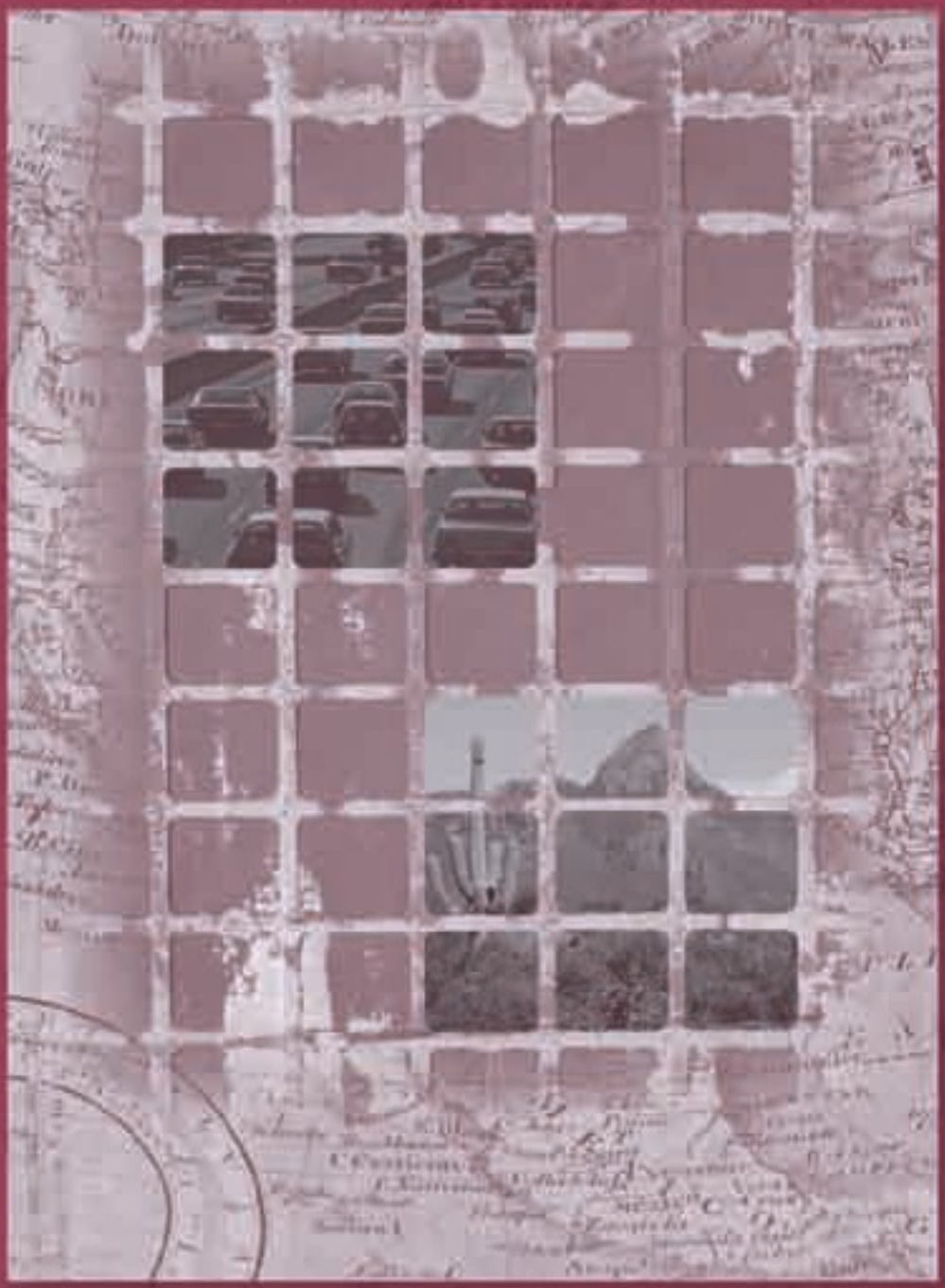
U.S.-Mexico Border Environment

Air Quality and Transportation & Cultural and Natural Resources



Ninth Report of the Good Neighbor Environmental Board to the President and Congress of the United States

GNEB
The Good Neighbor Environmental Board

March 2006

About the Board

The Good Neighbor Environmental Board is an independent U.S. Presidential advisory committee that operates under the Federal Advisory Committee Act (FACA). Its mission is to advise the president and Congress of the United States on "good neighbor" environmental and infrastructure practices along the U.S. border with Mexico. The Board does not carry out border-region environmental activities of its own, nor does it have a budget to fund border projects. Rather, its unique role is to step back as an expert, nonpartisan advisor to the president and Congress and recommend how the federal government can most effectively work with its many partners to improve the environment along the U.S.-Mexico border. Under presidential executive order, its administrative activities were assigned to the U.S. Environmental Protection Agency (EPA) and are carried out by the EPA Office of Cooperative Environmental Management (OCEM).

Membership on the Board is extremely diverse. It includes senior officials from a number of U.S. federal government agencies and from each of the four U.S. border states - Arizona, California, New Mexico and Texas. It also includes representatives from the tribal; local government; non-profit; ranching and grazing; business; and academic sectors. In addition, the Board maintains dialogue with its counterpart Mexican environmental agency advisory groups, the Consejos Consultivos para el Desarrollo Sustenable (CCDS), referred to as Consejos, to help ensure that it remains informed about issues on the Mexican side of the border.

The Board meets three times each calendar year in various U.S. border communities and in Washington, D.C. Its advice is submitted to the U.S. president and Congress in the form of annual reports that contain recommendations for action. These recommendations are submitted after consensus is reached across the entire membership. They are shaped by the combined expertise of the Board members, by the Board's ongoing dialogue with its Consejo counterpart groups, and by the speakers and concerned citizens from both sides of the border who attend its meetings in border communities. The Board also occasionally issues Comment Letters during the year to provide input on timely topics. One of the most frequently recurring themes in its advice is that support for cross-border cooperation is essential if sustained progress is to be made on environmental issues along the U.S.-Mexico border.

All meetings of the Good Neighbor Environmental Board are open to the public. For more information, see the Board website, www.epa.gov/ocem/gneb or contact the Designated Federal Officer, Elaine Koerner, at (202) 233-0069 or koerner.elaine@epa.gov.

Notice: This report was written to fulfill the mission of the Good Neighbor Environmental Board (the Board), a public advisory committee authorized under Section 6 of the Enterprise for the Americas Initiative Act, 7 USC, Section 5404. It is the Board's Ninth Report to the President and Congress of the United States. The U.S. Environmental Protection Agency (EPA) manages the operations of the Board. However, this report has not been reviewed for approval by EPA and, hence, the report's contents and recommendations do not necessarily represent the views and policies of EPA, nor of other agencies in the Executive Branch of the federal government, nor does mention of trade names or commercial products constitute a recommendation for use.

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An electronic copy of this report can be found at www.epa.gov/ocem/gneb

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GNEB
The Good Neighbor Environmental Board
an independent federal advisory committee
on environmental sustainability in the
U.S.-Mexico border region

March 14, 2006

The President
The Vice President
The Speaker of the House of Representatives

On behalf of the Good Neighbor Environmental Board, your advisor on environmental and infrastructure conditions along the U.S.-Mexico border, I am pleased to submit to you the Ninth Report of the Good Neighbor Environmental Board to the President and Congress of the United States.

This year, we address two topics: Air Quality and Transportation, and Cultural and Natural Resources. The crux of our advice for retaining good air quality in the border region, while also supporting transportation and trade activities, is for federal policymakers to concentrate on three areas: 1) border stations and transportation infrastructure; 2) emissions reduction; and 3) public transit. For the second topic, protecting cultural and natural resources along the border, the Board also singles out three areas for special attention: 1) capacity building through partnerships; 2) controlling growth; and 3) coordination of security efforts.

We appreciate the opportunity to offer these recommendations to you in this, our Ninth Report, and respectfully request a response. In addition, we welcome continued dialogue with the Executive Branch and Congress on implementation of our advice.

Respectfully yours,

Paul Ganster

Paul Ganster,
Chair

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Good Neighbor Environmental Board Ninth Report
Recommendations at a Glance

Air Quality and Transportation

To both retain good air quality and support transportation activities along the U.S.-Mexico border, the Good Neighbor Environmental Board suggests the following:

Border Stations and Transportation Infrastructure: Bolster infrastructure, technology, personnel and related activities through substantial new funding, and intensify long-range planning and coordination at the binational, national, state and locals levels to cope with the congestion at border crossings, and thus reduce air pollution.

Emissions: Harness new and emerging technologies and fuels to reduce emissions from diesel trucks, buses, municipal and private fleets and passenger vehicles, and identify private/public funding sources to accelerate the process.

Public Transit and Alternatives to Driving Alone: Encourage public transportation, ride-sharing, car-sharing, biking and walking in border cities so that fewer people will drive alone, thus reducing motor vehicle trips and the emissions of pollutants.

Cultural and Natural Resources

To better protect cultural and natural resources along the U.S.-Mexico border, the Good Neighbor Environmental Board suggests the following:

Capacity Building: Efficiently use and leverage existing federal support initiatives such as the National Heritage Area program. Establish more public-private partnerships to increase both funding and staffing levels. Foster more public involvement in cultural resources preservation through stronger public education about its value.

Growth: Increase partnerships between preservation groups and agencies to purchase land with high-value cultural and natural resources, thus helping to manage growth. Create incentive programs to encourage private landowners and developers to voluntarily protect cultural resources. Encourage tribal governments and agencies to participate in government-to-government consultation to minimize damage to cultural resources, including sacred sites.

Security: Undertake border security efforts with recognition of the need to protect cultural and natural resources. Improve efforts in interaction, coordination and cooperation among federal, tribal, state and local governments. Examine methods to reduce the number of undocumented migrants crossing border tribal lands, thus reducing associated damage to sacred sites, burial grounds, archeological sites, important ecosystems, and traditional lifestyles.

CALIFORNIA
ARIZONA
NEW MEXICO
TEXAS
BAJA CALIFORNIA NORTE
SONORA
CHIHUAHUA
COAHUILA
NUEVO LEON
TAMAULIPAS
Sunland Park
El Paso
Columbus
Ciudad Juarez
Las Palomas
Douglas
Agua Prieta
Naco
Nogales
Nogales
Naco
Yuma
Calexico
Mexicali
San Luis Rio Colorado
San Diego
Tijuana
Presidio
Ojinaga
Del Rio
Ciudad Acuna
Eagle Pass
Piedras Negras
Laredo
Nuevo Laredo
Mc Allen
Brownsville
Reynosa
Matamoros
Super City
100km Border Buffer
State Boundary

OVERVIEW

For both topics, the Board's recommendations reflect its continued call for action from strong partnerships, equipped with adequate resources, that span sectors and geographic boundaries.

This year's report, the Board's Ninth Report to the President and Congress, provides advice from two angles on maintaining healthy environmental quality along the U.S.-Mexico border. First, it examines the relationship between the region's air quality and the transportation activities upon which its economy — indeed, the nation's economy — depends. The second topic, equally complex, is the interplay among ecosystem conditions, natural resources, and the state of the region's invaluable cultural resources such as its archaeological sites and its tribal sacred springs and mountains. For both topics, the Board's recommendations reflect its continued call for action from strong partnerships, equipped with adequate resources, that span sectors and geographic boundaries.

Following the main section is this year's Business Report, which contains several articles that are a departure from tradition. For example, readers are provided with an informative snapshot of 2005 border-region environmental activities carried out by all nine federal agencies that are represented on the Board. In addition, the Board's Performance Measures Workgroup provides an update on its efforts to measure the impact of the Board's voice. Also, an article on the Consejos Consultivos de Desarrollo Sustentable (Consejos) — public advisory boards in Mexico that mirror the role of the Board in the United States — provides an overview of their structure and activities. Finally, in addition to the regular feature of Board meeting summaries, this year the summaries are followed by a listing of the more than 100 members of the public and speakers who attended these meetings. As in previous years, the Board benefited enormously from the opportunity to talk directly with border-community officials and residents, and its advice continues to be enriched by these exchanges.

For the coming year, the Board will deliberate what, perhaps, is among the most challenging topics the border region faces: the delicate but essential balancing act of maintaining strong border-region security, while also vigilantly continuing to protect the region's often fragile environment. The outcome of these deliberations will be published in its Tenth Report to the President and Congress, due out in the spring of 2007.

SECTION - 1

Air Quality and Transportation

Recommendations

To both retain good air quality and support transportation activities along the U.S.-Mexico border, the Good Neighbor Environmental Board suggests the following:

BORDER STATIONS AND TRANSPORTATION INFRASTRUCTURE:
Bolster infrastructure, technology, personnel and related activities through substantial new funding, and intensify long-range planning and coordination at the binational, national, state and locals levels to cope with the congestion at border crossings, and thus reduce air pollution.

EMISSIONS:
Harness new and emerging technologies and fuels to reduce emissions from diesel trucks, buses, municipal and private fleets and passenger vehicles, and identify private/public funding sources to accelerate the process.

PUBLIC TRANSIT AND ALTERNATIVES TO DRIVING ALONE:
Encourage public transportation, ridesharing, car-sharing, biking and walking in border cities so that fewer people will drive alone, thus reducing motor vehicle trips and the emissions of pollutants.

INTRODUCTION

Air quality along the 1,952-mile international border that separates the United States and Mexico is of great concern due to its effect on public health. All or parts of several major metropolitan areas do not meet U.S. Environmental Protection Agency (U.S. EPA) standards for maximum allowable levels of one of three air pollutants: ozone, carbon monoxide, and 10-micron particulate matter (PM_{10}).

Border region air pollutants originate from a variety of sources, including open air burning (trash, residential heating, and brick kilns,) unpaved roads, windblown dust, power plants, area sources such as dry cleaners, industrial facilities, and transportation activities. These sources can affect air quality by increasing the level of pollutants such as particulate matter, carbon monoxide, ozone, nitrogen dioxide and toxic air contaminants. According to the U.S. EPA, the California Air Resources Board and the Centers for Disease Control and Prevention, these air pollutants can trigger and/or worsen already existing respiratory conditions and, in some cases, go so far as to cause lung damage or premature death. The Good Neighbor Environmental Board already has discussed some of these sources, such as power plants, in its Fifth Report [www.epa.gov/ocem/gneb].

The cause-effect relationship between transportation and air quality takes different forms at different locations. For instance, in the San Diego–Tijuana region, ozone is a leading air pollutant, where problems resulting from locally-produced emissions are compounded by emissions that drift southward from the Los Angeles area. By contrast, in the Imperial and Mexicali Valleys, Nogales area, and El Paso–Ciudad Juárez, particulate matter such as dust from unpaved streets and vehicle emissions are of concern.

Another factor that can influence air quality is the geographic spread of the population. Approximately 13 million people reside in the U.S.-Mexico border region. The vast majority of these residents live in one of the region's 14 "sister cities"—pairs of cities that lie across the international boundary from each other. These communities extend from San Diego–Tijuana on the Pacific, to Brownsville–Matamoros near the Gulf of Mexico. Residents routinely cross the border to visit family and friends, shop, and commute to work or school.

Recent decades have witnessed continued population growth as well as economic growth in the region. Not surprisingly, this trend has resulted in a parallel increase in transportation activities. Hundreds of thousands of automobiles, trucks and rail cars cross the border each day.

According to the U.S. Department of Transportation's Bureau of Transportation Statistics (BTS), passenger vehicle crossings into the United States increased by about 38 percent between 1995 and 2004, from 66.4 million to 91.3 million crossings. Besides this increase in passenger traffic, the region has experienced a similar surge in commercial crossings. BTS estimates that between 1995 and 2004, truck crossings from Mexico to the United States rose by about 57 percent, from 2.86 million to 4.50 million. The North American Free Trade Agreement (NAFTA) contributed significantly to this growth. Following its implementation in 1994, bilateral trade between the United States and Mexico increased dramatically, with Mexico overtaking Japan as the United States' second-largest trading partner (after Canada). Trade between the two countries rose from $108 billion to $267 billion between 1995 and 2004, according to the U.S. Department of Commerce.

Thriving international trade has helped to fuel the increase in both passenger and commercial border crossings. Maquiladoras (manufacturing assembly plants in Mexico) have frequently been located near border crossings. They have been a strong magnet for internal migration northward from the interior of Mexico. Population growth, coupled with the increase in income derived from the maquiladoras, has contributed to the increase in the number of passenger vehicle crossings. Concurrently, the increased flow of goods from maquiladora plants has resulted in greater use of commercial trucks. In Laredo alone, for instance, northbound truck traffic grew by 34 percent between 1996 and 2003, to 1.35 million crossings, according to the Texas Center for Border Economic and Enterprise Development. The highways that carry the increased commercial traffic have evolved into international trade corridors of great importance to the economies of both the United States and Mexico. At the border, these corridors

are funneled into only a handful of major ports of entry. The great increase in bilateral trade has benefited many regions in both countries. But the negative impacts of increased truck traffic—including saturated border crossing facilities, increased traffic in border communities, and more air pollution—have been absorbed by only one region, the border.

U.S.-Mexico Border Crossings

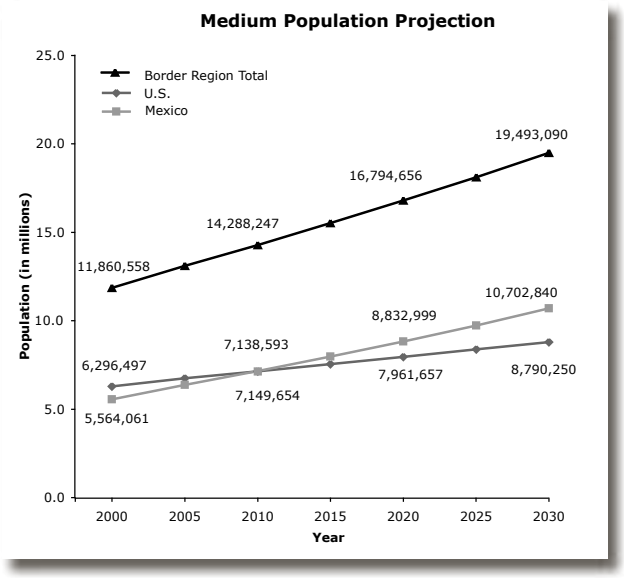
Bridge/Border Crossing Name	Location	Mex. City/Town	Status[1]	Form
Las Americas Pedestrian Bridge	San Diego, CA	Tijuana, Baja Calif.	Proposed	PED
Virginia Avenue Land Border Crossing	San Diego, CA	Tijuana, Baja Calif.	Proposed	
San Ysidro Land Border Crossing	San Diego, CA	Tijuana, Baja Calif.	Existing	PED, PAS, RR
Otay Mesa Land Border Crossing	Otay Mesa, CA	Tijuana, Baja Calif.	Existing	
Otay Mesa II (Otay Mesa East) Land Border Crossing	East Otay Mesa, CA	Tijuana, Baja Calif.	Proposed	
Tecate Land Border Crossing	Tecate, CA	Tecate, Baja Calif.	Existing	
Tecate-Campo Rail Crossing	Tecate, CA	Tecate, Baja Calif.	Existing	RR
Calexico Land Border Crossing	Calexico, CA	Mexicali, Baja Calif.	Existing	
Calexico Rail Crossing	Calexico, CA	Mexicali, Baja Calif.	Existing	RR
Calexico East Land Border Crossing	Calexico East, CA	Mexicali, Baja Calif.	Existing	
Andrade Land Border Crossing	Andrade, CA	Algodones, Baja Calif.	Existing	
Andrade II Land Border Crossing	Andrade, CA	Algodones, Baja Calif.	Proposed	
San Luis Land Border Crossing	San Luis, AZ	San Luis Rio Colorado, Son.	Existing	
San Luis II Land Border Crossing	San Luis, AZ	San Luis Rio Colorado, Son.	Proposed	COM
Lukeville Land Border Crossing	Lukeville, AZ	Sonoyta, Son.	Existing	
Sasabe Land Border Crossing	Sasabe, AZ	Sasabe, Son.	Existing	
Nogales-Mariposa Land Border Crossing	Nogales, AZ	Nogales, Son.	Existing	PED, PAS, COM
Nogales-DeConcini Land Border Crossing	Nogales, AZ	Nogales, Son.	Existing	PED, PAS
Nogales Rail Crossing	Nogales, AZ	Nogales, Son.	Existing	RR
Nogales East Morley Gate Pedestrian Crossing	Nogales, AZ	Nogales, Son.	Existin	PED
Naco Land Border Crossing	Naco, AZ	Naco, Son.	Existing	
Naco Rail Crossing	Naco, AZ	Naco, Son.	Closed	RR
Douglas Land Border Crossing	Douglas, AZ	Agua Prieta, Son.	Existing	
Antelope Wells Land Border Crossing	Antelope Wells, NM	El Berrendo, Chih.	Existing	
Columbus Land Border Crossing	Columbus, NM	Las Palomas, Chih.	Existing	
Santa Teresa Land Border Crossing	Santa Tersa, NM	San Jeronimo, Chih.	Existing	PAS, COM
Sunland Park Land Border Crossing	Sunland Park, NM	Anapra, Chih.	Proposed	
Burlington Northern-Santa Fe RR Bridge	El Paso, TX	Cd. Juárez, Chih.	Existing	RR
Paso Del Norte (Santa Fe Street) Bridge	El Paso, TX	Cd. Juárez, Chih.	Existing	PED, PAS
Union Pacific RR Bridge	El Paso, TX	Cd. Juárez, Chih.	Existing	RR
Good Neighbor (Stanton Street) Bridge	El Paso, TX	Cd. Juárez, Chih.	Existing	PED, PAS
Bridge of the Americas	El Paso, TX	Cd. Juárez, Chih.	Existing	PED, PAS, COM
Ysleta-Zaragoza Bridge	El Paso, TX	Zaragoza, Chih.	Existing	PED, PAS, COM
Socorro Railroad Bridge	El Paso County, TX	Municipality of Cd. Juarez, Chih.	Proposed	RR

Tornillo-Guadalupe Bridge	**El Paso County, TX**	Municipality of Guadalupe, Chih.	Proposed	PED, PAS, COM
Fabens Bridge	**Fabens, TX**	Caseta, Chih.	Existing	PED, PAS
Fort Hancock-El Porvenir Bridge	**Fort Hancock, TX**	El Porvenir, Chih.	Existing	PED, PAS
Presidio-Ojinaga (Hwy 67)	**Presidio, TX**	Ojinaga, Chih.	Existing	PED, PAS, COM
Presidio-Ojinaga Railroad	**Presidio, TX**	Ojinaga, Chih.	Existing	RR
Heath Canyon-La Linda (Hallie Stillwell Memorial) Bridge	**Brewster County, TX**	La Linda, Coah.	Closed	PAS
Lake Amistad Dam Crossing	**Val Verde County, TX**	Cd. Acuná, Coah.	Existing	PAS
Del Rio I Bridge	**Del Rio, TX**	Cd. Acuná, Coah.	Existing	PED, PAS, COM
Del Rio II Bridge	**Del Rio, TX**	Cd. Acuná, Coah.	Proposed	
Eagle Pass I Bridge	**Eagle Pass, TX**	Piedras Negras, Coah.	Existing	PED, PAS
Eagle Pass II (Camino Real) Bridge	**Eagle Pass, TX**	Piedras Negras, Coah.	Existing	PED, PAS, COM
Eagle Pass-Piedras Negras RR Bridge	**Eagle Pass, TX**	Piedras Negras, Coah.	Existing	RR
Laredo Columbia Railroad Bridge	**Webb County, TX**	Colombia, Nvo. Leon	Proposed	RR
Laredo-Columbia (Solidarity Bridge)	**Webb County, TX**	Colombia, Nvo. Leon	Existing	PED, PAS, COM
Laredo-Nuevo Laredo IV (World Trade)	**Laredo, TX**	Nuevo Laredo, Tam.	Existing	PED, COM
Laredo New International Railroad Bridge	**Laredo, TX**	Nuevo Laredo, Tam.	Proposed	RR
Laredo-Nuevo Laredo Railroad Bridge	**Laredo, TX**	Nuevo Laredo, Tam.	Existing	RR
Laredo-Nuevo Laredo I (Gateway to the Americas)	**Laredo, TX**	Nuevo Laredo, Tam.	Existing	PED, PAS
Laredo-Nuevo Laredo II (Lincoln-Juarez)	**Laredo, TX**	Nuevo Laredo, Tam.	Existing	PAS
Laredo V (City of Laredo)	**Laredo, TX**	Nuevo Laredo, Tam.	Proposed	
Laredo V Unity Bridge (Webb County)	**Laredo, TX**	Nuevo Laredo, Tam.	Proposed	
Lake Falcon Dam Crossing	**Falcon Heights, TX**	Nueva Cd. Guerrero, Tam.	Existing	PAS
Roma-Cd. Miguel Aleman (Hwy 260)	**Roma, TX**	Cd. Miguel Aleman, Tam.	Existing	PED, PAS, COM
Roma-Cd. Aleman Suspension	**Roma, TX**	Cd. Miguel Aleman, Tam.	Closed	
Rio Grande City-Cd. Camargo	**Rio Grande City, TX**	Cd. Camargo, Tam.	Existing	PAS
Los Ebanos International Bridge	**Los Ebanos, TX**	Cd. Gustavo Diaz-Ordaz, Tam.	Proposed	
Los Ebanos-Cd. Diaz-Ordaz Ferry	**Los Ebanos, TX**	Cd. Gustavo Diaz-Ordaz, Tam.	Existing	FER
Anzalduas International Crossing	**Mission, TX**	Reynosa, Tam.	Proposed	
McAllen-Hidalgo-Reynosa Bridge	**Hidalgo, TX**	Reynosa, Tam.	Existing	PED, PAS
Pharr-Reynosa International Bridge	**Pharr, TX**	Reynosa, Tam.	Existing	PED, PAS, COM
Donna-Rio Bravo International	**Donna, TX**	Rio Bravo, Tam.	Proposed	
Progreso-Nuevo Progreso International Bridge	**Progresso, TX**	Nuevo Progreso, Tam.	Existing	PED, PAS, COM
Los Indios-Lucio Blanco (Free Trade Bridge)	**Los Indios, TX**	Lucio Blanco, Tam.	Existing	PED, PAS, COM
Brownsville West Rail Bypass	**Brownsville, TX**	Matamoros, Tam.	Proposed	RR
B&M Railroad/Vehicle (Mexico Street)	**Brownsville, TX**	Matamoros, Tam.	Existing	PED, PAS, RR
Brownsville-Matamoros (Gateway International)	**Brownsville, TX**	Matamoros, Tam.	Existing	PED, PAS
Los Tomates-Matamoros III (Veterans International)	**Brownsville, TX**	Matamoros, Tam.	Existing	PED, PAS, COM
Port of Brownsville Bridge	**Brownsville, TX**	Matamoros, Tam.	Proposed	

Total Crossings Listed = 72; Total Existing = 51; Total Proposed = 18; Total Closed = 3.
"Sources: U.S.-Mexico International Boundary and Water Commission (IBWC), U.S. Bureau of Transportation Statistics, Good Neighbor Environmental Board (GNEB), and U.S. Department of State."
Note: This table is an UNOFFICIAL compilation of Border Crossings.
"1 - The word ""Proposed"" is used in the broadest sense possible, and refers to any crossing that was reported to GNEB as planned, envisioned, or in the works. "
"2 - Key for ""Form"" category: PED = Pedestrian; PAS = Passenger Vehicles; COM = Commercial Vehicles; RR = Railroad; FER = Passenger Ferry"

Fewer than 50 official ports of entry can be found along the entire U.S.-Mexico border, and they vary greatly in form. They range from small facilities that service only the local community, to larger border stations that form part of a regional network, to the major complexes that serve as the gateways to the international trade corridors. At one end of the spectrum is the hand-pulled ferry at Los Ebanos, in the Lower Rio Grande Valley, where three cars can cross at a time—less than 34,000 cars negotiate the crossing each year (under 100 cars per day). At the other extreme is the 24-lane land port at San Ysidro, California, where roughly 17.4 million passenger vehicles cross into the United States each year. The major commercial crossings and their corresponding trade corridors include Laredo to I-35, El Paso to I-10 and north to I-25, Otay Mesa to I-5, the Lower Rio Grande bridges to U.S. 281 (and I-69 in the future) and Nogales to I-19 north to I-10.

Each vehicle crossing the border from Mexico must queue up for inspection as it enters the United States. Depending on the time of day and the port, the border crossing process may be smooth and with only a short delay, or it may consist of a wait of an hour or more. Southbound passenger traffic normally is not congested, as Mexico allows most cars to enter the border zone with only random checks. But significant delays sometimes do occur, as when U.S. Customs and Border Protection performs its periodic inspections of outbound vehicles.



The population of the U.S.-Mexico border region is expected to nearly double between 2000 and 2030, placing ever-greater strains on border crossings and border transportation infrastructure.
(Source: Southwest Consortium for Environmental Research and Policy)

The major sister cities of the region have felt the effects particularly strongly. Here, border crossings have become chronic choke points. And looming on the horizon is an additional scenario that could create even more cross-border traffic: As the ports of Los Angeles and Long Beach become increasingly congested, Mexicans seaports could serve as viable alternatives, and Mexico could become a "land-bridge" to the United States for millions of sea-borne containers each year.

Given projected economic and population growth, traffic on both sides of the border—and especially cross-border traffic—will continue to rise into the foreseeable future. [www.sandag.org] The additional traffic may produce additional environmental impacts, especially on air quality. Hopefully, improvements in vehicle and fuel technology that are currently in process, along with additional planned proactive measures, will help forestall any deterioration in air quality resulting from the additional cross-border traffic.

While dealing with this policy challenge would be difficult for any region, the U.S.-Mexico border region must contend with a particularly complicated set of management and resource issues. The United States and Mexico have very different legal systems and regulatory environments. The two nations also have a great disparity in their respective levels of economic development. In 2004, for example, according to the Central Intelligence Agency Fact Book, per capita GDP in the United States was $40,100, more than four times that of Mexico's figure of $9,600. Differences in standards, regulations, enforcement, and fuels only add to the air quality challenges.

The section that follows examines three policy areas—among the many—that play a significant role in determining the effects of transportation activities on the border region's air quality. They include: 1) border stations and the related transportation infrastructure; 2) emissions control; and 3) the use of mass transit and other transportation alternatives to driving alone. For each of the three areas, the Good Neighbor Environmental Board describes remaining challenges, provides examples of promising collaborative initiatives, and calls for specific actions that will result in improvements.

BORDER STATIONS AND TRANSPORTATION INFRASTRUCTURE

RECOMMENDATION - Bolster infrastructure, technology, personnel and related activities through substantial new funding, and intensify long-range planning and coordination at the binational, national, state and locals levels to cope with the congestion at border crossings, and thus reduce air pollution.

Border stations in the United States are built by the U.S. General Services Administration (GSA) and operated by U.S. Customs and Border Protection (CBP) within the Department of Homeland Security. At border stations, CBP inspectors perform the post-9/11 priority mission of keeping terrorists and terrorist weapons from entering the United States. They also carry out traditional border-related responsibilities such as stemming the tide of illegal drugs and illegal aliens, securing and facilitating legitimate trade and travel, and protecting the food supply and agriculture industry from sabotage, pests and disease. The most recent comprehensive initiative to expand border crossing infrastructure was the 1988 Southwest Border Capital Improvement Program, which provided $353 million for numerous projects along the U.S.-Mexico border. This program included upgrading many existing ports of entry as well as building new border stations at Calexico East (California), Santa Teresa (New Mexico), and Colombia, Pharr, Los Indios, and Veterans/Los Tomates (Texas). The program proved extremely helpful in meeting the increase in demand during the 1990s, particularly following the implementation of the North American Free Trade Agreement (NAFTA).

In recent years, however, improvements in U.S.-Mexico border crossing infrastructure have been episodic. Since the opening of the World Trade Bridge in Laredo in 2000, no major new border crossing has been built. The only new border stations built have been replacements for old, small facilities at Ft. Hancock, Texas, and Tecate, California. While there are plans for new crossings at locations such as San Luis, Arizona, and Mission, Texas, the focus of activity primarily has been confined to upgrading existing ports of entry.

On the transportation infrastructure side, the U.S. Department of Transportation and its Federal Highway Administration (FHWA) work with state departments of transportation and local metropolitan planning organizations on

Border crossings between the United States and Mexico vary greatly. For example, the massive San Ysidro Port of Entry (left) connects San Diego with Tijuana; nearly 48,000 cars per day enter the United States. By contrast, the hand-pulled ferry at Los Ebanos near McAllen, Texas (right) carries fewer than 100 cars per day across the Rio Grande. (Source: U.S. General Services Administration)

the planning and construction of roads and other transportation facilities. One promising recent development is the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU [P.L. 109-59]). Section 1303 of SAFETEA-LU authorizes $833 million over the life of the program, from 2005-2009, specifically for a Coordinated Border Infrastructure Program. SAFETEA-LU contains specific provisions such as the apportionment of funds under a formula system to ensure that border states, including the four on the southern border with Mexico, receive an equitable share of the available resources. In addition, the act allows for funds to be transferred to GSA to build border stations or other border station improvements that facilitate cross border traffic, and provides authority to use funds for projects in Mexico. SAFETEA-LU continues funding for projects that will help reduce transportation emissions in air quality non-attainment and maintenance areas. Money provided under Section 1303 is included in the minimum guarantee amount to donor states (those states that contribute more in gas tax revenue than they receive back under the act). To fund new border projects, most border states must make the difficult decision to withdraw similar amounts from other projects already on their long-standing transportation plans. The act also includes a Border Enforcement Grants program, which provides $32 million annually for four years, 2006-2009, to reimburse states for the increased costs of conducting safety inspections.

States have built, and are building, safety inspection stations for commercial vehicles entering the United States from Mexico. For example, under Texas Bill SB 913 passed in the 76th legislative session, the Texas Department of Transportation is building inspection stations at eight major ports of entry along the border in Texas.

PROJECTS AND PARTNERSHIPS

Tri-national

The Security and Prosperity Partnership (SPP) of North America. Launched in March 2005, the SPP was created to advance the common security and prosperity of the United States, Canada and Mexico. To meet this goal, the partners are working to expand cooperation and harmonization of immigration, border and security policies. SPP's transportation agenda focuses on alleviating congestion along the border, expanding market access, and enhancing road infrastructure planning. Its environmental agenda calls for improving air quality, enhancing water quality, and protecting biodiversity. Prior to SPP, the U.S.-Mexico Border Partnership ("Smart Border") Agreement of March 2002 had a similar goal. [www.spp.gov]

Binational

The U.S.-Mexico Binational Commission (BNC) The BNC is chaired by the U.S. Secretary of State and the Mexican Secretary of Foreign Relations. It meets annually, alternating between Washington and Mexico City. Workgroups address a variety of issues that go beyond just the border. However, two workgroups are especially relevant to this section of the Ninth Report: border security and cooperation, and transportation. [www.state.gov/p/wha/ci/mx/c10787.htm]

The U.S.-Mexico Binational Group on Bridges and Border Crossings The Binational Group is chaired by the Department of State and the Mexican Secretariat of Foreign Relations. It includes representatives from all federal agencies from both countries that have a role in border crossing and transportation issues, as well as from the 10 U.S. and Mexican border states.

The U.S.-Mexico Joint Working Committee on Transportation Planning (JWC) The JWC is a binational group whose primary focus is to cooperate on land transportation planning and the facilitation of efficient, safe and economical cross-border transportation movements. It was created in 1995 by a Memorandum of Understanding signed by the Secretaries of the U.S. Department of Transportation and the Mexican Secretariat of Communication and Transportation. The JWC also includes representatives from the U.S. Department of State, the Mexican Secretariat of Foreign Relations, and the four U.S. and six Mexican border states' departments of transportation. The U.S. General Services Administration (GSA) and the U.S. Customs and Border Protection (CBP) also participate in JWC meetings. Its reports include: *Binational Planning and Programming Study (1998), Bottleneck Study: Transportation Infrastructure and Traffic Management Analysis of Cross Border Bottlenecks (2004), and Binational Border Transportation Infrastructure: Needs Assessment Study (2004).*

Currently, the JWC is developing a report called the Border Master Plan. JWC also monitors specific programs such as the Border Technology Exchange Program. [http://international.fhwa.dot.gov/tmpl.cfm?title=BrdrTech]

In addition to these formal mechanisms, U.S. federal agencies such as GSA and CBP have established a regular dialogue with their Mexican counterparts.

National

The Inter-Agency Working Group on Bridges and Border Crossings The Inter-Agency Working Group is chaired by the Department of State and is composed of the U.S. federal agencies that participate in the Binational Group on Bridges and Border Crossings.

The Border Station Partnership Council (BSPC) The BSPC was created in 1997 to develop a comprehensive federal approach to border station planning management. It consisted of the federal inspection services (U.S. Customs Service, U.S. Immigration and Naturalization Service, U.S. Department of Agriculture—Animal and Plant Health Inspection Service, and the Food and Drug Administration) as well as GSA and FHWA. The BPSC began to develop a national border infrastructure strategy and produced a report called "Border Station Five-Year Long Range Plan." With the consolidation of most border inspection functions into CBP in 2003, the role of the BSPC has devolved.

Department of Homeland Security

U.S. Customs and Border Protection (CBP) Programs to Ease Commercial Traffic Border Crossings CBP has created several programs that ease the border crossing process for qualifying commercial traffic. For example, it has worked with the private sector to create the Customs and Trade Partnership Against Terrorism (C-TPAT) program, in which companies that meet stringent security requirements are deemed low-risk and given preferential treatment at ports of entry. Another program, Free and Secure Trade (FAST), is linked to C-TPAT and significantly reduces crossing times for participating companies. In addition, CBP is moving forward with implementation of its Automated Commercial Environment (ACE) system, which employs modern technology such as electronic filing of customs documents over the internet.

CBP Programs to Ease Passenger Traffic Border Crossings The secure Electronic Network for Travelers' Rapid Inspection (SENTRI) program allows participants who have been screened and determined to be low-risk to use a dedicated commuter lane. It has been in operation for

U.S. Border Counties in Non-attainment Status of the National Ambient Air Quality Standards (NAAQS) for Carbon Monoxide, Ozone and PM_{10}

	Carbon Monoxide	Ozone 8-hour standard	PM_{10}**
San Diego, CA		X	
Imperial, CA		X	X
Yuma, AZ			X
Pima, AZ			X
Santa Cruz, AZ			X
Cochise, AZ			X
Doña Ana, NM			X
El Paso, TX*	X		X

**In 2005 the Texas Commission on Environmental Quality submitted a request to EPA for re-designation of El Paso to attainment status for carbon monoxide, together with a maintenance plan.*
***Only certain areas within the listed counties are in non-attainment for PM_{10}.*
(Source: EPA Air Data web page, www.epa.gov/air/data)

years in the San Diego and El Paso areas, and is expanding to several other ports of entry by mid-2006.

United States Visitor and Immigrant Status Indicator Technology (US-VISIT). US-VISIT is a comprehensive program to monitor the entry and exit of foreigners. Through the use of advanced technology, such as radio frequency identifiers, it aims to enhance security and facilitate the crossing of legitimate travelers without creating new delays. It was implemented at all border crossings by the end of 2005.

The Texas Border Partnership Working Group. The Working Group was created in 2003 and is co-chaired by the Texas Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration-Texas Division. It is open to all surface transportation partners and also includes the: Texas Department of Public Safety, Federal Motor Carrier Safety Administration-Texas Division, Texas Transportation Institute, Center for Transportation Research, and Texas Metropolitan Planning Organizations.

State-Led

CyberPort Arizona has developed a concept called "CyberPort" that is focused on the Nogales/Mariposa Port of Entry. CyberPort seeks to improve the flow of trade from the point of origin to the point of destination. It incorporates CBP programs such ACE, C-TPAT and FAST. It features innovations such as an intelligent transportation system called EPIC 2 that monitors trucks through the federal and state inspection processes, as well as "Super-Booths" where federal and state officials work side-by-side to perform primary inspection of trucks.

REMAINING BARRIERS, NEXT STEPS

Barrier 1

Planning and coordination on border stations and related transportation infrastructure not equal to the challenge The United States and Mexico have developed numerous mechanisms to plan and coordinate border stations and border transportation issues. These mechanisms have had some success, particularly the U.S.-Mexico Joint Working Committee's efforts on technical matters. Also, the trilateral Security and Prosperity Partnership lays out an ambitious program for coordinated actions. Nevertheless, cross-border planning and coordination mechanisms have not been able to create the needed level of stability and predictability. Most notably, they have not been able to generate a common list of priorities and a corresponding timeline for projects. Multiple reasons account for this situation, some binational and some internal to the United States.

For example, the United States and Mexico often have different interests that result in different priorities. Moreover, there is no direct link in the United States between the binational planning process and the federal budget process. Thus, even when U.S. and Mexican interests coincide and officials responsible for border planning can agree on a project, the United States may not be able to implement the agreement. For example, at the March 2004 meeting of the Binational Group on Bridges and Border Crossings, U.S. and Mexican officials agreed to assign a top priority to the new San Luis II crossing on the Arizona–Sonora border, with the goal of opening the new port of entry in late 2007/early 2008. Based on this agreement, in December 2004, Mexico launched a process to identify a concessionaire to build its facilities. However, the U.S. president's FY-06 budget proposal to Congress did not include the project. Thus, the U.S. side could not be built on schedule.

In addition, within the United States, the federal agencies that build, maintain and operate border crossings often have different interests and priorities than those of the border states, who build and maintain the border transportation infrastructure. Federal agencies tend to

focus on pressing operational needs, such as maintenance and upgrades of their existing facilities, whereas states look to address issues such as future economic growth. Both the federal process to build border stations and the states' process for building roads are lengthy; years of lead time are needed, and both levels of government must deal with limited resources. It is essential that both the federal and state processes operate in tandem to avoid opening ports of entry without the needed transportation infrastructure (as occurred at Otay Mesa), or to avoid building "roads to nowhere." The San Luis II project underscores the problem of not working in tandem; it is the centerpiece of a comprehensive state program to enhance border infrastructure, for which the Arizona Department of Transportation is investing nearly $100 million. Unfortunately, while the state is moving ahead, the federal port of entry project is on hold, awaiting funding.

As the new leader for border station planning, CBP has created Integrated Product Teams and launched a comprehensive Facility Investment Planning Process. Critical to this process is the Strategic Resource Assessment, which produces in-depth regional reports of current and future facility requirements organized by field offices (San Diego, Tucson, El Paso and Laredo on the southern border). In preparing these assessments, CBP has recognized the need to consult with state and local governments to incorporate future growth projections into its calculations.

NEXT STEPS

Develop a long-range plan that integrates border station and transportation infrastructure priorities The ambitious planning and coordinating efforts initiated as part of the Security and Prosperity Partnership, as well as the efforts within the United States to develop a rational list of priorities for border stations, are positive steps. Particular examples include the creation of the multi-agency federal Border Station Partnership Council in the 1990s, and CBP's Facility Investment Planning Process/Strategic Resource Assessment. But more is needed. Paramount is the need for a binational process for planning border stations that is fully integrated with that for planning transportation infrastructure. This process should be interactive, transparent, and shielded from political influence so that it yields priorities based on need. As port of entry and highway projects often require 10 or 15 years to move from inception to completion, planners today should be thinking ahead to 2015-2020.

Existing bilateral and domestic planning and coordination mechanisms and processes should develop a binational approach that marries the needs of national corridors, regional transportation systems and local communities with the needs for new and improved border stations. Metropolitan planning organizations and state departments of transportation should have a key role in this process. They should develop regional and statewide transportation plans that make good use of the Congestion, Mitigation and Air Quality Improvement Program (where applicable), Surface Transportation Program funds, and Coordinated Border Infrastructure Program funds as defined in SAFETEA-LU, to address the needs of these border areas. CBP's Strategic Resource Assessment process should draw heavily on such transportation planning in its planning for border stations. The objective would be to have a binational long-range plan that leads to a multi-year rolling list of border station priorities. These priorities, in turn, would be linked directly to priorities for investments in transportation infrastructure.

Barrier 2

Inadequate funding for border stations Border stations are not receiving the resources necessary to allow them to keep pace with the rapidly growing increases in cross-border traffic. This under funding has resulted in congestion, longer lines, and more delays at many ports of entry—particularly those in major population centers and along major trade corridors. In addition, this trend has raised the cost of business for commercial activity, eroded the quality of life of border residents, and raised concern about additional air pollution around the border stations. Major ports of entry can be prone to traffic backups associated with clearing of customs and immigration. When these backups occur, motor vehicles' engine idling contributes to air pollution. With the projected growth in both trade and travel between the United States and Mexico, the volume of passenger vehicle traffic and commercial truck and bus operations at the border is likely to increase. The engine idling resulting from this extra traffic could contribute to the degradation of air quality in the border region. A number of efforts are underway by CBP to expedite vehicle crossing, including the FAST program for commercial drivers and carriers, and the SENTRI program for passenger vehicles (see Projects and Partnerships). Nonetheless, with the anticipated growth in traffic, air pollution may get worse without new investments in infrastructure, use of new cleaner vehicle engines, and further progress in the application of emerging clean vehicle technologies.

In 2000, the Border Trade Alliance (BTA), a prominent private-sector organization promoting commerce between the United States and its neighbors, worked with U.S. federal inspection agencies and GSA to produce a needs assessment on border infrastructure. The BTA reported that more than $215 million was needed for facilities and equipment. Congress tasked the legacy U.S. Customs Service to collaborate with GSA to produce an official assessment of these needs. The resulting 2001 report revealed that nearly $460 million was needed for the southern border. Although the terrorist attacks of 9/11 focused attention on the urgency of improving homeland security—including improvements at the ports of entry—new resources have been directed primarily to the northern U.S. border with Canada.

NEXT STEPS

Pass multi-year authorization bills for border stations Funding for border stations could be incorporated into multi-year authorization bills, similar to the process for multi-year transportation authorization bills. Such bills, synchronized with a binational long-range plan and a multi-year list of border stations' priorities as proposed above, would provide the needed level of stability to the funding process. It would also serve to focus attention on the needs of the border and help ensure an adequate level of funding.

Future transportation authorization bills should maintain the Coordinated Border Infrastructure Program (SAFETEA-LU Section 1303) and provide sufficient funding.

Border Crossings and Presidential Permits

Presidential Permits must be obtained for the construction, operation and maintenance of border crossings in the United States. Permits are required for the full range of new facilities on the border, including bridges, pipelines, tunnels, conveyor belts and tramways, as well as border crossings for land transportation. Permits are also required for substantial modifications to existing border crossings. In most cases, the authority to process the applications and issue the permits is held by the Department of State. Bridges over the Rio Grande also require a permit from the U.S. Coast Guard.

For the Department of State to issue a permit, it must find that the project "serves the national interest." The department consults extensively with all relevant federal and state authorities and with the Mexican government regarding each project. Depending upon the complexities involved, the permitting process may take a number of years. Applicants may be private entities such as individuals or companies, or public entities such as cities or counties. They must provide the department with extensive information on the project, including a description of the facility, traffic data, a construction plan, and a financial plan. They also must include information about foreseeable environmental impacts, and provide any documentation required by the National Environmental Policy Act of 1969, including an environmental assessment or an environmental impact statement. Applicants must also address the issue of environmental justice by providing information on how the project would affect minority and low-income populations.

During the permitting process, applicants consult with federal agencies such as: the U.S. Customs and Border Protection of the Department of Homeland Security, the General Services Administration, the U.S. EPA, the Fish and Wildlife Service of the Department of the Interior, the U.S. Coast Guard and the U.S. Section of the International Boundary and Water Commission. In addition, they work with appropriate state and local agencies, including those responsible for the environment, parks, wildlife, highways, and historic and cultural preservation.

EMISSIONS

RECOMMENDATION - Harness new and emerging technologies and fuels to reduce emissions from diesel trucks, buses, municipal and private fleets and passenger vehicles, and identify private/public funding sources to accelerate the process.

Air quality can be affected in many ways by the pollutionemitted from a number of different sources such as vehicles, power plants or commercial and industrial processes. These sources emit a variety of air pollutants or emissions including carbon monoxide, ozone, particulate matter, nitrous and sulfurous oxides and other substances that are harmful to the environment and human health. Air pollutants occur as gases, liquid droplets, and solids. Once released into the environment, many pollutants can persist, travel long distances, and move from one medium (e.g., air, water and land) to another. In many cases, the effects of air pollution can be clearly seen, such as decreased visibility in the forms of haze or smog or vehicle exhaust. Emissions from transportation activities can produce one or more pollutants and air toxic contaminants that can affect both air quality and health in an area or air basin.

Along the U.S.–Mexico border, vehicle traffic has been steadily increasing over the past 15 years due to population growth, a booming economy, and rapidly expanding bilateral trade that is carried primarily by trucks. Mobile sources are major contributors of urban air pollution, and cause the formation of carbon monoxide, ozone, nitrous and sulfurous oxides, hydrocarbons and particulate matter. The increased traffic, passenger-vehicle fleet characteristics, and an aging drayage fleet (short-range commercial trucks used to deliver freight across the border) have concerned public and health officials. A health study conducted in November 2003 by the Commission for Environmental Cooperation of North America in the El Paso, Texas — Ciudad Juárez, Chihuahua urban region observed a significant association between ozone ambient levels and respiratory-related emergency visits by children.

In general, diesel exhaust is a major source of particulate matter, especially the fine particles less than 2.5 microns in diameter. Fine particles in the air pose a significant health risk because they can easily pass through the nose and throat and become lodged in the lungs, causing lung damage. Fine particles not only aggravate health conditions such as asthma and bronchitis; in extreme cases, they also contribute to premature death.

Since 2000, the U.S. EPA has been developing regulations to reduce sulfur content from highway diesel exhaust. The Good Neighbor Environmental Board shares the widespread concern about emissions from high sulfur diesel fuel. In June 2005, the Board issued a Comment Letter to a group of U.S. Congressional leaders who were meeting in Rhode Island with Mexican counterparts. In its letter, the Board requested that members of the U.S. delegation raise the issue of ultra-low sulfur diesel (ULSD) fuel standards, as well as emissions standards for heavy-duty highway diesel engines. It advised that there was a need to identify "binational mechanisms for advancing environmental sustainability within our highly interdependent U.S.-Mexico border region." [see Business Report section of this report for full text of Comment Letter]

On October 19, 2005, an extremely positive development took place in the form of a historic binational meeting in Tijuana, Mexico. The U.S. EPA and SEMARNAT, Mexico's Ministry of Environment and Natural Resources, announced Mexico's plan to aggressively reduce sulfur levels in gasoline and diesel fuel beginning in 2006, and signed a Letter of Intent for Cooperation on Diesel Emission Reduction. In late January 2006, SEMARNAT unveiled a major nation-wide plan to reduce sulfur emissions.

To reduce trucks' diesel emissions, it is essential to give close attention to: 1) advanced emission control technologies, such as retrofitting trucks by adding a diesel oxidation catalyst or a particulate filter; and 2) use of alternative or cleaner fuels such as ULSD. U.S. EPA regulations require that at least 50 percent of all new heavy-duty diesel engines beginning with model year 2007 be equipped with advanced pollution controls (increasing to 100 percent in model year 2010). Additionally, beginning October 1, 2006, at least 80 percent of diesel fuel sold for heavy-duty trucks in the United States will have to be ultra-low sulfur diesel, and the figure increases to 100 percent in 2009. ULSD is necessary for the above pollution control technology. Its use is designed to reduce sulfur content to a maximum requirement of 15 parts per million (ppm).

Based on field experience in the United States, it is anticipated that the control technologies in combination with ULSD will reduce particulate matter and nitrogen

oxide emissions by approximately 90 percent. [www.epa.gov/otaq/regs/hd2007/frm/frdslpre.pdf]

Some federal and state programs currently exist that also encourage retrofitting pre-2007 engines with the emissions control technologies that will be used in the new engines. The use of ULSD alone on pre-2007 engines is estimated to reduce particulate matter emissions between 5 and 9 percent. [http://tinyurl.com/8f3yo]

In addition to the use of ULSD, several alternative fuels —such as Liquefied Petroleum Gas (LPG), Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG) and Biodiesel— are being used or proposed. These fuels offer several advantages and have the potential to reduce pollution, not only from heavy-duty trucks, but also from other mobile sources. Several of these alternative fuels have demonstrated reductions either in ozone-forming emissions, carbon monoxide, particulate matter or nitrogen oxide emissions by 50–90 percent. In fact, several border-region cities already have begun to take advantage of these alternative fuels. In El Paso and San Diego, for example, a majority of the public transit buses operate on CNG fuel.

One additional issue deserves mention as a necessary component of policy discussions related to air quality along the border: while there is no data showing that long-haul Mexican trucks are more polluting than their U.S. counterparts, as Mexican trucks are allowed to transport goods into the interior of the United States, some local and state officials are concerned that additional nitrogen oxide and particulate matter smaller than 2.5 microns ($PM_{2.5}$) emissions will affect the air quality in cities beyond the border. Data may be forthcoming from California, which plans to start enforcing federal EPA standards in 2006 for diesel engines at ports of entry and in other parts of the state. As trade with Mexico continues to grow, the potential additional degradation of air quality in areas of non-attainment status must be closely observed by state and local governments.

PROJECTS AND PARTNERSHIPS

Air quality in communities located north of the border can easily influence the air quality found in communities just south of the border, or vice versa, due to similar climatic, topographic or meteorological conditions. The following projects and partnerships are examples of the type of work that is being conducted along the length of the border to help reduce air pollution within these areas.

Binational

The Joint Advisory Committee (JAC) for Air Quality Improvement The JAC is a binational committee established in May 1996 under the framework of the 1983 U.S.-Mexico La Paz Agreement. The JAC provides local community input in the El Paso, Texas/Dona Ana, County, New Mexico–Ciudad Juárez, Chihuahua metropolitan area known as the "Paso del Norte Region." It helps set priorities and secure procurement of funds to foster greater cooperation and more effective air pollution policies, without overriding existing government environmental regulations. The JAC is made up of 20 members (10 U.S. members and 10 Mexican members) that represent the federal, state, and local governments, universities, private sector, and non-governmental environmental and public health organizations. In 1997, the JAC helped introduce the use of alternative gasoline or oxygenated gasoline during the winter months in Ciudad Juárez, Mexico, to reduce carbon monoxide emissions. The JAC currently serves as one of the air working groups under the Border 2012 Program established by U.S. EPA and SEMARNAT, U.S. and Mexican border states, and U.S. border tribes.

National

U.S. Environmental Protection Agency (EPA) Federal Grants During 2004 and 2005, the U.S. EPA contributed to a number of significant environmental projects along the border designed to achieve reductions in mobile emissions and collect data on diesel emission sources. Several of these grants helped fund pilot projects that retrofit-

ted either diesel trucks or school buses, or explored the use of alternative fuel sources such as biodiesel. Recipients of some of these projects include: the San Diego County Air Pollution Control District, the Santa Cruz Valley Unified School District, the Laredo Independent School District, the Las Cruces School District, and the Ysleta del Sur Pueblo Tribe in El Paso. In addition, EPA awarded grants to the California Air Resources Board, the Arizona Department of Environmental Quality, and the Texas Transportation Institute of Texas A&M University to conduct pilot projects that will assess the impact of diesel emissions from drayage trucks.

State-Local Agency Partnerships

Border states have invested hundreds of millions of dollars to reduce emissions using state and local resources as well as Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds. CMAQ funds are provided to non-attainment and maintenance areas for transportation programs and projects that help these areas meet air quality standards. These investments have targeted a wide variety of emission-reducing approaches, including improving public transit, promoting alternative fuels, reducing idling from long haul trucks, and managing traffic better.

For example, in 2005, El Paso became one of the first cities in Texas to improve its air quality by meeting federal air standards for both carbon monoxide and the 8-hour ozone standards. The success of El Paso's air cleanup campaign can be attributed to a number of programs implemented by the Texas Commission on Environmental Quality and the City of El Paso, as well as to measures being implemented across the border. These programs include an increase in tailpipe inspections, the use of alternative gasoline or oxygenated gasoline during the winter months to reduce carbon monoxide emissions, Stage II vapor recovery systems at gasoline pumps, regulation of open burning, use of watering at construction sites to reduce particulate matter from becoming airborne, and local public participation.

The Texas Emissions Reductions Program TERP is a state legislative program (SB 5, 77th legislative session) that includes various voluntary financial incentive programs and other assistance programs to help improve the air quality in Texas. In FY-04, TERP provided $1,932,018 for emissions reductions in El Paso County.

Public-Private Partnerships

The West Coast Diesel Emissions Reductions Collaborative This is a joint effort that includes U.S. federal agencies—EPA, the Department of Agriculture's Natural Resource Conservation Service, the Department of Energy, the Department of Transportation—Canada and Mexico, as well as state, local, non-profit and private sector partners, particularly from California. The goal is to reduce air pollution emissions from diesel engines along the U.S. West Coast. The Collaborative coordinates across sector workgroups to identify, fund, and implement regional diesel emissions reduction projects.

The Blue Skyways Collaborative This Collaborative —inaugurated in February 2006— focuses on reducing air emissions related to transportation and energy generation in the nine central U.S. states between Mexico and Canada. The Central States Air Resources Agencies' organization manages the Collaborative, with active participation by the U.S. EPA's Dallas and Kansas City offices, other federal agencies, participating states, and local non-profit and for-profit organizations. Representatives from Mexico and Canada also participate. At the border, the Collaborative promotes activities ranging from the introduction of ULSD fuel in Mexico and electrified truck stops for border crossings, to wider use of CBP's FAST program and "Smart Way" (see below) concepts to provide truckers with circulating loans to upgrade the efficiency of their fleets.

SmartWay Transport Partners This is a voluntary collaboration between the U.S. EPA and a group of commercial, industrial, and public sector organizations. Participants have committed to reducing greenhouse gas emissions and air pollution, and to improving fuel efficiency of ground freight transportation. Their two-fold goal is to adopt fuel-saving strategies that both increase profits and reduce emissions.

REMAINING BARRIERS, NEXT STEPS

Barrier 1

Lack of resources for establishing a baseline of current emissions from drayage fleets and for improving border-crossing coordination so as to decrease idling along ports of entry Further studies are needed to obtain a better baseline inventory of the current state of drayage fleets, which are predominantly Mexican. Currently, drayage fleets from Mexico can only travel within designated commercial zones around ports of entry. The Mexican drayage fleet is said to be composed of approximately 66 percent of 1993 model year or older trucks, and 25 percent of pre-1980 model year trucks. Older drayage vehicles are subject to less stringent emissions standards than those that apply to newer vehicles typically used for long-haul transportation. However these fleets are subject to emission inspections on a semi-annual basis by Mexican states, in accordance with Mexican norms, and can be subject to stringent maintenance inspections by U.S. states' departments of transportation, such as in the case of El Paso. A data gap exists on the impact of diesel emissions from these particular mobile sources on border air quality.

Idling at ports of entry is thought to be one of the major causes of mobile source emissions in border sister-cities. A study by the Texas Commission on Environmental Quality in August 2003 [www.jac-ccc.org/pubs] found that approximately 22 percent of area-source carbon monoxide emissions in the El Paso–Ciudad Juárez air shed were the result of vehicles idling on the international bridges. Waits of one hour or longer are not uncommon. An article in the June 2004 *International Journal of Transport Economics* stated that commercial trucks traveling through the Laredo port of entry can take anywhere from 1–8 hours, depending on the time that the drayage truck begins its crossing. [www.maritimeeconomics.com]

NEXT STEPS

States and private industry should continue to increase their participation in emerging technologies and programs such as SmartWay (see Projects and Partnerships section). A program such as SmartWay encourages owners and operators of diesel vehicles to use diesel engine retrofits to help reduce diesel emissions. SmartWay currently has over 200 partners, some of which are major U.S. freight carriers such as FedEx, DHL and UPS.

Federal–private partnerships need to continue strengthening in the wake of new emerging technologies Technology such as electrification of truck stops demonstrate that private companies can monetarily benefit from using truck stops to reduce long idling periods, thus reducing diesel emissions. Government should work more closely with industry to explore the feasibility of such truck electrification stops near ports of entry. In addition, as ULSD fuel is introduced, the U.S. EPA should work closely with its Mexican counterpart to promote clean diesel corridor pilot projects along the border and ensure ULSD fuels are available in these corridors.

Government needs to continue to provide new funding mechanisms as well as increase awareness of existing financial mechanisms The federal government should seek to make states and metropolitan planning organizations more aware of the new eligibility for retrofit projects in federal programs such as the CMAQ Program. With the passing of the new energy and transportation bills of 2005, Congress recognized the need for further research to help identify alternative fuel sources. Several measures in the energy bill allocate funding for programs that will investigate alternative fuels. It will be important for Congress to continue this type of support, and promote and fund further research on alternative fuels, their environmental impacts and new technology that uses such fuels.

Barrier 2

Lack of the necessary binational mechanisms in border communities to encourage cleaner passenger vehicles Vehicle fleets along U.S. border communities, except for the San Diego and El Paso metropolitan areas, are on average at least two years older than other U.S. cities of comparable size. Meanwhile, in Mexican border communi-

ties, average vehicle fleets are at least 10 years older than their U.S. counterparts, with 25 percent of vehicles being 15 years or older. Many of these vehicles are also driven on U.S. border cities' streets.

Mexican border communities have a concession to purchase American used cars five years or older and register them with a special border ("frontera") license plate. The purchase of this special plate is an incentive to acquire a low-efficient/low-cost "scrap" vehicle that has outlived its days before it is imported and sold in the Mexican market. While this border concession is intended to compensate for asymmetries between U.S. and Mexican inhabitants, it allows buyers to drive highly polluting vehicles not only in Mexican border cities but in neighboring U.S. communities as well.

San Diego and Imperial Valley in California and El Paso County in Texas have emissions inspection and maintenance programs (I/MPs) in place. Ciudad Juárez, Chihuahua, across the border from El Paso, has had an emissions inspection program for the last 13 years. However, vehicle owners registered in the Dona Ana County, New Mexico portion of the binational metropolitan air shed are not subject to an I/MP, and so do not have the same emissions control requirements.

State-of-the-art technologies are being developed to estimate truck emissions. These technologies include heavy duty remote sensing units, portable emission monitoring systems, and traditional opacimeters. This photo was taken in March 2005, when the Arizona Department of Environmental Quality sponsored a study by Tucson-based Environmental Systems Products at the Mariposa Port of Entry in Nogales to test such equipment.
(Source: Environmental Systems Products)

NEXT STEPS

Promote state vehicular inspection/maintenance programs (I/MPs) along the U.S.-Mexico border. Governments need to work closely with sister cities to encourage inspection programs for both U.S. and Mexican vehicles in sister-city areas. The Mexican cities across from San Diego and Imperial Valley —Tijuana and Mexicali— could be encouraged to develop parallel I/MPs. California's Air Resources Board recently assisted Tijuana with establishment of an inspection facility and program, but the effort collapsed when a new municipal administration came into office. Currently, the municipality of Mexicali is in the process of implementing a vehicle inspection program. Similarly, New Mexico's JAC delegation could be encouraged to have Dona Ana County implement an I/MP. In these communities, it is important to recognize and promote the financial savings from greater fuel efficiency derived from I/MPs that may help pay costs of enhanced maintenance.

Barrier 3

Exportation to Mexico of older vehicles that do not meet U.S. emission standards, and lack of binational enforcement and communication mechanisms regarding the exportation of "junk cars." Local Mexican officials have expressed concern that cars imported from the United States into Mexico frequently do not meet basic U.S. emission standards applicable for the vehicle's model year. These local Mexican officials believe that these vehicles exacerbate air pollution from mobile source emissions on the Mexican side of the border. Currently the Texas Department of Public Safety (DPS) fines a person or used-car-lot dealer who transfers title ownership of a vehicle that has not passed an emissions test to another Texas resident. However, there is no fine for a person or dealer who sells such a vehicle to a Mexican citizen living across the border, or to a resident of a neighboring state such as New Mexico. In addition, Mexican President Fox issued an August 22, 2005, decree allowing the importation of 10-15 year old vehicles, as well as allowing vehicles in the country illegally or with temporary authorization to be registered by Mexi-

can nationals. Considering that many of the air quality problems lie within sister cities, it is important to recognize that improving a portion of the binational air shed in the region improves the air quality of the whole air shed. It should be noted that in non-attainment areas of Texas, automobiles not meeting tailpipe tests that are bought by the state under its Low Income Repair Assistance Program, are either fixed, or prevented from being resold by being crushed.

NEXT STEPS

Require that U.S. sellers certify that their cars meet basic U.S. and local emissions standards. The JAC has passed a resolution that, among other items, calls for implementing basin–wide measures, such as a harmonized vehicle-emissions inspection and maintenance program throughout Dona Ana County, New Mexico, Ciudad Juárez, Mexico and El Paso, Texas.

Similarly, a mechanism linking Santa Teresa port of entry officials to the Texas DPS' computerized registry of vehicles would allow Mexican authorities to block emission inspection-failed vehicles from being imported into Mexico, and would allow them to be sent to a junk yard. Such binational communication is not new. In 1997, the Attorneys' General offices of Chihuahua and Texas, in conjunction with local police departments, inaugurated a computerized stolen vehicle center to provide real time communication on stolen vehicles and to track their sale.

Increase binational enforcement and cooperative efforts among border community key stakeholders, such as federal, state or local officials. Currently, Mexico requires that cars imported into Mexico have a U.S. or Mexican inspection sticker. However, greater enforcement and cooperative efforts are needed between the two countries to ensure that older model vehicles ("clunkers") are not illegally imported.

Partnerships are a key ingredient in reducing border-region emissions. In June 2005, the Texas Transportation Institute of Texas A&M University and U.S. EPA conducted a study at the El Paso-Ciudad Juárez port of entry on emissions from diesel trucks entering the United States.
(Source: U.S. Environmental Protection Agency)

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PUBLIC TRANSIT AND ALTERNATIVES TO DRIVING ALONE

RECOMMENDATIONS - Encourage public transportation, ridesharing, car-sharing, biking and walking in border cities so that fewer people will drive alone, thus reducing motor vehicle trips and the emissions of pollutants.

Driving alone has many negative consequences that can affect border areas very significantly. It increases congestion and raises emissions to higher levels than they could be if alternatives were available and used more. Using public transit, sharing rides, walking, biking, or even sharing cars can reduce these negative consequences, allowing more efficient use of existing infrastructure in an environmentally friendly way.

Mass transit in the United States is available in many forms, including buses, ferries, commuter rail, light rail, and heavy rail. When travelers make the choice to use mass transit, motor vehicle trips may decrease and thus, emissions of air pollutants can be reduced. While there are many benefits of successful mass transit services, among the most significant are energy conservation, reductions in emissions of air pollutants, and enhanced mobility that contributes to reduced road congestion.

Parts of San Diego County, for example, are in non-attainment of the 8-hour National Ambient Air Quality Standard (NAAQS) for ozone. Use of mass transit, including buses and light rail, takes vehicles off the road and contributes to improved air quality. Public transportation produces about 95 percent less carbon monoxide and about 90 percent fewer volatile organic compounds than private vehicles. [www.publictransportation.org/reports/asp/energy.asp#teb)]

Enhanced mobility is another benefit of mass transit. By taking some drivers off the road, travel time is reduced for other commuters. In addition, there is reduced idling time, and less stopping and starting, leading to further decreases in emissions of vehicular pollutants.

In the border region, the Metropolitan Transit System in San Diego and Sun Metro in El Paso, Texas are the two largest metropolitan transit systems. The Metropolitan Transit System in San Diego uses a fleet of buses for public transport. It also has a highly successful light rail system, known as "the Trolley." The Trolley has a line that ends at the San Ysidro border port of entry. Passengers coming from San Diego can disembark at the Trolley's final terminal and take a short walk across the border to Tijuana, Baja California. Similarly, pedestrians coming from Tijuana can

The San Diego Trolley is a light rail system providing fast, efficient public transit between the city and the San Ysidro Port of Entry across from Tijuana. (Source: U.S. Department of Transportation)

board the Trolley at this terminal and go to San Diego. The San Ysidro port of entry is the busiest U.S.-Mexico border crossing.

While the focus of this report is on the United States, Mexican cities have extensive public transportation systems as well, primarily bus systems. Monterrey, Mexico has a subway/heavy rail system, but it is located outside of the 100-kilometer border zone (as defined by the La Paz Agreement). In addition, in Mexico, many maquiladoras have their own private transit systems to transport workers from home to work and back. These private transit systems work very well; the reasons for their use are many, but primarily they offer the incentive of free transportation to ensure employees come to work.

Recently enacted federal legislation provides additional opportunities for strengthening the border region's mass transit infrastructure. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), was passed in 2005. It authorizes alternative fuel projects, in addition to two national programs. While these programs are not directly targeted to the border area, they provide nationwide funding incentives to support increased use of alternative fuels in public transportation.

SAFETEA-LU also continues the Congestion Mitigation and Air Quality Improvement (CMAQ) program. CMAQ can fund projects for ridesharing, transit, bicycle/pedestrian activities, traffic flow improvements, clean fuel, retrofit and similar programs. States may also use Surface Transportation Program funds under SAFETEA-LU for a variety of transit, bicycle/pedestrian, and traffic improvement projects.

Another piece of federal legislation, the Energy Policy Act of 2005, provides significant funding for alternative fuels, including a national program to be implemented through the Department of Energy's Clean Cities Program. Two sections of the Energy Policy Act—706 and 731—support fuel cell and hybrid-electric buses.

Transit Services in U.S. Sister Cities on the U.S.-Mexico Border

City	Population Served ('000)	Type	Number of Vehicles	Trips ('000)
San Diego, CA	223.4	Mixed2	1,032	95,293.6
El Paso, TX	563.7	Bus	185	13,567.1
Laredo, TX	176.6	Bus	48	4,648.7
Brownsville, TX	139.7	Bus	24	1,693.9
Bisbee, AZ	6.3	Bus	2	30.5
Douglas, AZ[1]	14.3	None		-0-
Nogales, AZ[1]	20.9	None		-0-
Yuma, AZ	181.2	Bus	6	141.1
Calexico, CA[1]	27.1	None		
Del Rio, TX (City of) (Val Verde Co.)	34.6	Bus	12	55.3
Eagle Pass, TX[1]	23.5	None		
McAllen, TX	106.4	Bus		600.0
Presidio, TX[1]	4.6	None		
Rio Grande City, TX 'Rainbow Lines'[3]	12.6	Bus		

***1** - The towns or counties with no transit service may receive service from neighboring counties, or residents may obtain transit service in cities across the border.*

***2** - Mixed—includes light rail and bus.*

***3** - Transportation within rural areas and small urban areas using comfortable vans and buses.*

The Fuel and Vehicle Programs created by the Energy Policy Act may benefit the border in specific areas: Section 742 is aimed at ports and other areas where major truck haulage occurs, with grantees intended to be state or local governments or their instrumentalities. The funding is intended to support the retrofit of trucks purchased to replace scrapped trucks. Priority funding is given to trucks that use ultra-low sulfur diesel (ULSD) fuel (less than 15 ppm), as well as U.S. EPA or CARB verified emissions control retrofit technology. Thus, Section 742 could be a significant incentive for cross-border partnerships to improve truck technology and reduce emissions.

PROJECTS AND PARTNERSHIPS

Sun Metro, El Paso, Texas Cross-Border International Transit Connection Sun Metro, owned by the City of El Paso, is working with Ciudad Juárez on a unique partnership to provide cross-border service through an international transit connection. The United States and Mexico have incorporated this initiative into the Security and Prosperity Partnership (SPP) of North America, launched March 23, 2005. Currently, Sun Metro is working with U.S. Customs and Border Protection on an agreement with Mexico and the U.S. Department of Transportation for a one-stop permit that would allow Sun Metro to take passengers across the border in both directions. The original concept of cross-border rail service has not proven economically feasible, so the project is being modified as a bus service with a binational route to cross the border. Sun Metro conducted a trial run late in 2005, and regular service is expected to begin in 2006. The project will help alleviate traffic congestion, improve air quality, and add to the safety and security of passengers.

Sun Metro also is planning construction of a multimodal International Terminal to accommodate international bus operators. The terminal will have a number of bays for Sun Metro buses, and it will consolidate all operators —including Greyhound, charter services, and taxis— into one downtown location. Sun Metro acquired the land in June 2005, allowing it to proceed with construction.

Ciudad Acuña-Del Rio, Texas, Fixed Route Cross-Border Service The city of Del Rio formerly operated one bus in fixed route service, terminating that route at the International Bridge close to downtown. When it became necessary to operate para-transit service (transit service for persons with disabilities), Del Rio bid out its fixed route service. The new service began in July 2005, and the fixed route now crosses into Mexico to Del Rio's sister city of Ciudad Acuña.

Multi-modal Center, McAllen, Texas While McAllen, Texas Transit operates only within McAllen, in 2001 the transit system inaugurated a multimodal center to provide taxi and intercity bus connections to its local transit system. The multimodal center provides bus bays for several Mexican bus operations that bring shoppers and medical visitors and workers from the bordering town of Reynosa. There are four Mexican-owned bus lines serving the McAllen area. They include Tamaulipas/Noreste Bus Company, Autotransportes CD Mantes, Autobus Turismos Management and ADO Management.

U.S. Department of Energy Clean Cities Program The U.S. Department of Energy's Clean Cities Program seeks to support local practices that reduce petroleum consumption. [www.eere.energy.gov/cleancities] More than 80 partner coalitions have enlisted and participate in the program, including the binational Paso del Norte area (1995), San Diego (1996) and Laredo (2004). The Clean Cities Program has fostered international partnerships on energy and the environment, such as that between El Paso and Ciudad Juárez.

It should be noted that there are few projects and partnerships in the Arizona and New Mexico border region, because transit systems in the border region of these states are few or are not well developed.

REMAINING BARRIERS, NEXT STEPS

Barrier 1

Absence of cross-border transit systems Cross-border transit systems are nonexistent along most portions

of the border, adding to border congestion and increased vehicle emissions. Cross-border transit systems need to be created or renewed, to the extent possible. Homeland security issues are a concern, but in the past, economic issues have also helped derail cross-border transit systems. For example, merchants in Ciudad Juárez who were concerned that they were losing business to merchants in El Paso opposed cross-border transit. There are some attempts to create or renew some of these services, particularly in non-attainment areas.

NEXT STEPS

Work with Mexico as well as state and local stakeholders to examine methods to improve cross-border transit systems. As part of the Security and Prosperity Partnership (SPP) of North America, the United States and Mexico have agreed to implement a secure cross-border commuter service between El Paso and Ciudad Juárez. (Ironically, in the early 1900s there was a trolley system connecting the two cities.) This project should be a pilot for the entire southern border, and the policies and procedures adopted could be emulated at other sister cites.

Improve transit system connections along both sides of the border. The lack of connectivity between Mexican and U.S. transit services presents a major challenge to increasing ridership in border public transit systems. Ultimately, this is an area where local or state governments or local public/private partnerships will have to develop transit system connections between cities in Mexico and the United States. While Federal Transit Administration grant funds cannot be expended to provide service with Mexico, they can be used to provide better connections within the United States.

Develop mass transit links to each side of major ports of entry. While cross-border public transit systems would be ideal, many benefits would be derived from transit systems in sister cities that were linked to the major ports of entry. Commuters could ride to the border, cross as pedestrians, and then connect to mass transit in the other country.

Barrier 2

Few riders on public transit systems. There are not enough riders on existing transit systems. For a variety of reasons, public transit in border communities is seriously underutilized. Moreover, in a number of towns, transit systems do not exist. Nogales, Arizona (population 21,000) and Eagle Pass, Texas (population 23,500) are examples of communities without public transit.

NEXT STEPS

Support efforts by local authorities to provide incentives that increase ridership on public transit. Steps can be taken to increase ridership in public transit systems along the border, especially given high fuel costs. For example, metropolitan transit authorities (MTAs) in the border region could begin campaigns similar to the "Dump the Pump" campaign that Capital Metro in Austin launched in August 2005 to promote the use of buses. Other ideas to increase ridership include the use of van pools, in which the riders pay a nominal fee and commit to riding in an MTA-owned vehicle at least three days a week. Cities such as Nogales or Eagle Pass, which do not have mass transit, could consider starting such systems, in coordination with local Metropolitan Planning Organizations or their local Councils of Government.

Encourage wider use of the Department of Energy's Clean Cities Program to create more border transit systems. U.S. transit systems that participate in the Clean Cities Program will use cleaner fuels, which may reduce border air pollutants such as nitrogen oxides which contribute to ozone formation. While the three largest U.S. border transit systems are already Clean Cities partners, increasing the number of systems will yield great benefits. For example, Calexico and Nogales could be encouraged to engage with maquiladoras in their cross-border communities. SAFETEA-LU funding may be available from CMAQ or the Coordinated Border Infrastructure Program-

Borders program, and the U.S. Department of Energy could coordinate best practices.

Barrier 3

Conflicting interests between facilitating cross-border traffic and enhancing homeland security. The interests of protecting the environment and public health by decreasing congestion at ports of entry are often pitted against the interests of securing the nations from threats such as terrorism, drugs and illegal immigration. For example, at some ports of entry in Texas, concrete blocks are placed in a circuitous fashion to prevent drug smugglers in vehicles from racing through the inspection areas, as has happened. Unfortunately, this further slows traffic and increases vehicular emissions. Nevertheless, creative ways have been found to manage risk so as to promote both homeland security and increased traffic flow goals. The installation of dedicated commuter lanes at busy ports of entry is a prime example.

NEXT STEPS

Use Sun Metro's cross-border transit program as a pilot and extend applicability to other parts of the border. The cross-border transit program that Sun Metro is developing with Ciudad Juárez is one method of speeding up traffic flow across the border while still meeting homeland security concerns. This program could be considered a best practice and used elsewhere.

Explore the viability of a pre-cleared border-crossing card for those who regularly cross the border in public transit. U.S. Customs and Border Protection could expand or replicate its Secure Electronic Network for Travelers' Rapid Inspection program, now in effect for passenger vehicles, to support cross-border public transit. Travelers who undergo a background check and deemed to be "low risk" could be issued with a special border-crossing card linked to public transit systems. This would encourage greater use of cross-border transit services.

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SECTION - 2

Cultural and Natural Resources

Recommendations

To better protect cultural and natural resources along the U.S-Mexico border, the Good Neighbor Environmental Board recommends the following:

CAPACITY BUILDING

Efficiently use and leverage existing federal support initiatives such as the National Heritage Area program. Establish more public-private partnerships to increase both funding and staffing levels. Foster more public involvement in cultural resources preservation through stronger public education about its value.

GROWTH

Increase partnerships between preservation groups and agencies to purchase land with high-value cultural and natural resources, thus helping to manage growth. Create incentive programs to encourage private landowners and developers to voluntarily protect cultural resources. Encourage tribal governments and agencies to participate in government-to-government consultation to minimize damage to cultural resources, including sacred sites.

SECURITY

Undertake border security efforts with recognition of the need to protect cultural and natural resources. Improve efforts in interaction, coordination and cooperation among federal, tribal, state and local governments. Examine methods to reduce the number of undocumented migrants crossing border tribal lands, thus reducing associated damage to sacred sites, burial grounds, archeological sites, important ecosystems, and traditional lifestyles.

INTRODUCTION

The U.S.-Mexico border region is rich in history, culture, regional character and diversity, all of which contribute greatly to the region's collective heritage and community identity. The region encompasses some of the most impressive archaeological sites and traditional cultural landscapes in North America, including ancient Native American villages, the magnificent Mission church of San Xavier del Bac, and Mexican and U.S. Territorial-era ranches. The region also contains historic mining districts, frontier towns, and early railroads, roads, and trails. Together, these cultural resources represent over 10,000 years of settlement along the border.

Also contained within the border region are a variety of landscape features, along with plant and animal species, that have come to feature prominently in its collective identity. Landscapes range from hot and dry deserts, to lush riparian corridors and irrigated farmland, to highly productive rangeland, to mountain top forests. Significant wildlife species include the New Mexico ridge-nosed rattlesnake, the coati mundi and coppery-tailed trogons, as well as better-known species such as the desert bighorn sheep, the javelina, the mountain lion, and the coyote. Some of these landscapes and wildlife species remain closely linked to ongoing cultural practices of tribal groups and others in the area.

The Good Neighbor Environmental Board recognizes the dynamic interplay among the region's cultural resources, their surrounding natural resources, and the region's environmental quality. It also recognizes that, fortunately, protection of one element often incorporates protection of the others. One of the clearest examples of this interplay can be found in the region's prehistoric and historic archeological sites. Thus, for the purposes of this report, the Board decided to focus primarily on the topic of archeological sites and their associated natural landscapes. It also chose to examine how the cultural resources of one of the region's many cultural groups, the 26 U.S. tribes whose land lies within the border region, are being affected by factors such as development pressures and a shortage in agency staff resources.

The following section describes cultural resources in the border region from three perspectives: ***archaeological sites, traditional cultural landscapes and properties, and traditional cultural practices.***

Archaeological sites are physical remains of past human activities that are at least 50 years old. These sites may contain artifacts such as stone tools and features such as rock walls. One example is the Hueco Tanks State Historic Site in Texas, which contains both pictographs (rock paintings) from ancient Native Americans, as wells as the ruins of a stagecoach station and historic ranch house. [www.tpwd.state.tx.us.]

Much of the preservation activity to date has focused on preserving only specific archaeological sites; these areas often are easily recognizable by the general public. While laudable, such efforts often focus strictly on a limited geographic area, while excluding the connection to the surrounding cultural and natural landscapes.

Traditional cultural landscapes and properties are natural resources that have taken on special cultural significance, such as sacred springs or mountain peaks. They may or may not show overt signs of human activity. The National Park Service and the National Register of Historic Places use a similar definition. According to the National Park Service, a traditional cultural landscape is "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." A traditional cultural property (TCP) is defined as a property that is eligible for inclusion on the National Register of Historic Places because of its association with cultural practices or beliefs of a living community. TCPs are essential to maintaining the cultural integrity of many Native American nations, and are critical to the cultural lives of many of their communities. A good example is Tecate Peak, which lies astride the international border between San Diego, California and Tecate, Baja California. Not only is it a sacred site for Kumeyaay and other regional tribes, but it also is an important natural area, protected on the U.S. side as Bureau of Land Management lands and on the Mexican side by the first ecological easement in Baja California.

Traditional cultural practices or beliefs of a living community are rooted in the community's history. They

serve a key role in maintaining the continuing cultural identity of that community. One example, located along the Arizona border on Tohono O'odham land, is the Baboquivari mountain peak area. The Tohono O'odham people believe that the Baboquivari Peak is the home of their creator, I'itoi, spirit of goodness, who dwells in the center of all things and watches over them. Pilgrimages are made to the peak for spiritual purification and strengthening. Also of great cultural significance to the O'odham people is the coyote, which features greatly in the O'odham belief of creationalism, and in their traditional songs and stories.

Yet another example, this one non-tribal, is the production and harvesting of soap from the wax of an endemic plant, the "candelilla." Its wax remains an important economic cash crop in the Big Bend area of Texas, and especially in the rural areas of northern Mexico. Harvesters of the plant, called "candelilleros," teach their sons and daughters sustainable harvesting techniques such as pulling up the plant by hand in a way that promotes the fastest regeneration. [www.texasbeyondhistory.net/waxcamps/today.html.]

Cultural resource management in the border region faces unique challenges. An explosion in the region's population has had a dramatic effect on shared natural and cultural resources. Urban development creates an ongoing loss of archaeological sites and traditional cultural landscapes, and a negative impact on traditional cultural practices. Foot traffic, off-road vehicles, and trash associated with undocumented migration causes damage to sites and hinders use of sacred sites and recreational areas. Increased border security impedes cultural practices, especially for tribes such as the Tohono O'odham in Arizona, and the Kumeyaay of California and Baja California, whose members reside on both sides of the border. In addition, especially in remote areas, lack of resources for adequate protection leads to increased looting.

To preserve the border region's cultural heritage, policymakers must recognize that many of the same forces affect both natural and cultural resources, and that natural resource stewardship has much in common with cultural resource stewardship. Sacred sites and traditional cultural landscapes contain important reservoirs of genetic and species diversity, and can help to protect ecosystems against environmental degradation. Archaeological sites often are located along fragile riparian corridors. Traditonal cultural practices often rely on interaction with local natural resources. Therefore, sustainability of both cultural and natural resources is key to the preservation of each.

Fortunately, there is growing awareness of this concern, and some border region communities already are taking steps to simultaneously preserve both natural and cultural resources. For example, Texas and its neighboring Mexican state of Tamaulipas have created a binational "Caminos del Rio (Roads of the River) Lower Rio Grande Heritage Corridor." Through designation of the corridor, the two countries seek to preserve the heritage and architecture of the area along the Rio Grande between Brownsville–Matamoros and Laredo–Nuevo Laredo. While the primary focus is on preserving buildings, the effort also includes land preservation in the form of the historic Palmito Battlefield. The corridor wends its way past large working ranches and farms, some of which have been in operation since the late 19th century. [www.thc.state.tx.us/heritagetourism/htcaminos.html]

National recognition of the border region's rich cultural resources also is growing. For example, in 2000, the Smithsonian Museum's annual Folk Life Festival on the National Mall in Washington, D.C. featured an exhibit simply named "El Rio." The goal, in the words of the curators, was to explore "the relationship between traditional knowledge, local culture, and a sustainable environment in the Rio Grande/Rio Bravo Basin." [www.folklife.si.edu]

Despite these promising signs, much more needs to be done if the border region's natural and cultural resources are to be sustained. The section that follows highlights some of the promising partnerships working on both issues as well as some of the remaining barriers. Note that because the Good Neighbor Environmental Board's Sixth Report included a substantial section on natural resources, this report focuses primarily on cultural resources. However, significantly, it does include an update on the natural resources recommendations made in the Sixth Report.

Cultural and

PROJECTS AND PARTNERSHIPS

Throughout the U.S.-Mexico border region, projects and partnerships have been undertaken to protect its cultural resources. The following section highlights a few of the promising efforts. In some cases, projects that started out protecting only one aspect of cultural resources —such as preserving a particular archaeological site— have broadened over time. They now recognize the interconnectedness of sites, cultural landscapes, cultural practices and natural resources, and manifest a resource protection philosophy. On the partnership side, the value of public/private partnerships has moved to the forefront.

The Archaeological Conservancy Established in 1980 and based in Albuquerque, New Mexico, the Conservancy is a non-profit organization dedicated to acquiring and preserving archaeological sites**.** The Conservancy protects sites in the border region by acquiring the land on which they rest, preserving them for posterity. Examples of Conservancy preserves include missions of Father Kino and several important Hohokam ruins in southern Arizona, and important sites in Texas and New Mexico. Over the past few decades, the knowledge and methods of modern archaeologists have advanced tremendously. Keeping a significant portion of raw data in the ground guarantees that archaeologists with even more advanced knowledge and technologies will have access to it.

The Arizona Site Steward Program This is a volunteer program with approximately 150 certified participants in southern Arizona. Each volunteer is assigned to monitor the condition of archaeological sites. Participating sites are managed by a variety of agencies: the National Park Service; Pima County; Coronado National Forest; University of Arizona; Bureau of Land Management; Arizona State Land Department; Arizona State Parks; and The Archaeology Conservancy. The program dates back to the mid-1980s, when members of the Governor's Archaeology Advisory Commission partnered with the State Historic Preservation Office. The primary role of the "Site Stewards," as they are called, is to report site vandalism or damage, and to educate the public about the importance of leaving the archaeological record intact. Most damage occurs from looters, but it also occurs from illegal grading and road building, graffiti, natural erosion, and casual collections of artifacts. The Site Steward program of Arizona has served as a model for the New Mexico Site Watch program.

Strong arms and a sturdy back. "Candelilla" plants typically are harvested entirely by hand, sometimes with a sharpened stick. Wax from the plant remains an important economic cash crop in the Big Bend area of Texas and the rural areas of northern Mexico. (Source: Raymond Skiles, www.texasbeyondhistory.net/waxcamps)

Falcon Reservoir Cultural Resources Some 850 archaeological sites, encompassing approximately 8,000 years of human occupation, have been found at the Falcon Reservoir on property controlled by the United States Section of the International Boundary and Water Commission, United States and Mexico (USIBWC). These cultural resources include prehistoric sites as well as Spanish colonial ranch sites. Falcon Dam is located on the Rio Grande between two pairs of sister cities: Laredo, Texas-Nuevo Laredo, Tamaulipas; and McAllen, Texas–Reynosa, Tamaulipas. It was constructed by the U.S. and Mexican sections of the Commission in 1953. At normal conservation capacity, the reservoir covers 87,181 acres of land. The cultural resources located in the Falcon Reservoir area are the highest density recorded in any one site in Texas.

The USIBWC has been working with the Texas Historical Commission to continue to protect the site's extensive cultural resources. However, the sheer number of sites in the area, and their remote location, complicate efforts to protect them from damage caused by illegal collectors and other human activity. Many of the sites also suffer from erosion due to rising and falling lake levels. During 2005, partnership activities included survey work as well as

efforts to develop salvage and treatment plans for sites in danger of significant erosion.

Franklin Mountains State Park This park in El Paso, Texas, is one of the largest urban parks in the U.S. It comprises some 37 square miles, all within the El Paso city limits. The park was created by the Texas Legislature in 1979 and acquired by the Texas Parks and Wildlife Department (TPWD) in 1981. Among the park's assets are colorful Native American pictographs located on boulders and in rock shelters, and mortar pits, formerly used to grind seeds. Preservation of the park can be credited to strong partnerships among the residents of the Paso del Norte region.

The Heritage Southwest Program The Center for Desert Archaeology, a private nonprofit organization based in Tucson, Arizona, promotes the stewardship of archaeological and historic resources in the American Southwest and Mexican Northwest through active research, preservation, and public education. Under the Heritage Southwest Program, Center researchers currently are compiling information for inclusion in a geographic information system for the management and protection of archaeological sites. The program gives priority to compiling an inventory of sites that date between A.D. 1200 and 1700 across the American Southwest and Mexican Northwest. A prime research concern is exploring the links between modern tribal groups and archaeological sites that date to this interval. The program also is pursuing research into the arrival of agriculture to the American Southwest and Mexican Northwest. Agriculture has been an element of human survival in the Greater Southwest/Northwest for approximately 4,000 years, and has been critical to that survival for about 2,000 years. [www.centerfordesertarchaeology.org/pdf/hsw_summary.pdf]

Native Seeds/SEARCH This is a nonprofit conservation organization based in Tucson, Arizona that conserves, distributes and documents the diverse varieties of agricultural seeds, their wild relatives and the roles these seeds play in cultures of the American Southwest and Northwest Mexico. Native Seeds/SEARCH works with indigenous gardeners on both sides of the border to seek out native seeds, grow larger quantities of what they collect, and return the crops to native elders. They now have a seed collection of nearly 2,000 varieties across 99 species of crops from 18 tribal groups. Many of these crops were once thought to be gone forever.

Protecting cultural and natural resources in remote areas of the border region is extremely difficult due to insufficient human resources. Remains of a historic chimney found on lands in the Falcon Reservoir in Texas. (Source: USIBWC)

Santa Lucia Ranch and Rancho Seco Land Purchase Agreement In April 2005, Pima County, Arizona, officially purchased two adjoining ranches located just north of Arivaca in the Altar Valley. The event was the culmination of a unique partnership involving ranchers, Arizona Open Land Trust members, and county and city officials. Together, the Santa Lucia Ranch and its neighboring ranch, Rancho Seco, comprise nearly 10,000 acres of land. As part of the acquisition, grazing leases will be assigned to the county, but ranchers will remain on the property and continue ranching for at least ten years. The purchased land is in an area that is under considerable development pressure. Informal investigation indicates a number of archaeological sites on the land. An additional significant benefit of the agreement is that the two ranches directly abut the Buenos Aires National Wildlife Refuge.

Tumacácori National Historical Park Partnership (NHP) Tumacácori NHP is creating a working partnership with the Instituto Nacional de Antropologia e Historia (INAH) in Sonora, Mexico. Together, under a grant from the Cultural Resources Training Initiative, the partnership hosted a binational symposium of preservationists from the Mexican states of Sonora, Coahuila, Durango, Chihuahua, and Nuevo León, as well as specialists from the U.S. National Park Service, the U.S. Bureau of Land Management, the U.S. Forest Service. and the Arizona State Historic

Preservation Office. The goal was to discuss the future of earthen architecture mission sites in the border region. The preservation process began more than a decade ago, when specialists and volunteers from the National Park Service teamed with citizens from San Ignacio, Sonora, Mexico to help preserve the local mission. The Tumacácori NHP contains three missions, historic orchards and ancient irrigation systems that are extremely vulnerable to subdivision development. San José de Tumacácori and Los Santos Ángeles de Guevavi, both established in 1691, are the two oldest missions in Arizona, and the third mission, San Cayetano de Calabazas, was established in 1756.

Proposed National Heritage Area: the Santa Cruz Valley Local government agencies, chambers of commerce, tourism councils, and a variety of nongovernmental organizations are collaborating in efforts to add a border-region river valley to the current list of National Heritage Areas (NHAs): the Santa Cruz Valley in southeastern Arizona. The Santa Cruz River Valley is unique, as it contains several stretches of natural river flow, important riparian and grassland habitats, unfragmented wildlife migration corridors, and diverse plant and animal communities, including numerous endangered species.

Pictograph from Seminole Canyon State Park and Historic Site, west of Comstock, Texas. Pictographs (rock paintings) created by ancient Native Americans are one of the border region's cultural resource treasures. These cultural resources, their surrounding natural resources, and the region's environmental quality remain in dynamic interplay -- protection of one often leads to protection of the others. (Source: Texas Parks and Wildlife Department)

The Santa Cruz National Heritage Area Feasibility Study, produced by the Center for Desert Archaeology, is an excellent description of the valley's biological resources and corridors, historic structures, and archaeological sites. The drive to designate the Santa Cruz Valley a National Heritage Area is gaining momentum due to a convergence of local efforts to: conserve natural resources and open spaces; preserve historic structures and archaeological sites; educate the public about the history and cultures of this region; increase national recognition of the region; develop heritage tourism and bring other economic benefits to local communities; and improve cultural ties across the U.S.-Mexico border.

NHAs are designated by Congress to conserve resources and open spaces as well as to preserve the historic structures and archaeological sites important to the history and cultures of the region. Being designated an NHA often results in increased recognition and resources. Significantly, Yuma Crossing, in Arizona, is currently the only National Heritage Area in the entire U.S.-Mexico border region. (also see Next Steps section).

U.S.-Mexico Border States Symposium on Natural/Cultural Resources Management This symposium was held April 19-21, 2005, at New Mexico State University in Las Cruces. It was a consolidation of several forums held in previous years: the U.S.-Mexico Border States Conference on Protected Areas, Wildlife, and Recreation; the International Workshop on Management of Cultural Resources; and the "Sister Parks" Workshop. The goal was to improve transboundary cooperation by facilitating networking among resource managers and the public and private sector, academic communities, and political decision makers. The event included three themes: Natural Protected Areas and Cultural Heritage; Wildlife Management; and Tribal Relations and Efforts.

Waste Characterization of Solid Waste from Undocumented Migrants The Tohono O'odham Nation is examining the possibility that the amount of recyclable and reusable material in the solid waste left by undocumented migrants would be sufficient to support sustainable businesses. (Each individual discards a daily average of approximately eight pounds of waste, comprised mainly of backpacks, clothing, blankets, water bottles, plastic sheeting, and food. With more than six tons (12,000 lbs) of solid

waste being deposited on the Nation's lands each day, this problem rapidly is approaching crisis proportions.) During the Nation's waste characterization study, 10,679 pounds of solid waste from fifteen sites were sorted into categories and graded on cleanliness. Two sorts were completed. Most of the material from the first sort was not usable, as it was dirty, wet or degraded. The second sort consisted of material recently discarded and showed more promise. Several business areas are being considered: cleaning and selling of backpacks; selling of textiles and shoes to recyclers; processing of textiles for rags; and recycling of plastic.

California Indian Basket Weavers Association (CIBA) CIBA was formed in response to concerns about the loss of traditional sites for gathering basket materials as a result of development and land use changes. In 1991, CIBA opened a dialogue with agencies such as the Forest Service, Bureau of Land Management, National Park Service, and the California Department of Parks and Recreation to protect Indian access to these natural resources integral to their culture. [www.ciba.org]

Particular landscape features hold special meaning for tribal groups and others in the border region. The Tohono O'Odham people, for example, honor the sacred spring (left) on historic tribal land at Quitovac, Mexico. They also honor the sacred mountain of Baboquivari Peak (right) in southern Arizona, the home of their creator, I'itoi, spirit of goodness. Because the tribe's land spans the border, tribal members on both sides make regular cross-border pilgrimages to maintain their revered cultural practices. (Source: Tohono O'Odham Nation Environment and Solid Waste Departments)

REMAINING BARRIERS AND NEXT STEPS

CAPACITY BUILDING

Barrier 1

Lack of institutional resources to adequately manage and protect cultural resources. A shortage of funds continues to stymie cultural resource preservation efforts throughout the border region. Insufficient financial resources lead to insufficient human resources. Protecting cultural and natural resources in remote areas of the border region is extremely difficult, and public land managers have far too few patrol officers to oversee the lands under their jurisdiction. For example, much of the border area of the Coronado National Forest in southern Arizona is remote and unroaded. This 1.7 million acre national forest has approximately six full-time law enforcement personnel. Other employees are occasionally placed in the field, but seldom on the border.

This lack of resources has led to a lack of complete data on cultural resources throughout the border region. For example, there are 3,984 archaeological sites known in Pima County, Arizona, yet only 12 percent of the land base has been formally investigated. Staff from the Coronado National Forest estimate that only 10 percent of the forest has been surveyed. Without data on the number, types and status of cultural resources, informed decision-making is difficult.

NEXT STEPS

Increase funding for sustainable management and protection of cultural resources. Without additional funding, cultural resource preservation efforts throughout the border region will continue to be inadequate. In addition, agencies, need to look at ways of becoming more efficient, and should focus on strategies to conserve the whole resource base.

In cooperation with interested authorities, compile a comprehensive inventory to document cultural resources along the border, while respecting the concerns of those groups who choose not to participate. A comprehensive site inventory is needed as a foundation for informed decision-making about how best to preserve the region's cultural resources. One example of progress in data collection is a project in Big Bend National Park, Texas, one of the largest national parks in the nation. In 1995, a comprehensive archeological survey was initiated to create and preserve a record of the evolution of the park's cultures. More than 7, 000 acres were surveyed. The findings and collected data were integrated into the park's Geographic Information System.

Facilitate an increase in public-private partnerships to protect cultural resources. In Texas, for example, the inception of the "Caminos del Rio" (Roads of the River) Lower Rio Grande Heritage Corridor began with assistance from the Meadows Foundation, which completed a cultural resources survey published as *A Shared Experience.* With this survey in hand, several Texas state agencies, the National Park Service, and agencies in Mexico created the corridor.

Designate additional National Heritage Areas in the border region. Only one National Heritage Area currently exists in the border region, the Yuma Crossing National Heritage Area, though several others are being considered (see Projects and Partnerships section). National Heritage Areas are designated by Congress as regions with natural, cultural, and recreational resources that, when considered together, are nationally distinctive and significant. In recognition of the link between economic development and cultural resources, they are designed to stimulate economic growth by encouraging local stakeholders to collaboratively plan and implement projects that "recognize, preserve and celebrate many of America's defining landscapes." Once designated, an NHA is eligible to receive up to $10 million in 50 percent matching funds over 15 years.

Barrier 2

Increase in vandalism resulting from lack of resources. Vandalism continues to be a major problem for cultural resources along the border. The potential financial gain, coupled with the low probability of getting caught, keep looters active. For example, at Hueco Tanks State Park in El Paso County, the pictographs created by the

Jornada Mogollon culture have been defaced in the past 15 years by vandals, resulting in irreparable cultural destruction. The Arizona Site Steward Program (see Projects and Partnerships section) reported over 50 acts of vandalism to archaeological sites in southern Arizona during 2005, including pot hunting, surface collection of artifacts, illegal dumping of trash, removal of petroglyphs, fence cutting, and damage from off-road vehicles.

NEXT STEPS

Increase monitoring activities at archaeological sites. The most effective means of decreasing vandalism at archaeological sites is to have a permanent presence at the site. However, agencies continue to operate with limited financial resources. In lieu of agency staff, volunteers and even neighbors, can monitor areas. The Arizona Site Steward Program and the New Mexico Site Watch program are highly successful volunteer monitoring programs. The best protectors of cultural resources are often the people who live near the sites. The inhabitants of these areas could be of great service to preservation efforts by refraining from pot hunting, reporting vandals at sites, and alerting agencies to unauthorized land-clearing activities.

Barrier 3

Lack of awareness about the value of cultural resources and the benefits of preservation. Public education is the key to cultural resource preservation in the border region. If more members of the public understood and respected cultural resources, greater self-restraint would be exercised, land-holding agencies would find it easier to justify the expenditures for preservation activities, and law-enforcement and judicial agencies would be more willing to use existing tools such as antiquities laws.

NEXT STEPS

Foster more public involvement in cultural resource preservation through stronger public education about its value. Expanding and strengthening public knowledge about the protection and preservation of our cultural resources would help to create a cultural resources preservation ethic in the general population. The energies and interests of avocational archaeology and historic preservation groups should be channeled for the benefit of cultural resource management. Members of such groups can serve as educators as well as conservation advocates. Partnerships with organizations traditionally focused on natural resource protection could lead to increased protection of cultural resources.

GROWTH

Barrier 1

Explosive population growth, urbanization, and land cover changes. Older buildings with historical significance are abandoned and, with age, demolished for "urban renewal" or redevelopment projects. Increased development near protected areas increases visitation and often, unfortunately, vandalism. Big Bend National Park and the corresponding adjacent protected areas in Mexico are being compromised by the development of adjacent lands. Issues include air and water quantity and quality effects, invasive plants and animals, and an increase in motorized recreation.

NEXT STEPS

Work with private landowners so that when private land is developed, cultural resources are considered as a part of the development review approval process. Archaeologists and others interested in cultural preservation must make strenuous efforts to acquire institutional access to the planning and management process whenever land-surface alterations are involved. Projects can be designed to minimize damage to cultural resources if considered at the development review stage.

Purchase land containing high value cultural resources Pima County, Arizona has successfully used this strategy through bond initiatives to purchase areas containing significant cultural and natural resources. Acquisition strategies are often driven by changes in the modern landscape, such as intense development pressures. Pima County looked at development pressures, but also the significance of the sites to the resource base.

Make use of urban parks combining urban development, preservation and public education. Urban parks can balance urban development, preservation, and public education. They can range from a passive archaeological park consisting of a preserved area with little disturbance, to assemblages of historic buildings, to areas with formal construction such as displays, interpretive paths and installed signs.

Create an incentive program to encourage private landowners to voluntarily protect cultural resources on their land or, when necessary, compensate them. For many years, conservation easements focused entirely on natural resources such as plants, wildlife habitat, open spaces, rangeland and even scenic views. However, because many landowners are interested in protecting not only natural, but also cultural, resources, conservation easements have been increasingly used to protect landscapes in a more holistic manner.

Barrier 2

Threats to cultural practices of tribes along the border. For the 26 U.S. tribes whose land falls within the border region or crosses the border, dependence upon local natural resources for cultural practices goes far beyond the economic dimension. In many cases, numerous aspects of daily life, from spiritual practices, to daily diet, to creation of handcrafted objects from local materials, are affected. For instance, the Tohono O'odham people of southern Arizona weave more baskets than any other tribe today, using indigenous plants such as yucca, bear grass, and devil's claw. Their techniques remain identical to that of their prehistoric ancestors. They must first gather natural materials to be used, including the natural vegetable dyes. They often incorporate cultural symbols including the coyote, the desert turtle, and desert lizards, to decorate their baskets.

Another example is the Kumeyaay Indians, the predominant native group in Southern California, who have lived on both sides of the westernmost portion of the U.S.-Mexican border for thousands of years. The Kumeyaay depend on native plants for clothing, basketry, food, shelter, and medicine. Today, they continue to honor the land through language, story, song, prayer, and habits of daily life.

Traditional farming, the stabilizing force in many Native American communities, also is endangered. Traditional farmers conserve historic seeds adapted to local conditions, keep traditional agricultural and culinary practices alive, donate crops for ceremonies and feast days, and feed extended families from their fields. When peoples once sustained by agriculture lose their agricultural traditions, their survival as a culture may also be at risk. For many Native American tribes in the southwestern U.S. and northern Mexico, these relationships are endangered.

NEXT STEPS

Encourage protection of natural resources vital to traditional cultural practices. The Wild Chile Botanical Area was officially designated as a special management area within the Coronado National Forest in 1999. Establishment of this 2,500 acre area as a site rich in genetic resources makes it the first such designation designed to conserve wild relatives of traditional important crops, in this case, the wild chile. Through research, training and education, the botanical area provides government, non-government and private interests the opportunity to work together toward the common goal of conserving natural resources and cultural practices.

Another strategy is employed by the organization Native Seeds/SEARCH, which works with indigenous gardeners on both sides of the border to seek out native seeds, grow larger quantities of what they collect, and return the crops to native elders (see Projects and Partnerships section).

Consult more extensively with traditional cultural practitioners to identify landscapes of significance. Cultural landscapes often are difficult to recognize, and may not come to light through the conduct of routine archeological or historical surveys. The existence and significance of such locations often can be ascertained only through interviews and consultation with traditional cultural practitioners.

Barrier 1

Potential conflicting priorities across land management agencies and border security agencies. Preservation agencies' priorities are at times in conflict with border security priorities. Each land management agency has a distinct mission and set of responsibilities. These missions involve managing the land for a variety of purposes related to the conservation, preservation, and development of natural resources.

Native American tribes have concerns regarding current and proposed border security projects exempt from federal environmental laws, such as fencing, roads, and remote monitoring stations. For example, the Border Fence Project in the San Diego, California–Tijuana, Baja California border region was exempted from such laws through a Congressional rider attached to a defense bill. This large triple fencing, approximately 30 miles long, will destroy or cover an ancient La Jolla period archeological site, and will affect several endangered plant species.

NEXT STEPS

Improve coordination and cooperation among federal, tribal, state, and local governments. Federal, tribal, state, and local governmental entities should increase cooperation to develop shared conservation goals. A combined agency effort toward completing a formal assessment of border policies on cultural and natural resources, followed by a project to inventory, monitor, evaluate and assess environmentally sensitive areas, would help mitigate impacts to cultural and natural resources.

Require compliance with federal laws on federal projects. The National Environmental Policy Act (NEPA) requires that federal agencies must prepare environmental impact statements prior to making decisions about projects that may significantly affect the quality of the human environment. Exemptions to NEPA for border security projects may harm natural and cultural resources.

Barrier 2

Undocumented immigration and illegal drug activity, which damage archaeological sites, disturb significant natural areas, violate sacred sites and force changes in cultural practices. Tribal lands - The increased number of undocumented migrants crossing border tribal lands, coupled with the increased border security efforts by the federal government, has resulted in greater violation of tribal sacred sites, burial grounds, and changes in traditional lifestyles. Estimates from the Tohono O'odham Nation indicate that, at times, up to 1,500 undocumented migrants cross the Nation's lands each day. This increased human activity has resulted in many more unofficial roads, trails, and paths, and more off-road traffic. The higher human and mechanized traffic, in turn, has led to increased impacts on natural areas, sacred sites, burial grounds, and archaeological sites, whether inventoried or not. This human activity also has adversely affected border tribal members in the gathering of wild foodstuffs, medicinal plants, and materials used in basketry and pottery, which are essential for maintaining tribal traditions and lifestyles. Examples include cacti fruit, yucca and devil's claw fiber, nuts, clay, dyestuffs, and various medicinal plants. In addition to the vegetation damage caused by migration pressure, many border tribal members now refrain from going out to gather native fruit, plants, and other materials because of the fear for personal security out in the wild. The combined effect has sobering implications for efforts to maintain tribal cultural traditions.

National parks, national forests, and state lands – The national park system manages seven national parks along the U.S.-Mexico border, including Organ Pipe Cactus National Monument and Coronado National Memorial in Arizona; Amistad National Recreation Area; Big Bend National Park; Chamizal National Memorial; Palo Alto Battlefield National Historic Site; and Padre Island National Seashore in Texas. They share approximately 365 miles of the international border with Mexico, and are directly affected by increased illegal border activity. Other parks nearby, including Saguaro National Park; Chiricahua National Monument; Fort Bowie National Historic Site; and Tumacácori National Historical Park also feel the effects of illegal border activity.

National forests such as the Cleveland National Forest in southern California and the Coronado National Forest in southern Arizona, as well as state-protected lands such as the Anza-Borrego State Park, also are located near or on the border. They too have been affected by the movement of undocumented persons through their landscapes. Concerns include the creation of new trails that produce erosion with winter rains, untended migrant campfires that cause wildfires, and large quantities of trash. Most of these protected areas were established to preserve some of the country's most unique natural and cultural resources, which are contained in a very fragile environment. Yet human and vehicular intrusions continue to cause damage.

NEXT STEPS

Address the impacts of illegal immigration on cultural and natural resources. Impacts could be reduced by: minimizing off-road driving and the resulting creation of new roads by Border Patrol personnel; increasing education and public awareness of impacts caused by undocumented migrants crossing border tribal lands; increasing existing training of Border Patrol personnel in cultural sensitivity and appreciation of the border region's diverse cultural heritage; and providing additional funds for the removal of trash and mitigation of damage caused to cultural resources.

FEDERAL LAWS PROTECTING CULTURAL RESOURCES

The enactment of laws to protect cultural resources began exactly 100 years ago with the Antiquities Act of 1906. Since then, others have been passed at the federal, state and local level. Listed below is a synopsis of the main points of the most relevant federal laws.

Antiquities Act of 1906 authorizes the president to designate, as national monuments, areas containing historic landmarks, historic and prehistoric structures, and objects of historic or scientific interest located on federally owned or controlled lands.

National Historic Preservation Act of 1966 authorizes the Secretary of the Interior to maintain a National Register of Historic Places; directs the secretary to approve state historic preservation programs that provide for a State Historic Preservation Officer; directs federal agencies to take into account the effects of their activities on historic properties; and establishes a National Historic Preservation Fund program.

National Environmental Policy Act of 1969 declares that it is the policy of the federal government to preserve important historic, cultural, and natural aspects of the nation's heritage, and requires that federal agencies prepare environmental impact statements prior to making decisions about projects that may significantly affect the quality of the human environment.

Native American Religious Freedom Act of 1978 sets forth a policy of protecting and preserving the rights of Native Americans to freedom of religion, and allows access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

Archaeological Resources Protection Act of 1979 amends the Antiquities Act of 1906. It regulates archaeological resources on federal lands by setting a broad policy that archaeological resources are important for the nation and should be protected. Violations of the law include civil and criminal penalties.

Native American Graves Protection and Repatriation Act of 1990 provides for the protection of Native American graves. It requires federal agencies and recipients of federal funds to: document Native American human remains and cultural items within their collection; to notify all Indian tribes and Native Hawaiian organizations that are or are likely to be affiliated with these holdings; and to provide an opportunity for the repatriation of appropriate human remains or cultural items.

Executive Order No. 13007: Indian Sacred Sites, May 24, 1996, Accommodation of Sacred Sites states that each executive branch agency with statutory or administrative responsibility for the management of federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, accommodate access to and ceremonial use of sacred sites by Native American religious practitioners, avoid adversely affecting the physical integrity of sacred sites, and, where appropriate, maintain the confidentiality of sacred sites.

LANDSCAPE FEATURES OF THE U.S.-MEXICO BORDER REGION

Landscapes within the region vary greatly. They include Mediterranean climates (on the Pacific Coast), deserts (Mojave, Sonoran and Chihuahuan), and subtropical conditions. Annual rainfall ranges from four inches in desert regions to 28 inches in the Lower Rio Grande Valley of Texas. Elevations range from 120 feet below sea level in Imperial Valley, California, to 8,000-plus foot mountain peaks (Guadalupe Mountains National Park, Animas Mountains, New Mexico, and Coronado National Forest, Arizona).

Moving from west to east:

- On the western edge, in California, a mixture of coastal grasslands and oak savannahs, gradually transitioning to an oak woodland near Tecate;
- The Imperial Valley of California, which historically was part of the Mojave Desert, is extremely arid and hot. Currently, much of the valley is irrigated and includes productive farmland;
- Across the Colorado River in Arizona is the Sonoran Desert, another extremely hot and dry area. Although some irrigation exists in the Yuma/San Luis Rio Colorado area, most of the area is natural desert;
- An extensive portion of the Arizona border, from Sasabe in the west to the San Pedro River in the east, consists of uplands with live oak savannahs and woodlands. Some of the higher mountains support conifer forests;
- The valleys of the San Pedro, Sulphur Springs, and San Bernardino Wash are arid, with flora and fauna from the Chihuahuan Desert;
- Still further east, in New Mexico, another uplands area exists with oak woodlands, mountain forests, and grasslands. It begins in the Peloncillo Mountains along the Arizona border and extends to Big Hatchet Peak in Hidalgo County;
- From near Columbus–Las Palomas eastward into Texas is a long stretch of Chuhuahuan Desert that extends through the Big Bend of the Rio Grande to the Southern Valley of Texas; and
- Finally, the lower valley of the Rio Grande in Texas is a subtropical area that supports an extensive farming area and a rapidly growing winter tourist industry.

NATURAL RESOURCES ALONG THE U.S.-MEXICO BORDER

A PROGRESS REPORT

In its Sixth Report to the President and Congress [www.epa.gov/ocem/gneb/gneb6threport], the Good Neighbor Environmental Board singled out four issues confronting effective management of natural resources in the borderlands:

1) Many different agencies help to shape conservation policy, so the process is not always coordinated;
2) Cattle ranchers and environmentalists may hold conflicting views on how to manage land;
3) Illegal immigration places great stress on the region's natural resources; and
4) The region's fragile ecosystems face multiple threats, including drought, invasive species, and urban sprawl.

Below is an update on these issues. In summary, the Board's view is that although progress has been made, additional federal attention is needed to adequately protect and preserve the border region's natural resources. In addition, given that the fate of natural resources is so closely linked to that of cultural resources, federal support for natural resources preservation likely would also yield benefits to the region's cultural resources, perhaps boosting its economy in the process.

Issue 1: Multiple Jurisdictions Control Conservation Policy

Sixth Report Board Recommendation
Foster cooperation across natural resources agencies; promote sustainable practices, such as prescribed burning.

The issue of multiple jurisdictions continues to be a challenge to effective management and policy-making. On the U.S. side of the border, natural resource management responsibilities continue to be shared by a plethora of groups: private landowners; the U.S. Forest Service; the U.S. Natural Resource Conservation Service; the U.S. Bureau of Land Management; the U.S. Fish and Wildlife Service; the National Park Service; state land departments; state wildlife agencies; state foresters; and a number of other individuals and agencies. In Mexico, foresters and biologists from the Ministry of Environment and Natural Resources and the National Forest Commission are involved in these efforts along the nation's northern border. Given this scenario, collaborative efforts involving multiple agencies and public interest groups will continue to be the key to more effective leveraging of resources and better cross-agency communication.

In the view of the Board, collaboration across jurisdictions has picked up pace since 2002. For example, the Malpai Borderlands Group of New Mexico and Arizona coordinated a 46,000 acre "prescribed burn" in Arizona and New Mexico, a management practice carried out to help restore the balance of the local ecosystem. The Malpai Borderlands Group is a coalition that promotes both conservation and strong livelihoods on ranchland and grazing land. In addition, a group called the Quivera Coalition of New Mexico held a collaborative conservation workshop in Albuquerque in 2005, and a follow-up workshop is scheduled for early 2006. Another example: the Southwestern Section of the Society of American Foresters and the Mexican Association of Professional Foresters held a joint meeting in Tucson, Arizona. The purpose was to discuss forestry concerns in the Sky Islands of Arizona, New Mexico, Sonora, and Chihuahua. The Sky Islands are mountain areas that are biologically isolated by intervening desert valleys.

Public education on the benefits of collaboration is also growing: During 2005, the Mexican cement company Ce-

mex, along with the Sierra Madre Group and Conservation International, published *"Transboundary Conservation: A New Vision for Protected Areas."* The book includes a chapter on the black bear population's self-initiated return to colonize Texas from its last holdout in Coahuila, thanks to public-private partnerships involving stakeholders on both sides of the U.S.-Mexico line.

*I*ssue 2: Tensions Continue Between Cattle Ranchers And Environmentalists

Sixth Report Board Recommendation

Promote dialogue across groups to increase understanding of differing views, and identify common ground.

The Board is pleased to note that progress has been made on this issue since 2002. For example, the Malpai Borderlands Group (see above) was instrumental in bringing diverse interests together from 2003 to 2005 to craft a Safe Harbor Agreement for the Chiricahua Leopard Frog. Participants are hopeful that this agreement will aid conservation efforts on private lands. In addition, the Jaguar Management Committee continued its collaborative dialogue on jaguar habitat needs, as well as its research on existing jaguar populations in the Mexican state of Sonora. The committee includes both agency and non-agency representatives: the Arizona and New Mexico Game and Fish Departments; the U.S. Fish and Wildlife Service; the Malpai Borderlands Group; the Defenders of Wildlife; the Center for Biodiversity; and local citizens. As recommended for Issue 1, supporting collaborative dialogue is the most effective means for the federal government to help pick up the pace on progress already under way.

Issue 3: Illegal Immigration Places Stress On Natural Resources

Sixth Report Board Recommendation

Encourage immigration officials and conservation managers to work together more closely; support tribal initiatives to protect and sustain reservation land.

Unfortunately, in the case of this issue, the Board's view is that the problem has become even more pressing over the past several years. Stresses on natural resources continue to grow in intensity as undocumented migration and illegal drug activities accelerate. The trend continues despite increasingly constructive discussions and cooperation between border security agencies and agencies charged with natural resources protection. During 2005, for example, the Border Patrol, the Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, and the Malpai Borderlands Group produced two videos for use in training Border Patrol agents. The films are titled "Courtesy on the Range" and "Endangered Species." More such films are being planned. Also in 2005, a joint use facility was completed in the Tohono O'odham Nation to be used by the U.S. Border Patrol and the Nation's police department. The joint facility is located just a mile or two from the U.S.-Mexico boundary, and was built to facilitate the processing of detained undocumented migrants, as well as to provide local border O'odham communities with more efficient services from the Nation's police department. Without this joint facility, police services would take approximately one half to one hour to arrive from Sells, the nearest police station.

Given the Board's continued concern about this serious issue, it decided that "Immigration and the Environment" should be the theme of its last meeting in 2005. The meeting took place from October 17th-19th on Tohono O'odham land near Tucson, Arizona (see 2005 Meeting Summaries, in Business Section of this report). Moreover, the Board has selected the topic of "Border Security and the Environment" as the theme for its next report, the Tenth Report to the President and Congress, scheduled for publication during the first quarter of 2007.

The choice of theme was influenced by the sobering speaker presentations it heard at the meeting, as well as the field trip that followed. For the field trip, the Board traveled to the Arizona border community of Sells to listen first-hand to border security issues voiced by Tohono O'odham tribal leaders. They also were briefed by wildlife refuge personnel from the Cabeza Prieta National Wildlife Refuge.

Issue 4: Ecosystems On Undeveloped Land Face Multiple Threats

Sixth Report Board Recommendation

Promote planning and management practices that reduce threats to natural resources.

From the Good Neighbor Environmental Board's perspective, some promising initiatives have gotten under way or have continued to make progress since 2002, but many of the threats facing border-region ecosystems on undeveloped land remain strong. Approaches such as prescribed burning to restore ecosystem balance, and sustainable grazing through moderation of stocking rates, continue to be steps in the right direction. Another extremely useful approach is the use of conservation easements. These easements take the form of legal agreements that prohibit subdivision and other environmentally detrimental uses of land. Typically, such easements are purchased and held by a "land trust" such as the Malpai Borderlands Group, the Nature Conservancy, or a government agency.

The Board also applauds the work of the Invasive Species Council, another Presidential advisory committee, and requests that additional attention is brought to border-specific invasive species. Also at the national level, actions under the National Fire Plan are producing sound fire management planning within the border region.

Two additional projects deserve mention for their focus on planning and strategic management: First, the U.S. Fish and Wildlife Service (USFWS) Lower Rio Grande/Rio Bravo Binational Ecosystem Group has completed a Binational Ecosystem Plan to address issues and threats along the South Texas–Tamaulipas, Mexico border. The four-year effort included eight agencies and two universities, as well as a number of non-governmental organizations. The goal of the plan is to identify, restore, connect, and conserve wildlife corridors along the Lower Rio Grande River on both sides of the border.

In addition, the USFWS South Texas Refuge Complex has provided basic fire training and prevention to federal, state and local governments, universities, and the Mexican military in the Mexican states of Tamaulipas and Nuevo León over the past several years. The next fire training is scheduled for early 2006 at Chipinque Ecological Park in Monterrey, Nuevo León, Mexico. This technical assistance enables skills and strategies to be exchanged across the border.

** The term "natural resources" refers to those elements that occur in nature and are of beneficial use to humans. They can be divided into two categories – renewable resources, such as trees and grass, and non-renewable resources, such as oil, gas, and minerals.*

BUSINESS REPORT

The opportunity to see different parts of the border region first-hand, combined with input from the local community, continues to enrich the Board's deliberations. During 2005, for the first time in its history, the Board held one of its meetings on tribal land. The T'ohono O'odham Nation meeting, October 17-19, featured presentations from local tribal and community leaders, a public comment session, and an educational field trip that ended at the barbed wire fence marking the border. (Sources: Paul Ganster and Robert Varady).

BOARD HOLDS THREE MEETINGS DURING 2005

During 2005, the Good Neighbor Environmental Board held two public meetings in towns located along the U.S.-Mexico border, as well as its annual Strategic Planning meeting in Washington, D.C. The public meetings in border towns were organized around particular environmental themes and included presentations from local speakers and public comment sessions. They also included a business meeting component and an optional field trip to learn more, first-hand, about environmental issues in that portion of the border region.

The first meeting took place in Eagle Pass, Texas on February 16th and 17th, and included a briefing session at a colonias community center. Opening remarks were made by three local officials: Jose Aranda, Maverick County Judge; Magdalena Herrera, Eagle Pass Mayor Pro Tem; and Roy Bernal, on behalf of Kickapoo Tribe Chair Juan Garza. Other speakers included: Roberto Gonzalez, Eagle Pass Water Utility Director; Hector Chavez, Eagle Pass Public Works Director; Buddy Garcia, Texas Assistant Secretary of State; Ing. Luis Eustaquio Gurrola, General Manager, SIMAS, Piedras Negras; Alven Lam, HUD; Jean Parcher, USGS; Sandra Fuentes, Co-Chair of the Border Organization; community leaders Luz Liserio, Esperanza Guajardo, and Nina Polendo; Domingo Davalos of the Colonias Initiative; and Center Director Sabino Garza. The first day ended with a brief tour of the nearby Kickapoo Reservation. A routine business meeting as well as the Board's annual Strategic Planning Session were held on the second day.

The Board's annual meeting in Washington, D.C. took place on May 10th and 11th. The meeting began with presentations from William Nitze of the Center for Strategic and International Studies, and Carlos de la Parra of SEMARNAT, on how to effectively manage the border region's water resources. Additional presentations followed from experts on the topics for the Board's Ninth Report - transportation, air quality and natural and cultural resources: Gregory Pence of U.S. Customs and Border Protection; Jill Hochman of the Federal Highway Administration; Martin Rojas of the American Trucking Association; Jenny Martinez of the Sierra Club; Herb Raffaele of the U.S. Fish and Wildlife Service; and Jonathan Putnam of the National Park Service. On the second day, the Board briefed both senior administration officials and Congressional representatives on the recommendations in its Eighth Report, which had been released in March.

The final meeting of 2005 took place October 17th-19th on tribal land at the Tohono O'odham Nation Desert Diamond Casino in Sahuarita, Arizona (near Tucson). The theme of the meeting was border region security and the environment. Councilman Edward Encinas of the Tohono O'odham Nation opened the meeting with a tribal blessing. Speakers included: Mike Connolly, Campo Band of Mission Indians; Colin Soto, Cocopah Indian Tribe; Jonathan Ammon and Rose Whitehair, State of Arizona Office of Homeland Security; Judith Gans, Udall Center for Policy Studies; Paula Stigler and Hiram Sarabia, Pala Band of Indians; Rene Cordova and Flavio Olivieri, Mexican Consejo Consultivo Liaisons to the Board; Melody Sees, Los Coyotes Reservation; Art Guajardo, U.S. Customs and Border Protection; and Roger De Rosa, Cabeza Prieta National Wildlife Refuge. On October 18th, the Board traveled to the Tohono O'odham community of Sells on the Arizona border, where presentations were given by the following: Chairwoman Juan-Saunders; Gary Olson, SWMP Administrator; Richard Saunders, Chief TOPD; John Petersen, Hydrologist, TON Water Resources; Marlakay Henry, Chairwoman, Chukuk Kuk District; Fern Salicido, Chairwoman, Gu Vo District; Dave Gutierrez, Border Patrol Casa Grande Sector; Peter Steere, Archaeologist; Karen Howe, Ecologist; Tim Walls, TOUA, Quitovac Project. On the third day, the Board held its business meeting.

The first meeting of 2006 is scheduled to take place in Washington, D.C. on March 14th and 15th. The second meeting will be held in San Diego on July 18th and 19th. The Board will travel to Alpine, Texas, October 24th-26th, for its final meeting of the year.

MORE THAN 100 MEMBERS OF THE PUBLIC ATTEND 2005 BOARD MEETINGS

The Board continued to benefit from extensive interaction with the public during its meetings in 2005. Following is a list of individuals who signed the registration list at the meetings. (Disclaimer: Other members of the public may have attended. Inaccuracies in the spelling of names and affiliations is unintended.)

Eagle Pass, Texas, February 16th - 17th

Jose Aranda, Maverick County Judge; Jose Andrade, Community Colonias Organization Ildeliza Antonares, North American Development Bank; Roy Bernal, Kickapoo Traditional Tribe of Texas, Taos, New Mexico; Mike Castillo, NRCS Office, USDS; Mario Chavez, Solid Waste Planner, Carrizo Springs; James Crumley, District Conservationist, USDA, Natural Resource Conservation Service; Domingo Davalos, Office of the Secretary of State, Maverick County; Elizabeth Elizalde, citizen, Val Verde County; Rosella Even, Principal, Rosita Valley Literacy Academy, Loma Linda Colonia; Jacqueline Frausto, Regional Coordinator, Health and Human Services Commission, Office of Border Affairs; Sandra Fuentes, Co-Chair, Texas Border Organization; Sabino Garza, Director, La Central Community Center ; Esperanza Guajardo, Las Quintas Colonias representative; Ingeniero Luis Estaquio Gurrola, General Manager of SEMAS, Piedra Negras; Magdalena P. Herrera, Mayor Pro Tem, Eagle Pass; Mr. Hernandez; Robin Holder, Indian Health Service, U. S. Public Health Service, Lawton, Oklahoma; Maria Luz Liserio, Co-Chair, Texas Border Organization, Val Verdes Park Estates; Marco Lopez, Environmental Director, Kickapoo Traditional Tribe of Texas; Francisco Martinez, Assistant Manager, Eagle Pass Water and Wastewater System; Dr. Martinez, Val Verde County Health Department; Enrique Montalo, Federal Programs Director, Eagle Pass Independent School District, and Chairman, Waterworks System, Eagle Pass; Joe Ornelas, District Coordinator for Representative Tracy King; Mr. Pachos Jose Paz, Workforce Center Manager, Eagle Pass, Texas; Nina Polengo, Las Quintas Colonias leader; Ronnie Rivera, Middle Rio Grande Development Council, Eagle Pass; Johnny Ruiz, Director of Planning and Operations Division, Middle Rio Grande Development Council; Victor Wong, Texas Commission on Environmental Quality, Laredo, Texas.

Washington, D.C., May 10th - 11th

Rebecca Adamus, Imperial Valley Press, Washington, D.C.; Francisco Apodaca, New Mexico Environment Department; Mary Brandt, U.S. IBWC, Department of State; George Brokis, Bronx, N.Y.; Rosenda Chavez, FUMEC; Karen Clark, Department of Interior; Sandra Dugue, BITF, EPA; Jorge C. Garces, NADB; Jeff Gannon, SOCMA; Albes Gaona, OIA, EPA; Randy Grinnell, U. S. Public Health Service, DHHS; Bob Hardaker, Former DFO for GNEB; Milagos Hernandez, International Affairs, HUD; Margaret McMorrow, Alliance to Save Energy; Jane Moore, Office of Water, EPA; Vinh Nguyen, EPA; Carolyn Olsen, Science Advisor, USDA/NRCS; Elizabeth Rezai-zadeh, HRSA, DHHS; Shauna Riley, OIA, EPA; Rick VanSchoik, SCERP, San Diego State University; Jim Stefanov, U. S. Geological Survey (USGS); Bob Stein, U. S. Department of Transportation (DOT); Sue Stendebach, EPA; Karen Stewart, HRSA, DHHS; Jose Yunis, National Resources Defense Council; Nancy Woo, EPA; Trent Wells, EPA; Daniel Zielinski, RMA.

Tohono O'odham Nation, Sahuarita, Arizona, October 17th - 19th

Joaquin Murrieta, Sonoran Institute; Mary Kasulaitis, Rancher, Arivaca, Arizona; Delma Garcia, Tohono O'odham Nation; Evelyn Juan Manuel, Tohono O'odham Nation; Gary Brasha, Santa Cruz Valley Citizens Council; Rich Bohman, Santa Cruz Valley Citizens Council; Hector Aguirre, U.S. EPA, Region 9, Pacific Southwest, San Francisco, California; Jonathan Ammon, Arizona Office of Homeland Security, Phoenix, Arizona; Darlene Andrews, Council Member, Tohono O'odham Nation, Sells, Arizona; Regis Andrew, S. F Ordar District, Arizona; Robbie Aonan, Sells, Arizona; Cornelius Antonne, Tohono O'odham Nation, Sells, Arizona; Letticia Baltazar, Pasqua Yaqui Tribe, Tucson, Arizona; Alexandra Von Barsewhisch, Berlin, Germany; Nancy Bohman, Santa Cruz Valley Citizens Council; Dan Brocious, Smithsonian Institute, Arizona; Anne Browning, Udall Center, University of Arizona; Marianne Bruonotz; Ty Cáwéz, Coor-

dinator, Arizona Tribal Border 2012, Tempe, Arizona; Roger DiRosa, U. S. Fish and Wildlife Service, Arizona; Gerald Fayvant, Tohono O'odham Nation; Marcom Flores; Robert Frost, Green Valley, Arizona; Ethel Garcia, Tohono O'odham Nation; Nina Hepner, Native American Environmental Protection Coalition, Temecula, California; Jason Hill, Los Coyotes Environmental, Warner Springs, California; Artemio Hops; Shanna Ioane, Tohono O'odham Nation; Laurence D. José, Sells, Arizona; L. J. Juan, Sells, Arizona; Rob Kasulaitis, Rancher, Arivaca, Arizona; John Kyl, Senator, Tucson, Arizona; Bill and Ellen Kurtz, Amado, Arizona; John Lawson, Council Member, Tohono O'odham Nation; Shela McFarlin, BLM, Tucson, Arizona; Homer Marks, Sr., Tohono O'odham Nation, RCMP, Sells, Arizona; Robert Merideth, Udall Center, University of Arizona; David B. Miller, CBP/BP, Department of Homeland Security, Tucson, Arizona; Denise Moveno, University of Arizona; Ted Noor; Fred Orosco, Tohono O'odham Nation; Paul Rasmussen, Arizona Department of Environmental Quality (ADEQ); Ana C. Rivas, Douglas, Arizona; Celia Rivas, University of Arizona; Lorinda Sam, Tohono O'odham Nation; Placido dos Santos, ADEQ, Tucson, Arizona; Hiram Sarabia, San Diego, California; Carol and Jim Siorggett, Arizona; Doralina Skidmore, Congressmen Ginjava's Office, Tucson, Arizona; Britann Smith, Tucson, Arizona; Colin Soto, Cocopah Elders, Somerton, Arizona; Amos Stevens, Tohono O'odham Nation; Sandra Stone, Oversight Courier, Canoa Ranch Trust, Green Valley, Arizona; David Tautolo, Tohono O'odham Nation; Olivia Villegus, Legislative Courier, NRC, Tohono O'odham Nation; Daniel Wirth, Office of the Secretary, Department of Interior, Tucson, Arizona; Metta Young, University of Arizona.

MEMBERSHIP CHANGES

Non-federal Members

Before leaving the U.S. EPA to take up his new position as Secretary of the Department of Health and Human Services, U.S. EPA Administrator Michael Leavitt appointed three new members to the Board to represent their respective state governments: Peter Silva from the State Water Resources Control Board was appointed to represent California; David Randolph of the Arizona-Mexico Commission to represent Arizona; and Stephen Niemeyer of the Texas Commission on Environmental Quality to represent Texas. In addition, three existing members were appointed to serve a second term: Amanda Aguirre of the Regional Center for Border Health; Kenneth Ramirez of Bracewell & Patterson; and Douglas Smith of Sony Electronics. The following non-federal members' terms came to an end during 2005: Dora Alcala, Mayor of Del Rio, Texas; Diana Borja of the Texas Commission on Environmental Quality; and Jerry Paz of Molson Corbin & Associates.

Federal Members

Federal members stepping down included RADM Richard Walling, U.S. Department of Health and Human Services; and John Klein, U.S. Department of the Interior.

PUBLICATIONS

Eighth Report to the President and Congress

The Board released its Eighth Report to the President and Congress on March 8th in Tucson, Arizona, at the second annual National Coordinators Meeting of the Border 2012 Program. Entitled "Water Resources Management on the U.S-Mexico Border", the report contains three key recommendations:.

1) Additional collaboration among institutions responsible for water resources management;
2) More and better -integrated data; and
3) A watershed-based, strategic approach to decision-making.

During 2005, more than 4,000 copies of the report were distributed to border region and national officials, as well as to interested members of the public.

COMMENT LETTERS

In addition to its annual report to the president and Congress, the Board issues occasional Comment Letters. These letters enable the Board to provide advice on time-sensitive topics between its annual reports. During 2005, the Board issued two Comment Letters, one on the Border Environment Cooperation Commission and the North American Development Bank Business Process Review, and the other on diesel fuel standards in the U.S.-Mexico border region.

Full text of both Comment Letters follows.

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GNEB
The Good Neighbor Environmental Board
an independent federal advisory committee on environmental sustainability in the U.S.-Mexico border region

February 25, 2005

Re: Comments on the Business Process Review (BPR) for the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADB).

Dear Board of Directors of the Border Environment Cooperation Commission and the North American Development Bank:

The Good Neighbor Environmental Board appreciates the opportunity to comment on the BECC/NADB BPR. We have two main comments: one related to the resources allocated to the BECC; and the second on the role of public members in the new, merged Board.

Our first comment is that, to date, the BECC has not had the necessary resources to carry out its responsibilities to the best of its ability. For example, its operating budget has been much smaller than NADB's. As a result, although its has accomplished much, BECC has not always been optimally positioned to carry out its essential quality-control functions such as technical assistance, monitoring of sustainable development project components, and full public involvement. In addition, lack of resources has resulted in a tendency to contract out much of BECC's work, resulting in a lack of institutional memory. One example is that BECC has not had the resources to develop the geo-spatial databases necessary for prioritizing, planning, and siting infrastructure facilities. Another example of fall-out from resource limitations is that BECC has not always been able to fully explore, and then confidently recommend, the use of innovative technology in cases where it may have been beneficial.

Our second comment relates to the upcoming merger of the current BECC and NADB Boards into a new, combined Board for the two agencies. We have been very pleased with the format of the BECC Board meetings, which have encouraged public participation and promoted transparency in BECC processes and actions. This has happened largely because the BECC charter states that the Chair of the BECC Board must be a public member and cannot be one of the federal agency representatives. By contrast, the make-up of the NADB Board, as well as the format of its Board meetings, has not been conducive to public input and participation. To ensure that the new, combined Board format maximizes transparency and public participation, we strongly recommend that the Chair of the new Board be one of the public-member members. If this approach is not feasible, we recommend, at a minimum, that the Chair position be alternated between federal agency members and public members.

The Good Neighbor Environmental Board looks forward to a new stage of BECC-NADB operations in which these institutions are fully supported so that they can individually, and jointly, carry out their valuable roles to ensure strategic investment of border-region environmental infrastructure.

Sincerely,

Paul Ganster
Chair

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The Honorable John Cornyn
United States Senate
517 Hart Senate Office Bldg.
Washington, DC 20510

The Honorable Jim Kolbe
United States House of Representatives
237 Cannon House Office Building
Washington, D.C. 20515-0308

June 7, 2005

Dear Representatives Cornyn and Kolbe:

As you and your Congressional colleagues prepare for your Mexico-U.S. Inter-Parliamentary Meeting taking place from June 9-12 in Newport, Rhode Island, we, the Good Neighbor Environmental Board, would like to draw your attention to a timely topic: the impact of increased trans-border truck traffic on the health of residents in the U.S.-Mexico border region. To alleviate the problem, two diesel issues must be addressed: 1) diesel fuel standards, in particular, ultra-low sulfur diesel (ULSD) fuel; and 2) diesel engine design standards. We respectfully advise that you raise both issues with your counterparts in Mexico during your meeting.

While the Board's mission is to advise U.S. (and not Mexican) officials, your upcoming meeting will provide a valuable opportunity to discuss both ULSD fuel and cleaner diesel engine standards topics with your Mexican counterparts, particularly in the context of identifying bi-national mechanisms for enhancing environmental conditions within our highly interdependent U.S.-Mexico border region.

On the first topic, from our perspective, the required use of ULSD in both countries should be strongly encouraged. Its use will help safeguard the health and well-being of communities located in the border region of both countries.

Negative effects could result if ULSD fuel is not widely used in both the U.S. and Mexico. Fortunately, U.S. availability of ULSD begins June 1, 2006, when most U.S. highway diesel fuel will be limited to a maximum of only 15 ppm of sulfur. Mexico, by contrast – despite ongoing talks with the U.S. Environmental Protection Agency and a very successful experiment with trucks using low-sulfur diesel fuel in Mexico City – has no firm timetable for adopting the stricter fuel standards.

U.S. border state officials are very concerned about this development because some areas within their states, especially along the border, already suffer from air quality degradation, and have been labeled as non-attainment, or near-non-attainment, areas for their failure to meet federal and/or state air quality standards. Failure of Mexico to adopt stricter fuel standards, combined with growing cross-border trade volumes, would exacerbate these communities' existing air quality problems.

The second topic, new design standards for diesel engines, is related to the first. In the United States, new diesel engine design standards scheduled for implementation will help reduce levels of ozone and fine particulate matter from heavy duty trucks. However, ironically, when U.S. trucks meeting these new engine standards enter Mexico, their range will be limited because the use of ULSD fuel is necessary to preserve their pollution control equipment. In the short run, U.S. truck fleets will be bifurcated; this likely scenario further strengthens the longer-term need for ULSD fuel use in both countries.

Our interest in these issues is shared by others. For example, as noted, the U.S. Environmental Protection Agency has raised the issue of ULSD fuel in various instances with SEMARNAT, its Mexican federal counterpart. It is our understanding that

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a primary concern in Mexico has been the capital costs that refineries owned by PEMEX, the national petroleum agency, will incur to produce ULSD fuel. While sensitive to this concern, we believe this cost will be offset by cost reductions associated with improvements to public health and the environment. In cities like Monterrey and Mexico City, the concentration of fine particulate matter (to which diesel emissions make a very significant contribution) runs about three times higher than the U.S. health-based air quality standards.

The discussion of these issues with Mexican officials during your upcoming meeting is important to ensuring a healthy environment in the U.S.-Mexico border region. We would appreciate knowing the outcome of your meeting, and extend our best wishes for productive bi-national dialogue.

[Note on the Board: The Good Neighbor Environmental Board is a federal advisory committee created to advise the President and Congress on environmental and infrastructure issues and needs within the states contiguous to Mexico. It was created by the Enterprise for the Americas Initiative Act of 1992 (EAIA 7 U.S. Code Section 5404)]

Sincerely,

Paul Ganster
Chair

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U.S. FEDERAL AGENCY 2005 BORDER-REGION ACTIVITIES

Senior officials from nine U.S. federal agencies serve on the Board, constituting approximately one-third of its membership. These federal representatives work alongside members from a variety of other sectors: state and local government; tribal government; the non-profit sector; the private sector; and academia.

For this annual report, each federal agency member was asked to submit a summary of his or her federal agency's 2005 border region activities related to the board's mission. These summaries follow.

U.S. Department of Agriculture

Natural Resources Conservation Service

U.S. Department of Agriculture (USDA) representation on the Good Neighbor Environmental Board comes from the agency's Natural Resources Conservation Service (NRCS). NRCS is responsible for the conservation of soil, water, air, wildlife, and other natural resources on privately-owned land. The agency carries out its work through partnerships with locally-controlled soil and water conservation districts, units of state government, other federal agencies, and international initiatives. All of the agency's work is directed by local needs. NRCS provides funds to the State Conservationist, who then determines priorities in consultation with locally elected District Supervisors from the Soil and Water Conservation Districts.

NRCS activities in the U.S.-Mexico border region are coordinated by offices located in Temple, Texas; Albuquerque, New Mexico; Phoenix, Arizona; and Davis, California. The agency provides soil science expertise leadership for soil surveys and the National Resources Inventory, an assessment of natural resource conditions and trends in the United States. In addition, it provides technical assistance to foreign governments, and participates in international scientific and technical exchanges. Presently, NRCS does not work in direct partnership with any counterpart Mexican agencies, although the possibility of doing so in the future is being explored.

Following is a summary of NRCS accomplishments in the U.S.-Mexico border region during 2005, with a special focus on environmental benefits.

Irrigation Water Management on Cropland (Deming, New Mexico)

- Thousands of irrigated acres were converted from surface systems to subsurface drip systems, thus improving efficiencies from 40 to 90 percent and saving ground water.
- Irrigation systems in river basins were improved 10 to 30 percent by installing metering devices, high flow turnouts, concrete ditch lining, field laser leveling, and irrigation water management.
- Dairies continued to implement Comprehensive Nutrient Management Plans, addressing all resource needs. They concentrated on managing the waste water produced in the milk houses, with many dairies needing additional storage and pond lining.
- Circle irrigation systems were installed, and improved water use efficiency by 30 to 40 percent, thus increasing crop yields on the same acres using the same amount of water.

Rangeland Management (Hebbronville, Texas)

- Prescribed grazing continued, characterized by livestock management techniques such as rotational grazing. This approach incorporates recognition of unique environmental land resource concerns. Benefits of prescribed grazing, realized through improved vegetation management, include: improved soil stability (which minimizes blowing soil); aquifer recharge; improved health and nutrition of wildlife; and increased ecosystem health, thus reducing noxious and invasive plant species.
- Water developments on rangelands also continued; they provided benefits including improved wildlife distribution and less stress on wildlife populations, which use these watering systems as an alternative to riparian areas.
- Brush management projects were used to restore ecosystems invaded by undesirable woody vegetation to a more desirable state, closer to the historical climax plant community. Benefits include increased herbaceous vegetation, thus improving aquifer recharge and reducing blowing soil and water run off; and improved habitat for wildlife species, including ground nesting neo-tropical birds.
- Riparian restoration gained momentum across the region. Its components include structural stream channel stabilization, and creation of a riparian forest buffer that establishes riparian plant species to enhance wetland functions. Benefits of riparian restoration included aquifer recharge; wildlife habitat improvement with emphasis on threatened and endangered species; improved water delivery to downstream users; flood flow mitigation; and forage production, including drought reserves.

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U.S. Department of Commerce

Economic Development Administration

Representation on the Board from the U.S. Department of Commerce (DOC) comes from its domestic economic development arm, the Economic Development Administration (EDA). DOC is charged with promoting the nation's economic development and technological advancement. Within this broader charge, EDA provides direct grants, on a cost-share basis, for projects that will create and retain private-sector jobs and leverage public and private investment in distressed areas.

EDA administers four grants programs: Planning Assistance; Technical Assistance, Public Works; and Economic Adjustment. EDA's special focus is innovation and competitiveness. Its grant programs to the four U.S. border states are administered by two EDA regional offices. The Austin, Texas regional office administers grant programs in Texas and New Mexico. The Seattle, Washington regional office administers grant programs in Arizona and California.

The Planning Assistance program provides funding to Economic Development Districts, Native American organizations, states, sub-state planning regions, urban counties, cities, and other eligible applicants to perform long-term economic development planning activities designed to mitigate the economic problems in the region.

In 2005, EDA awarded planning grants to the following border-region entities:

- $60,000 to Imperial County in El Centro, California;
- $35,000 to the Quechan Tribe located in Yuma, Arizona;
- $57,000 to the Western Arizona Economic Development District located in Yuma, Arizona;
- $60,000 to the Southeast Arizona Governments Organization located in Bisbee, Arizona, which includes the Cochise and Santa Cruz border counties;
- $150,000 (in a three year grant) to the Southwest New Mexico Council of Governments located in Silver City, New Mexico, which includes the Hidalgo and Luna border counties.

Existing three-year planning grants of $150,000 were awarded to:

- The South Central New Mexico Council of Governments, located in Elephant Butte, New Mexico, which includes Dona Ana County;
- The Southeastern New Mexico Economic Development District located in Roswell, New Mexico, which includes Otero, Eddy, and Lea border counties;
- The Middle Rio Grande Development Council located in Carrizo Springs, Texas, which includes the Val Verde, Kinney, Maverick and Dimmit border counties;
- The West Texas Economic Development Council located in El Paso, Texas, which includes El Paso, Hudspeth, Jeff Davis, Presidio and Brewster border counties;
- The South Texas Development Council located in Laredo, Texas, which includes Webb, Zapata, and Starr border counties; and
- The Lower Rio Grande Valley Development Council located in McAllen, Texas, which includes Hidalgo and Cameron border counties.

A short-term Planning Assistance grant for $412,000 was awarded to Webb County, Texas in 2005. The purpose of this grant is to develop a master plan for the proposed railway to bypass downtown Laredo. The goal is to ease rail and traffic congestion in downtown Laredo and facilitate the flow of rail traffic from Mexico.

The Technical Assistance Program provides funding for studies or issues affecting economic development, and includes the University Center program. The University Center program provides funding to institutions of higher education to help resolve economic problems in their region. The following border state universities received EDA funding in 2005: the University of Southern California; the University of Arizona; the University of Texas at El Paso; and the University of Texas-Pan American, located in Hidalgo, Texas. This last university will provide services throughout Cameron, Hidalgo, Starr and Willacy counties.

The Public Works program provides grants for physical infrastructure that support economic development activities. In 2005, EDA awarded Public Works grants to the following recipients in the border region: Delta Region Regional Council in Edcouch, Texas; Rio Grande Valley Livestock Show in Mercedes, Texas; University of Texas in El Paso, Texas; and University of Texas-Pan American in Edinburg, Texas.

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U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) is responsible for protecting human health and the environment. For the U.S.-Mexico border region, EPA focuses its efforts through a binational program called Border 2012. The Border 2012 program includes six goals and 23 measurable objectives that address: reducing pollution in water, air, and on land; improving environmental health; reducing exposure to chemicals from accidental releases or terrorism; and improving environmental performance through compliance, pollution prevention and the promotion of environmental stewardship.

Border 2012 is implemented primarily by EPA, Mexico's Secretariat for Environment and Natural Resources (SEMARNAT), the U.S. Department of Health and Human Services (HHS), the

Mexican Secretariat of Health (SS), the ten states on both sides of the border, and U.S. tribes. The EPA has two lead regional offices implementing the Border 2012 Program: the South Central office (Region 6) which includes the states of Texas and New Mexico; and the Pacific Southwest office (Region 9), which covers the states of Arizona and California.

During 2005, in EPA Region 6, more than $800,000 in federal grants were awarded under the Border 2012 program. Projects included watershed monitoring and education, improvement of public health, biodiesel market development, waste tire cleanup and planning, solid waste management, reduction of illegal dumping, health professional capacity building, pesticides exposure reduction, health capacity building in colonias, joint hazardous material education and response, and environmental education. In addition, $600,000 in Air Program grants where awarded. These included grants to "Smartway" and other projects such as:

- The University of Texas at Austin for $60,000 to reduce the emissions of air toxics and to improve environmental health for the people in the Texas-Coahuila-Nuevo León-Tamaulipas region.
- El Paso Hispanic Chamber of Commerce for $75,000 to implement a community-based, voluntary approach to emission reductions in the small business community through both stationary and mobile-source emission reduction strategies.
- The FEMAP Foundation for $60,000 to reduce air pollution. Reduce air pollution by observing a reduction in sulfur dioxide emissions, and promote environmental stewardship by integrating waste grease producers as bio-fuel marketers. Identify waste grease generators, report total waste grease generated in the Paso del Norte region, utilize bio-diesel in a donated vehicle and promote the use of bio-diesel through its use.
- Alamo Area Council of Governments for $294,179 that will test emissions of Mexican diesel trucks using standard diesel fuel from Mexico vs. cleaner burning fuels.
- New Mexico Environment Department for $104,862 to locate and install an air quality monitoring station in Luna County, New Mexico and report its data to EPA's Air Quality System database and AirNOW; and for support to existing monitors in Dona Ana County.

In Region 9, 16 new projects were awarded through the Border 2012 Competitive Grants Program and the Region 9 media programs (totaling approximately $1 million). For example, to reduce air emissions, the San Diego-Tijuana Diesel Retrofit Project identified appropriate heavy-duty border fleets and retrofit technologies. Region 9 provided more than $200,000 to retrofit over 12 vehicles, and also funded the Western Governors' Association completion of the first Inventory of Mexican Air Pollution Emissions. The Emissions Inventory is a critical tool for targeting future emission reduction strategies. Other projects included:

- Water and sanitation improvements at three indigenous communities in Baja California;
- Childhood lead poisoning prevention campaigns in Arizona;
- Training on Response to Chlorine Releases in Arizona-/Sonora;
- A Diesel Emissions Reduction Pilot project in San Diego-Tijuana; and
- Cleanup of Tire Piles in Mexicali.

For more information on the Border 2012 Program and on-going activities of EPA along the U.S.-Mexico border, please visit [www.epa.gov/usmexicoborder/] or

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U.S. Department of Health and Human Services

The U.S. Department of Health and Human Services (HHS) is charged with protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves.

The U.S.-Mexico Border Health Commission, and the HHS Secretary's role as U.S. Co-Commissioner, provide a binational venue for federal, state and local stakeholders along the

U.S.-Mexico border to engage in environmental health activities. The Commission provides international leadership to optimize health and quality of life along the U.S.-Mexico border. It is comprised of the U.S. and Mexican Secretaries of Health, the chief health officers of the ten border states and prominent individual health professionals and academics from both countries. The Commission's health promotion agenda, known as Healthy Border 2010, promotes community-based action in border health priority areas, including environmental health goals such as improving household access to sewage disposal, and reducing the rate of hospitalization for asthma. The Commission also enjoys a collaborative relationship with the U.S. Environmental Protection Agency (EPA) in support of its Border 2012 program (see EPA section above).

HHS's Centers for Disease Control, Environmental Hazards and Health Effects Program (EHHE), located in Atlanta, Georgia, also takes a lead in environmental health activities along the U.S.-Mexico border by participating in initiatives such as the Border 2012 program. Border 2012's Environmental Health Work Group (EHWG) serves as the main conduit for addressing binational environmental health concerns, and EHHE plays a central role within this work group.

Over the past several years, EHWG has focused on research, training, education and communication. More recently, the work group focus has expanded to also include the development and application of indicators to assess changes in specific human exposure and health conditions. Ongoing border environmental health projects include:

- Ground-Level Ozone Concentrations in Support of Border 2012 Environmental Health Decisions
- Assessment of Assets and Needs of Federally Funded C/MHCs' Ability to Address Respiratory and Cardiovascular Illness Related to Air Pollution
- Binational Surveillance of Disease Related to Air Pollution in Imperial County and the Municipality of Mexicali
- Effects of Diesel Exposure and Traffic Related Air Pollution on Asthmatic Children in Ciudad Juárez, Chihuahua
- Clinical Impacts Text of Promotoras-led Education on Child Pesticides Exposure
- Pilot Study to Identify an Approach to Measure Neurobehavioral Effects of Pesticides in Children Multimedia
- U.S./Mexico Border Binational Environmental Health Connections E-Group
- Identifying Regional Environmental Health Indicators
- Inventory/Assessment of Environmentally-related Disease and Environmental Databases in the California–Baja California Border Region
- Binational Tracking Network of Environmentally Related Diseases
- Environmental Health Indicators Initiative

EHHE is collaborating with EPA and the Pan American Health Organization's (PAHO's) field office in El Paso, Texas to develop indicators of binational environmental health problems. Pilot projects will collect data on both sides of the border using key environment and health information as indicators of environmental health problems. This binational activity will exchange information between state and local agencies and academic institutions in the United States and Mexico. In addition, several workshops have been sponsored to identify, score and rank environmental health indicators to focus on areas of local, state, and health agency concerns. The collaborative PAHO project also will also help demonstrate improvements in environment and public health as a result of the Border 2012 program.

EHHE also works in partnership with the environmental health program of Instituto Nacional de Salud Publica (INSP), an independent entity supported by Mexican federal funds. The goal is to identify and fill research and information gaps, and to increase the number of people working in the environmental health field. Through the collaboration, INSP has conducted several activities such as training environmental health professionals at the masters and doctoral levels, and performing environmental health epidemiological studies and surveillance activities.

In addition, EHHE is investigating the effects of diesel exposure and traffic-related air pollution on asthmatic children in Ciudad Juárez, Chihuahua. The purpose is to develop "proximity to major traffic roads" as an environmental indicator, by characterizing the air pollution exposure in relation to the distance from major roads using Geographical Information Systems (GIS). EHHE will link GIS exposure data to health effects in at-risk populations, such as children who have asthma. Results from this study will characterize exposure to traffic-related air pollution in Ciudad Juárez, and will examine associations between this expo-

sure and health outcomes in populations susceptible to respiratory problems. One potential outcome is a change in traffic regulations, such as reducing heavy vehicular traffic flows in certain areas during school hours. Furthermore, the study may serve as the basis to develop similar models.

Finally, results of the following studies are being prepared for publication:

- Two binational pediatric lead assessments in Arizona-Sonora and New Mexico-Chihuahua using portable blood-lead analyzing technology.
- A retrospective study on the association between pediatric asthma and ambient air quality in the Paso del Norte airshed in the El Paso, Texas, area.

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U.S. Department of the Interior

United States Geological Survey

The United States Geological Survey (USGS) is the sole science agency within the U.S. Department of the Interior. Its mission is to provide reliable, impartial scientific information to minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect the quality of life. Activities include map-making; providing data on the quality and quantity of the nation's water resources; providing earth-science information on natural hazards, mineral and energy resources, and the environment; and assistance with understanding the status and trends of biological resources, as well as the ecological factors affecting living resources.

USGS offices in the four U.S. border states (Texas, New Mexico, Arizona, and California) have conducted interdisciplinary work along much of the U.S.-Mexico border. In addition, scientists from USGS offices in Denver, Colorado, Reston, Virginia, and Columbia, Missouri have done biological and geological research at a number of locations within the border region.

During 2005, the USGS continued work on a binational project called the "Internet Map Service (IMS) for Environmental Health in the U.S.-Mexico Border Region." The goal is to develop a binational, web-based geographic information system (GIS) containing natural resource data that can be applied to clarify links between the condition of the physical environment and environmental and human health issues. Representatives from all four USGS disciplines (water, geology, biology, and geography) are working on the project. Mexican agencies also have provided data.

Accomplishments in FY 2005 include:

1. Development of a website, [http://borderhealth.cr.usgs.gov], that includes background project information, methodology for binational data set integration, links to publications and references, and spreadsheets with health statistics as well as data on colonias;
2. Satellite imagery, orthoimagery and integrated geology, hydrology, transportation, geographical names, potential sources of contaminants and boundary datasets added to the IMS;
3. Integrated demographic data for population density, income levels, and education, hydrology, disease cases and rates, potential sources of contaminants, air monitoring stations, and Nexrad daily weather;
4. Creation of on-line static maps and a data table library to provide an alternate method of accessing information served on the IMS;
5. Publication of Version 1 of a binational geo logical dataset for a pilot area in southernmost Texas and parts of Tamaulipas and Nuevo León, Mexico;
6. Development of methodology for compiling bi-national geology datasets in the pilot area, based on remote sensing techniques, which will serve as a

template for the entire US-Mexico border;

7. Several outreach activities with U.S. and Mexican federal agencies, such as EPA, SEMAR NAT, PEMEX, Department of Homeland Security, and the National Geospatial-Intelligence Agency.

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International Boundary and Water Commission, United States and Mexico

United States Section

The International Boundary and Water Commission (IBWC) is responsible for applying the boundary and water treaties between the United States and Mexico and settling differences that arise in their application. As such, the Commission is actively involved in projects related to water quantity and quality along the U.S.-Mexico border. It is the only agency serving on the Good Neighbor Environmental Board that has both a U.S. Section and a Mexican Section. The Commissioner of the U.S. Section serves as the Board representative.

During 2005, the Commission resolved Mexico's longstanding Rio Grande water debt, with the support of the U.S. Department of State and Mexico's Ministry of Foreign Relations. Under a 1944 treaty, Mexico is to deliver to the United States a minimum volume of water from six of its Rio Grande tributaries in cycles of five years. Starting with the 1992-1997 five-year cycle and continuing into the next cycle, Mexico accumulated a deficit in those deliveries of over one million acre-feet. In March 2005, the two countries reached agreement for Mexico to pay off its deficit entirely by September 30, 2005. A significant portion of the debt payment was accomplished through transfers of water from Mexican ownership to U.S. ownership in the international reservoirs on the Rio Grande - Falcon and Amistad Dams. Additionally, Mexico committed to meet the minimum annual average delivery in each year of the 2002-2007 cycle so as to avoid incurring a deficit in the current cycle.

The Commission also sponsored the Binational Rio Grande Summit in McAllen, Texas-Reynosa, Tamaulipas, with participation from hundreds of water experts from the United States and Mexico. The summit recommendations are intended to assist the Commission in planning for the long-term sustainable management of the Rio Grande Basin.

In addition, the United States Section of the Commission (USIBWC) made considerable progress in addressing sanitation issues at the San Diego-Tijuana border. It completed a Supplemental Environmental Impact Statement for development of a wastewater treatment plant in Tijuana, Baja California. The new treatment plant would provide secondary treatment of effluent from the USIBWC's existing plant in San Diego, which currently provides advanced primary treatment of up to 25 million gallons per day of wastewater from Tijuana. The planned Tijuana treatment plant, which would have a capacity of 59 million gallons per day, is being developed under a public-private arrangement. The new plant is expected to be operational by September 30, 2008.

Efforts to rehabilitate and raise Rio Grande flood control levees in the Lower Rio Grande Valley of Texas also advanced significantly. By year's end, construction had begun on levee improvements near Hidalgo, Texas, and preliminary studies had been completed for levee work in other critical reaches. Overall, Commission levees provide flood protection for more than three million residents of the U.S.-Mexico border region.

In September, President Bush named Carlos Marin to serve as Acting U.S. Section Commissioner following the resignation of Commissioner Arturo Q. Duran. Marin is a civil engineer who has worked for the USIBWC since 1979.

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U.S. Department of Transportation

The U.S. Department of Transportation (USDOT), as part of its transportation mission, seeks to protect the environment, and provides federal assistance to state transportation agencies (DOTs) for the improvement of transportation facilities. The state DOTs coordinate transportation planning and environmental management processes to ensure individual transportation projects are compatible with the regional environmental planning objectives. USDOT's involvement is to support the state DOTs in accomplishing their agency's mission of enhanced mobility and safety, in an environmentally sound manner.

The department has responsibility for the U.S.-Mexico Joint Working Committee on Transportation Planning (JWC), which coordinates planning processes for border transportation activities. Established in 1994, the group is co-chaired by the USDOT's Federal Highway Administration Office of Planning and Environment, together with the Mexican Secretariat of Communications and Transportation (SCT).

In addition to USDOT and SCT, JWC membership includes representatives from the State Department, the Mexican Secretariat of Foreign Relations, the four U.S. border states' departments of transportation, and the six Mexican border states. Meetings are held every six months in alternate locations, one in the U.S. and one in Mexico. For 2005-2007, projects include:

- The identification and finance of short term/low cost/high impact projects;
- A Safety Conscious Planning Seminar and follow up actions;
- The development of a Regional Operations Model;
- A Border Wizard/Sin Fronteras Pilot regional study in the El Paso–Ciudad. Juárez and San Diego–Tijuana areas;
- A Border Technology Exchange Program Strategic Plan Update; and
- The development and implementation of outreach strategies.

In addition, USDOT is committed to the North American Free Trade Agreement (NAFTA) and Mexican motor carrier access to U.S. markets. The decision by the Supreme Court in June 2004 overturning a Ninth Circuit decision requiring an Environmental Impact Statement opened the way for the USDOT to continue working with Mexican authorities to move forward with long-haul bus and truck operations. At the same time, the agency is committed to a comprehensive approach to guarantee that trucks and buses operating within the U.S. are in compliance with all applicable safety and environmental standards.

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U.S. Department of State

The State Department's U.S.-Mexico Border Affairs Unit is responsible for coordinating binational relations along the border. Border Affairs is the principal Washington liaison for U.S. consulates located in Mexico's border states, as well as for U.S. state and local governments in the border region. Border Affairs also helps coordinate binational dialogue and debate on many issues, including bridges and land border crossings, shared water resource management (Rio Grande and Colorado river systems), environment (BECC/NADBank – Border Environment Cooperation Commission/North American Development Bank), health (Border Health Commission), education (Border Education Commission), and state/federal relations (Border Governors Conference). The Border Affairs Coordinator serves as the State Department's representative on the Good Neighbor Environment Board. The State Department's Deputy Assistant Secretary for North America represents the department on the BECC/NADBank Board of Directors. During 2005, Border Affairs promoted environmental development along the border, primarily through it's participation at the XXIII Border Governors Conference, the Bridges and Border Crossing Conference, and also on the BECC/NADBank Board of Directors.

The XXIII Border Governors Conference took place July 14-15, 2005 in Torreón, Coahuila. The conference agenda

was extensive, and addressed key environmental issues. Participants identified priority areas, and agreed to promote the production of Ultra Low Sulfur Diesel Fuel (ULSDF) by Mexican Petroleum (PEMEX) refineries; implement and promote comprehensive waste management programs throughout the border region; petition Mexico's federal and border state legislatures to regulate emissions requirements for vehicles imported to Mexico; and request that authorities in both countries help enforce vehicle emission laws.

The Bridges and Border Crossing Conference in Reynosa, Tamaulipas, May 2-5, 2005, focused on identifying binational priority border crossing projects and better harmonization of the permitting process for such projects. Key to the issuing of a permit is demonstrating that a project does not have a significant adverse environmental impact, in accordance with the requirements of the National Environmental Policy Act.

Regarding BECC and NADBank, both are NAFTA-related institutions that support local communities in developing and implementing environmental infrastructure projects related to water treatment and wastewater and solid waste management. BECC identifies, assists and certifies projects for financing consideration from NADBank and other sources. As of September 30, 2005, BECC had certified a total of 105 projects - 69 in the U.S. and 36 in Mexico. The sponsors of 91 of these projects have requested financial assistance from NADBank. The BECC/NADB Board of Directors continues to discuss strategies for improving the productivity of both institutions.

Finally, the State Department's North America Desk in the Bureau for Oceans and International Environmental and Scientific Affairs (OES) also interacts with public/private environmental organizations and academic institutions along the border to promote scientific and educational exchanges with Mexican counterparts under the Science and Technology Umbrella Agreement of 1972. The office also grants C-175 authority for U.S. federal agencies to negotiate agreements with Mexican counterparts. OES's present efforts include policy negotiations to facilitate the movement of scientific research vessels and equipment across the US-Mexico border.

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THIRD GENERATION OF SEMARNAT'S ADVISORY BOARD: THE "CONSEJOS"

Providing the Good Neighbor Environmental Board with a citizen-driven mechanism for dialogue on opportunities for cross-border cooperation.

Prepared by Flavio Olivieri, Baja California Business Sector representative, Northwest Regional Board, Citizens Sustainable Development Advisory Board

On June 5, 2005, President Vicente Fox swore in the Third Generation of SEMARNAT's Citizens Sustainable Development Advisory Board. The ceremony took place in Monterrey, Nuevo León, Mexico, during the World Environment Day Celebration. This advisory board, in Spanish the "Consejo Consultivo para el Desarrollo Sustentable" (CCDS), or "Consejos", provides the Mexican federal government a structured and systemic mechanism for involving citizens in the decision-making process on environmental policy and related governmental programs. The structure of the Consejos, and its member selection process, guarantees SEMARNAT a broad, regionalized, plural and professional sounding board for environmental issues, concerns and priorities throughout Mexico.

Within these broader national environmental policy discussions, specific discussions take place on the environmental issues of the U.S.-Mexican border region. These border-specific discussions are the springboard for the ongoing dialogue that takes place between the Consejos and the Good Neighbor Environmental Board (GNEB). The structure of the Consejos is the key to its success, and the reason why it provides GNEB with a citizen driven perspective from the northern Mexican border on border region environmental and infrastructure policy issues.

CCDS History and Structure

The CCDS has its roots in the efforts of the United Nations to develop a global sustainable development agenda, beginning in the early 1980s, and especially at the Rio de Janeiro Earth Summit in 1992. Based on the recommendations set forth by Agenda XXI, which was adopted at the summit, and its fundamental principle of broad public participation, the Mexican Government established the first CCDS in April 1995. Its charge was to provide a public consultation mechanism on environmental issues, and to share the responsibility with society for protecting the environment and promoting sustainable growth. Mexico, through SEMARNAT, entered into an agreement with the United Nations Development Program [www.undp.org/], which provided seed funding and continues to provide technical assistance and oversight.

SEMARNAT, Mexico's environmental protection agency, leads the CCDS and provides the staffing, budget and organizational support necessary for its successful operation. The CCDS is comprised of a National Board and five Regional Boards for the Northwest, Northeast, Center, West-Center and South-Southeast. The National Board is formed by 55 appointed members from the principal groups listed below, and 42 representatives from the Regional Boards. The appointed members are selected from formal recommendations made by each group of people with proven track records and subject knowledge. To ensure broad representation, the appointments are allocated proportionally, with representatives from CONAP (Consejo Nacional de Areas Protegidas—National Council of Protected Areas), JPAC (Joint Public Advisory Committee of the Commission for Environmental Cooperation), the Mexican National Advisory Council for the Commission for Environmental Cooperation Senate, the National Congress, NGOs for gender equality, Indian populations and youth, social organizations, professional colleges (associations), environmental NGOs, higher education institutions,

and industrial and business organizations.

The 42 regional representatives include the five presidents and secretaries of the regional boards, and one elected representative for each of the 32 states of Mexico. The regional boards have 192 members, six representatives and their alternates for each of the 32 states from the social, academic, business, NGO, local Congress and state government sectors. The representatives are elected democratically within their own peer group.

The members advise the Secretary of the Environment on environmental policy, programs and specific actions, including recommendations for legislative changes. The boards are organized into technical committees and work groups addressing specific areas such as water and air quality, natural protected areas, waste management, biodiversity, climate change, environmental education, environmental infrastructure, and international affairs. The technical committees analyze reports and policies and share their experiences. They provide recommendations to their regional or national boards for discussion and approval as formal recommendations for SEMARNAT.

The Secretary of the Environment has the obligation to respond to each recommendation. Many times the response is a matter of clarification or of providing additional information; and sometimes it requires concrete actions from SEMARNAT. During the period 2001-2003, the Consejos provided 281 formal recommendations, 39 of them resulting in policy changes, environmental programs or specific actions. Some of the most relevant recommendations have evolved into significant environmental reforms in regional environmental planning and zoning, particularly for the Gulf of California and the Burgos Basin (Cuenca de Burgos).

International Affairs

The National Board, as well as the Northwest and Northeast Regional Boards, have technical commissions addressing international and U.S.-Mexico border affairs. The ongoing dialogue between the Consejos and GNEB primarily takes place during meetings attended by representatives from these three boards.

At the national level, the technical Commission on International and U.S.-Mexico Border Affairs is led by anthropologist René Cordova, and includes six additional members, including a liaison with the North American Commission for Environmental Cooperation (CEC) and GNEB. As one of its main priorities, the Commission follows Mexico's participation in international conventions such as Stockholm POPS Elimination, Johannesburg Sustainable Development, Kyoto Protocol, BDC Biodiversity, Earth Council and Gulf of Mexico's Environmental Zoning. In addition, the Commission provides recommendations and participates in follow-up activities within Border 2012, CEC, BECC/NADBANK, GNEB, Southern Border Environmental Program and Agenda XXI. The Commission made the following recommendations to SEMARNAT in the last plenary session of November 25, 2005:

- Establish a national coordination committee for the application of the Stockholm Convention agreements, involving public participation from the initial planning phase;
- Promote alternative recycling methods for waste tires, besides using them as a fuel source in cement factories in the border region;
- Harmonize chemical substance reporting levels and classification to a comparable listing with the U.S. and Canada;
- Integrate a National Agenda XXI, in order to comply with commitments from the Rio de Janeiro and Johannesburg summits; and
- Include in the CCDS Mexico's representative at BECC/BANDAN (NADBANK).

The Northwest Regional Board established a Committee on Pollution Prevention and Border Affairs, lead by René Cordova, and six additional members. In their September 2005 regional meeting, the committee presented the following recommendations to SEMARNAT:

- Allocate the financial resources necessary for the complete remediation of the Metales and Derivados contaminated industrial site in Tijuana and of CYTRAR in Hermosillo, for the total removal of the hazardous waste;

- Keep or augment the Mexican contribution to the budget of the Commission for Environmental Cooperation's budget of $3 million US dollars;
- Allocate additional resources in the 2006 budget for the implementation of the Toxic Release Inventory (RETC) in order to double the number of complying companies;
- Enhance support and participation of SEMARNAT in Border 2012 Task Force activities.

The Northeast Regional Board also has established a Committee for Border Affairs, NAFTA and Financing, lead by Oscar Marmolejo, and three additional boardmembers.

CCDS Liaisons to GNEB

The national and regional boards have designated three representatives to participate in GNEB meetings and policy deliberations:

Lead Representative:
Flavio Olivieri, for the National Board.

Alternate:
René Cordova, for the Northwest Region.

Alternate:
Oscar Ochoa, for the Northeast Region.

BOARD MOVES FORWARD ON ASSESSING ITS EFFECTIVENESS

The following is an update on the activities of the Board's Performance Measures Workgroup, prepared by Workgroup Coordinator and Board Member Robert G. Varady.

Most organizations, at some point in their institutional lifetime, would like to know whether they are functioning efficiently and in ways that meet stated objectives. For some institutions, such assessments can be relatively straight forward. Advisory boards and official commissions, by contrast, present unusual challenges to such an exercise. The Good Neighbor Environmental Board (GNEB), whose stated mission is to advise the U.S. president and Congress on U.S.-Mexico border environmental issues, is subject to constraints that are due to the indirect and difficult-to-attribute nature of the board's potential influence.

The GNEB does not promote or draft legislation; it does not become directly involved in policy discussions; and it does not have the power to finance projects on the ground. Its official mission is to serve as an expert advisor. Therefore, at first blush, it would seem that the appropriate measure of its effectiveness would be whether or not its advice is taken.

Yet, according to David Flitner, Jr, author of the 1986 book, "The Politics of Presidential Commissions: A Public Policy Perspective," attempting to measure the worth of an advisory board or commission solely by seeing if its recommendations lead to legislation "misses the point." The value of such bodies cannot be established via what Flitner calls a "legislative box score." Rather, he notes, their job is to educate . . . and that is no small thing in a democracy." While this observation applies well to the GNEB, it is no easier to evaluate the Board's success in educating various publics than in causing certain actions.

With these caveats in mind, beginning in 2003 the GNEB, then chaired by Placido Dos Santos, began considering ways to gauge its effectiveness. At one of that year's meetings — in Del Rio, Texas — current Board Chair Paul Ganster drafted a list of indicators, and suggested an approach for collecting data and drawing conclusions from them. A half-year later, the Board began in earnest to implement some of Ganster's suggestions. A Performance Measures Committee, coordinated by Robert Varady, refined the indicators list and developed a two-prong assessment strategy. First, by means of a simple survey instrument, the Board would seek to collect baseline information over a specific timeframe on some relatively easy-to-quantify measures (for example: attendance at Board meetings, hours expended, and participation in various Board activities such as report-writing and planning for meetings). The instrument would also seek to capture effectiveness-related outcomes such as documented instances of GNEB influence. The strategy's second stage would be to develop and implement a Web-based site that would be used by Board members to continuously enter effectiveness-related information, so as to permit continual analysis of the Board's performance.

The first prong of the assessment strategy already has been carried out. At the October 2005 GNEB meeting, hosted by the Tohono O'odham Nation, the committee distributed a questionnaire to Board members designed to elicit data on their previous year's Board-related activities. An analysis of 15 returned survey forms (about a 75 percent response rate) revealed the following highlights about member activities:

Attendance at Board meetings was 86 percent;

Each Board member, on average, expended 121 hours on GNEB work during the year; in addition, their staffers spent another 20 hours;

- 80 percent of Board members participated in drafting the 8th annual report;
- 60 percent of the members took part in drafting GNEB letters to the president;
- 73 percent participated on planning committees;
- 93 percent distributed annual reports at conferences, symposia, meetings, and other venues;
- 53 percent helped identify and invite guest speakers for Board meetings;
- 60 percent of the members participated in briefings with members of Congress, border officials, local politicians, and/or other decision-makers; and
- 73 percent had contact with, or exchanged information with, fellow Board members on non-Board topics related to their work.

Besides capturing the level of Board member involvement, the questionnaire also asked three broader questions aimed at capturing benefits that related to, but went beyond, the Board's core mission of advising the president and Congress. For the period in question, respondents were asked to provide examples of: (a) how the Board's work made a difference, (b) recommendations that have served as catalysts for action, and (c) how membership brought benefits to the member and/or the member's organization.

Among the responses, the following anecdotes emerged:

- Although cause and effect are inextricably entangled, it may be significant that the Board's 2003 Comment Letter on the IBWC's Nogales international wastewater treatment plant was followed in 2005 by a US$59.5 million grant to upgrade the Nogales facility. (In addition to issuing an annual report, the Board also produces occasional short Comment Letters on timely border-region environmental issues.)
- Regarding the GNEB's relationship to the binational Border 2012 program, an EPA Border 2012 Region 9 official noted: "The GNEB [Eighth] Report is an excellent report, concurring with a lot of problems with data collection, especially the data gaps. The report is a mirror image of what we have been doing along the border to establish our baseline for report ing and the next steps... ."
- The Board received this message regarding its Seventh Report (on children's environmental health) from an official of the California Water Boards: "This is a very good report that I will be sharing at our next Regional Advisory Committee meeting. We've considered some of the recommendations made in this report, and we can use this to reinforce our approaches."
- In regard to the Board's two Comment Letters calling attention to transborder problems caused by invasive aquatic plants and by ULSD fuel, a member wrote, "It seems that the Board got some good attention . . . [which] should help to advance efforts to deal with these issues. A meeting was established with a federal invasive species council, border lawmakers expressed an interest in getting the Board Comment Letter . . . and [it appeared that] Mexico had taken some additional steps. . . ."
- Commenting on benefits gained from membership, one member noted that, partly through its member ship on the Board and the networks that were established, the USDA's Natural Resources Conservation Service (NRCS) was able to establish relationships with Mexico, specifically with SEMARNAT (Mexico's federal environmental protection agency). "SEMARNAT," he noted, "has asked the NRCS to share our technical expertise and experience in serving the public. UNEP will establish a Center for the Conservation of Natural Resources (CCNR) in Monterrey, Mexico. The NRCS will be asked to be on the advisory board for this center."
- As a final example, another member, in referring to the Board's Eighth Report, stated that "One of the key recommendations was to use the Mimbres Basin as a possible pilot project for applying groundwater management approaches in the U.S.-Mexico border. This recommendation has been brought to the attention of the Hewlett Foundation within the context of permitting the New Mexico Water Resources Research Institute to expand its area of research to encompass the Mimbres aquifer. Moreover, this idea became the basis of a proposal presented in late 2005 in Santa Fe to the New Mexico-Chihuahua Commission (chaired by the governors of the two states, who were in attendance) to financially support a binational data/GIS mapping project using the Mimbres aquifer as a pilot area."

During the year ahead, the Board intends to continue collecting, archiving, and analyzing information bearing on its performance. The Performance Measures Workgroup will strive to achieve an increase in activity of this sort, and continue moving toward institutionalizing the evaluation process. The foundation for this work remains a firm belief that a better understanding of the Board's past performance can only strengthen its effectiveness in the future.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

Dr. Paul Ganster
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Dear Dr. Ganster:

I am pleased to respond, on behalf of the Executive Office of the President, to the Eighth Report of the Good Neighbor Environmental Board to the President and Congress of the United States, entitled Water Resources Management on the U.S.-Mexico Border.

The Bush Administration appreciates your thorough and thoughtful analysis of water resources management along the U.S.-Mexico border. We value your recommendations on fostering stronger cross-institutional collaboration, enhancing data collection, and implementing a border-region strategic planning process based on a watershed approach.

The U.S. Environmental Protection Agency's Border 2012 Program, particularly Goal 1: Reduce Water Contamination, provides an excellent framework for a binational, results-oriented approach to the recommendations you have provided. The Agency supports the planned assessment of shared and transboundary surface waters to facilitate the collection, management and exchange of environmental data essential for effective water management. We plan to release a report in early 2006 about the first stage of this binational environmental data collection effort. Our effort directly supports your recommendation on data-sharing and also will facilitate stronger strategic planning and cross-institutional collaboration.

The current Border 2012 Workplan provides for improving water quality along the border through a range of pollution-control sanitation projects. The goal is to address water quality problems in a number of key shared and transboundary surface waters by the year 2012. For example, EPA and Mexico's National Water Commission will increase the number of home connections to potable water systems, thus reducing health risks to residents who lack access to safe drinking water. Similarly, by increasing the number of homes with access to basic sanitation, EPA and its partners will reduce the discharge of untreated domestic wastewater into surface water and groundwater. In addition, the Agency will continue to support public health protection at border-area coastal beaches as well as improvements in water and wastewater service provider operations, Here again, our view is that this infrastructure work supports your recommendations on cross-institutional collaboration.

Your report is a valuable resource for enhancing our existing program and focusing our long-term planning. On behalf of President Bush and the millions of people living along the U.S-Mexico border, I thank you for a job well done. I offer you and the Board best wishes for continued success as you prepare your Ninth Report of the Good Neighbor Environmental Board to the President and Congress.

Sincerely,

Stephen L. Johnson

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GOOD NEIGHBOR ENVIRONMENTAL BOARD MEMBERSHIP ROSTER

Note: The list below includes all members who served during 2005. Asterisk(*) indicates individuals who completed their service during the year. See website for current membership list (www.epa.gov/ocem/gneb).

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Note of Thanks

As in previous years, the Board's deliberation process for this year's report to the president and Congress was greatly strengthened by valuable contributions from a number of other border-region environmental policy officials. These contributions were greatly appreciated by the Board Members, Alternates, and Resource Specialists (see 2005 Membership Roster).

In many cases, contributors were based within a member's organization, and worked alongside the member on other border-region projects. In other cases, the person was based in a non-member organization and was consulted as an outside expert on a particular issue. In several instances, individuals listed below were appointed in early 2006 as new members to the Board, but began their contributions more informally during 2005. In all cases, these additional "team members" worked through an existing Board member to ensure that the final report and recommendations officially remained the "voice of the Board," albeit a voice enriched by the input of others.

Our thanks to all those individuals listed below, and to anyone else whose name inadvertently may have been left out. We appreciate the value you added to the Good Neighbor Environmental Board's consensus-based process for formulating its recommendations: James Stefanov (DOI); Dave DeCarme; Sylvia Grijalva, Cecelia Ho, Jeanne O'Leary, Paul Marx, Camille Mittelholtz, Roger Petsold, Chuck Rombro, Mike Savonis, and Robert Stein (DOT); Sarah Clemens, Carl Edlund, Linda Falk, Dave Fege, Barry Feldman, Nate Lau, Megan Moreau, Carlos Rincon, Becky Rosen, Maria Sisneros, Andrew Steckel, Christine Vineyard, James Yarbrough, and Amy Zimpfer (EPA); Elisa Arias (SANDAG); Ross Pumphrey (TCEQ); Manuela Ortiz (Texas DOT); Cornelius Antone, Ty Canez (Tohono O'odham Nation); Steve Fox; Rong Kuo; Jose Nunez; Carlos Marin (USIBWC); and Elizabeth Ramirez (State Department).