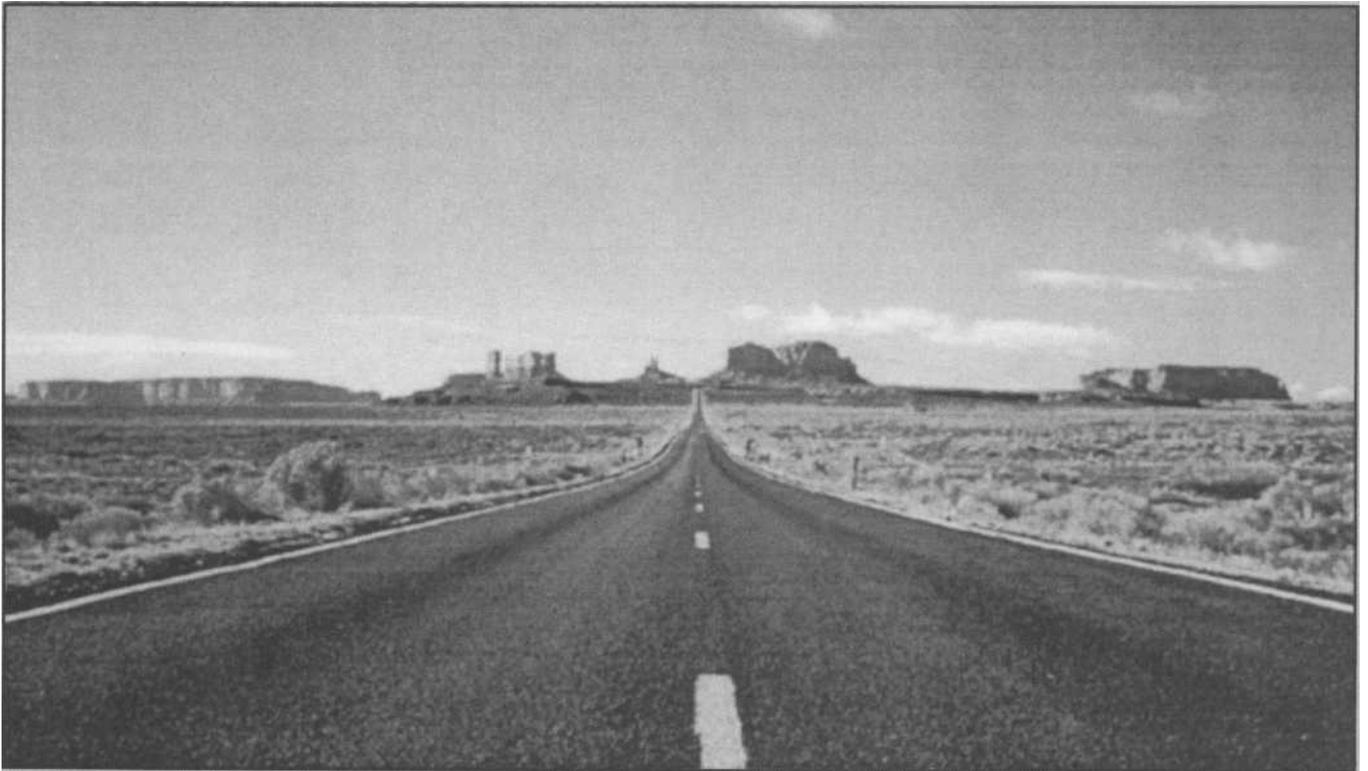


# Good Neighbor Environmental Board.



## Annual Report

A Presidential and Congressional Advisory Committee  
on U.S.-Mexico Border Issues

July 1998

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# INTRODUCTION

The Good Neighbor Environmental Board was created by the Enterprise for the Americas Initiative Act of 1992 (7 U.S. Code Section 5404) to advise the President and the Congress concerning environmental and infrastructure issues and needs within the States contiguous to Mexico. The statute requires the Board to submit an annual report to the President and the Congress. The Board has submitted reports in October 1995 and April 1997. The Board's 1997 report was also translated into Spanish and widely disseminated on both sides of the border.

The Act requires that Board membership include representatives from appropriate U.S. Government agencies; from the governments of Arizona, California, New Mexico and Texas; and from private organizations, including community development, academic, health, environmental, and other nongovernmental entities with expertise on environmental and infrastructure problems along the southwest border. A list of members is provided in Appendix A.

A Presidential Executive Order delegates implementation authority to the Administrator of the Environmental Protection Agency (EPA). The Board operates under the Federal Advisory Committee Act and meets three times annually at locations along the U.S.-Mexico border. The Board has met nine times at various border locations since its inception.

Under the auspices of both national governments, the Board and its Mexican counterpart, Region I of the Mexican National Advisory Council for Sustainable Development, met jointly for the first time in September 1997. This meeting initiated annual joint meetings of the two advisory committees. The Mexican National Advisory Council for Sustainable Development has representatives from nongovernmental and public sectors in each Mexican state; Region I represents nine of the 31 states, including the contiguous border states. The two committees will meet again in the fall of 1998 in Mexico. The committees are also expanding coordination through attendance at each others meetings and development of joint priorities, projects, and recommendations.

In this third annual report, the Board is reporting on the status of Executive Branch and other implementation of prior years' recommendations, as reported by the federal agencies' represented on the Board. This report also identifies areas requiring further effort, and new areas to be addressed by the Board.

# EXECUTIVE SUMMARY

The Board has developed a statement of its vision for the border region. The vision emphasizes the unique binational character of the region, its environment, and its peoples and the Board's hope for achieving sustainable economic development:

- *The U.S.-Mexico border is a binational region, sharing responsibilities, with sustained economic development that ensures the health and well-being of its residents, protects the environment and unique natural resources, engages the private sector, and promotes equity, opportunity, and empowered communities.*

The Board also developed a mission statement which describes its role to help implement the above vision:

*The Good Neighbor Environmental Board is committed to providing direction, guidance, and advice to enable achievement of an environmentally sustainable border region.*

The Board intends to apply this vision and mission to evaluate how governmental, industry and nongovernmental activities are moving toward sustainability, and as a benchmark for future recommendations. The Board also intends work with its Mexican advisory committee counterpart to propose to both governments approaches for measuring the results of its human and infrastructure investments in the border region.

## Management of Federal Programs

During the past four years, the Board has seen substantially greater intergovernmental cooperation with Mexico, as well as improved federal and state interagency cooperation. The Good Neighbor Environmental Board and its counterpart, Region I of the Mexican National Advisory Council for Sustainable Development, have also established ongoing coordination, including participation at each others regular meetings, joint annual meetings, and development of joint priorities and projects.

The two federal governments are working together on a variety of projects through Border XXI, the Border Environment Cooperation Commission (BECC), the North American Development Bank (NADBank), the International Boundary and Water Commission (IBWC) and other venues, and the states and local governments are cooperating on a wide variety of cooperative efforts. Nevertheless, the Board still perceives the need for a more comprehensive approach to border planning and priority-setting.

While federal agencies are working on finding innovative ways to cooperate with and assist each other, the U.S. government still needs to address largely statutory limitations on federal agency authorities and leveraging of resources in the border region. We again urge the Congress to consider:

- more authority to agencies to coordinate and integrate their border program activities, to budget jointly for cooperative projects, to leverage appropriations, to develop interagency funding agreements, to provide multi-agency grants, and to permit use of federal funds in both countries;
- authority for the Department of Health and Human Services to address critical transboundary health problems;
- additional funding for the Departments of the Interior and Agriculture to address priority natural resource protection needs;
- continuing targeted funding for addressing issues in colonias and similar settlements in the four states;
- assuring funding and increasing attention to problems facing border region tribes;
- increased emphasis on emergency response and hazardous materials management;
- increased funding for industrial and community pollution prevention efforts;
- obtaining better census and economic development information on both sides of the border;
- focusing resources to the border from the state water infrastructure revolving funds; and
- special tax-exempt infrastructure financing for the U.S. border states.

## Environment

In the past four years, the Board has seen the development of numerous projects and very active work by binational work groups on air, water, natural resources, hazardous materials and waste, contingency planning and emergency response, pollution prevention, enforcement and compliance, and environmental information. In its 1996 inventory, the Board identified over 400 federal projects that were underway or had been completed. Since then, additional projects have been developed, principally under the auspices of the Border XXI program.

We commend growing efforts to address border problems more comprehensively through airshed- and watershed-wide programs. However, we would like to see full implementation of the El Paso-Ciudad Juarez Air Quality Management

Basin agreement and use of this type of institutional framework to address other binational environmental management issues. We also cite the need to more effectively address widespread environmental emergencies that affect borders, and complex issues such as water quantity, water allocation, and land use that have a large political dimension but are critical to solving regional problems.

While we commend progress to date, we reemphasize that there is still an enormous amount of work that remains in each area discussed in the report, and urge all participants to define a more comprehensive, integrated strategy under the Border XXI program for addressing these needs in order to achieve maximum environmental benefits.

## Health

We commend several important accomplishments in addressing environmental health issues including, for example, establishment of the U.S. side of the Binational Health Commission, improved coordination at all governmental levels, formation of the binational Border XXI environmental health workgroup, the border-wide tuberculosis control program, professional training of scientists and allied health workers, development of community-based outreach models that can be replicated throughout the U.S.-Mexico border region, and improved information access by the public and practitioners.

## Transportation

Transportation agencies have also made substantial progress in working to harmonize standards and data, improve highways and border crossings, use new technology to provide safer and more efficient movement and address delays and, through the Livable Communities program, to integrate transportation with training and community development to provide for sustainable development in economically distressed areas. While the Board endorses the recent report and two-year action plan issued by the Joint Working Committee, it continues to emphasize the need for a comprehensive strategy to address border transportation, environment and health relationships.

## Housing

The Department of Housing and Urban Development (HUD) reports providing over \$300 million annually in the four border states for rehabilitation, construction and improvement of housing and other basic infrastructure (e.g., streets, potable water and sanitation) in colonias, developing low cost housing programs, and purchasing housing contracts from colonias developers and working with foundations to

help colonias residents own their own houses. There are also significant programs managed by the Department of Agriculture Rural Development organization providing subsidized loans, loan guarantees and grants for infrastructure in rural communities and colonias.

## **Native Americans**

The Board has seen a significant increase in emphasis on tribal issues and growing outreach to border tribes. We commend the conference that was held in February 1998, bringing together the 25 tribal entities on the U.S. side of the border with officials of federal and binational agencies to help identify tribal issues and needs, to provide an opportunity for these organizations to brief tribes on their programs and resources, and to create new opportunities for assistance and coordination. We also commend the increased staffing focused on working with tribes. Although there has been a substantial increase in targeted EPA funding (\$17 million) for tribal infrastructure needs, more funds are needed.

## **Border XXI**

The Board commends EPA's lead role in Border XXI development and implementation. We also note improved access to these processes by state, local and tribal governments and the public through regional work groups and ongoing information dissemination. We also cite the development of a comprehensive set of border environmental indicators. It is important to note that the federal program still needs much greater emphasis on meeting and measuring achievement of the goal of empowering communities, tribes and industry to solve and prevent problems in the long term.

## **Industry**

We commend the extensive binational training and technical assistance being focused on maquiladora operations as well as important state efforts through the ten border states organization and, for example, the Arizona-Mexico International Green Organization (AMIGO) state-level partnership for voluntary pollution prevention activities among industries. We also urge greater efforts to assist smaller and medium-sized non-maquiladora companies. We emphasize that greater industry involvement is needed in addressing issues related to border economic development, conducting research, applying technologies, and augmenting governmental resources for infrastructure and training. We also urge the governments to immediately address the implications of termination of the maquiladora program, especially related to the management of hazardous wastes.

## **Infrastructure**

The Border Environment Cooperation Commission (BECC) has established rigorous criteria and is focusing on certifying sustainable projects in communities. Both BECC and the North American Development Bank (NADBank) are now providing technical assistance to communities on project development and management issues. There is evidence of growing cooperation among the International Boundary and Water Commission (IBWC), the BECC and the NADBank. We continue to urge the BECC to increase its emphasis on use of lower cost technologies by border communities. Due to limited capitalization and charter requirements, NADBank sees itself primarily as a lender of last resort, relying heavily on providing grant funds through a program sponsored by EPA. We continue to urge the governments to consider changes in the Bank's charter requiring that it charge a "market-related" rate of interest. We also urge the NADBank to increase its outreach efforts and resources to a level more comparable to the BECC.

Thousands of people still live in colonias or similar settlements with minimal infrastructure. We continue to recommend targeted grant funding for colonias infrastructure in all four U.S. border states, especially by EPA. Even if States were to focus greater loan funds to these settlements, the communities lack the ability to pay in most cases. We have seen improved coordination among agencies addressing colonias issues, especially by the Departments of Housing and Urban Development (HUD) and Agriculture (USDA) and EPA. New USDA flexibility has allowed more than \$25 million of additional low interest rate construction and home repair funds for colonias, and HUD has provided tools to help build and repair homes, installed septic tanks, bought contracts of sale from developers, and developing housing construction methods that will permit home purchases by low income residents.

## **Information**

Information is a crucial component to sustainable development of the border region. Comparable information must be available to both federal governments; information must be shared between federal and state governments; and information must be available to communities and non governmental organizations to allow them to participate effectively in decisions.

We commend the work of the U.S. Geological Survey (USGS) in mapping the border region. Aerial photography and digital mapping products are being produced for pollution detection and monitoring, soils classifications, urban, rural planning, geologic mapping, watershed management, and water quality analysis. We also commend the work of

the Border XXI information work group, the participating agencies, and the EPA San Diego Border Liaison Office for making information more widely available, more easily accessible, and for encouraging more effective public participation in the region.

In the coming year, the Good Neighbor will build on its own previous efforts and its joint work with the Mexican Region I advisory committee.

*In the remainder of this report, the Board revisits recommendations that were contained in its two previous reports, provides status reports on implementation of those recommendations based on information provided primarily by the responsible federal agencies and, in some cases, provides additional recommendations based on the Board's review of the status of implementation.*

## MANAGEMENT OF FEDERAL PROGRAMS

***Recommendations:*** One of the Board's roles is to promote a paradigm shift to sustainable development of the border region. The Board recommends that agencies apply sustainable development-oriented policies and environmental sustainability criteria in planning and implementing border region projects. Criteria for sustainability emphasize:

- binational scope;
- community involvement in project planning, implementation and evaluation;
- a balance of remediation and prevention objectives;
- community and private sector capacity building;
- leveraging of resources and authorities through involvement of other federal, state and local government entities and the private sector; and
- assuring that needed information is accessible.

***Response:*** The U.S. promotes sustainable development goals through implementation of Border XXI, and through BECC's sustainable development criteria for consideration of project certification. Planning is underway for a multi-sector conference on sustainable development in the border region in Fall 1998 that will help further define sustainable development in the border context.

- Most Border XXI projects are binational in scope, although there are also U.S.-based projects which address unique issues on the U.S. side of the border and help U.S. agencies characterize and inventory border resources.
- Community involvement in project planning and implementation occurs through sub-regional workgroups that allow for greater local input into priorities; formal binational public meetings to solicit local input on existing and anticipated projects and to aid in evaluating results; grants for local initiatives; ongoing informal meetings and telephone contacts; and outreach by border liaison offices.
- Priorities seek a balance between remediation and prevention. Pollution prevention activities consist largely of assistance to *maquiladora* managers and regulators on source reduction, recycling, reuse, and pollution prevention. Remediation assistance is provided through on site assessment, risk assessment, liability determinations, and enforcement actions.

- Capacity building is a very high priority. Substantial amounts of training and technical assistance are being provided on an ongoing basis. Efforts are being made through regional subgroups and other outreach efforts to provide information and to encourage greater participation by local governments, tribes, nongovernmental organizations and community leaders.
- Resources are increasingly being leveraged through cooperation among federal, state, and local government entities. The Border XXI Program acts as an umbrella, aiding in coordinating among U.S. and Mexican national and state agencies. Technical and financial resources are pooled among agencies to expedite implementation of projects. At the local level, communities generally must fund a portion of infrastructure costs for BECC projects; Border XXI grants also require a matching contribution.
- Access to information is a fundamental goal. EPA supports a 1-800 number for toll-free access; a repository of border documents; monthly and quarterly meetings; regular visits to border communities; newsletters and fact sheets on Border XXI workgroup activities and contacts; Websites which include on-going projects, hotlinks to other organizations and Border XXI documents; and access to data, studies, contacts, and projects underway along the border. EPA funds translation of documents and interpretation of meetings where appropriate.

***Recommendation:* Using the Border XXI Framework and sustainable development-oriented policies, establish more formal strategic, project, and budget coordination among agencies in annual project priority setting and scoping. Each agency's existing authorities and resources, especially related to the border region, should be summarized, clarified and coordinated.**

*Response:* Border XXI emphasizes institutional strengthening and decentralization as one of its implementation strategies. While Border XXI provides no new regulatory authority, it has established a coordinated binational framework for the direct participation of federal, state, local, and tribal governments; academics; the private sector; and nongovernmental organizations. The program is producing substantial improvements in coordination among federal border programs and priorities as well as better coordination among stakeholders, while recognizing the sovereignty of each nation. The border states themselves have also developed expanded coordination mechanisms for addressing environmental problems in the region, e.g., the Border Governors' Conference which meets to discuss common themes, including environmental issues, and regular meetings of the heads of the environmental agencies in the ten U.S. and Mexico border

states to support actions agreed to by the governors and to increase coordination efforts. Although U.S. states have been more quickly integrated, Mexico has made a number of significant advances in the past few years toward decentralization of previously federal government authorities. All 31 Mexican states have enacted comprehensive environmental statutes that provide the basis for regulation within state jurisdiction and the clarify environmental authority between the state and local levels.

Identifying and assessing each agency's authorities to provide services on the border will improve collaboration among the federal agencies by providing specific information on capabilities and limitations. The matrix of U.S. federal activities in the border, developed by the Board, is enhancing federal agency efforts to coordinate and leverage resources. As a result of its review of the Board's matrix and its cooperation with the Board, Mexico's National Advisory Council for Sustainable Development and SEMARNAP have agreed to develop a similar matrix of Mexican federal activities that will be combined with the U.S. data to improve binational project coordination.

## **Inventory and Analysis of Border Region Programs and Projects**

To better understand the extent of federal agency programs and funding in the border region, in 1996 the Board asked each of the eight federal agencies participating on the Board to provide available information concerning work initiated between 1992 and 1995. The resulting document, "Summary Matrix of Selected U.S. Agencies U.S.-Mexico Border Region Programs and Projects," provided information on approximately 400 projects implemented since 1992. Reported projects addressed both specific and broad issues related to air and water quality management, compliance, emergency response, solid and hazardous waste management, pollution prevention, natural resources management, environmental health, information management, transportation, urban development and other infrastructure. The data reflected a significant commitment to assisting Mexico to develop governmental staff and institutional capacity; assisting communities on both sides of the border improve human health and the environment; meeting water infrastructure needs; and assisting border industry to develop and implement remediation and prevention programs. The Board also analyzed the data against several criteria developed to assess the programs' contributions to sustainable development of the region and developed the following observations which we believe are still current.

*Geographic Scope:* Over 40 percent of projects are binational; approximately one-third are multi-state or border-wide. The rest of the projects are focused locally or regionally in the four states. There was limited evidence of ecosystem-level effort, although there are notable projects addressing airsheds, watersheds and nature preserves.

*Capacity Building:* While human and institutional capacity building efforts were apparent in all agencies' programs, emphasis was on informing the public about the programs, as opposed to adjusting priorities and resources based on input from the communities. We cannot overstate the importance of this relationship-building in achieving successful U.S. and binational efforts.

*Remediation and Prevention:* Given the severity of existing environmental and health-related problems, agencies have placed heavy emphasis on remediation, but there was also a positive trend toward a parallel emphasis on promoting prevention of pollution.

*Institutional Development:* Development of effective community institutions on both sides of the border is equal in importance to building infrastructure capacity. There were relatively limited resources associated with solid and hazardous waste management and emergency response issues. We reemphasize the need for greater federal emphasis on addressing Native American environmental and health issues.

*Information Management:* Given the very large investments in data collection and information system development by multiple agencies, there is a high risk of duplication of effort and high probability that lack of overall coordination may preclude sharing of information among data bases and broad-based analysis. There was also little apparent priority for providing information to communities and nongovernmental organizations on both sides of the border.

Although some agencies were able to provide only partial data largely because their internal tracking systems do not report border-specific information separately from national programs, each of the departments and agencies have agreed that compilation of this information will continue to be very valuable for improving interagency coordination and for increasing leveraging of existing statutory authorities and program budgets. The Mexican environmental and natural resources agency, i.e., SEMARNAP and the Region I Mexican National Advisory Council for Sustainable Development are cooperating to develop a similar matrix of information on programs and projects on the Mexican side of the border.

**Recommendation: Develop a more comprehensive multi-year estimate of needs and a long-term funding commitment.**

*Response:* Developing a comprehensive inventory of needs in the border area is an ambitious task. The list of needs continues to change as more information and analysis is done on the problems in the border area. However, the development of agreed-upon estimates of needs will contribute to long-term planning and commitments thus serving to narrow the number of activities for which there is insufficient funding in a given year. While U.S. funding projections are generally made at least two years in advance because of budget cycles, funding is still based on annual appropriations by Congress. The Border XXI Framework Document lists the studies performed on the needs and the resources required to address these needs.

*Recommendations:* Given that federal resources will **continue to be inadequate in relation** to the magnitude of border problems, we recommend that **the U.S. Government** develop new **authorities** to permit agencies to budget jointly for **cooperative** projects, to leverage appropriations, to develop interagency funding agreements, to provide **multi-agency** grants, and to permit utilization of federal funds in **both** countries to make projects truly binational and **sustainable**. Recognizing that these innovations will generally require congressional action, we **urge** the Congress to consider:

- funding authority for the Department of Health and Human Services to permit it to address critical **transboundary health** problems;
- additional funding for the Departments of the Interior and Agriculture to address priority border-specific natural resource protection needs;
- increased emphasis on border emergency response and **hazardous** materials management;
- increased funding for **industrial** and community pollution prevention efforts;
- **obtaining** better census and economic development **information of the border**;
- **special tax-exempt** infrastructure financing for the U.S. border states;
- **focusing** resources to the border from the federal and state water infrastructure revolving funds; and
- **creating** with the government of Mexico a public/**private fund** for binational demonstration projects.

We endorse congressional proposals for biennial **budgeting and** commend the multi-year funding commitment by the three NAFTA countries for implementation of the environmental side agreement. To the extent feasible, we support negotiation of binational multi-year

**funding commitments to address sustainable development priorities for the border region.**

The Board strongly urges congressional attention to these proposals that we believe will contribute substantially to "reinventing government" in the border region and to meeting its unique needs.

***Board Reaction:* Considerable time and resources are being devoted by federal and state agencies to collect data and develop analyses needed to prepare environmental assessments for projects and programs. Substantial cost and time savings can be found if federal and state agencies working in the border region develop agreements to coordinate requirements and to accept each others' environmental assessments.**

## **BORDER XXI IMPLEMENTATION**

The Border XXI Framework establishes important goals for the region and for the governments themselves. It establishes five year implementation objectives for each of the nine focus areas, an annual work planning process, and a regional as well as binational approach to issues.

The Board has been asked by the government to assist in the development, implementation and evaluation of Border XXI. Since the inception of the Border XXI framework and planning process, the Board has been providing comments and recommendations on Border XXI, focusing on development of its goals and objectives, program coverage, regionalization, work planning and implementation, and public participation.

The Board believes that the process has resulted in a number of excellent projects, substantially improved inter-agency and federal-state coordination and public participation, and enhanced community and local government participation. The Board intends to continue to monitor and assist with further development of this program.

***Recommendation:* The binational Border XXI workgroups must be held accountable to overall goals and objectives, to addressing priority concerns identified by the public and state and local governments, to assuring clear connections between goals, objectives and annual work plan priorities, and to objective evaluation of plan implementation.**

***Response:*** The National Coordinators guide the Border XXI Workgroups, coordinate with policy makers from participating departments of both governments, and hold all workgroups accountable for overall Framework goals and objectives and for accomplishment of annual implementation plans. All workgroup co-chairs and staff names, addresses, telephone and fax numbers, and e-mail addresses have been made available to the public through a variety of published materials and a Web Site.

***Recommendation:* Assure that the public has real input into annual work planning, establishment of priorities, and evaluation. Border XXI should provide for and assist substantial, continuous and informed input from all segments of the public, including state and local governments and communities, on both sides of the border. Establish regional sub work groups with participation by state and local governments, nongovernmental organizations, tribes, and industry; and establish clear mechanism for consideration of citizen priorities.**

*Response:* One of the key strategies of Border XXI is the participation of state and local governments, tribes, and the public. The success of all Border XXI work depends on the involvement of all sectors of border communities.

Multiple opportunities exist for public participation in workgroups' activities. Specific formal mechanisms include comment periods on specific documents. Annual Implementation Plans provide the public with written material on projects. A Biennial Border XXI Progress Report to be issued in 1999 will identify changes in priority, direction and activities that may have emerged since publication of the Framework document. Many informal mechanisms are also used to create two-way communication with border communities, including information centers within the three EPA border liaison offices; 28 repositories; a toll-free telephone line; a Web Site with links to agencies working on border-related issues; Internet work stations for the public to access environmental information without cost to them; e-mails, faxes, and phone calls; correspondence; public meetings; quarterly newsletters and fact sheets. The public is also encouraged to contact the workgroups and public advisory committees such as the Good Neighbor Environmental Board, Region I of Mexico's National Advisory Council for Sustainable Development, or the Joint Advisory Committee for the Improvement of Air Quality in the El Paso, Texas, Ciudad Juarez and Dona Ana County Air Basin.

While the Border XXI program is successfully coordinating federal agencies and programs, it requires substantial efforts by agency staff who have limited resources and other responsibilities, resulting in difficulties in maintaining the level of public involvement and information dissemination that is desired and expected.

***Recommendation:* Industrial interests on both sides of the border have played a very minor role in formulation of border objectives and programs. Border XXI needs to address more effectively the significant impacts of industrial growth on the border environment and to identify mechanisms for greater participation by industry.**

*Response:* Border XXI's industry outreach initiative has focused on *maquiladoras* and municipalities. One of the most successful activities has been voluntary site assessments by the Texas Natural Resource Conservation Commission at various *maquiladoras* at the invitation of PROFEPA. The participating *maquiladoras* have reported annual reductions of 4-5 million gallons of waste water, over 7,000 tons of hazardous waste saved, over 47,000 tons of non-hazardous waste saved, and a reduction in their electricity of over 8 million kilowatt hours. Pollution prevention techniques that have been implemented, such as engineering changes, product substitutions, and better inventory controls, have resulted in a savings of over \$5 million.

Other activities include a series of recycling workshops, capacity-building for universities and municipalities, and sector-specific pollution prevention workshops, including the wood-finishing, electronics, textile, and automotive industries. In El Paso, for instance, operators of auto body shops are trained in using auto spray paint booth recovery systems.

The Commission for Environmental Cooperation is working with Mexican small and medium-sized businesses to implement pollution prevention techniques. Loans are repaid with money that a company saves, plus a four percent administration fee.

***Board Reaction:* The Board commends the numerous programs and projects that are underway to inform and assist *maquiladora* operations and to encourage their participation in various remediation and pollution prevention programs. At the same time, we encourage the agencies to focus efforts on providing comparable information and assistance to other medium and smaller non-*maquiladora* companies, as well as to work with and solicit the assistance of large companies in providing information and technical assistance to counterparts. We also continue to encourage all Border XXI work groups to promote participation in work plan development and implementation by business and industry. Industry officials have informed the Board that they are anxious to be invited to participate and to offer their knowledge.**

***Recommendation:* Establish relevant performance and environmental measures to measure the extent to which annual work programs support Border XXI objectives and goals and the extent to which overall efforts are leading to sustainable development of the border region.**

*Response:* One of the major concerns of border communities and the Border XXI workgroups has been the need to evaluate the effectiveness of border environmental policy. As a result, environmental indicators have been developed to assess both achievements and obstacles to progress. Workgroups have developed binational indicators as well as indicators unique to one country or geographic region. The indicators will assist analysis of implementation efforts, and be an important tool for dissemination of information on progress. The indicators also measure performance to evaluate whether programs are meeting their intended goals. Since states in both countries are a source of some of the data as well as an important audience for its findings, they have also been involved in selecting indicators; border tribes have also provided input. The first Environmental Indicators Report was published in both English and Spanish in early 1998.

*Board Reaction:* The Board commends the work that has been done to develop and publish indicators for tracking and reporting environmental and public participation accomplishments under Border XXI. However, we note that these indicators are primarily oriented to tracking processes and routine progress against work programs, rather than measuring outcomes and impacts of the overall program. In conjunction with its Mexican counterpart, the Board intends to press for greater attention to tracking and reporting environmental results, development of human and institutional capacity, and progress toward achieving the Board's vision of and criteria for sustainable development.

In the Board's view, a key component of this effort is measuring the impact of Border XXI and other public participation activities. We encourage continued efforts to improve the effectiveness of current mechanisms for public participation. We commend the outreach work of the agencies, especially the EPA San Diego Border Liaison Office; increasing and more sophisticated dissemination of information, and the greater participation of local and state governments, tribes, and nongovernmental organizations in regional work groups. However, we urge the governments to shift emphasis from simply providing information to people to measuring how the information is resulting in increased capacity to shape communities, build human and infrastructure capacity, manage development, prevent pollution, improve health, and move toward sustainable development. We also urge the governments to increase their assistance to nongovernmental organizations and municipal governments on both sides of the border to facilitate their critical roles in education, participation and feedback and to establish public participation programs defined by sustainable development criteria.

The Board is working on development of key sustainable development indicators and intends to propose outcome measurements and define more specifically its expectations for results in future reports. The Board offers to help agencies construct a system that can report on Border XXI results as well as processes, and at the same time give agencies the flexibility to achieve results within available resources.

*Recommendation:* Border XXI should continue to expand coverage and integrate additional issue areas becoming, over time, the umbrella process for defining an overall sustainable development strategy for the region, linking binational efforts and coordinating public and private programs and resources.

**Border XXI needs** to address *transportation* issues emphasizing a comprehensive, cross-border transportation planning process; *water resources* especially groundwater management, water conservation and reuse, and coastal and in-stream-flow issues; *commerce and economic development* emphasizing coordination of economic development priorities with those of other environmental, natural resources, transportation and housing agencies of the two governments, and obtaining population and economic data on both sides of the border; and *natural resources* to reduce negative impacts on fragile ecosystems and species.

*Response:* The Border XXI goal of sustainable development for the border region is reflected throughout the structure of the program and funded projects. The national coordinators and each of the workgroups are committed to furthering the goal by using sustainable development concepts in prioritizing, designing, and implementing Border XXI projects. Participation in the certification process of the Border Environment Cooperation Commission (BECC) is another part of the overall strategy for sustainable development.

The Border XXI Framework Document identifies the key federal agencies involved in its development and implementation. The workgroups recognize that there are also other federal entities doing important work along the border and, as the Border XXI Program develops, other agencies will be encouraged to participate. For example, while not all transportation issues are within the scope of Border XXI, workgroups consider specific environmental impacts related to transportation issues. Water conservation and reuse are being discussed in existing workgroups. In addition, the both governments are discussing generating binational hydrologic data that can be used to characterize border water resources. While economic development has not been specifically emphasized, it is being addressed. However, before expanding Border XXI coverage to include more federal agencies and programs, it is important to assure optimum coordination among agencies participating currently. Regional subgroups provide a forum for representatives from local, municipal, and state organizations to participate in identifying priorities, coordinate with each other, and exchange information.

*Recommendation:* Identify crucial "hot-spots" areas for priority natural resource protection and conservation projects.

*Response:* The Department of the Interior (DOI) and SEMARNAP, the Mexican national environmental and resource conservation agency, have identified "hot spots," including Cienega Santa Clara/Lower Colorado River; the San Pedro and Santa Cruz Rivers, Organ Pipe Cactus National Monument, Pinacate Biosphere Reserve, Cabeza Prieta

National Wildlife Refuge, Big Bend National Park, Big Bend State Ranch, Black Gap Wildlife Management Area, Santa Elena Canyon, Maderas del Carmen, and Laguna Madre. In addition, Otay Mountain has two designated Wilderness Study Areas and contains the world's largest stands of Tecate Cypress and other unusual vegetation.

**Recommendation: Officials of the federal drug interdiction agencies should consult with federal natural resources management agencies to devise effective drug interdiction practices that will reduce negative impacts on fragile ecosystems and species.**

**Response:** DOI has had discussions with the Department of Justice (DOJ) on the need for consultation on environmental concerns related to border barriers and roads. These discussions followed the 1995 Immigration Act that waived Endangered Species Act (ESA) and National Environmental Policy Act (NEPA) requirements "to the extent the Attorney General determines necessary to ensure expeditious construction of barriers and roads." DOJ did not request this waiver and has indicated that it will make every effort to comply with environmental laws. Big Bend National Park has a history of cooperation with the various drug interdiction agencies to increase sensitivity to the fragile ecosystems and species and is working with U.S. Customs officials to allow temporary travel between adjacent protected areas in the U.S. and Mexico for park rangers, tourists, and local residents.

**Recommendation: Address land use issues along the border emphasizing sustainability of the natural resources and more integrated approaches to managing border region lands recognizing the complex, interconnected ecosystems that they are.**

**Response:** The relationship between land use and water resources is well established. Land use planning efforts should consider the resultant impacts on the available water resources. Land use planning on non-federal land is typically done by city and municipal planning agencies. Depending on proposed land uses, some lands require detailed planning while others require very little. DOI has authority to implement land use planning and management only for federal lands managed by its bureaus, i.e., about one-third of the land on the U.S. side of the border, and sustainability concerns are addressed in its plans. In addition, the Department works with tribes along the border, but does not have authority over land use planning on tribal lands. The American Heritage Rivers program provides some opportunities to work with border communities on some issues related to land use planning.

**Recommendation: Implement ecosystem-wide management strategies and programs.**

**Response:** The Border XXI Framework divides the border into five geographic regions based on political subdivisions (California-Baja California, Arizona-Sonora, New Mexico-Texas-Chihuahua, Texas-Coahuila-Nuevo Leon, and Texas-Tamaulipas) to help address the unique environmental, political, and social characteristics of each region. Political subdivisions were used instead of ecoregions because they are the main administrative units of the border and because many issues do not organize by ecoregions, e.g., enforcement, air quality, and hazardous waste. In some cases, implementation of Border XXI occurs in pre-determined ecoregions, e.g., the Rio Grande and Colorado River systems and the El Paso-Ciudad Juarez-Dona Ana County Air Quality Management Basin. The Border XXI Natural Resources workgroup is establishing regional subgroups to help focus on unique border ecosystems. The Rio Grande Alliance is implementing ecosystem-wide management strategies and programs, cooperative activities, community-based decision making, interdisciplinary approaches to environmental problems, basin wide exchange of information and technology, and projects that specifically address human health issues.

**Recommendation: Every four years, federal agencies, the Good Neighbor Environmental Board and its Mexican counterpart should sponsor a binational border-wide conference to review the status of Border XXI implementation.**

**Response:** Formal evaluation of the implementation of Border XXI is essential and the Good Neighbor Environmental Board should play a key role. Subject to the availability of resources and support from the Mexican government, a conference could be a very useful, binational public forum. The Board and the Mexican Region I Council for Sustainable Development may wish to consider holding such a conference in conjunction with their annual binational meeting.

# DEVELOPMENT OF INSTITUTIONAL ARRANGEMENTS

## COOPERATION BETWEEN GOVERNMENTS

**Recommendation:** Because they share many ecosystems, watersheds and airsheds, the U.S. and Mexican governments should work more closely to develop additional joint cross-border programs, involving representatives from local, state and tribal governments as well as the federal governments.

**Response:** There is an increasing number of binational projects. While these projects require clearly defined standards and responsibilities and a high level of sensitivity to differing technological, cultural, and organizational environments, the U.S. and Mexico are cooperating very effectively and there is increasing involvement of a wide range of stakeholders in their development and implementation. Technical and financial assistance are also important components to help build on and transfer successful cross-border programs.

**Recommendation:** Encourage greater coordination of U.S. and Mexican government border programs with those of the International Boundary and Water Commission (IBWC), and the NAFTA North American Commission for Environmental Cooperation (CEC).

**Response:** The International Boundary and Water Commission (IBWC) exercises responsibilities for implementation of several U.S.-Mexico treaties. These treaty-mandated responsibilities provide the two countries the ability to deal with binational water quantity and quality data gathering, information sharing, wastewater infrastructure development and potential water quantity and quality problem identification and resolution. Reflecting a Board recommendation, IBWC is carrying out these responsibilities in partnership with states and municipalities and federal agencies of the two governments. IBWC has actively supported the environmental cooperation process established by the La Paz Agreement along with other mechanisms, including working with the BECC and NADBank. The IBWC finds the Board's support of sustainable development in project planning, recognition of the transboundary nature of environmental infrastructure, focus on basin-wide nature of the resources, and the treaty mandates on water quantity to be an added impetus for its strategic planning into the 21st century. Importantly, this supports an IBWC focus to lessen, over time, federal resource obligations in operations and maintenance of pre-NAFTA

wastewater projects, and cooperation with other agencies and organizations to support programs to improve the institutional capacity of the Mexican sanitation system operating organizations.

The IBWC is leading binational technical efforts on water quality and quantity questions, supporting natural resource information needs in the Colorado River Delta, leading binational technical committees of state, federal and local officials to facilitate data gathering and information sharing the Santa Cruz River and the El Paso-Juarez aquifers, and leading similarly structured binational technical committees in facility planning efforts at Mexicali, Nogales, Reynosa, Piedras Negras, Ciudad Acuna, Nuevo Laredo and Matamoros to enhance their chances for BECC certification and NADBank financing.

The NAFTA Commission for Environmental Cooperation (CEC) is addressing specific issues, e.g., San Pedro River habitat and water issues as well as broader transboundary impact assessment processes.

## LOCAL AND REGIONAL MANAGEMENT CAPACITY

**Recommendation:** Continue to build needed local capacity to address problems on an ongoing basis. Assist nongovernmental organizations and provide networking assistance to help share information and resources. Encourage binational community-level cooperation on cross-border issues and programs. Provide technical and financial assistance to build on and help transfer successful community-level cross-border programs. Widely publicize binational success stories which might serve as a models.

**Response:** Border XXI is working to help build capacity and decentralize environmental management in order to augment the participation of state and local institutions. Meeting this challenge involves assuring access to information, training, and support of locally identified priorities.

The binational Environmental Information Resources Workgroup has been working to establish a number of mechanisms for building capacity. There are a number of programs to assure access to information; state and local government, community and industry training programs are being conducted directly and through nongovernmental organizations and universities; and there are a number of ongoing programs to assist the Mexican government develop its own capacity. Community development support is being provided through participation in sub-regional workgroups, binational public meetings to further local

input into existing projects and anticipated future projects, and BECC and NADBank grant programs to help communities plan and develop needed infrastructure. In addition, over the past two years, 28 Border XXI grants averaging \$40,000 have been awarded to help border organizations implement local, regional and border-wide programs. These competitive grants have supported local and binational initiatives, including efforts in environmental education, recycling, hazard prevention, and training, in Cochise County, Ambos Nogales, San Diego/Tijuana, western Sonoran Desert, San Elizario, Donna, Laredo, Columbus/Palomas, Big Bend, and Brownsville. Grant funds also supported the Campo Band of Mission Indians in designing a Kumeyaay Environmental Strategy. In addition, the Fish and Wildlife Service Borderlands Initiative has been providing grant funds in Mexico averaging \$25,000 to broadly based community projects focusing on local capacity building, sustaining ecosystems, and information transfer and management

The Department of Agriculture Rural Development Office of Community Development is supporting the Southwest Border Partnership, involving local governments and community organizations in the four border states, to help address community and economic development and infrastructure issues. The Partnership has also invited participation by other regional organizations such as the Tennessee Valley Authority to provide technology transfer on successful approaches in other parts of the U.S.

It is also recognized that the Good Neighbor Environmental Board is providing a forum for the public on the U.S. side of the border and for growing coordination with the public on the Mexican side of the border. We are confident that the Board will provide an increasingly broad and binational perspective on the border publics' needs and concerns and development of a sustainable future for the border region.

## INDUSTRY'S ROLE

***Recommendation:* All levels of industry and government must more effectively address the significant impacts of industrial growth on the border environment and identify mechanisms for greater industry participation. We encourage development of public-private sector programs that link environmental protection and economic development objectives. We also encourage the governments and communities to recognize the growing number of companies that are demonstrating a strong commitment to pollution control, prevention, recycling and reuse.**

***Response:*** In order to develop cooperative partnerships among government agencies, nongovernmental organizations, and industry, a number of projects are also currently underway, such as the Arizona-Mexico International Green Organi-

zation (AMIGO) program, the State of Texas voluntary audits program, and the San Diego/Tijuana pollution prevention partnership. The AMIGO program is a binational state-level partnership for pollution prevention designed to create partnerships leading to voluntary pollution prevention activities among industries located in the Arizona-Sonora border region. A collaborative industry pollution prevention program is under development for the Tijuana area involving NGOs, Federal and state governments, *maquiladoras*, and academia to provide technical assistance to selected *maquiladoras*; the program may be funded by contributions from *maquiladoras* based on cost savings resulting from application of pollution prevention techniques and technologies. Joint U.S.-Mexico staff site assessments and follow-up site visits are focused on determining opportunities to implement pollution prevention and clean technology for Mexican industrial facilities. These have resulted in reductions in waste and air emissions and have also saved over \$1 million through pollution prevention. Bilingual pollution prevention manuals have also been developed for the several key industries. The Department of Health and Human Services also sponsored an international symposium on health which addressed the *maquiladora* industry's impact on the environment and development. Under the Government Performance and Results Act, binational environmental indicators have been developed to quantitatively measure success in implementation of programs; Mexico is undertaking a similar effort. A variety of measures have been identified which will require Mexico and the U.S. to compile and report data on key indicators of success.

Two important efforts have been initiated in the past year to address waste management issues associated with industry: development of a waste generation model to help determine the amount of hazardous wastes being generated along the Mexican border, and binational measures to collect data from Mexico relating to the *maquiladora* solid and hazardous waste issues. The waste generation model will help the U.S. evaluate the extent of industrial growth impacts and monitor how this changes over time, allowing better targeting of waste minimization efforts.

Discussion is underway regarding expanded programs to recognize companies that are implementing programs which are environmentally responsible and cost effective. The U.S. already has an array of recognition programs for to involve industry and promote pollution prevention such as the Environmental Leadership Program, Border Waste WiSe, Empowerment Zone and Enterprise Community programs, and other programs. Mexico has also developed "Industria Limpia" to recognize Mexican national industry for their environmental achievements. There are also recognition programs at state levels such as the Clean Texas 2000 and pollution prevention round tables. The ten border states are

considering a "showcase" of border industries which are successfully participating in existing programs and a forum for transferring successes to others, providing incentives for more industry participation and partnerships.

## **NATIVE AMERICAN NATIONS INVOLVEMENT**

*Recommendation:* Native American nations **along** the border still **have** not been included to **any** significant extent in planning or implementation of border programs. Substantially accelerate efforts to include Native American representatives in border **planning**. Because several of the tribes' lands **and** peoples are in **both** countries, actively involve the Mexican national government in **addressing** tribal cross-border issues.

*Response:* EPA provided a total of \$17 million from fiscal year 1996 border infrastructure funds to help meet environmental infrastructure needs identified by border tribes. Based on these estimates and the use of allocated funds, EPA believes that no additional tribal infrastructure funding will be required immediately.

Under Border XXI, the two governments agreed to encourage greater involvement of tribal nations in all workgroups. Tribal representatives have been invited to participate in regional subgroups and at the annual National Coordinators meeting where key policy decisions are made. Native American community representatives are already involved in binational natural resources protection under a binational Letter of Intent on Adjacent Protected Areas. The Tohono O'odham Nation is helping lead a project for the Western Sonoran Desert to identify threats to cultural resources. A conference was held February 3-5, 1998 at San Diego that brought together the 25 tribal entities along the border with federal officials to help identify tribal issues and needs, to provide an opportunity for federal agencies to discuss their programs and resources with tribes, and to create new opportunities for assistance and coordination. The Environmental Information Resources Workgroup also has worked closely with tribal staff to solicit input on environmental indicators. The San Diego Border Liaison Office has also held seminars for tribal representatives to discuss participation in the Border XXI Program and has hired a full time coordinator to work with tribes in Arizona and California.



**Board Reactions:** The Board commends the progress that has been made over the past two years in working with border tribes to identify and address their needs, and to increasingly recognize the special relationship tribes have with the governments, the environment and the land. The Board believes that tribal environmental infrastructure needs substantially exceed the \$17 million allocated by EPA. In addition, tribes have informally identified significant health, housing, transportation, and related needs to the Board and to agencies at the recent tribal conference. The Board encourages EPA, other agencies, BECC and NADBank, to work with the 25 border tribes to help them as needed to develop plans and funding estimates, and to work closely together to leverage their existing authorities and funds to meet these needs.

The Board endorses the border tribes proposal to hold a binational conference in 1999, following on the 1998 domestic conference, that will include indigenous peoples' representatives from both sides of the border along with representatives of both U.S. and Mexican federal and state governments.

## **AIRSHED PLANNING**

**Recommendation:** Evaluate the implementation of the binational Air Quality Management Basin and Joint Advisory Committee (JAC) for the El Paso-Juarez airshed to determine if this model may be useful for addressing air quality issues elsewhere in the region, as well as for other transboundary environmental problems, such as water, hazardous waste, and health.

**Response:** The JAC was formed through a consensus that regional air quality problems are shared and that it was essential to address the problems on a binational basis. The binational JAC formulates recommendations to the Border XXI Air Work Group. The Paso del Norte Air Quality task force, a non-governmental, non-partisan organization, has led the effort to advocate and sponsor pollution abatement throughout the basin, to create public awareness of air pollution problems, and to garner governmental support for studies to define problems and possible solutions.

The San Diego and Tijuana area has also begun examining the possibility of forming an entity similar to the JAC for the San Diego/Tijuana/Rosarito area. In November 1997, the Commission for Environmental Cooperation (CEC) hosted a meeting in San Diego to provide a forum for individuals interested in forming such an entity. Several individuals with experience in the creation of the El Paso-Juarez JAC attended the meeting to provide their experience.

**Board Reaction:** The only binational entity for the El Paso-Ciudad Juarez air basin is the binational public advisory body that advises the Border XXI Air Working Group. The Board continues to urge the establishment of the authorized air quality basin management entity for the El Paso-Juarez region, and for other major urban binational regions such as San Diego-Tijuana. We also continue to recommend potential application of the concept to address other transboundary environmental problems, such as water, hazardous waste, and health.

**Recommendation:** Address visibility problems at Big Bend National Park on a binational and multi jurisdictional basis using the Grand Canyon Visibility Transport Commission (GCVTC) as a model. Apply a truly binational effort to reduce emissions from Carbon I and II and from other sources on both sides of the border which are affecting air quality in the region.

**Response:** The Board recommendation contains a number of the characteristics that define U.S. government efforts to address visibility problems in the Big Bend region. EPA, the Department of the Interior, Texas, and the government of Mexico are working to develop a conclusive understanding of the sources and remedies of visibility problems in the Big Bend region. EPA views the Board's reference to the Grand Canyon Visibility Transport Commission (GCVTC) as an example of how visibility is a problem that requires a regional solution. The U.S. and Mexico designed the 1996 joint field study to cover a vast area containing much of northern Mexico and Texas. The impact of many sources beyond Carbon I and II were, and will be, considered in deciding which sources have the greatest impact. Other elements of the GCVTC effort included collaboration on regional studies and data gathering, use of outside experts when possible, a collaborative effort where all interested parties are invited to participate, and anticipation that the analysis will guide interested parties to a comprehensive, equitable solution. The Big Bend effort shares these characteristics with the GCVTC.

The agencies welcome the opportunity to deal with issues of air quality in the Big Bend area and emissions from Carbon I and II on a truly binational basis. EPA has sought to address the issue on a regional basis, proposing the series of studies now underway. If the studies bring to light the need to control sources within the United States that affect visibility in Big Bend, EPA will address these issues as part of the national program on acid rain, visibility, and fine particulate control. EPA appreciates and shares the Board's desire to see the United States and Mexico reach an appropriate solution.

**Board Reaction:** Given the promulgation of new National Ambient Air Quality Standards for ozone and small particulates (PM 2.5) in July 1997, the Board recognizes the need for additional collaborative research concerning the impact of these and other pollutants on human health, and recommends that federally-funded research programs investigate these impacts, especially on low-income peoples of the border region.

## WATERSHED PLANNING

**Recommendation:** The Board recommends consideration of the Department of Commerce's binational sustainable development study of the Rio Grande River (that addressed economic development, water use, and watershed planning) as a possible model for other airshed and watershed areas.

**Response:** Funding is expected in fiscal year 1999 for unified assessments to assess and characterize water resources from a watershed perspective. This effort will be led by EPA and the U.S. Geological Survey. The Department of Commerce expresses its appreciation for the Board's recognition of its work and its willingness to work with other agencies considering application of its approach as a model.

**Board Reaction:** The Board commends expanding interagency efforts to develop unified watershed assessments along the border. These unified assessments should have very positive impacts on approaching management of all water resources, as well as improving public health and water quality.

## WATER QUANTITY MANAGEMENT AND WATER CONSERVATION

**Recommendation:** Much greater focus is needed on water quantity issues. In many locations along both sides of the border, there are still critical questions about the location, amount, quality and movement of groundwater, and ecosystem relationships. We urge the two governments to work jointly and with the states and the International Boundary and Water Commission (IBWC) to collect essential water quantity data, using joint protocols, and to discuss water allocation issues.

**Response:** On the U.S. side of the border, primary authority and much of the responsibility to protect groundwater resources resides with U.S. states. Although the U.S. federal government has some jurisdiction over groundwater, it is more limited than its jurisdiction over surface water. Congress has authority under the Commerce Clause of the U.S. Constitution to regulate groundwater in the U.S., including instances in which groundwater crosses the boundary between U.S. states or between the U.S. and a foreign country. EPA takes the position that Congress has chosen to provide some Federal jurisdiction over groundwater through the Clean Water Act. In addition, some portions of the Safe Drinking Water Act authorize EPA to regulate contamination of underground sources or potential underground sources of drinking water. The Resource Conservation and Recovery Act (RCRA) regulations deal directly with groundwater, and both RCRA and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund") provide some remedial authority with respect to groundwater. Nevertheless, since there is no comprehensive Federal authority over U.S. groundwater resources, efforts to protect groundwater on the U.S. side of the border with Mexico must focus mainly on action by the U.S. border states.

The IBWC's policies emphasize sustainable, holistic, watershed-based approaches; the importance of binational communications, and establishing a new operating paradigm with the BECC and NADBank. Operating under several treaties, IBWC conducts data gathering, facilitates information sharing, and conducts planning on boundary rivers. A 1970 boundary treaty gave the IBWC a number of responsibilities for flood plain management and for providing some degree of natural restoration to the rivers. In the lower Rio Grande Valley, during the drought of 1992-1993, IBWC negotiated a loan of water to Mexico and at the same time increased the dialogue between both countries bringing in the water sectors from the lower Rio Grande Valley and counterparts in Mexico to find ways to develop better knowledge of the water system. IBWC is still in charge of operating and maintaining the vitally important international Amistad and Falcon Reservoirs. They also have had a number of agreements tied to the delivery and quality of Colorado River water that is delivered to Mexico. With NAFTA, IBWC is under pressure to take a different view in the manner in which deliveries are made to Mexico, on the quality of the waters delivered to Mexico, and data gathering beyond the 24-mile reach of the Colorado River.

IBWC has developed wastewater infrastructure projects based on federal directives that will require long term government subsidies, but are taking steps to reduce federal government costs, and increase work with the NADBank and local communities to build local capacities. IBWC receives resources from EPA, including \$47 million for a facility plan

for five Mexican communities on the Rio Grande River and, on the land boundary, with Nogales and Mexicali to meet BECC certification requirements in 1998. IBWC also serves as a coordinator of agencies with the ability to move equipment and personnel from one side of the border to the other unimpeded. IBWC has been a partner with other U.S. and Mexican agencies before signing of the 1983 LaPaz Agreement and continues to be very active in the Border XXI water work group.

**Recommendation:** Develop new binational water quantity and ground water management institutional arrangements at key locations along the border that combine the planning and public oversight aspects of the El Paso-Ciudad Juarez Air Quality Management Basin and Joint Advisory Committee, and the implementation and management aspects of the Rio Grande River Water Master.

**Response:** With respect to new binational institutional arrangements, the Department of State endorses development of appropriate binational entities that facilitate innovative solutions to transboundary problems.

**Recommendation:** Develop and implement a border wide and bilateral strategy and programs for the conservation and use of ground and surface water sources. Because many water quantity problems relate to agricultural practices, the Board recommends greater efforts to encourage use of "best management practices" and local water conservation programs.

**Response:** The Border XXI water work group believes that, prior to being able to establish border-wide strategies, data must be comparable on a regional basis. The link between cause and effect, such as agricultural practices on water quality, can only be established through well-defined and implemented monitoring plans.

**Recommendation:** Increase emphasis on addressing in-stream flow issues.

**Response:** In-stream flow is a major concern to Department of the Interior resource managers in the Lower Rio Grande Valley where reduced flows threaten native flora, fauna, and recreational values. Information is needed by federal, state, local, and non-governmental organizations to document historical hydrologic trends for the river, to determine the in-stream flow requirements of the flora and fauna, and to develop management decisions that will result in maintenance and enhancement of the river's biodiversity. One obstacle to influencing instream flow decisions is that Rio Grande water

management authorities do not endorse management of in-stream flows for habitat and recreation. They are primarily concerned with flood control, municipal use, and irrigation. In addition, Federal reserved water rights for in-stream flow in the San Pedro Riparian National Conservation Area is currently under adjudication in Arizona state court.

## **HAZARDOUS MATERIALS AND EMERGENCY RESPONSE**

**Recommendation:** Improve the efficiency and reliability of notification and monitoring of hazardous materials transported across the border

**Response:** EPA, U.S. Customs and the Department of Transportation continue to cooperate to address problems associated with transportation of hazardous materials across the border. In order to understand what hazardous chemicals cross the border and to facilitate development of realistic sister city contingency plans, EPA is completing commodity flow studies at various high risk crossings, such as Brownsville, McAllen, Laredo, Eagle Pass, Del Rio, and El Paso. In addition, the Haztraks database has been developed to facilitate U.S. and Mexican efforts to track hazardous waste shipments crossing the border, and to enable both countries to conduct import and export compliance monitoring and enforcement activities. The Haztraks system has seen system and data improvements over the past two years resulting in more accessible, accurate and timely data. Mexico has developed a new tracking database containing substantially more Mexican data than Haztraks that will interface directly with Haztraks and should allow for comprehensive tracking of transboundary waste shipments. However, correlating the U.S. and Mexican data has been difficult due to lack of data from Mexico on original shipments and different waste definitions between the two countries. EPA recently completed a prototype waste correlation dictionary to help correlate and track transboundary shipments. Plans are already under development to begin training Haztraks customers to use both systems as soon as possible.

**Board Reaction:** Further efforts are needed to accurately monitor and control cross-border flows of hazardous wastes, including the more effective operation of Haztraks.

**Recommendation:** Develop binational agreements and joint emergency response programs that facilitate the rapid movement of emergency response personnel and equipment across the border, improved availability of emergency equipment at crossings, development and testing of response plans, improved tracking of cargoes

**prior to inspection, and thorough training of inspectors on both sides of the border.**

*Response:* U.S. government staff have been working with sister cities to help develop contingency plans which address the hazardous chemical risks associated with their community, accelerate movement of emergency response personnel and equipment across the border, improve availability of emergency equipment at crossings, track cargoes, and train inspectors. Grants have been provided to states to address sister city issues, for chemical emergency response training for border emergency responders, for workshops to facilitate development of sister city contingency plans, and for specific technical assistance. EPA also chaired a Cross-Border Workgroup to discuss barriers to responding to hazardous materials emergencies in the border area and to identify potential solutions for overcoming barriers. The workgroup found that several issues could be resolved at the local level through coordination with appropriate local agencies. IBWC also has the ability to move equipment and personnel from one side of the border without immigration/customs restrictions.

***Recommendation:* Obtain donations of usable equipment and simplify transfer of equipment to Mexico.**

*Response:* Currently, U.S. regulations do not permit donation of equipment to foreign countries. However, EPA has been working with local communities to explore opportunities to share such equipment. Local U.S. communities along the border have donated equipment to their Mexican neighbors.

***Board Reaction:* The Board recommends that the governments expand their border region contingency planning efforts to address large scale emergencies, such as the recent fires and eruptions, that may affect the border region. The Board notes that this was a major topic of discussion at the recent Binational Commission meeting.**

***Recommendation:*** Begin addressing immediately the implications and requirements for **hazardous** waste disposal in the border region that will result from the termination of the *maquiladora* program in 2001.

*Response:* The *maquiladora* program will continue beyond 2001 unless Mexico terminates it. Approximately 80-90% of the *maquiladoras* are U.S.-owned; the remainder are owned by companies in non-NAFTA countries. The NAFTA phase-in of tariff elimination will not affect these non-NAFTA countries and they can be expected to continue using the program; some research suggests that the advantages of conducting business under the *maquiladora* program are such

that U.S. companies may choose to continue doing business under this program despite the elimination of tariffs as a result of NAFTA. These advantages include expedited customs brokering, continued tariff and tax breaks for products that will not be affected by tariff reductions until 2008 under the NAFTA schedule, and continued exemption from value-added taxes for inputs into the manufacturing and assembly processes. In any case, many U.S. companies can be expected to take advantage of the NAFTA tariff reductions and to establish subsidiaries in Mexico outside of the *maquiladora* program. This will be important for waste management in that Mexico may be required to handle a large increase in hazardous wastes generated by U.S. companies that will no longer be required to be returned to the U.S. for treatment, storage and disposal. Mexico has completed a "vulnerability atlas" which identifies acceptable locations for the siting of hazardous waste treatment facilities. Companies have been invited to bid on the construction of such facilities within the targeted zones. The U.S. has offered technical assistance to the Mexican government in the design, construction and management of such facilities, but cannot fund any activities directly through any Mexican entity.

## HEALTH

***Recommendation:* Address the unique public health issues of the border region. Consider establishment of the authorized U.S.-Mexico Border Health Commission. Provide funds to continue to support border health training programs, increase training in surveillance, epidemiology, and environmental health; implement a tuberculosis control program at the border; strengthen and expand community-based, electronic, binational, environmental health surveillance systems; create a truly binational clearinghouse on environmental and health data, research and resources.**

*Response:* A significant number of steps have been taken to implement Board recommendations regarding border environmental health institutional needs. In 1994, legislation authorizing a binational U.S.-Mexico Border Health Commission (BHC) was passed by Congress, which allocated \$800,000 for BHC implementation in fiscal year 1998. The Secretary of the U.S. Department of Health and Human Services (DHHS) will chair the U.S. side of the BHC which is now being formed, and the first meeting is being scheduled. The Department is working with Mexico and border community groups to maximize the BHC's initial meeting. The Department agrees with the Board's earlier recommendation that to be effective, the Commission must ultimately be binational. DHHS provides funds to the border region in support of training efforts through various mechanisms. Most of the

DHHS support comes from its normal grants mechanisms to State and local governments. It also supports the Pan American Health Organization's (PAHO) Field Office in El Paso, Texas, which provides training opportunities in epidemiology and program management. The National Institutes for Health (NIH), Centers for Disease Control and Prevention (CDC), and the Environmental Protection Agency (EPA) have cooperated to train health scientists, clinicians, epidemiologist, toxicologists, engineers, industrial hygienists, chemists, and allied health workers in both general environmental health and occupational health. Recently, they have been training physicians from *maquiladoras* in occupational health. CDC also offers a distance learning program for public health professionals and a training program for people to design, implement, and evaluate prevention programs and interventions at the community, state, and national levels.

Tuberculosis (TB) continues to be a public health concern on the border. The Ten Border States lead a binational, border-wide, public/private tuberculosis control campaign. The tuberculosis control project accelerates sharing information, education, and state-to-state agreements. CDC is continuing its multi-year collaborative project with Texas on tuberculosis prevention and health promotion. Additional efforts are being discussed with the advent of increased prevalence of drug resistant TB.

Several mechanisms have been developed over the past years to address the need for better environmental health surveillance and communication systems on the border. The Interagency Coordinating Committee for Environmental Health on the U.S.-Mexico Border (ICC) continues to be an important forum for U.S. federal, state and local health and environmental representatives. The PAHO Field Office is also an active ICC participant. ICC members conduct research projects with support from the Environmental Protection Agency (EPA) to determine the potential risk of environmental contaminants on human health. Some of the work which originated in the ICC has been expanded to a binational forum through the Environmental Health Workgroup of Border XXI (EHWG). The ICC and the EHWG are inextricably linked, with the ICC providing a domestic focus for environmental health issues and the EHWG offering ICC members an avenue for pursuing binational environmental health issues.

The Border XXI Environmental Health Workgroup is focusing on seven initiatives: 1) a *Health Alert Bulletin Board* was established to help share epidemiological data and information about environmental health related issues quickly across the border. The initiative is considering the development of a binational directory of environment and health officials, an electronic conduit for communication among border health offices and federal agencies, and a communication system to share product alerts; 2) *Pesticide*

*Exposure and Health Effects in Young Children* is being addressed in three phases: discover what pesticides are being used, locate the people exposed, and identify risk factor values. Phase I has been completed and Phase II is underway; 3) *Pediatric Lead Exposure Identification and Risk Reduction*. Although the lead program within CDC and EPA now receives less funding than before, pediatric lead exposure is still considered a problem on the border. Recently, a new technology that provides a simple and very rapid reading of blood lead levels was introduced and is being used in a project in Arizona and New Mexico; 4) *The Advanced Training* initiative is a collaborative effort with PAHO to provide adequate and appropriate training to individuals in the realm of toxicology, epidemiology, and environmental health. Four scholarships have been awarded for advanced training for public health workers in the border region; 5) *Poison Control Center Development*, including establishment of a poison control center in each of the Mexican border states that will provide a central point of assistance to alert both governments to potential problems, and will link laboratories, the poison center and an epidemiologist to assure a full range of public health services; 6) *Geographic Information Systems* for Environmental Health are being expanded, working with the pesticides initiative to develop a visual data base; and 7) *Neural Tube Defects* are still a concern regarding potential links to environmental exposures. By the end of 1998, a report will be presented to border communities about what is known and how to target resources.

Several efforts are underway to address health and environmental data communication needs. DHHS is working with PAHO and community-based organizations to evaluate data infrastructure needs through demonstration programs in each of the border states. The Sister Communities Health Profiles, a 1991 compendium of binational demographic and health statistics for the U.S.-Mexico Border, is currently being updated by the U.S.-Mexico Border Health Association (USMBHA). The initial preformation process of the U.S.-Mexico Border Health Commission looked at the availability of border health data to formulate a baseline of information.

**Recommendation: Evaluate the benefits of the health delivery *promotora* concept and provide additional *promotora* training.**

**Response:** The Department of Health and Human Services is funding development of community-based health outreach models that can be replicated in urban and rural areas throughout the U.S.-Mexico border region. The four U.S. border states are utilizing the *promotora* concept (training and using community representatives) to improve community access to health care and community services. In the third year of funding, the project is moving along well.

**Board Reaction:** The Board continues to support the *promotora* concept. We find that *promotoras* are being asked to perform more and more health care functions and believe it is time to develop standards for assuring the effectiveness of *promotora* training and delivery of health care services.

## NATURAL RESOURCES

**Recommendation:** Improve management and coordination of natural resources in the border region.

**Response:** The Field Coordinating Committee of the Department of the Interior (DOI) is a very successful effort at improving communication among regional and local staffs of the National Park Service, Fish and Wildlife Service, Bureau of Land Management, Bureau of Indian Affairs, Bureau of Reclamation, Geological Survey, and Minerals Management Service. It meets regularly to share information, establish common positions, and jointly finance projects all of which improves consistency and the impact of Federal conservation work along the U.S. Mexico border. Under Border XXI, the natural resources work group is focusing on 1) exchange of information on vegetation, wildlife and other natural resources to support natural resource management decisions in the U.S. and in Mexico; 2) coordination of natural resource management programs and decisions among federal and state agencies on both sides of the border; and 3) holding training courses, educational programs and outreach activities regarding natural resource management and wildlife and habitat protection. Efforts this year will emphasize increasing state, tribal and other public participation on both sides of the border in development of priorities.

In the Department of the Interior, the Bureau of Land Management, National Park Service and U.S. Fish and Wildlife Service administer nearly 10 million acres within 100 kilometers of the border. There are also millions of acres held in trust for Native Americans in reservations along the border. The Fish and Wildlife Service and National Park Service provide extensive technical and leadership training with Mexico. Together, they provide about \$900,000 annually in grants to support locally-generated projects addressing capacity building, ecosystem conservation, and information transfer. The Fish and Wildlife Service and National Park Service also support training projects along the border to restore natural vegetation in riparian zones while managing the land for the combined purposes of wildlife habitat, nature-oriented recreation and environmental education at the grassroots level. Participants include Mexican personnel as well as local groups and communities.

The Interior department has also been developing a binational framework agreement with Mexico to cooperate on wildfire management and rapid response to emergency wild land fire regardless of what side of the border the fire is occurring. In a separate but related effort, a guidebook has been developed to provide natural resource information for fire management and law enforcement officers. Regarding the illegal trade in wildlife products and wildlife, the Fish and Wildlife Service has worked with U.S. Customs agents to teach them how to identify illegally traded wildlife products. In addition, U.S. Fish and Wildlife and counterpart agencies in Mexico and Canada have held workshops on trade in reptile skins and birds and, in Mexico, the forensic aspects of wildlife investigations. The U.S. Geological Survey has just initiated a major five year analysis of the factors controlling the occurrence and distribution of ground water in the southwestern U.S. and along the border. Many of the study findings will have relevance to establishing links between existing water resources and natural resource variables.

For the Department of Agriculture, primarily the U.S. Service, is also involved in managing two national forests along the border totaling 2.3 million acres. USDA's Natural Resources Conservation Service and Rural Development are also very involved in the border land management and rural infrastructure development.

**Recommendation:** Use "best management practices," such as drip irrigation in irrigation water management in the border region, which is almost universally water poor.

**Response:** USDA, through the Natural Resources and Conservation Service, is committed to best management practices in its conservation efforts. Irrigation management is an important element of the overall strategy and the department has sponsored a large number of projects along the border.

## TRANSPORTATION

**Recommendation:** A top priority for border development must be the establishment of a rational and binational transportation planning process that is coordinated with Mexican agencies. Develop a comprehensive, cross-border transportation planning process. In the meantime, develop cross-border transportation authorities to guide state transportation investments. Upgrade cross-border and border area highways and establish joint emergency response capabilities for dealing with accidents involving hazardous waste and hazardous materials in the region.

*Response:* The Department of Transportation (DOT) is working to better coordinate and integrate the planning of transportation infrastructure with Mexico. Through the Federal Highway and Federal Transit Administrations, the Department is participating in the Joint Working Committee (JWC), which is a binational effort at the state and federal levels of government. The U.S. and Mexican state departments also are part of this effort. The JWC recently completed a \$2.4 million study emphasizing trade and transportation planning. This study and its implementation plan can provide the framework recommended by the Board.

In addition, the Federal Highway Administration (FHWA) has been working with other US. agencies, the states, as well as with its counterparts in Mexico to improve the compatibility of commercial motor vehicle safety standards, signage and signals, permissible vehicle weights and dimensions, and to better coordinate compliance and enforcement activities including the processing of vehicles at border crossings. Efforts also are underway to improve the collection of transportation, trade, and related data. These improvements foster the Board's safety goals through the safer handling of all commodities including hazardous materials and wastes.

There are a significant number of highway improvement and border crossing projects being put in place or being developed through both public and private funds. Much of the federal surface transportation aid has been provided

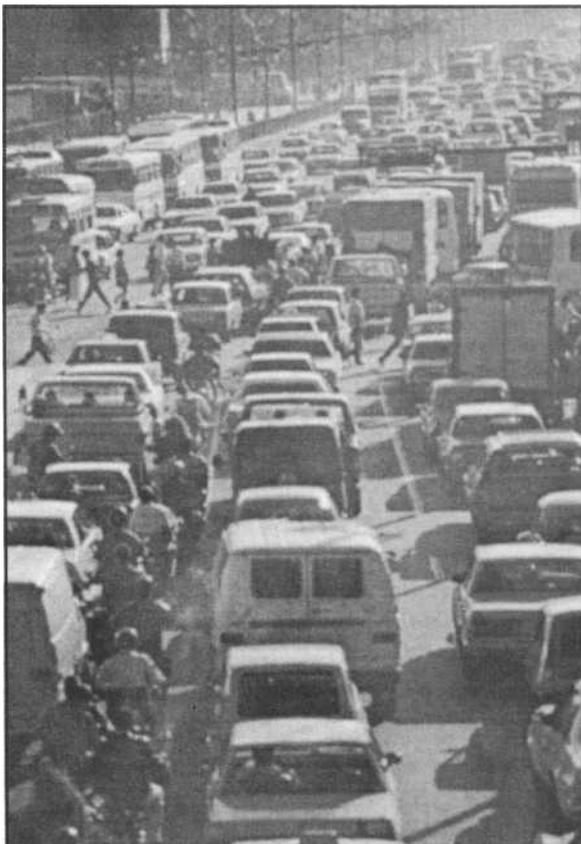
through state Departments of Transportation and other entities rather than through unique border programs. Over the last several years, bridges have been permitted outside of metropolitan areas, and commercial traffic, especially hazardous materials, is being routed to specific ports of entry that have modern facilities normally located outside of population centers, e.g. Los Tomates/Matamoros, Laredo III and IV, Nuevo Laredo, and the new land crossing at Calexico East/ Nuevo Mexicali.

In seeking to improve border crossings, FHWA efforts extend to the use of Intelligent Transportation Systems, binational planning efforts, as well as the placement of new infrastructure away from congested urban centers e.g., Laredo III/IV Bridge and the crossing at Mexicali/Calexico. The ITS efforts are best demonstrated through the North American Trade Prototype (NATAP) which is an effort by DOT, Treasury/Customs, and Justice/INS to create a single federal database for the processing of all transborder trade and the vehicles and drivers used to move those goods. This data base also is expected to generate more timely and reliable information about NAFTA trade flows. It also will serve as a key component in the International Trade Data System which will create a single federal data base for all the movement of all international cargoes and the vehicles and drivers used to transport them.

Other cooperative federal and state efforts include the Land Transportation Safety Standards Committee (LTSS) and the U.S.-Mexico Binational Bridges and Border Crossings Group. The LTSS is a trilateral working group established under NAFTA, which is, among other things, seeking to harmonize requirements and vehicle standards, reduce air pollution as part of the larger effort to improve safety and the environment as well as expedite cargo processing at the border. The U.S.-Mexico Binational Bridges and Border Crossings Group meets regularly to coordinate border crossings and bridges and their related infrastructure.

FHWA and the Federal Transit Administration (FTA) are using a variety of innovative financing tools to expedite the creation of needed infrastructure. Advanced construction loans and state infrastructure banks (SIBS) are two tools the border states now have to finance those transportation improvements that best meet their needs. All border states have or are creating SIBs and are use the other federal financing tools as well as the more traditional grant programs. Reauthorization of the federal surface transportation program, TEA-21 (Transportation Equity Act for the 21st Century) will provide increased capital for these efforts.

The FTA has created a Livable Communities program which integrates transportation with other federal services such as training and community development to provide for sustainable development in these economically distressed areas. The Corpus Christi, Texas project has successfully



integrated transportation with child care, training, and economic development.

In addition, FTA has funded a model project in McAllen, Texas to provide variable route service to increase transit availability. In developing the system, studies revealed that the biggest obstacle the poor and unemployed face is lack of access to flexible and reliable transportation. The Department recognized this link between transportation and transitioning people from welfare or underemployment to work. TEA-21 includes the Administration's plan to provide about \$600 million (\$100 million/year nationally) in funds to aid in this transition. The Department is also working with the Department of Health and Human Services (DHHS) to see how to best leverage the monies DOT spends on paratransit and the funds DHHS spends on health care transportation.

***Board Reaction:* The Board continues to recommend that transportation issues in the border region be viewed and addressed in a broad context and that a goal be to establish integrated, sustainable transportation systems. The Board perceives a number of interrelated mobility, land use, watershed and water quality, air quality and hazardous waste and hazardous materials issues that are part of a solution to transportation issues. Each of the border states are facing increasing traffic and border region congestion. This is also being exacerbated by Section 110 of the 1996 Immigration Act, requiring the Immigration and Naturalization Service to create an exit control system.**

## HOUSING

***Recommendation:* Providing sanitary and safe housing is a critical element to addressing environmental problems along the border and in lower income communities.**

*Response:* The Department of Housing and Urban Development (HUD) is focusing primarily on improving living conditions, cleaning up areas and providing for housing. HUD emphasizes providing assistance directly to home owners rather than to developers, and educating people how to build homes and to help them stay on their property. HUD administers a number of funding programs helping to address these issues: the Community Development Block Grants (CDBG), HOME, single family and multi-family housing, FHA program, fair housing, Native American housing, rehabilitation funding, public housing and Section 8. Funds are allocated to states and directly to selected entitlement communities. HUD has helped to establish self-

help centers; provided tools to people to help build and repair their homes; installed septic tanks; provided funds to buy contracts of sale from developers and put title in the hands of the property owners; amended its standards to make housing available to many more people; and is working with universities to develop plans for construction of houses at about \$20 per square foot to put a house within reach of a family for \$175 a month. In addition, HUD has been working with other federal agencies, communities and foundations to identify other sources of funds for non-housing infrastructure, including local bond monies.

In 1997, HUD funding in the four border states totaled approximately \$300 million: over \$125 million to Texas, over \$20 million to New Mexico, nearly \$70 million to Arizona, and more than \$85 million to California. The funding assists rehabilitation and construction of affordable housing, streets and drainage, sanitation, environment, potable water, social services, capacity building. Border states (except for California) are required to set-aside 10 percent of their CDBG funds for assistance to colonias. A new block grant program has been established in the HUD Office of Native American Programs providing border tribes the opportunity to apply for funds through a plan that they submit. This program gives tribes a new opportunity to leverage community development block funds with EPA, USDA, and other funding sources. In addition, for example, a foundation in Texas has contributed \$1.8 million for interest-free housing assistance in colonias. Studies by the Cooperative Housing Foundation and others have identified needs for approximately 215,000 additional low income housing units in U.S. border states (primarily Texas and California) and 280,000 units in Mexican border communities.

The Department of Agriculture (USDA) provides over \$4 billion of housing programs to rural communities across the country. More than \$1 billion of direct loans for low and very low income rural residents are loaned at subsidized interest rates through several hundred county-based offices. These same offices also provide more than \$60 million in home repair loans and grants to very low income residents. USDA also offers \$3 billion of loan guarantees to lenders loaning to rural mortgage applicants whose incomes are between 80% and 115% of median incomes.

USDA also provides \$150 million in multi-family and elderly apartment financing along with farm labor housing and housing preservation grants. The multi-family program also offers over \$540 million in rural rental assistance to nearly 1 million rural residents. These programs are especially utilized in rural communities along the U.S.-Mexico border, providing mortgage financing in communities where the absence of other credit is a continual problem.

## FOUNDATIONS

**Recommendation:** While U.S. private foundations have provided some funding to Mexican and U.S. entities to encourage development of more effective nongovernmental organizations, there are still very substantial needs for enhancing the ability of communities to address development issues and improve access to needed information. U.S. income tax law restricts deductibility of charitable donations when the funds are to be spent outside the U.S., making it very difficult for nongovernmental organizations to obtain funds for transboundary projects. We encourage changes in U.S. tax law to encourage private support to these public purposes, the creation of binational foundations, and technical assistance to Mexico to develop a private foundation network.

**Response:** The recommendation with respect to changes in tax law is not supported by the Treasury Department. Because U.S. legislation restricts tax exempt status to state and local governments and establishes limits on the total of tax exempt funding outstanding, any tax exempt funds that would be targeted to Mexico would reduce tax exempt funds available to U.S. jurisdictions.

## INFRASTRUCTURE DEVELOPMENT

**Recommendation:** For the past several years, both sides of the border have experienced significant developmental pressures due to industrialization, migration and population growth. Environmental, health, housing, transportation and other infrastructure has not kept pace with this development. The interconnection of environment, health, housing, and transportation infrastructure-related problems makes it imperative that infrastructure issues be addressed more comprehensively.

Compile a comprehensive, integrated, binational inventory and priority list of infrastructure needs to help rationally allocate limited resources, identify localities that are more stressed, and communicate priorities to communities competing for funding. Develop this information, at least regionally, to support a rational allocation of limited resources; to identify localities that are relatively more stressed by economic, environmental, and public health issues; and to communicate priorities to communities competing for funding.

**Response:** As one example of a strategic approach, the Rural Development program within the U.S. Department of Agriculture (USDA) has developed both a multi-year strategic action plan and one-year tactical action plan for meeting the needs of rural communities, including sections that deal specifically with the border region. These plans include specific goals for expanding outreach to partners in order to leverage assistance to the communities being served. Empowerment Zones and Enterprise Communities were also required to create a strategic plan to ensure prioritized needs are met first. The two Enterprise Communities are expected to apply for status as Empowerment Zones which will include additional goal setting and prioritization. Currently, USDA agencies are not empowered to deal binationally but work closely with the NADBank and BECC on infrastructure projects on the U.S. side of the border. A Border Region Initiative is also being developed to help border communities to identify common problems and to search for solutions at a regional level. In Arizona, the designation of the Arizona Border Region Enterprise Community and the creation of a strategic plan by these border communities during the application process also emphasized sustainable development policies. In Texas and California similar plans were the basis for the designation and working relationship with the Rio Grande Valley Empowerment Zone and the Imperial Valley Enterprise Community.

## **BORDER ENVIRONMENT COOPERATION COMMISSION (BECC)**

**Recommendation:** BECC should continue to identify ways to streamline its application process to encourage more rapid certification of projects for NADBank and other funding sources. We emphasize that this acceleration should not occur at the expense of an effective public participation process in the affected communities.

The BECC technical assistance program and sustainable development project review criteria should emphasize alternative technologies, i.e., technologies that generally have low capital, operating and maintenance costs, and should exercise leadership in promoting water conservation practices.

**Response:** The BECC has incorporated enhanced sustainable development criteria for review of border environmental projects, and has initiated a program to assist smaller communities in developing project proposals. The BECC's High Sustainable Development work plan includes several activities leading to recognition of model programs on the border: internal education/training; identification of experts in the field to serve on an advisory board; and linkages with other governmental, industry and nongovernmental organizations where sustainable development is a goal. The BECC is also in the process of developing workshop and training sessions in value engineering, principles that will enhance project sustainability, and is exploring a number of innovative technologies suitable for water supply systems and waste water treatment plants. It plans to have two managers on staff responsible for assuring that projects implement sustainable development principles.

With the help of state and local governments, technical committees have been developed in every border state to review needs assessments and prioritize projects to be certified. The new technical reorganization includes five project managers to cover an equal number of regions based on Border XXI subdivisions.

While the BECC is currently focused on water, wastewater and solid waste priorities, it anticipates beginning to address other environmental issues such as air and hazardous waste in the future.

**Board Reactions:** We continue to encourage the BECC and NADBank to foster the use of appropriate, proven alternative technologies to help reduce the capital, operating and maintenance costs of needed facilities.

As binational entities, the BECC and NADBank can play a potentially important role with indigenous peoples on both sides of the border. We commend and encourage efforts by these organizations to work with

tribes to help them identify, plan for and meet their environmental infrastructure needs.

The Board urges the U.S. to appoint its full complement of members to the advisory council to the BECC Board of Directors to assure appropriate formal public input to Board decisions. Several advisory committee members have resigned and the committee is no longer functioning as intended.

## **NORTH AMERICAN DEVELOPMENT BANK**

**Recommendation:** Despite being fully capitalized, North American Development Bank (NADBank) has approved few loans during its existence, relying instead largely on grant funds provided by EPA and working with other funding institutions. The binational agreement establishing the NADBank requires that the Bank charge a market-related rate of interest. This requirement precludes the neediest communities on both sides of the border from use of NADBank funding. The Board strongly recommends that the governments renegotiate the NADBank's charter to authorize reduction of its interest rate to support below-market lending and consider application of U.S. State Revolving Fund guidelines to NADBank operations. The Board urges the NADBank to further improve its communication with border communities and to work with the BECC to implement a coordinated outreach effort.

**Response:** The Bank has three roles: 1) an advisor on a community's current condition; 2) an investment banker who tries to find other, cheaper sources of money first; and 3) a lender of last resort. From its inception, the Bank has been limited by project preparation capacity, insufficient financial resources, and its lending requirements. On the U.S. side, Arizona has identified \$228 million of needs, and that understates needs of the tribal communities. Texas' needs are much larger than that and New Mexico's and California's are also very substantial. The Bank has received total capitalization from the U.S. Government and Mexican governments of \$202 million each. While the Bank is allowed to invest the U.S. capital only in low risk vehicles such as U.S. Treasury bonds, it is receptive to creative solutions to borrowing money and to subsidizing interest rates to bring down interest costs. The Bank can lend 20 percent maximum of its capital. The Bank is also required to lend at a market-related rate of interest. Rather than focus on reducing interest rates, the Bank has been focusing on reducing technology and operating costs to the communities.

The Bank has established an institutional development cooperation program to deal with institutional capacity, the

Border Environment Infrastructure Fund (BEIF), and formal and informal working relationships with federal agencies, especially EPA and USDA. EPA has provided the Bank a grant of \$170 million, to be awarded in grants over three to five years, to establish the BEIF. This fund is proving essential because rural communities along the border are typically very poor. The Bank's institutional development program, funded by interest on Bank capital, helps communities with rate studies, audits, management reviews, computers and software. The program has worked in 36 communities on both sides of the border, including colonias. The Bank has also established an Internet-based newsletter and encourages the public to attend its meetings. The Bank expects to be involved in most Mexican loans and in most U.S. solid waste facilities, but not to be a participant, except for interim loans, in water or wastewater systems in U.S. communities which are expected to rely on the State Revolving Fund (SRF) program.

As with other entities established under the NAFTA agreement, the Commission for Environmental Cooperation, BECC and NADBank will be evaluated as part of the mandatory triennial review of NAFTA implementation.

***Board Reaction:* Unlike the BECC, the NADBank has only one person responsible for public outreach and coordination in the ten border states. NADBank needs to increase staffing to meet their critical education, information and capacity-building responsibilities. We recommend that an outreach budget be established comparable to that of the BECC.**

## **COLONIAS AND RURAL AREAS**

***Recommendation:*** The rate of continuing urbanization in colonias and rural areas, and the absence of proper urban planning and local zoning controls, is threatening the ability of the governments to provide essential infrastructure.

***Response:*** Since 1991, the Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), the U.S. Department of Housing and Urban Development (HUD), and the International Boundary and Water Commission (IBWC) have allocated nearly \$500 million to address colonias infrastructure problems. Most of these settlements are located in Texas and New Mexico although there are comparable settlements in Arizona and California. Estimates indicate the United States border communities will require investments of more than \$1 billion over ten years to bring them up to acceptable standards. Mexico estimates needed investment for border region water services through the year

2000 at more than \$442 million: \$132 million for drinking water; \$265 million for wastewater. These estimates do not address critical air, hazardous and solid waste, transportation, or housing infrastructure needs.

***Recommendation:* Establish closer collaboration among the departments in addressing colonia infrastructure and natural resources management needs. To help determine needed changes in direction, we urge a matrixed assessment of each individual agency's authorities for providing assistance to colonias.**

***Response:*** The delivery of services to colonias requires close coordination to assure that resources are used wisely and projects provide maximum benefit to colonia residents. EPA, HUD and USDA, the key U.S. agencies addressing colonias infrastructure issues, are now working very closely together to coordinate programs, priorities, and allocation of resources and have agreed to work toward reducing the administrative burden for communities who are applying for water infrastructure assistance from one or more of the agencies. Development of the proposed matrixed assessment of existing assistance authorities will be discussed by the agencies.

In Texas and New Mexico, for example, work groups have been established to coordinate water-related projects in general. In both states, the effort involves several state agencies as well as regional representatives of HUD, USDA, and EPA. The working groups have helped to establish close coordination and developed a summary listing of all projects underway or planned by the various agencies.

***Recommendation:* Due to their lack of access to low-cost State Revolving Funds (SRF) loans, tax-exempt bond revenues or significant sources of user fees, colonias and small communities need continued priority focus and subsidization. Continue federal grant and low cost loan assistance at existing levels for infrastructure, health facilities, and training in U.S. colonias for at least the next 10 years.**

***Expand the definition of colonia to address similar substandard developments lacking basic infrastructure in all four border states. While major colonias funding to date has focused on designated colonias in Texas and New Mexico, there are similar substandard developments lacking basic infrastructure in Arizona and California. Eighteen areas have been identified in California in Imperial, San Diego, Riverside, and Kern counties. Arizona and California settlements receive limited funds from USDA, but not from EPA because these states did not identify colonia-like settlements.***

*Response:* When EPA established its program of wastewater assistance to colonias, the agency committed to providing assistance based on assessments of need prepared by the States. These assessments indicated that about \$300 million of EPA funding, combined with State matching funding, would be needed to address wastewater needs in Texas colonias, and \$20 million in New Mexico colonias. Since the \$300 million initially estimated has been funded by Congress, EPA does not intend to request additional funding targeted to colonias. Subject to congressional action, EPA expects to receive future funding as part of the general U.S.-Mexico border environmental infrastructure funding program that will include assistance targeted to low-income border communities such as colonias. Appropriations to USDA for colonias infrastructure are currently \$20 million, slightly less than previous years.

Although there is agreement that colonia-like settlements exist in California and Arizona, these states did not recognize the existence of colonias and so were not included in the initial estimates provided to EPA. Since EPA does not intend to request further funding for targeted assistance for colonias, a change in definition is not needed. USDA and HUD continue to provide funding to colonias and similar standard developments in all four border states.

There is agreement that substantial needs remain in Arizona and California, as well as in Texas and New Mexico. The tribal nations of Tohono O'odham and Cocopah have also designated all or substantial numbers of communities on their reservations as colonias resulting in substantial additional infrastructure needs. The Indian Health Service, EPA and USDA are coordinating on funding tribal projects. EPA dedicated \$17 million for tribal infrastructure last year and has been working with tribes to identify priority needs for these funds.

***Board Reaction:* The Board reemphasizes its view that targeted, line-item based funding must continue for addressing colonias' environmental infrastructure needs. We recommend that EPA revisit its policy not to seek additional colonias set-aside funding following appropriation of the \$300 million initially estimated, or to recognize "colonias" in California and Arizona. These initial funds have not addressed any of the needs in California and Arizona for colonia-like settlements or for tribes which have designated colonias on their tribal lands. In addition, there are significant remaining infrastructure needs in Texas and New Mexico that we believe cannot be met by funds available from State Revolving Funds or other agencies.**

***Recommendation:* Mechanisms currently being used by county officials to promote public housing and provide financial assistance to colonia residents should be enlarged and structured as block grants, and flexibility should be provided to facilitate combination of various federal program moneys, such as those established through the Rio Grande Valley Empowerment Zone.**

*Response:* Initial funding for Empowerment Zones and Enterprise Communities of the Rio Grande Valley, Arizona border region, and the Imperial Valley came from the enacting legislation. Subsequently, USDA has targeted over \$159 million since FY 1995 in business, community facility, and water and sewer funding to the three Empowerment Zones and thirty Enterprise Communities located in rural areas. Of these targeted funds, over \$11.8 million went to three areas located on the border. A second round of Empowerment Zone/Enterprise Community designation was authorized, although not funded, by the Congress last year.

USDA, through its Rural Development program, is working to direct more funding to colonias housing. They are channeling more than \$1 million of their colonia appropriation to provide grants to low income residents to "hook up" to recently completed water or sewer system. In addition, new flexibility has allowed more than \$25 million of additional low interest rate construction and home repair funds to be directed to designated colonias. USDA also works with state, tribal, and local governments to leverage scarce affordable-housing funds to develop more colonia housing.

Unfortunately, neither NADBank nor the BECC have the resources or the mandate to address housing issues.

***Recommendation:* Accelerate the approval and distribution process for currently available federal funding assistance for residential water and wastewater hookups and fixtures assistance in colonias in Texas and New Mexico.**

*Response:* With the recent enactment and state legislative approval for the creation of a revolving fund for water system infrastructure loans, more resources are now available to be utilized for these communities. In 1991, EPA established a \$15 million fund in Texas to provide low-interest loans to colonia residents for connecting homes to water distribution systems and sewage collection systems, as well as for household plumbing improvements; funds have been provided to several communities. EPA has also provided flexibility for limited amounts of its grant assistance in New Mexico to be eligible for hookups and fixtures if needed.

State governments have also begun to do more in helping to address the problem. Coordination of funding sources is improving through coordinating groups sponsored by state government. Examples include the Texas Water Development

Board and the Rural Infrastructure Committee in Arizona which bring together several funding sources, identify community needs, and meet to decide how to fund necessary improvements. These mechanisms accelerate the application process among funding sources and help to eliminate some "red tape." USDA has also streamlined its regulations to speed up application processing.

Recent enactment of Safe Drinking Water Fund legislation has led to the development of water system revolving funds to augment wastewater revolving funds in each of the border states. While the majority of these moneys are loans, some allow for forgiveness for the poorest communities. Some states, especially Texas, have developed supplementary funding through state general funds directed to colonias. These funds are in addition to earmarked Community Development Block Grant funds which are available through state governments.

**Recommendation:** Allocate a major portion of funds from border state wastewater revolving funds to border infrastructure needs.

**Response:** Allocation of a major portion of the funds in the state wastewater revolving fund to border infrastructure needs is a state matter within the requirements of each state's Revolving Fund program. Each state has a sensitivity to their border needs and is implementing its SRF accordingly.

**Recommendation:** We recommend that the U.S. Department of Housing and Urban Development (HUD) continue to provide financial assistance and incentives for upgrading substandard housing in the colonias, and work closely with state agencies in the U.S., and with federal and state agencies in Mexico, to develop mechanisms for promoting low-cost public housing construction in the border region. We also recommend that mechanisms currently being utilized by county officials to promote public housing and provide financial assistance to colonia residents be enlarged and structured as block grants, and that flexibility be provided to facilitate the combination of various federal program monies, such as those established through the Rio Grande Valley Empowerment Zone.

**Response:** HUD continues to increase funding for cleaning up areas and providing for housing. In the 1200 colonias in Texas, in excess of 500,000 people are living without basic housing. HUD has been working with communities and other agencies to identify sources of funds for non-housing infrastructure, including local bond monies. Often these funds are used in conjunction with USDA Rural Development funding through formal collaborations patterned after those taking place in the infrastructure arena.

HUD has a community development block grant program, home monies, single family and multi-family monies, the FHA program, fair housing, Native American housing,



rehabilitation funding, public housing and Section 8. In addition, HUD requires that 10% of the non-entitlement Community Development Block Grant (CDBG) allocations be allocated to colonias; these funds are increasingly being allocated to housing construction and rehabilitation. In Texas, funds are being set aside out of the home and CDBG monies to buy contracts of sale from developers and put title in the hands of the property owners so that they have an equity in that property. HUD has amended its standards so that colonia housing standards are the same as those for the American Indian, which has made housing available to many more people. Two universities are working toward developing a good house that can be built for about \$20 a square foot that will put a house within reach of a family for \$175 a month. In addition to government, the private sector, foundations, and joint ventures must be involved.

Various foundations and non governmental organizations also assist local communities respond to housing needs through self help, micro loans, bulk materials purchasing, etc. Moreover, certain *maquiladoras* are providing housing construction assistance to their employees and more of these companies are being encouraged to provide housing assistance programs.

***Recommendation:* Greater public-private and privatized environmental infrastructure financing is needed on both sides of the border. In addition, those that have contributed to the environmental and public health problems and that have benefitted from NAFTA implementation should bear more of the cost.**

***Response:*** The BECC has increased its emphasis on private sector funding of municipal environmental infrastructure, including new criteria for certification of private sector projects and a Build-Operate-Transfer (BOT) program. There are significant opportunities for full privatization of hazardous waste handling and solid waste management facilities, infrastructure which are not necessarily public environmental responsibilities.

***Board Reaction:* The Board notes that there has been considerable U.S. federal and state government and private sector investment in development of related economic infrastructure, including international trade routes, bridges and highways. We urge that the governments assure that investments *in* environmental and economic infrastructure be managed and balanced to help assure that economic development is sustainable.**

***Recommendation:* Take enforcement actions against developers of illegal settlements and discourage their establishment in the future.**

***Response:*** Although this is primarily a state issue, EPA grants to Texas and New Mexico Attorneys General Offices have supported innovative enforcement of state environmental, consumer fraud, land-use and nuisance laws against developers of border colonias to remedy severe environmental health degradation and promote environmental justice. Texas and New Mexico have initiated a number of lawsuits against colonias developers and obtained judgments in the majority of cases, resulting in remediation of contamination, upgrading of substandard environmental infrastructure, and preventing new inadequate developments. EPA and the Department of Justice, in cooperation with the Texas Attorney General's Office, brought a civil judicial action under the Safe Drinking Water Act and obtained a settlement with a colonia developer to bring safe drinking water to the residents of Cuna del Valle colonia in El Paso, in the first federal action of its kind.

***Recommendation:* Promote with Mexico legislation to authorize municipal bonding authority for Mexican communities. Consider providing tax-free status for public bonds issued in the U.S. for cross border projects and other incentives to encourage public-private and privatization efforts in both countries.**

***Response:*** Mexico is taking some steps in decentralization of financial responsibility, but its national constitution currently prohibits municipal or state bonding authority. U.S. efforts to promote municipal bonding authority for Mexican communities would be viewed by Mexico as significant interference in its internal affairs. In the U.S., tax exempt bonding authority is restricted to use by state and local governments and there are also statutory limits on the total of tax exempt funding outstanding. Use of U.S. tax exempt funds in Mexico would result in dollar-for-dollar loss of funds for domestic purposes.

# INFORMATION NEEDS

**Recommendation:** Although substantial amount of environmental, natural resource, **health and related data** already exists in both countries, **access to the information** is a critical prerequisite to effective community participation and government action in setting priorities, selecting the most feasible approaches, and locating needed financial and technical resources.

Identify what information already exists, systematize its availability, **and** define ways to **improve access** to information by border communities, states and national **governments. Establish more coordination among federal agencies, state agencies, local governments, Indian Nations, and community groups on both sides of the border.** Establish a federal-state-local clearinghouse network, in cooperation with the border offices of federal and state agencies, to provide more rapid transfer of information among levels of government and to local community **groups in the incorporated and unincorporated areas.**

**Response:** While a tremendous amount of information about the border environment has been collected, there is no comprehensive inventory of existing border environmental data and information. A U.S.-Mexican Border Environmental Information Web/Web Fronteriza de Informacion Ambiental project will provide access to the agencies and people working on the solutions. The project will have two main components, an Inventory and Directory. These two aspects will complement each other and help maximize the use of the system by the public, U.S. and Mexican elected officials, and private- and public-sector agencies. The Inventory will include environmental information, data about data, databases, projects, program activities, grants information, and other useful border-related information. The Inventory will include a search mechanism for the online version and indexes for hard copies to enable users to conveniently search for information. The Directory will contain useful information on agencies, organizations, groups, and projects related to the border environment. The Inventory and Directory will be available through the World Wide Web in English and Spanish, and in hard copy versions.

The Department of Health and Human Services maintains Web sites. One called *healthfinder*<sup>11</sup> allows the user to perform key-word searches on health information, links to other public and private health sites, and up-to-date news (<http://www.healthfinder.gov/>).

USDA has a Webpage for the department as well as for *each* of the mission areas. The Rural Development Webpage now includes agency regulations. The Empowerment Zone/Enterprise Community (EZ/EC) Initiative has its own Webpage with new ideas, meeting notices and other current and relevant information (<http://www.ezec.gov>). USDA also provides grants for both Distance Learning and Telemedicine. The Distance Learning grants help bring educational resources via computers to the most remote of locations. Telemedicine grants link medical personnel in rural communities with advanced diagnostic assistance in larger hospital and medical centers.

**Recommendation:** Develop educational curricula and **materials that promote sustainable development**

**Response:** Border XXI Workgroups and liaison offices have taken significant steps toward the development of an effective strategy to integrate and build on environmental education activities in the U.S.-Mexico border region. Last summer, an environmental education round table was held in El Paso, Texas to exchange ideas and experiences, identify successful programs, and define areas requiring additional effort.

EPA has awarded a Border XXI Grant to the Tides Center for Project Del Rio Sustainable Development Curriculum to develop, test and disseminate a sustainable development curriculum on water issues related to the U.S.-Mexico border. The result will be a strong binational educational tool that involves students in discussions of sustainability along the border, a regional forum for the exchange of ideas and information among environmental educators, and increased environmental awareness in the Rio Grande international watershed. EPA has also funded an integrated assessment of the binational Lower Rio Grande/Rio Bravo Basin watershed. The project provides scientifically sound and practical policies and management options for sustainable development within the watershed. Geographic information systems (GIS) and water quality/resource modeling tools are being applied to integrate information for consideration by decision makers and stakeholders.

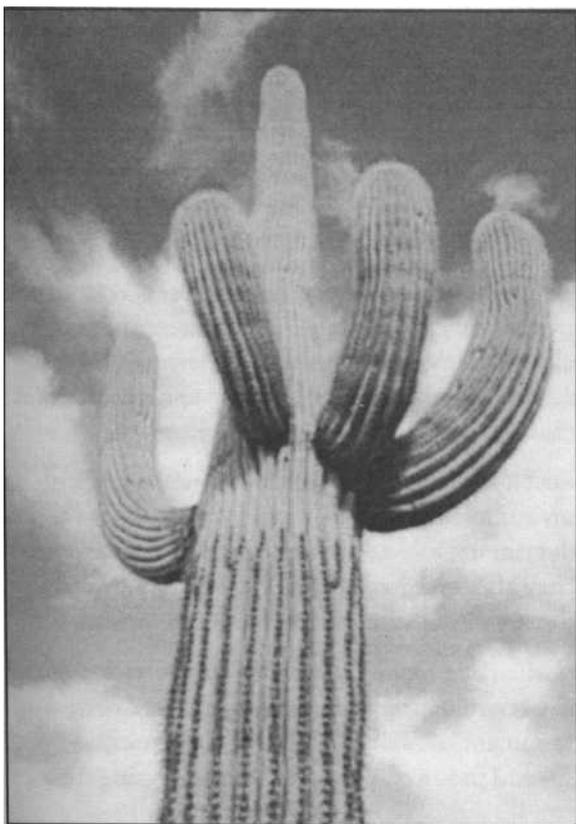
The San Diego Border Liaison Office has created two cooperative agreements. One agreement covers the Arizona/Sonora border region, the other covers the border communities of California/Baja California. Both cooperative agreements were created with local entities that have extensive experience in environmental education at the local and binational level. Each agreement provides for local environmental education organizations to identify and inventory each border community's most important environmental education programs, training capacity needs, and to establish regional bases of information that respond to those needs. The agreements will organize a series of conferences on

formal environmental education in the border region, create a council of educators and two action plans that will propose solutions for the identified regional needs of each border state. In addition, the EPA San Diego office is hosting a sustainable development conference that will explore and promote sustainable development within the U.S.-Mexico border region.

The Pan American Health Organization's field office in El Paso, TX has proposed the creation of an information system infrastructure that could improve greatly public access to health-related data along the border. A health bulletin board and other health communication tools, including a Website, are being established for health officials in the U.S.-Mexico border region. Data on border populations, information on vacancies at community and migrant health centers, and a directory of key health officials and contacts in the border-wide area also will be available on the Website.

**Recommendation: Integrate and analyze data using advanced Geographic Information System (GIS) technology.**

**Response:** Mexico and the United States share many environmental, land management, and cultural concerns within the border region. While current and consistent binational geospatial data has not been available, Geographic Information Systems (GIS) can be used to develop appropriate strategies to address the issues. For the U.S., the U.S. Geologic Survey (USGS) is the lead agency in the development of



the U.S.-Mexico Aerial Photography Initiative. USGS mapping activities supports all Interior bureaus, the Environmental Protection Agency (EPA), the International Boundary and Water Commission (IBWC), the Transboundary Resource Inventory Program (TRIP) and their Mexican counterparts. Through partnerships, the USGS has begun to make available these essential base mapping products along a 100-mile wide buffer on the U.S. side of the border. Through the USGS funded and coordinated Department of Interior High-Priority Mapping Program, the 1:40,000 scale Color-Infrared photography, 1:24,000-scale Digital Elevation Models, Digital Raster Graphics, Public Land Survey System and Boundary production activities were completed in fiscal year 1996 for the entire U.S. portion of the border region. In fiscal year 1997, the initial production of digital orthophotoquads was begun and plans are to begin digital and graphic map revisions in fiscal year 1998. Aerial photography and digital mapping products will be produced for a variety of applications such as pollution detection and monitoring, soils classifications, urban and rural planning, geologic mapping, watershed management, and water quality analysis.

**Recommendation: Assist states and communities to develop "community right-to-know" programs that make it easy for citizens to obtain access to environmental, project, financial, regulatory, and health data.**

**Response:** In the U.S., there is community right-to-know legislation and regulations in place which provide complete information on the type, amount, and location of hazardous materials in the community. The communities can access this information through their Local Emergency Planning Committee (LEPC) or the State Emergency Response Commission (SERC). In Mexico, community right-to-know legislation was recently passed which provides some hazardous chemical information to the community. In addition, through the Contingency Planning and Emergency Response Workgroup, hazardous materials information will be available to communities through a system called the Computer-Aided Management of Emergency Operations (CAMEO) which is currently being translated into Spanish. The NAFTA-related Commission for Environmental Cooperation has been working with the three countries to develop a continent-wide system for monitoring and reporting pollutant releases and transfers. They have begun producing annual *Taking Stock* reports that are based on increasing amounts of data from the three countries.

**Recommendation: Conduct binational studies concerning border population trends to improve the effectiveness of border region planning for infrastructure and programs. Establish binational Metropolitan Statistical Areas (MSAs) to highlight the large binational population and economic bases in the region.**

*Response:* Although the two national census agencies work only in their own countries, the U.S. Bureau of Census and its Mexican counterpart, INEGI, currently are cooperating and sharing data. Metropolitan Statistical Areas (MSAs) in the U.S. are determined by the Office of Management and Budget; there are no binational MSAs at this time.

**Recommendation: Direct research funding to solving real world border problems and make the results more accessible to the communities, other academics, and the governments. More actively involve academia and identify research needs cooperatively with the academic community. Funding sources should require that research products intended for use in border communities be bilingual.**

*Response:* Applied research to help solve real world border problems is being conducted by the Southwest Center for Environmental Research and Policy (SCERP), a consortium of nine educational institutions, five in the United States and four in Mexico. SCERP has been funded by Congressional add-on since 1991 with annual appropriations of approximately \$3 million. SCERP undertakes applied research that addresses the objectives and environmental problems identified in the Border XXI Framework Document. Projects are solicited from the consortium and must address short or medium term solutions; clearly demonstrate application of results; involve collaboration with potential users of the project results; involve member institutions, particularly between the U.S. and Mexican universities of SCERP; and provide opportunities for students to participate in environmental research. In FY 1997 SCERP funded 24 projects in air quality, water, environmental health, environmental information resources, hazardous and solid waste, natural resources, pollution prevention and Indian tribes. While SCERP receives substantial federal funding assistance, other universities in the border region are also producing research on border-related problems.

**Board Reaction: Additional research funding and emphasis on border issues is also needed by other border region universities. While we endorse SCERP's focus on border area research, we also encourage greater funding by and focus on solving real world border problems by other universities as well. All of the universities need to place emphasis on making research results more accessible to the communities, other academics, and the governments.**

<sup>e</sup> National Institutes of Health awards are made on the basis of scientific merit and are made for "directed research" when special allocated funds are available. The Fogarty International Center of NIH organized U.S.-Mexico biomedical and behavioral research development workshops in cooperation with the key Mexican scientific and health organizations and leading Mexican research institutions based on mutual priorities. Five such workshops have been held, each of which has included research recommendations relevant to U.S.-Mexico border health.

## **OTHER BOARD ACTIVITIES**

### *Coordination with the Mexican National Advisory Council for Sustainable Development*

The Board and its Mexican counterpart (Region I of the Mexican National Advisory Council for Sustainable Development) have established ongoing communication. The two advisory committees met together formally for the first time in September 1997 to begin development of coordinated agendas and to discuss development of joint recommendations. As a result of this meeting, a Joint Communique was developed identifying several areas for joint efforts by the two advisory committees. These areas include:

- *Sustainable development:* The two committees agreed to assist the governments as well as border residents in identifying practical ways to meet and measure achievement of this critical goal. The committees agreed to try to develop a joint list of indicators to measure sustainable development.
- *Environmental education:* The committees endorsed improved environmental education programs at all levels, including elementary, secondary, university and professional training. They also endorsed greater emphasis on project-specific and general education about sanitation projects.
- *Communication and coordination:* The committees endorsed more effective coordination and communication among all levels of government, as well as with non-governmental organizations and industry, particularly emphasizing the use

of electronic communications technologies. The committees agreed to develop information and publish such in similar formats to facilitate public access in both countries.

- *Measurement and evaluation of progress:* The committees believe that quantitative and qualitative evaluations are needed to monitor and report on progress toward a sustainable future for the border region. The committees commended both governments for their ongoing efforts in this important area.

- *Greater engagement of the private sector:* The committees agreed that the private sectors of both countries must play a larger role in solving environmental problems and in developing appropriate infrastructure and technologies.

The Good Neighbor Environmental Board and the Region I National Advisory Council for Sustainable Development pledged to continue their joint efforts to form additional mechanisms to carry out the mandate of Border XXI, agreed to build on the progress and cooperative relationships resulting from their first meeting, and committed themselves to meet in a joint session on a yearly basis. Members of the two committees are attending each other's regular meetings and are maintaining working-level contact. Joint efforts are expected to result in near term identification of proposed binational indicators of sustainable development and other recommendations addressing priorities reflected in the Joint Communique and potential additional areas of cooperation. The members of both committees are looking forward to their next annual meeting which will be held in Mexico in the fall of 1998, and a close long-term relationship between the committees and members.

Appendix A

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