



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

On behalf of the Board, I am pleased to present this Fourth Report of the Good Neighbor Environmental Board to the President and Congress of the United States. The Report reflects extensive discussions on the part of the Board Members about the needs of the border region, as well as considerable input from the public. The five recommendations it contains all reflect the basic premise that the U.S.-Mexico border region faces critical water problems. Too many piecemeal demands are being made on its water resources, to the detriment of the environment and, in the not-so-distant future, the economy. In the view of the Board, full support from the President and Congress for a watershed approach to strategically address the issue should be a top priority.

The Board appreciates the opportunity to offer these recommendations and respectfully requests a response. It intends to monitor follow-up to its recommendations and welcomes ongoing dialogue with the Executive Branch and Congress on the implementation process.

Respectfully yours,

Judith M. Espinosa,
Chair

Fourth Report
of the
Good Neighbor Environmental Board

to the President and Congress
of the United States



September 2000

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The Good Neighbor Environmental Board is an independent federal advisory committee. Its mission is to advise the President and Congress of the United States on good neighbor practices along the U.S. border with Mexico. Its recommendations are focused on environmental and infrastructure needs within the States of the United States contiguous to Mexico. Good Neighbor does not carry out any specific border program. Rather, its role is to step back as an expert, concerned observer and strategically analyze the big picture when it comes to the problems the border region faces as well as the opportunities at hand.

Board members include representatives from eight federal government agencies and from each of the four U.S. border states — Arizona, California, New Mexico, and Texas. The combined expertise at the table reflects perspectives from many U.S. sectors including federal, tribal, state, and local government; non-governmental; academic institutions; and businesses. Good Neighbor also confers regularly with Mexican organizations including The Region 1 National Advisory Council for Sustainable Development (Consejo). It meets three times a year at various border locations.

Good Neighbor submits its advice to the President and Congress in the form of reports containing recommendations for action. Its first report was published in 1995. Since that time, it has continued to provide an objective, consensus-based voice on strategic approaches for addressing U.S.-Mexico border issues. Recurring themes in its guidance include the following: focus on areas of greatest need; better integrate existing projects; support new initiatives that provide added value; involve many different organizations early on and throughout the process; and institute an underlying, environmentally-sustainable framework as the basis for making decisions.

The Good Neighbor Environmental Board is managed by the U.S. Environmental Protection Agency under the provisions of the Federal Advisory Committee Act (FACA). Its meetings are open to the public. For more information, contact the Designated Federal Officer of the Good Neighbor Environmental Board at (202) 564-9741.

Preface Each year, the federal government turns to hundreds of advisory committees for guidance on how to do its job better. The Good Neighbor Environmental Board is one of these committees, the only one with the responsibility for advising the President and Congress on what constitute “good neighbor” environmental and infrastructure practices along the 2000-mile border the United States shares with Mexico. Its first report in 1995 focused on the environmental health needs of the border as well as ways to improve community involvement in alleviating border problems. Since that time, Good Neighbor has continued to call for the President and Congress to support actions that better integrate existing programs. It also continues to encourage new approaches that more strategically address border needs and involve many different parties at the beginning and throughout the process.

Recommendations in this year’s report, its fourth, are targeted at one of the region’s most pressing issues: water. In a word, the border region does not have the infrastructure, policy, or institutions required to address the public’s water needs, either in terms of quantity or quality. According to a U.S. General Accounting Office (GAO) report from March 2000, a binational assessment concluded that 12 percent of the border population does not have access to potable water and 30 percent lack access to wastewater treatment facilities. Meanwhile, the economy and population of the area continue to grow rapidly, intensifying pressure on these already inadequate systems. Strategic solutions to water problems must be found and acted upon now to maintain the economic viability of the region, not to mention the health of its twelve million residents and the sustainability of its fragile ecosystems.

Water resource challenges, however, are only one part of a broader conundrum that besets the region. In the same report, GAO notes the significant absence of an overall strategic plan to address border environmental infrastructure problems in the region. Similar concern was echoed during public comment sessions sponsored by the President’s Interagency Task Force on the Economic Development of the Southwest Border. President Clinton announced the creation of the Task Force in 1999, requesting that all federal agencies develop and implement a comprehensive strategy to, first of all, fully assess the border region’s problems. The next step was to develop a coordinated federal response to help alleviate these problems and encourage sustainable economic development.

The Good Neighbor Environmental Board supports GAO’s call for a strategic plan to address border region environmental infrastructure needs. Specifically, it recommends that infrastructure needs related to water resources be targeted as a top priority for immediate and continual action over the course of at least a decade.

More specifically, Good Neighbor recommends that a Border-Region Strategic Water Plan be developed. This Plan should be based on a watershed approach, which should become the universally-adopted basis for alleviating water problems and encouraging sustainability in border region water resources. Its development must include participation, in fact, leadership, from state, local and tribal governments and complement their own efforts to support a watershed-based approach. While recognizing that the watershed approach already has made some inroads, the Board calls for these efforts to be stepped up and fully supported until the approach is institutionalized and implemented border-wide with full participation from the many affected parties.

The Strategic Water Plan should address both surface and groundwater issues. It should lead to sustainability for both natural ecosystems and economic activity, thereby also helping to safeguard human health. Hand in hand with the bipartisan U.S. portion of this effort, a coordinated, transboundary effort involving Mexico should be encouraged so that lasting solutions of the magnitude required are put into place. Needless to say, immediate solutions must continue to be found for communities facing water problems that cannot wait.

To begin this process, the Board recommends that key priority watersheds be selected for special focus within the overall Plan. Successes and lessons learned from this subset of watersheds can then be applied elsewhere until all border-region watersheds are managed through a watershed approach. At the same time, Good Neighbor urges support of any and all efforts to move toward watershed-based thinking and actions. Efforts in areas other than the initial subset of watersheds selected should be fully recognized and encouraged.

In the report that follows, this watershed approach concept is laid out through five interrelated recommendations. Each recommendation is accompanied by background contextual information, goals, objectives, and measures for success. Following the five recommendations, an ensuing section singles out one of the border’s major operating programs, the U.S.-Mexico Border XXI Program, which is led by the U.S. Environmental Protection Agency and the Mexican Ministry of the Environment, Natural Resources and Fisheries (SEMARNAP), and provides a close-up assessment of its contributions. Next, the benefits of the Board’s ongoing ties with Mexican civil society, including the Region 1 National Advisory Council for Sustainable Development (Region 1 Consejo), are outlined. The report concludes with a Board roster and a listing of relevant web sites.

2000 Recommendations at a Glance

As advisor to the President and Congress of the United States on environmental and infrastructure needs along the U.S. border with Mexico, we, the Good Neighbor Environmental Board, recommend that the following five steps be taken:

- 1 Institutionalize a border-wide watershed approach.** Enable institution of a watershed approach as the underlying standard operating procedure for all projects that deal with water resources management along the U.S. border with Mexico. Concentrate initially on key priority watersheds and then expand the effort.
- 2 Support data-gathering and analysis that generates a clear picture of border watersheds.** Using, initially, a subset of priority watersheds, strengthen current efforts to collect, integrate, and analyze the data needed to flesh out watershed-based planning frameworks and fully understand both existing conditions and potential future scenarios in them. Expand this effort until, eventually, sufficient data is gathered and available for all border-region watersheds so that a watershed approach can be fully implemented.
- 3 Highlight and support water resource management practices along the border that are based on a watershed approach.** Develop a Border-Region Strategic Water Plan that becomes a useful operational tool for day-to-day management decisions about individual watersheds made by U.S. federal, state, county, municipal and tribal decision makers, and also is available to other interested groups. The Plan should identify key transboundary water quality and quantity issues, present core components of a transboundary watershed analysis, and include preliminary options for addressing these issues and complement existing state, local and tribal government watershed-based plans and programs.
- 4 Encourage the full participation of tribal governments, along with binational organizations, federal, state and local governments and other border groups, in developing and implementing a watershed approach.** Ensure that the training, funding and physical infrastructure needs of all tribal governments, along with other border governmental agencies and population groups, are fully addressed when developing and implementing a watershed management approach.
- 5 Provide continued federal budgetary support for actions and programs consistent with the themes and purposes of a watershed approach for the border region.** Good Neighbor especially wishes to emphasize the importance and urgency of continued and full budgetary support for binational commitments to address border environmental issues within the context of a watershed approach.

The full text of the Good Neighbor Environmental Board's Fourth Report to the President and Congress of the United States is available on-line at www.epa.gov/ocem/gneb-page.htm.

Awatershed is a geographic area where water, sediments, and dissolved materials drain into a common water resource such as a lake, river, or underground aquifer. Unlike political boundaries, which may follow natural features like mountain ranges but ultimately are determined by humans, watersheds are boundaries shaped by nature.

When a watershed approach is used for managing a region's water resources, the land is divided into units that reflect these natural boundaries, regardless of whether or not they incorporate several different political boundaries. Watershed boundaries, and the complex set of natural and human interactions that take place within them, are then used as the basis for studying water resource problems and making the tough decisions about how to manage them. Water allocation, water quality management, drought and flood management, and aquatic habitat protection are just a few examples of the many water resource issues that benefit from a watershed management approach.

Though progress is being made, considerable practical barriers remain. Inherently, when watersheds cross local, state, tribal and, especially, national jurisdictions, a host of political, policy, resource, and budgetary complications come into play. Researchers and practitioners alike can benefit from working with new partners, more fully educating and involving stakeholders, and building coalitions of institutional support from many quarters.

Three years ago, federal support for adopting a watershed approach was significantly strengthened when Vice President Gore announced the decision to launch a new initiative to tackle the most serious water quality problems in the United States. The result, the Clean Water Action Plan, was announced by President Clinton the following year, in February 1998. The Plan provided a blueprint for restoring and protecting the nation's water resources. Significantly, it called for a cooperative approach to watershed protection in which state, tribal, federal, and local governments as well as the public identify those watersheds with the most critical problems and then work together to focus resources and implement effective strategies to solve those problems. In response, nine federal agencies have joined together in new partnerships dedicated to improving water quality in communities across the nation.

Backdrop

Why a watershed approach?

Water is the lifeblood of any community, but especially desert communities. Characterized by conditions of low precipitation, the long-term viability of many desert communities depends on either using water at a sustainable rate, or identifying additional new sources of supply to accommodate growth. For others that have long ago surpassed their local supply, they import water, provided they can afford to do so. Compared to many other communities throughout the United States and Mexico, border region communities deal with a perennial, almost unending condition of drought. As water resources diminish, local groundwater resources may be pumped out at a rate far greater than replenishment. Eventually, unless practices change, the supply will run out.

The limitations of local water supplies must be accounted for in the face of rapid growth and markedly increasing demands for water. A holistic watershed approach is the optimal way to confront these issues. The alternative is to proceed with development and economic growth with the baseless hope that sufficient water of adequate quality will somehow materialize in the future to meet continually-growing demands from municipal, agricultural, industrial and wildlife habitat sectors. Long-term water management planning is vital to ensure the future adequacy of water supplies to sustain continued development and economic growth. Awareness of a pending water management problem can lead to locally-implemented solutions such as conservation, wastewater reuse, aquifer recharge, or other strategic approaches.

A concerted effort should be undertaken to minimize or avoid the possibility of future binational conflicts over water resources, particularly groundwater. Along the entire length of the border, basins are shared by diverse communities without assurances of future availability through treaties or other binational agreements. In some places, rivers cross the border with no established arrangements for sharing the resources.

Watershed analyses can provide the scientific information necessary for sound water management decisions, whether they be local decisions or applicable in the transboundary setting. Although some of this work already has been done, or is getting under way in a few important watersheds along the border, many other critical areas could benefit from such efforts.

Why especially in the US-Mexico border region?

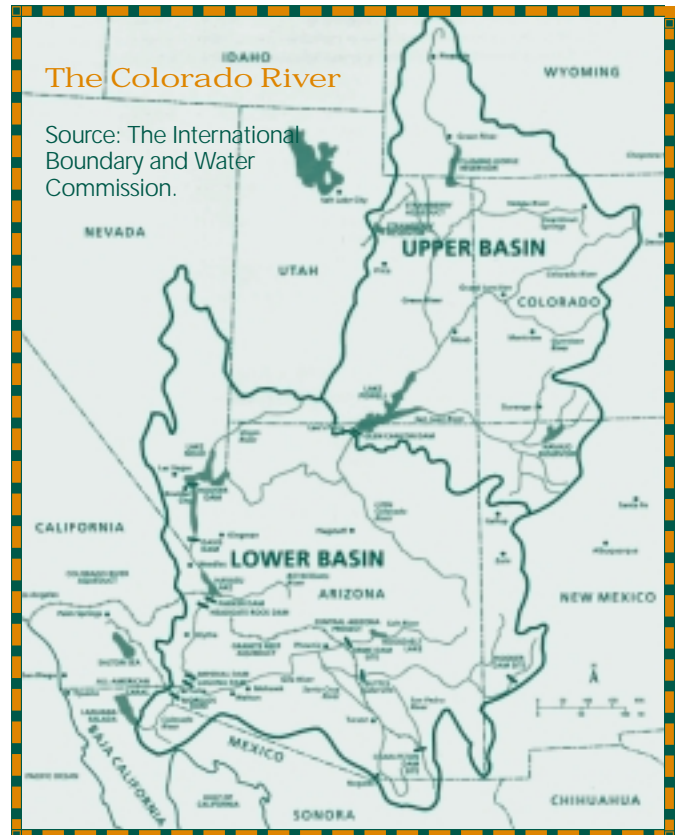
Water, or its paucity, has been a central theme in border region history. In fact, the availability and development of limited water supplies, the use of water, and the environmental consequences of water development and use have largely defined the historical and cultural context of the border region.

Border region watersheds' carrying capacity has been strikingly altered over the last several decades as the region has undergone major natural and human-induced changes. Municipal, agricultural and industrial demands for water have steadily increased. At some locations, these demands have reduced or eliminated surface water flows, causing serious impacts to water-dependent habitats such as riparian areas and marshes. Inattentiveness to the effects of these developments, and flawed water management decisions based on inadequate scientific information, are causing some native plants species to die out and allowing other invasive species to enter sensitive border-region ecosystems.

Aside from the quantity aspects of water management, diminished water quality in watercourses has demonstrably restricted the amount of usable habitat available to some threatened or endangered species. Raw and inadequately treated sewage, agricultural runoff, or industrial discharges may all adversely affect habitat conditions. Animal species, including fish, are becoming less diverse. Stresses from climate shifts such as droughts and floods have made it difficult for ecosystems to maintain equilibrium and have affected the complex web of interactions among border watersheds' inhabitants.

Only a watershed approach can generate the information that decision-makers need to make sound decisions about the future of water supplies for their communities. While there has been much reliance on groundwater mining and importation of water supplies throughout the West, serious concerns have been raised about this unsustainable response to the demands of growth. By contrast, a watershed analysis can result in an awareness of the maximum carrying capacity of water bodies, given available resources. Even more importantly, it can identify ways in which these resources can be optimized to the greatest benefit of local communities.

Successfully harnessing a watershed approach along the border entails overcoming a potentially major hurdle: the 2,000-mile national political border that draws a sharp line through the region's watersheds and separates pieces of the same watershed into different



The Colorado River, a major watercourse in the border region, is 1,440 miles long, extending from its headwaters in Wyoming to the Gulf of California in Mexico.



Water from the San Pedro River is diverted into cement-lined channels. Source: "Watershed at a Watershed," Arizona State University for Southwest Center for Environmental Research and Policy. Photo credit: Laurel McSherry.

jurisdictions. For purposes of binational cooperation and coordination, the 1983 La Paz Agreement defined the U.S.-Mexico border area as the region extending 100 kilometers on either side of the international boundary between the U.S. and Mexico. Some border region watersheds extend beyond this defined area. In some instances, there may be good reason to apply a large-scale watershed approach that officially extends beyond the defined "border area" for binational cooperation. In other instances, there are valid reasons for dividing some watersheds into smaller sub-watersheds for planning purposes.

Use of physical geologic and hydrologic boundaries, rather than political boundaries, provides numerous benefits for planning and management of water resources. Admittedly, different portions of the same watershed may be subject to very different laws, policies, funding decisions, and management practices. But the underlying scientific and physical facts revealed through a watershed analysis can shed objective light on discussions and make those management decisions more compatible. At best, the information that emerges can result in unifying decisions in previously unforeseen ways.

Border region history, to some extent, has laid a foundation for using a transboundary watershed lens to manage the area's water resources. United States-Mexico treaties establish rights and obligations concerning ownership of the international waters of two of the region's key water resources, the Colorado River and the Rio Grande (called Rio Bravo in Mexico) River. Treaty management has been entrusted to a government-to-government international organization called the International Boundary and Water Commission (IBWC). IBWC has utilized its position as an international commission to bring together governmental organizations from both countries to jointly acquire and exchange data about the region's transboundary hydraulic basins.

For the Colorado River, the IBWC has convened a task force to

develop binationally-compatible baseline information about its delta. Three types of information will be developed: hydraulic, environmental and natural resource. The IBWC also is performing an environmental review to study options to improve the greatly-reduced water-carrying capacity of the Colorado River along its 24-mile shared boundary. One of the intended outcomes is to help preserve this part of the river as the official international boundary.

For the 1,244-mile international portion of the Rio Grande River, the IBWC is looking closely at flood control management practices on both sides of the border. Current practices require significant, although selected, removal of vegetation. The IBWC review is directed toward environmentally-sound vegetative management and regional river management plans along this entire stretch of the river.

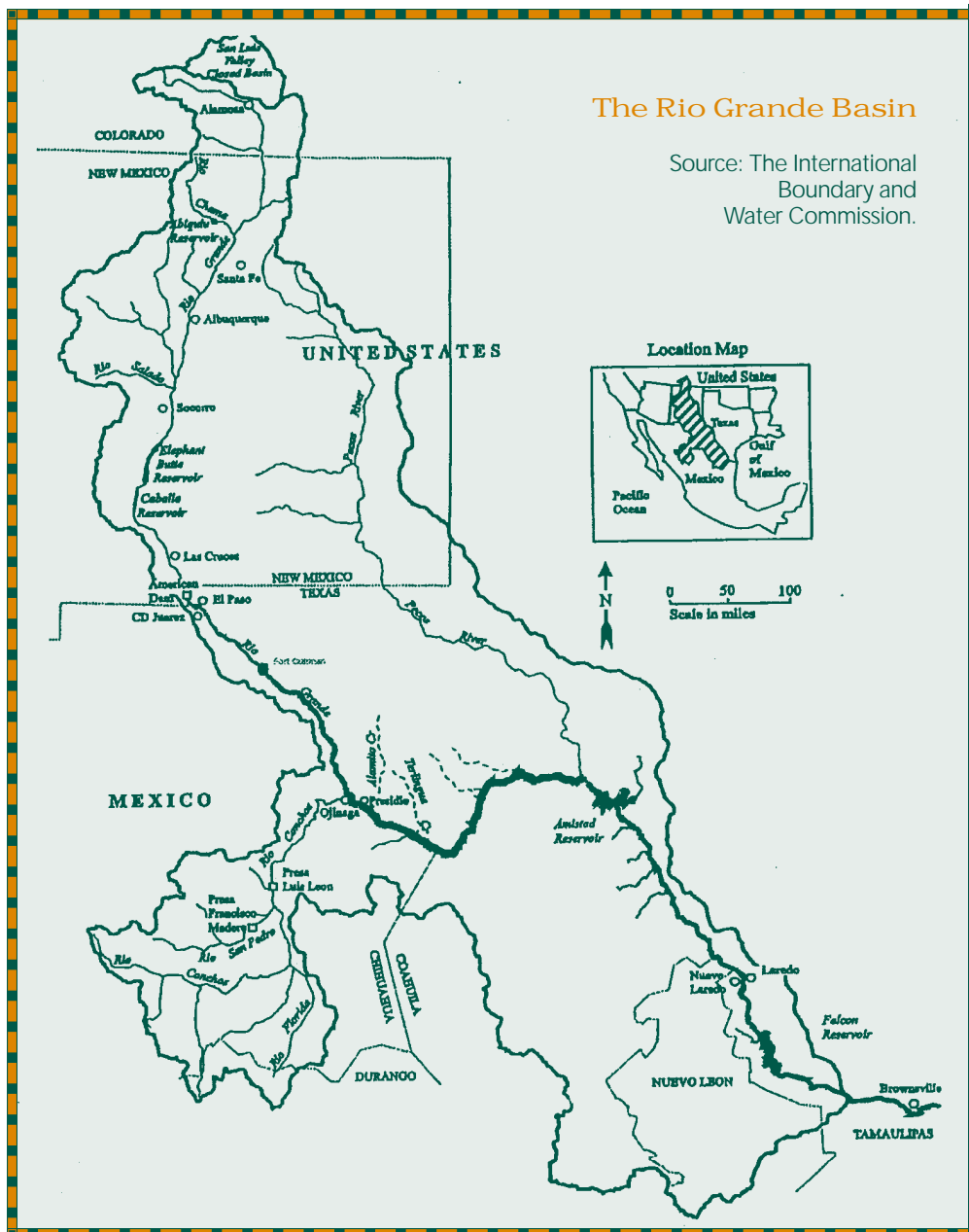
In another Rio Grande initiative, IBWC partnered with the U.S. Department of the Interior (DOI) and the Mexican Ministry of the Environment, Natural Resources and Fisheries (SEMARNAP) in Spring 2000 to host a symposium about the segment of the River located downstream of El Paso - Ciudad Juarez and the headwaters of Amistad Dam. This 500-mile international segment includes the Big Bend National Park in Texas and the Maderas del Carmen Flora, Coahuila and Santa Elena, Chihuahua protected areas in Mexico. One of the outcomes of the symposium was a Joint Declaration to expand binational planning efforts to improve and conserve the natural resources of the Rio Grande and associated habitats. The Declaration cites follow-up activities including: a binational task force under the direction of the IBWC to implement recommendations; development and exchange of compatible information systems; and facilitation of public participation.

Besides this transboundary work on surface waters, binational groundwater basin characterization efforts also are under way. IBWC has promoted partnerships with federal, state, and local authorities concerning data exchange in selected groundwater basins that straddle the boundary. Allocation decisions generally are governed by U.S.-Mexico treaties. The only exception is the Yuma, Arizona - San Luis Rio Colorado, Sonora area, where a temporary IBWC agreement was drawn up in 1973.

Despite progress both above and below ground, much of this government watershed work is just getting started. It must continue and be magnified. Moreover, it must proceed hand in hand with private-sector conservation efforts on the part of ranchers and other landowners. Collaboration, integration, and leveraging of funding and human resources must take place. Stresses on border water resources are great and growing greater, and full support for strategic measures based on a binational watershed approach is required now, not later.

A watershed approach for the border region makes sense financially, environmentally, and for community-based participation reasons. Moreover, it focuses attention on transboundary environmental results. Coordinating efforts across traditional boundaries of responsibilities means that programs based in different

organizations and even in each of the two countries can pool their expertise and resources. Decision makers can consider all of the issues affecting water management to come up with a more informed plan for the region. In the end, everyone will benefit.



The Rio Grande River, one of the principal surface water resources for the border region, originates in the San Juan Mountains of southern Colorado. It flows southeast along a 1,885-mile course before it empties into the Gulf of Mexico.

US-Mexico Border Watersheds: A Profile

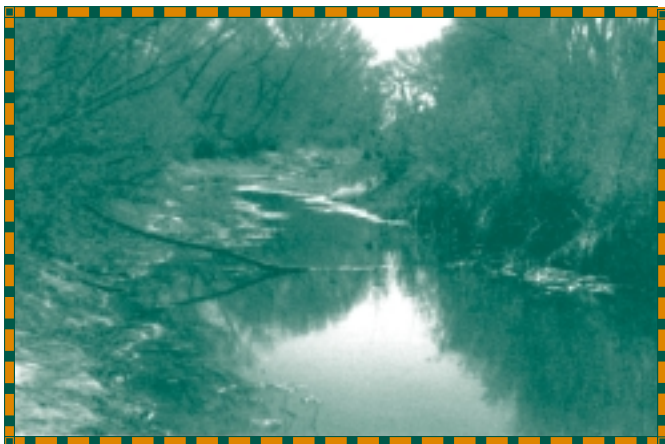
Mexico and the United States share a rich diversity of natural resources and cultures along their 2000-mile shared border. Side by side with some of North America's most pristine, untouched ecosystems are some of its most rapidly-growing urban areas. Almost 12 million people call the border region home. In recent decades, water supply in the region has come under increasing pressure from demands on both sides of the border, even while sources are often threatened by pollution that results in restricting their potential uses.

Surface-water supplies are allocated under international treaties and domestic laws. Rivers and their adjoining riparian areas make up one of the principal surface water resources for the region. The Rio Grande River is considered the most extensive. It originates in the San Juan Mountains of southern Colorado and winds its way southeast along a 1,885-mile course before it empties into the Gulf of Mexico. Along the way, the river and its tributaries drain a land area of 182,200 square miles. For approximately two-thirds of its course the river also serves as the boundary between the United States (specifically, the state of Texas) and Mexico. Its border area waters supply drinking and irrigation uses for more than 6 million people and 2 million acres of land.

The complexities of water resource management and the benefits of coordination with Mexico are perhaps nowhere better illustrated than in the case of the well-being of the Rio Grande: most of the year, the river is dry south of El Paso-Juarez. The second stretch of the river is fed by the waters from the mountains in the state of Chihuahua flowing to the Rio Grande via the Rio Conchos. The Rio Conchos enters the Rio Grande at Ojinaga, Chihuahua-Presidio, Texas and this water flows to the Gulf of Mexico. The lower Rio Grande valley of Texas, an area with a rapidly-growing population and a multi-million-dollar irrigated agricultural industry, is dependent on two reservoirs that are fed mostly from rainfall in northern Mexico. (In the Texas region, from Falcon Dam just south of Laredo to Brownsville, about 80 per cent of the water is used by the agricultural industry. However, outdated irrigation techniques and leaking conveyance systems have been reported to lose vast amounts of water prior to reaching their intended use.) Needless to say, a transboundary watershed approach offers the scope of vision needed to fully understand all of these interactions and incorporate this understanding into management practices.

The Colorado River, the region's other major watercourse, is 1,440 miles long, extending from its headwaters in Wyoming to the Gulf of California in Mexico. Along the way, it flows through Utah and Colorado, then continues down to the Lower Basin of Nevada, Arizona, and California. It forms an international boundary between the U.S. state of Arizona and Baja California, Mexico for 24 miles before continuing into Mexico for some 65 miles.

Besides the Rio Grande and the Colorado River, the border region has seven other federally-managed riparian corridors: the Gila River; the Yaqui River drainage; the San Pedro; the Rio Conchos; the Pecos River; the Rio Salado; and the Rio San Juan. In addition, other locally-impor-



San Pedro River. Source: "Watershed at a Watershed," Arizona State University for Southwest Center for Environmental Research and Policy. Photo credit: Joaquin Marruffo.



Agriculture near Presidio, Texas is irrigated with water from the Rio Grande. Photo credit: Laura Pierce.

tant watercourses cross the international border such as the Santa Cruz River, whose underlying aquifers represent a significant water source for both Nogales, Arizona and Nogales, Sonora. Finally, the Tijuana River Basin also plays a role in border-region water supply.

An abundant, diverse collection of flora and fauna depend upon these riparian areas as habitat. Besides the rivers themselves, associated cienegas (springs) and resacas (oxbow lakes) provide critical habitat for migrating as well as resident birds and other animals. The San Pedro River, which straddles the Arizona-Sonora border, has been identified as a globally significant and threatened watercourse that is a critical habitat for songbirds migrating between Canada, the United States, and Mexico.

Management of border region groundwater supplies offers an additional challenge. In contrast to surface waters, relatively little is known about their availability, quality, or sustainability. Nor is much known about how surface waters are affected when groundwater supplies are depleted by pumping.

Caution is required as communities make major shifts in water resource supply practices. Some aquifers in the border region are clearly being overdrafted by groundwater wells whose collective pumping far exceeds the aquifers' rate of natural replenishment. Groundwater pumping from wells, conservation measures such as the lining of canals, and numerous other water management actions in one locale can affect the other side of the international border. For instance, regional groundwater flow patterns have been modified by excessive pumping in the El Paso-Ciudad Juarez area, and evidence suggests that this continually-increasing activity is having transboundary effects.

Practices such as these can lead to conflicts over international

rights to groundwater. Moreover, if replicated in multiple locations, it can lead to unforeseen transboundary effects on critical riparian areas or on the availability of surface water, with all of the attending property rights implications. Mitigation actions often can be implemented, and they may, in fact, be beneficial to many parties. But such measures must first be identified and assessed in a comprehensive manner through critical analysis, including the development of water budgets and/or groundwater flow models.

Both groundwater and surface water resources on the border remain seriously threatened by the border region's recent rapid industrialization. The availability of inexpensive labor, accompanied by trade liberalization, has brought new business to the border and the workers needed to fill the jobs. These businesses include growing numbers of border assembly plants (maquiladoras). The population of the region continues to grow rapidly. Some of the newer residents live in unincorporated communities, known as "colonias," which surround the urban areas and often lack basic public services including municipal drinking water, wastewater treatment systems, and solid waste disposal. Even in some of the incorporated areas, the infrastructure is lacking to adequately handle the environmental consequences of human and industrial waste generation and disposal.

As a result, border communities face a host of complex social, political, economic, infrastructure, natural-resource and environmental-quality challenges that will not go away soon. Paramount among them is how to best handle water problems. Appropriately applied as a useful data-gathering and planning instrument, a watershed approach will go a long way toward addressing the region's water issues. It also provides a blueprint for strategic approaches to address other challenges in a manner that promotes sustainability.



Map of the United States-Mexico border area, as delineated by a shared-water resources perspective

Source: United States Department of the Interior, U. S. - Mexico Border Field Coordinating Committee.





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

Recommendations in Context

Note: The Good Neighbor Environmental Board encourages the President and Congress of the United States to provide support that enables movement forward on all five of the following recommendations simultaneously.

RECOMMENDATION 1

Institutionalize a border-wide watershed approach. Enable institution of a watershed approach as the underlying standard operating procedure for all projects that deal with water resources management along the U.S. border with Mexico. Concentrate initially on key priority watersheds and then expand the effort.

CONTEXT

Managing and maintaining the quantity and quality of limited water resources is a persistent critical issue for the border area. The universal adoption of a systematic watershed approach is an essential first step to align water resources management with sustainable development. Delineating the border's hydrologically-defined geographic areas (its watersheds) enables all levels of government, as well as the non-governmental sector, to work together across jurisdictional lines on a common goal that is based on long-term sustainability.

A watershed approach provides a template to overlay data on health indicators, economic development needs, public health needs, socio-economic needs, natural resources, and other factors to produce a comprehensive watershed profile. This profile can then be consistently and universally applied to help understand the complex and sometimes competing interests of sustainable development issues along the border. As Ingram, Laney, and Gillilan (1995) point out, water and politics are everywhere intertwined; only the pattern of the braid varies. No pattern is more complex and convoluted than the fragmented legal and institutional structures encountered at the border.

In the last several years, great strides have been made as water managers on both sides of the border have come to realize that strategically sharing binational watersheds requires, first of all, looking at them as a single unit. The next step is open exchange of data, a process founded on the concept that a watershed boundary can become the mechanism to connect and create a forum for international collaboration. The result is informed management of the whole system, not just a part.

Some federal agency work already has begun. Basic principles and techniques have been identified and some basic materials produced. For example, the Department of Interior has published a fact sheet with a map that delineates the border from a watershed perspective. Its purpose is to serve as a basic planning unit for carrying out more in-depth border watershed identification and analysis. In addition, the U.S.-Mexico Border XXI Program has established a Water Workgroup whose efforts include encouraging governmental and non-governmental groups to coordinate their efforts using a watershed lens as their common point of reference.

The research community also is doing its part. The Southwest Center for Environmental Research and Policy (SCERP) is funding a Transboundary Watershed Research Program that focuses on binational watersheds with inconsistent data gathering, differing approaches to protection, and disjointed planning and management. The highly urbanized Tijuana River watershed and the mostly wild San Pedro watershed are being studied by binational teams of hydrologists, ecologists, sociologists, economists, urban planners, resource managers and educators. SCERP also funded a project to produce a watershed-based model for sustainable development using the Upper San Pedro basin as the case in point.

Despite these encouraging signs, instituting a watershed-level approach throughout the border region still has far to go. When the short-term water resource needs of particular groups of users are pressing, the benefits of a watershed approach may appear much less obvious. Large watershed areas can be unwieldy, and they can be very challenging to organize effectively. The priorities for communities and habitats in one portion of a watershed may not be the priorities of another portion of the same watershed. In such cases, using a “subwatershed” lens, that is, looking at portions of watersheds, may be a useful way to begin building support. By focusing watershed efforts on smaller geographic regions (e.g. the upper, middle and lower San Pedro River watersheds), communities can focus more easily on common issues and solutions.

GOAL

That a systematic watershed approach to mapping and displaying sustainable development indicators be used in the United States border region with Mexico. That this approach be adopted by all levels of government, the academic community, states, tribal governments, and the private sector to the extent practicable.

IMMEDIATE OBJECTIVES

- That a limited number of priority border-region watersheds be identified. These priority watersheds would include the major

sources of water for the region and might include the following: Rio Grande, San Pedro, Santa Cruz, Lower Colorado, Tijuana, and New River.

- That priority watersheds be assessed to determine the resources required to fully institute a watershed approach. That, where appropriate, additional targeted resources are made available to these watersheds.
- That the concept of “subwatersheds” is encouraged and supported, where appropriate, as a building block toward instituting a full watershed approach.

MEASURE OF SUCCESS

Initially, for a subset of border-region priority watersheds, all organizations participating in water resources research, analysis, policy making, management, and other decision making roles in the four U.S. border states consistently use a systematic watershed approach in their work with these watersheds. This subset of watersheds becomes a template for including other border watersheds in the endeavor until, eventually, all border-region watersheds are included in the approach,

Other decision makers whose work affects watersheds, such as industrial park developers and government planners, factor these potential effects into their decisions.

RECOMMENDATION 2

Support data-gathering and analysis that generates a clear picture of border watersheds. Using, initially, a subset of priority watersheds, strengthen current efforts to collect, integrate, and analyze the data needed to flesh out watershed-based planning frameworks and fully understand both existing conditions and potential future scenarios in them. Expand this effort until, eventually, sufficient data is gathered and available for all border-region watersheds so that a watershed approach can be fully implemented.

CONTEXT

Maps and digital geospatial data products are essential tools for understanding the complex set of interactions taking place within the watersheds shared by the United States and Mexico. Scientists and land managers from both countries need current, accurate, and binationally-compatible geospatial information to monitor the effects of agricultural, industrial and municipal development, as well as other changes in border conditions. Although some of these tools are becoming available, the information still is somewhat scattered and under-utilized, in part because the information may be incompatible across databases. Collecting, collating, reconciling and merg-

ing datafiles from both countries can be daunting. Even basic information such as soil type, habitat type, meteorology, and land use have very different scales, classification types, and dates of collection for the two countries.

Lack of data means that current and projected water budgets are very challenging to develop with any precision.

U.S. federal agencies continue to work to fill these data gaps. For instance, the U.S. Geological Survey within the Department of the Interior and Mexico's Instituto Nacional de Estadística, Geografía y Informática (INEGI) are developing joint standards for digital geospatial data sets under a \$30 million, ten- to twelve-year project called the U.S.-Mexico Transboundary Mapping Initiative. Products will include imagery and integrated digital geospatial data as well as graphic maps for the U.S.-Mexico border region.

On a cross-border level, the IBWC has developed a data set for historical flow records of transboundary waters and compiled selected water quality data for the last 100 years. IBWC also has coordinated information exchange across countries about conditions in shared surface and groundwater resources. In the case of the Rio Grande and Colorado River basins, some of the information exchange even extends to areas of the rivers that are officially considered beyond the border region.

GOALS

That the following be identified: total universe of data needed, data currently available and their sources, data gaps, and the requirements of a programmatic system needed to maintain data availability.

That funding for the necessary data collection is available at the appropriate level, be it federal, tribal, state, county, or local.

That Federal agencies, working closely within the partnerships formed as a result of the President's Clean Water Action Plan, be provided with specific resources dedicated to collect hydrologic, geologic and water use data and perform vital watershed analyses to promote sustainable water management practices in critical watersheds in the border region.

IMMEDIATE OBJECTIVE

■ That the U.S. Department of Agriculture, the Department of the Interior, and the U.S. Environmental Protection Agency (EPA) lead an effort to determine the most appropriate tools for identifying data gaps, including Geographic Information Systems, considering factors such as cost-effectiveness, management, and access.

MEASURE OF SUCCESS

Eventually, data management systems containing comprehensive data to support comprehensive border-area water management plans for all border-region watersheds are widely available. The most critical watersheds have computer flow simulation models prepared binationally. These systems serve both near and long-term technical and policy decisions. They allow for refinement and further development of the data in response to evolving conditions and feedback from management practices.

RECOMMENDATION 3

Highlight and support water resource management practices along the border that are based on a watershed approach. Develop a Border-Region Water Strategic Plan that becomes a useful operational tool for day-to-day management decisions about individual watersheds made by U.S. state, county, municipal and tribal decision makers, and also is available to other interested groups. The plan should identify key transboundary water quality and quantity issues, present core components of a transboundary watershed analysis, include preliminary options for addressing these issues, and complement existing state, local and tribal government watershed-based plans and programs.

CONTEXT

In the United States, authority for the management of groundwater and surface water resources largely resides with state government. However, implementation of water-related projects, and the determination of land zoning decisions or growth issues, is handled at the county and municipal level. Sovereign tribal governments have both land and water management authorities.

Given the key role they play, state and local agencies and tribal governments must be actively involved in implementation of a watershed approach in critical water management areas along the border. This need for meaningful participation — in fact, leadership — by tribal, state and local governmental entities, may initially make the watershed approach seem unwieldy and challenging. Nevertheless, the effort is vital. Federal agencies, especially those such as the Department of Interior, the Environmental Protection Agency, and the Department of Agriculture, should leverage their existing roles to promote collaboration across jurisdictional boundaries.

Border-region states already are drawing on existing pieces of legislation to bolster their watershed-directed efforts. For instance, under the federal Clean Water Act, states must, and tribal governments may, define how water bodies will be used and establish standards that serve as goals for water quality. The Texas Natural

Resource Conservation Commission (TRNCC) has developed an approach to watershed management that has evolved from this federal Act as well as from a 1991 state legislative mandate, which created a watershed-based water quality assessment program. By coupling identified water quality problems with classified water segments, the TNRCC was able to prioritize watersheds for restoration. In a separate project, it partnered with the IBWC in its Clean Rivers Program for the Rio Grande, an initiative to extend scientific knowledge of the river basin in both countries.

In Arizona, the Department of Water Resources is drawing on provisions within a twenty-year-old state-level Act to promote watershed-based decisions. Long before the terms “sustainability” and “watershed” were in vogue, the 1980 Groundwater Management Act called for establishing management plans for the state’s critical groundwater areas. Boundaries for these groundwater basins, called “Active Management Areas,” predominantly are based on hydro-geologic features that control the movement of water. The statutes even go so far as to prevent the subdivision of land within these areas unless a 100-year assured water supply, of both adequate quantity and quality, can be demonstrated consistent with achievement of the area’s water management goals.

Management plans for individual Active Management Areas (AMAs) under the Act are targeted to the characteristics of each basin. For instance, the plan for Santa Cruz AMA (which includes Nogales) includes specific provisions for fostering international cooperation based on recognizing the transboundary nature of this watershed. Its mandated goal is based on the principle of preventing long-term water table declines. Fundamentally, it seeks to preserve surface water flows and thereby protect a vibrant riparian habitat in the binational Santa Cruz River.

California and New Mexico, the other two U.S. border states, also are doing their part.

What about the role of municipalities and local governments? In many cases, they are carrying out their management responsibilities amidst tremendous pressure from immediate needs that have to be met, leaving little time to step back and consider the broader view. Local decision makers face challenges such as how best to increase water supplies for their own growing populations. They are not always in a position to consider the full range of potential variables involved. These variables may include upstream or transboundary infrastructure projects on the drawing board, as well as the downstream impacts of particular projects on other users. Perhaps even more significantly, variables such as the carrying capacity and future availability of the water resources may not be factored into individual towns’ deliberations.

Community-to-community cooperation up and down the banks of the border region’s rivers faces numerous obstacles. Information is lacking, or has been compiled but is not easily accessible. Different measurement systems make data sharing and comparison difficult. Finally, often there is no legislative incentive to cooperate.

But these obstacles have to be overcome. Infrastructure needs in any given community must be integrated with the needs of upstream and downstream users on both sides of the border. Ecosystem needs for adequate stream flows must also be factored into the discussion. And the water needs for economic activities such as fishing and recreation, which rely on both instream flows and freshwater flows to estuaries, also need to be part of the discussion. Localities must be encouraged to think and act strategically. Just as importantly, they must have the means to do so.

U.S.-Mexico collaboration can help to enable states and localities to fulfill their respective roles in the watershed scenario. For instance, the four U.S. and six Mexican border states have been sharing experiences through a mechanism called the “Ten States Retreat.” This initiative brings together the ten states’ environmental Secretaries on an annual basis to compare notes and explore new avenues for cooperation.

In addition, the U.S. Department of the Interior (DOI) and the Mexican Secretaría de Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP) are working together on the management of several transboundary protected areas. These areas include the San Pedro River Basin in Arizona/Sonora, the Big Bend National Park/Maderas del Carmen Flora area in Texas/Coahuila, and the Santa Helena area in Texas/Chihuahua.

IBWC also is involved in promoting cross-border cooperation when it comes to watershed-based management practices. In partnership with DOI and SEMARNAP, the Commission sponsored a binational symposium to discuss migratory bird habitat, ecosystem processes, endangered species habitat, and water quantity and quality on the Rio Grande. One outcome was a joint declaration calling for coordinating policies, strengthening cooperative actions, examining opportunities for maintaining minimum flows, and undertaking research on the stretch of the river from Fort Quitman to Amistad Dam in Texas. A binational taskforce has been created to follow up on the declaration.

Federal agencies, along with other levels of government, can help states, localities, and tribes effectively manage border-region water resources by operating federal policy research and funding programs in a way that creates opportunities to reach out across traditional lines of authority and bridge gaps between areas of responsibility. Sound watershed management practices on the border must continue to be

DOI-SEMARNAP COOPERATION PILOT AREAS

Name	Date Established	State	Acres
Pilot Sister Area #1			
Organ Pipe Cactus National Monument	In 1937 named a NM then designated a Biosphere Reserve in 1976	Arizona, United States	330,689
Cabeza Prieta National Wildlife Refuge	Established in 1939 as a Wildlife Refuge then added to the wilderness system in 1990	Arizona, United States	860,000
Reserva de la Biosfera El Pinacate y Gran Desierto de Altar	In 1979 set aside as a Forest Protected Zone and Wildlife Refuge; in 1982 named an ecological Reserve and designated as a Biosphere Reserve in 1993	Sonora, Mexico	1,764,953
Reserva de la Biosfera Alto Golfo de California y Delta del Rio Colorado	First recognized in 1955 as a Refuge Zone then established as a Biosphere Reserve on June 15, 1993	Baja California, Mexico	2,308,847
Imperial National Wildlife Refuge	Designated in 1941	California, United States	25,125
Pilot Sister Area #2			
Big Bend National Park	In 1944 established as a NP then designated a Biosphere Reserve in 1976	Texas, United States	801,000
Area de Protección de Flora y Fauna Maderas Del Carman	November 7, 1994 as an APFF	Coahuila, Mexico	514,701
Area de Protección de Flora y Fauna Cañon Santa Elena	November 7, 1994 as an APFF	Chihuahua, Mexico	684,709

Source: Mark J. Spalding and Joanna Salazar "Adjacent US-Mexico Border Natural Protected Areas: Protection Management and Cooperation" chapter for *The Environment of Greater Mexico* to be published by the Regents of the University of California (forthcoming in 2000).

based on sound water infrastructure needs assessments. These needs assessments, in turn, should be based on solid sustainability criteria so that ensuing actions are more than stop-gap measures.

The federal government also can continue to provide incentives for non-governmental entities to take part. Groups such as private landowners and users, for instance, are critical team members. Grazing land constitutes the single largest watershed land cover type along the U.S.-Mexico border, and so well-managed, healthy grazing lands, both public and private, can make a significant difference in quickening the pace toward a watershed approach on the border.

To encourage conservation practices on private land across the nation, a federal initiative is being proposed that would provide annual payments to farmers and ranchers who implement various conservation practices. The practices would include comprehensive nutrient management, prescribed grazing, and partial field conservation practices such as grassed waterways and windbreaks. By encouraging sound private land stewardship, a key piece of the border watershed protection puzzle could be put into place.

A Border-Region Strategic Water Plan would harness contributions from all of these jurisdictional levels and from many other

quarters. It would build on what states, municipalities, and other jurisdictions already are undertaking related to strategic water supply management. Though it could include straightforward components such as water and wastewater infrastructure project needs on a "pipe and valve" level, more significantly, it would help to identify where pending water management problems may be looming, as yet undetected or inadequately addressed. It would provide a critical analysis and description of water management issues along the whole length of the border. Thus, it would help to answer the following questions: Where will the shortages be? How long before particular supplies are tapped out at predicted rates of growth? How long before sole-source aquifers become unusable due to contamination? Where are there transboundary problems that require binational clean-up solutions?

GOALS

That a Border-Region Strategic Water Plan is developed and used as a backdrop for day-to-day management decisions about individual watersheds made by U.S. state, county, municipal and tribal decision makers, and is made available to others as well. That many different types of affected parties are involved in the development,

implementation, and ongoing evolution of the Plan so that their experience, expertise, and priorities can be incorporated.

That the four U.S. border states, as well as border-region municipalities, be supported as key players in implementation of watershed-based management practices, especially in the case of transboundary water bodies.

IMMEDIATE OBJECTIVES

- That groundwork be laid for development of a Border-Region Strategic Water Plan by bringing together interested governmental and non-governmental parties to discuss its creation and implementation. That initial discussions focus on identifying and publicizing existing best practices that could be highlighted in the Plan and existing resources for developing it.
- That the same subset of priority watersheds selected for developing a watershed framework and gathering comprehensive data (see Recommendations 1 and 2) be targeted as priorities for support in terms of encouraging sustainable management practices. That these management practices are optimally compatible across border state boundaries for comparison purposes and, at the same time, reflect state and local needs and priorities.
- That existing management models and best practices incorporating a watershed-based management approach be identified, highlighted, and explored for applicability elsewhere along the border.

MEASURES OF SUCCESS

In the near term, specific priority environmental infrastructure projects are in place and are continuously managed in a way that reflects a watershed management approach. These projects address critical needs such as providing safe drinking water, adequate wastewater treatment, and effective management of storm water runoff. The result is improved quality of life as well as more sustainable ecosystems.

Eventually, the watershed management issues at all points on the border can be linked to and addressed through an overarching Border-Region Strategic Water Plan. The Plan is based on the need to assure long-term watershed sustainability. It enables potential problems to be anticipated and opportunities identified, resulting in more effective management of the region's water resources by state, local and tribal authorities in cooperation with appropriate federal and Mexican authorities whenever needed.

RECOMMENDATION 4

Encourage the full participation of tribal governments, along with binational organizations, federal, state and local governments and other border groups, in developing and implementing a watershed

approach. Ensure that the training, funding and physical infrastructure needs of all tribal governments, along with other border governmental agencies and population groups, are fully addressed when developing and implementing a watershed management approach.

CONTEXT

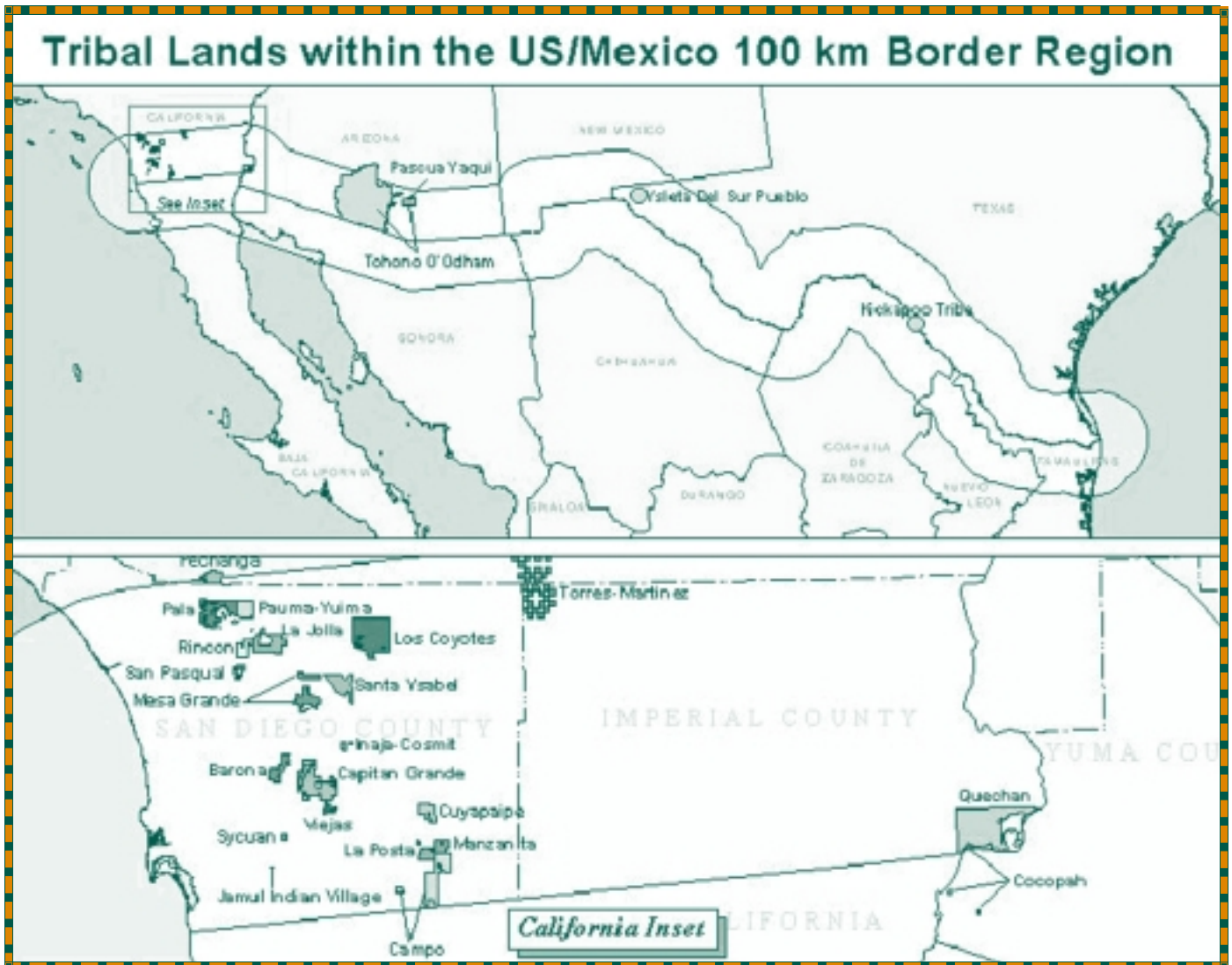
A total of 26 Federally Designated Tribes are located within the U.S. portion of the border region — 2 in Texas, 4 in Arizona and 20 in California. Tribal governments in the U.S. not only are border populations and landowners, but also resource managers and regulatory authorities whose participation is critical to comprehensive environmental management in the border region.

Despite their key role, the interests and needs of tribal governments historically have been under-represented in overall water resources planning and management deliberations. Involvement has been hampered by lack of a systematic approach to including these valuable government entities, as well as other neglected border populations, in these activities. Good Neighbor strongly encourages broad recognition of their legal status, rights, and responsibilities.

To increase communication and ensure meaningful tribal government participation, the following operational steps should be pursued: government-to-government consultation, robust outreach, targeted technical assistance, and training and funding to support the watershed approach and watershed protection. Numerous ongoing efforts would benefit from either initial or increased tribal government involvement, for example, those involving the Colorado River, New River/Salton Sea, Rio Grande, Santa Cruz River and Tijuana River watersheds.

Some progress on the federal front is evident. Good Neighbor applauds EPA for the recent inclusion of representatives of tribal governments as members of the Border XXI workgroups. It also applauds the U. S. Congress and EPA for funding tribal government water resources protection activities, and drinking water and wastewater infrastructure improvements, under the Clean Water Act and Safe Drinking Water Act. However, significantly more funding is needed to support the full development of tribal government water resources protection programs. Similarly, funds set aside through EPA for border tribal government infrastructure projects were severely inadequate to meet the needs of all tribal governments in the border region. The Board recommends that the EPA set-aside grant program be renewed and increased, and that Clean Water Act funding for tribal governments be similarly increased, with watershed management in mind.

Besides federal agency efforts, full tribal government involvement is especially important in three international border-region institutions: the Border Environment Cooperation Commission (BECC),



U.S. border tribes are shown in this GIS overlay map. The map was created by examining the list of U.S. Federally Recognized Tribes that are within one hundred kilometers of the border. A Federally Recognized Tribe can be a Band, a Rancheria Pueblo or a Nation. Source: U.S. Environmental Protection Agency.

the North American Development Bank (NADBank), and the International Boundary and Water Commission (IBWC). When BECC and NADBank were created, tribal governments were not included in the set-up negotiations and, even now, they are not formally represented on their Boards.

While Good Neighbor understands that there are no plans to formally renegotiate the BECC and NADBank agreements in terms of broadening the composition of their Boards, it nevertheless reminds all Federal agencies, and their representatives, of the U. S. government's trust responsibility to tribal governments. Although the BECC and the NADBank have undertaken some outreach to tribal governments, a perception persists that access to these institutions is not readily available. It is, therefore, recommended that BECC and NADBank continue and enhance their outreach efforts to ensure that

tribal governments, like all border populations, have full access to these new institutions. More specifically, Good Neighbor strongly recommends that a tribal representative be appointed to the BECC Advisory Council.

IBWC is one of the border region's oldest binational institutions. It was set up as a treaty-mandated organization that reports to the U.S. and Mexican federal governments and does not have a Board. Nevertheless, the IBWC has other mechanisms at its disposal to involve tribal governments more directly. Good Neighbor supports the efforts of IBWC to open participation on the Commission to others through joint cooperative projects.

GOALS

That no tribal governments, or other border populations, are left out of the decision-making process, or the opportunities to access sources of funding and/or technical assistance while efforts are under way to seek long-term border water management planning through the initial step of taking a watershed approach.

That the interests of tribal governments continue to be represented in border-area water resources management decision-making. That tribal needs are identified and addressed as a watershed approach is institutionalized, including gathering needed data and applying a watershed perspective to daily management practices in the border region.

IMMEDIATE OBJECTIVES

- That U. S. EPA convene a workshop involving tribal government leaders by the year 2001 to strategize tribal government options to address watershed cleanup and protection.
- That U. S. EPA complete a Border Tribal Government Drinking Water and Wastewater Infrastructure Needs Assessment within one year.
- That BECC, NADBank, and IBWC prepare a report on how they are addressing the concerns of tribal governments within one year.
- That U.S. EPA report within one year on how it is addressing the needs of tribal governments outside the context of BECC, NADBank, and IBWC, and whether by excusing tribal governments from BECC certification, it still is ensuring infrastructure sustainable development goals.

MEASURE OF SUCCESS

Tribal governments are fully involved early on and throughout the process of instituting and maintaining a border watershed approach process, including developing a framework, gathering needed data, and putting the information to work through sustainable watershed management practices.

RECOMMENDATION 5

Provide continued federal budgetary support for actions and programs consistent with the themes and purposes of a watershed approach for the border region. The Board especially wishes to emphasize the importance and urgency of continued and full budgetary support for binational commitments to address border environmental issues within the context of a watershed approach.

CONTEXT

Although philosophical commitment is a key ingredient of putting the watershed approach into action, so, too, is financial support. If the U.S.-Mexico border region is to address its pressing water problems in a strategic manner through a watershed approach, the funds to make it happen must be made available. The private sector as well as local, state, and tribal governments have a role to play, but only limited success can be had unless full federal financial support is forthcoming. Past and current funding efforts are resulting in good progress in certain areas, but more extensive and more carefully targeted federal funds are needed.

In the view of Good Neighbor, one of the areas in which continued federal funding will make the most difference is the agreement set up parallel to the North American Free Trade Agreement (NAFTA). In 1993, the U.S. and Mexico concluded an unprecedented agreement to address environmental infrastructure needs in tandem with trade liberalization. This side agreement called for the establishment of the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank), two related institutions that have become the primary vehicles for addressing the side effects of the explosive growth on the border.

Despite what many believe was a slow start, the BECC and NADBank are now starting to show real progress in addressing these infrastructure needs. A significant proportion of the BECC-NADBank projects involve activities that directly affect border watersheds. According to a June 22nd BECC press release, BECC has certified 40 water, wastewater and municipal solid waste infrastructure projects. These projects will represent a total estimated investment of \$976 million, benefitting almost 8 million border residents. Twenty-three (23) certified projects are located in the United States; seventeen (17) are located in Mexico. Over \$17 million has been approved in Technical Assistance for 125 projects in 95 border communities. This is the largest number of environmental projects ever underway in the region, but much remains to be done. Estimates of infrastructure needs over the first decade of the twenty-first century range from \$2.1 billion to \$3.2 billion.

The financial viability of BECC-NADBank projects depends heavily on the infusion of grant capital from EPA. The Border Environment Infrastructure Fund (BEIF), through which NADBank makes grant funding available to certified projects, has been crucial in recent BECC-NADBank successes. The BEIF program was originally envisioned as a seven-year program with \$100 million in grants appropriated per year. However, in Fiscal Year 2000, Congress cut the President's request in half to \$50 million. As a result, BECC and NADBank have been placed in the difficult

position, in some cases, of continuing to certify projects with the understanding that the BEIF funds are not currently available.

Also of concern is the operating budget for the BECC, a relatively small budget item, but one that is crucial since BECC certification is a necessary first step to carrying out infrastructure projects under the NAFTA side agreement. The U.S. contribution to BECC's operating budget had been planned to rise to \$2.1 million by FY-2000, but has been straight lined at approximately \$1.53 million for the past two fiscal years. As a result, it will be difficult if not impossible for the BECC to provide the necessary resources to develop and certify projects in such areas as solid waste, which also affects watershed approach planning.

On April 14-15, 2000, representatives of the four border states and more than 40 border communities came to Washington to emphasize the need for border infrastructure expansion to continue under the BECC-NADBank binational framework. Among the key issues was the need to maintain full funding in the President's FY-2001 budget for the BEIF grant program (\$100 million) and the U.S. portion of the BECC operating budget (\$2.1 million). Several border state members of Congress and the Senate expressed their support for full funding, but noted the difficulty of convincing members from outside the border region of the urgency of addressing this need.

A new dimension of the funding issue was introduced at the annual meeting of the NADBank Board on July 11, 2000, when a resolution was passed calling for an accelerated effort to maximize the use of NADBank lending resources. Mexico and the United States will be working closely with NADBank and BECC to identify potential areas for what is being called "mandate expansion," i.e., new environmental sectors in which NADBank lending resources can be brought to bear. Also under consideration is a proposal to expand the geographic area in which BECC-NADBank projects would be authorized (currently 100 km. on each side of the border). The two governments have agreed to develop a mandate expansion blueprint by September of 2000, and a paper prepared by NADBank on the mandate expansion proposals has been circulated for public comment.

BECC and NADBank's contributions are only one part of the watershed problem solving approach. Continued federal funding to address other watershed-related issues also is required if a watershed approach is to become a way of life in the border region. These issues include sustainable management of source waters, and protection of aquatic and riparian habitat, both of which need continued federal support.

According to the IBWC, an environmental study effort it is carrying out from 2000-2001 is expected to begin identifying river

Good Neighbor welcomes local citizens

The Good Neighbor Environmental Board values and encourages input from local citizens. Its meetings are open to the public and advertised nationally and locally. Meeting agendas usually include scheduled reports by representatives of local groups that address environmental issues, as well as time set aside for open comment from the public.

During recent meetings, Good Neighbor membership has benefitted from the sincere and knowledgeable input of a number of private citizens, community-based organizations, for-profit groups and public agencies. The selection below is representative of the variety of input received from the public during meetings:

- Private citizens concerned about the environmental impact of industry
- Academic consortia wishing to better coordinate environmental assessment processes
- Congressional staff requesting more information regarding board activities
- Community-based advocacy groups concerned about growth and environmental contamination
- Maquiladora representatives wishing to share its environmental protection efforts
- An association of tribal governments wishing to share information regarding its environmental programs, and
- A state-funded border health program wishing to share its approach to border health
- Federal agencies requesting advice regarding assessment and planning projects.

Good Neighbor is taking steps to maximize public input by enhancing outreach prior to meetings. Board members invite private citizens and public and private groups to address the board when meetings are held in their communities. Interested individuals and groups are encouraged to contact the board chairperson, or the Designated Federal Officer, prior to the meeting to find out more details. The public is welcome to attend the entire meeting. Input from local citizens during that portion specifically set aside for public comment is especially encouraged.

restoration efforts that, if implemented, will require hundreds of millions of dollars over the next decade for just the international boundary areas. Of particular importance, the Colorado River effort includes the delta in Mexico, a problem-area of worldwide attention. The Rio Grande effort from El Paso to Amistad Dam includes wild and scenic areas and subbasins in the United States and Mexico. Groundwater data development needs identified by the USGS and the IBWC are in the \$100 million plus range. Additional efforts to solve problems, such as the need for additional monitoring wells and development of international groundwater agreements, may more than double that amount.

GOALS

That the U.S. and Mexico “stay the course” in carrying out the planned environmental infrastructure improvements in the border region. That Congress retain full annual funding for the BEIF grant program (\$100 million per year) and the U.S. portion of the BECC operating budget (\$2.1 million) in the President’s FY-2001 budget.

IMMEDIATE OBJECTIVES

- That BECC be provided with the resources necessary to move forward on the overall strategic plan for infrastructure called for in the March 2000 GAO Report.
- This plan should adhere to sustainable development criteria, including a watershed approach.

MEASURES OF SUCCESS

BECC and NADBank are able to carry out their infrastructure development plans over the next decade. A minimum standard of success would be fulfillment of the recent NADBank projection for \$2.1 billion in funding over ten years for water and wastewater projects, of which grant funding will account for \$1 billion. Timely development and certification of projects by the BECC will be crucial to this process, as will maintaining requested levels of BECC operating funds.

Other, non-infrastructure efforts related to building and sustaining a watershed approach, such as river restoration, have the funds to be fully implemented and thus contribute to water resource sustainability.

Conclusions

A start has been made, but more needs to be done. This perhaps overused phrase, nonetheless, provides a fitting conclusion when assessing progress toward institutionalizing a watershed approach to solve water infrastructure challenges along the U.S. border with Mexico. The five recommendations contained in this Fourth Report to the President and Congress of the United States must be seen within the context of watershed approach efforts already under way. The Good Neighbor Environmental Board commends these efforts. At the same time, they are not enough.

On the most basic level, water development and infrastructure planning on the border must better incorporate the concept of a water body’s “need” to function in ecological good health. This need must be viewed as equally valid to a community’s need for safe drinking water, as a sort of natural capital that ultimately sustains border quality of life and economy. After all, in the longer term, failure to address the former will have dire consequences for the latter. Bringing a watershed approach to planning will help ensure that ecological processes are maintained as communities grow. By starting from a watershed perspective, border watersheds’ ability to provide surrounding communities with healthy water into the future will be protected.

Expanded data collection and research can help to illuminate the often complex interactions and hydrological processes that watersheds manifest; results from surface and groundwater interactions is just one example. Understanding these interactions is crucial to better understanding the limits of border water supply sources.

To put theory into practice, a watershed approach should become an integral component of border water infrastructure planning. Communities applying for infrastructure funding for major water development projects should be required to submit plans that consider its watershed implications and thereby promote greater sustainability as well as more creative solutions to water supply management problems. To assist in this process, funding request forms should be accompanied by concrete examples of what a watershed approach means.

Offering concrete, real-world examples of management

practices that incorporate a watershed approach also provides a starting point for engaging communities and planners in ongoing discussions on best practices for water infrastructure development projects. To encourage daily management practices that shift away from stop-gap measures and move toward sustainability, a list of sources of technical assistance funds for implementation also should be made widely available.

At the end of the day, however, only limited progress will be made unless one essential ingredient is present: universal recognition of the deep, diverse cultural values that drive daily life in the border region. Cultural values and environmental values are closely linked. A watershed approach will garner broad support only if the process is based on respect for traditional local knowledge and cultural practices. Conversely, for the approach to gain a strong foothold, those who value traditional ways must also be receptive to new tools, practices, and people who can augment the good work that already has been done.

Sensitivity to others' perspectives is the foundation on which collaboration around watersheds must rest. The fundamental interests of the local community may be different than those of the sponsoring agencies. It is important to engage members of the community and avoid imposing narrow agendas which do not address the perceived needs and concerns of local representatives. It also is important to pursue the concept of equity among all participants in such efforts, while also seeking to address the needs of the environment and habitat, which may lack a speaking voice.

While there is a need to address water management issues on a large scale basis, it is important to also recognize that smaller scale issues may be of greatest interest to local communities. Participants in a watershed effort should include all stakeholders, and the likelihood of cooperative success is greater if it is clear to everyone that they can benefit from the solutions identified. There is no reason why such watershed groups cannot be composed of stakeholders from both sides of the international border. This diversity enriches discussion and reinforces the basic premise that watersheds, like pollution, ignore political boundaries. More information exchange and greater transparency throughout the process helps to better anticipate and resolve potential conflicts over the limited supply of water that exists in the border region.

The next several years will present new opportunities — and challenges — for the border region, as national leadership changes

unfold in both Mexico and the United States. It is a time in which environmental and infrastructure successes from the past, and the people who helped to bring them about, must be integrated into the new system so that decisions about sustainability, especially as they relate to watersheds, have the full benefit of wisdom from the past and visions for the future.



U.S.-Mexico bridge crossing at Roma, Texas. Photo credit: Laura Pierce.



The Binational Dimension

EPA's Border XXI Program A Board Perspective

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I. Introduction¹

The Good Neighbor Environmental Board (GNEB or Board) is an advisory committee to the President and Congress of the United States. It was created by the Enterprise for the Americas Act of 1992 and is administered by the U.S. Environmental Protection Agency (EPA) to provide advice on environmental and sustainable development issues along the U.S.-Mexico border. The 25-member board is comprised of representatives from federal, tribal, state, and local government, non-governmental organizations (NGOs), academia, private organizations, and the community.

At the June 1999 GNEB meeting, EPA approached the Board to explore the possibility of developing an independent assessment of the Border XXI Program for this Progress Report. This Border XXI Progress Report has been developed because the conclusion of the five-year planning period is approaching, and its timing roughly coincides with the end of the Clinton and Zedillo administrations in the United States and Mexico. EPA's stated reason for this request was to ensure there was an outside entity to evaluate how Border XXI Program activities are moving toward meeting and measuring program goals. The GNEB agreed that the inclusion of its independent assessment of the Border XXI Program would enhance the report's utility.

This GNEB "assessment" for the Border XXI Progress Report is the Board's product. The EPA agreed to incorporate it as an unedited addendum to the Progress Report. The Board's goal was, in part, to evaluate resource commitments and progress on Border XXI objectives on a policy basis. The Board does not have the time or resources to examine and evaluate the quantitative data being assembled in the Border XXI Program as a whole. As such, we have chosen to focus on the Mission, Goal, and three Strategies described in the Border XXI Framework Document.

The Board places much emphasis on transboundary conditions and activities due to the strong binational links and relationships that characterize the U.S.-Mexico border region. However, before doing so, we note that under its charter, the GNEB covers those issues inside the U.S. territory and does not presume to suggest actions that should be undertaken by Mexico. This said, we must fulfill our obligation to inform the President and Congress of transboundary environmental impacts on U.S. territory, as well as their sources and causes because it is directly relevant to spending U.S. tax

dollars in Mexico through grants and other programs. Any of our observations about Mexico in this report are informed by our discussions with our Mexican counterpart, the Consejo Consultivo para el Desarrollo Sustentable de Region 1 (Advisory Board for Sustainable Development in Region 1), and by its assessment of Border XXI that was prepared in parallel with ours.

With its diverse representation, the GNEB can bring to bear a comprehensive understanding of U.S.-Mexico border environmental and infrastructure issues. As a consensus-driven body with numerous perspectives, the Board's views are sometimes quite diverse. In the spirit of inclusiveness, disparate views are communicated in this assessment along with points of general consensus.

BORDER XXI MISSION:

"To achieve a clean environment, protect public health and natural resources, and encourage sustainable development along the U.S.-Mexico Border."

BORDER XXI GOAL:

- Promote Sustainable Development

BORDER XXI STRATEGIES:

1. Ensure Public Involvement
2. Build Capacity and Decentralize Environmental Management
3. Ensure Interagency Cooperation

II. Border XXI Background

The United States and Mexico signed the "La Paz Agreement" in 1983. The agreement focused on promoting cooperative efforts to address environmental issues along the U.S.-Mexico border. It defines the "border area" as the region situated 100 kilometers on either side of the international boundary. The agreement also establishes that the U.S. and Mexico will "*cooperate in the field of environmental protection in the border area on the basis of equality, reciprocity and mutual benefit.*"

The Border XXI Program (Border XXI or Program) is a binational plan to address the environmental issues along the length of the U.S.-Mexico Border. The U.S. and Mexico adopted the Border XXI Program with the release of the "*Border XXI Framework Document*" dated October 1996. The Program is the most recent in a series of

¹ The GNEB thanks its drafting subcommittee for its work on this document: Irasema Coronado, Placido dos Santos, Judith Espinosa and Mark Spalding. We acknowledge that some of the text is borrowed from Spalding, Mark, "Governance Issues under the Environmental Side Agreements to NAFTA" chapter for *Economic Integration and the Border Environment* to be published by the Regents of the University of California (forthcoming in 2000).

steps designed to promote binational cooperation on environmental issues along the U.S.-Mexico border. Border XXI was created pursuant to the La Paz Agreement and builds upon its workgroup structure. The Program is the follow-on to the Integrated Border Environmental Plan (IBEP) which spanned 1992-1994.

The EPA serves as the lead U.S. agency for the Border XXI Program. EPA's equivalent in Mexico is the Secretariat for Environment, Natural Resources and Fisheries (SEMARNAP). A host of other U.S. entities are identified in the Framework Document as agencies involved in the Border XXI Program but they seem to have fulfilled lesser roles in the program's actual implementation. These include, but are not limited to, the U.S. Departments of State and Agriculture and the President's Council on Environmental Quality (Border XXI Framework Document, Appendix 3). The U.S. Department of Interior serves as the lead federal agency for the program's natural resources activities and the Department of Health and Human Services co-leads environmental health activities with EPA.

The following nine binational working groups are recognized under Border XXI:

- Air
- Water
- Hazardous and Solid Waste
- Contingency Planning and Emergency Response
- Pollution Prevention
- Cooperative Enforcement and Compliance
- Natural Resources*
- Environmental Health*
- Environmental Information Resources*

* The first six of these workgroups were initially authorized in the La Paz Agreement. Those denoted with an asterisk were created under Border XXI.

III. GNEB Perspectives

The Border XXI Program has been the subject of some controversy as a result of misunderstandings and a desire to search for precise definitions, which are sometimes elusive. Even the very nature of the program has been misunderstood by many. Several of the program's ambiguities are identified and explored throughout this assessment. The Board takes this opportunity to present its collective

view of the Border XXI Program in order to establish the context for this evaluation.

The Border XXI Program is a coordination mechanism between the U.S. and Mexico. The Program does not establish new regulatory authorities for any of the involved agencies. It is not really part of the NAFTA package that included the creation of the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank). However, because Border XXI came after the NAFTA package was finalized and the NAFTA environmental institutions were starting, the effort was influenced by sustainable development theory and is an evolution and refinement of previous binational efforts to address environmental and natural resources issues between the U.S. and Mexico.

The Border XXI Program is an innovative binational effort which brings together the diverse U.S. and Mexican federal entities responsible for the shared border environment. It is intended to promote cooperative efforts toward sustainable development through protection of human health and the environment, and proper management of natural resources in both countries.

Although numerous environmental, environmental health, and natural resources projects are undertaken along the length of the border, there is no clear litmus test to help define what falls under the Border XXI coordination umbrella. Consequently, it is sometimes unclear if the efforts of the NAFTA environmental institutions such as the Commission for Environmental Cooperation (CEC), Border Environment Cooperation Commission (BECC), and North American Development Bank (NADBank), or other border focused institutions such as the Southwest Center for Environmental Research and Policy (SCERP) and the U.S.-Mexico Foundation for Science (FUMEC), fit under the Border XXI umbrella and, as such, are part of the Program. Even the GNEB itself is identified as a component of Border XXI in the 1996 Framework Document (page I.9), yet the Board's precise function as a part of Border XXI has been ambiguous at best until now.

The Border XXI Framework Document indicates that the GNEB fulfills a role for the development of the Border XXI Annual Implementation Plans (page I.8), but the Board has never been formally asked to provide input on these during their development, even though plans have been developed for the years 1996-1998. This evaluation was the first formal request for input by the Board since it commented on the original Border XXI Framework and

workplans. We also note that a 1999 Implementation Plan has not been developed even though the year was practically over at time of writing (December 1999). This said, the Board acknowledges that the Border XXI Program always was something it could and did make recommendations about in its annual reports to the President and Congress.

The Board members see great potential from continued collaboration with Mexico's similar advisory body called the Consejo Consultivo para el Desarrollo Sustentable de Region 1 (the Consejo).² However, many members of the GNEB were unaware that the purpose of their annual meeting with the Consejo is established in the Framework Document. The document states that *"At least once a year, the two advisory boards will convene a joint meeting to evaluate the progress of the Program"* (Framework Document, page II.2). Some of this ambiguity may be attributed to the fact that the Board's membership changed significantly during 1999. The experience points to opportunities and the great need for continual coordination efforts among Border XXI participants and observers. EPA's request for GNEB input on this Border XXI Report is a very positive step because this role was also envisioned and expressly stated in the Border XXI Framework Document (page I.8) and we concur that this role is appropriate .

Ambiguity among the Border XXI participants has contributed to suspicion and doubt among some members of the public and representatives of some local governments. Public outreach efforts are vital to counter erroneous interpretations of the Program's objectives and strategies even if some definitional ambiguities persist. At its core, the Border XXI Program seems to implement pollution control and pollution prevention to protect public health and the environment in the transboundary setting of the U.S.-Mexico border. Natural resources efforts are also currently a component of the Border XXI Program. Such natural resources efforts pre-date Border XXI and, to a large extent, are independent of the Program's core pollution control and pollution prevention functions, water supply management notwithstanding.

An alternative perspective advanced by some members of the EPA describes the Border XXI Program as a water infrastructure and conservation/environmental health program. This latter interpretation would include natural resources as an integral part of the program but it is unclear how cooperative enforcement, one of the nine workgroups, would fit well into this structure. Another perspective holds that natural resources were incorporated into Border XXI

because public input reflected a desire for that inclusion. The fact that there is disagreement about the program's core components reinforces the sense of ambiguity of what the program entails, particularly since the program's stated goal is to promote sustainable development.

Environmental health is more directly linked to the other pollution-related aspects of the Border XXI Program because the activities can directly or indirectly reduce human health exposures. For this reason, the Environmental Health Workgroup has asked to work closely with others such as the Air Workgroup.

Regardless of where they originate, border environmental problems significantly impact communities and ecosystems on both sides of the border. Border XXI respects the sovereign rights of the U.S. and Mexico to manage their own resources according to their own policies, and seeks to ensure that such activities do not damage the environment of the neighboring country.

IV. Progress on the Border XXI Strategies

a. Ensure Public Involvement

To date the Border XXI workgroups have included federal government and state government representatives. Formalizing places at the table for state and tribal governments has recently augmented them. This still omits civil society (especially environmental NGOs) and the private sector. With regard to the last group, we are concerned that EPA and SEMARNAP have done little to effectively integrate border private sector, including but not limited to, industrial entities.

Implementation of public outreach is a relatively new activity for some of the parties involved in Border XXI. It has been performed with varying degrees of success and effectiveness all along the U.S.-Mexico border. The federal governments' incorporation of public input opportunities within the Border XXI workgroups, subgroups and the high-profile annual National Coordinators Meetings, is a significant step forward. The workgroup, subworkgroup, and National Coordinators' Meetings are appropriate vehicles for incorporating public input into the program. However, it is disappointing to see some workgroup meetings minimally advertised, intentionally excluding the public, hastily organized to be conducted in cities far beyond the border region where the public cannot reasonably attend, or even not meeting at all except at the annual National

² It should be noted that the GNEB and Consejo do not precisely match each other as they have different geographic focuses and membership.

Coordinators' Meeting. In a general sense, both federal governments should be congratulated for the progress that has been made since the beginning of the Border XXI Program. However, full transparency has not been achieved and is necessary to truly incorporate the public in this program.³

The establishment of EPA's Border Offices in San Diego, El Paso, and Brownsville are helping considerably with outreach needs. However, outreach efforts should be developed and implemented in close coordination with tribal, state and local governments, as well as civil society organizations, which usually have stronger links to the residents of border communities. The offices have taken a positive approach by establishing their own "workshops" or "open house meetings" but more should be held in border communities outside the offices' home bases. Greater effort should also be made to identify and use locally available fora ranging from Municipal Environmental Committee meetings to local Rotary Club meetings. The EPA should consider preparing a concise annual public outreach plan that would describe the Border XXI outreach events envisioned for the forthcoming year in the U.S.

EPA should also recognize and use the great value of the local media for delivering its border environmental messages. Newspapers, television, and radio are underutilized but are potentially key allies in the efforts to change behaviors and increase public awareness about environmental issues. The successful pursuit of media coverage often requires personal effort and interaction at the local level. The mere generation of press releases or media advisories is often insufficient to draw out positive media coverage. Consequently, close interaction with state and community representatives is necessary bring attention to the real world issues and to the progress that is being made. Although this must be executed carefully and in conjunction with local officials, the EPA outreach offices should develop and implement media outreach plans for U.S. border communities. Outreach efforts should also continue to be undertaken with bilingual, binational and class-sensitive approaches that recognize that many border residents do not have access to advanced communications technology such as e-mail. It should also be noted that many residents of U.S. border communities rely heavily on Mexican media for information conveyed in Spanish. Consequently, outreach efforts should be oriented toward local conditions, further emphasizing the importance of integrating local government representatives in the design and implementation of public outreach efforts.

Additional focused effort should be made along the length of the U.S.-Mexico border to seek public comment and provide the public with information regarding plans and progress. EPA made efforts to integrate state and local government, as well as some civil society input during development of the Border XXI Framework Document. However, genuine public outreach has been virtually nonexistent in the development of the Annual Border XXI Implementation Plans. Because these are essentially the blueprints for the projects and activities to be performed during two-year periods, public input opportunities should be organized throughout the border region to provide residents with progress reports while also seeking suggestions for future activities. This should also reach out to Native Americans when the necessary collaboration with tribal governments has been performed.

The new Environmental Information Resources Workgroup seems to have been developing well, and has the potential to make some difference in the dissemination of environmental information. As such this multi-media workgroup has a difficult job, but one that is crucial to make Border XXI effective as a multi-disciplinary and cross-media effort. In this regard, there is a need for greater inter-connection between workgroups (i.e., Air, Health, Water, etc.). Some of this is underway, but the new Environmental Information Resources Workgroup and Environmental Health Workgroup can and should play a vital role in making this a reality.

The workgroups should also do more to emphasize environmental education efforts throughout the border region. Investing in future generations and promoting environmental education at all levels will help border communities develop the long-term technical skills, interest and knowledge necessary to address local problems.

EPA and SEMARNAP have agreed that Border XXI documents be binational in nature. Consequently, they are developed with input from both nations, ostensibly incorporating public and subnational governmental input. Because they are subject to binational approval, numerous logistical complexities are introduced including the development of binationally acceptable text, working within binational time frames, completing accurate translations, and finally approving the reports in their entirety. These binational complexities tend to bog down report production and create a great deal of work for the agency staff. As an unfortunate consequence, public outreach is often ignored or is shifted to a lower priority in the world of deadlines that are dictated from the central governments of each nation. Nevertheless, as one of the three fundamental strategies of the

³ For some GNEB members, this concern has been around for some time, and has been the subject of considerable remediation effort. In particular some view the activity by EPA to reach a broad cross section of the stakeholder/public as extensive and think that at the technical level there is strong participation by NGOs and other knowledgeable sources.

Border XXI Program, both federal governments must do more to fully incorporate their public in the development of these reports.

The Border XXI Program has been described as having ulterior motives such as surrendering national sovereignty of the border region to the United Nations, or pursuit of a “new world order.” These accusations are patently false, yet they have persisted for years in certain circles of border communities. Their prominence in public statements by some public figures is largely an artifact of inadequate public outreach efforts to discredit such misrepresentations of the Border XXI Program. Public outreach describing the environmental issues of the border region and identifying the locally specific efforts to address these problems is vital to counter these baseless claims. A particularly sad result of this was the lack of full participation by all of the border states in Border XXI until the execution of the Coordination Principles document in mid-1999.

b. Build Capacity and Decentralize Environmental Management

The GNEB perceives that the decentralization strategy of the Border XXI Program is directed primarily at Mexico’s governmental operations. It is important to state this because of some perceived ambiguities pertaining to this topic in the Border XXI Framework document. The following paragraph clarifies the nature of the confusion surrounding the decentralization theme in the Framework Document.

Appendix 5 of the Border XXI Framework Document, entitled “State and Municipal Decentralization and Strengthening in Mexico in the Context of Border XXI,” is a proposed federal strategy for decentralization in Mexico. Portions of the text in this Appendix were not written clearly enough and led to very serious misunderstandings among governmental entities in the United States. For example, the appendix states, *“In terms of water concerns the laws of border States are significantly outdated.”* It adds that, *“Under Border XXI, existing legislation will be revised to give more legal authority to state and municipal administrators. Specifically a new legal framework will be established for each border government entity”* (Framework Document, Appendix 5.8). Such language generated profound concerns among state and local governmental representatives in the U.S. because the text did not state with sufficient clarity and emphasis that this was contemplated in Mexico but not in the U.S. Thus, this language seemed to conflict with the voluntary nature of the Border XXI Program, which was described as an effort that does not create

new regulatory authorities. The problem within the U.S. was one of clarity, not one of intent. To avoid such problems in the future, the EPA should provide timely opportunities for review and comment from state and municipal environmental agencies. The drafters of text should always recognize the great importance of emphasizing what is intended in the binational context and what is intended for either the U.S. or Mexico.

Through Border XXI and more generally, Mexico’s federal government has expressed a commitment to decentralize regulatory authorities to the state and local levels. Progress has been incremental but the declaration of this objective in the Border XXI Program is a very positive development in itself. Additional movement toward decentralization in Mexico would help shift decision-making toward the level of government closest to the affected communities and would lead to greater parity with state environmental agencies in the United States. However, sectors of the Mexican government and certain binational institutions have resisted this objective for a variety of reasons.

Mexico’s regulatory authority for environmental management is currently and primarily centralized at the federal level. For institutional reasons, Mexican federal agencies historically focused their interaction with U.S. federal agencies and had limited interaction with U.S. state agencies. With adoption of Border XXI, Mexican agencies have recognized and accepted the strong authorities at the state level in the U.S. This has led to the development of important functional links between state environmental agencies and their Mexican federal counterparts. For example, through the Border XXI Enforcement Subworkgroup, Arizona, California, and Texas have developed important operational relationships with Mexico’s Attorney General for Environmental Protection (PROFEPA), thus permitting the U.S. states to interact on various specific issues with transboundary implications. Similar important links have been established with other Mexican federal agencies responsible for other aspects of environmental management.

Because one of the three Border XXI strategies is “Building Capacity and Decentralizing Environmental Management,” the Board takes this opportunity to address this key area. However, before doing so, we again note that under its charter, the GNEB provides advice to the President and Congress on issues inside the U.S. territory and does not presume to suggest actions that should be undertaken by Mexico. This said, we wish to inform the President and Congress of transboundary environmental impacts on U.S. territory, as well as their sources and causes in order for the U.S. appro-

priations process to be well informed in any decisions on grants and other assistance offered to neighbors.

Mexico's financial management and decision-making systems are highly centralized, with power and resources located in Mexico City. Such a centralized structure has profound significance for how and when transboundary environmental issues are addressed and thus has generated much interest and discussion between the GNEB and the Consejo. Progress has definitely been made in Mexico during the period of the Border XXI Program, but this has not included financial decentralization, which is vital if decentralization is to be pursued in a meaningful way. Mexican states have readily accepted new authorities with the expectation that training and funding would follow but progress has been slow.

The Transboundary Environmental Impact Assessment (TEIA) process may ultimately prove to be a casualty of the decentralization problem. One of the NAFTA parallel agreements created the Montreal-based Commission for Environmental Cooperation (CEC). The CEC was charged with laying the groundwork for a trilateral U.S.-Mexico-Canada agreement to provide transboundary governmental notice whenever a proposed project has the potential of causing a significant transboundary environmental impact to the neighboring country. Although the CEC did an excellent job in its fundamental planning and preparation of draft text for negotiations, the trilateral discussions quickly became mired in the issue of environmental permits or licenses subject to approval at subnational (i.e., tribal, state and local) levels. The centralized governmental structure in Mexico seemed to be at odds with the decentralized system of government present in the U.S. and Canada. The fundamentally different systems of government led to disagreements that have not yet been resolved despite years of federal negotiations. It appears that Canada and the U.S. may ultimately develop a bilateral TEIA agreement while a similar agreement may be elusive for the U.S.-Mexico border. In fact, the effort to adhere to a centralized notification mechanism for TEIA to function from states to our federal government, as proposed by some federal representatives, would merely perpetuate the centralized system that currently exists.

The management of water supplies and water quality issues in the Border region has also been notably centralized with the current structure of the International Boundary and Water Commission (IBWC), whose efforts are sometimes described as falling under the Border XXI umbrella. Although the U.S. and Mexico Sections of the IBWC have made some progress in attempting to incorporate stake-

holder input for its border infrastructure planning in accordance with BECC criteria, the IBWC mechanism itself remains highly centralized. This may be best typified by the organization's role as the only official conduit for sharing water-related information between parties in the two countries. The different scopes of the activities performed by the IBWC and the Border XXI Water Workgroup remain unclear after three years of the Program's existence.

However, the efforts of the BECC and the NADBank, through their capacity-building efforts for local communities, have made a substantial contribution toward the decentralization goals described in the Border XXI Program. Efforts such as the NADBank's Institutional Development Program (IDP) should be recognized and nurtured by the two federal governments.

c. Ensure Interagency Cooperation

Numerous agencies and academic institutions are performing environmental monitoring, research, infrastructure planning, and pollution control planning along the border. The Border XXI Program is an established coordination mechanism to help facilitate and integrate these efforts with related activities such as environmental health studies. The Annual Border XXI National Coordinators Meetings afford outstanding opportunities for interaction with our Mexican counterparts. Nevertheless, overall coordination and communication among the states and other participants in the Border XXI Program sometimes fall short of the actual needs.

The EPA, SEMARNAP and the environmental agencies of the four U.S. and six Mexican border states have signed a "Coordination Principles" document for the Border XXI Program. The agreement grew out of state concerns that they had not been adequately incorporated into the Program. The states' call for standard operating procedures or minimum performance standards for Border XXI Workgroups evolved into the Coordination Principles document. The Coordination Principles document establishes mutual expectations for interagency cooperation and the incorporation of subnational participants into the Border XXI Program. It was designed so that other state entities may also execute the document and become officially recognized participants in the Program. The EPA has expressed a strong interest in having Native American tribal authorities formalize their participation through the Coordination Principles document.

The development of the Coordination Principles document has resulted in greater involvement of Mexican state environmental

authorities in the Border XXI Program. After years of being excluded, the progress that is now occurring to engage them into this process is very gratifying and, in fact, is vital to address long-term border environmental issues.

The Coordination Principles document, which was developed by the border states, the federal governments, and the Western Governors' Association, is an important movement toward interagency coordination. The document does not go far enough to remedy the problems that can be noted in the operation of some Border XXI workgroups. There is still a great need for minimum performance standards for each of the Border XXI workgroups. The Coordination Principles document establishes that the workgroups will meet at least once per year. If this is the only interaction among workgroup participants, progress will be illusory for those workgroups that make minimal effort to collaborate with state, local, and tribal governments as well as the public.

The workgroups operate in vastly different ways and some meet very infrequently. The absence of formalized operational procedures for the workgroups has led to a counterproductive disparity among the workgroups. Some workgroups meet only once per year and make negligible genuine progress, while others, such as the Hazardous and Solid Waste Workgroup, usually coordinate with tribal, state, and local authorities in an exemplary fashion with frequent, planned conference calls. To ensure adequate interagency coordination, EPA and SEMARNAP should establish minimum performance requirements for all of the workgroups and should promote the establishment of regional subworkgroups whenever affected tribal, state, and local authorities concur that subworkgroups would be useful.

The Board also recognizes that many of the Border XXI projects have been labeled with the misnomer of "subworkgroup." This misnomer leads to the mistaken conclusion that the Border XXI Program has many functional subworkgroups operating along the length of the border. The terms "subworkgroup" and "project" should not be interchangeable. Subworkgroups should be regionally based, and have regularly scheduled meetings with agendas and broad representation. Subworkgroups should also specifically be co-chaired by state representatives whenever possible as described in the Border XXI Coordination Principles document. Recognizing criteria such as these will help identify the legitimate subgroups working along the border such as those formed under the Border XXI Cooperative Enforcement and Compliance Workgroup.

EPA has stepped up its efforts to engage U.S. tribes in the Border XXI Program. With a Border XXI Tribal Conference held in San Diego, allocation of border infrastructure funding for tribes, appointment of a Border XXI tribal coordinator in EPA Region 9, and inclusion of tribal representatives in the Arizona-EPA Border Retreat, it is clear that EPA is making a genuine effort. Tribal members in Mexico have historically been limited to participating in Border XXI as individuals. The addition of states and tribes has been very positive; next we must see an opening of the Border XXI Program to environmental NGOs and other forms of civil society, as well as to private sector voices.⁴

Besides the federal governments, several other Border XXI participants have made some progress in their efforts to integrate state and local governments into the Program. BECC and NADBank have made notable strides to integrate states and local entities into their planning activities. Although some similar environmental infrastructure programs exist for Indian communities, tribal representatives have made a call for enhanced access to the NADBank and the BECC. This can and should be considered by the Administration. Through a Joint Declaration in 1999, the Border Governors Conference, the ten governors of the U.S. and Mexico border states, also expressed a strong interest in nominating the state representatives on the BECC's Board of Directors and Advisory Board in accordance with the NAFTA side agreement that requires state representation.

The consortium of five American universities that comprise the Southwest Center for Environmental Research and Policy (SCERP), along with their seven Mexican university associates, has also demonstrated a stronger interest in engaging the states and tribes through their outreach and solicitation of input on their proposed research agendas. SCERP has also sought guidance on the appropriate mechanisms for more fully integrating tribes, Mexican states, and Mexican academic institutions into their operations. The prospect of tangible improvements in SCERP's activities is good, as long as the consortium's management continues to work with states and tribes to develop applied research with defined clients and practical applications. In addition, SCERP's conversion to programmatic research rather than individually-driven research agenda is positive. We also have high hopes for the SCERP/BECC border needs assessment as a vehicle to do better regional planning and prioritization of environmental infrastructure projects. The Board also suggests that the SCERP should have the primary responsibility for collecting and

⁴ The possibility of binational tribal involvement in the next joint meeting of the GNEB and the Consejo is a positive step toward enhanced collaboration.

analyzing annual environmental indicator information to assess environmental conditions along the length of the border. In cooperation with their Mexican academic partners, the SCERP seems uniquely qualified to perform this vital function along the length of the U.S.-Mexico border.

The U.S.-Mexico Foundation for Science (FUMEC) also receives substantial U.S. federal funding for scientific efforts along the border. FUMEC has not made an extensive effort to integrate tribal, state, or local governments into planning or implementation of their efforts. Also omitted have been civil society and private sector interest groups. Private sector participation is particularly critical because of the need for their involvement in designing and implementing industrial pre-treatment programs that the FUMEC has attempted to support for border communities. Because it has focused on water issues, some of the FUMEC's shortcomings may be partly attributable to the Border XXI Water Workgroup, which has been the subject of widespread criticism and whose scope is ill defined with regard to the IBWC activities.

The Commission for Environmental Cooperation (CEC) is a tri-lateral organization among the U.S., Canada, and Mexico but some of its activities have been linked to the Border XXI Program (Framework Document, pages I.9, and II.3, item 7). The CEC learned a great deal about the importance of integrating the local perspectives, both governmental and citizen views, as a result of some serious controversy related to its Article 13 study of the globally-important San Pedro River that straddles the Arizona-Sonora border. The CEC has made substantial progress on interagency cooperation as a Border XXI participant (Framework Document, page I.9). The CEC's broader mission involving the entire North American Continent, coupled with its Canadian-based headquarters, presents it with challenges for interagency cooperation on the border yet it approaches these issues very capably with its multinational staff.

V. Progress Toward the Border XXI Mission and Goal

The principal goal of Border XXI is “to promote sustainable development in the border region by seeking a balance among social and economic factors and the protection of the environment in border communities and natural areas” (Framework Document, page I.1). A precise reading of the Border XXI Framework Document

clarifies that the Program's goal is to promote sustainable development without having a parallel aspiration to achieve it. Consequently, the EPA's Border XXI Program efforts to promote sustainable development through events such as the 1998 Border Institute held in Rio Rico, Arizona, and the 1999 Sustainable Development Workshop held in Brownsville, Texas, and the various other activities that are consistent with sustainable development, could be identified as evidence of the program's success. However, promoting sustainable development without an aspiration to achieve it seems to trivialize the massive binational coordination effort that is underway and directed toward sustainable development.

Some perceive a glaring disconnect between the Border XXI Program's sustainable development goal and the activities performed under the Border XXI umbrella. The Program's scope and composition are inadequate to genuinely move the border region toward sustainable development.

If the Program's only measure of effectiveness were the border region's progress toward sustainable development, the Program might be considered a failure. However this would ignore the important progress that has been made toward pollution control and pollution prevention between the U.S. and Mexico. It would also ignore the strong impact that North American socioeconomic factors play in constantly driving us further from sustainable development along the border.

Regardless of the definition that one uses, sustainable development in the U.S.-Mexico border region is a more distant goal today than it was in 1996 with inception of the Border XXI Program. In the three years that the Border XXI Program has been in place, the border region's population increased from about 11 million to 12 million people. The border region continues to grow at a remarkable rate and projections suggest that the population may double to 24 million people by the year 2020. The growth of the border region is, to a large extent, fueled by the economic disparity that exists on either side of the international border that separates our two nations as much as it unifies them.

A key element of this growth is the industrialization of Mexico's northern border spurred by U.S. demand for inexpensive consumer goods. Throughout the world, companies competing in the global market have made sensible business decisions to seek out the lower wage labor force available in developing nations. Many labor-intensive industries, largely U.S., for decades have sought to minimize shipping costs and to have ready access to facilities, including suppli-

ers, by establishing operations in communities in Mexico, particularly along the border. This was further facilitated by adoption of laws for “in bond” assembly and manufacturing facilities with favorable import/export tariff treatment and known as maquiladoras. These maquiladoras are often matched by related company facilities in the U.S. that house management, warehousing, distribution and other functions. Together they are often referred to as “twin plants.”

The maquiladora industry has offered new opportunities for those in other sections of Mexico where socioeconomic problems, including high unemployment and very low wages, are more severe. The result has been the influx to the border communities of hundreds of thousands from the interior of the country, particularly central and southern Mexico. Because the number of migrants may exceed the maquiladora job opportunities, some individuals remain unemployed or underemployed in border communities. Consequently, many individuals must supplement their incomes by working multiple jobs or by sharing household expenses with others.

A 1999 report⁵ by Mexico’s national statistics agency, INEGI, indicates that maquiladoras employ over one million workers in Mexico with approximately 804,000 of those jobs located in the border region. The report also indicates that the average wages for maquiladora workers (obrerros) is about US\$1.00 per hour including benefits (i.e., about US\$2,500 annually). The average hourly wage for technical level workers is about US\$2.90 including benefits (i.e., about US\$6,700 annually).⁶ A 1999 report⁷ by the U.S. Department of Labor indicates that the average maquiladora wage for “export processing” was US\$14.00 per day in 1998, or about US\$1.56 per hour excluding benefits such as meals and subsidized housing if available.

While maquiladora wages are considerably higher than Mexico’s minimum wage of US\$3.00 per day, the maintenance of low absolute salaries on both sides of the border, coupled with rapid growth of the region, undoubtedly contribute to the environmental and environmental health issues that exist along the length of the border. Some critics assert that the great physical distance between the border communities and the twin plant facility owners (parent companies) generates a sense of detachment for so-called “absentee-owned corporations.” While some twin plants have yet to effectively address the issues of border communities, it should be noted that others are considered model corporate citizens. Regardless, twin plant operations often minimize taxes paid to Mexico by avoiding making their maquiladoras profit centers. In addition, when maquiladoras pay taxes to the centralized financial bureaucracy in

Mexico City, much of these taxes do not return to the border communities, and are instead used to address needs elsewhere throughout Mexico.

The tax base of U.S. and Mexican border communities is often too small for current needs, much less for the provision of infrastructure for projected growth. The result is that border communities are unable to generate enough in tax revenues to support the governmental entities that implement and manage environmental infrastructure systems for potable water, sewage collection, wastewater treatment, solid waste management, and road paving projects which are necessary to control particulate air pollution. This socioeconomic problem thus manifests itself in domestic and transboundary environmental and health problems.

Many of the citizens of the border region are unable to afford the basic housing that is required for a suitable standard of living. The impoverished population in border communities, whether employed, unemployed, or underemployed, leads to shantytowns, often referred to as *colonias*. The colonias located on either side of the border, usually lack potable water systems and sewage collection systems. During winter, the inadequate housing of the colonias often leads to burning of wood fuel within the homes for warmth. This can lead to unsafe conditions and has resulted in fatalities from carbon monoxide buildup within homes. It also represents an important area-wide air pollution source. The inadequate wastewater management systems in colonias contaminate shared rivers and groundwater.

In this terribly unsustainable scenario, heavy dependence on U.S. grant funding is an inescapable conclusion if the needs are to be addressed to protect the residents of U.S. border communities. Many contend that U.S. grant funding is the appropriate monetary source to address border environmental issues because the economic benefits are realized by consumers throughout the United States whenever they purchase products that were assembled or manufactured in the border region. However, long-term dependence on federal grant funding may place the border environment at risk if such federal funding continues to be reduced, as has been the recent trend.

Although the NADBank has made notable strides to move border communities toward financially sustainable solutions, the bank projects that one billion dollars in new grant funding will be necessary over the next ten years (NADBank’s *U.S.-Mexico Border Ten-Year Outlook*, Summer 1999). The absence of this grant funding will make the NADBank’s loans unaffordable to border communities in both countries. The Board notes that the Congress reduced EPA’s

⁵ Instituto Nacional de Estadística Geografica y Informativa (INEGI), Feb 1999 - “Estadísticas Economicas, Industria Maquiladora de Exportacion”

⁶ Ibid.

⁷ U.S. Department of Labor, 1999 - “Foreign Labor Trends in Mexico”

FY-2000 appropriation for border infrastructure needs from \$100 million to \$50 million. This significant reduction in EPA's appropriations for border water and wastewater infrastructure projects will impede the construction of necessary projects and is a major setback for poor communities along the length of the border.

A long-term strategy is necessary to address the root cause of the unsustainable nature of the border region's growth. The U.S. government should engage the Mexican government and the private sector in pursuit of new economic mechanisms that will address environmental and humanitarian needs without eternal dependence on larger and larger federal grants. The pursuit of low-cost housing for every employee of U.S.-owned companies should be an integral part of these governmental discussions with the private sector. Optimally, appropriate economic compensation should be pursued for twin plant workers to ensure that they are able to acquire adequate housing while addressing the appurtenant infrastructure needs.

Because the NAFTA is the first trade liberalization agreement that contains provisions to deal with the environmental issues that arise in the context of trade relations and disputes, and because the NAFTA package includes two environmental side agreements, the NAFTA's ultimate success depends on the development and implementation of a long-term economic strategy for the environmental well-being of the U.S.-Mexico border region. This is a binational problem that will require innovative public and private sector cooperation to resolve.

VI. Other Border XXI Issues

As noted above, binational cooperation on natural resources issues predates the Border XXI Program. When Border XXI was developed, Natural Resources was one of three new workgroups created by the federal governments without consulting the states or local governments. The inclusion of a Natural Resources Workgroup in the Border XXI Program has created apprehension and some confusion while producing minimal benefit for those that have been working together on binational natural resources issues for many years without the Border XXI umbrella.

Widespread public apprehension about the natural resources component of Border XXI can be traced back to the powers of the Endangered Species Act (ESA) and the actions of federal land management and wildlife management agencies in the western U.S.⁸ This became particularly alarming to some when ESA's powers were

viewed in the context of the U.S.-Mexico border region. Many wondered what the outcome or actions might be. The ESA does have implications for private property rights in the United States including land management and water management. The inclusion of Natural Resources into the Border XXI Program introduced volatility that, in some circles, painted over the Border XXI Program as a whole. Many environmental agency representatives in the U.S. were concerned that ESA-related actions that happened to occur within the defined 100-kilometer border region would somehow be misconstrued as Border XXI "actions" and thus generate an uproar about the Program as a whole.

State natural resources agencies have not readily embraced the Border XXI Program, choosing instead to handle their binational pursuits through other pre-existing fora. We have also noted that the Border XXI Program, as a coordination mechanism, has had very little benefit for Department of Interior's pursuits on natural resources issues in general. Meanwhile, the Department of Interior has been very successful with its Mexican counterpart (SEMARNAP) without having to wave the Border XXI flag.

It is apparent that the Natural Resources Workgroup is not a good fit in the Border XXI Program, which is essentially a pollution control and pollution prevention effort. Some members of the public made a call for inclusion of natural resources issues during the public comment period for the Border XXI Framework Document but it is now clear that other members of the public believe it should be excluded. The GNEB recognizes Mexico's more holistic view of the environment which has integrated natural resources with other environmental quality responsibilities under a single federal institution called the SEMARNAP. However, the fundamentally different regulatory scheme in the U.S., as well as its sensitive political implications, should be evaluated as important considerations for the Program's current structure, and for the future content of a successor program after 2001.

While some of the Annexes to the La Paz Agreement address air issues, the GNEB also notes the absence of a binational institution charged with providing financial assistance to address air quality issues. As the results of binational air quality studies emerge, it is becoming clear that area sources, such as unpaved roads and the lack of adequate public transportation, present important health risks for border residents. Although road paving projects are undertaken with state and federal assistance, U.S. and Mexican communities suffer from the same funding issues described earlier in this paper for water and waste-

⁸ We note that some of us view the ESA as lacking in adequate power to really accomplish its mandate, while many feel its powers are too strong.

water infrastructure. The two federal governments should evaluate possible financial mechanisms to assist with transboundary air pollution problems ranging from burning landfills to unpaved roads.

The Border XXI Program itself seems to be minimally funded, but the Program's existence has elevated awareness of the need for additional binational environmental infrastructure funding. Even so, Congressional appropriations have decreased for environmental programs as a whole and for border environmental programs in particular. This trend is very disconcerting because the border region's needs are not being addressed due to funding shortfalls.

A second aspect of the funding issues relates directly to EPA's internal allocation of border funding. The bulk of the border-related funding apparently comes from other EPA programs such as Water and Wastewater Management but there is no firm process for the allocation of these funds to border needs. In addition it appears that there is no line item in EPA's budget strictly for funding border programs, with the possible exception of water and wastewater infrastructure funding. The functional link between the Border XXI Program's initiatives and funding distribution is not clear at this time. EPA should develop a strategic link between activities performed under the Border XXI Program, and the funding that is necessary to carry out those activities over the course of the Program. This is a very difficult issue due to the annual nature of budget appropriations. Nevertheless, budget appropriations should be initiated and pursued with as much commitment, vigor and interagency cooperation as is needed for the project activities themselves. It can also eliminate some ambiguity about the Border XXI Program, because it might pave the way for the development of a more precise definition to identify Border XXI projects. An EPA line item for border funding could establish a litmus test for defining a Border XXI project or activity. Such a line item should also establish that broad binational coordination needs, which are fundamental to the success of the Program, require firm and consistent financial support.

We note that the BECC's operational budget may barely suffice for the water and wastewater infrastructure efforts that it pursues but, assuming additional resources are identified, the institution's mandate should eventually be expanded to address the need for additional hazardous waste management facilities (Treatment, Storage, and Disposal or "TSDs"). The critical shortage of such facilities, particularly in Mexico, raises serious concerns about the ultimate disposition of hazardous wastes in the border region. TSDs are private sector business endeavors, but the BECC could play a very

useful role in promoting and certifying the establishment of such facilities in Mexico.

Also pertaining to hazardous wastes, binational efforts are still needed to ensure the completeness, accuracy and compatibility of the U.S. HAZTRAKS and Mexico's SIRREP hazardous waste tracking mechanisms, which are supposed to address transport in the transboundary setting. The adequacy and compatibility of these two databases is necessary to ensure that hazardous waste generators are properly managing their materials in accordance with applicable laws.

VII. Conclusion

As a five-year plan, Border XXI looks beyond single Congressional appropriation cycles, but falls short of taking the long-term view. It is notably attempting to put in place the use of long-term indicators of human and ecosystem health.⁹ It is still heavily focused on federal interaction and has not fully succeeded in building local capacity or in thoroughly fostering public support. It has, however, made the work of the La Paz workgroups more accountable to the public through their individual transparency or failure to work transparently.

Because Border XXI is a continuation of the Integrated Border Environmental Plan (IBEP) and is the result of the La Paz Agreement which was signed by the President of each country in 1983, it is likely that Border XXI or a similar successor will continue to serve as a coordinating mechanism for the two countries. As Border XXI continues to emphasize transparency to the public as well as to tribal, state, and local governments, there will be more participation by those governments and from NGOs and the private sector in the workgroup and subworkgroup process. Most likely this will also mean a lengthier decision-making process. As decentralization continues to result in greater decision-making capability by state and local governments, particularly in Mexico, there will be more state-to-state collaboration on local regional projects. One can already see collaboration among the four U.S. and six Mexican border states through the Ten State Alliance that ironically gelled out of concerns about being excluded from the Border XXI Program. The federal governments will probably play a different role in this decision-making paradigm.

The improved communications and dialogue that exists between state and federal environmental officials in the U.S. and Mexico is an important benefit of the Border XXI Program. A variety of bination-

⁹ The development of a follow-up Border XXI indicators report is greatly desired by some border community representatives. This would be especially useful to achieve coordination with the OECD process.

al projects have been implemented which might otherwise not have been possible without the Border XXI Program or some other binational coordination mechanism. We must ensure that the communications avenues that lead to such projects continue to be available because they are the underlying basis for cooperative binational efforts to mitigate environmental issues. As with any massive coordination effort, the Border XXI Program does have room for improvement. This will always be the case.

The GNEB hopes to see more rapid decentralization and greater local empowerment as the Border XXI Program continues to mature. This delegation of authority and the need for more local implementation should be accompanied by a commensurate distribution of funding to support the tribal, state and local involvement

which is vital to the success of the Program.

In the broader context of trade, environment, and quality of life, the ultimate success of the NAFTA is heavily dependent upon the involved parties' ability to mitigate and, whenever possible, remedy the challenging environmental issues of the rapidly-growing border region. The importance of resolving these environmental issues in a binationally cooperative manner cannot be overstated. The Border XXI Program is the only existing coordination mechanism to this end. Consequently, GNEB supports the Program and we encourage the federal governments to perpetuate these binational efforts beyond 2001. Such efforts must be accompanied by commensurate funding from both federal governments.



Daily life for some border region residents includes drawing water from storage containers because they remain unconnected to the local water supply system. Source: Photo was taken by Diana Cedillo, age 10, as a participant in the photo project, "The U.S.-Mexico Border Through the Eyes of Children," coordinated by the Border Health Foundation and the Border Vision Fronteriza Project of the UA Rural Health Office.



The Binational Dimension

Good Neighbor's Coordination with Mexico

As the only U.S. government federal advisory body focused on environmental sustainability of the U.S.-Mexico border region, the Good Neighbor Environmental Board realizes that both domestic and binational approaches are needed in order to effectively achieve its mission. It is imperative that the Board have an up-to-date and in-depth understanding of how Mexican environmental policy, infrastructure and issues affect U.S. natural resources and border communities. For that reason, a subset of members serves as the Coordination with Mexico Workgroup in order to exchange information and perspectives with Mexican public and private agencies.

The purpose of this liaison role is to maximize the two-way exchange of information between the two countries. The first objective is to remain informed about developments in Mexican environmental policy, and incorporate this information in the formulation of recommendations to Congress and the President. To complement this incoming flow of information, the Board reaches out to maintain an active network with Mexican governmental and non-governmental organizations so that its recommendations to the U.S. President and Congress may also be communicated effectively to numerous organizations in Mexico. The ultimate objective of this two-way communication is to identify the top transboundary environmental sustainability priorities for the U.S. President and

Congress, and to recommend more effective approaches for improving the border environment.

In 1997, Good Neighbor began to actively engage in dialogue with representatives from a counterpart Mexican structure, the Region 1 National Advisory Council for Sustainable Development (Consejo). The Consejo is charged with advising the Mexican Ministry of the Environment, Natural Resources and Fisheries (SEMARNAP) on issues including border environmental conditions. The Region 1 portion of Consejo includes a number of Mexican border and northern states. Since 1997, Good Neighbor and Consejo Region 1 have held two joint meetings specifically focused on identifying common goals and discussing collaborative methods for reaching them. In addition, on a more ad-hoc basis, representatives of the two advisory groups have been attending each other's events. Both groups continue to report back on developments and incorporate this knowledge into their respective reports.

Based on this valuable experience, Good Neighbor is taking steps to seek out and actively listen to additional groups in Mexico from both the governmental and non-governmental sectors. The Board is committed to an open and robust dialogue with Mexican civil society, as well as the public sector, so that its recommendations continue to be informed by the insights it gains from these interactions.

APPENDIX A

GOOD NEIGHBOR ENVIRONMENTAL BOARD 1999 & 2000 ROSTER FOR FOURTH REPORT TO THE PRESIDENT AND CONGRESS

Judith M. Espinosa, Chair
Director, ATR Institute
1001 University Blvd. Suite 103
Albuquerque, NM 87106
505-246-6410; 505-246-6001 fax
email: jmespino@unm.edu

Marc Sixkiller Ayuvoo
Environmental Manager
Pala Band of Mission Indians
P.O. Box 50
Pala, CA 92059
760-742-3174; 760-742-3189 fax
email: pepac@palatribe.net

Pat Banegas
General Manager, Water and Sanitation District
P.O. Box 1751
1470 N. 4th Street,
Anthony, NM 88021
505-882-3922; 505-882-3925 fax
email: awsd1@whc.net

Diana Borja
Director, Border Affairs (MC 121)
Texas Natural Resources Conservation Commission
P.O. Box 13087
Austin, TX 78711-3077
512-239-3603; 512-239-3515 fax
email: dborja@tnrcc.state.tx.us

Karen M. Chapman
Texas Center for Policy Studies
44 East Avenue Suite 306
Austin, TX 78701
(512) 474-0811; (512) 474-7846 fax
email: kc@texascenter.org

Irasema Coronado, Ph.D.
Department of Political Science
University of Texas- El Paso
El Paso, Texas 79968
Phone: 915-747-7980 (office)
915-747-5227 (department); 915-747-5400 fax
email: icoronado@miners.utep.edu

Placido dos Santos
Border Environmental Manager
Arizona Dept. of Environmental Quality
400 W. Congress Street, Suite 521
Tucson, AZ 85701
520-628-6744; 520-770-3540 fax
email: dossantos.placido@ev.state.az.us

Jennifer L. Kraus
Principal
Global Environmental Consulting Company
11502 Alborada Drive
San Diego, CA 92127
858-674-9686; 858-674-9697 fax
email: jkraus@gecco-inc.com

Susan Kunz
Director
Border Health Foundation
2501 E. Elm Street
Tucson, AZ 85716
520-795-9756; 520-795-1365 fax
email: skunz@ambhf.org

Bess Metcalf
U.S. Director
Rio Grande/Rio Bravo Basin Coalition
109 North Oregon, Suite 617
El Paso, TX 79901
915-532-0399
915-532-0474 fax
email: coalition@rioweb.org

Ed Ranger
Counsel, International Law
Carlsmith Ball
2303 N. 44th St. Suite 14-213
Phoenix, AZ 85008
(480) 784-6886; (603) 971-1784 fax
email: EdRanger@USA.net

Linda Smith

Manager of Environmental Affairs
H-E-B Grocery Company
4839 Space Center Drive
San Antonio, TX 78218
210-938-5414; 210-938-5280 fax
email: smith.linda@heb.com

Mark J. Spalding

Assistant Professor
University of California-San Diego
1055 Cedarcrest Way, San Diego, CA 92121-4136
858-638-0783; 858-638-0784 fax
email: mspalding@ucsd.edu

Nancy H. Sutley

California Environmental Protection Agency
555 Capitol Mall Suite 525
Sacramento, CA 95814
916-445-3846; 916-324-0908

Jorge Vargas

University of San Diego School of Law
5998 Alcala Park
San Diego, CA 92110
619-260-4816; 619-260-2218 fax
email: mexlaw@acusd.edu

FEDERAL MEMBERS**Gregg Cooke**

Regional Administrator
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733
214-665-2100; 214-665-2146 fax
email: cooke.gregg@epa.gov

M.J. Fiocco

Office of Intermodalism
Room 10126 (S-3)
U.S. Department of Transportation
400 Seventh Street S.W.
Washington, DC 20590
202-366-8018; 202-366-0263 fax
email: m.j.fiocco@ost.dot.gov

John Klein

Assistant Regional Hydrologist
U.S. Geological Survey
Placer Hall, Suite 2015; 6000 J Street
Sacramento, CA 95819-6129
916-278-3032; 916-278-3045 fax
email: jmklein@usgs.gov

M. Winston Martin

Special Projects Officer
U.S. Department of Housing
and Urban Development
800 Dolorosa Avenue
San Antonio, TX 78207
210-475-6806; 210-472-6804 fax
email: winston_martin@hud.gov

David E. Randolph

Coordinator for U.S.-Mexico Border Affairs
Office of Mexican Affairs (ARA-MEX)
U.S. Department of State, Room 4258 MS
2201 C Street, N.W.
Washington, DC 20520
202-647-8529; 202-647-5752 fax
email: randolphde@state.gov

Ella M. Rusinko

Deputy Assistant Secretary Congressional
Liaison for Program Research and Evaluation
U.S. Department of Commerce
Room 7814A HCHB
14th and Constitution Avenue NW
Washington, DC 20230
202-482-2309; 202-273-4723 fax
email: erusinko1@doc.gov

Alan Stephens

State Director, Rural Development
U.S. Department of Agriculture
3003 Central Avenue, Suite 900
Phoenix, AZ 85012
602-280-8702; 602-280-8708 fax
email: alan.stephens@az.usda.gov

Rosen do Treviño III

State Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
6200 Jefferson Street, Northeast
Albuquerque, NM 87109-3734
505-761-4401; 505-761-4463 fax
email: rtrevino@nm.nrcs.usda.gov

Richard Walling

Director, Office of the Americas
and the Middle East
Office of International and Refugee Health
U.S. Department of Health and Human Services
Room 18-74, Parklawn Building
Rockville, MD 20857
301-443-4010; 301-443-6288 fax
email: rwalling@osophs.dhhs.gov

BINATIONAL

Mr. John Bernal
U.S. Commissioner
International Boundary and Water Commission
4171 N. Mesa, Suite C-310
El Paso, TX 79902
915-832-4101; 915-832-4191 fax
email: johnbernal@ibwc.state.gov

DESIGNATED FEDERAL OFFICERS

Elaine M. Koerner (2000)
Office of Cooperative Environmental Management
U.S. Environmental Protection Agency (1601 A)
1200 Pennsylvania Ave. N.W.
Washington, DC 20004
202-564-1484; 202-501-0661/0656 fax
email: koerner.elaine@epa.gov

Melanie Medina-Metzger (1999)
Office of Cooperative Environmental Management
U.S. Environmental Protection Agency (1601A)
401 M Street S.W.
Washington, DC 20460
202-564-5987; 202-501-0661/0656 fax
Email: medina-metzger.melanie@epa.gov

ADDITIONAL RESOURCE SPECIALISTS

Rafael J. Guerrero
Strategic Planner
USDA/NRCS South Central Region
P.O. Box 6459
Ft. Worth, TX 76115-0459
817-509-3292; 817-509-3338 fax
rguerrer@ftw.nrcs.usda.gov

William McLeese
Office of Mexican Affairs
U.S. Department of State, Room 4258 MS
2201 C St. N.W.
Washington, D.C. 20520
202-647-8529; 202-647-5752 fax
mcleesewv@state.gov

Allyson Siwik
El Paso Border Liaison Office
U.S. EPA
4150 Rio Bravo, Suite 115
El Paso, TX 79902
915-533-7273; 915-533-2327 fax
siwik.allyson@epa.gov

Darrin Swartz-Larson
El Paso Border Liaison Office
U.S. EPA
4150 Rio Bravo, Suite 115
El Paso, TX 79902
915-533-7273; 915-533-2327 fax
swartz-larson.darrin@epa.gov

M. Roberto Ybarra
International Boundary and Water Commission
4171 N. Mesa, Suite C-310
El Paso, TX 79902
915-832-4105; 915-832-4191 fax
bobybarra@ibwc.state.gov
Appendices

APPENDIX B

INTERNET INFORMATION RELEVANT TO THIS REPORT

Below is a list of web sites that may contain additional information of interest to the audience for this Fourth Report of the Good Neighbor Environmental Board to the President and Congress of the United States. Good Neighbor has compiled this list to serve as a potential information tool in following up on the recommendations contained in the report. The Board does not vouch for the accuracy of the contents of the web sites, nor does it necessarily support the policies they may contain or endorse any products, services, or enterprises displayed on the sites. In addition, the Board acknowledges that there may be additional sites that contain information relevant to this report. Good Neighbor welcomes suggestions for additional sites to include in this list.

INTERNATIONAL

Border Environment Cooperation Commission (BECC)
www.cocef.org

Borderlines Index Page
www.irc-online.org/borderline/

Coalition For Healthier Cities and Communities
www.healthycommunities.org/

European Foundation for the Improvement of Living and Working Conditions
<http://susdev.eurofound.ie>

International Boundary and Water Commission
www.ibwc.state.gov

North American Commission for Environmental Cooperation
www.cec.org

North American Development Bank (NADBank)
<http://www.nadbank.org>

North American Agreement on Environmental Cooperation
www.epa.gov/oia/aboutna.htm

North American Trade Corridor Partnership
www.naitcp.gob.mx/

Pan American Health Organization
www.paho.org/english/heq/heq_home.htm

Sierra Madre Alliance Program Overview
www2.planeta.com/mader/planeta/0799/0799sierra.html

Sister Communities Health Profiles
www.fep.paho.org/english/SisCity.asp

Transboundary Resource Inventory Program
www.bic.state.tx.us/trip/

U.S.-Mexico Border Health Association
www.usmbha.org/

MEXICAN GOVERNMENT

Comision Nacional Del Agua
www.cna.gob.mx

Comision Nacional para el Conocimiento y Uso de la Biodiversidad
www.conabio.gob.mx

Consulado General de Mexico en San Diego
www.sre.gob.mx/sandiego/

Instituto Nacional de Estadística Geografía e Informática
www.inegi.gob.mx

Procuraduría Federal de Protección al Ambiente
www.profepa.gob.mx

Secretaría de Salud
<http://cenids.ssa.gob.mx>

SEMARNAP
www.semarnap.gob.mx/

UNITED STATES FEDERAL GOVERNMENT

Clean Water Action Plan
www.cleanwater.gov

**Department of the Interior- U.S.-Mexico
Field Coordinating Committee**
www.doi.gov/fcc

EPA Region 6- U.S.-Mexico Border Program
www.epa.gov/earth1r6/6bo/6bo.htm

EPA Region 9 U.S. Mexico Border Programs
www.epa.gov/region09/cross_pr/compendi/index.html

EPA- Sala De Lecturas
www.epa.gov/espanol/

EPA-Surf Your Watershed
www.epa.gov/surf/

EPA- U.S. Mexico Border Center on Air Pollution
www.epa.gov/ttn/catc/cica

Healthy People 2000 Fact Sheet
<http://odphp.osophs.dhhs.gov/pubs/hp2000hp2kfact.htm>

**Homes and Communities-U.S. Department of
Housing and Urban Development**
www.hud.gov/

National Center for Health Statistics-Healthy People 2000
www.cdc.gov/nchs/products/pubs/pubd/hp2k/review/review.htm

National Water Resources
[Http://water.usgs.gov/watuse/](http://water.usgs.gov/watuse/)

Servicio de Investigacion Agricola-USDA
www.ars.usda.gov/is/pr/para.suscribir.htm

USDA Agricultural Research Service
www.ars.usda.gov/is/

USDA-Natural Resources Conservation Service
www.nrcs.usda.gov

U.S. Department of Commerce
www.doc.gov

U.S. Department of Health and Human Services
www.dhhs.gov/

U.S. Department of State
www.state.gov

U.S. Geological Survey-Arizona Water Resources
<http://dg0daztcn.wr.usgs.gov/>

U.S. Geological Survey-California Water Resources
<http://water.wr.usgs.gov/>

U.S. Geological Survey-Texas
<http://tx.usgs.gov>

**U.S. Geological Survey, Water Resources
Division-New Mexico District**
www.dnmalb.cr.usgs.gov/

U.S.-Mexico Border XXI Program
www.epa.gov/usmexicoborder/ef.htm

TRIBAL GOVERNMENT

EPA American Indian Environmental Office
www.epa.gov/indian/programs.htm

Institute for Tribal Environmental Professionals
www.cet.nau.edu/itep/

National Tribal Environmental Council
www.ntec.org/

STATE AND LOCAL

Arizona Department of Environmental Quality
www.adeq.state.az.us

Border Ecoweb
www.borderecoweb.sdsu.edu

California Environmental Protection Agency
www.calepa.ca.gov

New Mexico Environment Department
www.nmenv.state.nm.us

Search for U.S. Mayors Along the Border
www.fep.paho.org/english/usmayors.asp

Texas Natural Resource Conservation Commission
www.tnrcc.state.tx.us/

Western Governor's Association
www.westgov.org/

United States-Mexico Chamber of Commerce
www.usmcc.org

NON-GOVERNMENTAL

BorderBase

www.borderbase.org

Border Health Foundation

www.ambhf.org

Border Trade Alliance

www.thebta.org

Good Neighbor Project for Sustainable Industries

www.enviroweb.org/gnp

Hazard and Recovery Center

<http://chud.tamu.edu/>

National Wildlife Federation

www.nwf.org/watersheds

Purdue University-Know Your Watershed

www.ctic.purdue.edu/kyw/

Rio Grande/Rio Bravo Basin Coalition

www.rioweb.org/

Right to Know Network

www.rtk.net/

Southwest Center for Environmental Research and Policy

www.scerp.org

Texas Center for Policy Studies

www.texascenter.org/

University of California-San Diego

www-irps.ucsd.edu/jed/v1n1.html

University of San Diego

www.acusd.edu/bulletin/as/environment.html

University of New Mexico

www.unm.edu

University of Texas-El Paso

www.utep.edu/comm3459/spring98/final/project/environment.htm

World Resources Institute

www.wri.org/watersheds/

RESOURCES

Austin's Beltway Chronicle newsletter

www.austin-copelin.com/Newsletter.html

Border Ecoweb

www.borderecoweb.sdsu.edu

Border Environmental Health Directories

www.fep.paho.org/english/env/envdirs.asp

Border State Health Officials in the U.S. And Mexico

www.fep.paho.org/sho.asp

Border Ozone Map

www.ozonemap.org/

U.S. Directory of Embassies and Consulates

www.usembassy-mexico.gov/edirector.html