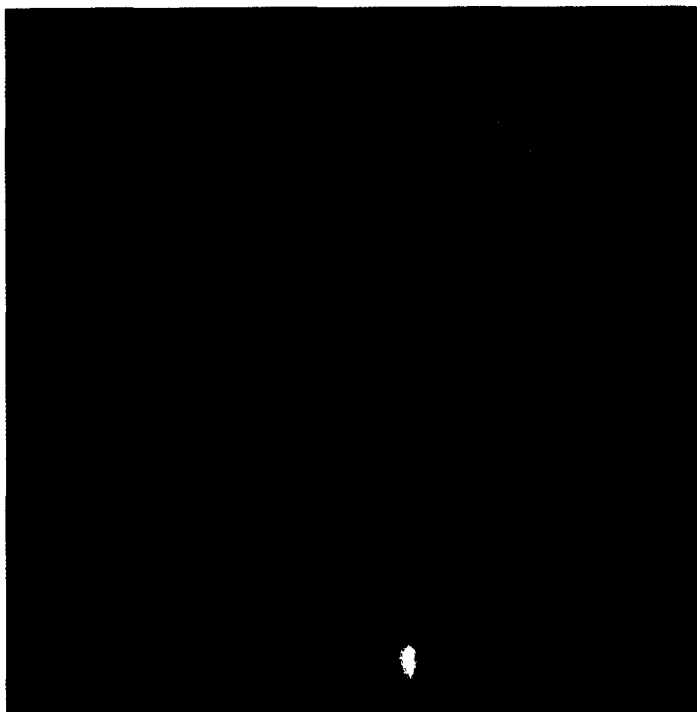


REMEMBER THE PAST



PROTECT THE FUTURE



U.S. Environmental Protection Agency
Region 6/Central-South States
EPA-906-R-00-001

EPA was born 30 years ago at a time when rivers caught fire and cities were hidden under dense clouds of smoke. We've made remarkable progress since then. But we can't rest on our success.

Our mission to protect the environment, and to protect public health, is a mission without end. New challenges loom over the horizon as surely as the new day.

We must continue our work to ensure that with each new dawn, the sun shines through clear skies and upon clean waters — and all our families enjoy the blessings of good health.

A handwritten signature in black ink, reading "Carol M. Browner". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

- Carol M. Browner, EPA Administrator

GREGG A. COOKE
REGIONAL ADMINISTRATOR
U.S. EPA REGION 6

In December 2000, the U.S. Environmental Protection Agency will celebrate its 30th anniversary. This is a time to look back with pride on our accomplishments — together, as a nation — in preserving and restoring our environment and protecting public health. It is also time to give thoughtful consideration to the work that remains before us in reaching our goals for a clean, healthy, sustainable environment that thrives within a vigorous economy.

In Arkansas, Louisiana, New Mexico, Oklahoma, and Texas — EPA's Central-South region — we have enjoyed the benefits of 30 years of protection and leadership in environmental challenges. We have proven that economic prosperity and environmental health protection go hand in hand.

Our region is unique and essential to our nation's economic prosperity. Nowhere else can you find such a diverse and productive industry makeup as we have along the lower Mississippi River and the Gulf of Mexico coastline.

We have come a long way in solving problems facing us. Tremendous challenges lie before us.

More toxic waste is produced from our factories and businesses in the Central-South region than anywhere in the country. Louisiana and Texas have the highest reported toxic releases in the country. Air pollution and ozone smog in some of our cities are among the highest in the nation. Approximately 5,000 accidental releases of oil and hazardous materials are reported every year, more than in any other area in the country.

The 2,000-mile border Texas and New Mexico share with Mexico is seeing the largest boom in population and industrialization in the country; yet living standards along the border are the lowest in the nation.

To meet these growing challenges, the Central-South region has been a leader in building consensus and collaboration. We are developing air quality with our local and state leaders to improve air quality for our children. Using Alternative Dispute Resolution, we have solved protracted problems quicker and cheaper without resorting to the courts. Formal alliances, like brownfields agreements with our Tribes, states and cities are transforming contaminated land into productive use without government mandates.

To have a healthy environment, we must continue to forge effective programs with states, Tribes, businesses, communities and citizens. Together, we can move beyond basic compliance with environmental laws — using innovation, flexibility and incentives — to foster a sustainable environment for today's children and tomorrow's leaders.

REGION VI LIBRARY
U. S. ENVIRONMENTAL PROTECTION
AGENCY
1445 ROSS AVENUE
DALLAS, TEXAS 75202



CLEAN AIR

The Breath of Life — For a Healthy America

Before there was an Environmental Protection Agency, before there was an Earth Day, before Rachel Carson wrote "Silent Spring," there was an air pollution tragedy in Donora, Pennsylvania.

On the evening of October 26, 1948, a suffocating cloud of industrial gases and dust from a local zinc smelter descended upon this town, killing 20 residents and sending 7,000 people — half the population — to the hospital with difficulty breathing.

The Donora tragedy shocked the nation and marked a turning point in our complacency about industrial pollution. Americans demanded breathable air, and industry was forced to clean up. In 1963, Congress passed the first Clean Air Act and then strengthened it in 1970. States were required to meet clean air standards.

Since 1970, we have removed 98 percent of lead from the air, 75 percent of soot, 35 percent of sulfur dioxide, 32 percent of carbon monoxide, and 38 percent of volatile organics which contribute to forming the smog soup now called ozone. At the same time, however, nitrogen oxide (another ingredient that can form smog) rose 11 percent. Overall, between 1970 and 1997, air pollution has dropped by 10 million tons.

We now understand how air pollution blows across state and international boundaries. We

understand how haze that obstructs the vistas in Big Bend National Park, Texas is a concern for Mexico and the United States. Last year, we saw how smoke from fires in Mexico can travel into Texas, Louisiana, and Oklahoma.

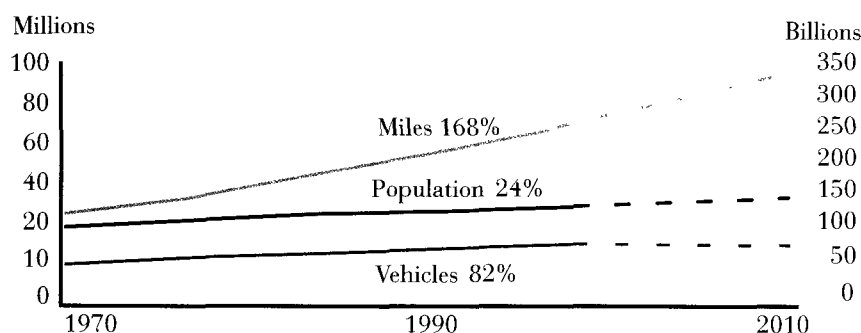
Economic, Health and Environmental Benefits

During the past 30 years, air quality has improved significantly because of environmental compliance, industry controls, cleaner gasoline, and more efficient cars despite a 127-percent increase in the number of motor vehicle miles driven and a 31-percent population increase.

Ground-level ozone — today's smog — is still with us, and so are its associated health problems. Studies estimate that 10-20 percent of all respiratory-related hospital visits can be attributed to ozone pollution. Cases of death among children from asthma have reached alarming levels.

The economic value of the public health and environmental benefits that Americans enjoy from the 1990 amendments to the Clean Air Act exceed their costs by a four-to-one margin. An estimated \$110 billion will be saved avoiding illness and premature deaths that would have occurred without the new air standards. Houston alone estimates that achieving cleaner air will save the city \$3 billion annually.

Number of Vehicles and Vehicle Miles Traveled Increases Dramatically



Source: EPA OAQPS, U.S. Census

During the past 30 years, air quality has improved significantly while the GDP grew by 140 percent, the population grew by 24 percent, and the number of motor vehicle miles driven increased by 168 percent.

An EPA study shows that by 2010, the 1990 amendments will save 23,000 people from dying prematurely, and will avert more than 1.7 million asthma attacks.

In addition, the Clean Air Act amendments will prevent 67,000 incidents of chronic and acute bronchitis, 91,000 occurrences of shortness of breath, 4.1 million lost work days, and 31 million days that Americans would have had to restrict activity due to air pollution and related illnesses. Also, averted would be 22,000 respiratory-related and 42,000 cardiovascular-related hospital admissions, and 4,800 emergency room visits for asthma.

In December 1999, EPA announced the strongest standards ever for controlling harmful tailpipe emissions from vehicles. For the first

time, sport utility vehicles, minivans and pickup trucks will meet the same new low tailpipe emission standards required for passenger cars.

New standards mean that over the next few decades, almost 50 million tons of smog-causing air pollution will be removed from the air, which could result in 260,000 fewer asthma attacks in children, 4,300 premature deaths prevented, and 173,000 respiratory-related illnesses avoided. The standards will save \$425 billion in health-related costs and prevent 683,000 lost workdays and more than 5 million days when people would have restricted their activity because of bad air.

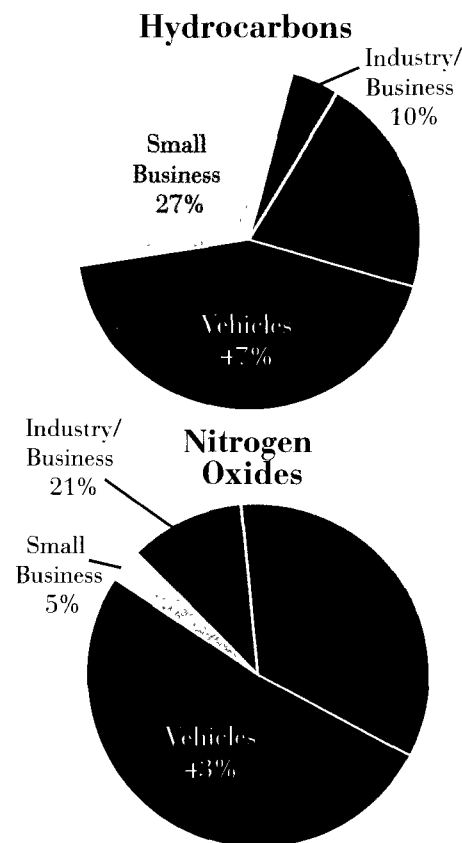
Smog in the Central-South

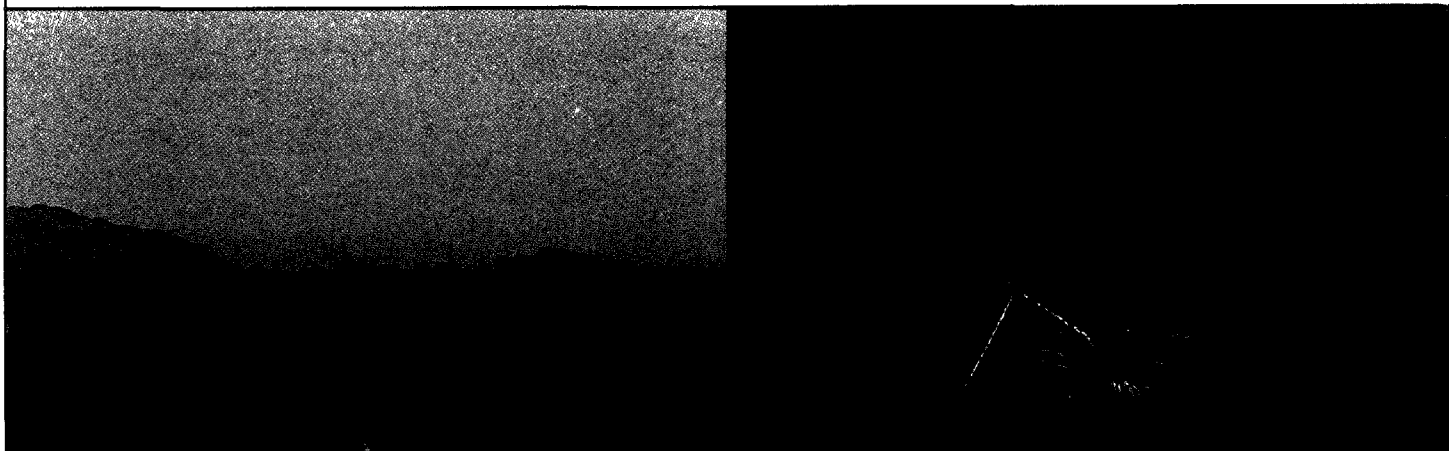
In Texas — the nation's second-fastest-growing state — more than 9.6 million people

live in areas that do not meet health-based air quality standards for ozone. Central-South communities in the top 10 fastest-growing metropolitan areas from 1990-1998 are Laredo, McAllen, and Austin, Texas, and Fayetteville, Arkansas — all exceeding a growth rate of 29 percent — more people, more cars, more ozone smog.

Louisiana, New Mexico, and Texas have started auto inspection and maintenance

Dallas/Fort Worth Sources of Air Emissions (Tons Per Day)





Working together -- Mexico, the state of Texas, and the EPA Central South region are studying air pollution along the international border. Pictured above is Big Bend National Park with and without an pollution haze.

programs to identify high-polluting vehicles. Many cities (Austin, Oklahoma City, San Antonio, and Tulsa) are close to exceeding air quality standards mainly because of growing vehicle traffic. The Dallas-Fort Worth area has significant air quality problems due to vehicle traffic.

EPA's Central-South region has shown leadership in building alliances with local, state and Tribal governments by helping communities understand the

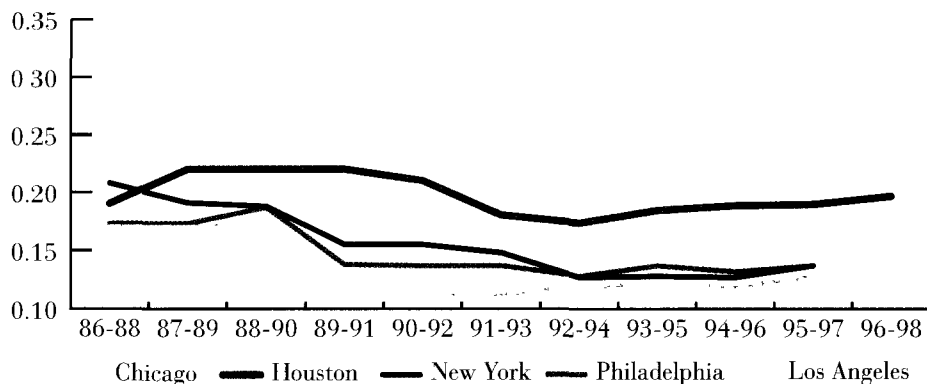
impacts of air pollution. More air monitors are being added to identify air pollution sources, and real-time mapping of air quality data is available on the Internet and on local weather broadcasts for communities like El Paso, Dallas-Fort Worth, and Houston.

We are working with the U.S. Department of Transportation and states to identify opportunities for light-rail systems, transportation

corridors, alternative fuel buses and high-occupancy vehicle lanes. In 1999, EPA hosted transportation summits challenging community planners to consider the relationship between transportation projects and air quality.

The region is helping cities like Austin, San Antonio, Corpus Christi, and Tulsa develop a proactive approach to address air quality so that they can meet air quality standards.

1 hour Ozone Trends for Houston and Severe and Extreme Nonattainment Areas



Whether the Clean Air Act would have saved 20 lives in Donora in 1948, or will improve life for 100 million Americans living in non-attainment areas, it is clear that protecting air quality is imperative. Protecting the environment has paid big dividends to America, and none bigger than in public health.



CLEAN WATER

Safe Drinking Water for Everyone

Water quality has improved tremendously since the early seventies when portions of the Houston Ship Channel were among EPA's 10 most polluted bodies of water. Between 1973 and 1980, EPA upgraded municipal waste treatment facilities that discharge into the Channel, and all industrial facilities were ordered to upgrade wastewater treatment. By 1980, the restoration was described by EPA as "a most notable improvement, a truly remarkable feat."

Throughout our 30-year history, we have developed alliances with state and local partners to ensure the nation's waters will be restored and protected. Through EPA grants, billions of dollars have been spent upgrading treatment plants and building drinking water facilities.

Despite progress, much work remains. Forty percent of our waters are still not safe for fishing and swimming. About half of the country's 2,000 major watersheds, including the Mississippi River watershed, have water quality problems.

Two areas of interest for water protection in the Central-South region are the Gulf Coast and the lower Mississippi River.

Responding to concern over harmful chemicals in drinking water, such as low-level organics in the lower Mississippi River, EPA set standards under the 1974 Safe Drinking Water Act. Today,

Americans enjoy one of the world's safest drinking water supplies. Three-fourths of Americans served by public water systems get drinking water from lakes and rivers; the balance from ground water. In the Central-South region, most large systems, serving more than 20 million people, use surface water as a drinking water source.

Drinking water standards are in place for more than 80 contaminants. In 1998, President Clinton called on all public water suppliers to tell customers where their water comes from and what it contains. In 1998, 94 percent of America's public drinking water systems reported no violations of the health-based drinking water standards. More than 85 percent of all Americans now have safe, healthy drinking water. President Clinton has challenged EPA to raise this to 100 percent.

The Central-South region has the largest number of underground injection wells to dispose of wastes in the nation. Due to the region's extensive oil and gas production, almost 80,000 injection wells dispose of billions of gallons of oilfield waste into deep underground formations each year. This prevents waste from contaminating fresh ground and surface water as it did in the early 1900's. Along the Gulf Coast, there are 86 injection wells that dispose of billions of gallons of hazardous waste each year.

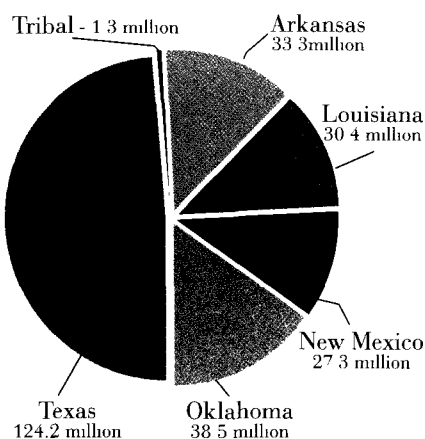
from the petrochemical industry. The underground injection control program assures the safe disposal of waste into deep underground formations where it is isolated far below fresh ground water.

The Public's Right to Know

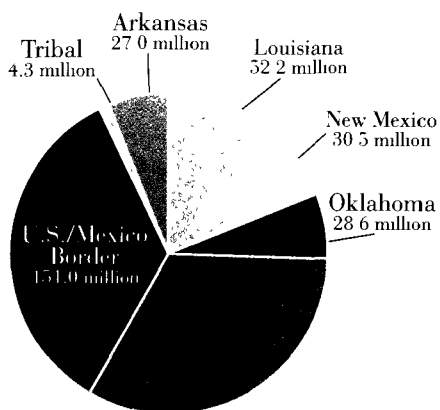
A new consumer confidence report rule requires water companies to tell customers about the source, quality, and possible contaminants in drinking water.

EPA and the states regulate more than 9,500 water systems serving over 33 million consumers in the Central-South region. In 1998, only 6 percent of America's public drinking water systems reported violations of a health-based drinking water standard.

EPA Funding Drinking Water 1997 - 1999



EPA Funding Water Quality 1999



EPA enforcement actions are key to maintaining safe drinking water. From 1994-1999, 1,157 actions were taken against public water systems in the region ranging from informal phone calls to full-blown criminal action.

National Goal of Fishable, Swimmable Water

Armed with the 1972 Clean Water Act, EPA leads the fight to reduce industrial, municipal, and agricultural discharges into public waters. EPA annually helps prevent more than one billion pounds of toxic pollutants from entering our waterways.

In the past, massive fish kills were common and threatened the fishing industry in estuaries along the Gulf of Mexico. Through waste treatment improvements, water quality has improved. Fish are now plentiful in rivers once too contaminated to

support aquatic life. People now swim and fish in many lakes, such as Lake Pontchartrain. Louisiana, where before it was unthinkable.

Over 1,000 oil spills have been reported each year since 1987 in the Central-South region. The region has developed an industry-supported Expedited Settlement Agreement to prevent oil spills. Ocean dumping of sewage sludge, industrial waste, plastic debris and medical waste has been banned, and more than 30,000 major industrial dischargers pretreat waste before it enters sewers. These efforts have removed 75 percent of the toxic discharges from our sewers.

Water Quality

In partnership with its states,



Wastewater treatment is important in protecting our drinking water sources.

the region identified watersheds not meeting their designated uses of fishing, swimming or drinking water. The region focuses on improved monitoring and on developing Total Maximum Daily Loads (TMDLs), which set pollution reduction goals for water bodies and provide a roadmap for restoring water quality.

In 1998, the region's states refined priority watersheds by developing Unified Watershed Assessments. The assessments promote joint water quality priority setting by state, Tribal, federal and local agencies. The resulting assessments have provided a framework that focuses resources on the most pressing problems.

States and Tribes identify designated uses for water

bodies, and water quality standards protect those uses. TMDLs and permits for point sources of pollution are based on water quality standards. When permits are violated, EPA and its state partners take enforcement actions.

EPA's Central-South region set a national precedent with action against the Sewerage and Water Board of New Orleans for pollution of Lake Pontchartrain. This was one of the first actions nationwide to incorporate preventive maintenance and spill response. On behalf of nearby citizens, EPA fined the city \$1.5 million and committed New Orleans to correct deficiencies that plagued the collection and treatment system for years. This action complemented ongoing

watershed protection and Lake Pontchartrain is showing signs of improvement.

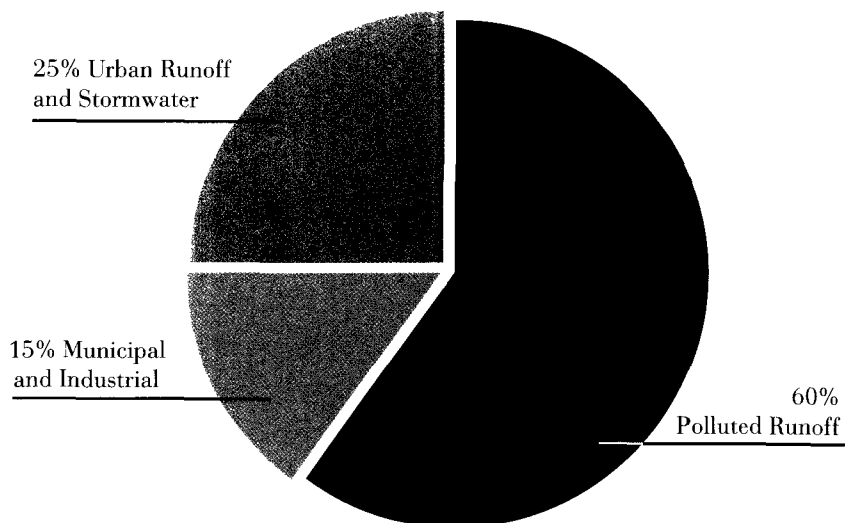
Challenges

Polluted runoff is the biggest source of water pollution today. Agricultural sources of polluted runoff affect 70 percent of our rivers and streams and 49 percent of our lakes. Practices such as fertilizing fields with manure have contributed to this problem because farmland has become over-saturated with nutrients. Excess nitrogen and phosphorus flow as pollution into rivers, streams, and ground water. Also, runoff from commercial fertilizer, herbicides and pesticides causes water pollution.

Addressing polluted runoff is a major goal of the 1998 Clean Water Action Plan. EPA's Central-South region began hosting forums in 1998 with the Department of Agriculture, state agencies, associations, and farmers to build programs to protect and improve water quality.

The Clean Water Action Plan, issued to commemorate the 25th anniversary of the Clean Water Act, is about each of us working to protect the waters we love and share. Its goal is to protect waters by organizing citizens, business, and government to address local concerns.

Sources of Water Quality Impairment, on Average





CLEAN LAND

From Superfund to Super Parks

One hundred years ago, President Theodore Roosevelt called on us to preserve the nation's great natural landscapes for future generations. Between 1901 and 1909, he set aside nearly 230 million acres for parks, sanctuaries, and reserves. Preserving our landscapes is not just about protecting the places we visit on vacation, but about enhancing our communities where we live, work, and raise our families.

Throughout the region, acres of abandoned land and decrepit buildings have replaced vital industries. Most toxic waste sites requiring Superfund cleanup are where people live and work — the auto repair shop that used toxic solvents to clean engines; the dry cleaner that used volatile chemicals in laundering; the factory that manufactured metal goods; or the garbage dump that accepted industrial waste.

The Texas and Louisiana coasts are home to 214 chemical facilities and 32 refineries. The major regulated facilities reported about 550,000 tons of annual air emissions in this Gulf Coast region. In 1970, approximately 100 million tons of hazardous wastes were generated from chemical and petroleum industries in Texas, Louisiana, Oklahoma, Arkansas, and New Mexico.

Refineries and petrochemical facilities have improved waste control and use new technologies to reduce or eliminate hazardous wastes.

EPA and the states use permits, inspections, and environmental monitoring to ensure industries are operating properly. Communities and citizens play a vital role in our efforts to protect the environment and ensure quality of life.

In 1980, Congress passed the Superfund law to clean up the nation's worst hazardous waste sites. Hazardous materials are now tracked from production to disposal, and citizens must be kept informed about potential dangers.

During the last 18 years, EPA's Superfund accomplishments were substantial. More than 675 of the nation's most serious uncontrolled or abandoned hazardous waste sites have been cleaned up and 85 more can be completed by the end of 2000. In fact, since January 1993, construction has been completed on more than three times as many sites as in the previous 13 years combined. The Superfund program involves state partners, local governments, and the public.

Cleanup is completed or underway at the region's 94 Superfund sites. Approximately 5 long-term and 20 short-term cleanups are completed each year. Since 1982, the region has cleaned up 43 sites, and responsible parties have paid 70 percent of the cleanup costs, saving taxpayers millions of dollars. Since

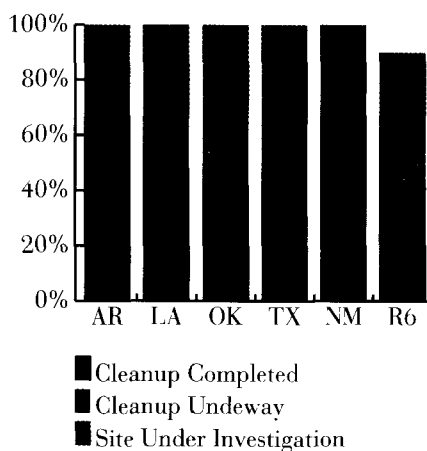
October 1995, the region used innovative approaches to modify 18 cleanup decisions to accelerate construction and save more than \$100 million. From 1996 to 1999, the average amount billed to cooperating private parties for clean-up oversight was reduced 85 percent.

Recycling Land and Buildings

Environmental cleanups can bring life and economic vitality back to communities. More than 13,000 restored acres are now in reuse, creating 11,000 jobs and representing more than \$225 million in annual income.

More than 32,000 low-level hazardous waste sites have been put on the fast-track for

Superfund Sites: Cleaned Up or Underway As of December 1999



redevelopment by eliminating unnecessary red tape and the stigma of contamination for potential developers. It is estimated that about 450,000 such sites exist

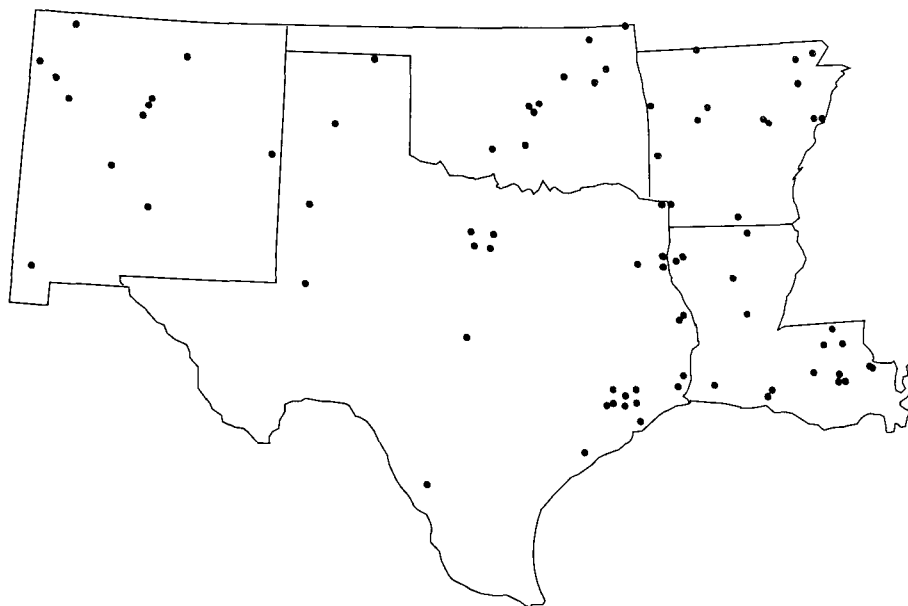
nationwide. Brownfields redevelopment has been one of the most effective tools for restoring and preserving communities. More than 300 brownfields pilot programs have been created by states, communities and Tribes across the country, and over 845 properties are being assessed for redevelopment.

Through grants to Tribes and local governments, EPA has helped to take abandoned land and buildings and eliminated the environmental hazards to make the property developable and livable, generating new jobs and an increased tax base. Since 1995, EPA's Central-South region has awarded \$200,000 each to 24 brownfields pilot projects. EPA has restored 32 brownfields properties, and cleared the way for more than 11 properties that do not need additional cleanup. We have leveraged more than \$1 billion in redevelopment funds and have been the catalyst to support more than 1,500 jobs.

A shining example of a revitalized site is the old Dallas Electric Company. A \$325 million development project transformed it into the Dallas Victory Center, which is part of a larger development project and the brownfields program.

From the 1920s until 1986, Oklahoma Steel Castings in

Location of Superfund Sites





The Jefferson North End Site had been abandoned for over 20 years. Today, it is the location of a \$34 million, multi-family residential complex near downtown Dallas. EPA Regional Administrator Gregg Cook, Administrator Carol Brunner and Dallas Mayor Ron Kirk, welcome leaders to the 1999 Brownfields Conference.

Tulsa was a productive company. In 1950, it was the largest such facility west of the Mississippi with more than 400 workers. Now the

site exemplifies what a community is doing to revitalize a blighted area. Its proximity to downtown Tulsa, major highways, and

railroads makes it suitable for development. A cooperative effort between the industrial authority, the site's current owner, and the community is underway to restore the site for use as a single-industry or multi-tenant industrial park.

Brownfields Redevelopment Pilots

Louisiana

- Shreveport
- Southeast Louisiana Regional Planning Commission
- New Orleans
- Gretna

Oklahoma

- Tulsa
- Oklahoma City
- Association of South-Central Oklahoma Governments
- Comanche Nation

New Mexico

- Albuquerque
- Bernalillo County
- Santa Fe
- Pueblo of Acoma
- State of New Mexico Environmental Department
- Rio Grande Council of Governments

Texas

- Dallas
- Fort Worth
- Grand Prairie
- Tarrant County
- Austin
- San Antonio
- Houston
- Galveston
- Laredo
- Brownsville

Our success is gaining momentum, and through grants and other assistance, EPA has helped states and Tribes develop these programs.

Long-term benefits of brownfields programs include eliminating environmental hazards and making the properties usable. This generates new jobs, an increased tax base, reduced urban sprawl, and builds better partnerships between public and private sectors.



LIVABLE COMMUNITIES

A Decent Home and Suitable Living Environment

Congress mandated “a decent home and suitable living environment for every American family” in 1949 and reaffirmed it again in 1968. President John F. Kennedy warned in 1963 that if we neglect our cities, we will neglect the nation.

Since the end of World War II, families have often fled our inner cities and headed for the suburbs seeking the dream of homeownership. New freeways provided easy access to abundant and affordable land.

The character of city neighborhoods changed. Productive industrial factories and buildings became Superfund or brownfields sites. Vacant lots became garbage dumps. The tax base disappeared. Schools were neglected. America’s great cities were in peril and faced a myriad of environmental problems. Polluted air. Lead paint hazards. Asbestos. Radon. Vehicle gridlock. Aging and outdated infrastructure. As urban sprawl expanded, these problems also spread to suburbia.

EPA has worked with states, Tribes and cities to address urban problems like lead in our environment. Since 1978, average blood-lead levels in children have declined by nearly 75

percent. Sellers and landlords must disclose known lead paint and its hazards to renters and buyers. Since June 1999, contractors remodeling or renovating are required to give homeowners a copy of *Protect Your Family From Lead in Your Home*.

U.S. households testing for radon gas have increased from 3.6 percent in 1990 to 10.2 percent in 1994. While radon is a concern for many Tribes and Pueblos in New Mexico, it is particularly a problem at the Taos Pueblo where 76 percent of homes detected high radon levels.

Between 1985 and 1994, 90 of the nation’s largest cities — except Los Angeles — saw a 72 percent reduction in the number of days when the air was considered unhealthy. In the Central-South region, El Paso has significantly improved its smog readings.

Safer and Healthier Communities

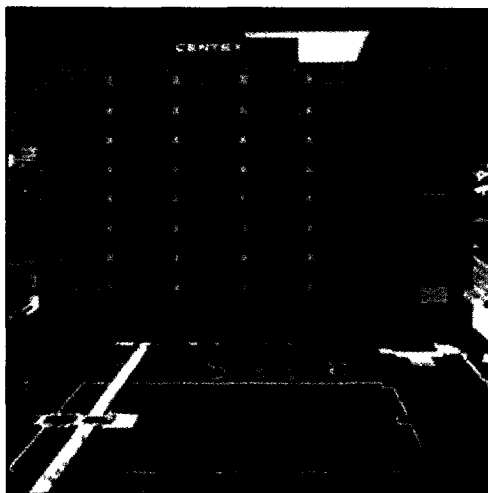
Today, over 2,800 chemicals are produced in amounts greater than one million pounds per year. EPA has challenged companies producing these chemicals to voluntarily publicize health data, and more than 230 companies responsible for 1,230 chemicals have shared information

about chemicals used in thousands of products.

Armed with the Food Quality Protection Act, EPA is reviewing 9,700 pesticide residue tolerances to ensure they meet new standards.

In February 1994, President Clinton directed agencies to ensure that minority and low-income communities are not disproportionately impacted by federal decisions. The region's Office of Environmental Justice is working with communities on issues involving low-income and minority residents. For example, in Calcasieu Parish, Louisiana, EPA is joining other community and government representatives in quarterly meetings concerning community and environmental justice concerns.

Another example is Beaumont, Texas, where a partnership has been established to increase air monitoring and data available to residents. The partnership includes representatives from EPA, neighboring industries, and residents of the largely African-American Charlton Pollard neighborhood. The partnership has also led to industry-sponsored scholarships, summer student employment, and alternate routes for truck traffic to make neighborhoods safer.



Businesses like the Centex Building in Dallas, are experiencing significant savings through low-cost energy efficiency opportunities.

The Energy Star Building Efficiency Program helps local businesses conserve energy. The Centex Building in Dallas was recognized for its unprecedented ENERGY STAR rating of 99, which means they have done all that they can feasibly do to become energy-efficient. Developers can save \$130 billion by 2010 if they take advantage of available,

low-cost energy efficiency opportunities.

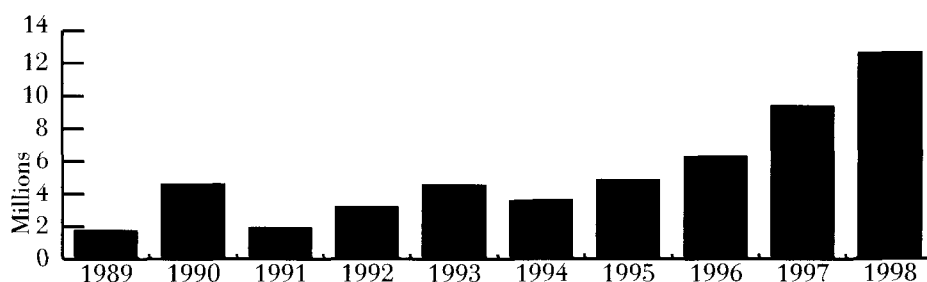
People spend nearly 90 percent of their time indoors, where air can be more polluted than air outdoors. Asthma rates have increased alarmingly during the past few decades, and poor indoor air quality is a culprit. Although there are no regulatory standards for indoor air, there are ways to improve the indoor environment.

After receiving complaints about extensive mold growth in the Birdville and El Paso Independent School Districts, the region assisted the schools in improving indoor air quality through EPA's "Tools for Schools" program.

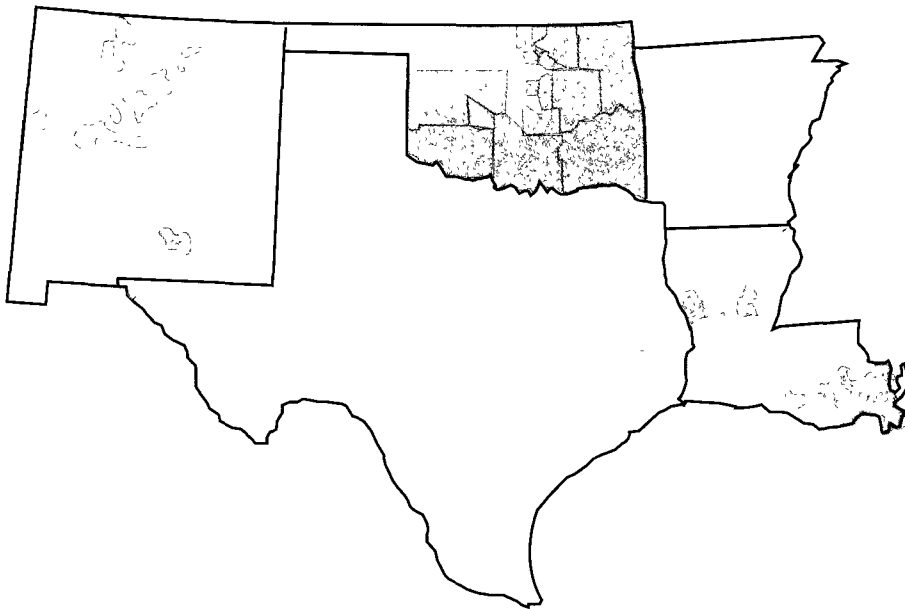
Indian Country — the Nation's Native American Communities

The U.S. Government has an important relationship with the first Americans — the Indians — created in the Constitution, treaties,

Funding For Tribes



Indian Country



In the Central-South region, 65 sovereign Indian Nations own 9 million acres of some of the most scenic land in this country.

statutes, and court decisions. Today, Indian Nations form an integral part of our national system, and Native-American citizens retain much of their status as self-governing sovereign nations.

Indian Country, the part of the United States set aside for Indian Nations, is bigger than all the New England states combined. Indian Country includes 52 million acres — 8 million acres are farmed, 6 million are forested, and 38 million are used for grazing.

Despite accomplishments in the past decade, much remains to be done in

establishing environmental programs in Indian Country. We need to ensure that all Native Americans are afforded equal protections of their air, water, and land.

Nationally, the air is not healthy to breathe in 83 tribal communities. In the Central-South region, only one Tribe, Ysleta del Sur Pueblo, in El Paso, is located in an air non-attainment area. Nationally, there are 180 major and 750 minor sources of air pollution in Indian Country.

Less than 4 percent of the Tribes have approved water

quality standard programs, and only 12 percent of Tribes have solid waste management plans. There are 1,600 open dumps in Indian Country.

Most of the 185 schools for more than 53,000 Indian children are over 30 years old and likely to contain lead paint and asbestos. The 20 percent of schools over 50 years old are likely to contain toxic PCBs.

Today, EPA has authorized 145 Tribes to implement 186 environmental programs under federal law, including 38 tribes to set water quality and pesticide standards.

In 1999, \$42 million was provided to administer environmental regulatory programs in Indian Country. In the Central-South region, 53 of the 65 Tribes received

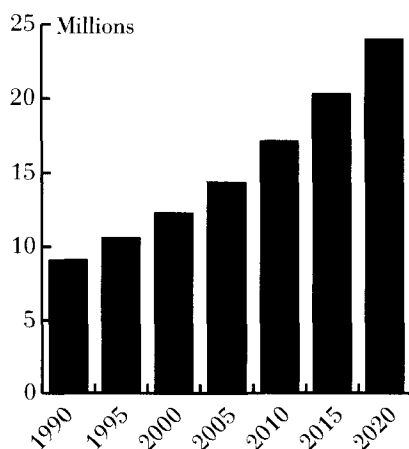


Ysleta Pueblo's Environmental Director Stanley Payton, welcomes EPA Deputy Regional Administrator, Jerry Clifford to annual Tribal Summit.

assistance for environmental programs.

Since 1989, the two major regional tribal consortia have received nearly \$9 million to implement Superfund programs in Indian Country. More than 160 sites were evaluated for potential cleanup. The Central-South region has trained tribal staff to clean up abandoned sheep-dip vats which could ultimately result in cleaning up of hundreds of such vats on Indian lands in New Mexico.

Border Growth



Since 1990, EPA has provided \$2.2 million to 11 Pueblos in New Mexico to operate waste transfer stations and recycling centers to manage solid waste.

EPA has also established programs within Indian Country to address water runoff, smog, brownfields redevelopment, and national tribal water quality. These programs rely on tribal leadership and creativity.

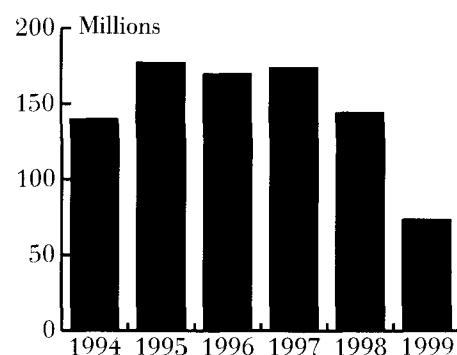
U.S.-Mexico Border Communities

A unique part of our world is situated along a 2,000-mile stretch between the U.S. and Mexico. Defined in the 1983 agreement between Presidents De la Madrid and Reagan, the "border" comprises 62.5 miles north and south of this boundary. Nowhere in the world are two nations more distinctly separated, and yet united.

Economic differences are stark, yet the residents share many characteristics. EPA and its neighbors to the south want to improve environmental conditions to launch this area into an era of economic prosperity and sustainable development.

The U.S. and Mexico focused on the 1993 North American Free Trade Agreement (NAFTA). The environmental side accords created two institutions, the Border Environmental Cooperation Commission (BECC) and the North American Development Bank (NADB), the first of their kind in the world, who can evaluate projects and lend

Funding For Border Projects



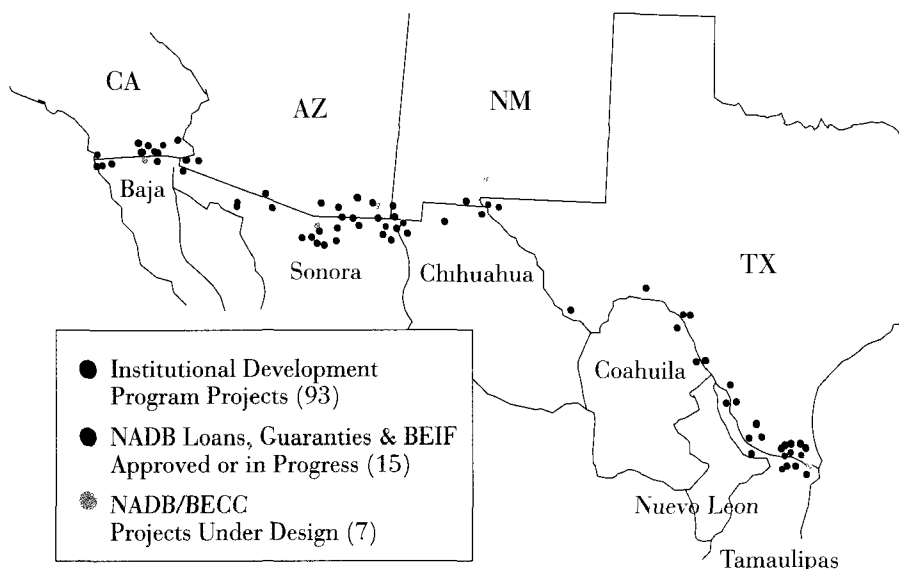
money on both sides of the border to improve water supply, wastewater treatment, and municipal solid waste disposal.

Mexico and the U.S. have continuously worked on the increasing demands of the region. Following the agreement, environmental concerns have been resolved voluntarily.

Binational workgroups undertake the most pressing border problems in air, water, hazardous waste, cooperative enforcement and compliance, pollution prevention, natural resources, health, contingency planning and emergency response, and environmental information.

An important milestone occurred in 1999 when the 10 border states agreed on a decentralized approach to environmental protection. The power and obligations associated with federal

Border Projects Underway



Border development projects will provide essential services to communities in both the United States and Mexico. In 2000, the \$11.08 million wastewater treatment plant opened in Juarez, serving 1 million people.

mandates are transferring to the states, and nowhere is it more necessary than at the border.

One of the great border stresses focuses on it being the most rapidly growing region of North America. Population has gone from 1 million in 1960 to 11.5 million in 1999. If the projected growth rate of over 6 percent per year continues, this area will grow to 25 million by 2020. Such growth rates and unsustainable production and consumption surpass the carrying capacity of the natural resource base, and basic infrastructure, particularly for water resources. These conditions threaten the biodiversity, air

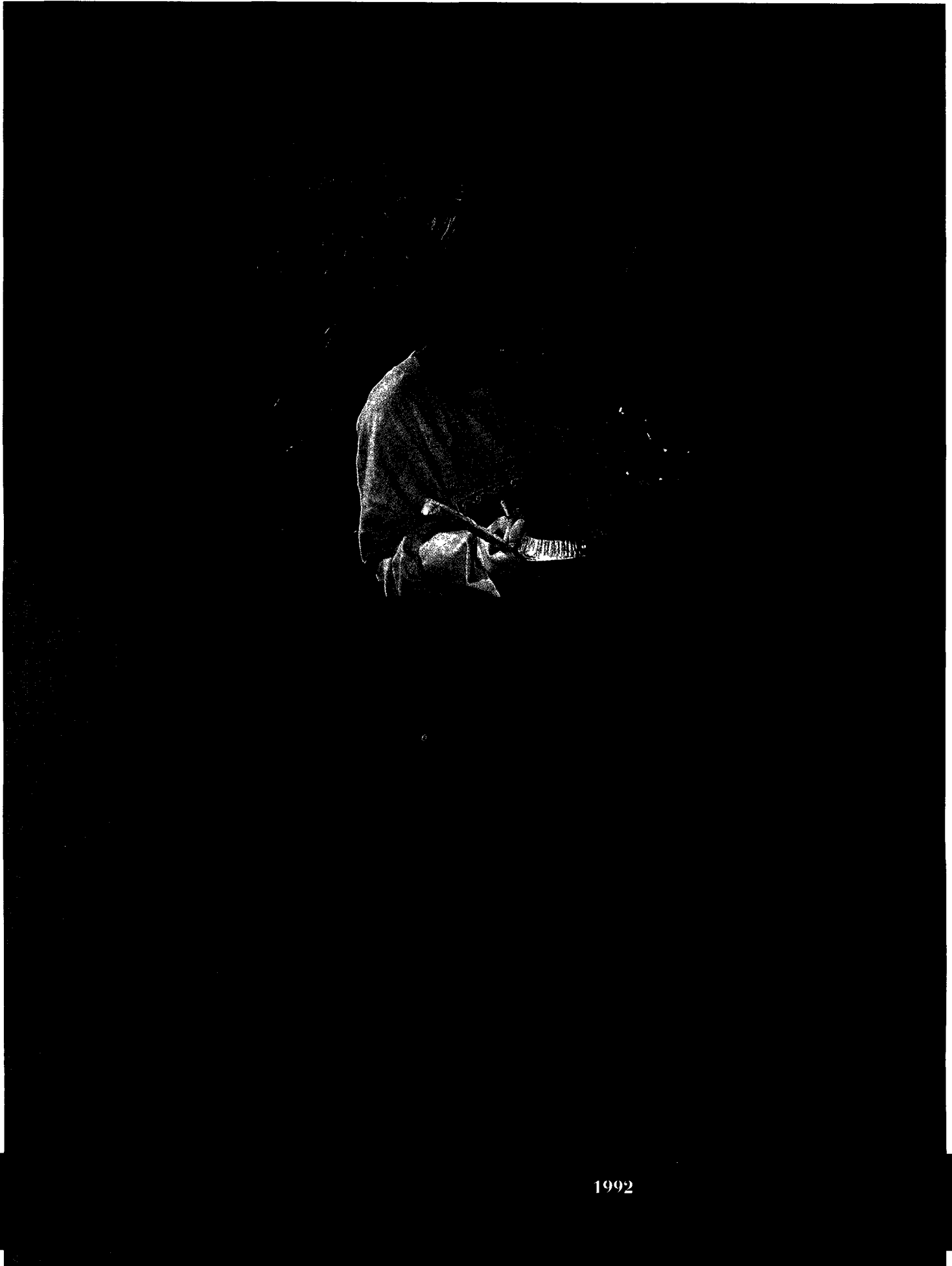
and water quality, and health. EPA seeks sustainable development at the border with a balance among social

and economic factors. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.

This is a lofty goal. NAFTA is seen as a solution to many problems. Meanwhile, some critics point to the economic and environmental cost of free trade. Based upon our partnership with new international institutions such as the BECC and the NADB, border environmental conditions will improve, and a renewed era of environmental protection and public participation has begun. The border region can be a model of international cooperation and local decision-making in protecting human health and the environment.



Population growth rate along the U.S./Mexico border presents many social and environmental challenges to communities.



HEALTHY *The Dynamic Interaction of Habitat and People* ECOSYSTEMS

An ecosystem is the interrelationship of all living and non-living things in an environment such as a lake, forest, or a geographic region. Often, we think of a home terrarium as a man-made ecosystem, but ecosystems can also be as large as our solar system.

In the Central-South region, a major ecosystem is the Gulf of Mexico. The diversity of the Gulf, from the clear waters of the Laguna Madre in Texas to the mangrove swamps of south Florida, contributes to cultural traditions that characterize this vast sea.

Since its discovery by Spain 500 years ago, the Gulf of Mexico has become a wellspring of commerce and transportation, as well as an area of strategic military importance. Today, human actions and pollution are threatening the health and well-being of the Gulf. However, it is sometimes difficult for people to understand how our day-to-day actions can harm the Gulf.

At risk in the Gulf are billions of dollars in infrastructure, homes, schools, roads, ports,

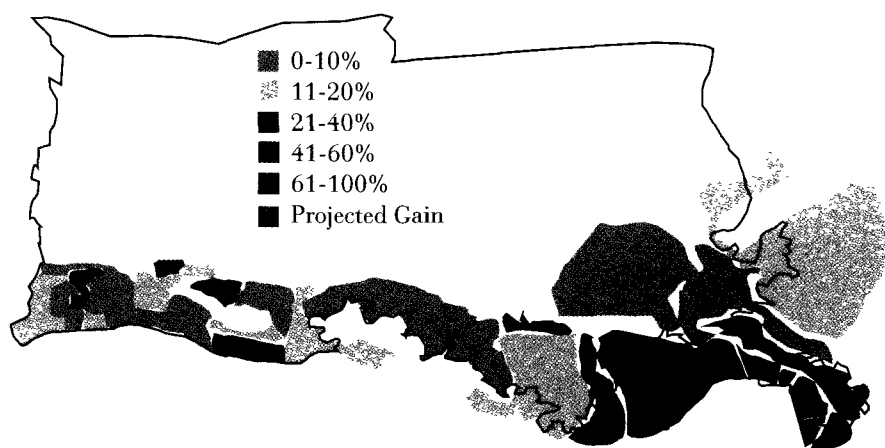
businesses and industries. Moreover, coastal marshes are essential to various lifestages of over 90 percent of marine species that people depend on for their livelihoods and recreation. Marsh loss threatens the productivity of Gulf fisheries.

Since 1991, EPA's Central-South region has worked with the Louisiana Department of Natural Resources to restore the more than 500 miles of barrier islands that help protect the Louisiana and Texas shorelines against tropical storms and hurricanes. Today, almost 10 miles of the Isles Dernieres chain shoreline have been restored. Without restoration, these islands could disappear by 2020. Island restoration resulted from public and private partnership.

The Gulf of Mexico Program

The Gulf of Mexico Program — founded on the principles of partnership, science-based information, and citizen involvement — includes representatives from federal and Gulf state agencies, business, industry, the environmental community, and academia.

Louisiana Projected Wetlands Loss 2050



Louisiana includes 40 percent of all coastal wetlands in the United States, and each year more wetlands are lost in Louisiana than exist in the rest of the nation

Over the past 10 years, the program has completed several demonstration projects that offer solutions to the most difficult environmental issues facing coastal waters. However, progress is not keeping up with growth. The Gulf of Mexico is the nation's second-fastest-growing population on a coastline. The underlying stresses of population, coastal development, and energy production and transportation growth have prevented real environmental and public health gains.

Ecological problems confronting the Gulf are complex and enormous on a geographic scale. Solutions to these problems must be found before they lead to systemic crises. Some

solutions will require international cooperation with Mexico, Central America and the Caribbean.

Challenges

While coastal wetland loss in Louisiana is caused in part by subsidence — a natural process in the Louisiana delta — human activity has accelerated this loss. Following the disastrous 1927 flood, levees were built along the Mississippi River, stretching from upland areas all the way to the Gulf. These levees cut off the river from its natural floodplain, reducing the essential flow of nutrients and sediments needed to replenish the marshes.

This has been further accentuated by channeling of

the coastal marshes to allow for oil and gas exploration and production, and improved transportation. The dissection of the coastal marshes, considered essential to energy development of the day, caused physical destruction and allowed the introduction of saltwater into previously freshwater marsh areas, hastening their demise.

An unprecedented “red tide” occurred in the Gulf during the fall of 1996, impacting beaches and shellfish waters from Florida to Texas. In the past, red tides were confined to the western and northwestern Florida continental shelf, the east coast of Texas, and the Bay of Campeche, Mexico. The red tide caused large-scale fish kills, loss of invertebrates, and loss of endangered Florida manatees. In addition, as these blooms approached shore, the toxic by-products of the bloom organisms contaminated shellfish. In some areas, wave action generated toxic aerosols, causing respiratory problems, eye irritation, and allergic reactions for beachgoers.

Progress

In Louisiana, restoring four priority oyster beds in the Barataria-Terrebonne Bay Watershed will increase the Gulf shellfish beds available for safe harvest by 10 percent.

***The Gulf of Mexico Program
Focuses on These Challenges:***

- **Public Health**
- **Excessive nutrient enrichment**
- **Habitat loss and degradation**
- **Nonindigenous species introductions**

region has joined with the U.S. Coast Guard and the state to remove the most threatening barges.

Since 1990, the Texas Parks and Wildlife Department has teamed up with the Gulf of Mexico Program to identify sites for habitat protection called Gulf of Mexico Ecological Management Sites. They receive additional management attention to protect key coastal and offshore areas of ecological significance.

EPA responds to ecosystem problems of the northwestern Gulf of Mexico in a number of ways: through funding states' programs, especially those under the Clean Water

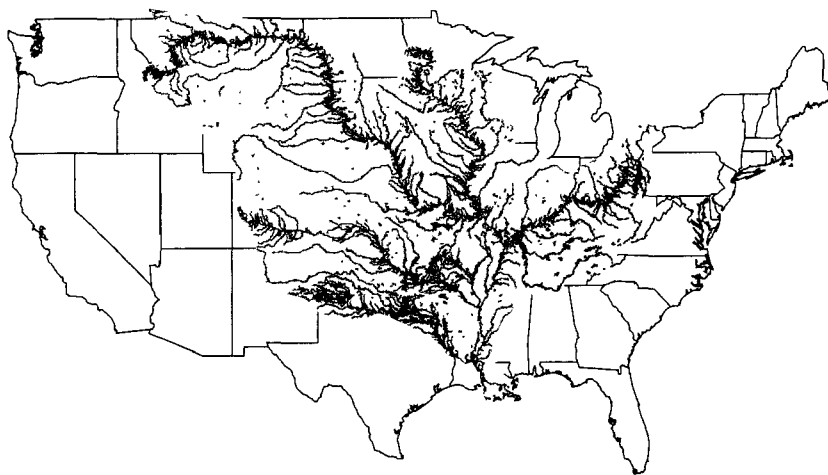
Act; through activities under the Coastal Wetland Planning Protection and Restoration Act; and through support for the Gulf of Mexico Program, the Lake Pontchartrain Basin Foundation and the Barataria-Terrebonne National Estuary Program, Galveston Bay Estuary Program, and Coastal Bend Bays and Estuaries Program.

Maintaining these ecosystems requires financial and technical investments. To restore the marine and estuarine ecosystems of the northwestern Gulf of Mexico, difficult policy choices and large new financial and human resource investments are needed.



The region has a Baton Rouge office that specifically works with Louisiana, local governments, and communities to restore and protect wetland resources. Today, over \$20 million has been provided by EPA to restore 1,300 acres of wetlands. Also, hundreds of abandoned barges in south Louisiana threatened the bayous, rivers and marshes with releases of oil and hazardous materials. The

Mississippi River Tributaries and Basin



Human actions and pollution have contributed to a large area of oxygen-depleted water off the mouth of the Mississippi River that cannot support the normal marine life



HEALTHY *The Responsibility of All Nations* PLANET

Children today face hazards in the environment that were neither known nor suspected only a few decades ago.

In the last 50 years, more than 75,000 chemicals have been dispersed into the environment. Fewer than half of these chemicals have been tested for their potential toxicity to humans. Fewer still were assessed for their toxicity to children.

Children eat proportionately more food, drink more fluids, and breathe more air. Because their bodies are growing and developing, they are more vulnerable and susceptible to environmental risks.

Over the past 30 years, this nation has made great progress in protecting public health and the environment. We have the safest drinking water in the world. Toxic pollution from industry has declined. Our air is cleaner.

But the job is not done. Over 6 million children have asthma, which doubled from 1980 to 1995. Nearly 8,700 children will be diagnosed with cancer in 1998, the most common cause of disease-related mortality in children.

Armed with legislation from Congress, EPA led the way in protecting children's health from environmental threats. In 1996, the Food Quality Protection Act and revisions to the Safe Drinking Water Act are two successful examples. Both laws require us to evaluate chemicals and their toxicity to children. In addition, a Presidential task force guides our actions and directs all federal agencies to make protection of children's health and safety a high priority.

Young and old alike benefit from reductions in pollution. Protecting our future by putting our children first is an investment in the health of all Americans.

Children's Health

Through our children's health program, the Cherokee Nation is intervening to protect rural Native American children from polluted ground water used for drinking. Children living near polluted water sources are participating in educational activities to increase their awareness of water-quality hazards.

Communities concerned with pollution can show children an education video called "E-Hazards,

"They're Out There" to increase awareness about ways to protect themselves from everyday environmental hazards. The educational booklet and video were produced by EPA's Central-South region.

In New Mexico, Albuquerque Healthy Environments and Living Places for Kids Project, funded by EPA, is designed to reduce risks to children at home, school, and in child care.

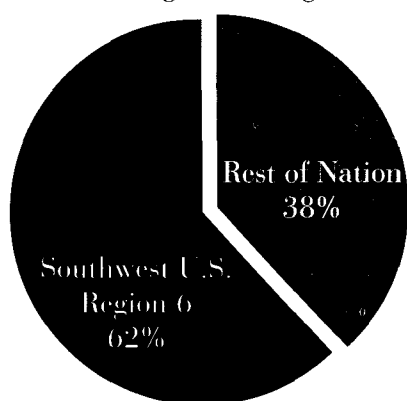
Through partnerships with Health and Human Services and the University of Texas Southwest Medical Center, the region is teaching health care providers ways to diagnose and treat children affected by exposure to environmental hazards.

Schools across the region are using indoor air quality "Tools for Schools" to improve air quality using practical, low-cost solutions.

The Arkansas Department of Health and EPA are helping identify asthmatic children from kindergarten through sixth grade for a study on reducing risks from biological agents that aggravate their symptoms. Children with asthma miss twice as many school days as other children.

Working with schools and caregivers, EPA developed an educational Pesticide Safety Bingo game to teach proper use and handling of pesticides. The

Hazardous Waste Generated and Managed in Region 6



game is available in English and Spanish.

In Louisiana, the Deep South Center for Environmental Justice at Xavier University received funds to train community leaders about the hazards of lead paint. Over 50 local community leaders will

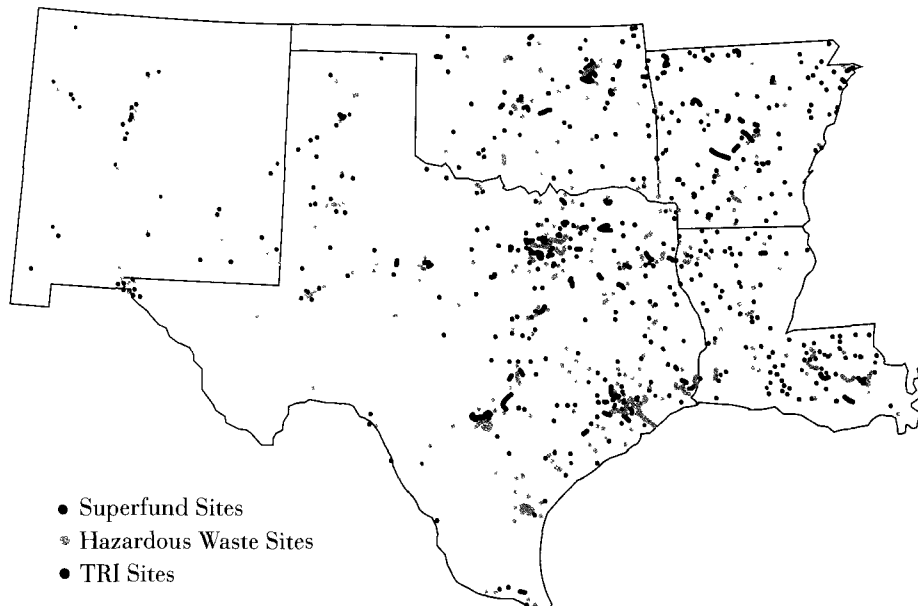
train other citizens on childhood lead poisoning prevention.

Websites designed for parents and caregivers on children's health issues and federal government programs are www.epa.gov/region6/children and www.epa.gov/kids.

Teaching Children

The National Environmental Education Act of 1990 called for the EPA to strengthen and expand environmental education as an integral part of its mission to protect the environment. Since the passage of the Act, more than 1,200 environmental education projects have been funded in states, colleges, schools and nonprofit organizations worth about \$13 million.

Sources of Pollution



Last year, Texas and Louisiana were first and second in the number of reported releases in the nation.

Through its Partners-In-Education program, the region has been teaching students from schools about the environment, and helping them mentor others. This new program, established in 1997, has graduated 3,900 students through 1999.

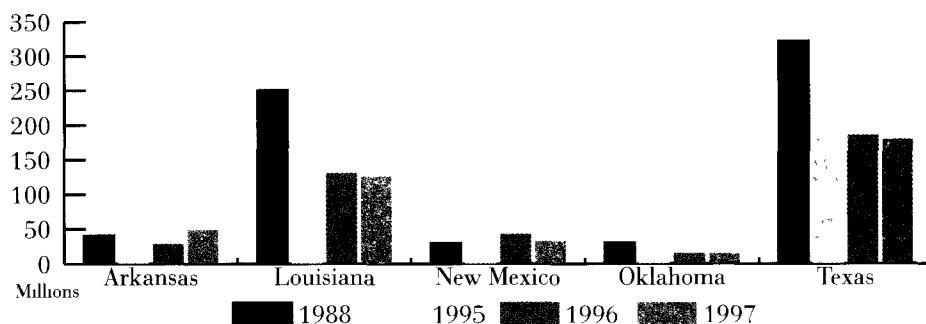
In 1999, the region helped establish an environmental curriculum and education center at the University of North Texas campus in Denton. Two EPA employees relocated for a year to help establish the program.

In Hot Springs, Arkansas, the Habitat Learning Project will train 625 at-risk students in math and environmental science. In Oklahoma, 4-H student leaders, teachers and county extension educators will teach stream hydrology to youth. Each year, EPA's Central-South region has provided about \$175,000 for 20 to 25 environmental education projects.

Since 1997, EPA's Central-South region has partnered with Langston University in Oklahoma to strengthen its environmental science program. Langston, an historically black university, and EPA are developing curriculum and outreach programs focusing on Native American communities.

The President's Environmental Youth Awards are presented annually to 10 national finalists from across the country. In

Toxic Release Inventory Trends



1999, Kate Widland and Valerie Kaye, the region's winners were, two high school seniors from Albuquerque who founded an Environmental Youth Network, hosted an environmental conference and started an environmental business award.

Sharing Information

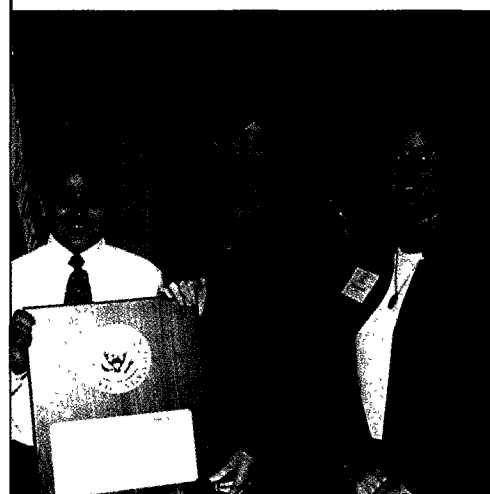
A late 1980s popular bumper sticker "Think Globally, Act Locally" urged us to recognize the impact of local activities on global environmental conditions.

Today, Americans want to understand environmental conditions in their neighborhoods. We recognize environmental progress is ultimately measured at the community level.

In the 2000s, people have access to more information than ever about chemicals released into their air and water. New labeling and disclosure programs help consumers safely use household products and protect against hazards. EPA's Internet Ozone Smog Map provides families with

community-specific, real-time information about ozone smog in their neighborhoods.

Internet use has risen dramatically. EPA's website is accessed more than 60 million times every month. EPA seeks ways to make more and better environmental information easily available to citizens, not only through the Internet, but also through partnerships, outreach and education.



Administrator Browner presents President's Environmental Youth Award to Danny Herrera and Gloria Basden of Gadsden Middle School, Anthony, New Mexico.



FUTURE CHALLENGES

Smart Growth — Challenge of Urban Sprawl

The air, water and land we depend on are being threatened by unplanned or poorly planned development. Our communities, ecosystems and yes, our planet, are suffering from overwhelming growth. Between 1970 and 1990, almost 20 million acres of rural land were developed nationwide. A total of 400,000 acres a year are used for residential and commercial development. In 1998, voters passed 170 of 240 local ballot initiatives to reduce urban sprawl and created over \$7.5 billion in new funds to protect open space.

After World War II, city dwellers began to abandon compact urban neighborhoods for newly built suburbs at the edge of the city. This outward migration continues unabated to the present day. The population of the Austin metropolitan region increased 30 percent from 846,227 in 1990 to 1,105,909 in 1998, while only 10 percent of growth is in Austin's urban core. Air pollution, traffic and a lack of affordable housing are threatening the quality of life. Citizens are starting to realize the cost of rapid growth. In 1998, Austin voters agreed to higher water rates to raise \$65 million to preserve 15,000 acres of land outside the city.

Texas's healthy economy continues to create jobs and attract workers. Texas's population is expected to rise 66 percent from 20 million to 33.8 million between 2000 and 2030. By 2030, nine out of ten new residents will be minorities; three out of four will be Hispanic. From 1982 to 1992, Texas lost nearly a half million acres of farmland — more than any other state.

The Dallas-Fort Worth area added more than 250 residents a day between 1990 and 1998, fueling a 19 percent growth rate — more than twice that of any other metropolitan areas its size or larger. As the core city remains stable in size, suburbs are growing at a rapid rate. Lack of natural barriers to expansion provides more room for population growth. In 1996, residents of the Dallas metropolitan area traveled an average of 29.8 miles per day per person, and spent nearly 55 hours per person in traffic.

The Houston-Galveston-Bay Area ranked second with a 18 percent growth rate — ahead of Los Angeles, San Francisco, Chicago, Detroit, Boston, New York and Philadelphia. In 1999, the Houston metropolitan area showed the

highest air quality reading for ozone smog in the country.

Texas border cities of Laredo and McAllen-Edinburg-Mission showed tremendous growth rates of 41 percent and 36 percent from 1990 to 1998, respectively. El Paso, Texas showed an 18 percent population growth rate reaching 703,127 residents in 1998.

In Arkansas, the Fayetteville-Springdale-Rogers area grew 29 percent from 210,908 in 1990 to 272,615 in 1998. In Little Rock, population remained constant while land use doubled to nearly 200 square miles.

In New Mexico, Santa Fe had a 21 percent growth rate from 117,043 to 141,730, and Las Cruces showed a 24 percent growth rate from 135,510 to 169,165 during the same period.

Many challenges impact our quality of life. Loss of green space to sprawl and development. Polluted runoff from highways, cities and factory farms. Aging infrastructure in cities and towns. More cars driving longer distances. Greater demands for electricity and fuels. Abandoned factories and commercial sites in inner cities. Any of these left unmet could impact our communities.

Looking to the Future

In facing these challenges, we must continue working together — leveraging our resources and building stronger alliances. The face of tomorrow's landscape depends upon our activities today.

Air pollution in the Central-South states of Arkansas, Louisiana, New Mexico, Oklahoma and Texas is a major environmental challenge. Many of our cities' air quality is not improving quickly enough to keep up with growth. In Texas, nearly one-half of the population lives in areas not meeting national health-based air quality standards. As we learn more about the health impacts of ozone smog and soot, stricter standards are needed to protect people, especially

the elderly and children. Many of our cities are barely meeting these health-based standards and may not meet new national air quality standards being proposed to protect public health. EPA has adopted national standards for cleaner-burning fuels and vehicles which will help our communities face the clean air challenge. In the Central-South region, alliances with local and state leadership like those demonstrated in Tulsa, Austin, Baton Rouge, Dallas-Fort Worth, Houston and San Antonio are essential to bring about common-sense controls to air pollution.

Water pollution, as well as increased demands for clean water, is impacted by development along our rivers, lakes and streams. Runoff

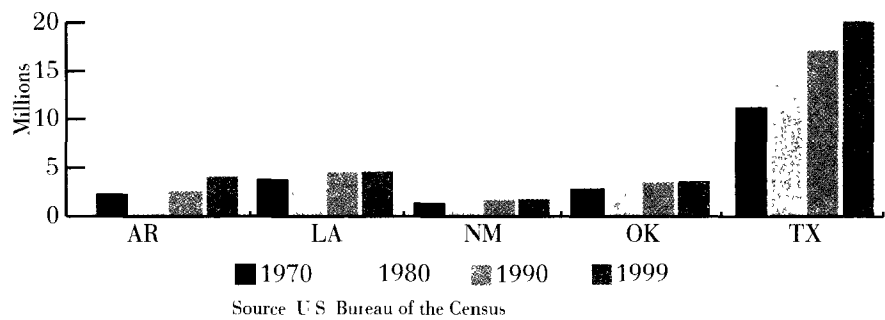
Houston faces significant air quality challenges. In 1999, 15 of the nation's 30 highest ozone smog readings were in Texas. Photo: Houston Chronicle.

from farmland and city streets pollutes our water. No longer can we regulate factories separately. To get there, we must look at the cumulative impact of many sources of pollution on the same river. Programs emphasized in EPA's Clean Water Action Plan will help to identify and control these sources of water pollution. Partnerships with the Central-South states of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas are vital to our achieving healthy water.

Loss of green space and increase in abandoned land challenge communities throughout the region. More incentives for reusing abandoned and toxic waste sites in cities and rural communities are needed. Maintaining green, pristine land and wetlands provides us healthy places to escape the daily grind and live. Brownfields redevelopment, transportation and urban planning programs are working to offset some of the impacts to sprawl. Three of our five states have federally endorsed voluntary clean-up programs to speed redevelopment of abandoned properties.

Population growth in our urban centers and along the Texas-Mexico border challenges public utilities and services. Providing equal protection and equal hope for

Population of Region 6



communities throughout the Central-South is essential to improving the environment that impacts us all. Many times, education and collaboration with these communities can yield great results. Other times money for infrastructure — sewers, drinking water, garbage disposal — and local people to run them are needed to ensure the health of an entire community.

Loss of wetlands and green space to development reduces natural treatment and filtering of pollution. Focusing on ecosystems by looking at pollution sources throughout entire geographic areas is yielding results. Each day, more and more communities are banding together to protect their vital resources and improve public health. Pollution does not recognize geographic or political boundaries. More needs to be done. Stronger alliances are needed to create shared goals and improve these large-scale,

complex problems. It is essential to the well-being of everyone.

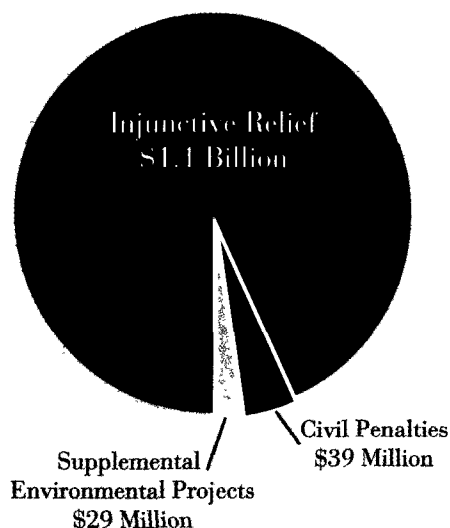
Finally, we must continually evaluate our health-based standards using strong science and modern technology. It continues to be the age of discovery. We must evaluate chemical impacts on communities, both people and places. We must use new technologies to reduce pollution from current sources. Government, businesses and industry must face the technology challenges in collecting and reporting environmental information. We must look for new ways to share information with people. An informed public will make better environmental and public health decisions.

To meet the environmental challenges of today and tomorrow, each of us individually and collectively must do our part.

Enforcing Environmental Laws

To maintain a balanced playing field for industry and business and ensure fair competition, enforcement of the environmental laws is essential. The region has aggressive civil and criminal enforcement programs. We are continuing to work with our state and industry partners to build enforcement and environmental compliance programs, as well as aggressively pursue criminal actions when necessary.

Enforcement Accomplishments 1996 - 1999



Civil Enforcement

EPA and the State of Texas sued Koch Pipeline for hundreds of oil spills in Kansas, Louisiana, Oklahoma and Texas. A settlement was reached requiring Koch to pay \$30 million in penalties, making it the largest Clean Water Act settlement in history. Koch will also undertake \$5 million worth of environmental projects for pipeline safety and education, and wetlands restoration.

Johnson Properties violated the nation's clean water laws by failing to operate 175 wastewater treatment facilities in Louisiana. Improper operation caused raw sewage to back up into homes, schoolyards and city streets — threatening public health. For only the second time in history, EPA took over operation of the privately owned treatment facilities through a court-appointed receiver.

McKinney Smelting violated our hazardous waste laws by poorly managing lead and PCB waste in Texas. A total of over 2,000 tons of contaminated soil was removed from the site and over \$1 million was used to return the property to productive use. Lead is known to impact the development of young children, and PCBs can cause cancer.

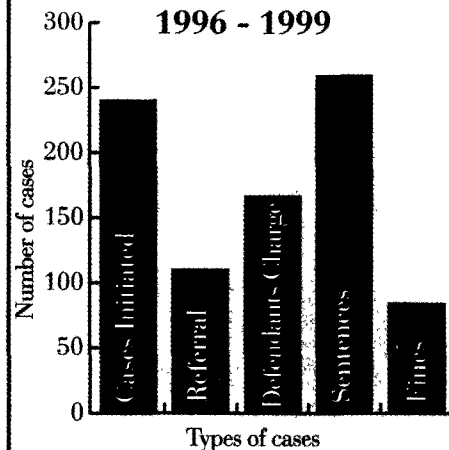
Petroleum Wholesale, Inc. violated the federal underground storage tank laws at 7 facilities in Houston Texas by operating storage tanks without adequate leak detection. Over 80 violations were discovered, resulting in a \$274,000 penalty. Undetected leaks can cause irreparable harm to ground water.

Encycle/Asarco in Texas, Montana, and Tennessee, improperly treated, stored and disposed of over 500 tons of highly toxic waste. Over \$5.5 million for injunctive relief and penalties was awarded. It is essential to communities that companies manage hazardous waste safely.

Criminal Enforcement

In Baton Rouge, the

Major Criminal Enforcement Cases 1996 - 1999



superintendent and former foreman at the former Hall Buck Marine River Plant were sentenced to prison for violating the nation's clean water laws. They were charged with illegally discharging polluted waste from their barge-cleaning operation into the Mississippi River. Previously, the plant plead guilty to Clean Water act violations and paid \$440,000 in fines and \$4 million in clean-up costs.

In a 1998, joint Texas, City of Dallas, and EPA action, Herman Nethery received the most severe sentence ordered in Texas for an environmental crime: 30 years in prison, \$100,000 fine, and \$125,900 in restitution. Mr. Nethery operated an illegal landfill in southeast Dallas, the largest illegal dump in the state of Texas.

In a 1999 joint EPA and State of Texas action, company officials were convicted of criminal charges in Texas for violating the federal clean air laws. The Huntsman Port Arthur plant manager and Jefferson County environmental manager were convicted and face up to 25 years in prison and a fine of up to \$1.25 million.