



BORDER ENVIRONMENT COOPERATION COMMISSION

2004 ANNUAL REPORT

**A TEN YEAR JOURNEY TO
A BETTER FUTURE ON THE BORDER**

The Border Environment Cooperation

Commission (BECC) is an international organization created by the governments of the United States and Mexico with a mission to help conserve, protect and enhance the environment in the U.S.-Mexico border region. Its functions include assisting, developing and certifying environmental infrastructure projects, incorporating innovative concepts of sustainability and public participation.

Once certified by BECC, a project may qualify for funding from the North American Development Bank (NADB) or from other sources requiring such certification.

BECC is authorized to work in an area covering 62 miles (100 km) on the U.S. side of the border, and 186 miles (300 km) on the Mexican side.

Its mandate includes projects related to water pollution, wastewater treatment, municipal solid waste management, hazardous waste, water conservation, hookups to water and sewer systems, waste reduction and recycling, air quality, transportation, clean and efficient energy, and municipal planning and development, including water management.

BECC's operating budget is funded by contributions from the U.S. Department of State, the U.S. Environmental Protection Agency (EPA), and from Mexico's Secretariat of the Environment and Natural Resources (SEMARNAT). Additionally, BECC manages the Project Development Assistance Program (PDAP), which is funded with contributions from EPA.

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THE BORDER ENVIRONMENT
COOPERATION COMMISSION CELEBRATES

WITH A DECADE OF HANDS-ON
EXPERIENCE IN PROJECT DEVELOPMENT
AND A COMMITMENT TO PROMOTING
ENVIRONMENTAL INFRASTRUCTURE

A TEN-YEAR JOURNEY

10

TOWARD A BETTER FUTURE
ON THE BORDER

An aerial photograph of a river with rapids. In the foreground, an American flag is flying on a tall pole. The river flows from the top right towards the bottom left, with white water rapids visible. The banks are covered in green trees and vegetation. The sky is clear and blue.

2004 ANNUAL

BORDER ENVIRONMENT CO

AL REPORT



OPERATION COMMISSION

Building an institution

In November 1993, the governments of the United States and Mexico signed an agreement creating the Border Environment Cooperation Commission (BECC), along with the North American Development Bank (NADB). With its sister agency, BECC was empowered to assist both countries' federal, state, and local governments in addressing the environmental needs of communities in the U.S./Mexico border region.

But, signing an agreement is much like deciding to travel to a destination – thinking of going doesn't mean you have arrived and the journey itself may entail many changes. Today BECC is an important contributor to public health on the border, having certified \$2.4 billion worth of environmental infrastructure projects in the last 10 years. In 1994, however, when it held its first board of directors meeting, such contributions were by no means assured.

BECC was a truly binational entity. It had managers from both the United States and Mexico, a binational staff, and a 10-member board with U.S. and Mexican representatives for the public at large, local communities, state governments and federal representatives from the U.S. Environmental Protection Agency (EPA), Mexico's Secretariat for the Environment and Natural Resources (SEMARNAT) and both sections of the International Boundary and Water Commission. But, in 1994, an organization where U.S. and Mexican staffs work side by side on problems that traverse their countries' borders had never been tried before. In a sense, BECC would have to draw its own road map, with help from the respective federal and state institutions, as well as from border residents.

BECC is the conception of two federal governments, but, in order to implement their concept, BECC's board, managers and staff had to understand and adapt to local realities. From the beginning, it was recognized that those involved with the commission had much to learn from the border itself.

Shaped by its own austere climate and particular history, the border is a place where U.S. and Mexican

cultures collide, commingle and transform. Twin cities like Nogales, Ariz./Nogales, Son., El Paso, Texas/Ciudad Juarez, Chih., and Laredo, Texas/Nuevo Laredo, Tams., dot the international boundary line. Border residents work, study, shop and play on both sides of that boundary. Its language and its architecture reflect the region's diversity and distinctiveness and here, more than anywhere else in Mexico or the United States, residents are conscious that there is always *el otro lado* (the other side).

If at first there was a bifurcation among BECC's staff, a tendency to divide along national lines engendered by history, national interests, work habits, tastes and even different senses of time, they eventually realized they would have to adopt the same flexibility as has border culture. Setting new rules and becoming a more integrated institution meant accepting new customs, for nationals of both the United States and Mexico.

Learning from experience: creating programs

As the agreement establishing BECC requires, the commission's primary focus has been on supporting the development of environmental infrastructure in the border region. The area originally designated by the agreement stretched 2,000 miles from the Pacific Ocean to the Gulf of Mexico and 100 kilometers (62 miles) north and south from the border. It was—and is—an area of tremendous vitality. Liberalized trade between Mexico and the United States, augmented by the North American Free Trade Agreement (NAFTA), has drawn thousands of new industries and hundreds of thousands of workers. The population has surpassed 12 million, with some estimates projecting it could reach almost 20 million by 2020.

However, while the influx of new industry and new residents has invigorated communities, it also has resulted in new environmental problems—on top of old ones. When BECC was chartered, many residents in the border region lacked adequate public services, in some cases any public services at all. Inadequate or nonexistent water and wastewater systems led to surface and groundwater

1994/1995

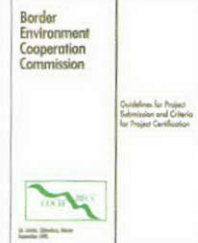
BECC's board of directors holds its first meeting in November 1994, then opens its offices in Ciudad Juarez in 1995. Shown is its first site at the Torres Campestre building.



The board holds a special meeting on Feb. 15 where BECC formulates its goals, including its aim to be easily accessible, supportive and responsive to communities on both sides of the border.



After extensive public discussion, one of BECC's first major accomplishments is the adoption of project submission and certification guidelines.



pollution, and water-borne diseases. Poor solid waste disposal meant that garbage and hazardous wastes infected soil, water and air. Industrial wastes often went untreated and dust from unpaved roads and streets contributed to air pollution.

In the last 10 years, BECC, in coordination with the NADB, federal, state, and local agencies in Mexico and the United States, has successfully addressed many of these health threats and forged new methods of doing so. The 105 projects certified between 1994 and 2004 will bring much needed environmental infrastructure, and corresponding health benefits, to approximately 8 million border region residents.

The variety of these projects is noteworthy. Of the certified projects, there are 67 water and wastewater projects, 45 in the United States and 22 in Mexico; there are 13 solid waste projects, four in the United States and nine in Mexico; there are four air quality projects, all in Mexico; and there are 21 water conservation projects, 20 in the United States and one in Mexico. This list demonstrates BECC's attention to projects in the expanded range of eligible sectors approved by the BECC and NADB boards in 2000—hazardous waste, air quality, clean, and efficient energy, public transportation, municipal planning and development and water conservation. But these achievements, too, have entailed a process of learning and adaptation. In 1995, BECC began work with one set of



When BECC was chartered many residents in the border region lacked adequate services. Problems included poor solid waste disposal, improper disposal of scrap tires, and nonexistent or inadequate water and wastewater treatment systems. The problems contributed to ground, water and air pollution.



project certification guidelines, but quickly saw the need to revise them in light of real conditions and the demands of its border residents. In November 1996, after holding several public meetings and taking more than 200 written comments from border residents, governmental

and non-governmental agencies, the board approved a new set of criteria, with changes in the areas of human health and the environment, technical and financial feasibility, project management, sustainable development and public participation.

It also quickly became clear that finances would play a more complicated role in building border infrastructure than had at first been realized. Many communities with serious needs lacked the credit capacity to apply for NADB loans. For this reason, in 1997, the U.S. Environmental Protection Agency (EPA) provided an initial \$90 million from its Border Infrastructure Fund to the NADB. Under the bank's Border Environment Infrastructure Fund (BEIF) program, it used the EPA money to provide grant funds to communities that had water and wastewater projects certified by BECC, but



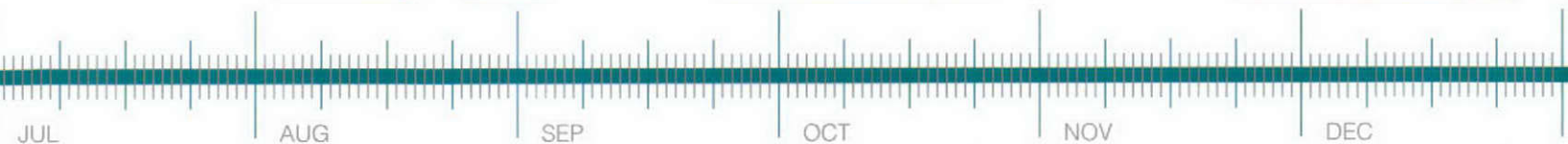
June 1, (left to right) Luis Raul Dominguez, BECC's first deputy general manager, Roger Frauenfelder, first general manager, and Gonzalo Bravo, public participation officer (Mexico) announce BECC's opening in Mexico City.



Nov. 15, BECC's board of directors holds its second public meeting in El Paso, Texas.



The Northwest Wastewater Treatment Plant and Pumping Station in El Paso, Texas, is one of the first four projects certified by BECC.



that couldn't afford the projects if required to rely solely on credit.

In 1998, BECC divided the border into five transnational regions, each overseen by its own project manager. The move was one of several the commission made over the years to improve its project management efficiency, but it also reflected a growing awareness of the border as a single region, with governmental and cultural differences, but with many of the same problems in both countries.

Also in 1998, with the NADB, BECC played a key role in developing a coordinating committee of Mexican and U.S. regulatory and financing agencies to improve communication and eliminate duplication of effort. In 2000, the commission undertook a streamlining study aimed at evaluating its own efficiency in preparing projects for certification. Out of this effort grew the creation of a quality assurance department to set and enforce standards for the project certification process and the Rapid Assessment Process (RAP), which defines a strategic plan for each project at an early stage of development; structured timelines for projects; and the implementation of state-level coordination groups with regular meetings.

BECC produced its first staff project development manual in 1999, then developed an even more detailed manual in 2003. The 2003 guidelines standardize project development practices and give detailed instructions on each aspect of project development.



Among the challenges to regional health BECC, with other agencies, has successfully addressed are poorly managed solid waste landfills and aging or decrepit environmental infrastructure. The variety of the projects BECC has helped develop is noteworthy.

BECC also has grown more focused about defining the final design costs of the projects it certifies. Since 2003, it has stopped certifying projects with long production horizons, concentrating instead on projects for which specific costs and grant subsidy amounts are clearly established. Doing so enforces greater project transparency, allowing sponsors to tell community residents exactly how the proposed project will affect their utility rates.

The result of these improvements is a project development process that has become fine-tuned to the circumstances of border communities. First, BECC develops projects from a regional perspective. Its staff recognizes that, regardless of where they originate, border environmental problems affect communities and ecosystems in both countries. Second, BECC has come to understand the ways in which different governments develop their projects — their rules, their norms and their procedures. In that sense, BECC has become an academy where its project development staff has gained a rare, binational expertise.

Like project development, the commission's technical assistance program has been steadily improved to make it more relevant to regional conditions. From the beginning it was understood that some deserving communities don't have the money or technical expertise to develop final designs for projects before they submit them for

1996

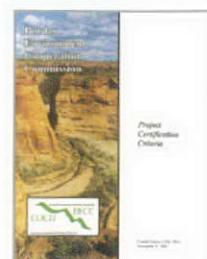
Throughout the year, BECC's board of directors certifies eight projects for the following communities: Douglas and Somerton, Ariz.; Matamoros, Tamps.; Nogales, Puerto Peñasco and Agua Prieta, Son.; El Paso and Mercedes, Texas; at an estimated cost of \$52.6 million.



A technical assistance program is created to assist development of border water and wastewater projects.



BECC publishes its manual of improved project certification criteria.



certification. As early as 1995, BECC began offering technical assistance to these communities, either through in-house staff or by paying private consultants. In 1997, with funds from the EPA, BECC began its Project Development Assistance Program (PDAP). PDAP grants apply only to water and wastewater projects and BECC has continued to use administrative funds to develop other types of environmental infrastructure.

In 2002, BECC's technical assistance department also adopted a standardized set of procedures, including a check list of steps each community accomplishes to demonstrate it has met grant requirements. As with project development, the standardization aims to establish a uniform level of quality throughout BECC's process.

As of Dec. 31, 2004, BECC had approved technical assistance totaling \$30.3 million to 131 border communities — \$19.7 million for 70 U.S. communities and \$10.6 million for 61 Mexican communities. Communities have received funds to help them carry out environmental assessment studies, technical, economic and financial feasibility studies, preliminary and final design studies, the evaluation of social aspects and sustainability of projects, public participation programs, to design operation and maintenance programs, and for institutional capacity building.

BECC requires project sponsors to develop a community participation plan that requires establishing a steering committee with representatives from diverse parts of the community. The public participation process encourages community support for projects.



From theory to practical application: sustainable development

BECC's insistence that sustainable development be considered as part of its project certification criteria has been an innovation and, occasionally, a source of controversy. Initially some wondered whether the concept wasn't too vague to include as a project requirement. Here, as elsewhere, BECC has found a way to apply a lofty ideal in a practical manner.

Between 1998 and 2002, a BECC work group, with the help of a private consultant, formulated a manual that lays out a method for assessing problems in communities and implementing sustainability principles. It uses a variety of performance indicators from which are derived 14 minimum requirements for project compliance.

The 14 minimum requirements set forth the most basic tasks required to address sustainability in the project development process. These include establishing baseline conditions, incorporating energy efficiency principles into infrastructure design, demonstrating the ability to continually assess infrastructure conditions and system durability, carrying out institutional strengthening of the operating utility, undertaking

BECC increases its focus on public participation. The steering committee for the Comprehensive Municipal Solid Waste Collection and Final Disposal Project for Agua Prieta, Son., holds its second meeting on Sept. 30.



The Comprehensive Municipal Solid Waste Collection and Final Disposal Project for Agua Prieta, Son., is certified at an estimated cost of \$1.96 million. The project includes construction of the landfill's liner which is completed in late 1998.



A series of workshops are presented by BECC to encourage regional communities to address their environmental infrastructure needs.



community education on the responsible use of natural resources and project infrastructure, and analyzing the community's present worth and ability to pay for the project's construction, maintenance and operation, and the effect that effort will have on residents' utility rates.

As part of BECC's continuing effort to make sustainability an essential part of project development, the baseline conditions report has been made a component of the Rapid Assessment Process.

For the benefit of all: public participation

BECC's charter requires that it make written information about its projects publicly available to the extent possible, and that it provide the public with opportunities to comment on BECC guidelines and certified projects. However, when BECC opened in 1995, nothing required project sponsors to hold more than one informational meeting and creating citizens' steering committees was entirely optional.

However, in their written and oral comments at the time of the 1996 criteria revision, border residents, as well as interested NGOs, stated repeatedly they wanted more chances to learn about projects' details and more involvement in their development. As a result, today



Citizen's steering committees meet and work with project sponsors. They may take part in developing a public participation plan, conduct surveys of public opinion and disseminate information about the projects.

BECC's certification criteria require sponsors to develop a community participation plan that states they will create a steering committee with representatives from diverse parts of the community, will hold at least two public information meetings and will meet with local organizations. Citizens' steering committees meet and work with project sponsors. They may take part in developing a public participation plan, conduct surveys of public opinion and disseminate information about the projects.

In 2002, BECC produced its first public participation manual. By drawing on the experience gained by BECC's public participation staff over the previous seven years, the manual offers standardized guidelines for making public participation a more efficient and inclusive process. It also

includes new techniques for measuring community opinion about a project in a more precise manner.

Over the last 10 years, an estimated 337 public information meetings have been

held, 115 citizens committees have been formed, 41 in Mexico and 74 in the United States; and close to 1,000 local organizations have received project information, 427 in the Mexico and 562 in the United States.

The public participation process encourages long-term community enthusiasm for a project and fosters a commitment between public officials and their communities that aids project

1997

BECC's board of directors holds its 14th public meeting in Ciudad Juarez on Oct. 5th. During this year it certifies seven projects for the communities of Tijuana (2) and Mexicali, B.C., San Diego, Calif., Ciudad Juarez, Chih., and Alton and El Paso, Texas, with an investment of \$277.3 million.



The \$14.77 million project for Alton, Texas, and nearby colonias, certified on June 18 of this year, includes the construction of a gravity sewer collection system for Alton and a transmission line to carry wastewater to an existing wastewater treatment plant owned and operated by the city of McAllen. The project's operation starts in March 2001.



Javier Cabrera is appointed BECC's general manager and Peter Silva as deputy general manager on May 19.



continuity, even through changes of administration. It has become a tool to help communities achieve transparency in their decision-making processes and to bridge internal divisions. Sitting down with technical consultants, going over the data and issues related to their problem, steering committee members come to see that their quality of life and the future of their community are more important than the interests of any one group.

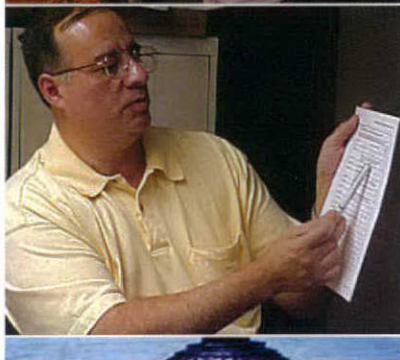
In a similar way, BECC-co-sponsored inter-city, inter-agency meetings, like the First Binational Forum on Scrap Tires, held in Ciudad Juarez in 2003, and the Binational Forum on Used Vehicles and Solid Waste, held in Juarez, Sept. 8, 2004, have brought neighboring communities together over issues that are regional and binational.

Ideally, BECC addresses issues like water supply contamination with immediate solutions including wastewater treatment, but, through changes in awareness, it also makes broader issues, like changes in ways of using natural resources, part of the solution, as well.

Two sides of the border, a common future

By fostering comprehensive solutions, as well as responding to immediate needs, BECC is fulfilling its role in a way that couldn't have been imagined 10 years ago. But, it can't afford to rest on these successes or be content with merely improving the processes it has already established. Its

BECC can coordinate forums to analyze problems and contribute to solutions. Its strong relationships with governments and people on both sides of the border can support creation of projects and programs.



next great challenge is to develop strategies that will lead it through its next 10 years.

In 2004, BECC provided logistical support for early meetings of the Border 2012 program, established by the EPA and SEMARNAT. BECC looks forward to helping Border 2012 achieve its objectives in the future.

Among the things BECC can offer Border 2012 are 10 years' experience in project development on the border, an in-depth knowledge of border problems, a vast amount of technical information and strong relationships with governments and people on both sides of the border, which can help make tasks like logistical support operate more smoothly. BECC can coordinate forums to analyze problems and develop solutions and has proven its ability to foster projects that put those solutions into practice.

In another area, there is a growing need to develop a binational strategic plan that the United States and Mexico can consider when addressing environmental issues. BECC is carrying out a focused needs assessment study in the areas in both countries covered by its mandate. This study could serve as a component of a much larger binational strategic plan.

Drawing on its 10-years' experience, BECC has begun identifying some of the obstacles to achieving environmental improvements on the border. Besides financial limitations, these include institutional problems, like challenges for the management of public utilities,

On Sept. 30, BECC certifies a project for improvements to the North and South wastewater treatment plants and the expansion of a sewage collection system in Ciudad Juarez. Former Mexican President Ernesto Zedillo visits the South Wastewater Treatment Plant on May 22, 1998



BECC's technical assistance program becomes a major source of professional guidance and support to its infrastructure development projects along the border.



BECC helps develop an action plan to facilitate interagency communication and the availability of information such as financing procedures, and to promote sustainability in the use of resources.



lack of continuity in administrative and technical staff, high personnel turnover and a lack of incentives and penalties to encourage good environmental practices. BECC has the ability to identify the actions and develop programs that can contribute to solving these problems.

BECC's management and staff also believe it can help establish a center for technical, environmental and health information about the border, and could become a forum for the analysis of border environmental problems and the identification of solutions. Coordinating the Binational Forum on Scrap Tires and the Binational Forum on Used Vehicles and Solid Waste has given it experience in developing such forums and its capabilities in project development could contribute to developing solutions.

The limited amount of grant funding available for project construction is one of the most serious obstacles facing the effort to address border environmental problems. In 2004, the knowledge that estimated needs far exceeded available BEIF funds forced EPA, BECC and other agencies to develop a prioritization process for the projects receiving those funds. In 2004, 149 water and wastewater projects, with an estimated construction cost of over \$1 billion, were submitted for prioritization. Together these projects would require \$423 million in BEIF grant funds. Every one of them proposed to address an important deficiency in environmental infrastructure; however the limited availability of grants means that many of them will not receive the highest priority for funding.

BECC has the ability to help communities identify the environmental infrastructure problems facing them and to aid implementation of strategies to address them. It has often proven its ability to promote projects that put solutions into practice.



Without BEIF grants, the projects' sponsors will be forced to look for other sources of funding, primarily loans. If those loans prove unaffordable or financially unfeasible, the projects' will be unaffordable for their communities. The failure to complete them could lead to greater environmental degradation along the border.

The crisis in grant funding highlights an important fact—BECC and the NADB have reached a point where the current funding model must be expanded. BECC, with the NADB and other agencies, is beginning efforts to identify additional sources of funding and/or new funding mechanisms to help move more projects toward construction.

Vital to future success is the identification of additional opportunities for private sector participation, which is a fundamental, and potentially highly creative, tool for addressing environmental and human health problems. Private entities should be encouraged to use market incentives to develop projects that contribute to sustainable development. To help promote this, BECC is reviewing its certification criteria to better tailor them to private sector projects. Projects included in the new sectors of environmental infrastructure identified in BECC and NADB's mandate expansion may provide opportunities to more fully address environmental infrastructure improvements through private sector investment.

Finally, in August 2004 an amended BECC/NADB charter went into effect,

1998

On June 24, BECC's board of directors holds its 16th public meeting in Saltillo, Coah. During this year it certifies seven projects: wastewater projects for Del Rio, El Paso and Donna, Texas; a wastewater project for Reynosa and a solid waste project for Matamoros, Tamps; a wastewater project for Berino, N.M., and a water project for Calexico, Calif.



A meeting on environmental infrastructure in Monterrey, N.L., held on Jan. 13, illustrates the strengthening of BECC's interagency coordination with CNA, NADB and state governments.



Deputy General Manager Pete Silva awards the El Paso Lower Valley Water District a \$498,000 technical assistance grant in a ceremony held on Aug. 13.



consolidating governance of the two institutions into a single board of directors, expanding the area addressed by BECC and NADB in Mexico from 100 kilometers (62 miles) to 300 kilometers (186 miles), and allowing the bank to use paid-in capital for grants. The new charter marks a transition for both institutions—but, like a bend in the road, it will provide the chance to see things from a renewed perspective.



Certainly, the journey is not over. Confronted with new initiatives like Border 2012, as well as new, and growing, environmental challenges, both institutions have more than enough work to keep them busy for many years to come. This is work that BECC and NADB, with their capacities for cross-border cooperation and coordination, are exceptionally able to accomplish, but to do so both entities must prepare for increased opportunities and responsibilities.



Members of the steering committee of the Nogales Water Project represent all of the hundreds of steering committees that have supported BECC's certified projects throughout these 10 years.

Government Relations Officer Gonzalo Bravo, representing BECC, participates in the First Assembly of the Latin American Network of the Basin Organizations in Bogotá, Colombia.



Sustainable development principles are the subject of training taken by the staff and members of the board of directors and advisory council, conducted by Pete Silva, BECC deputy general manager.



BECC initiates a series of binational workshops, including a water supply workshop in Nuevo Laredo, Tamps., co-sponsored with the United States Environmental Training Institute (USETI). The workshop is offered to municipalities in Nuevo Leon and Tamaulipas.



In many ways, 2004 marked the beginning of a new era for BECC. With the new charter changes going into effect Aug. 6, BECC's board met for the last time on July 30. However, while ending one era, the commission launched a number of important initiatives to begin its new one.

Project Prioritization

In an important effort, BECC worked with the U.S. Environmental Protection Agency (EPA) to address problems raised by limited funding for the Border Environment Infrastructure Fund. Under E.P.A. direction, beginning in late December 2003, BECC, along with other agencies, developed criteria and a methodology for prioritizing projects applying for the funding. Other agencies involved in the effort included the North American Development Bank (NADB) and Mexico's National Water Commission (CNA).

The goal of the prioritization process is to identify which drinking water and wastewater projects will address the most severe public health and environmental conditions identified in communities along the border. For this reason,

the methodology assigns first priority to projects that correct a situation that could be an immediate danger to human health. Prioritized projects will be eligible for grant assistance for fiscal years 2005 and 2006.

The prioritization criteria and methodology were finalized in July 2004. Communities, utility providers, state and federal agencies and U.S. Congressional members were notified of the process and of extensive workshops BECC sponsored to review its details. In addition, BECC followed up with each project sponsor to provide guidance on the process. The deadline for submitting proposals for the BEIF prioritization process was Nov. 30, 2004.

Business Process Review

In March 2002, U.S. and Mexican Presidents George W. Bush and Vicente Fox Quesada accepted recommendations from a binational working group that included the suggestion to carry out a comprehensive review and evaluation of each institution's organization and the overall project cycle. A consultant was hired in 2003 to conduct this business process review.



BECC held workshops on the project prioritization process Sept. 14-20, 2004, in 10 communities, five on each side of the border. At the workshops, BECC personnel outlined the methodology and criteria of the prioritization process to project sponsors and interested parties and offered guidance on how to present a project proposal under the new process.

1999

A special public meeting of BECC's board of directors, in El Paso, Texas, certifies six projects valued at \$63.6 million on Aug. 11.



Westmorland, Calif., holds its first public meeting to discuss the city's proposed wastewater treatment plant expansion project.



BECC awards \$6 million in contracts through its technical assistance program during the year.



The review had three objectives: to make the overall BECC/NADB process more efficient and easier for communities and project sponsors to use; to increase the value added by BECC and NADB to the project process; and, to develop a plan for the board of directors to evaluate the institutions' performance and measure results.

In December 2004, the consultant finished work on a series of five task reports and BECC and NADB presented them for a 60-day public comment period. A total of 27 recommendations for improving the institutions' operations overall, in addition to recommendations pertaining to performance evaluation and results measurement. Among them were: integrate BECC's and NADB's project cycles; develop standard operating procedures that clearly define roles and responsibilities, focusing NADB's responsibility on the financial aspects of the projects and BECC's responsibility on the technical analysis and engineering design, public participation, and environmental and sustainable development for the entire project cycle; project certification

and financing should be presented to the board for approval at the same time.

Also recommended: include a financial feasibility step in the first part of the application process; modify the certification criteria, including increasing the opportunities to develop and finance environmental infrastructure projects sponsored by the private sector, especially in the new

sectors of activity included under BECC and NADB's mandate; empower BECC and NADB to be strategic leaders for the border region; develop a strategic plan and a business plan for BECC and NADB; maintain BECC and NADB as separate institutions reporting to a single board of directors.



(left to right) Alfonso Martinez, SEMARNAT's representative in Nuevo León, Alberto Cárdenas, at that time secretary of SEMARNAT, Emilio Rangel Woodyard, general director of Nuevo Leon's state Environment Protection and Natural Resources Agency, with Javier Cabrera, BECC's deputy general manager, attend the opening of Border 2012's liaison office in Monterrey, N.L., in April 2003. Made possible through the cooperation of the U.S. EPA and SEMARNAT, the office helps coordinate the work in the region of the E.P.A.'s Border 2012 program, to which BECC provides on-going logistical support.



Using grant funds from the U.S. EPA, Region 6, BECC continues to monitor meetings and provide logistical support for the Border 2012 program. The first binational meetings of the program's New Mexico-Chihuahua and Rural East Chihuahua-Texas task forces were held in Janos, Chib., and Ojinaga, Chib., in October and November 2004, respectively.

Border 2012

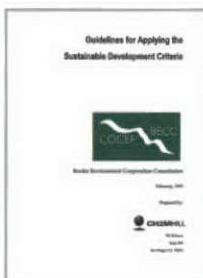
BECC plays an important support role in the Border 2012 Program developed by EPA and Mexico's Secretariat of the Environment and Natural Resources (SEMARNAT). This 10-year plan is aimed at addressing environmental and public health needs on the U.S.-Mexico border.

BECC provided logistical support for two of the multidisciplinary, geographically focused

BECC produces its first internal project development procedures manual to help facilitate the certification process and it proves to be an indispensable resource in meeting BECC's objectives.



BECC's manual of application guidelines and sustainability indicators is created in order to clearly set out the objectives of the sustainable development process and ensure better results for each project.



A video that outlines BECC's mission and function is presented, in keeping with its goal to use the most effective methods and technology available to reach the public.



work groups assigned to gather input on key border environmental issues for Border 2012, the Texas-Chihuahua-New Mexico and Texas-Coahuila-Nuevo Leon-Tamaulipas work groups.

In November and December, it provided logistical support as most of the task forces of the Chihuahua-Texas-New Mexico Regional Work Group held meetings, helping to organize the first meetings of U.S.-Mexico rural task forces in Janos, Chih., and in Ojinaga, Chih.

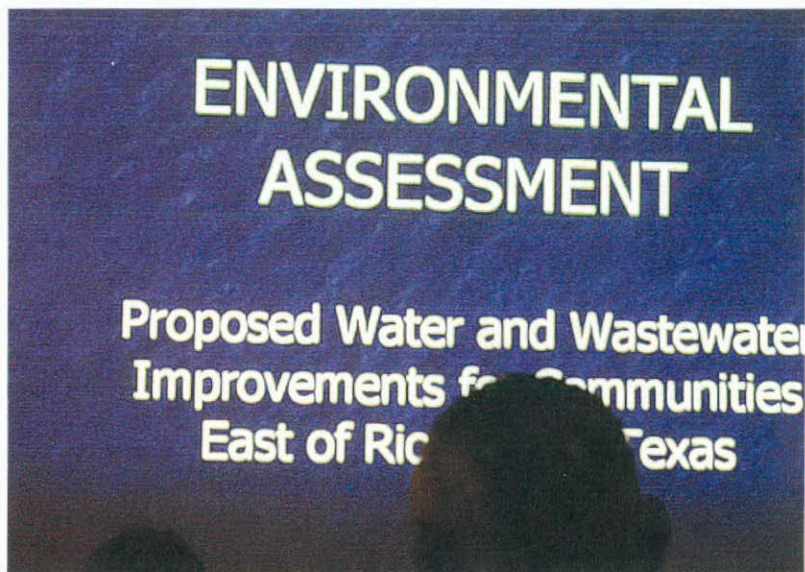
BECC contacted the media about the meetings, arranged for meeting sites and equipment, took the minutes, set up e-mail distribution lists for all types of information about the task forces and work groups, and continues to serve as a link between federal and local leaders in the program.

Needs Assessment

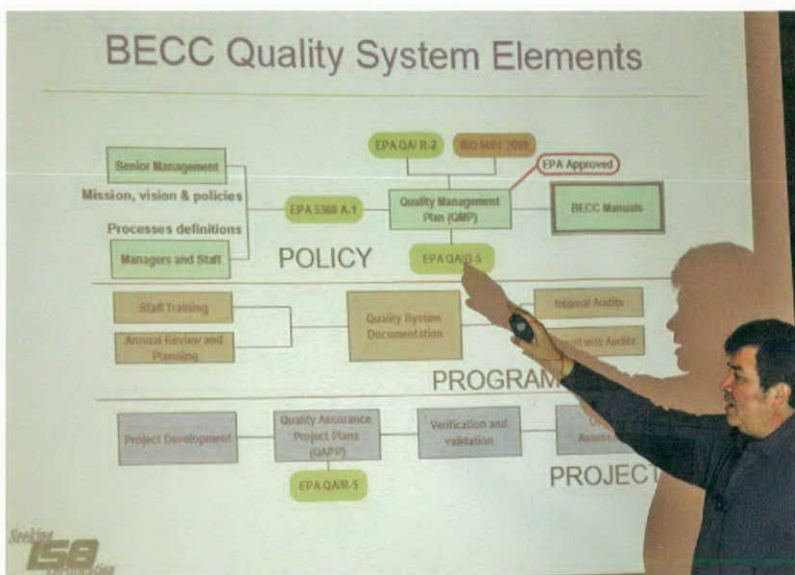
In September 2004, BECC began work on a study aimed at further identifying environmental needs in the border region and defining which types of projects can meet those needs.

Phase 1 of this needs assessment, which requires the identification of potential water, wastewater and solid waste projects in Mexico, within the 300 kilometer (186 mile) area addressed in BECC/NADB's new mandate, was initiated in 2004. The work included identifying the potential projects, determining their level of state and local support, then identifying which of the projects have the potential to be developed using a regional approach.

This required BECC staff to develop a detailed matrix containing all available information on the projects and to identify the



BECC's staff provides technical briefings for sponsors, residents and consultants. An overhead projection illustrates a briefing near Rio Hondo, Texas.



BECC Quality Assurance Director Mario Vazquez describes his department's procedures during a workshop for consultants in El Paso, Texas, December 2002.

2000

Construction of the water treatment plant in Piedras Negras, Coah., is one of 11 projects certified. The project will significantly increase the coverage of sanitary sewage collection and improve wastewater treatment.



The board of directors holds four public meetings throughout the year in which 11 projects are certified with an estimated investment of \$253.88 million.



Fernando Macias is appointed the new general manager and Javier Cabrera as the deputy general manager on July 10.



types of information that would be needed to take the project from planning through construction. It also required developing a method for measuring the level of support for existing and potential projects from Mexican state and local governments, focusing on pre-established priorities and projections of the availability of funds. BECC expects to complete the needs assessment in 2005.

ISO Certification

In December 2004, BECC received certification from the national accreditation board of the American National Standards Institute-American Society for Quality in the ISO 9001:2000 quality standard. This ISO:9001 certification means BECC passed a rigorous examination of its processes to assure it is operating in accordance with the standards set by this internationally-recognized quality systems institution.

Obtaining the certification required the BECC to make several strategic decisions about its administrative procedures, particularly regarding the project development process. To develop a quality management system, it defined a set of quality objectives that emphasize prompt and complete fulfillment of the project development tasks required of its personnel and precise record keeping.



A consultant on ISO:9000 methodology discusses "process mapping," a systematic method of analyzing procedures, with BECC personnel in January 2004.



BECC personnel participate in an internal seminar on quality systems in connection with ISO:9000 certification during the spring of 2004.

It also developed a quality management manual which outlines the objectives and the steps required to achieve them. The manual served as the basis for a series of training sessions that fully informed BECC's staff about the new quality management procedures.

BECC updated its project management information system (PMIS) to reflect a more thorough reporting policy and improved its system of document control, filing and storage guidelines. To encourage continuous improvement, internal audits and follow-up audits are carried out on a scheduled basis and a tracking system has been established for every procedure in which BECC is audited.

In addition, BECC recently completed work on two new procedures manuals, the Technical Assistance Manual, which brings all technical assistance procedures up to date, and the Procurement of Goods and Services Procedures Manual, which revises

procedures to reflect the fact that the handling of BECC contracts has now been centralized in its technical assistance department. Also, its simplified contract ordering agreement (SCOA) was changed to a qualifications-based-and qualifications-and-cost-based system.

BECC develops a draft set of 14 minimum sustainability criteria that now are required for BECC projects.



Ten steering committee meetings are formed and 13 comprehensive public participation plans are approved. Twenty-five project public meetings with more than 3,700 attendees are held. Approximately 29,000 households are directly contacted with project information.



Through Dec. 31, \$19.5 million is allocated by BECC's technical assistance program to aid in the development of 142 environmental infrastructure projects and concepts related to water, sewage, and municipal waste in 98 communities on both sides of the U.S.-Mexico border.



First Project Certified

Brawley, California's first families arrived with the railroad in 1903. At that time, the area was in the desert, but had plentiful water. In the far southeastern corner of the state, in the lower Colorado Desert, the city has played a significant role in the agricultural economy of California's Imperial County. Its strategic location at the crossing of several highways and rail lines allows easy access for residents, visitors, businesses and regional shipping services.

But, by the early 1990s, city officials acknowledged they must take steps to meet the demands of the 21st century, especially in the area of domestic water use.

In March 1993, Brawley's domestic water system was cited for noncompliance by the California Department of Health Services. The department found the city had failed to meet a deadline for fixing the system, and continued failure would lead to high, and continuous, fines. City officials decided to construct a completely new water treatment plant, hoping it would both meet state regulations and reduce potential health risks to their residents.

But, Brawley was a small town and the cost of a new plant was high. To finance the plant, officials would need to increase utility rates, a difficult task when 55 percent of the city's population was classified by the state as low income. To lessen the burden on residents, they designed a financing strategy that included seeking grant and loan financing.

Certification by the Border Environment Cooperation Commission (BECC) qualified them for a loan from the North American Development Bank (NADB). Other funds came from the U.S. Department of Agriculture, the U.S. Department of Commerce and the state of California.

The officials also got a positive response at the public meetings on the new plant required by BECC's certification guidelines. The city's water

users were willing to pay increased rates for safe, potable water.

Besides providing access to the NADB loan, BECC and NADB's staffs were able to show Brawley officials how to speed up the remainder of the project certification process and to save money. The city had already designed 80 percent of the project, and, by doing a value engineering review, staff members were able to show city officials how to lower its cost.

"The original cost of the plant to Brawley was going to be around \$27 million. By the time we got through with NADB and BECC doing additional cost benefit analyses and affordability studies we were able to reduce that from \$27 million to around \$18 million," said Jerry Santillan, Brawley's former planning director, and Brawley's former city manager.

The modern water treatment plant that went into operation in June 2000 enabled Brawley to meet federal and state standards for water quality and to ensure safe drinking water for its residents. With a capacity of 15 million gallons a day and the ability to expand to 30 million gallons a day, it

benefited 24,000 residents in the communities of Brawley, Westmorland, and the Poe Colonia.

The project also is a clear example of how effective environmental infrastructure contributes to a community's sustainable development.

According to Santillan, a year after the plant went into operation a group of cattlemen chose Brawley as the site of their state-of-the-art meat processing plant. They made their decision because of the capacity of the city's water system. As a result of the new plant, Brawley's unemployment rate fell from 25 percent to 14 percent.

"We became heroes then," Santillan said. "Prosperity came to Brawley. We have a university, new businesses, increasing occupancy in our hotel rooms – and all because you have the basic infrastructure."



Building a new water treatment plant enabled the city of Brawley to supply cleaner water for its residents and to meet federal and state water quality standards. The new plant went into operation in June 2000, with a capacity of 15 million gallons a day and the ability to expand to 30 million gallons a day. (Photos courtesy of NADB)

2001

In close coordination with NADB, BECC begins working with projects in the new sectors. In February, both institutions conduct a joint outreach effort to identify ideas regarding potential projects in each of the mandate expansion sectors. Waste reduction and recycling are identified as part of these new sectors.



Shown is the steering committee of Sasabe, Son, whose proposed sewer system project receives BECC certification this year. The new system will reduce health risks caused by wastewater runoffs from septic tanks and cesspools.



Videos of each project to be certified prove to be an effective communications tool, showing the board of directors the issues confronting communities in the region. These videos are first presented in March.





In Braley's water treatment plant, water in the plant's sedimentation basin flows down through intake weirs. From here, it will continue on to the plant's filtration system. In one of BECC's first projects, certification helped the historic farming town replace an aging plant that had been cited by the California Department of Health Services. (photos courtesy of NADB)

BECC's board of directors holds its 28th public meeting on June 22 at the U.S. Library of Congress in Washington D.C. It is the board's first meeting in Washington, D.C.



BECC's board members hold their 29th public meeting on Oct. 16 at the National Museum of Anthropology and History in Mexico City, their first meeting in Mexico's capital. A total of 12 projects at an estimated cost of \$110 million are certified during 2001.



BECC begins to study the zero emissions concept. The Zero Emissions Research Initiative (ZERI) is introduced to BECC by its founder, Gunter Pauli. The objective of zero emissions is the total consumption of raw materials in industrial processes.



JUL

AUG

SEP

OCT

NOV

DEC

THE BORDER ENVIRONMENT
COOPERATION COMMISSION STAFF IS
COMMITTED TO ADDRESSING THE
ENVIRONMENTAL INFRASTRUCTURE NEEDS
IN THE U.S.-MEXICO BORDER REGION, IN
ACCORDANCE WITH BECC'S MISSION,
INCORPORATING QUALITY PRINCIPLES AND
CONTINUOUS IMPROVEMENT.

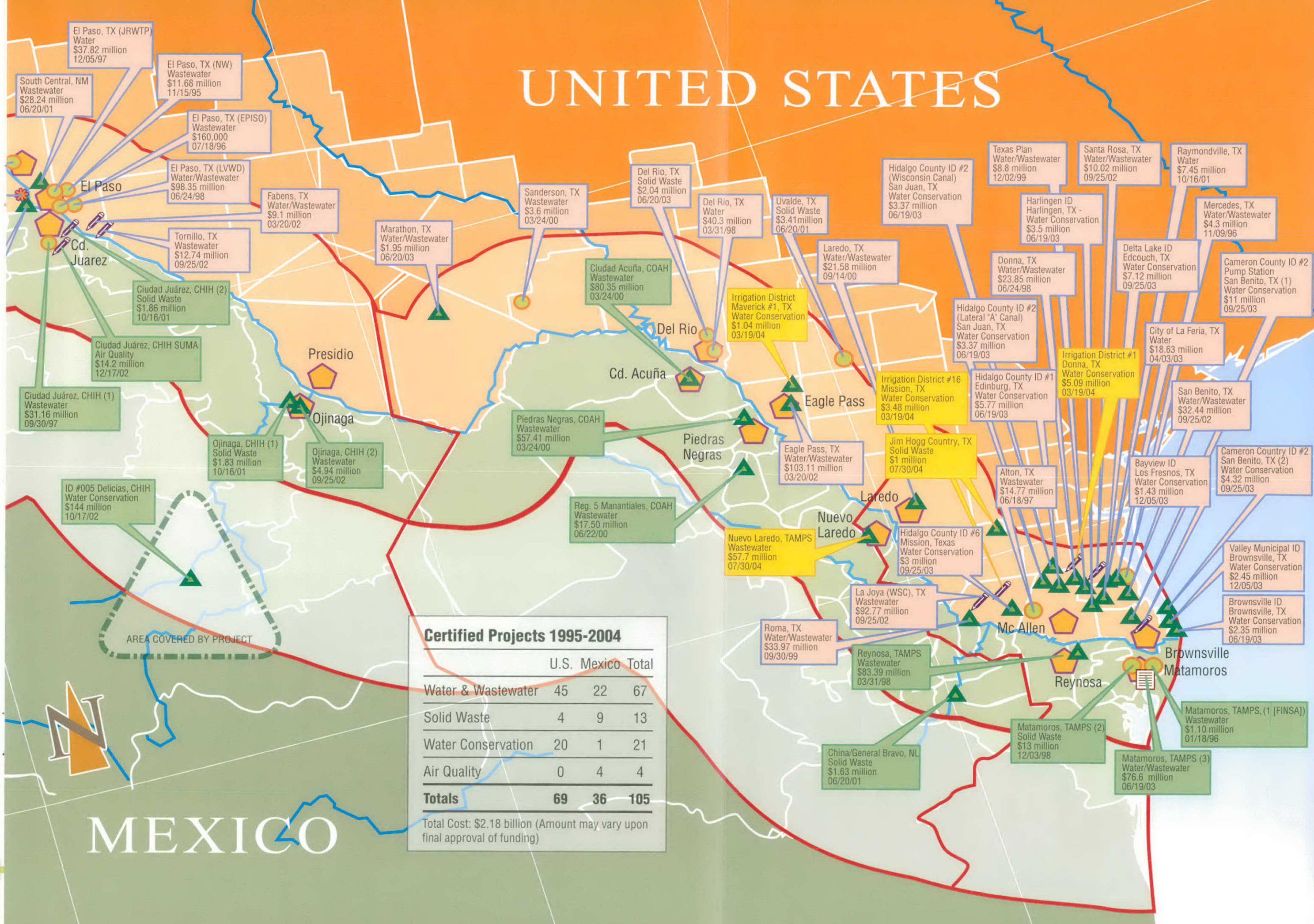


QUALITY ASSURANCE AND MANAGEMENT OF
INFORMATION SYSTEMS DIRECTORATE

LEGAL COUNSEL, PUBLIC OUTREACH, STRATEGIC PLANNING
AND GOVERNMENTAL RELATIONS



UNITED STATES



Certified Projects 1995-2004

| | U.S. | Mexico | Total |
|--------------------|-----------|-----------|------------|
| Water & Wastewater | 45 | 22 | 67 |
| Solid Waste | 4 | 9 | 13 |
| Water Conservation | 20 | 1 | 21 |
| Air Quality | 0 | 4 | 4 |
| Totals | 69 | 36 | 105 |

Total Cost: \$2.18 billion (Amount may vary upon final approval of funding)

AREA COVERED BY PROJECT

MEXICO



ADMINISTRATION DIRECTORATE



OPERATIONS DIRECTORATE

Water Conservation Improvement Project—Hidalgo and Cameron Counties Irrigation District No. 9 (Mercedes, Texas)

PROBLEM: The Rio Grande Valley has in the past seven years experienced a drought, which has limited the amount of surface water available for irrigation and municipal use. The drought in northern Mexico and the entire Rio Grande Basin, which includes the Rio Conchos Basin in northern central Mexico, has contributed significantly to the water shortages for irrigation in the Lower Rio Grande Valley.

PROJECT: The water conservation project will provide a modern, centralized means of controlling and monitoring flows to the various accounts/parcels and eliminate water seepage losses with resulting water savings and respective energy savings through reduced pumping. The project also includes rehabilitation of two major siphons, repairing an existing aqueduct, lining a section of the main canal, and installation of automated canal gates.

| Source | Amount (US dollars) | % |
|--|---------------------|------------|
| Grants | | |
| NADB- Water Conservation Investment Fund (WCIF) | 1,250,000 | 50 |
| Sponsor's Contribution | | |
| Hidalgo and Cameron Counties Irrigation District No. 9 | 1,250,000 | 50 |
| Total | \$2,500,000 | 100 |

Water Conservation Improvement Project—Donna Irrigation District Hidalgo County No. 1 (Donna, Texas)

PROBLEM: One of the most pressing problems facing the Lower Rio Grande Valley of Texas is the water shortages due to drought over the last seven years and an increasing demand due to population growth. The future health and social and economic well being of the population in the Rio Grande Valley are highly dependent on conservation and maximizing beneficial use of available water to meet domestic and agricultural needs.

PROJECT: The project consists of the replacement of 13 lateral canal sections in the upper canal system of the district with underground pipeline. The project addresses the critical water shortages by reducing water losses and providing for more efficient delivery of water, thus enhancing availability of water for both domestic and agricultural use.

| Source | Amount (US dollars) | % |
|---|---------------------|------------|
| Grants | | |
| NADB- WCIF | 2,544,325 | 50 |
| Texas State Energy Conservation Office (SECO) | 311,316 | 6 |
| Sponsor's Contribution | | |
| Donna Irrigation District Hidalgo County No. 1 (Donna, Texas) | 2,233,009 | 44 |
| Total | \$5,088,650 | 100 |



The drought in the Rio Grande basin during the last decade has made promotion of water conservation and water's sustainable use essential, particularly for agricultural productivity in the area.

Gila Gravity Main Canal Water Conservation Project (Yuma County, Arizona)

PROBLEM: Sediment deposits have raised the bottom of the canal by as much as four feet. The result is an inability to operate the canal to meet the needs of agricultural and domestic water users.

The irrigation districts represented by the Gila Gravity Board along with the Yuma County Water Users Association provide water to produce about half of Arizona's agricultural production during winter months.

PROJECT: The project consists of improvements to the irrigation system of the Gila Gravity project. The project will have significant water savings in two ways: (1) elimination of transmission losses by sealing in sections that allow water seepage, and (2) providing water flows at the right quantity and at the right time by sediment removal from the canal, a water measurement improvement structure and a system for remote control of canal operations.



| Source | Amount (US dollars) | % |
|----------------------------------|---------------------|------------|
| Grants | | |
| NADB – WCIF | 827,500 | 47 |
| U.S. Bureau of Reclamation (BOR) | 227,250 | 13 |
| Sponsor's contributions | | |
| Gila Gravity | 701,505 | 40 |
| Total | \$1,756,255 | 100 |

Water Conservation Improvement Project—Hidalgo County Irrigation District No. 16 (Mission, Texas)

PROBLEM: Hidalgo County Irrigation District No. 16 heavily exploits its water; therefore, it is important to manage flows to reduce water loss. The district does not have oversized canals for storage; thus pumping and variable flow management are more critical than in systems that can count on storage. Also, there are large water losses due to seepage in the main canal.



PROJECT: The project consists of the upgrading of relief pump stations No. 1 & 2, the re-lining of five miles of the existing concrete-lined main canal with a membrane and installation of a computerized pump control system for the Hidalgo County Irrigation District No. 16 water conveyance system.

| Source | Amount (US dollars) | % |
|--|---------------------|------------|
| Grants | | |
| NADB- WCIF | 1, 376,697 | 40 |
| State of Texas—SECO | 254,180 | 7 |
| Sponsor's Contributions | | |
| Hidalgo County Irrigation District No. 16 (Mission, Texas) | 1,852,503 | 53 |
| Total | \$3,483,380 | 100 |



Sediment deposits have raised the bottom of the Gila Gravity Project's main canal by as much as four feet. The proposed project will reduce seepage and improve water flow.

Water Conservation Improvement Project—Maverick County Water Control & Improvement District No. 1 (Eagle Pass, Texas)

PROBLEM: One of the most pressing problems facing the Lower Rio Grande Valley of Texas is the water shortages due to drought over the last seven years and an increasing demand due to population growth.

PROJECT: The proposed activities will improve management and conservation of water, reduce evaporation, seepage losses, operation and maintenance costs, and will conserve energy. The project includes canal lining, replacing lateral turnout gates, rehabilitation of check gates and installation of flow meters.

| Source | Amount (US dollars) | % |
|---|---------------------|------------|
| Grants | | |
| NADB-WCIF | 406,941 | 39 |
| State of Texas- State Energy Conservation Office (SECO) | 303,883 | 29 |
| Sponsor's Contribution | | |
| Maverick County Control & Improvement District No. 1 | 336,119 | 32 |
| Total | \$1,046,943 | 100 |



Among the four measures considered in the project for Maverick County Water Control & Improvement District No. 1 is the installation of an impermeable lining on 4.7 miles of lateral canals.

Jim Hogg County, Texas Closed Landfill Repair Project



PROBLEM: Jim Hogg County sustained serious flood damage to its closed landfill site from storms occurring in the fall of 2001. The landfill had been closed since 1997. Floodwaters from a nearby dry creek bed (Mesquite Creek) cut a deep trench through the disposal area of the landfill, displacing tons of waste material, resulting in environmental and health risks. The county is required to maintain the integrity and effectiveness of the closed landfill and to prevent any surface flooding or run-off from eroding or otherwise damaging the closed site.

PROJECT: The proposed project will address environmental requirements of the Texas Commission on Environmental Quality for appropriate repairs to the county's closed landfill.

The project includes recovery, segregation and disposal of the displaced landfill materials, final cover improvements and Mesquite Creek channel repairs for final improved closure of the landfill.

| Source | Amount (US dollars) | % |
|--|---------------------|------------|
| Grants | | |
| Office of Rural Community Affairs (ORCA) Disaster Relief Grant Program | 350,000 | 35 |
| NADB—SWEP | 400,000 | 40 |
| Loan | | |
| Jim Hogg County, Texas | 250,000 | 25 |
| Total | \$1,000,000 | 100 |



Members of the Jim Hogg County steering committee and a consultant to the project (far left), gather for a picture. The proposed project will help maintain the integrity and effectiveness of a closed landfill.

Comprehensive Municipal Solid Waste Management in Naco, Sonora

PROBLEM: The current disposal method does not comply with existing norms and clearly creates a source of pollution and potential public health risks. The disposal site does not have the necessary controls to minimize environmental impact, such as the control of leachates, surface run-off and biogas. Similarly, the operation of the dumpsite does not include the daily compacting and covering of trash, which causes the dispersion of trash, foul odors, the proliferation of harmful fauna and occasional wildfires with international repercussions, since the smoke generated reaches the neighboring city of Naco, Ariz.

PROJECT: The project consists of the construction of a sanitary landfill for comprehensive solid waste management in Naco, Son., including the installation of the necessary equipment and the closing of the current dumpsite.

| Source | Amount (US dollars) | % |
|---|---------------------|------------|
| Grants | | |
| State/Municipal Governments of Sonora | 244,969 | 50 |
| NADB—Solid Waste Environmental Program (SWEP) | 244,969 | 50 |
| Total | \$ 489,938 | 100 |



Colorful barrels on easily moved carts provide an affordable, practical way to collect trash from city streets in Ojinaga, Chih. They are part of a comprehensive approach to solid waste management similar to that proposed in Naco, Son.

Air Quality Improvements for Nogales, Sonora

PROBLEM: Unpaved city roadways are the main source of the production of an annual 8,896 tons of dust particles exceeding the official standard up to 26 times per year, while regulations allow only one exception per year. The reduction in airborne dust levels will also have a major impact on improving the overall state of health of the population that resides in the basin.

PROJECT: The project consists of reducing air pollution from suspended dust particles by paving urban streets in residential areas of Nogales, Son., with reinforced waterproof concrete and asphalt. This will be accomplished by creating an entity decentralized from the municipality that will be in charge of the street paving program.

| Source | Amount (US dollars) | % |
|---|----------------------|------------|
| Grants | | |
| State government of Sonora | 2, 631,579 | 27 |
| Loans | | |
| NADB | 4, 824,561 | 50 |
| Banco Nacional de Obras y Servicios Públicos (BANOBRAS) | 2, 280,702 | 23 |
| Total | \$ 9, 736,842 | 100 |

Rehabilitation of the Sewer System in Nogales, Sonora

PROBLEM: Nogales, Son., has a long history of wastewater problems resulting from some aging sewer lines, the existence of areas that lack sewer service, and the constant silting suffered by the sewer system. The problems found in the sewer lines affect environmental quality and, thus, pose a risk for the health of residents of both Nogales, Son., and Nogales, Ariz.

PROJECT: The project consists of the rehabilitation of approximately 30,000 linear meters of primary and secondary sanitary sewer lines, which corresponds to virtually 100 percent of the city's system of primary and secondary wastewater collection lines.

| Source | Amount (US dollars) | % |
|--|----------------------|------------|
| Grants | | |
| NADB-Border Environment Infrastructure Fund (BEIF) | 5,418,178 | 50 |
| Comisión Nacional de Agua (CNA) | 2,275,635 | 21 |
| State government of Sonora | 3,142,543 | 29 |
| TOTAL | \$ 10,836,356 | 100 |

Improvements to the Water, Wastewater Collection and Treatment Systems in Nuevo Laredo, Tamaulipas

PROBLEM: The city of Nuevo Laredo needs to upgrade its water infrastructure to modernize inadequate facilities and to develop a planning program to improve border sanitation in the area.

An inefficient potable water distribution system results in problems such as storage and pumping, pressure losses, leaks in the waterline network and lack of service to 4 percent of the population. Additionally there are clogged and aged sewage collectors, with inappropriate interconnections to the storm sewer system, which has direct wastewater discharges to the Rio Grande. Sanitary sewer system service is unavailable to 29 percent of the population. As a result of the improvements to the sewer system, there will be extended coverage and elimination of direct discharges to the Rio Grande. The capacity of the wastewater treatment plant will also be upgraded.

PROJECT: The proposed project will implement priority improvements to the water, wastewater collection and treatment systems for the city of Nuevo Laredo, Tamps., in order to streamline their operation, expand service coverage, and eliminate contamination of the Rio Grande water through an adequate treatment of wastewater.

Nuevo Laredo is facing a backlog in the construction of primary infrastructure. Prior to the certification of the project, the city provided sanitary sewage system service to only 71 percent of its population

| Source | Amount (US dollars) | % |
|--|---------------------|------------|
| Grants | | |
| CNA | 13,448,000 | 23 |
| State government of Tamaulipas | 4,592,000 | 8 |
| NADB-(BEIF)* | 20,000,000 | 35 |
| Loans | | |
| NADB | 4,900,000 | 8 |
| Municipal government—Comisión Municipal de Agua Potable y Alcantarillado (COMAPAS) | 14,760,000 | 26 |
| Total | \$57,700,000 | 100 |

*This amount is contingent upon the authorization of the EPA-BEIF budget for FY05.



2002

Throughout the year, BECC certifies 12 projects, including a wastewater project in Eagle Pass, Texas, which represents an investment of \$121 million. The Eagle Pass steering committee and officials from the state of Texas gather for the project certification on March 20 in Austin, Texas.



In May, BECC is invited to discuss its public participation strategies at the International Association for Public Participation's 12th Conference in Salt Lake City. BECC's success in creating a public participation process that is applicable on both sides of the border is discussed at the conference.



BECC's public participation manual for border region communities and project sponsors is approved on June 24. The manual applies improved public participation practices, based on the commission's seven years of experience.



Dolores Dorado, a Vado, N.M., resident, says roaches, mice and rats used to infest her neighborhood, but things are better now. She thinks much of the credit for that goes to a wastewater collection and treatment system the government of Doña Ana County, N.M., with help from the Border Environment Cooperation Commission (BECC), The North American Development Bank (NADB) and the Environmental Protection Agency (EPA), brought to Vado and seven other nearby communities in southern New Mexico.

The unincorporated communities of Vado, Del Cerro, La Mesa, San Miguel, Berino, Chamberino, Las Palmeras, and Montana Vista are located between 13 and 18 miles south of Las Cruces, N.M. and 27 miles north of the U.S.-Mexico border. In the 1990s, they were the sites of an unplanned and uncontrolled population explosion, as people moved into the area looking for work. The places many found to live were on landlocked lots with little or no infrastructure. Wastewater was treated by on-site systems using often-substandard septic tanks or unlined cesspools.

"Where you were only supposed to have one trailer for every three-fourths of an acre, you'd have more trailers – on half an acre. With everybody trying to use one septic tank, it just didn't work out," Vado resident Roosevelt Boyer explained in 2001.

A study commissioned by Doña Ana County, N.M., found that because of the number of dwellings crowded together, combined with dense, poorly draining soil, contaminated water frequently pooled on the surface.

Like Dorado, the consultants said the filthy standing water attracted insects and rodents, and, also, endangered any children who might like to play in mud puddles. Furthermore, they said, because of a shallow ground water table, there was the potential that overloaded septic tanks and unlined cesspools would contaminate drinking water—as many residents reported was already happening.

After looking at their own studies and the results of studies conducted through BECC's technical assistance program, Doña



Members of Vado/Del Cerro steering committee, one of four steering committees that promoted the construction of a wastewater collection and treatment system for six communities in Doña Ana County, New Mexico.

Ana County officials decided to build a wastewater treatment plant for the area on a site about 15 miles south of Las Cruces, on the west bank of the Rio Grande.

The site put the plant near the center of the communities, allowing wastewater to be collected from each customer's residence, then piped through force mains to the plant, where it would be treated to environmentally safe standards and discharged into the river.

BECC provided \$1.28 million in project development assistance and, through its certification of the project, created an opportunity for a \$12.1 million grant, using the NADB's Border Environmental Infrastructure Funds (BEIF) managed

by NADB. At a total of \$28.8 million, the rest of the project's funding came from the New Mexico Environment Department's Clean Water State Revolving Fund and Colonias Program – both of which receive some EPA money—and through utility payments by system users.

The 1-million-gallon-a-day plant was completed in 2003, with plans for an expansion in 2009. Sue Padilla, director of Doña Ana County's utilities department, said all of the communities except La Mesa and San Miguel are now connected to the system and construction is underway to add them.

Unaccustomed to paying utility rates, some residents grumbled when required by the county to hook up to the new wastewater treatment system, Padilla said. But, after a period of adjustment – and a break-in period for the new system – most residents are now content.

"I think it's going about as well as could be expected," she said.

Dorado, who has had her connection to the system for some time, said she is quite happy with its service. She said what she learned at the public information meetings held by Doña Ana County in accordance with BECC's certification requirements, helped her become an advocate for the wastewater treatment system in her community. Now she says she feels good about urging her neighbors to support it.

"We needed the cleaner water and I feel good to be able to do something for the community," she said.

Outstanding coordination between NADB, BECC, IBWC/CILA, EPA, and SEMARNAT results in the certification of the Modernization and Technical Improvements to the Delicias 005 Irrigation District project, located along the Conchos River in the state of Chihuahua. Developing the project is one of the goals established by the U.S. and Mexican governments, which seek to address water management issues on the Rio Grande/Rio Bravo watershed.



The Rapid Assessment Process (RAP) is implemented in order to define a strategy for the development of each project. The RAP produces a project strategic plan, which describes the existing conditions of the project sponsor's infrastructure, organizational and financial capacities, and defines a comprehensive project objective and potential funding strategy, among other aspects.



BECC facilitates a first-time training workshop for those technical consultants contracted through its Simplified and Competitive Ordering Agreement (SCOA) in December, in El Paso, Texas. Some 50 consultants, from Mexico and the United States, attend the workshop.



Success Stories/Tijuana, Baja California



Tijuana is one of Mexico's most successful cities. In the 1990s, growth in its tourist, commercial and industrial sectors surpassed the expectations of even its most optimistic promoters, but with that growth came worsening environmental problems.

A multiplying population put increased stress on an aging city wastewater treatment system, resulting in ineffective sewage treatment and periodic overflows from its wastewater conveyance system. The inadequately treated sewage was discharged into the Tijuana River, which carried it into estuaries and coastal areas. The overflows sent raw wastewater down arroyos on Tijuana's west and north sides and over the U.S.-Mexico border.

The Tijuana River's estuaries are an internationally recognized wetlands zone and the coast near the river's mouth is a popular recreation area. U.S. and Mexican environmental groups, and California agencies charged with protection health, complained that the sewage damaged these areas. In addition, that the overflows raised health concerns for Tijuana homeowners, as well as ranchers and vegetable growers in San Diego County, Calif.

As part of a long-term solution to the problem, the State Public Service Commission of Tijuana (CESPT) proposed to enlarge and improve the city's existing San Antonio de los Buenos wastewater treatment plant, build a new lift station and construct a new conveyance system for Tijuana's wastewater.

The existing wastewater conveyance system was an open-air channel that occasionally became blocked by debris, said Roberto Espinosa-Mora, of CILA, Mexico's section of the International Boundary and Water Commission. Also, because of a lack of infrastructure, if the system was ever shut down for repair, there was



Certification by BECC paved the way for the State Public Service Commission of Tijuana (CESPT) to rehabilitate and expand the city's San Antonio de los Buenos wastewater treatment plant. The expanded plant handles more sewage from the growing city and helps reduce the chance of overflows.

2003

Some of BECC's technical staff receive certification in ZERI methodology in January. The purpose of ZERI is the complete use of raw materials in industrial processes. Its basic methodology is to use the waste from one productive process as the raw material for another process, thus eliminating waste and generating a value-added input.



An intensive public information campaign about a proposed street paving project draws more than 8000 persons to public meetings in the Baja California cities of Ensenada, Mexicali, Rosarito, Tecate and Tijuana. The \$61 million project is the first of a proposed five-part regional effort to pave streets and improve air quality.



Creating a role in broader initiatives, BECC addresses one of the most pervasive environmental problems in the border region by co-sponsoring the First Binational Forum on Scrap Tires on April 9 in Juarez.



no place for the backup to be released. As a result, wastewater overflowed into arroyos and the river, he added.

The proposed conveyance system would consist of 10.8 miles of pipeline that would run parallel to the old channel. Enclosed, it would prevent overflows; in addition, it would provide an alternate route for waste, so that flows could be switched between it and the old system for repairs.

The Border Environment Cooperation Commission (BECC) board of directors certified the Parallel Conveyance System and Rehabilitation of the San Antonio de los Buenos Plant project in 1997. Its certification made it possible for CESPT to receive approximately \$21.9 million to help pay for the work, a combination of Border Environmental Infrastructure Funds (BEIF) and a NADB loan. An additional \$5.5 million was provided by local sources.

In line with BECC's certification process, CESPT formed two citizens committees, one in San Diego and one in Tijuana, which held public meetings to inform residents about the impacts, costs and benefits of the projects and to learn their reactions.

San Diego-area residents were generally in favor of the project and simply asked how long it would take to complete it, said Mark Spalding, who headed the San Diego committee.

But, Jose Galicot, head of the Tijuana citizens committee, said, Tijuana residents found the chance to comment on a public works project a novel experience and responded with enthusiasm.



Overflows from an aging conveyance system sent raw wastewater down arroyos on Tijuana's west and north sides and over the U.S.-Mexico border.

"This was a way to prove that citizens could do many important things. We had many meetings, in different parts of Tijuana, and everybody came. One time we held a meeting in a garden and it was raining pretty heavily. People thought nobody was going to come, but more than 600 people arrived. It was overwhelming, people's good will about this important program," he said.

Both Espinosa and Galicot said the project has worked perfectly to eliminate the problem it was intended to solve.

"It reduced, for the most part, all the types of maintenance problems we had in the old days," Espinosa said. "Now, the system can be serviced without flows across the border and maintenance is done on a regular basis. From CILA's standpoint, it was a very successful project."



During its 10 plus years of work, BECC has represented for the communities on the U.S.-Mexico border an organization that, besides serving as a forum for discussion and analysis of environmental issues, has linked the three levels of government with civil society to develop a consensus in favor of environmental infrastructure projects that propose to improve their quality of life.

It was a pioneer in opening opportunities for citizen participation in its decision-making process, where it continually applies principles of economic and technical rationality in its certification of projects. The appearance of this binational organization on the border has secured (a role for) public opinion in public works. It is a recognized player that has contributed to the strengthening of the new environmental culture.

—Laura Silvan, Director of the Border Environment Project for Environmental Awareness

Matamoros hosts the 37th public meeting of BECC's board of directors on June 19. BECC certifies 25 environmental infrastructure projects in this year, a record number, with an estimated construction investment of \$812 million.



Representatives of U.S. EPA, SEMARNAT, the 10 border states and the 26 U.S. Indian tribes met in Tijuana on April 4, to recognize the commencement of the Border 2012 U.S.-Mexico environmental program, a 10-year joint effort to improve the border's environment.



Jerry Clifford and Maria Teresa Bandala Medina, U.S. EPA and SEMARNAT's national coordinators for the Border 2012 program, sign a joint communiqué on Dec. 4.





United States Department of the Treasury



Mexican Ministry of Finance and Public Credit



United States Department of State



Mexican Ministry of Foreign Relations



United States Environmental Protection Agency (EPA)



Mexican Ministry of Environment and Natural Resources



CALIFORNIA



ARIZONA



BAJA CALIFORNIA



SONORA



CHIHUAHUA



NEW MEXICO



TEXAS



COAHUILA



NUEVO LEON



TAMAULIPAS

Representative of the U.S. border states

Representative of the Mexican border states

Member of U.S. public who resides in the border region

Member of Mexican public who resides in the border region

2004

Members of BECC's board of directors celebrate the 100th project certification at their 40th public meeting, in Edinburg, Texas. A total of 10 projects are certified by the board of directors this year, representing an investment of \$93.4 million.



As part of a reform effort, a comprehensive business process review of BECC and NADB was conducted to develop ways to make designing, developing, approving, financing and implementing projects more efficient and easier for communities and a variety of project sponsors. The findings and recommendations of the review are presented in December 2004.



Following passage of the necessary U.S. and Mexican legislation and completion of the corresponding diplomatic processes between the two countries, an amended BECC-NADB Charter goes into force on Aug. 6. Among its new provisions, the BECC-NADB geographic jurisdiction is expanded to include communities in Mexico up to 300 kilometers from the border.



For more than 11 years the government of the state and its municipalities has looked for the best opportunities for financing and for support of environmental projects, and for having great allies like the BECC and the North American Development Bank. This partnership is reflected in the certification of 9 projects totaling \$497.19 million, which represents 26% of the total investment by BECC on certified projects to this date. With the assurance and support given from organizations like the BECC, we will continue constructing a better future for Bajacalifornians, to guarantee a worthy environment, free of risks and live full, better lives.

—Ing. Arturo Espinoza Jaramillo, secretary for Infrastructure and Urban Development of the state of Baja California



Over the past ten years, BECC has been an invaluable partner with the Environmental Protection Agency as we work to develop and construct water and wastewater infrastructure along the U.S./Mexico border. The BECC's unique blend of technical expertise, a strong network and credibility with communities has resulted in evaluations and project plans for over 131 communities along the border. Over 7.9 million lives have been touched by the BECC's work to bring clean water, basic sanitation and air quality to the border region.

—Jane Moore, deputy director of EPA's Office of Wastewater Management



Early during the formation of the BECC and the NADB, the regional office recognized the need to focus on communities discharging the largest amounts of untreated or inadequately treated sewage into the Rio Grande and which were having the greatest impacts on public health and the environment. I am extremely pleased that these communities now have certified projects that have been completed or are in the process of being implemented. The genuine expression of deep appreciation on the faces of the public attending the project meetings is an image that is deeply etched in my memories.

—Oscar Ramirez, Jr., EPA's former deputy director for the Office of Water Quality Protection, Region 6



After a difficult childhood BECC is now coming out of the ever-changing teenage years. As it enters maturity, I am very confident that its contributions to improving the Border environment will surpass the successes of the past. I look forward to continuing the strong partnership between Texas and BECC.

—Ralph Marquez, commissioner of the Texas Commission on Environmental Quality



The BECC's public participation requirements set the standard for involving the community and stakeholders in environmental infrastructure planning on the border. Such transparency enhances project design and promotes accountability. There is no going back to the old ways.

—Plácido dosSantos, border environmental manager, Arizona Department of Environmental Quality



With the participation of national and international organizations (CNA, BECC, NADB, EPA among others) we managed to create an Integral Potable Water Plan and Sanitation (IPWPS), through which appropriate directives and actions guarantee the water supply to the city. With BECC's certification, this plan is today a reality which includes great public works that will be of great impact for next the 25 years. This event, without precedent in the history of Matamoros, has a total investment of 4.7 billion pesos with an amount of 730 million pesos to be apportioned in the first phase during the period 2003-2006.

—Mario Zolezzi Garcia, secretary of administration for the state of Tamaulipas



During this year, BECC launches a needs assessment study of environmental infrastructure in the border region. Among the problems already identified is a lack of abundant potable water.



BECC receives ISO 9001:2000 certification on Dec. 14. This certification means BECC/COCEF has passed a rigorous examination of its processes to assure it is operating in accordance with the standards set by this international quality systems body.





Independent auditors' report to the Board of Directors of Border Environment Cooperation Commission

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We have audited the accompanying statements of assets, liabilities and fund balance of the Border Environment Cooperation Commission accounts exclusively related with the administration of the contributions obtained from the Federal Governments of the United States of America and the United Mexican States (the "Commission"), as of December 31, 2004 and 2003, and the related statements of revenues, expenses and changes in fund balance and changes in assets, liabilities and fund balance for the years then ended, all expressed in U.S. dollars. These financial statements are the responsibility of the Commission's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in Mexico. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement and that they are prepared in accordance with the basis of accounting described in Note 2. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the basis of accounting used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared in U.S. dollars, because the Commission is a bi-national organization (United States of America and Mexico), and all significant transactions are in such currency. Considering the aforementioned situation, and the Commission's information requirements, the accompanying financial statements have been prepared on the basis of accounting described in Note 2 for information purposes to the Board of Directors. Consequently, its financial statements do not recognize the comprehensive effects of inflation which are required by Bulletin B-10 "Recognition of the Inflation Effects in Financial Information", or the liabilities and expenses related to retirement benefits, as required by Bulletin D-3 "Labor Obligations" and have not been prepared in accordance with accounting principles generally accepted in Mexico.

In our opinion, the financial statements referred to above, present fairly, in all material respects, the financial position of the Border Environment Cooperation Commission accounts exclusively related with the administration of the contributions obtained from the Federal Governments of the United States of America and the United Mexican States as of December 31, 2004 and 2003, and its revenues, expenses and changes in fund balance and changes in its assets, liabilities and fund balance for the years then ended, in accordance with the basis of accounting described in Note 2.

This report is intended solely for the information and use of the Board of Directors of the Border Environment Cooperation Commission, and is not intended to be and should not be used by anyone other than these specified parties.

The financial statements have been translated into English for the convenience of users.

Galaz, Yamazaki, Ruiz Urquiza, S. C.
Member of Deloitte Touche Tohmatsu

C.P.C. Miguel García Spíndola
Partner

February 14, 2005

Auditoría. Impuestos y Legal. Consultoría. Asesoría Financiera.

Member of
Deloitte Touche Tohmatsu

Project Development Assistance Program (PDAP)
Consolidated Balance Sheet as of December 31, 2004 (In U.S. Dollars)

ASSETS

Current Assets

| | |
|-----------------------------|-------------------|
| Banks | \$ 254 |
| Accounts Receivable | |
| PDAP Authorized Grants | 10,070,318 |
| Value Added Tax to Recover | 14,743 |
| Others Accounts Receivable | 243 |
| Total Current Assets | 10,185,558 |

Fixed Assets

| | |
|---------------------|-------------------|
| Computer Equipment | 23,828 |
| TOTAL ASSETS | 10,109,386 |

LIABILITIES & EQUITY

Liabilities

| | |
|---------------------------------------|---------------------|
| Accounts Payable | 591,073 |
| Equity | |
| Disbursed Funds | (31,681,687) |
| EPA Contributions | 41,200,000 |
| TOTAL LIABILITIES & EQUITY | \$10,109,386 |

Combined Statement of Revenues, Expenditures in Funds Balances

For the eighty seven months ending December 31, 2004

| | Actuals as of previous month 10/97-12/04 | Grant amount | |
|---|--|----------------------|---------------------|
| | | Authorized | Unexpended |
| Sources of Funds | | | |
| Other Income | 590,576 | | (590,576) |
| VAT to Recover | (14,743) | | 14,743 |
| EPA Reimbursements | 31,129,682 | 41,200,000 | 10,070,318 |
| Total Source of Funds | \$ 31,705,515 | \$ 41,200,000 | \$ 9,494,485 |
| EPA Reimbursements Allocation | | | |
| Personnel Expenses | 4,856,160 | 5,920,686 | 1,064,526 |
| Operational Travel | 413,681 | 537,959 | 124,278 |
| Office & Computer Equipment | 80,336 | 132,082 | 51,746 |
| Supplies & Incidentals | 16,533 | 26,447 | 9,914 |
| Special Consultant | 818,818 | 1,283,729 | 464,911 |
| Public Participation | 209,612 | 334,341 | 124,729 |
| Consultants on TA Projects | 25,310,375 | 32,964,756 | 7,654,381 |
| Total EPA Reimbursements | \$ 31,705,515 | \$ 41,200,000 | \$ 9,494,485 |
| Other Assets—Net | (23,828) | | |
| Consultants—Technical Assistance Unpaid | | | (1,700,310) |
| Total Grant Funds Available | \$ 31,681,687 | \$ 41,200,000 | \$ 7,794,175 |

Balance Sheet as of December 31, 2004 (In U.S. Dollars)**ASSETS**

CURRENT ASSETS

| | |
|------------------------------|-----------|
| Cash & Short-Term Investment | 1,243,389 |
| Value Added Tax | 20,748 |
| Accounts Receivable | 125,161 |
| Total Current Assets | 1,389,298 |

| | |
|--|---------|
| Fixed Assets (Furniture & Equipment—Net) | 100,645 |
|--|---------|

| | |
|---------------------|---------------------|
| TOTAL ASSETS | \$ 1,489,943 |
|---------------------|---------------------|

LIABILITIES AND FUND EQUITY

CURRENT LIABILITIES

| | |
|---------------------------|---------|
| Accounts Payable | 743,561 |
| Total Current Liabilities | 743,561 |

FUND EQUITY (Excess of Revenues over Expenditures)

| | |
|--|-----------|
| Results from Previous Years | 1,188,548 |
| Current Year (Revenues Over/(Under) Expenses | (442,166) |
| Total Fund Equity | 746,382 |

| | |
|--|---------------------|
| TOTAL LIABILITIES & FUND EQUITY | \$ 1,489,943 |
|--|---------------------|

Statement of Revenues, Expenses and Charges in Fund Balances

Year ended December 31, 2004 (In U.S. Dollars)

REVENUES

| | |
|--|-----------|
| Contributions - United States of America | 2,110,035 |
| Contributions - United Mexican States | 1,067,266 |
| | 3,177,301 |
| OTHER INCOME - NET | 71,910 |

| | |
|-----------------------|-----------|
| Total Revenues | 3,249,211 |
|-----------------------|-----------|

EXPENSES

| | |
|--|-----------|
| Wages & Benefits | 2,690,996 |
| Travel Expenses | 105,504 |
| Public Meetings | 45,603 |
| Technical Assistance and Professional Fees | 446,286 |
| Other Expenses | 402,989 |
| Total Expenses | 3,691,377 |

| | |
|---|-----------|
| EXCESS OF REVENUES OVER EXPENSES | (442,166) |
|---|-----------|

| | |
|---------------------------------------|-----------|
| FUND BALANCE BEGINNING OF YEAR | 1,188,548 |
|---------------------------------------|-----------|

| | |
|----------------------------------|-------------------|
| FUND BALANCE, END OF YEAR | \$ 746,382 |
|----------------------------------|-------------------|

Note: The financial statements were audited by Deloitte & Touche. The audited financial statement is available on our web site www.cocof.org

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The Border Environment Cooperation Commission wishes to thank the current members and former members of its board of directors and advisory board, who have contributed so much to making the last 10 years as productive as they have been. Also, BECC wishes to acknowledge the members of the public, federal, state and local officials, North American Development Bank staff and project consultants who have worked to achieve a healthier border region through the development of sustainable environmental infrastructure.



General Manager
Fernando R. Macias

Deputy General Manager
Javier Cabrera Bravo



20001233

OUR MISSION

THE BORDER ENVIRONMENT COOPERATION COMMISSION
WORKS TO PRESERVE, PROTECT AND ENHANCE HUMAN HEALTH
AND THE ENVIRONMENT OF THE U.S.-MEXICO BORDER REGION,
BY FACILITATING STRATEGIC INITIATIVES AND SUSTAINABLE
PROJECTS THROUGH A TRANSPARENT BINATIONAL PROCESS IN
CLOSE COORDINATION WITH THE NORTH AMERICAN
DEVELOPMENT BANK, FEDERAL, STATE AND LOCAL AGENCIES, THE
PRIVATE SECTOR, AND CIVIL SOCIETY.



BORDER ENVIRONMENT COOPERATION COMMISSION

