



# Year in Review

Program Performance and Results  
Border Environment Cooperation Commission

# 2010



Wastewater Treatment Plant in Fabens, TX. with 1.2MGD capacity

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## Year in Review: Program Performance and Results 2010

Building upon the experience accrued by working along the United States-Mexico border region, in 2010, the Border Environment Cooperation Commission (BECC) continued its efforts to develop new opportunities to achieve efficiency and high quality, as well as to expand the types of value-added services to be provided to border region stakeholders. These enhancements have been made possible through the systematic implementation of a number of management tools, with strategic planning efforts as the basis for long-term focus. BECC's strategic planning is aligned with the institution's Mission and Vision, and it includes five overarching objectives: 1) Effective Management of Water and Wastewater Projects, 2) Water Conservation and Reuse, 3) Waste Management, 4) Transportation, Energy, and Air Quality, 5) Climate Change, Mitigation, and Adaptation. These objectives were used to develop annual goals for the organization and its staff.

BECC's management tools are built upon the foundation of its strategic planning efforts and provide the framework for the participation and involvement of all staff in the development of goals as the basis to monitor its performance. These tools include:

- **Balanced Scorecard (BSC)** – a method of translating strategy into specific action plans with annual goals and objectives that are utilized to measure program performance.
- **Quality Management System (QMS)** – assuring process compliance to a high quality standard, monitored through periodic internal audits conducted throughout the year.
- **Results Measurement System** – a framework developed specifically to document the results of projects certified by BECC and financed by NADB, focused on achieving project outcomes which contribute to positive environmental and human health impacts.



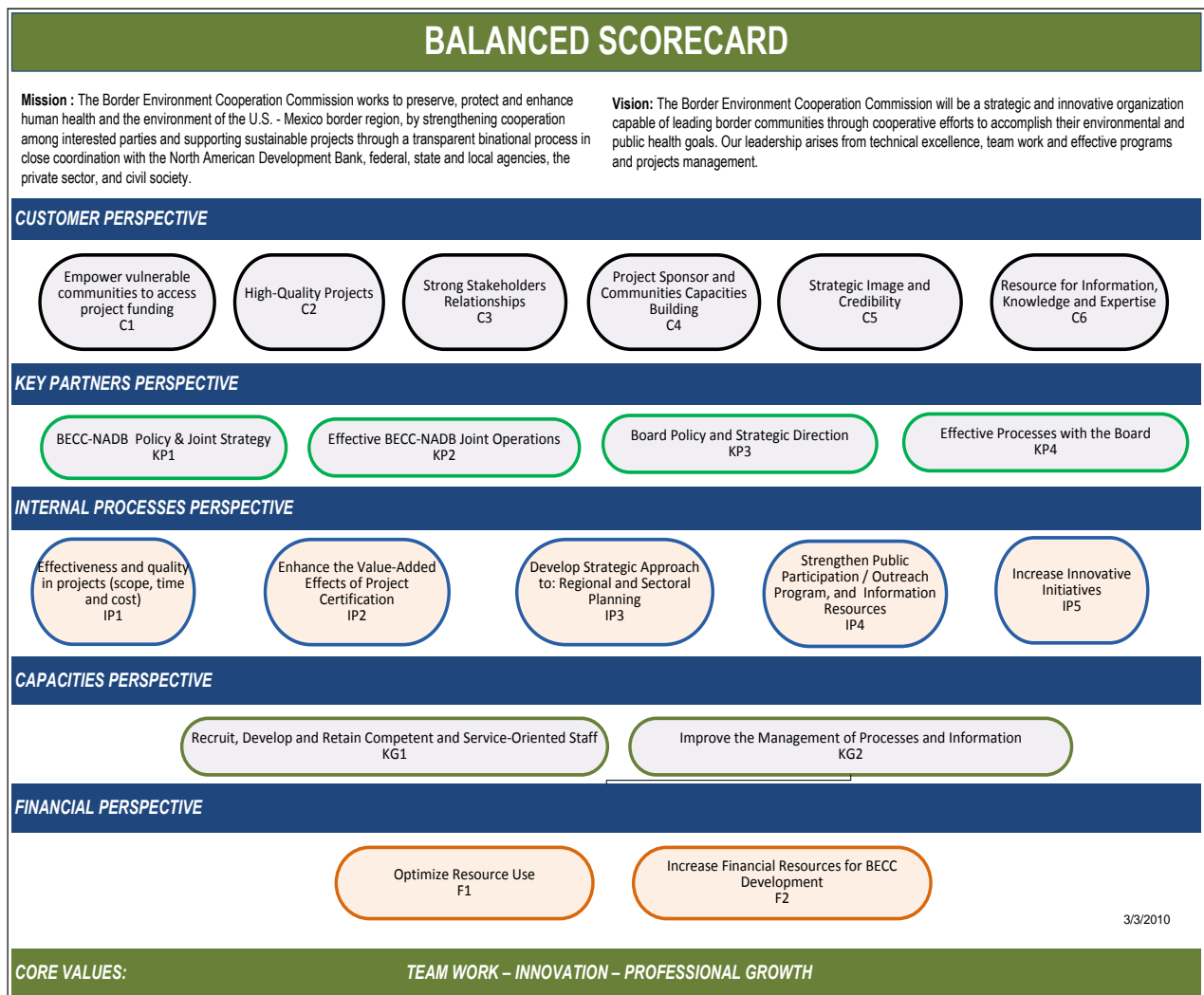
The purpose of this report is to present the achievements of BECC's seven institutional programs. After first reviewing BECC's implementation and use of the BSC to guide and evaluate its activities under each program, a summary of program accomplishments and a specific review of its BSC objectives are provided.

## BECC's Balanced Scorecard

Since 2006, BECC has instituted the Balanced Scorecard (BSC) management tool as a method for translating its annual strategic objectives into clear and measurable actions. Using the BSC model, BECC's planning efforts have been developed to consider the perspective of its **customers** –expectations of its Board, NADB, and other border stakeholders– as well as to assure sufficient institutional infrastructure through:

- efficient and effective internal processes
- continuous assessment and expansion of the knowledge and competencies of its human resources, and
- optimization of its financial management practices.

BECC has realized a number of important benefits from this planning technique. For example, the strategic map provides a comprehensive picture of business operations and interrelationships. The BSC has also been a practical tool for communicating goals and strategies at all levels of the organization and BECC employees are able to see and understand how their work is related to the success of the organization as a whole. BECC has utilized the performance measures resulting from this practice to inform its stakeholders of achievements and opportunities for improvement. BECC's 2010 BSC Strategic Map reflecting the relationships among its 19 objectives is presented below.



Because the BSC is intended to be adaptable to unique and evolving work environments, BECC annually conducts a series of internal work sessions to review and evaluate the effectiveness of its BSC, identify improvements for the following year, and develop annual goals and objectives. For 2010, BECC's senior staff **identified nineteen (19) new or refined objectives along with seventy-two (72) associated measurable targets**. To further support the potential success of these new expectations, the management designed a reporting program which features bi-monthly follow-up and measurement of progress at regular senior staff meetings. With the management's commitment to utilize this tool to its greatest potential, BECC's BSC has proven to provide an effective means for evaluating and documenting the performance of the institution.

**Program Performance and Results**

In 2010, BECC successfully met 82% of its BSC objectives and continued to advance its mission through significant accomplishments in each of its seven institutional programs:

1. Technical Assistance and Project Certification Program
2. Environmental Project Management Program
3. Strategic Planning Program
4. Knowledge Management Program
5. Public Participation and Capacity Building Program
6. Performance Improvement Program
7. General Support Program

The performance of each program, including notable accomplishments, along with a brief recap of those activities measured for its BSC objectives, are highlighted below.

**Program 1: Technical Assistance and Project Certification**

**2010 Balanced Scorecard Review**

<b>Objective</b>	<b>Measurable Target</b>	<b>Actual</b>
High-Quality Projects/Services	15 certify-ready projects	8
High-Quality Projects /Services	Complete 80% of BEIF projects in 2 years or less	100%
Strengthen communities to access project funding	10 communities benefited	5
High-Quality Projects/Services	Complete 80% of expanded-sectors projects within specified timeline	66%
High-Quality Projects/Services	85% Customer Satisfaction	100%

*The purpose of the Technical Assistance and Project Certification Program is to offer technical services and/or financial assistance to help project sponsors effectively implement high-quality project development efforts and achieve certification for their environmental infrastructure projects.*



## Projects

Throughout 2010, BECC staff managed a significantly steady project workload at any one period. As of December 31, 2010, there were 45 projects in BECC's project development pipeline, with an estimated cost of approximately US \$905 million. Of these, 24 were in the United States and 21 in Mexico; 38 were related to water and wastewater, 3 to solid waste (SW), and 4 to air quality (AQ).

During 2010, eight environmental infrastructure projects successfully advanced through the BECC certification process and received NADB financing approval, representing an estimated infrastructure investment of more than US \$276.40 million and benefitting 1,825,610 border residents. A list of projects certified in 2010 is provided below. Additional project information can be found in BECC's 2010 Annual Report or accessed through the BECC's website.

Project Name	Population Benefitted	Cost (US\$ Millions)
<b>San Luis Rio Colorado, SON.</b> – Wastewater Collection System Expansion to Unserved Areas – Phase III.	55,129	\$ 6.99
<b>Cd. Juarez, CHIH.</b> – Wastewater Collection and Treatment Project for Tres Jacales	283	\$ 1.04
<b>Cd. Juarez, CHIH.</b> – Wastewater Collection and Treatment Project for El Millon	720	\$ 1.31
<b>Cd. Juarez, CHIH.</b> – Wastewater Collection and Treatment Project for Jesús Carranza	720	\$ 1.31
<b>El Paso, TX.</b> – Paisano Valley Water Project	117,407	\$ 18.00
<b>Sonora</b> – Paving Project for 58 Municipalities in Sonora	1,464,302	\$ 190.26
<b>Nogales, Sonora</b> – “Los Alisos” Wastewater Treatment Plant and Conveyance Project	70,000	\$ 19.31
<b>Nuevo León</b> – Basic Environmental Infrastructure Program for Substandard Urban Developments	117,049	\$ 38.18

In 2010, BECC certified a paving project for 58 municipalities in the State of Sonora. This project is expected to improve air quality conditions, thus benefitting 1,464,302 local residents.

Consequently, as of December 31, 2010, BECC had certified a total of 175 projects, 82 in the U.S. and 93 in Mexico, benefitting 13.8 million border residents and estimated to have a construction value of \$3.92 billion dollars. NADB financing has supported 149 BECC-certified projects with \$1.13 billion dollars in loans and grants. At year-end 2010, an additional 7 projects had received funding approval and were pending funding agreements.

To efficiently and effectively advance the development of a project, many project sponsors require the support of BECC's technical services or technical assistance (grant funds) programs. Technical services are provided by a specialized, multi-disciplinary project development team that has the experience to assist a project sponsor with a wide range of needs. These services are provided by BECC staff at no cost to the project. However, the direct participation of the project sponsors in each task creates an ideal forum to strengthen their own institutional capacity. In performing any service, BECC staff strives to provide a model for best management practices that can be routinely implemented by the project sponsor in all infrastructure projects.

## Technical Assistance

BECC manages two technical assistance grant funds – the Project Development Assistance Program (PDAP) and a special BECC Technical Assistance (TA) Fund. PDAP is funded through resources provided by the U.S. Environmental Protection Agency’s (EPA) US-Mexico Border Program. The latter TA program was created by BECC through savings gained from the efficient use of its operating budget to support the development of water and wastewater projects that will not receive PDAP funding, as well as all other BECC-NADB eligible project types. These resources enable border communities to undertake initial project development activities, facilitating the detailed technical work necessary to formulate high-quality projects. Funds are available to support project tasks such as the development of environmental assessments, technical feasibility studies, preliminary and final design, and institutional capacity building.

*As of December 31, 2010, BECC had approved US \$39.39 million to support the development of projects in 160 communities. Of this amount, \$34 million are from PDAP and \$5.39 from BECC’s TA.*

PDAP is available for public water and wastewater infrastructure projects identified through a program-specific prioritization process. BECC, in close coordination with EPA and NADB, conducts a public and transparent process to handle the application, evaluation and ranking of projects applying for technical assistance through PDAP and construction funding through the Border Environment Infrastructure Fund (BEIF) administered by NADB. The objective of this process is to prioritize projects based on the severity of the human health and/or environmental conditions to be addressed by the new or improved water and wastewater infrastructure proposed by the project. The total amount of technical assistance awarded in 2010 is \$1,819,427 dollars, benefitting 21 communities. Of the 33 studies supported with this technical assistance, the majority relate to facility planning, environmental assessments, and final design.

*A total of US \$5.39 million in BECC funds has been invested in the technical development of 39 water and wastewater projects, 57 solid waste projects, and 18 new sector projects.*

BECC’s **TA Fund** has been designed to support the development of water and wastewater projects that will not receive PDAP funding, as well as all other BECC-NADB eligible project types. Because these funds are derived from its operations budget, BECC has committed to incorporating cost-saving practices in all of its budget areas in an effort to increase the resources available for this special fund. In 2010, BECC awarded 21 technical assistance grants totaling

\$214,650 dollars from this fund to support the development of water, wastewater, solid waste, and new sector projects in the border region.

The projects, communities and total funding provided through PDAP and with BECC’s own resources are summarized in the table below.

Country	Communities*	Projects	Amount (US\$ Millions)	Percent
Mexico	72	182	\$14.87 million	38%
United States	88	141	\$24.52 million	62%
<b>Total</b>	160	323	\$39.39 million	100%

\* A community may have several projects.

A summary of technical assistance awards for 2010 is provided in Attachment 1.

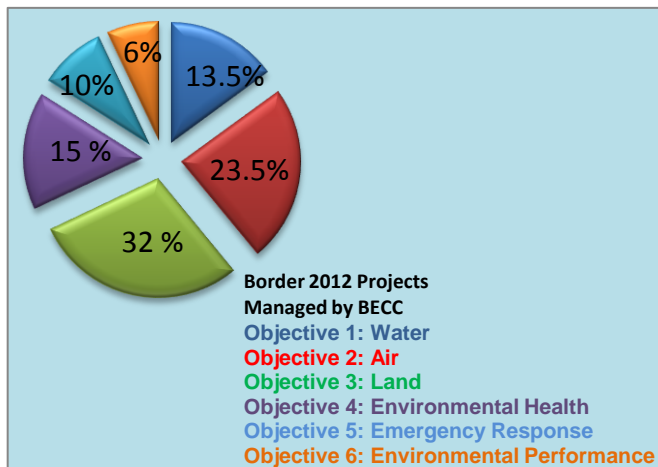
## Program 2: Environmental Project Management

### 2010 Balanced Scorecard Review

Objective	Measurable Target	Actual
High-Quality Projects/Services	80% compliance for B2012 with developed timeline	90%
High-Quality Projects/Services	80% Comply with project specified features and functions for B2012 and other initiatives	100%

*The purpose of the Environmental Project Management Program is to utilize BECC's leadership, credibility with stakeholders, and institutional capacities to advance efforts, other than infrastructure projects, to improve the human health and environment along the US-Mexico border. The effectiveness of border environmental initiatives is benefited by integrating BECC's approach and experience in project and program management.*

With the experience gained and relationships established while developing projects along the US-Mexico border, BECC is able to offer a unique project management service for environmental projects promoted by a variety of external programs in the border region. In 2010, the program consisted of activities primarily supporting two external programs: Border 2012 and Methane to Markets.



Border 2012 (B2012): The Border 2012: US-Mexico Environmental Program is focused on six objectives: (1) reducing water contamination, (2) reducing air pollution, (3) reducing land contamination, (4) improving environmental health, (5) emergency response, and (6) improving environmental performance along the U.S.-Mexico border. BECC's role in this important bi-national effort has continued to increase over the past three years. To support EPA and Mexico's Ministry of the Environment and Natural Resources (SEMARNAT) in their efforts to achieve results, BECC provides its services to

facilitate stakeholder meetings as well as to identify, contract, and manage projects. By year-end 2010, EPA had authorized approximately \$10.1 million in grant funding for 162 BECC-managed B2012 projects, distributed among the program goals as follows:

	Goal	SON	AZ	BC	CA	CHIH	NM	COAH	NL	TX	TAMS	TOTAL
1	Water	8	2	10	0	0	0	0	0	1	1	22
2	Air	9	3	14	4	4	0	1	0	2	0	37
3	Land	9	5	15	1	2	1	1	0	6	12	52
4	Environmental Health	3	4	2	2	3	3	0	1	4	2	24
5	Emergency Response	3	5	4	4	0	0	0	0	1	0	17
6	Environmental performance	3	1	4	0	1	0	0	0	1	0	10
		35	20	49	11	10	4	2	1	15	15	162

In 2010, with the concurrence of EPA, BECC approved \$2.27 million in technical assistance funds for 50 B2012 projects. Of these funds a total of \$1.69 million was disbursed in support of 39 projects. Further information on the Border 2012 projects supported in 2010 is contained in Attachment 2. Additionally, BECC's Logistics area provided logistical support at 33 B2012 meetings, including regular meetings held by Regional Work Groups, Air and Water Policy Forums, and the National Coordinators Meeting; general support included in some cases simultaneous interpretation services, arrangements for meeting facilities and refreshments, participant registration, and minute taking.

**Methane to Markets (M2M):** At the request of EPA and SEMARNAT, since 2007 BECC has offered its project management support and technical expertise to these environmental agencies' Methane-to-Markets initiative (M2M). During 2010, BECC, in collaboration with the International City/County Management Association (ICMA), launched the study "Methane Recover in Municipal Landfills – Outreach and Experience Sharing Project in Mexico." BECC obtained \$170,000 in EPA grant funding for this study, which purpose is to share the experience gained by ICMA and BECC in this sector with border communities, in an attempt to identify opportunities to address multiple environmental issues while developing new energy sources. This study is expected to be completed in 2011.

### Program 3: Strategic Planning

#### 2010 Balanced Scorecard Review

Objective	Measurable Target	Actual
Enhance the Value-Added Effects of Project Certification	6 projects closed-out	4
Develop Strategic Approach to Regional and Sectoral Planning	100% completion 2011-2012 prioritization process	100%
Develop Strategic Approach to Regional and Sectoral Planning	Identify 3 paving coverage studies (Sonora)	3
Develop Strategic Approach to Regional and Sectoral Planning	Complete 4 Regional Plans for US Border States	2
Project Sponsor and communities Capacities Building	Develop and implement Climate Change Strategy for 6 Mexican Border States	6



*Identifies infrastructure needs, develops/prioritizes solutions, and optimizes resources to achieve local, state and regional environmental and human health goals through sound public policies that promote the implementation of environmental infrastructure.*

Strategic planning has long been recognized by development agencies as a critical tool to effectively implement sustainable projects to address identified needs. BECC has undertaken several efforts aimed at assessing the conditions and needs of border communities, by region and by sector.

Regional planning efforts enables the institution to identify and prioritize infrastructure needs within its mandate area, quantify the resources required for implementation, justify the financing of related works, and propose specific project development strategies.

BECC utilizes officially published data sources to document existing environmental infrastructure conditions in the water, wastewater collection, and treatment sectors. In the case of municipal solid waste, urban road paving, air quality, urban transportation and mobility, and other energy-related indicators, BECC conducts surveys, research, and diagnostic assessments both internally and through the use of consulting services. These studies help to estimate the investments required to meet identified gaps in infrastructure. The result of this process is an assessment of environmental infrastructure needs that guides and supports the decision-making processes of local and state governments.

#### *Basic Needs Assessment*

During 2010 BECC updated “Basic Environmental Infrastructure Needs Assessments” for Sonora and Tamaulipas, adding “paving needs,” “water conservation,” and “opportunities for enhanced street lighting efficiency” sections. A second report of the Arizona Border Environmental Infrastructure assessment was also completed during this year. Assessments for the California and Texas border regions are currently under development and will be completed in 2011. The needs basic environmental infrastructure needs assessment for New Mexico was completed since 2009.

#### *Assessment of Municipal Financial Strength*

The purpose of this study was to evaluate the financial performance of municipalities within 100 kilometers of the U.S.-Mexico border. Financial performance benchmarks were established to measure the ratio between the municipalities’ revenue and public expenditure, and other related analyses were performed to identify their debt capacity. The main result of this study was the definition of six indicators associated with efficiencies and capacities in municipal finances.

#### *Strategy for Sustainable Housing Development*

The two-volume “Sustainable Housing Development Manual” developed by BECC defines criteria and guidelines for identifying, evaluating and developing housing projects that are sustainable from an urban, environmental, social and economic standpoint. The purpose of this effort is to promote the design and construction of housing projects that consider measures related to water and energy conservation, as well as waste reduction, among other measures.

The manual describes in detail 71 sustainability indicators, 26 of which do not represent an increase in the cost of housing units. The manual intends to be a tool to assess the sustainability of new urban developments and serve as a reference for local authorities and policy makers, as it includes proposed municipal regulations that may be incorporated as guiding instruments for urban/housing development and lays the foundation to further the promotion of sustainability-friendly policies and design parameters. This effort was widely coordinated with the INFONAVIT headquarters in Mexico City. Several legislators from the states of Nuevo Leon and Sonora are also using this information generated by BECC to propose specific changes to state laws governing construction and environmental protection.

### *Diagnostic Assessment of Paving Needs*

In 2010, BECC completed an assessment using *World View 2* satellite imaging and geographic information systems to identify paving needs in twelve cities of the state of Sonora, “reviewing” more than 72 million square meters of urban roads using satellite imagery interpretation technology and a classification algorithm. This technology helps to obtain rapid diagnostic assessments and accurately estimate investments (by subdivision) by associating statistical population data.

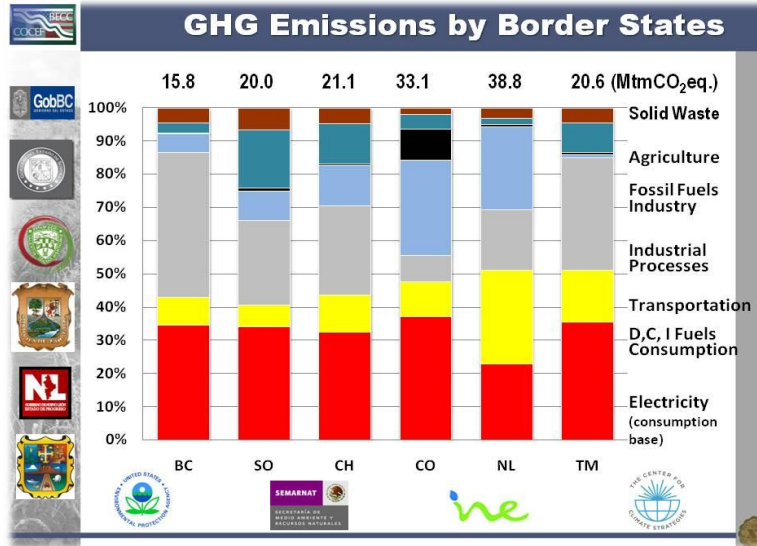
The cities surveyed were San Luis R.C., Nogales, Agua Prieta, Cananea, Magdalena, Hermosillo, Caborca, Puerto Peñasco, Santa Ana, Sonoyta, Nacoziari de García, and Imuris. The results of these studies supported a \$190 million dollar paving project that benefits 58 municipalities in the State of Sonora, certified by the BECC and approved for NADB financing.

### *Climate Change*

During 2009-2010, the Center for Climate Strategies (CCS) –a U.S. non-profit organization– collaborated with experts and institutions from the six Mexican border states to develop greenhouse gas inventories (GHG, baseline year 1990) and projections to 2025, within a framework of collaboration with BECC and EPA and in close coordination with INE. GHG inventories and forecasts for the six Mexican border states were completed in July 2010 and published in October 2010.

The overarching principles and guidelines that governed the development of GHG inventories and projections were: transparency, consistency, priority to existing state and local information sources, priority to major emission sources, and comprehensive coverage of GHG by sectors, activities (statewide), and time periods. Special consideration was given in the project to ensuring the coherence, consistency, and compatibility of results to support national and binational (U.S.-Mexico) policy planning and development processes.

Inventories and projections include the six types of GHGs included in Mexico’s national inventory and commonly reported under the Kyoto Protocol. In total, the six border states generated 141.3 MTMCO<sub>2</sub>e in 2005. Gross projected emissions, based on consumption, will rise to 225.7 MTMCO<sub>2</sub>e by 2025. The chart below shows the main sources of greenhouse gas emissions by state. It is clear that the electricity generation/use and the passenger and freight transportation sectors are the most significant sectors and have the best perspectives for GHG emission mitigation projects.



BECC's goal is to support capacity building and a regional strategy for climate change mitigation and adaptation that will result in project initiatives that can be certified by BECC and financed by NADB.

To support the development of State Climate Action Plans (SCAPs), BECC has conducted a training workshop for Technical Work Groups (TWGs) of the six Mexican border states via Webinar, with the purpose of enhancing the TWG's ability to implement action planning processes related to climate change in each of the border states. Module 1 of the workshop, entitled "Study of Greenhouse Gas Inventory and Forecast Data and Planning Form" was conducted in August 2010. Module 2: "Policy Option Selection and Design," and Module 3: "Policy Option Cost-Effectiveness Analysis" were scheduled for January and June 2011, respectively.

Once the State Climate Action Plans are completed, BECC will be able to develop and certify environmental infrastructure projects related to climate change mitigation and adaptation, which can be financed by NADB.

### *Results Measurement*

To maintain the results measurement system, since July 2008 BECC and NADB have included a results matrix with each certified project. By the end of December 2010, 40 projects have been presented to the Board of Directors accompanied by results matrices. We anticipate that the development of project results will be reviewed as part of the project close-out process directed by BECC in coordination with NADB, the project sponsor, and other stakeholders. , The process:

- **Evaluates the construction and/or operating conditions of the new infrastructure against the conditions proposed at the time of project certification**
  - Have all products (tasks) been completed?
  - Is the infrastructure working as expected?
    - Technical – flow, energy, quality, operator training
    - Financial – household connections/discharges, revenues
  - Were projected results achieved?

- **Identifies any specific influence that deviates from the expectations at the time of certification**
  - Insufficient funding or cost fluctuations
  - Design or operational issues
  - Unforeseen conditions – weather, land, characteristics of the customer
  - Slow flow connections, unfulfilled population projections, etc.
  
- **Establishes a feedback system**
  - Outline instructions that may enhance the development of the project or expectations for future projects

To date, the project close-out process has been concluded for six BEIF projects, and is underway for an additional four BEIF projects that are currently under development. The BEIF project close-out process was added since October 2010 to the EPA-funded Project Development Assistance Program (PDAP) work plan. Additionally, BECC and NADB have designed an outreach and reporting process for water projects that are not eligible to receive BEIF funding, which was presented to the Board of Directors during its February 2011 meeting. The implementation of this task for non-BEIF eligible projects is expected to begin during the second quarter of 2011.

## Program 4: Knowledge Management

### 2010 Balanced Scorecard Review

Objective	Measurable Target	Actual
Develop Strategic Approach to: Regional and Sectoral Planning	4 case studies for expanded sectors	1
Improve the Management of Processes and Information	Digitalized 100% certified projects and studies	65%
Strengthen Public Participation / Outreach Program, and Information Resources	Annual report within six months of year; at least two flash news per month; one press release per month	70%

*Generates, enhances and promotes the exchange of information regarding projects, environmental news, and special studies.*

Information availability and accessibility are critical for border communities, government agencies, and other stakeholders to prioritize and coordinate actions intended to address environmental and human health issues that still exist in the border region. Cognizant of the role that information plays in defining strategies and implementing actions, BECC has developed specialized studies, diagnostic assessments, and various publications intended to serve as tools to identify and implement environmental infrastructure projects in a variety of sectors.

On a broader level, this Program includes the generation of institutional reports such as the Annual Report, quarterly reports, the Joint BECC-NADB Status Report, the Border Environmental Flash series and other status or performance reports which may be requested by



the Board or other stakeholders. Periodically, BECC also publishes special reports or white papers on specific border issues or programs.

### Border Environmental Flash 2010

1. Ian Tucker, Senior Budget Analyst from the U.S. Department of State visits the border
2. Border Energy Forum held in Chihuahua City
3. BECC and NADB participate in Binational Conference on Green Approaches to Managing Stormwater and Reclaimed Water
4. Border Environment Cooperation Commission's role recognized at the Border Governors Meeting held in Santa Fe, New Mexico
5. BECC offers Workshop on State Climate Action Plans
6. Paisano Valley water transmission line to be replaced
7. Construction of new Los Alisos wastewater treatment plant begins in Nogales, Sonora
8. Workshop on Opportunities for Carbon Offset Projects held in Mexico City
9. Eight Air Policy Forum Meeting held in Las Cruces
10. BECC participated at the Binational Colloquium on Transborder Human Development in the Arizona-Sonora Region
11. Public Meeting held for the proposed Sonora State Paving Program
12. BECC begins the installation of two heliostatic photovoltaic panels
13. New Wastewater Treatment Plant inaugurated in Fabens
14. BECC-certified projects improve water and wastewater conditions in La Feria and Mercedes, Texas
15. Workshop held on Opportunities for the Use of Methane generated in Sanitary Landfills
16. Anapra Wastewater Treatment Plant Inaugurated
17. BECC takes part in Elephant Sculpture exhibition at Paso del Norte Cultural Center in Juarez
18. BECC and NADB Officials meet at Grutas de Garcia to review a comprehensive project that includes the cleanup of the Pesqueria River, wastewater collection, solid waste management, road paving, and renewable energies
19. The Border Environment Cooperation Commission adheres to Earth Carter principles and values
20. BECC present at the First Border Municipalities Partnership meeting
21. BECC takes part in Motor Oil Best Management Practices workshop
22. Apostoles del Agrarismo Elementary School enjoys renovated restrooms through BEEC program
23. BECC obtains ISO 14001 on
24. Agencies review water conservation strategies for the border
25. BECC and the State of Sonora reach agreement to work on new environmental infrastructure project development program
26. Major advances presented at the Sixth U.S.-Mexico Border 2012 National Coordinators Meeting

In 2010, BECC published 26 Border Environmental Flashes to an e-mail registry of more than 1,000 subscribers

During 2010, BECC developed and published a number of documents that provide detailed information to assist border institutional stakeholders in making policy decisions. The most relevant studies are described in this report under Program 3: Strategic Planning. These publications can be found in our website: [www.cocéf.org](http://www.cocéf.org)

Other relevant actions carried out during the year include:

- In collaboration with Mexico's Federal Office for Environmental Protection, BECC concluded water and solid waste assessments for 21 municipalities along the Conchos and Grande Rivers.
- With EPA funds and in coordination with the Pan-American Health Organization, BECC completed and released the final reports on the incidence of gastrointestinal diseases and on community awareness about health and water management in the "Valle de Juarez" region. The lack of water and wastewater treatment infrastructure has caused a high incidence of parasites such as *Giardia lamblia*, *Entamoeba histolytica*, and *Cryptosporidium* among most of the children's population and certain adults. The results of the study will be useful to reduce gastrointestinal disorders and their geographic dissemination throughout the Paso del Norte region, based on the identification of health risks factors for border residents resulting from the exposure to inappropriately managed

wastewater in agricultural fields and the absence or shortage of basic water and wastewater services in local communities.

- BECC issued 26 Border Environmental Flash reports, a brief publication focused on current environmental events occurring in the border region, to an e-mail registry of more than 1,000 subscribers.

### *Website*

To support access and transparency of BECC operations and products, BECC launched a new website with an enhanced image and a functional design that facilitates document retrieval. The new Projects section in the website makes information about the 175 BECC-certified projects readily available.



Under the strategic objective to improve the management of processes and information, the BECC has been working to complete and maintain an updated database of border stakeholders. This useful tool was launched in 2009 and completed during 2010. Another important effort completed during 2010 involves the digitalization of all archived documents related to certified projects.

By the end of 2010, 100% of the archived documents related to certified projects had been transferred to electronic media.

## Program 5: Public Participation and Capacity Building

### 2010 Balanced Scorecard Review

Objective	Measurable Target	Actual
Project Sponsor and communities Capacities Building	Conduct 8 events such as street paving, climate change, storm water, water conservation and transportation	6
Strengthen Public Participation / Outreach Program, and Information Resources	10% increase in number of articles; 100% media coverage at BECC events	90%
Strong Stakeholders Relationships	Presentations at 40 Events/Environmental Forums	40
	Maintain collaboration with 8 NGOs and start with 2 new 62 visits with Executive and Legislative Stakeholders	6 62

*Promotes sustainable development along the border through efforts aimed at inspiring community-based support for a project, providing transparency in each border initiative and strengthening the institutional capacity of border communities and utility providers.*

One process that highlights BECC's transparency and the involvement of the border residents in project-related decisions is the Public Participation component incorporated in each project. The process is intended to give the communities easy access to all the information related to a project that is being considered for development at their community as well as an opportunity to voice their opinions or any concerns they may have about the operation of such project in their area.

In 2010, BECC assisted project sponsors in working with 6 new community steering committees and conducting 3 public meetings for projects.

The strategic objective of Project Sponsor Capacity Building was set to guide BECC's efforts to share knowledge with stakeholders, especially project sponsors and utility providers. During 2010, BECC shared knowledge and expertise as invited participant in more than 40 environmental infrastructure and border policy forums at a national, state and local level, including the Border Governors' Conference; Border 2012 Forums; Good Neighbor Environmental Board; US-Mexico Border Energy Forum; Energy Management Workshop for local governments; and others. BECC also participated in several panels during the COP 16 forum. Additionally, updates on border conditions and performance results were provided to important border stakeholders such as congressional and other elected officials. In 2010, BECC conducted 7 key training events with the participation of more than 720 attendees representing federal, state, and local governments, academia, and public interest groups. The most relevant of these training events were:

- Paving and scrap tire workshop in Hermosillo, Sonora, to discuss needs and opportunities for project development in these two important sectors.
- Workshop on opportunities for carbon offset projects, in coordination with the California Environmental Protection Agency, SEMARNAT, Mexico's National Institute of Ecology, the California Action Reserve, and the American Chamber of Commerce in Mexico.

- Two workshops on the Development of State Climate Change Action Plans for environmental stakeholders of all six Mexican border states.
- Using grant funds provided by EPA for the program – “Methane Recovery in Municipal Landfills – Outreach and Experience Sharing Project in Mexico” BECC helped organize a Methane to Market workshop.
- Energy Management Workshop for local governments in the Lower Rio Grande, with the purpose of supporting the development of efficiency and energy management plans.
- Co-sponsored the XVII Border Energy Forum, which brought together experts to review energy production and use trends along the border region, as well as opportunities to promote renewable energies.

Additionally, BECC participated in the XXVIII Border Governor’s Conference work tables related to water, environment and energy, and in the XXII Border Legislative Conference, sharing its experiences on planning for sustainable development and climate change along the U.S.-Mexico border region.

During the COP 16 meeting, hosted by Mexico, BECC participated in a side event regarding California-Mexico climate change collaboration, organized by California Climate Action Reserve.

Finally, BECC assisted project sponsor in working with 6 new steering committees: Bisbee, Arizona; Rio Grande, Texas; Tijuana, Baja California; El Paso, Texas; San Agustín, Chihuahua; and Praxedis G. Guerrero, Chihuahua. Public meetings were conducted for projects located in Matamoros, Tamaulipas; Agua Prieta, Sonora; Tijuana, Baja California; El Paso, Texas; and Nogales, Sonora.

- BECC is aware of the need to share information and experiences with other institutions that may have a positive impact on its efforts to achieve its mission. Through planned efforts under the Strong Stakeholder Relationships strategic objective, BECC strengthened its collaboration with non-governmental organizations and academia. For example, BECC through a partnership with the World Wildlife Fund (WWF) that began in late 2009 for the program entitled “*Clean Basin Program: Biodiversity and Environmental Monitoring in the Conchos River Basin,*” in June 2010 BECC carried out to 100% completion a biological monitoring study of the Conchos River.

In 2010 BECC also established an agreement to work with the University of Juarez and the Pan-American Health Organization (PAHO) on the assessment of the environmental health conditions and the establishment of indicators for communities in the “Valle de Juarez.”

BECC also carried out actions to meet a strategic objective related to Credibility. In this regard, BECC maintains specific data on the quality and timeliness of its response to partners and customers, including its Board of Directors. During 2010, BECC achieved a 100% on-time response record with its customers and partner stakeholders.

**BECC’s Quality Policy**

**BECC will meet or exceed stakeholder expectations with respect to quality, timeliness, cost effectiveness and service through continuous improvement**



## Program 6: Performance Improvement

### 2010 Balanced Scorecard Review

Objective	Measurable Target	Actual
Improve the Management of Processes and Information	4 processes standardized	3
Improve the Management of Processes and Information	Achieve 100% QMS and EMS objectives	100%
Improve the Management of Processes and Information	No more than 2 Non-Conformances for ISO 9000 and 2 for ISO 14000 certifications	100%

*The purpose of the Performance Improvement Program is to identify, develop, and implement institutional improvements to optimize BECC's human and financial resources, thus enhancing its capacity to achieve high-quality products and services.*

BECC works diligently to meet the expectations of its stakeholders, as well as to achieve the high standards created internally by its management. Through tools such as its International Standards Organization (ISO) Certification, the Balanced Scorecard and performance-based budgeting, BECC has created an institutional culture which values continuous performance improvement and advancement toward meeting its strategic objectives. Program 6 works like an incubator of improvement initiatives that once developed will be moved into a one of the other six programs. Recertification audits of BECC under the ISO 9000 and 14000 standards were successfully completed, without any non-conformances being issues.

An additional BECC objective is the standardization of documents. The purpose of the document standardization is to work more efficiently and reduce the margin of human error through the use of electronic templates where the information can be entered one time and managed throughout the rest of the project certification process. During 2009, some of the documents previously standardized were being improved on by internal work teams. For 2010, the primary focus of the document standardization task was on technical assistance-related documents where three processes have been identified: Scopes of Work for water and wastewater collection and treatment projects in Mexico; Water Project Certification Document in both languages, and Solid Waste Certification Document for Mexican projects.

In 2010, BECC renewed its ISO 9001 certification for the third time, maintained its ISO 14001 certification, and continued to integrate new processes into its Quality Management System (QMS), reviewed quality objectives, and conducted Management Review meetings. As part of this effort, work instructions and process flow diagrams were reviewed and updated using a team approach with the participation of all the parties involved.

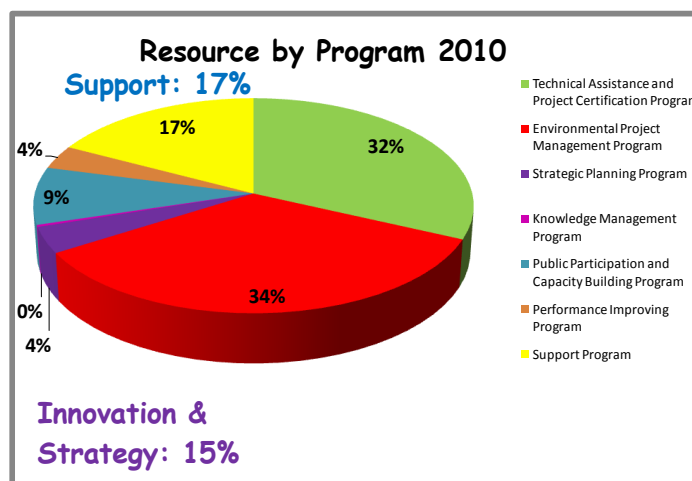
## Program 7: General Support

### 2010 Balanced Scorecard Review

Objective	Measurable Target	Actual
Improve the Management of Processes and Information	Dynamics (administrative system) 100% implemented; 100% main accounting procedures updated	80%
Increase Financial Resources for BECC Development	At least one opportunity developed	100%
Optimize Resource Use	Develop and implement a travel-efficiency program.	80%
Recruit, Develop and Retain Competent and Service-Oriented Staff	Implement Professional Development Program. Include internal training = 80%	80%
Recruit/ Develop/Retain Competent and Service-Oriented Staff	Improve 5% rating of Work Atmosphere	7.8%

*The purpose of the General Support Program is to provide responsive and high quality services important to the daily operations of BECC.*

During 2010, the resource allocation continued its focus on the project certification and technical assistance programs with 66% of the resources going to these areas (Programs 1 and 2). This approach, as well as the development and use of standardized documents, allows the BECC to manage as many as 100 projects at any point in time during the year. 15% of the resources were devoted to innovation and strategy (Programs 3-6), and only 17% to administrative tasks and support (Program 7).



During 2010, as part of an effort to enhance its processes and information, BECC implemented a comprehensive modular administrative system - Dynamics -, which helped the BECC to enhance productivity for its operations and achieve more effectiveness in its processes. The new administrative system integrates accounting, financial reporting, accounts payable, purchases, requisitions, cash management, fixed assets, project management, project contracts, timesheet, travel expenses, and project budgets. The system has a natural interface with our Microsoft Project Server system implemented in 2009, and allows for cost and budget control by project, program, agency, or fund.

In 2010 BECC implemented a Comprehensive Administration System that allows for the centralization and automation of its accounting system, including multiple agencies and Technical Assistance programs.

The second annual organizational climate survey was conducted with employees during the months of April and May of 2010. The questionnaire included 61 questions on 9 different areas. The results showed an improvement of 7.8% as compared to the results obtained the year before. The Organizational Climate Committee (METRA) developed an action plan to address the areas where the results showed the best opportunities for improvement.

During 2010, as part of BECC's Training Program, the technical staff attended training courses related to the basic sector and other sector projects, to meet the need for additional competencies to address new projects and receive refresher training on water projects. Training courses attended by the BECC staff include:

1. Solar Water Pumping Projects
2. State Climate Action Programs
3. Wastewater Pretreatment Programs
4. Wastewater Treatment Alternatives
5. Review of Final Designs for Automated Treatment Plants
6. Desalination of Different Brackish Waters
7. Arsenic Reduction Through Well Management
8. Basic Climate Change Concepts

Additionally, the management included capacity building courses to promote and upgrade employee development as a strategy to enhance customer service effectiveness and efficiency. Some of these courses were: *Leadership*, *High Performance Team Building*, and *Effective Communication and Assertiveness*. BECC's staff averaged 78 man/hours of training per employee during the year.

Cross-directorate committees that were organized to address specific topics continued to work at BECC. In addition to the discussion and execution of work plans, these teams foster inter-department integration as staff members from all areas participate in these groups. The work of these teams has a positive impact not only within our institution but also in our community. Our Social Responsibility Committee (CORES) implemented bathroom reconstruction efforts valued at more than US \$13,800 at 4 Juarez elementary schools, supported by

The Environmental Awareness Committee convened the *First Border Environmental Essay Contest*, which involved all Technological Universities from the 6 Mexican border states. 80 submissions were evaluated, and awards were issued to the first 3 places.

employee financial contributions. In 2010, the Environmental Awareness Committee established an agreement with the *Universidad Técnica de Ciudad Juárez* (UTCJ) to announce the creation of a new Renewable Energies Engineering degree through a program that included 4 conferences on environmental issues and an “Environmental Essay” contest opened to all border Technological Universities.



## Attachment 1:

BECC 2010 Technical Assistance Awards (by Community)		
Project Development Assistance Program (funded by EPA)		
Benson	Arizona	\$42,182
Bisbee	Arizona	\$131,152
Rosarito	Baja California	\$4,856
Tijuana	Baja California	\$17,008
Heber	California	\$70,000
Holtville	California	\$21,939
Palo Verde	California	\$165,100
Loma Blanca	Chihuahua	\$33,840
San Agustin	Chihuahua	\$7,928
Colombia	Nuevo Leon	\$82,568
Anthony	Nuevo Mexico	\$179,099
Sunland Park	Nuevo Mexico	\$500,000
Naco	Sonora	\$22,755
Camargo	Tamaulipas	\$65,534
Matamoros	Tamaulipas	\$150,405
Miguel Aleman	Tamaulipas	\$32,985
Nueva Ciudad Guerrero	Tamaulipas	\$58,914
Reynosa	Tamaulipas	\$6,212
Rio Grande City	Texas	\$77,950
Sullivan	Texas	\$36,342
Vinton	Texas	\$112,658
<b>Total PDAP</b>		<b>\$1,819,427</b>

**BECC 2010 Technical Assistance Awards  
(by Community)**

BECC Technical Assistance Program		
Bisbee	Arizona	\$5,169
Baja California (State)	Baja California	\$2,000
Chihuahua (State)	Chihuahua	\$2,000
Ojinaga	Chihuahua	\$3,634
Coahuila (State)	Coahuila	\$2,000
Nuevo Leon (State)	Nuevo Leon	\$2,000
Sonora (State)	Sonora	\$2,000
Caborca, Cananea, Imuris and Santa Cruz	Sonora	\$175,306
Nogales, SLRC, Agua Prieta, Cananea, Magdalena, Caborca, Puerto Peñasco, Sonoyta, Santa Ana, Imuris and Nacozari	Sonora	\$15,541
Tamaulipas (State)	Tamaulipas	\$5,000
<b>Total BECC Special TA</b>		<b>\$214,650</b>

## Attachment 2:

<b>BORDER 2012 PROGRAM</b> Technical Assistance Approved During 2010		
<b>B-2012 GOAL</b>	<b>TA Description</b>	<b>Amount (US\$)</b>
3	Clandestine Waste Dumping Sites Cleaning and Mitigation Program	41,000.00
3	Comprehensive Program for the Identification and Clean up of Empty Lots	20,000.00
3	Assessment and Final Design of Dry Controlled Landfill	40,000.00
4	Environmental Education Program for All The Children of Reynosa	9,635.00
2,3	Assessment of Sustainable Development Possibilities of Mexican Municipalities along the United States-Mexico Border	25,000.00
2	Border Energy Forum Outreach and Communications Development	40,000.00
4	Viva Verde Living Green for Climate Protection in Southern New Mexico- Northwestern Chihuahua Border Region	30,000.00
2	Spray Gun Ecological Conversion for Automobile Paint Shops	40,142.00
3	Electronic Waste Disposal Joint Project	30,000.00
4	Environmental Education and Outreach; Pharr Green Stars	20,000.00
4	Pesticide Education Safety Training	75,000.00
2	Río Grande Watershed Día del Río Awareness	20,000.00
4	Environmental Cleanup Program	40,000.00
4	Bi-national Municipal Vector Patrol	20,000.00
2	To Establish the "Clean Transportation" Program to the City of Juarez Urban Area	36,500.00
5	Brownsville-Matamoros Sister City Plan Updates, Bi-National Exercises, Risk Analysis and Training Project	35,000.00
3	The Brownsville-McAllen Household Hazardous Waste Workshop and Collection Program	30,000.00
4	Theatrical Training/Education for Migrant Workers and Their Families on the Hazards of Pesticides	18,000.00
2	Coahuila Climate Action Planning Project	120,000.00
2	Additional Activities for Retrofitting School Buses	6,000.00
5	Tri National Emergency Preparedness Plan	18,550.00
2	Reducing Diesel Emissions Impacting School Children in Col. Chilpancingo, Tijuana	4,850.00
3	Additional Funds for Hazardous Material Training and Equipment for Southern Arizona and Northeastern Sonora	5,600.00
2	Additional Activities-Greenhouse Gases Inventory	22,400.00
2	Additional Funds for Repair the Analyzers for the Air Monitoring Network	1,412.00
1	Community Toilet Facility	3,794.91

1	Additional fund for Design, Rehabilitation, and Construction for Potable Water Supply and Distribution System	10,824.43
4	Reduce Exposure to Unhealthy Air in the Imperial Valley, California	95,360.00
2	Baja California Climate Action Planning Project	102,846.00
4	Transferable Training Modules for Promotoras	28,398.00
2	House Electric Appliances Reverse Fabrication to Recover Green House Gases	100,00.00
2	Sonora Climate Action Planning Project	108,720.00
2	Border Area Development & Growth of Environmental Responsibility (BADGER) for Automotive Businesses in the San Diego County Area along the U.S. Border.	13,196.00
2	Border Area Development & Growth of Environmental Responsibility (BADGER) for Automotive Businesses in the San Diego County Area along the U.S. Border.	37,454.00
1	Flood Warning and Stream Discharge Monitoring of Nogales Wash, Nogales, Arizona	39,430.00
3	From waste to resource: fibrous concrete as an alternative to landfilling and burning Preliminary Engineering Report in Nogales, Sonora	19,844.00
3	From waste to resource: fibrous concrete as an alternative to landfilling and burning Preliminary Engineering Report in Nogales, Sonora	75,456.00
3	City of Holtville Storm Water Pollution Prevention Plan and Clean-Up Project for the Alamo River	92,000.00
2	Implementing clean transportation in Tijuana, Baja California and Nogales, Sonora	50,000.00
4	Reducing Children Mercury Exposure	34,918.00
1,4	Small and Inexpensive Point-Of-Use Treatment Systems for Simultaneous Removal of Arsenic and Nitrate from Groundwater for the Border Region Communities	50,331.00
2	Reducing Diesel Emissions Impacting School Children in Tijuana	75,000.00
2	Strengthening the GHE and RETC report at the municipal level	31,925.80
5	Emergency Response Training for Maquiladora Workers in the Border Cities of Nogales, San Luis R.C., and Agua Prieta	68,000.00
1	Construction of a Wetland for "Las Arenitas" Wastewater Treatment Plant	99,294.00
2,4	Maximizing Resources NM-CHIH Border	100,000.00
4	Green Barrier Program Reducing Dust in Elementary Schools at the Sonora Border	51,646.60
4	School Chemical Management For Arizona Border Schools	53,747.00
2	Environmental Education Media Campaign In Mexicali, Baja California	75,000.00
2	Building Community Capacity to Implement Storm Water Harvesting Practices in the Arizona Border Region	110,293.00
		<b>2,270,705.06</b>