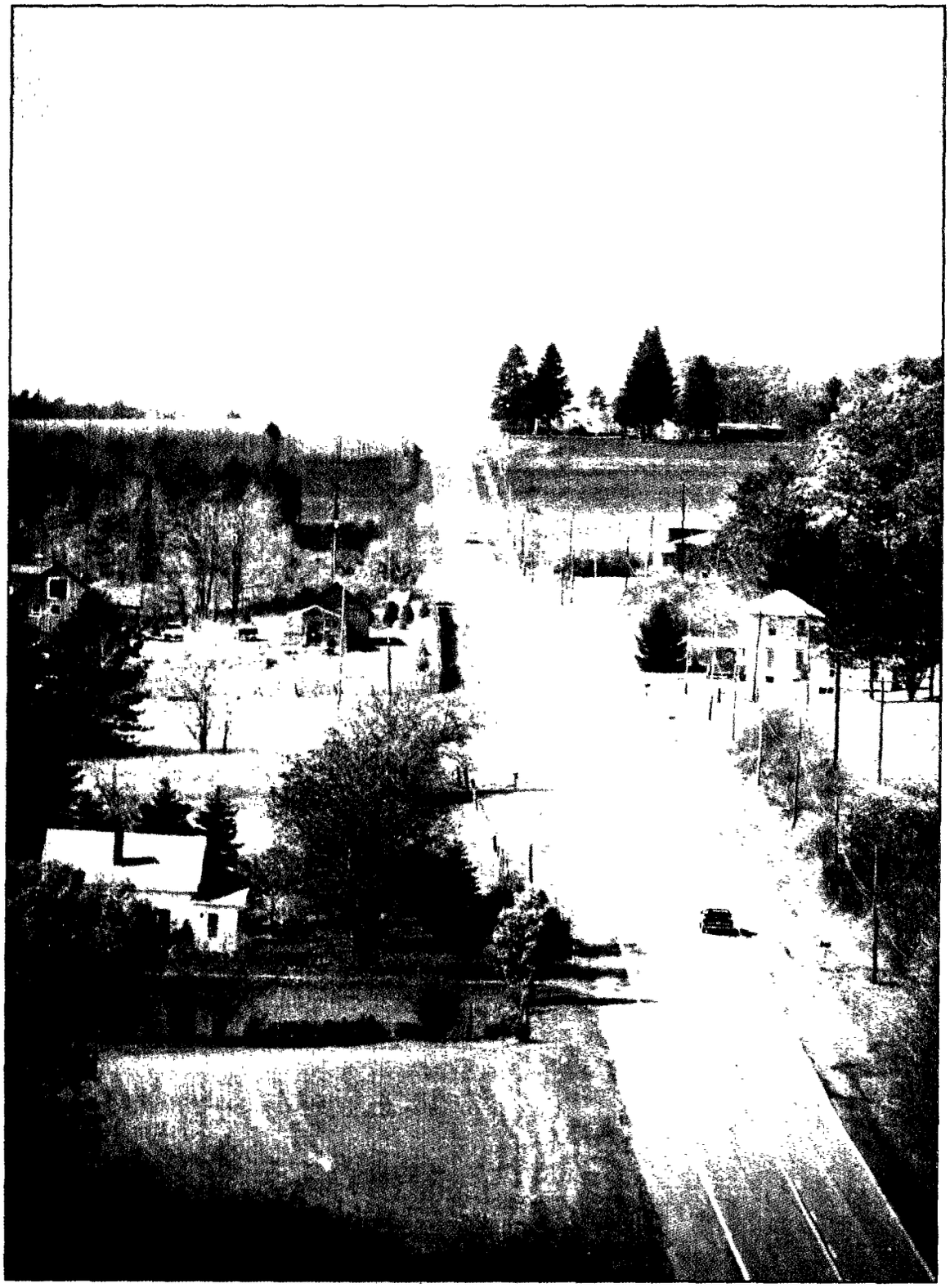
RGI funding allowed a two-pronged approach to watershed restoration. RGI funding helped leverage a partnership of federal, state, local governments, several foundations, corporations, fishing and hunting groups, conservation organizations, and individuals to provide over $1.4 million to cover costs of design and construction to complete a long-awaited fishway at Bosher's Dam in 1998. This fishway is the last of five on the James at Richmond and reopens 137 miles of the James and 168 miles of tributaries between Richmond and Lynchburg to spawning shad and river herring. In 1998 RGI funds supported collection of wild shad eggs for hatcheries in Virginia's American Shad Restoration Project.

Aquatic Reef Habitat Restoration: Thanks to RGI funds, reef restoration progressed farther in 1997 and 1998 than ever before, both in terms of completed projects (four in Virginia, three in Maryland) and in our understanding of the ecological value of reefs. Significant improvements in the oyster resource, especially spatset, were credited to reef restoration. A significant effort was initiated by citizen volunteers in the lower Chesapeake Bay to place disease-tolerant oysters on a reef in the Lynnhaven River.

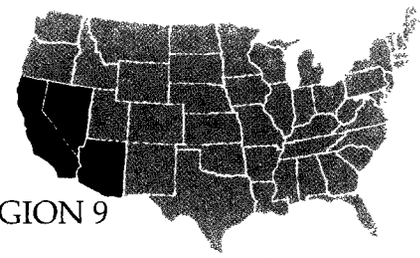


VALLEY COMMUNITIES

Multi-Media Pollution Prevention Techniques for the California Agriculture Industry



Multi-Media Pollution Prevention Techniques for the California Agriculture Industry



- *Pursuing pollution prevention techniques that help all farmers save the precious ecosystem they depend on*

- *Slashing pollutant discharges from key non-point sources*

Location

The Central Valley spans nearly forty percent of the state, stretching from the Oregon border to the northern tip of Los Angeles County and includes all or part of 38 of 58 counties. Although the region does not include the largest metropolitan areas, it is one of the fastest growing regions in the U.S., with a population of over five million. Most significantly, the valley is the world's richest agriculture region, forming the backbone of California's $26 billion in annual agricultural production. The rivers of the Central Valley feed into the San Francisco Bay Delta National Estuary, the largest estuary on the west coast of the Americas, supporting more than 120 species of fish, and a waterfowl migration and wintering area of hemispheric significance.

The Challenge

In the Central Valley, many water bodies do not meet water quality standards due to an influx of pesticides, fertilizers, selenium, and sediment. Moreover, many counties in the Central Valley are not meeting air quality standards for PM-10 and ozone, owing in part to agricultural activities such as application of pesticides, combustion of waste, and dust blowing off-site. These activities also impact wetlands, riparian areas, and other aspects of the ecosystem. Further, there are major human health effects from pesticide applications, especially for farm workers and their families. Children in local communities are at special risk.

The long term goal of the Agriculture Initiative, which includes the BIOS project (Biologically Integrated Orchard Systems) is to promote multi-media pollution prevention in the agriculture sector by developing broad public-private partnerships with key Western commodities producers. The effort draws together local, state and federal agencies and community organizations with industry leadership to demonstrate on-farm use of alternative techniques, with the goal of significant cuts in agrichemical use. Regional Geographic Initiative (RGI) funds were strategically critical in providing access to flexible resources that would address the needs of all the stakeholders.

1998 Activities

Since 1994, BIOS has become a nationally recognized model of technology transfer that is voluntary, flexible, and community-based. Using workshops, field days, and farmer outreach, funded by RGI, EPA and its partners/stakeholders in the BIOS project persuaded over 100 almond and walnut growers in seven counties to use ecologically sensitive farming practices; together they farm more than 10,000 acres. As one farmer put it, "This program sounded like a perfect way to do what we've wanted to do for years, because we wouldn't have to discover everything on our own."

Some 90% of BIOS almond growers dropped organophosphate dormant sprays altogether. Overall, use of organophosphate insecticides by participating farmers has plummeted 71% since the beginning of the BIOS program. The program has impacted almond growers throughout Merced County as well, where use of the most targeted pesticide diazinon has fallen more than 50%: This is extremely significant as diazinon has been found frequently in the region's water bodies at elevations exceding the criteria for the protection of aquatic life.

In fact, BIOS has been so successful that it spawned a number of other sustainable agriculture programs in California including the University of California's Biologically Integrated Farming Systems (BIFS) program. Grape growers participating in the EPA sponsored BIFS Program in Fresno County have successfully cut by 30% their use of the national priority pesticide simazine. Similarly, cotton growers enrolled in the EPA supported Biological Agriculture Systems In Cotton program (BASIC), have continued to document higher beneficial insect populations, lower operating costs and significant reduction in agrichemical use - for example, in 1998 BASIC growers reduced synthetic insecticides by 85% and chemical fertilizer by 58%! In addition, the BASIC program's parent organization, The Sustainable Cotton Project, in cooperation with BASIC and the Organic Fiber Council, continues to secure contracts from major apparel companies (e.g., Patagonia, Levis and Nike) to purchase BASIC organic cotton.

In 1998, the Agriculture Initiative focused on a number of specific activities, now ongoing, all of which either succeed BIOS or implement a BIOS approach.

- Continued support for the University of California's Biologically Integrated Farming Systems program for perennial and annual crops

- BIOS marketing feasibility study for BIOS almonds

- Continued support of the BASIC program's technical assistance and education program for San Joaquin Valley cotton farmers

- Development of a open book pest management system for tomato pest-control advisors and farmers in the Sacramento Valley

"These are the kinds of projects the Clinton Administration wants to see taking place all across the country."

Richard Rominger, Deputy Secretary of Agriculture

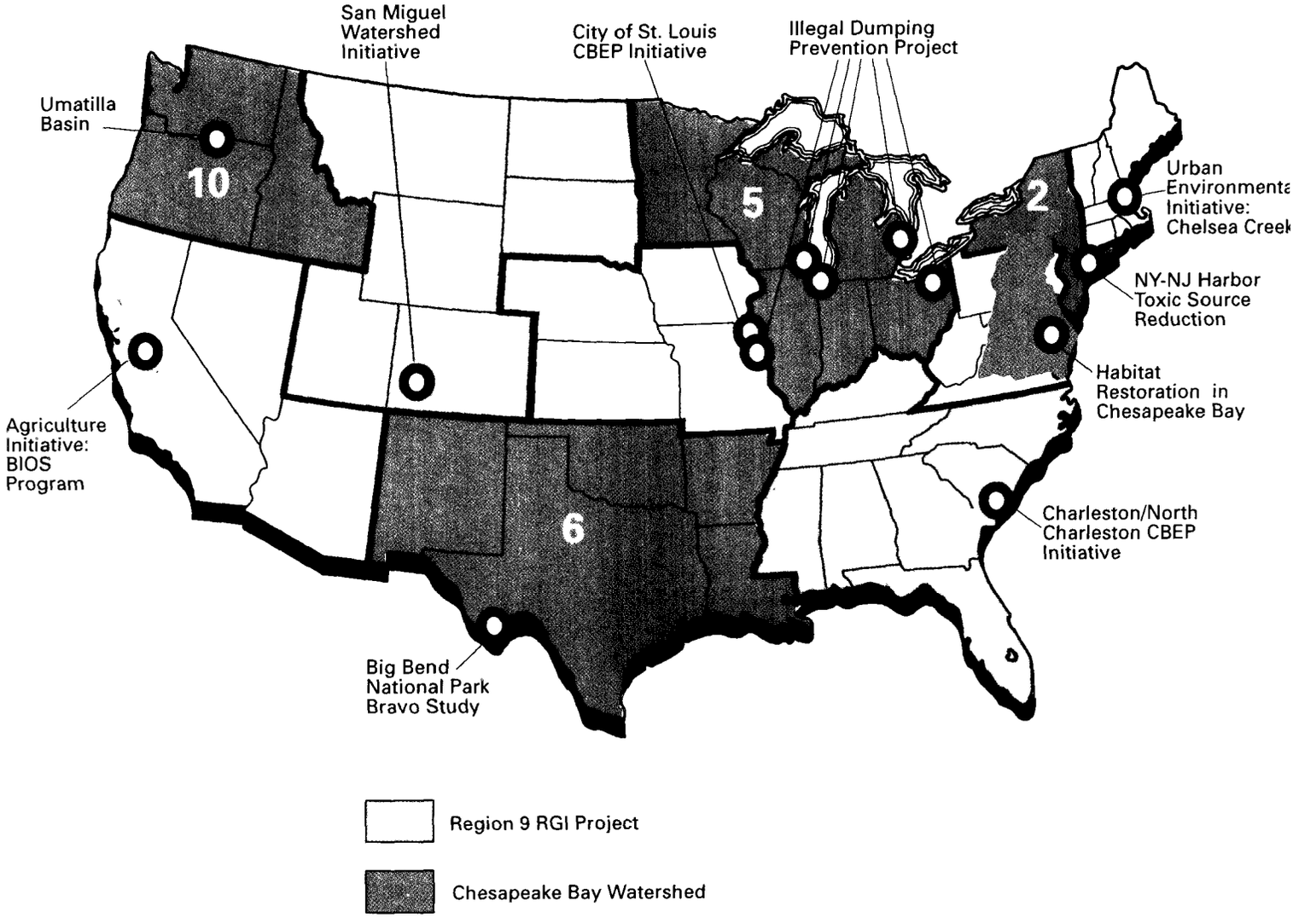
Sherman Boone, a participating almond grower, describes his orchard management during one of the typical BIOS educational field days that have attracted hundreds of growers, agricultural professionals, and policy-makers.

- Commodity partnerships/assessment of alternatives for minor-use crops
- Inter-agency agreement staff to provide technical support to both the EPA and its agriculture partners/stakeholders
- Support to carry out the BIOS project under the leadership of the local Merced County Resource Conservation District
- Providing seed money for corporate partnerships as an adjunct to on-farm agrichemical use reduction demonstration projects

Partners:
There are numerous partners. Key entities include:
Agriculture researchers
Almond Board of California
California State Water Resources Control Board
California Dept. Of Pesticide Regulations
California Alliance for Family Farms
Farmers and growers
Los Angeles Metropolitan Water District
Pest Control Advisors
Resource Conservation Districts
Univ. of California Sustainable Agriculture Research & Education Program;
Cooperative Extension
USDA-NRCS
San Joaquin Air Pollution Control District

Contacts:
RGI Coordinator – [illegible]
gomes.jan[illegible]
Project Officer – [illegible]
feder.paul[illegible]

Regional Geographic Initiatives



APPENDIX

Regional Geographic Initiatives Contributing to Presidential and Agency Initiatives

Environmental Justice

- Region 1 - Two Communities Working Together to Improve the Chelsea Creek
- Region 4 - Improving the Quality of life for the Charleston/North Charleston Community
- Region 5 - Environmental Costs of Illegal Dumping in the Great Lakes Region
- Region 7 - Strategies for Meeting St. Louis's Priority Environmental Issues
- Region 9 - Multi-Media Pollution Prevention Techniques for the California Agriculture Industry

Restoring and Protecting America's Waterways through the President's Clean Water and Watershed Restoration Initiative

- Region 2 - Reducing Toxics in the New York - New Jersey Harbor
- Region 3 - Restoring Chesapeake Bay Habitats
- Region 8 - San Miguel Community Rallies to Save Alpine Ecosystems
- Region 10 - Restoring the Umatilla Basin Ecosystem

Focusing on Health Risks to Children

- Region 1 - Two Communities Working Together to Improve the Chelsea Creek
- Region 4 - Improving the Quality of life for the Charleston/North Charleston Community
- Region 7 - Strategies for Meeting St. Louis's Priority Environmental Issues
- Region 9 - Multi-Media Pollution Prevention Techniques for the California Agriculture Industry

Strengthening Partnerships with Indian Tribes

- Region 10 - Restoring the Umatilla Basin Ecosystem

Reducing Risks Posed by Persistent, Bioaccumluative and Toxic Pollutants

- Region 2 - Reducing Toxics in the New York - New Jersey Harbor

Revitalizing Communities through the Brownfields Initiative

- Region 5 - Environmental Costs of Illegal Dumping in the Great Lakes Region

U.S. / Mexico Border

- Region 6 - CombatingVisibility Problems in Big Bend National Park - The BRAVO Study

Confronting the Global Climate Challenge

- Region 6 - CombatingVisibility Problems in Big Bend National Park - The BRAVO Study
- Region 10 - Restoring the Umatilla Basin Ecosystem

APPENDIX B

Regional Geographic Initiatives Contributing to the Agency's Goals and Objectives

GOAL 1

Clean Air

Objective 1: OAR:

By 2010, improve air quality for Americans living in areas that do not meet the National Ambient Air Quality Standard (NAAQS) for ozone and particulate matter (PM).

Region 10	Restoring the Umatilla Basin Ecosystem

GOAL 2

Clean and Safe Water

Objective 1: OW

By 2005, protect public health so that 95% of the population served by community water systems will receive water that meets drinking water standards, consumption of contaminated fish and shellfish will be reduced, and exposure to microbial and other forms of contamination in waters used for recreation will be reduced.

Region 3	Restoring Chesapeake Bay Habitats
Region 8	San Miguel Community Rallies to Save Alpine Ecosystems
Region 10	Restoring the Umatilla Basin Ecosystem

Objective 2: OW

By 2005, conserve and enhance the ecological health of state, interstate, and tribal waters and aquatic ecosystems--rivers and streams, lakes, wetlands, estuaries, coastal areas, oceans, and groundwaters--so that 75% of waters will support healthy aquatic communities.

Region 2	Reducing Toxics in the New York-New Jersey Harbor
Region 3	Restoring Chesapeake Bay Habitats
Region 8	San Miguel Community Rallies to Save Alpine Ecosystems
Region 10	Restoring the Umatilla Basin Ecosystem

Objective 3: OW

By 2005, pollutant discharges from key point sources and nonpoint source runoff will be cut at least 20% from 1992 levels. Air deposition of key pollutants impacting water bodies will be reduced.

Region 2	Reducing Toxics in the New York-New Jersey Harbor
Region 9	Multi-Media Pollution Prevention Techniques for the California Agriculture Industry
Region 10	Restoring the Umatilla Basin Ecosystem

GOAL 4

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Objective 1: OPPTS

By 2005, public and ecosystem risk from pesticides will be slashed through migration to lower-risk pesticides and pesticide management practices, improving education of the public and at risk workers, and forming pesticide environmental partnerships with user groups.

Region 1	Two Communities Working Together to Improve the Chelsea Creek
Region 9	Multi-Media Pollution Prevention Techniques for the California Agriculture Industry
Region 10	Restoring the Umatilla Basin Ecosystem

Objective 2: OPPTS

By 2005, the number of young children with high levels of lead in their blood will be significantly reduced from the early 1990s.

Region 1	Two Communities Working Together to Improve the Chelsea Creek
Region 4	Improving the Quality of life for the Charleston/North Charleston Community
Region 7	Strategies for Meeting St. Louis's Priority Environmental Issues

Objective 4: OAR
By 2005, reduce lung cancer, respiratory diseases including asthma and other indoor air health problems. Some 11.5 million more Americans will be exposed to healthier air in their homes by mitigation of 700,000 homes with high radon levels, the construction of one million homes with radon-resistant construction techniques, and the reduction of the proportion of households in which children six and under are regularly exposed to smoking from 27% in 1994 to 15%.

Region 4 Improving the Quality of life for the Charleston/North Charleston Community

Objective 5: OPPTS
By 2005, reduce by 25% (from 1992 level) the quantity of toxic pollutants released, disposed of, treated, or burnt for energy recovery. Half of this reduction will be achieved through pollution prevention practices.

Region 4 Improving the Quality of life for the Charleston/North Charleston Community

Objective 6: OSWER
By 2005, boost recycling and slash the quantity and toxicity of waste generated.

Region 5 Environmental Costs of Illegal Dumping in the Great Lakes Region

Region 7 Strategies for Meeting St. Louis's Priority Environmental Issues

Objective 7: AIEO
By 2003, some 60% of Indian Country will be assessed for its environmental condition, and tribes and EPA will be implementing plans to address priority issues.

Region 10 Restoring the Umatilla Basin Ecosystem

GOAL 6

Reduction of Global and Cross-border Environmental Risks

Objective 1: OAR
By 2005, reduce transboundary threats to human health and shared ecosystems in North America, including marine and Arctic environments, consistent with our bilateral and multilateral treaty obligations in these areas, as well as our trust responsibility to tribes.

Region 6 Combating Visibility Problems in Big Bend National Park - the BRAVO Study

GOAL 7

Expansion of Right-to-Know

Objective 1: ALL
By 2005, improve the ability of the American public to participate in the protection of human health and the environment by raising the quality and quantity of general environmental education, outreach and data availability programs, especially in disproportionally impacted and disadvantaged communities.

Objective 2: ALL
By 2005, improve the public's ability to reduce exposure to specific environmental and human health risks by making current, accurate substance-specific information widely accessible.

Objective 3: ALL
By 2005, meet or exceed the Agency's customer service standards in providing sound environmental information to federal, state, local, and tribal partners to enhance their ability to protect human health and the environment.

Region 1 Two Communities Working Together to Improve the Chelsea Creek
Region 2 Reducing Toxics in the New York-New Jersey Harbor
Region 3 Restoring Chesapeake Bay Habitats
Region 4 Improving the Quality of life for the Charleston/North Charleston Community
Region 5 Environmental Costs of Illegal Dumping in the Great Lakes Region
Region 6 Combating Visibility Problems in Big Bend National Park - the BRAVO Study
Region 7 Strategies for Meeting St. Louis's Priority Environmental Issues
Region 8 San Miguel Community Rallies to Save Alpine Ecosystems
Region 9 Multi-Media Pollution Prevention Techniques for the California Agriculture Industry
Region 10 Restoring the Umatilla Basin Ecosystem

APPENDIX C

1998 Regional Geographic Initiative Projects

REGION 1

Urban Environmental Initiative
Since 1996, the Urban Environmental Initiative has used a community-based, multimedia approach to reduce risks to human health (especially sensitive populations such as the elderly and children) and the urban environment. Emphasis is placed on neighborhoods in Boston, Massachusetts, Providence, Rhode Island, and Hartford, Connecticut. Technical assistance and funding include, but are not limited to, lead poisoning, asthma, contaminated urban land and restoring urban watersheds and green space.

Resource Protection Project
The Resource Protection Project identifies natural resources that need protection instead of remediation, and to work to protect them in collaboration with communities and other partners. FY 98 resources supported the identification phase in all six New England states, and funded community-based protection efforts. In New Hampshire, the identification phase has been completed; community-based efforts in high priority areas were financed. In Connecticut and Rhode Island, small grants supported conservation. In Maine, the identification phase was started and work is underway in Massachusetts.

Charles River Initiative
In 1995, EPA set a goal of restoring fishable and swimmable conditions in the Lower Charles River by Earth Day, 2005. The Lower Charles River is heavily used by rowers, windsurfers and sailors, but is badly contaminated by sewer overflows and storm water runoff. The Clean Charles 2005 initiative includes enforcement, technical assistance, pollution prevention, and public education to reduce both direct and indirect discharges to the river. Progress is reflected in major improvements in overall boating and swimming standards in the Charles. Boating standards were met 70% of the time in 1997, but 83% in 1998, and compliance with swimming standards rose from 34% to 52% over the same time period

REGION 2

Delaware Estuary Sub-Watershed Initiative - This effort fosters community involvement in the conservation and restoration of the Cohansey-Maurice sub-watershed of the Delaware Estuary. Small grants are provided for reduction and control of non-point sources of pollution, habitat restoration, and enhancement of public understanding of the Comprehensive Conservation and Management Plan (CCMP).

The Barceloneta-Manati Environmental Protection Project, Puerto Rico - The goal of this project is to enhance local capacity for preventing contamination of groundwater. As project co-leads, EPA and the Puerto Rico Environmental Quality Board (EQB) are helping communities develop and implement the Commonwealth's first local wellhead protection program. The design of this pilot project will be used in other municipios throughout Puerto Rico.

Mayagüez Comprehensive Watershed Plan - Strategies to restore, protect and manage all pollutant sources within the watershed will be developed with an emphasis on biota, sediment quality and quantity, and erosion. Projects will be implemented as they are identified and prioritized by the stakeholders.
South Bronx, New York Initiative - The South Bronx initiative comprises two intervention projects designed to gain more information about the origins of asthma, and examine the feasibility and effectiveness of environmental interventions in slashing asthma morbidity and mortality. Through education, outreach and intervention, asthma morbidity and mortality in the South Bronx can be reduced.

Measurement of Watershed Improvement in New Jersey
This RGI project enabled New Jersey and EPA to conduct a demonstration project in the Passaic and Rancocas Watershed Management Areas to improve watershed management through development of environmental indicators and enhanced monitoring network design. The indicators and monitoring network design will be applicable to other watersheds in NJ.

REGION 3

Green Communities
A workshop will train service providers on how to apply Region III's Green Communities tool kit in a pilot community.

Philadelphia Asthma
This project correlates information on air pollutants and climatic situations, both indoor and outdoor, with peak visits to hospitals/clinics by asthma sufferers from different socio-economic neighborhoods, to determine what environmental conditions cause surges in asthma related emergencies and treatment.

American Heritage Rivers
Acid Mine Drainage-related issues are being addressed in three of the American Heritage Rivers - the New, the Upper Susquehanna, and the Potomac.

Cheat River - This project emphasizes financially and technically effective acid pollution mitigation projects; monitoring the status of water quality and fisheries in the watershed and sharing data; and promoting the recreational use of the river, with economic benefits for all.

Paint Creek - The project focuses on characterizing the watershed and identifying significant sources of coal mine drainage and non-point sources of pollution, developing public awareness of the extent and impacts of pollution, and developing cooperative efforts and effective technologies to mitigate it.

Potomac Headwaters - This project will develop an interstate water quality management plan for the South Branch of the Potomac River, in which Region III, each of the affected states, and the District of Columbia would be partners.

Lenker Brook Stream and Wetland Restoration - Restore a headwater wetland and native vegetative cover along a _ mile riparian corridor that winds through a suburban development. The project will ultimately produce a model of a suburban stream restoration that engages the public in planning, restoring, and monitoring a local waterway for water quality and wildlife benefits.

Virginia's American Shad Restoration Project - Funds will expand an intensive restoration effort to reintroduce American shad along two of Virginia's river tributaries (James and Pamunkey) to Chesapeake Bay. This project utilizes spawning adults (brood fish) from the wild as an egg source to supply and support state and federal fish hatchery operations

Conowingo West Lift Operations
FY 98 will be the third year of a cooperative project of the Susquehanna River Technical Advisory Committee, made up of members from SECO, USFWS, Maryland DNR and the Pennsylvania Fish &Boat Commission. Restoration success will be evaluated via counts of anadromous fish species, including tagged and untagged American shad. Project funding will also cover costs of delivery of shad and herring to tank spawning hatcheries, and stocking of pre-spawn American shad and herring upstream of dams on the Susquehanna and its tributaries.

Pamunkey Tribal Government Shad Restoration -This is an aggressive American shad restoration project the Pamunkey Tribal Government has been operating since 1918. The hatchery is located on the King William County reservation, close to the Pamunkey River.

Somerset Project (MD)- This project will fund streambank sediment stabilization of a still-unnamed tributary of the Potomac River. Restoration includes installation of vegetated erosion matting on steeply sloped streambanks, as well as planting of shade-tolerant grasses and

shrubs for permanent habitat improvement and stabilization. Also, bluebird and bat boxes will be set up along the riparian corridor.

James River Habitat Restoration Project - This project will address critical habitat restoration and protection along 25 miles of the Lower James River by providing assistance to landowners for donation of conservation easements, development of resource management agreements, and implementation of shoreline improvements and replanting activities. Anticipated benefits will be preservation of significant habitat for striped bass and shad, bald eagles, herons, and migratory neotropical birds.

Trout Unlimited Riparian Buffer Restoration - Funding will contribute to the establishment of a private/public partnership to conduct landowner outreach and education and to coordinate the restoration of riparian forest buffers on targeted streams. Trout Unlimited will conduct direct outreach to landowners, and develop restoration plans in cooperation with the Maryland DNR

REGION 4

Cahaba River Basin - Past water quality monitoring and recent studies in the basin have found indications of low dissolved oxygen, toxics, eutrophication, habitat degradation due to sediments and high bacteria levels. An on-site Project Coordinator has been hired to prepare a basin plan; work is proceeding on reintroduction of fish species.

Chattanooga - An ambient air toxics monitoring program. EPA Region 4 is now conducting a monitoring program focusing on the risk imposed on neighborhoods by air toxic emissions from surrounding industrial sources.

Children's Pal - This is a community education and outreach program to reduce children's exposure to environmental health threats in the pilot area of Baldwin County, Georgia. Parents and children will be provided with the information necessary to make decisions to help cut exposures from pesticides, asbestos, lead, PCBs, secondhand smoke and radon.

Chip Mill - Funding was provided to Southern Appalachian Man in the Biosphere (SAMAB)
for the study of the impacts of chip mills in the southeast. Data sets are being upgraded.

Data Acquisition - A grant was issued to the University of Florida to conduct a comprehensive analysis of the ecological connectivity in the states of Region 4. Two objectives of this analysis are to identify primary ecological areas protected by some type of conservation or ecosystem management program and to identify a green infrastructure network that connects them.

Hiwassee - The Southern Appalachian Hiwassee Basin Interagency Initiative is a community- based project covering the Hiwassee and Ocoee River basins shared by the states of Georgia, North Carolina and Tennessee. Streambank restorations have been undertaken along Shular Creek and Turtletown Creek. Brook trout restoration is underway in Short Creek.

Outreach/Education - Two workshops in the Cahaba River Basin will disseminate information to urban and agricultural audiences describing responsibilities of various government agencies and how to use the agencies for environmental work in the area.

Charlotte Harbor - This project, located in Southwest Florida, is part of a larger NEP project. An atmospheric chemistry model, coupled with an existing air mass circulation model for the prediction of nitrogen deposition rates and chemical species, will be funded.

Southern Appalachian Mountain Initiative (SAMI) - Identify and recommend measures to remedy existing, and to prevent future, adverse effects from human induced air pollution. This RGI funding is to help assess acidic deposition to sensitive forests, streams, and aquatic life.

Tri-State - EPA Regions 3, 4, and 5 are working in partnership with Kentucky, West Virginia, and Ohio in a six-county, heavily industrialized valley with major chemical manufacturing, oil refining, metal refining, and coking operations. In the past year, substantial progress was made in gathering data to assess the human health and ecological risks in the Kenova industrial sector.

Tampa Bay - This project addresses atmospheric deposition of toxic materials to Tampa Bay and its watershed, which is a priority for development of a Toxic Material Management Plan. The project is quantifying loadings of toxic materials from atmospheric deposition to Tampa Bay. It is part of the larger Tampa Bay NEP project.

Savannah River Basin Watershed Project - The Savannah River Basin is a 10,000 square-mile basin, including portions of Georgia, South Carolina and North Carolina. A GIS landscape analysis is being conducted to evaluate the impact on water quality of each of the major land uses in the basin. Education and outreach activities for local stakeholders is also underway.

REGION 5

Ritual Mercury Use Exposure Assessment - Reduce the prevalence of practices that lead to exposures to mercury in Chicago's Hispanic community. A grant will assess whether ritual uses of mercury are creating health risks, and help make citizens and health practitioners aware of the dangers of mercury exposure and the need for proper disposal.

Brownfields Re-Use Plan - This is a cohesive community plan and consensus land-use document for the Southeast Michigan Initiative's Jefferson East Industrial Park that demonstrates the community's re-development strategy for the identification, assessment and marketing of Brownfields sites in the community.

Sediment Inventory - A database of contaminated sediments for the Upper Mississippi River system will provide information to agencies, organizations and residents regarding sediment quality, potential for bioaccumulation of contaminants and sediment toxicity.

Assessment of Uncontrolled Lead Releases - The Illinois Department of Public Health is gathering information to determine the health and environmental risks associated with uncontrolled releases of lead within the Mississippi River Gateway/East St. Louis study area, complete a hazard ranking of the site under Superfund and determine the need for mitigation or remedial response.

Grand Calumet River Corridor Local stakeholders within Northwest Indiana's River corridor envision future land uses adjacent to the river and ship canal, building environmental remediation and restoration projects to create a sustainable urban ecosystem.

ZAP Asthma - This project combines the Children's Health Initiative with the Greater Chicago Initiative to build strategic alliances among community organizations in order to improve the health of asthmatic communities. A coalition of stakeholders lead by the Department of Health and Human Services is training unemployed community residents to teach residents intervention strategies, which include a range of indoor-air measures.

Environmental Indicators Profile A profile of environmental indicators will characterize the state of the environment in Southeast Michigan to measure progress in environmental management, support policy decision-making, and communicate trends to the public and interested stakeholders.

REGION 6

Integrated Contingency Planning & Risk Communication Project for the Corpus Christi Petroleum Cluster - Despite local efforts to prepare for and respond to oil spills and other emergencies, the area has had a number of significant, accidental releases of hazardous materials. An electronic integrated contingency plan has been prepared by the LEPC, the US Coast Guard, Region 6, state agencies, and the local industries.

LEPC, Eagles Pass, TX emergency response outpost This project will provide an emergency response vehicle to meet contingency needs of the Kickapoo Indian reservation through an MOU between the Eagle Pass Fire Department and Indians along the Rio Grande River.

Public Drinking Water Contaminant Warning System for Facilities along the Louisiana Industrial Corridor - Public health and the environment are being threatened by contamination of water bodies. Optimization of the Waterworks Warning Network via e-mail or AUTOFAX will link it to the Dept of Environmental Quality's early warning organic chemical detection System and provide further linkages to state police, the Louisiana Office of Emergency Preparedness and the Coast Guard's proposed Vessel Traffic System.

Children's Uses of Galveston Bay Health Risk Characterization and Risk Management - There is a need to characterize and better manage the health risks to children in Galveston Bay, including consumption of seafood and contact recreation, especially along its tributaries. This project will sample seafood from the Bay, calculate potential health risks to children of consuming it and take appropriate action.

GIS Support to Regional Geographic Initiatives - This will allow regions to query, analyze, and display information via GIS tools and data sets for multimedia integration & spatial analysis of program & environmental information.

U.S./Mexico Cooperative Air Modeling in the Paso del Norte Airshed - This project will address critical air quality problems in the Paso del Norte area, the largest population center on the Mexico-U.S. border. A report will be prepared to assist senior U.S. and Mexican policy makers in adopting emissions control strategies for the El Paso-Juarez-Dona Ana airshed.

Rapid , Selective and Cost-Effective Analytical Methods for Toxic Organics in Air - There is a need for better, less-expensive data to form a scientific and statistical base for evaluating or predicting the long-term chronic health effects of exposure to indoor or hazardous-site air. This program will provide cost-effective, rapid screening procedures for carcinogens and other toxic organic compounds in air samples.

REGION 7

Middle Platte River Sub-basin, Nebraska Community-Based Environmental Protection Project Studies, surveys, assessments and reports were compiled and distributed to the middle Platte Community. Partners began the process of developing a comprehensive, long-range environmental plan to address ecological, social and economic issues in protecting the Middle Platte Watershed.

Hillsdale Lake Community Based Environmental Project The project has helped direct USDA Water Quality Improvement Project funds (WQIP) toward priority areas within the watershed, assumed the role of "Lake and Watershed Ombudsman," and brokered innovative partnerships and solutions.

Kansas River Watershed Enhancement Initiative - The project supports the Kaw Valley Heritage Alliance, providing technical assistance to the state in support of the Kansas Governor's Water Quality Initiative, promoting a CBEP approach in regulatory analysis, and encouraging inter-state liaison 'twixt Kansas and Nebraska on trans-boundary issues.

Mni *Sose* Intertribal Water Rights Coalition - Efforts of the tribes to form interagency partnerships to address environmental issues (i.e., water quality and quantity), data collection and verification, remediation consensus building, and the coordination and leveraging of existing resources–all were reinforced. Tribe Profiles explain the environmental, social, and economic perspectives and histories of 28 tribes.

Omaha Community Based *Environmental Project* Public/private organization and residents worked to clean up recurring illegal dumping sites in three diverse areas. They developed relationships with multiple business/organizations & agencies to support a comprehensive dialogue within the community to identify environmental priorities, and began forming local workgroups around issues of asthma and lead.

The Missouri River Project Two projects will gather information for the protection and restoration of the Missouri. 1) The MOInfoLink is a centralized database that will gather "mile-by-mile" information along Region 7's portion of the river. Various types of data will be available for the public to view on the internet. 2) The Manitou Bluffs community in Missouri will be engaged to plan this flood-ravaged area's environmental future

REGION 8

Wetland Restoration in Devil's Lake - Several sites of drained wetland in the Devil's Lake basin will be selected by high resolution satellite imagery and evaluated by GIS technology so optimal water storage capacity can be restored. Water quality sampling sites will be referenced and located. Surface water flow will be documented into sub-basins and a land ownership overlay will be developed.

Animas Watershed Coordinator The Watershed Coordinator is the sole employee of the Animas River Stakeholders Group developed as a collaboration of agencies, corporations, land owners, local citizens, and citizen groups with the mission to improve water quality, aquatic life and habitat through out the watershed.

Upper South Platte Watershed Protection Program - This project funds a watershed data inventory and assessment to identify responsible entities; data will not be limited to water quality, monitoring, land use, pollutant sources, and GIS data layers.

James Creek Watershed Protection - This is a citizens' initiative to encourage stakeholder education and interaction in the management of natural resources within the watershed. Assessment, monitoring and public outreach will continue.

"A River Runs Through Us" This organization's goal is to create opportunities for citizens in the Bear River Basin to learn about local water quality issues, and to collaborate, share resources and network to develop lasting water quality solutions. This project will develop a web site highlighting activities contributing to better water quality in the basin.

Southern Rockies Ecosystem Project - The goal of the project is an ecosystem assessment for conservation planning. Funding in 1998 will be used to increase the report's utility for local and regional planning, by undertaking further regional and watershed level assessments and conservation prioritization.

Economic Analysis of the Environmental Alternative for Missouri River Management Funds will procure the services of a economist trained in natural resource valuation to analyze economic benefits of upgrading river management. This analysis will help EPA fulfill its NEPA responsibilities in evaluating and rating the Master Manual draft and final EIS, and provide interested stakeholders and the public with objective information on the value of Missouri River natural resources.

ScSeed Saguache County, CO - Sustainable Environment & Economic Development/ Initiative - This collaborative citizen-led process will result in a strategic plan for compatible and sustainable development in Saguache County.

North Dakota Consensus Council's Devils Lake Basin Community Conversation - The NDCC will design, organize, facilitate, and document a two-year Community Conversation Project for the Devil's Lake Basin and adjacent regions affected by the proposed lake outlet. Community Conversation will provide a collaborative mechanism to help citizens and institutions build agreement on and implement a community agenda. Over two years Community Conservation will convene meetings region-wide, develop regional indicators and benchmarks, build a regional network of trained facilitators, and coordinate sustained facilitation.

SD Missouri River Corridor Program - Funding is requested to secure a full-time program coordinator to continue with program development and planning assistance. Tasks will include creation of GIS database and securing additional funds for day-to-day management, administration and program coordination.

Comprehensive design of a water quality monitoring network for the Big Thompson Watershed - The design will satisfy the needs of stakeholders in the Big Thompson Watershed Forum by focusing on the generation of statistically valid information, including easy-to-understand reports and maps.

Native Waters Project - Native Waters Student Activity Booklet This is an American Indian water resources education project for people developing, managing, and protecting tribal waters. It will provide tribe members and citizens with up-to-date contemporary water resources management information through educational materials, training, and support services. Funds will support a Native Waters Activity Booklet for students.

Inventory of Biological Resources Of the Upper Yellowstone This is Phase III–the last one-- of a project previously funded by RGI. It will support field work to verify information gathered thus far and to provide EPA with a final report. It takes information scattered among many sources and assembles a single data system for stakeholders.

Benthic Fish Analysis along the Missouri River - This is a four-year comprehensive evaluation of benthic fish communities and habitat conditions of all unimpounded stretches of the Missouri River. In its third year, the project is funded primarily by the Army Corps for North Dakota's portion of the overall budget for data analysis and hypothesis testing.

Grantsville-Millford UT, CBEP Environmental Exposure & Health Surveys - These two communities have contacted UDEQ and EPA to help them address multiple exposures to several environmental impacts. This funding request is for studies at Milford as a control/pilot community and then applying lessons learned to the Grantsville area.

Biological Survey for the Topeka Shiner - The Topeka shiner has been proposed for listing as endangered under the ESA. The fish is believed to inhabit tributaries of Big Sioux, James, and Vermillion Rivers in South Dakota. Surveying the entire SD range of this fish will be more cost effective than a project-by-project survey.

Surface Water Protection Demonstration Project for the Havre, MT Public Water System - Information from groundwater demonstration sites project is assisting development of a multimedia operator training module. This funding will complete the draft guidance manual and make the module available on CDROM.

Septic Tank Density Analysis for two proposed subdivisions in Cedar Valley, Iron CO, UT - This funding will support the County Planning office of Iron County in dealing with explosive population growth in the Cedar Valley. A scientific study is necessary to determine the appropriate septic tank density in proposed subdivisions to ensure longterm protection of groundwater and drinking water resources.

Virginia Canyon Project - The project demonstrates BMP for scope stabilization and reducing erosion of mine waste containing heavy metals, and disseminates this information to the Clear Creek Community.

Denver Urban Resources Partnership - DURP is now embarking on a two-year transition to sustainability, focusing on collaboration and investment in a smaller geographic area. RGI funds would be used to support the work of a community builder.

REGION 9

Tomato Reference Field Monitoring - Having demonstrated a nearly 50% pesticide reduction with cooperating farmers, this grant to the Bio-Integral Resource Center will add a critical education component for pest control advisors (PCAs) in California's Yolo and Solano Counties.

Biological Agriculture Systems in Cotton - Carried out by the Sustainable Cotton Project, this effort will maintain base support for demonstration of dramatic cuts in pesticide use on cotton farms in Madera County, CA.

Organic Fiber Campaign - As an adjunct to on-farm demonstrations of lower pesticide use, this effort by Mothers and Others for a Livable Planet, will provide seed money for building corporate partnerships.

BIOS Marketing Initiative Having built an enormous reputation as a model for agricultural pollution prevention, the Community Alliance for Family Farmers will use this seed money to test the feasibility of an eco-label to support farmers in California's Central Valley.

FQPA Commodity Partnerships The Commodity Boards of Fresno and Sonora Counties will use this grant to build commodity partnerships and assess economic alternatives for "minor-use" crops.

USDA Interagency Agreement The USDA Natural Resources Conservation Service will provide technical service support directly to the Region 8 Agriculture Initiative, and maintain interagency coordination between EPA and USDA.

Biologically Integrated Orchard Systems (BIOS) Transition to Community Leadership - This grant to the California Association of Resource Conservation Districts will maintain support for a community-based BIOS effort under the leadership of the local Merced County Resource Conservation District.

Stewardship of Rangelands, Vernal Pools, and Farmlands To advance our ongoing partnership with the California Association of Resource Conservation Districts, this project will add the Alameda County RCD. Building on our Vernal Pool Initiative, it will promote private conservation and sustainable ranching through technical workshops, incentive programs, mitigation banks, and the BIFS (Biologically Integrated Farming System)/BIOS (Biologically Integrated Orchard System) projects.

Promoting Collaborative Rangeland Management and Habitat Conservation - This project will improve rangeland management by sponsoring presentations to ranchers by a noted expert who will also assist the California Cattlemen's Association in preparing a report highlighting successful transfer and collaborative efforts in the San Francisco Bay/Delta region.

A Partnership with California Land Trusts to Protect Water Quality and Ecosystems - The Trust for Public Land will provide critical support to enhance the capability of local land trusts, resulting in a network of local trusts leveraging other resources to protect critical Bay/Delta (Central Valley) wetland habitats

San Francisco Bay Regional Wetlands Management Plan The San Francisco Estuary Project will assist the development of the Regional Wetlands Management Plan, intended to help implement the Wetlands' Goals Project

Financial Incentives Roundtable and Environmental Management Systems (EMS) - Cosponsored by the President's Council on Sustainable Development, this Roundtable explored the financial and environmental implications of using environmental management systems (EMSs). The event was attended by more than 100 invited leaders in industry, banking, the insurance sector, public interest groups and agencies. A survey report analyzing company experiences was produced; a final report with recommendations is forthcoming.

Industrial Laundry EMS Project This project will implement an environmental management system at Best Western Laundry in Long Beach, California, including methods to reduce point- source loading, and will serve as a model for developing effluent guidelines for the industrial laundry industry.

EMS Template Development and Testing - This project will develop and test an environmental management system for the metal finishing sector, including identification of environmental impacts, collection of baseline data, and documentation of environmental performance. A compliance/pollution prevention tool was developed that received favorable reviews from industry and environmental groups. Upon completion, this EMS template should serve as a model for other small industry sectors.

Metal Finishing Projects Various efforts will be undertaken to support active transfer of pollution prevention technologies developed for the metal finishing industry, including distribution of fact sheets, development of a tech-transfer video highlighting case studies, a worker training video, and training workshops.

Prevention of Lead Poisoning The African-American Unity Center will provide lead poisoning prevention and lead hazard awareness outreach to the African American and Hispanic populations within South-Central Los Angeles, CA.

Lead Outreach - Consumer Action will provide educational outreach on healthy, lead-safe children and lead-safe housing to San Francisco's low-income communities of color.

Lead Community Awareness San Diego's Environmental Health Coalition will use funds to increase the community awareness of the multiple sources of lead exposure, and ways to reduce them in the predominant Latino communities of Barrio Logan, Logan Heights, Sherman Heights, Memorial and Southcrest.

REGION 10

Puget Sound/Georgia Basin, WA and British Columbia - The waters of the Puget Sound/ Georgia Basin are shared by Canada and the United States. We are studying our mutual concerns including the introduction of exotic or nonnative species, loss of near-shore habitats, declining populations of marine fish and wildlife, the need for marine protected areas, and toxic chemical inputs.

Coeur d'Alene Basin, ID - The basin's water quality has been impacted from many years of mining in the region. The area is investing in a community-based, ecosystem management approach to environmental issues, as well as educating youth on bald eagles and hardrock mining.

Columbia Plateau Agricultural Initiative, WA - Community leaders, farmers, the public and governmental entities are developing ways to slash agricultural impacts on air quality, groundwater and surface water quality, while protecting drinking water sources, cutting pesticides and restoring habitats.

Community-based Grants Program, ID & AK - Funding under this initiative is specifically targeted to small communities, incorporated nonprofit organizations, or stakeholder groups to help them address environmental problems. In FY 98 the initiative funded 12 projects in Alaska and Idaho, and tribal lands within these state boundaries.

Aquatic Strategy Data Support A multi agency effort is working to lower water temperatures so that salmon can survive in the Columbia and Snake River system. Stream and river temperature data are being acquired for further analysis.

Columbia River Temperature Workshop - A Dec 3-4-98 workshop was held to present EPA's Columbia River mainstem water temperature model and share water data issues. One hundred and fifty participants from federal, state, and tribal governments, as well as industry, private citizens and environmental groups, attended.