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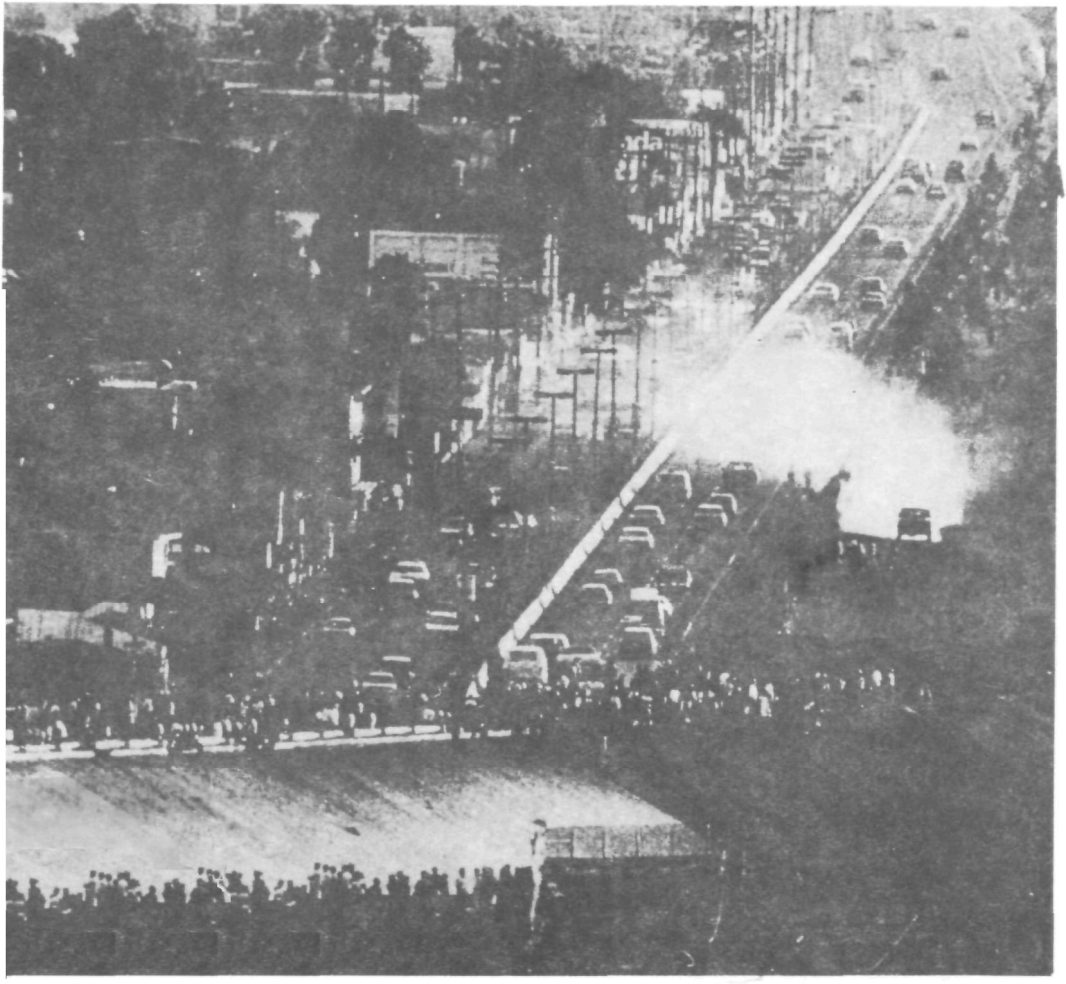
Environmental Protection Along The U.S.—Mexico Border



EPA

Environmental Protection Along the U.S. – Mexico Border

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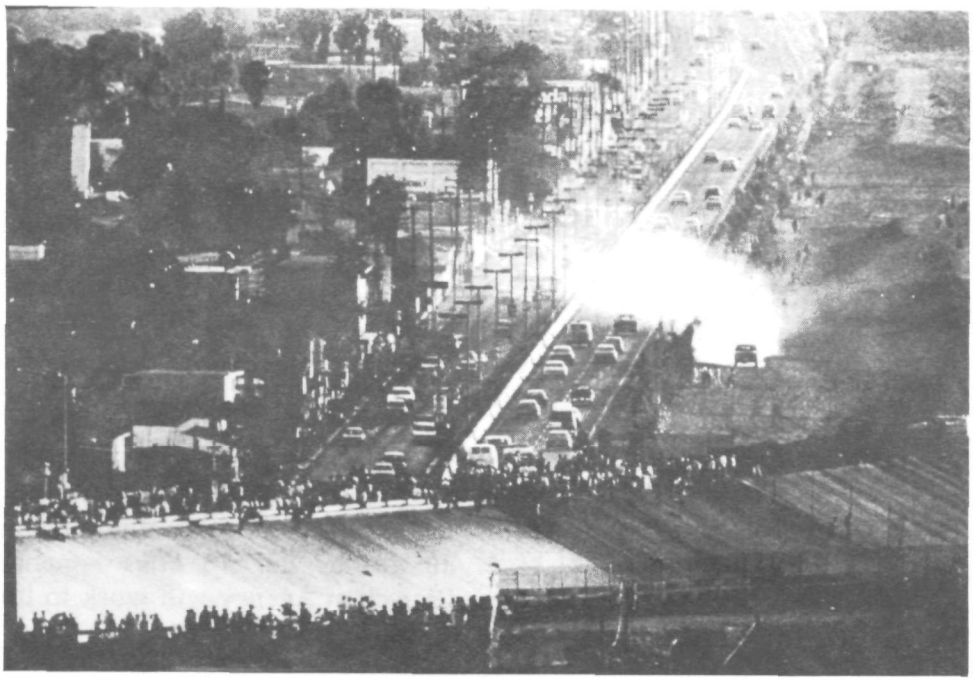
Introduction

Across the nearly 2,000 mile U.S.-Mexico border, U.S. and Mexican communities live side by side, sharing both the benefits of rapid economic growth as well as the environmental problems. Over the last decade, transboundary environmental problems have grown in direct proportion to the border region's dramatic increase in population and industrial development. Today, there are over 9.2 million border residents, double the population in 1983. Similarly, over 1,800 *maquiladora*[1] manufacturing/assembly operations now dot the border. While economic development remains critical to the prosperity of the border region, the combined effects of urban and industrial growth have contributed to problems such as air and water pollution, improper handling and disposal of hazardous waste and inadequate environmental infrastructure, challenging virtually all communities, small

[1] *Maquiladora* is a status under Mexican law that is conferred upon certain manufacturers in Mexico that "import" their materials from countries other than Mexico and "export" products and waste to countries other than Mexico. Maquiladoras receive preferential tax treatment.



Tijuana-San Diego near the San Ysidro port of entry.

and large, along the U.S.-Mexico border.

Binational cooperation and action are needed to address the unique transboundary environmental problems of the border area. President Clinton addressed this when he sought and won passage of the North American Free Trade Agreement (NAFTA), by requiring additional supplemental agreements to properly address transboundary environmental problems along the border.

To ensure that border environmental concerns would be addressed under NAFTA, the governments established the North American Commission on Environmental Cooperation

To ensure that border environmental concerns would be addressed under NAFTA, the U.S., Mexican, and Canadian governments established the North American Commission on Environmental Cooperation (CEC), which is headquartered in Montreal, Canada. Among the CEC's priority objectives are to improve national enforcement of each country's laws relating to environmental protection and to uphold the environmental provisions set forth under NAFTA. In an effort to address the long-neglected environmental infrastructure needs of the border region, the U.S. and Mexico also established the Border Environmental Cooperation Commission (BECC) and the North American Development Bank (NADBank). These two new bilateral institutions will work with local communities to arrange financing for vitally needed environmental public works projects.

During 1995, a review of ongoing environmental initiatives will be undertaken with the Mexican Government and plans will be developed to formulate a new plan, covering the period 1995-2000, building on achievements and lessons learned from the 1992 *Integrated Border Environmental Plan, First Stage* (IBEP). Recognizing the role of other U.S. and Mexican Federal agencies in addressing border environmental and health issues, the EPA will work with the U.S. Department of Health and Human Services, the U.S. Department of Interior, the National Oceanic and Atmospheric Administration, and the U.S. Agency for International Development.

Together with the CEC, BECC, NADBank, state and local governments, and Mexico's environmental authorities, the U.S. Environmental Protection Agency will work to im-

prove the environmental quality of the U.S.-Mexico border region based upon expanded public participation and an increased commitment of human and financial resources to the border region.

Historical Environmental Protection Efforts

The United States and Mexico have long recognized their shared interests in the border environment. In fact, the two countries have been involved in formal cooperative efforts related to the use of the border's waters for almost one hundred years.

During the 19th century, the Rio Grande and Colorado River periodically changed course, causing uncertainty in both countries as to the precise location of the border. In response, the two countries signed a convention in 1889 creating the International Boundary Commission (IBC), consisting of a Mexican and a U.S. Section, to resolve boundary location issues related to movements of the Rio Grande and Colorado River.

In 1944 the two countries agreed by treaty to create a new International Boundary and Water Commission (IBWC), to assume primary responsibility for border water sanitation projects agreed to by both countries. Consequently, in addition to its other duties, the IBWC is involved in the planning, construction, operation, and maintenance of several wastewater treatment plants.

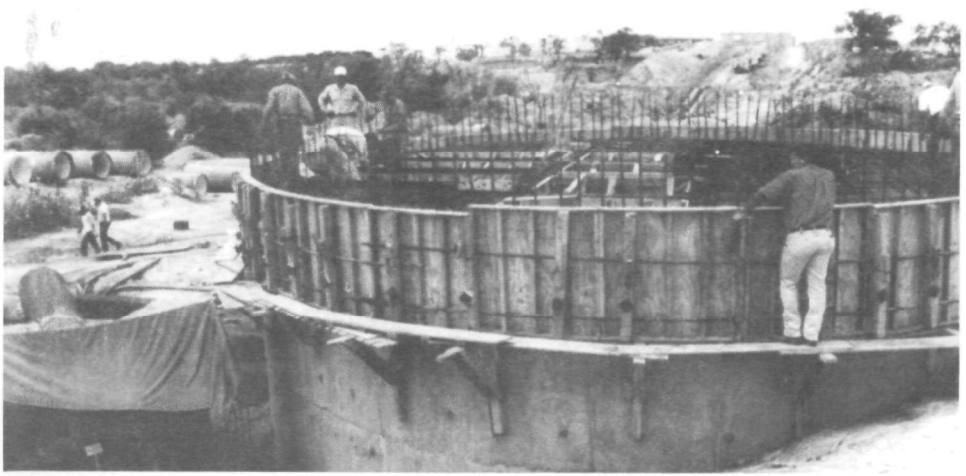
In 1983 joint Mexican-U.S. environmental activities in the border area were formalized with the signing of a comprehensive U.S.-Mexico Border Environmental Agreement known as the "La Paz Agreement". This agreement defined the border area as a 100-kilometer wide zone on either side of the political boundary, and it established a general framework in which both countries agreed to prevent, reduce, and eliminate sources of air, water, and land pollution. Under the La Paz framework, six work groups in the areas of enforcement, water, hazardous waste, air, emergency response and planning, and pollution prevention have been established.

Based on the commitments set forth under the La Paz Agreement, the EPA and SEDUE (now known as SEDESOL—the Secretariat for Social Development), Mexico's environmental agency, released the *Integrated Border Environmental Plan, First Stage (1992-1994)* (IBEP) in February 1992. The aim of the IBEP was to strengthen cooperation between the United States and Mexico in improving the environment of the border area. The key objectives of this first stage plan were to: strengthen enforcement of existing laws; reduce pollution through new initiatives; increase cooperative planning, training and education; and improve the understanding of the border environment.

Current Environmental Protection Efforts

Bilateral programs have responded to the changing environmental conditions along the U.S.-Mexico border. For example, as the prospect of NAFTA and its passage brought anticipations of economic growth in the border area, there has been an urgent need to respond to priority environmental concerns not being adequately addressed. Accordingly, the Clinton Administration has expanded the scope of EPA's work along the border to include initiatives aimed at:

- tougher environmental enforcement;
- improving environmental quality;
- promoting environmental justice among the border region's disadvantaged minorities;
- financing the border's environmental infrastructure deficiencies; and
- empowering border community groups to improve their environment through increased public participation.



Construction of the Nuevo Laredo Wastewater Treatment Facility.

Tougher Environmental Enforcement

The U.S. and Mexico are working together to ensure compliance with environmental laws on both sides of the border. The two countries' environmental agencies are increasing their own enforcement capacity, pursuing violators, and investigating cases involving transboundary pollution along the U.S.-Mexico border.

The two countries are collaborating to increase environmental enforcement capacity in Mexico through training of over 370 Mexican inspectors and cooperating in the development of in-house training capacity for Mexican inspectors. From its creation in 1992 through March 1994, Mexico's SEDESOL has conducted over 19,000 inspections, almost 3,500 of them in border states, including over 2,000 at *maquiladora* facilities. During this period, SEDESOL closed or partially closed 232 border area facilities (including 208 *maquiladoras*) for environmental violations.

The growing enforcement network has resulted in enhanced cooperation among the U.S. local, state, and federal agencies that are involved with enforcing environmental laws. For ex-

ample, a Task Force in San Diego County, California made up of state and local environmental groups, public health and law enforcement officials, the U.S. Customs Service, FBI, and EPA, has been working to detect environmental violations. The Task Force activities have encouraged increased cooperation among the U.S. and Mexican Customs Services in detecting illegal waste shipments, which has lead to criminal prosecutions.

EPA is providing grants to state environmental enforcement agencies to support their efforts to identify environmental violations in the border area. Texas launched a comprehensive border enforcement program, which coordinates field training and surveillance activity for illegal waste shipments with the U.S. Customs Service to identify violations in the border area. New Mexico is developing a full-time inspector program to focus on enforcement of air, water, and hazardous waste laws in the border area.

EPA, the Department of Justice and the states of Arizona and New Mexico have signed agreements creating Natural Resources Protection Coordinating Committees to provide communication and coordination of enforcement activities among local, state, federal, and corresponding Mexican agencies. A Strike Force, created by Texas' Attorney General and supported by EPA and the Department of Housing and Urban Development,

Binational emergency response exercises at the Brownsville-Matamoros port of entry.

is utilizing innovative enforcement techniques to attack the problem of environmental degradation in Texas' colonias communities.

Improving Environmental Quality

As the enforcement of existing environmental laws and regulations on both sides of the border is strengthened, the amount of pollution in the environment will decline. In addition, the Mexican and U.S. governments have undertaken a number of new initiatives in collaboration with state and local governments to provide further environmental protection for the border environment.

The following are recent initiatives related to water, air, hazardous waste, emergency response, and pollution prevention.

Increase Wastewater Treatment

Wastewater treatment activities are a central component of bilateral cooperative efforts in the border area. Currently, work is underway to construct the Tijuana International Wastewater Treatment Facility. When complete, this $383 million project will reduce pollution of the Tijuana River and thus protect the National Estuarine Research Reserve and the Pacific coastline south of San Diego.

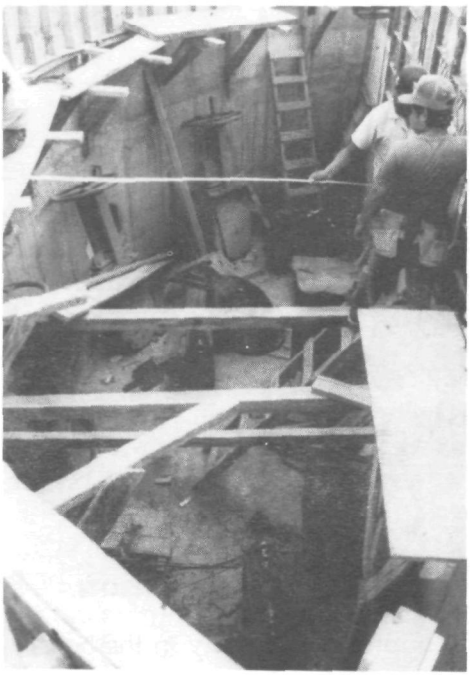
Unsafe drinking water supplies remains the single biggest public health concern for disadvantages communities on both sides of the U.S.-Mexico border.

This fall, work will also be completed on the $50 million wastewater treatment plant serving the sister city communities of Nuevo Laredo/Laredo. Planning has also begun for the expansion of the international wastewater facility in Nogales, Arizona and a facility to treat wastewater in the Imperial Valley/Mexicali border region.

Air Pollution Mitigation

To improve air quality in the border region, emissions inventories and monitoring networks are being developed for priority binational air basins,

including San Diego/Tijuana, Imperial Valley/Mexicali, El Paso/Ciudad Juarez, and Ambos Nogales to determine ambient air pollution concentrations, apportion sources and their relative impacts, recommend cost effective control strategies, and measure progress/compliance. Baseline air quality data are being gathered in currently unmonitored areas. In addition, major non-urban sources of air pollution will be addressed through a modified source review process for all sources that may impact the other country and through specialized ad hoc agreements.



Under NAFTA, the BECC and NADBank have been established to facilitate the financing of wastewater treatment facilities in the border region.

Hazardous Waste Management

With the passage of NAFTA, a number of changes are expected during the coming years in the movement and generation of hazardous waste in the border region. In particular, the current Mexican statutory requirement that all wastes generated by *maquiladoras* be returned to the U.S. may be phased out. Additionally, new hazardous waste disposal facilities are expected to open in Mexico. While the border area will continue to become more industrialized though the end of the decade, its relative importance as an industrial zone will likely diminish as Mexico's interior becomes more developed. The border, however, will continue to be important as a transit zone. Increased traffic of hazardous waste and enforcement under NAFTA will likely lead to increased repatriation of illegally exported waste and hence the need to establish EPA legal authorities with respect to repatriation.

EPA and SEDESOL have developed HAZTRAKS, a binational database that records information on waste that is imported and exported from both countries and compiles it to show the total volume and different types of waste crossing the US/Mexican border. The system aims to track transboundary movements of hazardous wastes on a "cradle to grave" basis.

Together EPA and SEDESOL have strengthened the consultative process for siting new waste facilities

in the border area. EPA continues to provide technical assistance to SEDESOL to improve Mexican capacity to identify inactive and abandoned waste sites, as well as to improve permitting and the operation of waste facilities. In addition, EPA is working to assist SEDESOL in closing the Nogales landfill and opening a new solid waste disposal facility.

Emergency Planning and Response

Because of widespread concern about the possibility of spills or accidents involving hazardous substances in densely-populated, extensively-traveled areas along the border, EPA and SEDESOL have been working to expand planning, training, and education efforts related to chemical accidents and emergencies. During the last two years, the U.S. and Mexico have dramatically enhanced the emergency response capabilities of border area communities through a series of contingency plan exercises and training programs for local officials.

To further enhance these contingency planning and response efforts, EPA has also recently teamed with the International City/County

Children playing near boundary of the U.S.-Mexico border.

Management Association (ICMA) to launch a "Sister Cities Initiative." This initiative seeks to help sister city pairs share innovative techniques to reduce the risk of chemical accidents. EPA has also completed sister-city profiles that describe the location of hazardous waste materials at facilities and the transport of these materials along the border.

Pollution Prevention

Pollution prevention is an innovative approach to environmental protection that promises substantial benefits in the border area. It is a relatively inexpensive way to protect the environment since the costs involved in preventing pollution often are dramatically lower than the costs of treatment and disposal. Because privately-owned businesses have an economic incentive to develop ways of minimizing waste, they are often willing to apply their own technical expertise in voluntary programs, thus reducing the need for government regulation.

Furthermore, pollution prevention efforts lessen the possibility of hazardous spills or accidents occurring either within or outside a facility's boundaries because less hazardous material needs to be handled, transported, and disposed. In promoting pollution prevention in the border region, EPA and SEDESOL are undertaking a variety of initiatives including: the development of pollution prevention manuals for specific industries, including metal and wood finishing, and the support of pollution prevention programs to be developed by a consortium of border area universities.

Among those border residents targeted for assistance by EPA are those living in colonias, unincorporated communities without adequate drinking water or sewage hook-ups.

Promoting Environmental Justice

Border communities are among the poorest in the U.S. More than 20 percent of the population lives below the poverty level, as compared to 12 percent for the rest of the United States. As such, border residents are more often subjected to poor environmental and public health conditions.

President Clinton signed Executive Order No. 12898, Federal

Actions to Address Environmental Justice in Minority Populations and Low-income Populations, on February 11, 1994. One provision of the Order is that all covered federal agencies begin an inter-agency review of federal, state, and local regulations and enforcement that affect communities of color and low income, such as those found on the border. The objective is to formulate an aggressive investigation of the inequalities in exposure to environmental hazards and to develop effective programs to address these inequalities.

Among those border residents targeted for assistance by EPA are those living in colonias, unincorporated communities without adequate drinking water or sewage hook-ups. Located mostly along the border region of Texas and New Mexico, there are currently over 300,000 U.S. residents living in colonias. Most colonias residents live without clean running water or working toilets in their homes and are, hence, susceptible to water-borne diseases such as hepatitis A and Shigella dysentery. According to a University of Texas study, 85-90 percent of colonia residents had been infected by Hepatitis A by the age of 35 years.

To address the colonias problem, EPA has awarded the States of Texas and New Mexico a series of loans and grants, totalling $60 million over the last few years to provide environmental services.

Financing Border Environmental Infrastructure Needs

To address the long-neglected environmental infrastructure needs of the border region, the U.S. and Mexico have established two new institutions: the Border Environment Cooperation Commission (BECC) to work with local communities to develop plans for better meeting their need for environ-

The BECC and NADBank will work closely with EPA to develop innovative solutions to finance priority environmental infrastructure projects for communities along the U.S.-Mexico border.

mental facilities (including wastewater treatment plants, drinking water systems, as well as solid waste disposal facilities) and the North American Development Bank (NADBank) to leverage private sector capital to finance the construction of border environmental infrastructure projects. The BECC and the NADBank are located in Ciudad Juarez, Chihuahua and San Antonio, Texas respectively and will work closely with EPA to develop innovative solutions to finance priority environmental infrastructure projects for communities along the U.S.-Mexico border.

Empowerment Through Public Participation

EPA recognizes that the people who live and work along the border must play an essential role in binational plans and activities to protect their border environment. Accordingly EPA has taken several steps to ensure that public participation is incorporated into its ongoing programmatic activities in the border region.

In order to promote greater public outreach EPA is establishing border program offices in San Diego, California and El Paso, Texas. These offices will be charged with the management of bilateral programs established by the U.S. and Mexico as well as coordinating these initiatives with state and local governments, industry, academia, and environmental & community groups in the border area.

On-going public input on border environmental issues will also be sought by EPA through the Congressionally established Good Neighbor Environmental Board made up of 30 border area decision makers from local and state government, business, academia, and non-governmental organizations. Though the Good Neighbor Environmental Board has been specifically charged with advising the President and the U.S. Congress on environmental matters specific to the border, EPA and other Federal agencies look forward to working closely with the Board in obtaining advice that will shape future governmental initiatives in the border area.

To promote greater public participation and the initiation of regional border environmental activities aimed at complimenting on-going EPA programmatic activities, EPA has provided grant funding to a variety of border area state and local government agencies as well as environmental non-government organizations active in the region. Details on EPA border area grant funding may be obtained by contacting EPA's Mexico Program.

For Further Information

For more information on EPA's involvement along the U.S.-Mexico border and elsewhere in Mexico, please contact:

EPA Border Programs

EPA Headquarters:
William Nitze
Assistant Administrator
Office of International Activities
Attention: Mexico Team
401 M Street, SW
Washington, D.C. 20460
Tel: (202) 260-4870

EPA Border Program Office
4150 Rio Bravo
El Paso, Texas 79901
(915) 533-7273

EPA Region 6
Attention: Oscar Ramirez
1445 Ross Avenue, 12th Floor
Dallas, TX 75202-2733
Tel: (214) 665-2100

EPA Region 9
Attention: John Hamill
75 Hawthorne Street
San Francisco, CA 94105
Tel: (415) 744-1281

EPA-Mexico

Enrique Manzanilla
Environmental Attache
U.S. Embassy-Mexico
P.O. Box 3087
Laredo, Texas 78044-3087
Tel: 011-52-5-211-0042, ext. 3595

Good Neighbor Environmental Board

Robert Hardaker
Designated Federal Officer
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460
Tel: (202) 260-2477

Case Study

Tijuana International Wastewater Treatment Facility

One major reason for environmental problems along the U.S.-Mexico border is the rapid population growth in the border communities. Tijuana, Baja California, Mexico has grown from just 500 people 70 years ago, to a city of one million people today and houses more than 550 *maquiladora* manufacturing plants. Tijuana's population growth has overwhelmed its sewage collection and treatment systems, with frequent overflows and breakdowns.

The "fugitive" sewage, as the overflow is called, flows into the Tijuana River, across the border near San Diego, and into the Pacific Ocean near popular recreation beaches. The danger to public health has forced authorities to close the beaches many times. Both the state of California and the city of San Diego have declared states of emergency due to the contaminated water.

Working with other federal, state and city government agencies, and with the U.S. and Mexican sections of the International Boundary and Water Commission, EPA has requested and received from Congress nearly $190 million to build an international wastewater treatment plant on the border, with more money requested to meet the U.S. share of the total cost of $383 million for the plant and its ocean outfall. A spate of sewage overflows starting in late 1993 led EPA and its project partners to accelerate design and construction to capture the overflows and at least partially treat them by 1995. The project is scheduled for completion in 1998.

The Tijuana plant is being built almost entirely with government grant funds. Future border environmental projects, however, may be financed through an $8 billion pool of government and private-sector funds anticipated for border pollution control over the next 10 years. This money, including about $2 billion from the NADBank, is far more than has ever been available for border pollution control. The BECC and NADBank provide a new way for communities along the border to have greater control and input in fulfilling their pollution control needs on the U.S.-Mexico border.

Case Study

The El Paso-Cd. Juarez Air Basin

Don Bartletti

The U.S. and Mexico are working to complete an air quality modelling analysis for the El Paso-Ciudad Juarez-Sunland Park airshed. The analysis is to evaluate candidate air pollution control strategies for their efficacy in improving air quality. This type of air quality monitoring requires a substantiable amount of background data, which the two countries are cooperating to obtain. The participating U.S. and Mexican agencies are also developing air pollution control strategies through a local work group, known as the Paso del Norte Air Quality Task Force. The Task Force, which was formed in 1993, is pursuing air pollution control strategies that can be quickly and easily implemented in order to achieve rapid results.

To date, three major ambient air field studies have been undertaken in Ciudad Juarez—a vehicular emissions survey and two major traffic surveys. Ambient monitoring networks throughout the airshed have also been expanded and upgraded, with four new, permanent air monitoring stations established in Ciudad Juarez. With EPA grant funds, the state of Texas is planning to establish a new central El Paso air monitoring site at or near the maximum air pollution concentration location. Another state sponsored project, supported by EPA funds, is the expansion of the air emissions inventory efforts with Mexico in Ciudad Juarez. By late 1994, the investigators hope to compile the first Ciudad Juarez vehicular emissions inventory.

In March 1994, the U.S. Department of Energy committed funds to do technical studies of the air pollution problem in the area, which EPA anticipates will contribute to an accelerated schedule of the El Paso-Ciudad Juarez-Sunland Park modelling analysis. EPA's Region 6 in Dallas, the Department of Energy, and the state and local governments have discussed this new endeavor and are planning their technical efforts for joint participation.