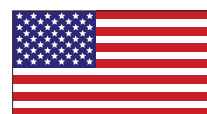




**U.S.-Mexico Environmental Program: Border 2012**  
Special Edition—Fall 2009



## Message from the National Coordinators

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As National Coordinators for the U.S.-Mexico Environmental Program – Border 2012, we offer our deepest gratitude to our partners: the environmental authorities in the 10 Border States; the U.S. border tribes; the co-chairs and staff of the Program’s Regional and Borderwide Workgroups, Task Forces and Policy Forums; academic, industry, and NGO partners; and communities along the border that have been actively engaged to advance our collective vision of improving environmental conditions for all border residents.

Addressing environmental problems along the border is a high priority for the U.S. and Mexico. Without the support of our binational partners, it would have been impossible to achieve the measurable results featured in this document. We congratulate the Border 2012 partners on these impressive accomplishments and we look forward to continuing this innovative, collaborative effort to achieve the rest of the Border 2012 goals.

**Michelle DePass**

National Coordinator, U.S.



**Enrique Lendo**

National Coordinator, Mexico



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# GOAL 1

## Reduce Water Contamination

### Border 2012 Helps to Create a Wetland



The Tecate Wetland.

The Tecate Creek is a truly binational body of water. Flows in the creek cross the international border four times. Most of the water in the Tecate Creek is effluent from the City of Tecate's wastewater treatment plant and the Tecate brewery (owned by Cervecería Cuauhtémoc Moctezuma). Water quality in this creek is improving thanks to the construction of a 3,800 square meter (one acre or 0.4 hectares) wetland immediately downstream of the city's wastewater treatment plant. The wetland is currently receiving about 25% of the plant's effluent, and data indicate that treatment provided by the wetland reduces suspended solids by over 50%. Border 2012 invested \$49,000 in this project, Fundación La Puerta provided \$55,000, and the remaining \$51,000 was paid for by the Baja State Water Utility. In constructing the wetland, over 80 abandoned cars were removed from the river and 600 used tires were utilized to fabricate the retaining wall and the liner.

This wetland is the first of a series being planned for the Tecate River. The design of these wetlands was paid for by a \$200,000 grant from the North American Development Bank. The Border 2012 project was so well received by the community that the Tecate Brewery has begun construction of another 12,000-square-meter (3 acres or 1.2 hectares) wetland that will help polish effluent from the brewery. In addition to improving water quality in the river, these wetlands create areas for groundwater recharge, reduce flooding potential, and provide refuge and food for resident and migratory birds.

### Nogales, Sonora Composting Toilet and Rainwater Harvesting Project



Composting toilet.

Colonia Colinas del Sol is a settlement of approximately 2000 households located on the eastern edge of Nogales, Sonora. This settlement has no access to water or wastewater services. Most of the current toilets in the area consist of holes dug into the ground, which pose significant public health risks, especially when rainfall causes the pit latrines to overflow. They're also malodorous, attract vectors, and can contaminate the local aquifer.

Given its difficult geographic location, Colinas del Sol is not scheduled to receive wastewater services from the municipality in the foreseeable future. Thanks to a Border 2012 grant of \$44,000 to the University of Arizona and Frente Civico Nogalense, supplemented by donations from Friends of the Santa Cruz River, 30 composting toilets have been installed in the colonia and are being monitored for 18 months to ensure that they are properly operated and maintained. Instead of the large amounts of running water needed by conventional toilets, these systems require only about a handful of sawdust per use. The City has been so pleased with the operation of the toilets that they are currently installing an additional 50 toilets using federal funds from SEMARNAT and SEDESOL (Secretary of Social Development).



Before and after picture with composting toilet on the left.

In addition to the composting toilets, the Border 2012 grant also paid for the installation of three rainwater harvesting systems. These systems are designed to capture and store rainfall from the roofs of houses and a church for later use in gardens, landscaping, and conventional toilets. In a year of typical rainfall in Colinas del Sol, a single 70 square meters (750 square foot) household can capture 27 cubic meters (7200 gallons) of water, which is a significant amount in a desert environment.

### **Border 2012 Helps Reduce Flooding in Nogales, Sonora**

Flooding in Nogales, Sonora is a serious problem that has damaged wastewater and drinking water infrastructure, contaminated surface waters, and caused loss of life and property. Through \$70,000 of funding from Border 2012, a 5-meter (16 foot)-high storm water detention device was constructed in the Cuesta Blanca Wash using 5000 cubic meters (6540 cubic yards) of rocks. This rock-berm slows the storm water flow collected in a 4.27-square-kilometer (1.5-square-mile) micro-watershed, and is designed to temporarily retain flows generated by a 6-hour, 25-year storm event (107,000 cubic meters or 28 million gallons of stormwater). By attenuating stormwater in the wash, peak storm flows are diminished, thereby preventing flooding in the downtown areas of Nogales, Sonora and Nogales, Arizona, and reducing the frequency of sanitary sewer overflows which impact the surface water quality in the region.

The City of Nogales, Sonora is finishing construction of four additional rock-berms in the upper watershed. The City's Administrator for Emergency Response has reported that these structures have already prevented serious flood events. The USGS and Arizona State University (ASU), through a study also funded by Border 2012, will soon be able to model the efficacy of these devices as well as other stormwater Best Management Practices, such as rainwater harvesting, in reducing floods.



**Stormwater Detention Structure.**

### **EPA Awards Nearly \$1 Million to Help Restore the Tijuana River Estuary**

After the Tijuana River enters the U.S., it culminates in the 3.9 square-mile Tijuana River National Estuarine Research Reserve (TRNERR) designated by the International Ramsar Committee as a "wetland of international importance," (one of only 23 wetlands so designated in the U.S.). The estuary is surrounded by intense urban development in San Diego and Tijuana. EPA Region 9 recently awarded \$990,898 to the Southwest Wetlands Interpretive Association (SWIA) (a partner of the TRNERR) through the 2008 West Coast Estuary Initiative to help improve water quality, remove invasive plants, and restore habitat in the Tijuana River Watershed. Goals of this three-year project, with a total cost of \$1,699,298 include:

- Re-vegetation of 15 acres and installation of pervious pavement on 6000 square meters of denuded land in an urban Tijuana canyon to reduce sediment runoff.
- Designation of 59 acres of conservation easements in the urban canyons of Tijuana.
- Development a trash consolidation and removal plan for Tijuana Estuary.
- Treatment of 6000 linear feet of roadway to better convey storm water flows.
- Stabilization of eight coastal bluff erosion scars.
- Restoration of two acres of maritime succulent scrub habitat.
- Volunteer cleanup activities to remove 27,000 pounds of trash from the TRNERR.
- Recruitment and training of 100 new long-term, regular volunteers to support restoration activities.



**Trash and Tires in the Tijuana River Estuary.**

**More information about EPA's West Coast Estuaries Initiative can be found at:**  
[www.epa.gov/region09/water/watershed/wcei-ca.html](http://www.epa.gov/region09/water/watershed/wcei-ca.html)



### **San Benito: Water and Wastewater Improvement Project**



**Solar Array at the San Benito Water Treatment Plant.**

The City of San Benito, Texas in Cameron County received approximately \$17,910,225 from the Border Environment Infrastructure Fund (BEIF) to upgrade its water and wastewater facilities. Because of population growth in the area, both the water and wastewater facilities experienced problems in meeting the demands of the community. The project originally certified by the Border Environment Cooperation Commission (BECC) on September 25, 2002 was completed in September 2009. The project consisted of three major construction components:

- A new 6 MGD Water Treatment Plant (WTP) with the potential to expand to 10 MGD;
- A new one million gallon elevated storage tank and a water transmission line to transport water from the new water treatment plant to the storage tank;
- A new 2.5 MGD Wastewater Treatment Plant (WWTP) completed in February 2009 and expanded to 3.5 MGD in September 2009.

The project is set to benefit a current population of approximately 28,000 residents. However, the project is designed to meet projected demands based on a population growth to approximately 43,477 people by 2030.

The San Benito Water Treatment plant is unique in that it will use a solar-powered array to provide approximately 10% of the plant's electricity. The solar array is estimated to reduce 45.6 tons/yr CO<sub>2</sub>, .10 ton/yr SO<sub>2</sub>, and .04 ton/yr NO<sub>x</sub>. The \$325,000 photovoltaic system was funded by the Environmental Protection Agency Region 6 through a grant to the Texas General Land Office's Sustainable Energy Project, and will serve as a showcase for solar energy potential for the Border region. This project won the 2008 Texas Renewable Energy Project of the Year award from the Texas Renewable Energy Industries Association.

**Links to additional information:**

[www.cocef.org](http://www.cocef.org)

[www.epa.gov/border2012/success/nuevo-laredo/sanbenito-water.html](http://www.epa.gov/border2012/success/nuevo-laredo/sanbenito-water.html)

### **Lordsburg, New Mexico Drinking Water Plant**



**Activated Alumina Vessels.**

In June 2009, Lordsburg, New Mexico began operating its new water treatment plant to meet the state and federal requirements of the Maximum Contaminant Level (MCL) for fluoride in drinking water of 4 mg/L. Prior to construction, the City of Lordsburg reported fluoride levels as high as 12 mg/L in some of their drinking water wells used for their public water system. Excessive levels of fluoride have been known to cause adverse health effects, such as skeletal fluorosis. A secondary maximum contaminant level of 2 mg/L is also set to protect against dental fluorosis. Total project cost was approximately US\$2 Million, of which approximately \$700,000 came from EPA's Border Environment Infrastructure Fund (BEIF). The project involved construction of an activated alumina treatment system at the well entry site and also included 1,200 linear feet of waterline to connect the Smith Well to the treatment plant, and 3,720 linear feet of sewer line to dispose of backwash flush water. The project is set to benefit a population of approximately 4,400 people based on 20-year projections.

**Links to additional information:**

[www.nadb.org](http://www.nadb.org)

[www.cocef.org](http://www.cocef.org)

[www.epa.gov/border2012/success/tx-nm-chihauhua/nm-lordsburg-water.html](http://www.epa.gov/border2012/success/tx-nm-chihauhua/nm-lordsburg-water.html)

### **Highlights of EPA Region 9's Border Environment Infrastructure Fund (BEIF) and Project Development Assistance Program (PDAP) for Fiscal Year 2009**

EPA and the Border Environment Cooperation Commission (BECC) evaluated sixty four (64) project applications submitted during the FY 2009–2010 BEIF/PDAP Prioritization Process, which represented an estimated BEIF requirement of nearly \$152 million. Based on available FY 2009 funds, 14 projects were identified to receive PDAP funding. These projects are located in Naco (Sonora), Benson (Arizona), Rosarito and Tijuana (Baja California), and Holtville, Heber, and Palo Verde (California). EPA expects planning, environmental analysis, and design to be completed within two years after certification.

In FY 2009, eight proposals selected during previous prioritization processes were certified by the BECC and North American Development Bank (NADB) Board, including seven in the Rosarito/Tijuana area of Baja California, and one in Sonoyta, Sonora. These projects will provide wastewater treatment service to nearly 16,000 households. Also in FY 2009, construction of four infrastructure projects were completed, providing 4,117 households with access to wastewater treatment. These projects are located in Playas de Rosarito (Baja California), Somerton, (Arizona), Agua Prieta (Sonora), and Nogales (Arizona).

The project completed in Nogales, AZ is a \$64 million upgrade to the International Wastewater Treatment Plant. Wastewater generated in both Nogales, AZ and Nogales, Sonora (totaling 14.7 mgd) is treated at this plant, and is then discharged into the Santa Cruz River and the local aquifer. More than 200,000 residents from the sister cities benefit from the enhanced performance provided by the new facility. But, the real winner is the Santa Cruz River; the water quality in the river has been improved dramatically with lower concentrations of toxic ammonia.

[More information about the BEIF/PDAP program can be found on BECC's website at www.cocef.org](http://www.cocef.org)

### **Highlights: Region 6 Border Environmental Infrastructure Fund (BEIF) & Project Development Assistance Program (PDAP)**

The U.S. Environmental Protection Agency's (EPA) Water Border Infrastructure Program has provided grant assistance to communities along the U.S.-Mexico through its Project Development Assistance Program (PDAP) and Border Environment Infrastructure Fund (BEIF). In the state of Texas, there are currently five (5) projects under construction and another 5 were completed in FY 2009. These ten (10) construction projects received a total of over US\$90 million in BEIF and are expected to be completed between December 2009 and the end of June 2010. Over 193,500 border residents are set to benefit from these projects once they are completed. In addition, during the FY 2007–2008 and FY 2009 Prioritization Process, a total of seven (7) projects were selected to receive PDAP, of which two (2) projects are expected to be certified in 2009, making them eligible to receive BEIF funds.

In the state of New Mexico, one construction project was completed in May 2009 in the City of Lordsburg, which received approximately US\$700,000 in BEIF. During the FY 2007–2008 Prioritization process, two (2) projects received both PDAP and BEIF funding. Both these projects are set to benefit approximately 13,600 residents and are expected to be ready for certification in FY 2010. During the FY 2009–2010 Prioritization process, two (2) addition projects were selected for PDAP funding only, Anthony and Doña Ana Village. The Anthony project is expected to be certified in the 2nd quarter of FY 2010.



**Nogales Waste Water Treatment Plant.**



**Matamoros West Wastewater Treatment Plant (WWTP): A lagoon system and the first WWTP for the City of Matamoros.**

## Goal 1: Reduce Water Contamination

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**The Reynosa WWTP has been completed and is in operation.**

There are currently six (6) projects under construction in Chihuahua. These projects have received a total of US\$3.9 million in BEIF funding and will benefit a total population of 14,929 in the Valle de Juarez area. Four (4) projects were completed in Chihuahua during FY 2009 located in Ojinaga, Anapra, Dr. Porfirio Parra and Praxedis Guerrero. Total BEIF funds for these four projects, were approximately over US\$4.6 million, benefiting over 53,696 residents. During the FY 2007–2008 Prioritization Process, seven (7) projects were selected to receive funding (PDAP/BEIF), two of which have already been certified and under construction, and three (3) projects were selected for PDAP only for the FY 2009 Prioritization Process.

In the state of Tamaulipas, there are currently five (5) projects under construction or in the process of starting construction, and one project (Matamoros) which has completed construction. These six (6) projects are set to benefit over 1.3 million residents. In addition to these projects, there were eight (8) projects selected for funding under the FY 2007–2008 Prioritization process that are currently under development. Most of these projects are expected to be certified by the end of the December 2009 or during the spring of 2010. The FY 2009–2010 Prioritization process resulted in two (2) more projects being funded for PDAP only.

In the State of Coahuila, Ciudad Acuña and Piedras Negras have received funding to provide wastewater collection and treatment to 100% of their residents. The project for Ciudad Acuña was completed in September 2008 with a total of 36,158 connections achieved and benefiting over 113,194 residents. Piedras Negras is expected to be completed by December 2009 with a total of 29,500 connections expected, benefiting 132,755 residents. In total, approximately US\$25.1 million in BEIF was utilized for construction of these projects.

Historically, there have been no projects selected for PDAP or BEIF funding in the state of Nuevo Leon. In the FY 2009–2010 Prioritization Process, the municipality of Colombia, Nuevo Leon was selected for PDAP only funding. This project will provide wastewater collection and drinking water distribution to unserved areas in the community and will benefit approximately 5,000 people at a total cost of approximately US\$2.6 million.

**Links to additional information:**

[www.cocof.org](http://www.cocof.org)

[www.nadb.org](http://www.nadb.org)

[www.epa.gov/border2012/success/borderwide/tx-beif-water-infra-summary2009.html](http://www.epa.gov/border2012/success/borderwide/tx-beif-water-infra-summary2009.html)

### **Workshop on Pretreatment Programs and Pollution Prevention for Municipalities and Industries in the Texas-Mexico Border Region**



**Approximately 65 representatives from Texas, New Mexico and Mexico participated in the workshop.**

On July 23, 2009, the Texas Commission Environmental Quality (TCEQ) Small Business and Environmental Assistance Program held a workshop on pretreatment and pollution prevention. This workshop benefits municipal and industrial wastewater plant managers and operators; pretreatment program staff; environmental managers; businesses and industries that discharge wastewater into municipal wastewater treatment plants; and individuals interested in methods to protect and restore water quality. Water quality on both sides of the border can be adversely impacted by businesses and industries discharging pollutants into collection systems and wastewater treatment plants. Some types of pollutants can cause problems in the collection system and/or result in discharges of untreated or improperly treated wastewater or affect wastewater system operation, and the ability to maintain compliance with wastewater discharge permits. This workshop provided information on how municipalities and businesses can work together to identify and solve water quality problems before regulatory requirements are imposed. The workshop was attended by 65 representatives from Texas, New Mexico and Mexico. The workshop evaluations by attendees indicated the workshop to be a great success.



### **New River Continues to Show Improvements as a Result of the Las Arenitas Wastewater Treatment Plant**

Prior to the construction and operation of a BEIF-funded wastewater treatment plant in Mexicali in 2007, 15 mgd of untreated sewage entered the New River. The decomposition of this waste in the river was responsible for the low concentrations of dissolved oxygen (DO) in the river (annual average of 1 mg/l). Since the construction of the treatment plant, water quality samples taken by the Regional Water Quality Control Board in the New River (at the border), now show that the annual average of DO has achieved EPA's chronic criterion of "greater than 4.8 mg/l."

The 15 mgd of wastewater that once polluted the New River is now pumped to a wastewater treatment plant 17 miles south of Mexicali in an area known as "Las Arenitas", where it is treated and then discharged to an agricultural canal that flows to the Rio Hardy and eventually to the Colorado Delta. Although the treated wastewater complies with Mexican standards, a two-year Border 2012-funded monitoring program in the Rio Hardy suggested that the effluent was exacerbating the algal blooms in the river. As a result, Border 2012 funded the Sonoran Institute to design a 97-hectare (240 acres) artificial wetland system which will reduce the nutrient levels in the discharge while providing much needed riparian habitat.

For more information about the New River Water Quality, refer to [www.waterboards.ca.gov/coloradriver/water\\_issues/programs/new\\_river](http://www.waterboards.ca.gov/coloradriver/water_issues/programs/new_river)

### **Progress made as to Water Resources within the Framework of the Border 2012 Environmental Program in the border region of the State of Chihuahua**

The Border 2012 Program defines as one of its principal goals increasing the number of households that are connected to potable water distribution systems, sewerage and waste water treatment. The creation of the Border Environmental Cooperation Commission (BECC) in 1995, has resulted in a noticeable improvement in the development and construction of water infrastructure along the U.S.-Mexico border.

In the last two years, the BECC has certified nine infrastructure projects for sewerage systems and to increase the network of potable water services along the northern border of Chihuahua. These projects represent a cost of \$25 million dollars and are presently under construction. It is expected that they will begin operating soon. 89% of these infrastructure projects are being developed in rural population centers in the northern part of the State of Chihuahua.

There is also a portfolio of six new infrastructure projects that have to do with sewerage and waste water treatment in rural communities. Two of them have to do with increasing the capacity of the southern water treatment plant, and construction of the new south plant in Ciudad Juarez, which will have a nominal treatment capacity of 2000 L per second and 1000 m per second initially, with a quality of 75/75 (BOD/TSS) and a lift station for the southeast zone. These last projects are in the financial analysis phase and are going through a public participation process to obtain BECC certification.

Presently, potable water service coverage in Ciudad Juarez is 98%, sewerage service coverage is 88% and waste water treatment is at 72%. On a national level, according to information provided by CNA for 2008, the levels of coverage insofar as potable water are at 90.8%, 86.6% for sewerage, and wastewater treatment at 40%.



**Las Arenitas Waste Water Treatment Plant.**



**Community in Valle de Juarez, Chihuahua.**

## Goal 1: Reduce Water Contamination

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In this regard, it is worth mentioning that almost 20 years after the construction of new hydraulic infrastructure projects were proposed to supply potable water to Ciudad Juarez, in August of 2009 the Conejos-Medanos Aqueduct began operating with an investment of 1,327 million pesos, of which 81% came from private capital. This project, which is almost 25 km long will supply 1000 liters per second of additional potable water to Ciudad Juarez, which represents 20% of the city's needs. In this way, it is estimated that coverage will reach 100% for the remainder of the next decade.

Historically, the supply of potable water to Ciudad Juarez has been obtained from the Bolson del Hueco, an aquifer which is shared with the city of El Paso, Texas and which today is showing signs of over exploitation, placing the future supply of water at risk. The Conejos-Medanos Aqueduct is made up of 23 wells which will be exploiting the La Mesilla aquifer's subterranean water. The La Mesilla Aquifer is a relatively virgin aquifer that is shared with the State of New Mexico.

### **Development of Potable Water and Waste Water Treatment Infrastructure Continues in the Border Region**



**Field visit to Potable and Sewer Treatment Infrastructure by EPA, BECC and Water Utilities personnel in the Chihuahua Texas border region.**

In order to assist in achieving Objective #1 for Goal one for the year 2012, which is to promote a 25% increase in the number of households that are connected to potable water, sewerage and waste water treatment systems under the U.S.-Mexico Border 2012 Environmental Program, in 2008 the Border Environmental Cooperation Commission (BECC) in coordination with the United States Environmental Protection Agency (EPA), Mexico's National Water Commission (CONAGUA) and the water operating agencies, certified six water and sewerage projects.

Presently all of these projects are under construction, and will enable populations centers such as Ciudad Mier, Río Bravo y Nuevo Progreso, Tamaulipas; Barreales and Juárez and Reforma, Chihuahua; Tijuana, B.C., and Sonoyta, Sonora, to increase to almost 100% their, potable water and sanitary sewerage coverage. It is estimated that when these projects have been concluded, 3368 new domestic water connections and 19,070 domestic sewerage connections will have been incorporated. It is estimated that this will require a joint investment of 551.24 million pesos, of which 271.81 million pesos will be contributed by the Mexican government, 208.25 million pesos will be contributed by the United States and 71.18 million pesos will be financed. Additionally, these projects will allow us to create better living conditions for the inhabitants of these cities and will contribute to improving their environment.

### **EPA's Tribal Border Water Infrastructure Program Continues to Address Critical Needs**

Tribes along the U.S.-Mexico Border have significant needs for improvements to drinking water and wastewater infrastructure. Many Tribes rely on drinking water systems that are susceptible to contamination, and wastewater systems that endanger public health and the environment.

The Tribal Border Water Infrastructure Program was established to address high priority water and wastewater needs of the U.S. Tribes along the border. EPA supports this program using a portion of the funds designated for the EPA's U.S. Mexico Water Border Infrastructure Program. In FY09 EPA received project requests for a total of \$9.8M. The following Tribes and projects were selected for funding with the \$1M available:

**Quechan Tribe:** To replace 68 deteriorated water service lines to serve tribal homes within the reservation.

**Manzanita Tribe:** To rehabilitate 21 drinking water wells, drill 3 new wells and install small water storage tanks with water lines.

**La Jolla Band:** To complete a geophysical study and drill a test drinking water well based on study's results.

**La Posta Band:** To connect to small rural water systems, serving 10 homes and several additional tribal community buildings.

In addition, this year the Campo Band of Mission Indians celebrated completion of a 112,000-gallon water storage tank constructed with \$491,000 of EPA Tribal Border Water Infrastructure funding. The project, constructed in partnership with the Campo Band and the Indian Health Service, replaced a tank at risk of catastrophic failure due to leaking welded steel joints. The tank serves 20 homes, tribal offices, a health clinic, childcare facility and a church.



**New Water Storage Tank to Serve Campo Band of Mission Indians.**

## GOAL 2

### Reduce Air Contamination



Estimates of automobile pollution were included in the Inventory.

#### Emissions Inventory Completed for Mexicali

In spring 2009, an emissions inventory was completed for the entire municipality of Mexicali, Baja California. The emissions inventory was a cooperative binational effort between state and federal agencies including: USEPA, Mexico's Secretariat of Environment and Natural Resources (SEMARNAT), the State of Baja California Secretariat for the Environment, and the California Air Resources Board. The emissions inventory provides an update of emissions sources in Mexicali and updates previous inventories that were developed for Mexicali in 1996 and 1999. The report reached many conclusions including: NO<sub>x</sub> and SO<sub>2</sub> emissions were dominated by point sources; on-road vehicles were the main source of CO; area sources are the largest contributors of PM<sub>10</sub> and PM<sub>2.5</sub> (i.e., due to unpaved and paved road dust), ammonia (i.e., from livestock ammonia and fertilizer application), and methane (i.e., from the landfill).

**Links to additional information:**

[www.usepa.gov/border2012/mexicaliemiissions](http://www.usepa.gov/border2012/mexicaliemiissions)

[www.epa.gov/border2012/success/borderwide/mexicali-emissions-inventory.html](http://www.epa.gov/border2012/success/borderwide/mexicali-emissions-inventory.html)



Tim Bradley, Account Manager, Auto Safety House describing the diesel oxidation catalyst pollution control device.

#### ADEQ Improves Air Quality in Nogales by Completing 55 Truck Retrofits That Will Reduce Harmful Emissions

Anti-pollution devices have been installed on 55 cargo trucks that regularly cross the Arizona-Mexico border at Nogales as part of a state and federal push to clean up the air in the congested corridor. Using a \$145,000 federal grant, the Arizona Department of Environmental Quality (ADEQ) worked with a Phoenix company to install emission control devices on trucks from eight fleet owners that cross the border frequently. The devices are expected to reduce particulate pollution from the diesel engines by about 30 percent. Trucks often idle at the border crossing for hours, fouling the air in Nogales. The pollution is often trapped in the valley, creating health risks for residents. In announcing the completion of the project, Gov. Jan Brewer described it as an example of "achieving cleaner air for our citizens while maintaining trade and the enormous economic impact that trade has on our state." This project was the result of a partnership between ADEQ, Auto Safety House, local trucking companies, and USEPA.

**Links to additional information:**

Page A1 Arizona Republic, Phoenix [www.azcentral.com/arizonarepublic/news/articles/2009/02/23/20090223air-border0223.html](http://www.azcentral.com/arizonarepublic/news/articles/2009/02/23/20090223air-border0223.html)

Page A1 Nogales International and Sahuarita Sun [sahuaritasun.com/articles/2009/02/20/news/02pollution222.txt](http://sahuaritasun.com/articles/2009/02/20/news/02pollution222.txt)

Page A1 El Diario, Nogales, Sonora [www.eldiariodesonora.com.mx/noticias/nogales/21971.html](http://www.eldiariodesonora.com.mx/noticias/nogales/21971.html)

Page B1 Arizona Daily Star, Tucson [www.azstarnet.com/allheadlines/281140.php](http://www.azstarnet.com/allheadlines/281140.php)

#### Vehicle Emission Studies Along the U.S.-Mexico Border

The Centro Mario Molina and Mexico's National Ecology Institute (INE) conducted a series of special studies from 2007–2009 in select Mexican border cities aimed toward characterizing the vehicular emissions using a Remote Sensing Device (RSD). The RSD measures Hydrocarbons (HC),

Carbon Monoxide (CO), Carbon Dioxide (CO<sup>2</sup>) and Nitrogen Oxide (NO) from vehicles that are driven across a path of beams connected to a mobile unit. In addition, a picture of the license plate of the vehicle is taken. The vehicle's plate is cross-checked through the State Vehicle Fleet Registry to reference that vehicle emissions to the vehicle type and characteristics. On average 400 vehicles were processed daily in each of the study areas.

The study took place in the following communities: 1) Mexicali and Tijuana (October 4–16, 2007); 2) Metropolitan Urban Area of Monterrey (May 27–June 5, 2008); 3) Matamoros y Reynosa (October 4–18, 2008); and 4) Nogales (July 19–August 1, 2009). This study which builds from the Remote Sensing Vehicle Emissions study done in Ciudad Juarez, Chihuahua in 2006, indicates that:

- Border cities have higher percentages of high-gas demanding vehicles (8-cylinder), as compared to the interior part the country: 19%, 15% and 3% for Reynosa, Monterrey and Mexico City respectively;
- 92% or more of vehicles being driven in border communities are U.S. importes into Mexico, of these 72% are 10 years or older models;
- Approximately 10 % of U.S. vehicles driven into Mexico do not have the valid Mexican registry paperwork and are either being driven with an expired U.S. license plate or without a license plate at all;
- The highest emissions are from vehicles that are 10 years or older.

**Links to additional information:**

[www.ine.gob.mx](http://www.ine.gob.mx)

[www.JAC-CCC.org](http://www.JAC-CCC.org)

[www.epa.gov/border2012/success/borderwide/vehicle-emission-studies.html](http://www.epa.gov/border2012/success/borderwide/vehicle-emission-studies.html)



**High smoking vehicle typical of border clunkers.**

## Strengthening Air Quality Monitoring Program Along the U.S.-Mexico Border

More than 125 technicians received training in a series of workshops and training sessions held in seven Mexican border cities in FY 2008–2009 for operating air monitoring equipment and stations. The sessions were held in the cities of: Matamoros and Reynosa in Tamaulipas; Ojinaga, Ciudad Juarez and Palomas in Chihuahua; and Mexicali and Tijuana in Baja California. Experts from the California, New Mexico, and Texas Environment Departments or Commissions (CARB, TCEQ and NMED); EPA and Mexico's Instituto Nacional de Ecologia (INE) within SEMARNAT, coordinated and carried out the workshops. The 2–3 day workshops, with both classroom and field exercises, focused on teaching participants how to improve their skills when operating the equipment (i.e. PM or CO units, Ozone canisters), changing filters, reading instruments and analyzing and managing data, that is expected to be included within Mexico's Air Quality Index and used for future airshed modeling. The workshops take a step towards harmonizing and building local capacity along major Mexican cities. Through these workshops, stakeholders have learned a need for the following: 1) data validation, 2) strong interaction between Air Quality reporting with the purpose of monitoring, which is protecting public health, 3) acquiring technology for real-time data transferring, 4) network diagnosis, and 5) effectively identifying sources of emissions. Future plans include carrying out an audit protocol on these cities' Ambient Air Quality monitoring stations and network, as well as analysis and management of data collected.

**Links to additional information:**

[www.ine.gob.mx](http://www.ine.gob.mx)

[www.JAC-CCC.org](http://www.JAC-CCC.org)

[www.tceq.state.tx.us/compliance/monitoring/air/monops/forecast\\_today.html](http://www.tceq.state.tx.us/compliance/monitoring/air/monops/forecast_today.html)

[www.epa.gov/border2012/success/borderwide/air-quality-strengthening.html](http://www.epa.gov/border2012/success/borderwide/air-quality-strengthening.html)



**Technician Graduates in Ciudad Juarez, Chihuahua.**





**Front yard in Las Cruces New Mexico home where landscaping has been covered in deep layer of dust that blew in from an empty lot across the street.**

### **New Mexico Dust Control Awareness**

New Mexico Environment Department (NMED), Dona Ana County, New Mexico State University and its Border 2012 partners are raising awareness and fostering compliance of local dust control ordinances in Las Cruces, New Mexico through a Border 2012 Grant. On May 18–19, 2009, a Dust Control workshop was held in Las Cruces, New Mexico. Approximately 50 citizens and developers attended each day. The workshop provided insights for Dust Control Best management Practices; and effectiveness of City Ordinances and enforcements actions relative to citizen's complaints on windblown dust from bare surface soil lots. Benefits of the project include raising awareness of the City's ordinance; highlighting health impacts of dust contamination; developing a database of dust control incidences, such as traffic accidents; defining affordable measures for compliance, and supporting improved enforcement of the ordinance. A statewide dust regulation is currently under consideration by the New Mexico Environment Department. NMED is taking comments on a survey about windblown dust and a potential statewide dust regulation. Data collection will also be attempted for the Chihuahua municipios of Ascensión and Juárez. Initial planning has begun for potential dust control workshop for students and officials in Cd. Juárez raising awareness of environmental issues and improving sanitation and health practices.

**Link to additional information:**

[www.epa.gov/border2012/success/tx-nm-chihuahua/nm-dustcontrol.html](http://www.epa.gov/border2012/success/tx-nm-chihuahua/nm-dustcontrol.html)

### **Mobile Source Reductions along the U.S.-Mexico Border**



**Mobile Source Reductions Along the U.S.-Mexico Border.**

Through an EPA Region 6 Grant to the Texas Clean School Bus Program in 2008, fourteen school districts located in counties that share a border with Mexico received funds to support mobile source reduction along the U.S.-Mexico Border. The school districts retrofitted their mobile source vehicles by installing a combination of diesel oxidation catalysts with an estimated reduction of PM (particulate matter) between 20 to 40 percent and either a closed crankcase filter or Flow thru Filter with an estimated reduction of PM between 80 and 97 percent.

The border counties that retrofitted school buses were:

- Cameron County retrofitted a total of 112 buses in the following independent school districts (ISD): Rio Hondo, Los Fresnos, Santa Rosa, Port Isabel and La Feria;
- Hidalgo County retrofitted approximately 112 buses in the following school districts: IDEA Academy, Donna ISD, Harligen ISD, La Villa ISD, Valley View ISD, and Pharr-San Juan-Alamo ISD;
- Webb County reported 72 buses retrofitted in United ISD;
- Dimmit County's Carrizo Springs ISD retrofitted 22 buses; and
- El Paso County retrofitted 16 school buses within the El Paso ISD with a combination of catalyst crankcase filters and flow thru filters.
- El Paso Sun Metro, (City of El Paso)—county public transportation retired Liquefied Compressed Natural Gas (LNG) used buses and replaced them with 65 new buses that have the latest engine technology fueled with LNG.

**Links to additional information:**

[www.tceq.state.tx.us](http://www.tceq.state.tx.us)

[www.epa.gov/border2012/success/borderwide/mobile-source-reduction.html](http://www.epa.gov/border2012/success/borderwide/mobile-source-reduction.html)

## Analysis of Low Wind Winter Air Inversions in Sunland Park, New Mexico; El Paso, Texas; Ciudad Juárez, Chihuahua

Utilizing a temporary particulate monitoring network in extreme northern El Paso County and the Colonia of Anapra, Mexico, particulate matter was monitored during the winter in order to determine how and where low-wind particulate exceedances were occurring. This study will result in an analysis that will be useful for future source apportionment and development of effective control strategies. The network consists of 12 PM<sub>10</sub>/PM<sub>2.5</sub> monitors near Sunland Park, Colonia of Anapra, Ciudad Juárez and an adjacent area of El Paso County. The New Mexico Environment Department Air Quality Bureau (NMAQB) acquired and set up rapidly deployable monitors (Met One eBAM) which will be retained by the U.S. and Mexican agencies for future particulate matter study efforts.

The NMEDAQB operated and maintained six (6) of the eBAM monitors in or near Sunland Park, including adjacent areas within Texas. Ciudad Juárez Dirección de Normatividad Ambiental (DNA) maintained the other six (6) monitors in Ciudad Juárez and Colonia Anapra. NMED conducted two training workshops for DNA staff which covered operation, maintenance, and data retrieval from the monitors.

Monitoring data was collected during the late fall/winter season of 2008–2009. Monitoring during any other time of the year would not document the low-wind particulate matter episodes monitored in Sunland Park. Once complete, policy makers will have detailed information on the location of emissions contributing to elevated PM measurements and can develop specific measures to control those emissions.

An aerial image of the site that shows the Sunland Park City Yards monitoring station and its proximity to the Mexico/U.S. border is available at this link:

[www.maps.google.com/maps?q=31.797326,-106.556909&spn=0.1,0.1&t=h&hl=en](http://www.maps.google.com/maps?q=31.797326,-106.556909&spn=0.1,0.1&t=h&hl=en)

**Met One eBAM information on this monitor is available at:**  
[www.metone.com/documents/ebamMassParticulate.pdf](http://www.metone.com/documents/ebamMassParticulate.pdf)

[www.epa.gov/border2012/success/tx-nm-chihuahua/nm-chihuahua-ebam.html](http://www.epa.gov/border2012/success/tx-nm-chihuahua/nm-chihuahua-ebam.html)



**Air Quality Monitor at Dona Ana Community College.**

## Results of the Border 2012 Air Policy Forum

On July 29 and 30, 2008 in San Diego, California, the 6th Meeting of the Air Policy Forum took place. The main objectives of the meeting were: to share the most relevant information on air quality projects in the region; to complete the Border's Comprehensive Air Quality Strategy, and to develop recommendations on how the Air Policy Forum (APF) can implement objectives on greenhouse gas emissions inventories (GGEI) and voluntary emissions reductions programs (VERP), and improve its coordination with the Environmental Health Workgroup.

One of the APFs most important results in July 2008 was the creation of a workgroup (WG) on the importation of used vehicles. This task force objective will be to evaluate and propose the most effective and efficient options to reduce the importation of vehicle that do not meet emissions standards in Mexico. On April 24, 2009 the members of the workgroup met in Monterrey Nuevo Leon to discuss the topics of "Definitive importation of used vehicles into Mexico" and "The legislative proposal: an initiative to amend and supplement the Federal Trucks, Bridges, and Vehicle Transportation Law."

Related to this workgroup, and within the framework of the Memorandum of Understanding between the Ministry of the Environment and Natural Resources (SEMARNAT) and several government agencies from the State of California, from the 15 through the 17th of June 2009 in the cities of San Francisco and Sacramento, California, Mexico's National Ecology Institute (INE) and the



**Border States Climate Change Workshop.**

## Goal 2: Reduce Air Contamination

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International Council for Clean Transportation (ICCT) presented strategies and initiatives to develop greenhouse gas emissions standards for passenger vehicles and reviewed cost-benefit analyses to establish an energy efficiency standard and to develop the standards.

Another one of the results reached within the APF was carrying out the Climate Change Workshop for the Border States within the Border 2012 Program, which took place on the 22nd and 23rd of April 2009 in Monterrey, Nuevo Leon. The workshop's objectives were to: exchange information on greenhouse gas inventories (GGI) in the Mexican border states; discuss the proposal for mandatory standards as to greenhouse gas reports (GGI) in the United States, and the development of climate policies in Mexico; share information and ideas as to the development of clean energy, efficient energy use, and projects to reduce GGE in border states; present-day market initiatives; and provide practical information on available ways and means to obtain financing for projects.

In order to follow up on initiatives that can improve air quality in the border region between both countries, the Seventh Air Policy Forum Meeting was programmed for the 31st of August and first of September 2009 in the city of Monterrey, Nuevo Leon. This meeting dealt with several topics of interest for the region, such as:

- Progress and follow up on the Border States Climate Change Workshop, held in Monterrey in April 2009 (state inventories, forecasts and action plans, as well as energy efficiency projects and other projects to reduce GGEs).
- Preliminary results of the management feasibility study, based on air basins and future steps (State University of New York in Albany)
- Task force options as to the importation of used vehicles
- Feasibility of incorporating mechanisms to reduce idling at certain border crossings.

### **Border 2012 Waste Policy Forum Launches an Extensive Website**

The Border 2012 Waste Policy Forum website was recently launched.

Waste—whether it is hazardous or nonhazardous, liquid or solid—does not recognize state or national borders, and this can present unique challenges for waste management in areas like the U.S.-Mexico border region. Inadequate waste management infrastructure, in addition to ongoing problems like makeshift waste dumps, unsupervised waste sites, scrap tire fires and other factors contaminate the land along the border.

The Border 2012 Waste Policy Forum, Regional Workgroups and Task Forces are working to reduce these land contamination challenges. The WPF website highlights these efforts while providing background information and tools to address these challenges.

The website has information on:

- Contaminated sites clean-up and remediation
- Electronic waste
- Hazardous waste
- Municipal solid waste including composting, illegal dumping prevention, landfills/transfer stations, methane, and recycling
- Scrap tires
- Spent lead acid batteries
- Used oil

The site includes an extensive section on scrap tires with information on:

- Scrap tire management
- What's being done in the border
- Partnerships
- Border 2012 Tire Group meeting summaries and presentations
- Frequent questions
- And resources on business development, clean-ups, fires, maintenance and safety, management, prevention, and markets and development.

The site can be found at the Border 2012 website ([www.epa.gov/border2012](http://www.epa.gov/border2012)) in the “Border News” section on its homepage.



**The Metales y Derivados contaminated site is featured on the Waste Policy Forum Website.**

**Link to additional information:**  
[www.epa.gov/border2012/fora/waste-forum/index.html](http://www.epa.gov/border2012/fora/waste-forum/index.html)

## Goal 3: Reduce Land Contamination

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**Lead from open pits or buried in drums and sacks, posed significant public health risks to nearby resident.**



**The Metales y Derivados facility property is now cleaned up and ready for reuse by community members in Tijuana.**

### **Successful Cleanup of Tijuana Metales y Derivados Contaminated Site**

A celebration event was held January 28, 2009 to celebrate the Metales site cleanup, the first completed remedy in the Border 2012 program's Goal 3, Sub-Objective 4A and among the first to be completed under Mexico's new cleanup law. Those in attendance included SEMARNAT, PROFEPA, Secretary of Baja CA environmental department, Governor of Baja CA, Mayor of Tijuana and other Mexican elected officials, EPA, grassroots environmental organizations and other community members.

Metales y Derivados was a lead smelting facility that began operations in the late 1980's. The U.S. owner abandoned the site in 1994, after PROFEPA cited the facility for environmental non-compliance. In 2004, a binational partnership workgroup, established as part of the U.S.-Mexico Border 2012 Program, implemented a four-phase cleanup plan which included the removal of 2,000 tons of high risk wastes and the recent construction of a concrete cap.

The local Tijuana community was very involved in the clean-up effort. The community action team, the Colectivo Chilpancingo Pro Justicia Ambiental, the Environmental Health Coalition, and other local groups worked closely with Mexican and U.S. governments to attain the historic accomplishment.

**Link to additional information:**

[www.epa.gov/border2012/metales-cleanup.html](http://www.epa.gov/border2012/metales-cleanup.html)

### **City of Laredo: Third Contaminated Site Selected for Clean-Up Along U.S.-Mexico Border**

Under Border 2012's Goal 3, Sub-Objective 4A indicates that "by 2012, apply a binational framework on clean-up/remediation and restoration of sites contaminated with hazardous waste or materials at least once in each of the four regional workgroup geographic areas." The Waste Policy Forum has selected the Killam Lake Brownfields Project in Laredo, in the Texas-Coahuila-Nuevo Leon-Tamaulipas region, as the third site identified for clean-up along the U.S.-Mexico border.

The contaminated site is an in-channel lake/wetland which suffered from years of illegal dumping. The cleanup will complement the city's Chacon Creek Master Plan, which calls for the preservation of natural areas along the creek and development of a network of nature trails and recreational facilities. Brownfields redevelopment is expected to enhance the city's Chacon Creek trail system and increase the value of adjacent properties.

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. In addition to cleaning the lake, the surrounding land will be developed using Low Impact Development (LID) methods, including a permeable LID parking lot which allows rainwater to infiltrate into the soil. The city of Laredo hopes to replicate this project in other future projects.

The project will not only help meet the Border 2012 Goal 3 (Land Contamination) Objective on contaminated sites, but will also contribute to overall capacity building in the border region.

In order to clean up the site, many stakeholders will be involved, including the City of Laredo, EPA Region 6, and local citizen groups.

**Link to additional information:**

[www.epa.gov/brownfields](http://www.epa.gov/brownfields)



**Years of illegal dumping have contaminated Killam Lake and the surrounding area.**



### Laredo Cash For Tires Round Up

The City of Laredo Environmental Services Department in collaboration with the City/County Health Department, Solid Waste Services Department, Parks and Leisure Services Department, and Keep Laredo Beautiful offered citizens the opportunity to make an environmental impact through the delivery of old tires to the 'Tire Corral' which was located at the Cigarroa Park Complex at 2100 Palo Blanco in South Laredo. Each participant was rewarded \$1.00 / tire, with a limit of 16 tires with the exemption of non-profit groups which were given a green light to cash for unlimited number of tires. An educational outreach booth was available for citizens, while they waited in line to drop off their tires. They learned, as they waited, about community clean-up activities that improve their environment, tire recycling, and solid waste minimization/ landfill life extension, mosquito transmitted viral diseases (dengue, West Nile, etc), mosquito reproduction and breeding in standing water. At the end of the event, in a six hour time frame, approximately 7300 tires, weighing in at 175,200 lbs, were collected. The event was a success as it was able to educate the community in addition to enhancing the community's environment and beauty through individual and personal responsibility and commitment.

#### Key Impacts:

- Removal of tires from public right of ways, creeks, river, and roadways
- Environmental consciousness through public awareness campaign
- Environmental education through cash out program
- Environmental Health and Disease Prevention Campaign



**In a six-hour time frame, 7300 tires were collected.**

### Maverick County and the City of Eagle Pass Address Illegal Dumping

The County of Maverick identified the lack of a Type I landfill site as one of the major sources of illegal dumping throughout the city and county. Illegal dumping was mainly along creek beds, arroyos and other water courses which eventually wind up in the waters of the Rio Grande River. The Rio Grande River, the boundary between the United States and Mexico serves as the sole source of drinking water for both the City of Eagle Pass and the Municipio de Piedras Negras. In order to control illegal dumping, which increased approximately in 1994, with the closure of the Type I landfill, the County of Maverick made a commitment to construct a new Type I landfill to serve both city and county residents. Closure of the Type I landfill required that arrangements be made with a garbage contractor to transfer and dispose of the garbage to Covell Gardens in San Antonio, Texas, a trip of 140 miles one way. This activity led to an increase of disposal fees for residents, increasing illegal dumping in the area. In April 2009, approximately 15 years later, a contract was awarded to M. Hanna Construction in the amount of \$1,144,313 for construction of Cell # 1 of the landfill. Construction of Cell # 1 is scheduled to be completed by September 30, 2009.



**Illegal dump site of construction debris.**

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/maverick-co-eagle-pass-landfill.html](http://www.epa.gov/border2012/success/nuevo-laredo/maverick-co-eagle-pass-landfill.html)



Scrap tire pile clean-ups occur along the U.S.-Mexico border.

### Launching of the Scrap Tire Initiative Implementation Workgroup

Collaboration is an essential component to solving the bi-national scrap tire problem. A border-wide scrap tire workgroup called the Scrap Tire Initiative Implementation Workgroup has been developed to enhance communication among border scrap tire stakeholders.

The workgroup is tasked with implementing the U.S.-Mexico Border Scrap Tire Integrated Management Initiative's (Tire Initiative), which is a scrap tire management framework that has principles and actions that when implemented create sustainable scrap tire management plans. The Workgroup encourages border-wide communication on scrap tire best practices and lessons learned.

Together, over a 2 year period, the workgroup will:

- Increase border-wide communication on scrap tire projects including best practices and lessons learned specific to the Tire Initiative's Principles and Actions.
- Create a compendium of scrap tire projects specific to the Tire Initiative's Principles and Actions.
- Evaluate best practices to determine which practices can be replicated border-wide.
- Update the 2007 Tire Inventory.
- Create Tire Initiative Implementation Guidance.

#### Links to additional information:

[www.epa.gov/border2012/fora/waste-forum/scraptires.html](http://www.epa.gov/border2012/fora/waste-forum/scraptires.html)

[www.epa.gov/border2012/success/borderwide/scraptire-workgroup.html](http://www.epa.gov/border2012/success/borderwide/scraptire-workgroup.html)

### Training Program for the Manufacture of Biodiesel in Ambos Nogales Begins



Biodiesel sample.

The Nogales Technological Institute (ITN) is participating in a project entitled "Training Program for the Creation of Biodiesel in Ambos Nogales". This program was created in response to a binational problem, since the Nogales sewerage system discharges its wastewater into the International Waste Water Treatment Plant (PITAR) in Rio Rico, Arizona. The project's main objective is to avoid discharging waste grease and oil into the city's drainage and sewerage system, since this creates serious problems for both sides of the border.

The project consists of collecting used vegetable oil that is produced by cafeteria services in factories and by the restaurant sector and converting it to biodiesel, thereby creating a sustainable option for the disposal of this waste that minimizes the impact these products have on the environment.

Using biodiesel as a fuel has recently gained importance, since it is a renewable fuel that can be made from vegetable oil or animal fat and contributes to the protection of the environment. Grease and oil are converted into biodiesel by means of a process known as transesterification, which is the chemical procedure recommended to reduce the viscosity in oils and is basically combining the oil with an alcohol methanol. It produces glycerin as a byproduct which can be used for the manufacture of soap, among other uses.

Although you can make biodiesel using virgin oil and grease, the project is focusing on waste oils generated in industrial cafeteria services and in the restaurant sector. Recycling these used oils avoids them from being dumped into the sewerage system or sanitary landfills, where they can cause leaks that contaminate underground water tables.

The project divides activities into three stages:

1. Identifying companies that generate wasted oil and grease to inform them of the feasibility of reusing this oil and grease, as well as the possibility of collecting this waste for its transformation into biodiesel.
2. Analyzing the information obtained as to the project feasibility insofar as the amount and quality of the wasted oils that can be collected.
3. Implementing an intermittent production process.

Thanks to the EPA's financial assistance, the project is presently in the intermittent production phase, covering the biodiesel demand required by the Instituto Tecnico de Nogales' school transportation system, which uses a 40% biodiesel mix. The goal is to increase production of biodiesel to 100% which would considerably reduce the emission of polluting gases into the air. In the next phase of the project, we plan to offer support to educational institutions that offer school transportation so that they can benefit from using this fuel.

In conclusion, this project was born with the objective of collecting and reusing the spent oil and grease before they are dumped into the sewerage system or a sanitary landfill, thereby offering considerable benefits such as:

- Reducing the disposal of oils in sanitary landfills, which avoids polluting underground water.
- Reducing problems in the sewerage system due to grease blockages in the pipes.
- Reusing a product that no longer has any value.
- Obtaining a high quality fuel at a low cost for biodiesel users.
- Reducing toxic gas emissions into the atmosphere.

Waste oil cannot be catalogued in and of itself as being highly contaminating, however, it produces serious problems in the sewerage system, which results in raw sewerage leaks resulting in high economic, environmental and public health costs for the citizens of both Nogales. Therefore, one could conclude that recycling oil and grease benefits the population at large by decreasing the environmental impact as a result of the reuse of this product.

## Paper Recycling in Nuevo Laredo

Raise awareness in Public Servants as to the sustainable use, preservation and conservation of our natural resources, which results in minimizing the contamination of our environment.

Insofar as environmental impact, through the Municipalities Environmental System on May 12, 2009 an internal paper recycling program began at each one of the municipal government offices. A pilot project was first begun at the Department of Public Works, Urban Development, the Environment and Municipal Services.

This program requires the participation of all government officials to foster a commitment towards the environment by strengthening an awareness of the need to participate in actions that contribute to mitigating air pollution and by sustainably using, preserving and conserving our natural resources.

As part of the participation between the Community and Government, the Environmental Association "Eco Ambiente Fronterizo" has become involved in the development and dissemination of the Program and will participate in coordination with the Environmental and Climate Change Unit to teach an internal program on Environmental Education.



**Ramón Garza Barrios, Mayor of Nuevo Laredo, Tamaulipas kicks off campaign.**

## Goal 3: Reduce Land Contamination

Following are the recycling results:

Internal Recycling Campaign						
	Municipal Government Offices			Offices of the Department of Public Works, Urban Development, the Environment and Municipal Services		
Month	Cardboard	Paper	Total	Cardboard	Paper	Total
November				15	320	335
December				10	180	190
January				12	225	237
February				18	305	323
March	22	145	167	9	125	134
April	38	710	748	13	130	143
May	25	335	360	19	155	174
June	29	812	841	21	580	601
July	33	604	637	25	246	271
August	35	234	269	11	190	201
<b>Total</b>	<b>182</b>	<b>2840</b>	<b>3022</b>	<b>153</b>	<b>2456</b>	<b>2609</b>

**Personnel and Equipment:** In order to reach our objectives, we have 27 inspectors in two shifts as well as 10 vehicle units, divided into 10 sectors to cover the city.

**Link to additional information:**  
[www.epa.gov/border2012/success/nuevo-laredo/recycling-nuevolaredo.html](http://www.epa.gov/border2012/success/nuevo-laredo/recycling-nuevolaredo.html)

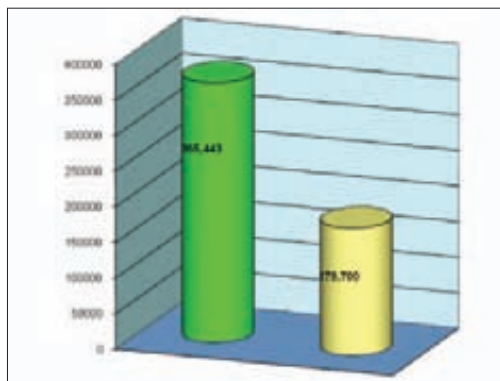
### Scrap Tire Clean-up in Nuevo Laredo



Scrap tire pile clean-ups occur along the U.S.-Mexico border.

The municipal government of Nuevo Laredo, based on its objectives, wishes to support the principles of sustainability and public health; as well as work jointly with government and the community for the success of programs and goals for Development, and, at the end of our term of office, leave behind a solid foundation to ensure the continuity of Nuevo Laredo's progress, aided by a broad and sufficient legal framework.

- From January 2008 to August 2009, 545,143 tires have been received at the Collections Center located at Km 18.



Waste tires collected from January 2008–August 2009.

**Link to additional information:**  
[www.epa.gov/border2012/success/nuevo-laredo/scraptire-cleanup.html](http://www.epa.gov/border2012/success/nuevo-laredo/scraptire-cleanup.html)

## Hazardous Waste Clean-up Program in Nuevo Laredo

One of the environmental problems that presently exist in Nuevo Laredo, is the incorrect management and disposal of hazardous waste that is generated in homes and small business establishments such as auto shops, car washes, printing shops, and other places. The present municipal government, with the vision of having a better, more sustainable environmental infrastructure and thereby eliminate these issues, began the operation of four temporary collection centers (CAT) to received hazardous waste. These are open the first weekend of every month. In order to benefit the entire community, and in this way facilitate collection, these CATs are located throughout the entire city. These centers receive the waste as shown in the table below. Actions undertaken are based on principles of sustainability, since waste will no longer be disposed of in vacant lots, water basins, the sewerage system, or sanitary landfills. The success of the program is based on three elements: citizen participation; the commitment of the municipal government and the support of the federal SEMARNAT Office in Tamaulipas, as well as the support of the BECC and the State of Tamaulipas Environmental Department for Sustainable Development.



**The director, architect Claudia Galaviz, inaugurates the program.**

Waste	Units	2008	2009	TOTAL
Absorbent Materials Soaked with Fuels	kgs	19754.5	9235	28989.5
Filters	kgs	9414.65	5726.6	15141.25
Empty Containers	kgs	6219	4718	10937
Used Oil	lts	43809	32727	76536
Car Batteries	kgs	46	106	152
Mud Impregnated with Fuel	kgs	22011	5908	27919
Used Oil mixed with Water	lts	3572	2426	5998
Empty Insecticide Containers	kgs	604.1	111.6	715.7
Left over Paint	lts	6121	3681.5	9802.5
Expired Medications	kgs	2806.9	960.5	3767.4
Empty Acid Containers	kgs	1309	36.5	1345.5
Chemical developers	lts	2923	4196	7119
Batteries	kgs	566.9	1339	1905.9

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/hazwaste-collection.html](http://www.epa.gov/border2012/success/nuevo-laredo/hazwaste-collection.html)





**Every month, a hazardous waste collection campaign is carried out.**

### **Solid Hazardous Waste Collection Program in Matamoros**

Thanks to the firm support of the Secretaría De Medio Ambiente y Recursos Naturales (SEMARNAT office in Tamaulipas), the Environmental Protection Agency (EPA) and the Border Environment Cooperation Commission (BECC), from August 2008 to the present date, we have carried out every month, a hazardous waste collection campaign with the participation of the members of the community who assist in taking materials that cannot be disposed of in a sanitary land fill as domestic trash to collection centers. Forty thousand dollars were granted for the implementation of this program. It is worth mentioning that the project was renewed for an additional year in order to offer continuity. Following are the results achieved to date:

- Used Oil, 12,010.5 L.
- Used Oil Mixed With Water, 4461 L
- Mud Mixed With Fuel, 768 Kg
- Expired Medicines, 1291.81
- Used Batteries, 2150.90

### **Resources Awarded to Reduce the Volume of Scrap Tires in Matamoros**



**450,000 tires are estimated to be disposed of the first year of operations.**

EPA's Border 2012 grant program awarded \$75,000 to the city of Brownsville to acquire a portable tire shredder, a transportation vehicle, and a frontal charger on behalf of the Municipality of Matamoros. The formal ceremony was carried out on August 6 of this year in the esplanade of the main plaza in the presence of the Mayor of the City as well as federal, state and municipal government officials and special guests, such as Miguel Flores, EPA Director, SEMARNAT delegate Ramon Sampayo, and Jose Hinojosa representing the city of Brownsville, among others. The municipality will dispose of the tire shreds in the sanitary landfill, and use at least some of the material as sink weight. It is estimated that at least in this first year of operation 450,000 scrap tires will be disposed of in the sanitary landfill. From December 2008 to May 2009, Matamoros has sent a total of 72,325 scrap tires to the CEMEX cement kiln in Monterrey, Nuevo Leon, and a total of 235,000 tires have been shredded.

## Drain Cleaning: “Protection During the Rainy Season”

Thanks to the coordinated efforts of the Environmental Control Department of the Municipality of Matamoros, directed by Jorge Mora Solaline, and the Federal SEMARNAT Office in the State of Tamaulipas, under the direction of Ramon Antonio Sampayo Ortiz, 175,500 m<sup>2</sup> of the “Los Angeles” drain, which goes through 10 colonias in the city of Matamoros, were cleaned. Trash, brush and over 4,000 tires were cleaned out and taken to the collection center in the Ejido de Guadalupe. Carrying out this program required an investment of \$314,328.36 pesos, which was provided by SEMARNAT and the municipal government.



175,000 m<sup>2</sup> of the Los Angeles drain were cleaned.

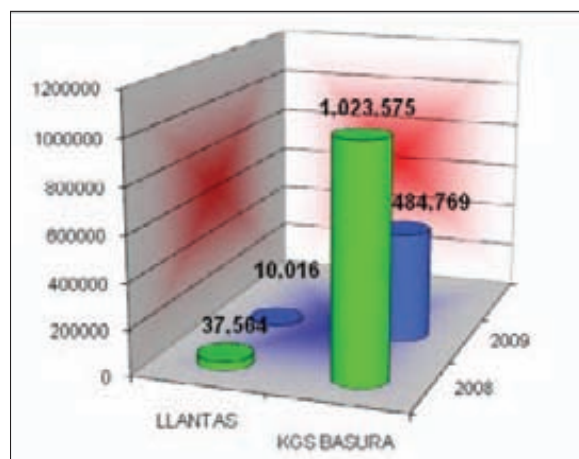
## Cleaning up Clunkers

The Government of the State of Tamaulipas working in coordination with the municipal government of Nuevo Laredo, the community and the private sector; joined efforts to carry out an Intensive Cleanup and Prevention Campaign to protect public health. Their objective was to eliminate risk factors that promote the incubation or presence of the mosquito that transmits Dengue Fever.

The program was carried out following a work timeline at each one of the colonias, in coordination with the Department of Health. Work first began in high risk areas and then continued with mid and low risk areas. Clunker collection routes were established and the community was informed through the press of the days and neighborhoods where the collection would be taking place. Telephone tree teams were also used to reinforce communicating the information. The Department of Health, through Sanitary Jurisdiction Number 5, is in charge of abatement efforts in the colonias where the program is being implemented. To date, the entire city has been cleaned up and a total of **1,508,384 kg** of trash has been taken to the sanitary landfill, as well as 47,580 tires.



Cleaning up the city.



Waste tires collected in 2008–2009.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/site-cleanup-vector-control.html](http://www.epa.gov/border2012/success/nuevo-laredo/site-cleanup-vector-control.html)



Temporary collection center.

### Temporary Collection Centers in the Urban Area

An objective of Laredo's municipal government is to create a support system based on the principles of sustainability and public health, and for government and community to work together in order to achieve success in the implementation of programs and goals that foster development. At the end of our administration, we wish to leave behind a solid foundation that will ensure continued progress in Nuevo Laredo, with the support of a broad and sufficient legal framework.

To date, the 12 temporary collection centers have received a total of 260,185 tires, which were transferred to the collection centers that are equipped to fully deal with scrap tires, where they will be shredded, and will handle their final disposal. We have had excellent results as to public health and the environment thanks to the joint efforts of the community and Government. These are as follows:

Public Health		Environment
Positive Dengue Cases		Tire Collection: 2008–2009
2007	520	Over 545,000 Tires
2008	3	Shredded Tires 2008–2009
2009	0	508,111

[Link to additional information:](#)

[www.epa.gov/border2012/success/nuevo-laredo/centros-de-acopio-temporales.html](http://www.epa.gov/border2012/success/nuevo-laredo/centros-de-acopio-temporales.html)

### Reduction of Scrap Tires within the Border 2012 Environmental Program Framework in the Chihuahua Border Region



Ciudad Juarez tire pile.

The appropriate management of scrap tires continues to be a topic that is of special interest for the Border 2012 Program. During 2008, 700,000 tires were removed from the collection center in Texas-New Mexico-Chihuahua (known as Ciudad Juarez). In 2009, under the Center's Cooperative Cleanup Agreement and its Annex 6, over 544,737 tires will be sent for co-processing with the collaboration of EPA, the National Cement Chamber, SEMARNAT, the government of the State of Chihuahua, and the Juarez municipality.

A workshop was offered in El Paso, Texas in July of 2008 on the Management and Disposal of scrap tires, among other actions undertaken for the binational management of scrap tires. Several actions resulted from the workshop, including proposing legislation for scrap tire management in Texas to promote an environmentally appropriate, final disposal for the entire border region.

The Chihuahua-New Mexico workgroup is continuing activities that were begun in 2007, given their successful Tire Inventory and Clean-up Campaign, which was done with community participation. They are investigating, management and disposal alternatives, and in 2010 plan to communicate the experiences they have learned, as to appropriate scrap tire management, with the municipalities of Asencion and Janos, and are also analyzing the scrap tire generation cycle and will present their results at a workshop for rural communities on the management and disposal of scrap tires. To this end, they will work within the Waste Forum in evaluating plans for the comprehensive management and disposal of scrap tires with a focus on long-term solutions, and are trying to get a letter of commitment signed for participation in the Scrap tire Management Initiative.

In the Junta de los Rios region, (Presidio, Texas-Ojinaga, Chihuahua), along the Chihuahua-Texas border, an environmental remediation proposal was presented in July of 2009, in order to be able to access resources from the Border 2012 Program for the purpose of addressing the problems

created by waste that resulted from the 2008 floods. These resources could be used in a used tire collection campaign, especially in the municipality of Ojinaga, as well as, for the disposal of this waste, spread throughout the city, and thereby avoid the risk of fires, as well as, eliminating spaces where mosquitoes that carry different illnesses can lay their eggs, or other harmful vermin.

### **Program to Clean-Up Sites Contaminated by Scrap Tires**

In July of 2006, an Agreement of Cooperation for the purpose of Cleaning up Sites that are Contaminated by Scrap tires in the State of Coahuila was signed by the Ministry of the Environment and Natural Resources (SEMARNAT), the government of the State of Coahuila, CEMEX, and the Grupo de Cementos de Chihuahua (CANACEM).

This agreement paves the way for Implementation Annexes to be signed with municipal governments for the appropriate disposal of their scrap tires. As a result of this, the following implementation annexes have been signed with local city governments:

- **2006:** Annex No. 1, signed with the municipality of Piedras Negras for the final disposal of 150,000 tires.
- **2007:** Annex No. 2, signed with the municipality of Ciudad Acuña, for the final disposal of 60,000 tires.
- **2008:** Annex No. 3, signed under a regional model with the municipalities of Sabinas, Nva. Rosita and Muzquiz for the final disposal of 40,000 tires.
- **2009:** Annex No. 4, signed under a regional model with the municipalities of Allende, Morelos, Nava, Zaragoza and Villa Unión for the final disposal of 40,000 tires.
- **2009:** Annex No. 5, signed with the municipality of Torreon for the final disposal of 40,000 tires.

To date, approximately 250,000 tires have been disposed of. It is also worth mentioning that although the municipality of Torreon is not on the border, the success achieved by Border 2012 in this regard led them to sign an agreement for the same objective, and they were also able to achieve outstanding results.

The appropriate disposal of scrap tires has contributed to a reduction in public health risks and has encouraged the conservation and restoration of natural surroundings by adopting a local focus when establishing priorities and making decisions through partnerships between the federal, state and local governments; thereby jointly addressing the considerable number of environmental impacts that exist in border communities.



**With the implementation of the Agreement of Cooperation, approximately 250,000 tires have been disposed up in the State of Coahuila.**



**Collection activities at the scrap tire reception center in the different neighborhoods of Mexicali, Baja California.**



**At the Progreso precinct.**



**At the Ciprecitos Colonia.**

### **Baja California Adds More Successful Projects for the Protection of the Environment and Public Health Along the Northern Border**

In 2009, Baja California undertook several activities to improve environmental health as well as reduce soil contamination and strengthen enforcement efforts, through actions that were carried out jointly between federal and local authorities.

In the area of environmental health, and within the framework of the Border 2012 Program Regional Workgroup, a project was implemented to collect pesticides that are no longer usable. The workgroup—which is made up by EPA, SEMARNAT, the Attorney General's Office for the Protection of the Environment, the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA), the Mexican Institute of Social Security (IMSS), the state of Baja California Institute for Public Health Services (ISESALUD), and the state government's Committee for Vegetables Safety, among others—called on pesticide users to report to the delegation the volume of expired chemicals that they had in their inventories, for the purpose of effecting their final disposal.

US EPA supported this effort and agreed to pay for the collection and shipment of these chemical substances for their final disposal. The strategy that was used for this program was to guarantee the final disposal of these substances without any cost to the user, thereby achieving an inventory of 1262.2 kg of solid waste from agricultural processes and 4,196 L. of liquid waste from agricultural processes.

In the process followed for the collection of these pesticides, participating companies transported their persistent organic pollutants (POP's) to Quimical, a company located in Mexicali, B.C. that is authorized to store these substances, who would operate as generator. For their part, US EPA hired Pacific Treatment Environmental Services, S.A. de C.V. to receive and package these substances, which were then transported to the United States for their final disposal. SEMARNAT initiated the paperwork needed to authorize the exportation of the hazardous waste; said authorization was issued on January 29, 2009 and covered the exportation of 1262.2 kg of solid waste from agricultural processes with a final destination in the State of Utah at Sukhwant Raju/Clean Harbors Environmental Services Aragonite LLC. The exportation took place on April 23, 2009 and PROFEPA issued verification documentation.

In other activities, also in the municipality of Mexicali, Baja California, scrap tires were collected for their final disposition. These activities were concentrated in the Delegacion Poniente and Zona Poniente colonias. This activity sought the active participation of the community for the purpose of collecting the largest number of tires possible for final disposal through the co-processing which took place in the CEMEX kilns at the plant located in Ensenada, Baja California.

These tires were collected on the 22nd of April 2009, taking advantage of the fact that the World Earth Day celebrations took place on that date. The total number of tires collected was 40,800. It is worth mentioning that this activity was possible thanks to the resources and support the municipality received from the Mexicali City Government, the Municipal Department of Social Development, SEMARNAT, EPA, PROFEPA, BECC and CEMEX.



## The Environmental Control Department, SEMARNAT and the Tamaulipas Department of Health Joined Efforts in a Scrap Tire Collection Campaign in the Colonias of the City of Matamoros

The purpose of the program is to eliminate any possible contamination in our city that results from the incorrect management and disposal of tires, thereby preventing the propagation of dengue. A tire collection campaign was carried out in neighborhoods of the city of Matamoros with the participation of 45 neighborhoods, and in two months 153,123 scrap tires were collected from empty lots, houses, and businesses, among others. This activity was possible thanks to the support of the Tamaulipas Delegation of SEMARNAT, the Department of Health, through its sanitation unit and the city government, through its Environmental Control Office.



153,123 scrap tires were collected in vacant lots, homes and businesses.

## Clean-up Efforts in Streams and Canals

During Engr. Ramon Garza Barrios' 2008–2010 government administration, one of the priorities has been caring for the environment, to this end, the Streams and Canals Clean-up Program was implemented with the goal of keeping these channels free from trash, branches, and other waste, in an effort to avoid flooding and the spread of infectious diseases. The streams and canals are periodically inspected according to an annual inspection schedule and their corrective clean-up or preventive maintenance is scheduled according to identified priorities.

One of the Laredo municipal government's objectives is to create a support system based on the principles of sustainability and public health, and for government and community to work together in order to achieve success in the implementation of programs and goals that foster development. At the end of our administration, we wish to leave behind a solid foundation that will ensure continued progress in Nuevo Laredo, with the support of a broad and sufficient legal framework.

Clean-up efforts were first carried out in the colonias that are categorized as being at high risk; streams and canals located in the urban area being the highest priority. Efforts were also undertaken under the "Clean City Crusade" which took place on March 30, 2009, as well as the Nationwide Campaign entitled "Limpiamos Nuestro Mexico," that is promoted by Fundacion Azteca.

Following are the results of the clean-ups done in 2008 and from January through August of 2009, where the number of tons of trash and other debris are indicative of the aggressive actions undertaken by the Municipality of Nuevo Laredo.



Canal before clean-up.



Canal after clean-up.

YEAR	TIRES	DEBRIS	TRASH
2008	2,982	1,148,500	220,730
2009	1,176	597,400	176,040
<b>TOTAL</b>	<b>4,158</b>	<b>1,745,900</b>	<b>396,770</b>

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/canals-creeks-cleanup.html](http://www.epa.gov/border2012/success/nuevo-laredo/canals-creeks-cleanup.html)

# GOAL 4

## Improve Environmental Health



Public health workers from Hidalgo County Health and Human Services Department learning about Asthma 101.



Nursing students at University of Texas Pan American attending the Asthma 101 training.



Eduardo Rangel from the Comité Estatal de Sanadid Vegetal de Guanajuato (CESAVEG) demonstrates the adequate use and donning of Personal Protective Equipment at the Joint Train-the-Trainer Workshop for Pesticide Safety Educators held in Chula Vista, CA.

### Creating Healthier Communities in Hidalgo & Starr Counties

In 2009, the Texas A&M Health Science Center – South Texas Center (STC) hosted a series of environmental health education workshops for physicians, nurses, promotoras, school health professionals, asthma patients, families, and farm workers on asthma and pesticides. The goal of this effort is to reduce asthma health care encounters, increase the number of symptom-free days for asthmatic individuals, and to decrease pesticide exposure inside and outside households. A variety of training curricula and tools are being utilized to promote health education on asthma. These include:

- For the younger population, an educational DVD entitled “A is for Asthma with Elmo”.
- The American Lung Association Curriculum entitled “Asthma 101” is also used to provide education for nurses and other health professionals. On August 28, 2009, 95 nursing students from the University of Texas Pan American and 95 public health workers from the Hidalgo County Health and Human Services Department were trained using the American Lung Association curriculum Asthma 101. On October 9th, respiratory therapist students from the South Texas College will be trained using the American Lung Association’s Open Airways curriculum.
- Healthy Homes workshops have been presented in McAllen, Texas and Harlingen, Texas to community health workers and promotoras.

This initiative was made possible through funding from the EPA-Border 2012 Program and the Texas Department of State Health Services, Texas Asthma Control Program to the Texas A&M Health Science Center – South Texas Center.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/healthy-hidalgo-starr.html](http://www.epa.gov/border2012/success/nuevo-laredo/healthy-hidalgo-starr.html)

### Protecting Farmworkers, Train-the-Trainer Workshops for Pesticide Educators

Region 9’s Pesticide Program participated in the expansion of the Joint Train-the-Trainer Workshop for pesticide educators in California, Arizona, Mexico and Tribal communities. Following successful workshops in San Marcos, CA and Yuma, AZ, a workshop was held in San Luis Rio Colorado, Sonora. This was the first workshop held in México, and thus was only offered in Spanish. Participants were trained in effective training techniques, identifying potential health effects resulting from pesticide exposure, and the proper selection/use/donning of personal protective equipment. The binational group of instructors also covered federal (Mexico and US), state (CA and AZ) and tribal pesticide laws and regulations.

As a result of the three workshops, a total of 101 individuals became certified to train agricultural workers in the state of California, and 54 of these became certified in the state of Arizona. Assuming that each pesticide safety educator trains at least 10 agricultural workers each, that is a total of at least 1,000 newly trained agricultural workers. Several trainers indicated that they expect to train 1,000–2,400 individuals.

### Upcoming Pesticide Collection Event in AZ/Sonora

Plans are being made for a pesticide collection event in Yuma, Arizona and San Luis, Sonora in the fall of 2009. This represents a return to the same area where a successful collection took place in summer 2006, resulting in the collection and disposal of some 75,000 pounds of unwanted, obsolete pesticides. Officials have indicated that there is a continued need for this in the area, as additional waste pesticides have been identified on both sides of the border. SAGARPA in Sonora, Mexico is also a key partner in this effort.

**For more information on previous pesticide collection events, please visit:**  
[www.epa.gov/Border2012/features/pesticides-collection/index.html](http://www.epa.gov/Border2012/features/pesticides-collection/index.html)



**Pesticides collected at a previous collection event.**

### Protecting Human Health in the Border Region

With the goal of improving environmental health in the border region that is shared between Mexico and the United States, the Federal Commission for Protection against Sanitation Risks (COFEPRIS), which is part of Mexico's Health Department, together with the United States Environmental Protection Agency (EPA), offered two workshops in 2008 which focused on analyzing health conditions in the border region, climate change, and programs implemented to remediate contaminated sites.

The "Binational Workshop on Climate Change and Health" took place on December 5, 2008 in the city of El Paso, Texas, and was jointly organized by the Colegio de la Frontera Norte (COLEF), the Border Environmental Cooperation Commission (BECC) and the Pan American Health Organization/ World Health Organization (PAHO/WHO), as well as the Border 2012 Program partners: EPA, SEMARNAT, and Mexico's Ministry of Health (SS), through the Federal Commission to Protect against Sanitation Risks (COFEPRIS). The event also had the support of the municipality of El Paso, the municipality of Ciudad Juarez, the New Mexico Department of Health, the County Department of Emergency Management, the city of El Paso, the Texas Commission on Environmental Quality (TCEQ), the State of Chihuahua's Department for Rural Development and the Environment (SEDUE), the government of the State of Chihuahua, the Ciudad Juarez Department of Ecology and Civil Protection, the University of Texas at El Paso (UTEP) and New Mexico State University (NMSU).

Faced with the impacts of climate change on the planet Earth, the World Health Organization (WHO) in 2008 selected the motto "Protecting Health from Climate Change" to celebrate, World Health Day. Some of the main points identified are:

- Climate change is accelerating.
- The sea level is rising as the glaciers melt.
- Rainfall patterns are changing
- Extreme meteorological phenomena are changing in frequency and intensity.

This last point is of particular importance for the Paso del Norte Region, given the increase in temperature variability, which causes certain natural phenomenon to appear more aggressive than before, and for rainfall seasons to be more extreme, thereby resulting in flooding such as that observed in 2006 and 2008. As proof, we have the effects of the rains that fell on the region, which affected the State of New Mexico, as well as the rivers overflowing their banks which took place in the city of Ruidoso in August of 2009.

The Mexican side has also been severely affected: in Ciudad Juarez the eastern section of the city known as El Barreal, was flooded in July, August 2006. As a result of this some land dikes of a provisional nature were built, among them the Santa Elena 1, which failed, together with the so-called Bordo de la Laguna de Patos, which later caused flooding in the Villas del Sur 1 and 2,



**Panel of Speakers for the December 8, 2008 meeting.**



**Participants of the "Binational Workshop on Climate Change and Health".**

## Goal 4: Improve Environmental Health

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Alborada, Los Naranjos, Las Almeras, Palmas and Praderas del Sol housing developments, where a total of 3100 families were affected. The flooding in most of the streets in the aforementioned neighborhoods increased the risk of illnesses such as the West Nile virus, dermatitis, gastrointestinal disease and eye infections among others.

Another event took place in our region at the end of July 2008 in New Mexico as a result of hurricane Dolly. Flooding took place in Lincoln County (the City of Ruidoso and nearby areas) from the 26th through the 28th of July, which resulted in one person's death, 200 houses damaged, streets closed, 13 bridges destroyed, communities cut off, 900 persons rescued and millions of dollars in material damages. The intense rain flooded the area during that weekend, causing the Ruidoso River to overflow with the resulting evacuation of all of the people who lived along its edges, including tourists who were visiting the area at that time.

Faced with this situation, it is necessary to stress the importance of mitigating the adverse effects of climate change, among which are the effects on human health and other associated problems. This has been clearly seen in new or more common epidemics of transmittable diseases, given the creation of new conditions that promote their propagation. Diseases transmitted by vectors, such as malaria and dengue, are good examples; as well as water-borne diseases, such as diarrheal diseases (with cyclical seasons) which could have a greater impact if the seasonal climate patterns are modified. Aside from health impacts, there are other serious impacts in the economic and social fields, especially in less developed countries.

We can find the real causes behind the recurring flooding in the Paso del Norte Region in the uncontrolled actions of human intervention on the environment, especially an accelerated urbanization that is taking place without the appropriate urban planning; the lack of a comprehensive system to manage the water basin with a binational focus; the absence of an efficient rainwater drainage system and the lack of a culture of prevention that is based on the lessons learned from previous floods. Aside from this, as part of the global phenomenon of climate change, these manifestations are becoming visibly more frequent and more acute. It is under these circumstances that the aforementioned **"Binational Workshop on Climate Change and Health"** was planned and carried out.

**Link to additional information:**

[www.epa.gov/border2012/success/tx-nm-chihauhua/tx-el-paso-climate-health.html](http://www.epa.gov/border2012/success/tx-nm-chihauhua/tx-el-paso-climate-health.html)

### ***"Beyond Translation": Evaluating the Impact of Joint Actions on Public Health in the Border Region***

The Forum "Beyond Translation" is an open space that was created in 2006 by the United States Environmental Protection Agency (EPA) and which has been especially promoted by Region 6. It is an effort to actively seek new opportunities that effectively involve the Hispanic community in the United States in the task of protecting the environment.

Within the framework of this forum, on the 14th thru 17th of October 2008, the meeting of the Border 2012 Texas-Coahuila-Nuevo Leon-Tamaulipas Regional Task force took place for the main purpose of discussing how to best follow-up on the effects that the programs or projects that have been implemented to improve environmental conditions in air, water and land. Specifically, a great deal of interest exists in connecting programs that clean-up tire piles and adequately dispose of scrap tires with the incidence of dengue cases in the last two years.

Different presentations were offered in an effort to report what each of the co-chairs is carrying out, and what the plan is for using appropriate indicators to evaluate the impact on public health. In this regard, Chemist Araceli Salazar, from the Ciudad Juarez Health Risks Department, presented the activities and the evaluation that is being carried out in that city on environmental health.



**Meeting of Border 2012 Health Goal in "Beyond Translation" Forum.**

During the development of the Beyond Translation Forum, the proposal was made to have discussions on the challenges and opportunities that have come up during efforts to improve and protect the environment; to explore ideas as to how to provide the Latino community better service, and how to improve relationships with colleagues within the Border 2012 Program.

To further the objectives that were proposed, different presentations were offered through which new ideas were discussed with the participation of the Border 2012 Program Environmental Health Task Force (EHTF). This participation included the group co chair, Dr. Carlos Rincon from EPA, and Dr. Matiana Ramirez Aguilar, representing Mexico.

This forum presented an overview of the regional work that has been proposed since the 2007 National Coordinators Meeting, and emphasis was given to the need to maintain close communication between the task forces in order to continue the positive impact that implemented actions are having. In order to achieve and document the aforementioned, it was announced that several meetings would take place along the Border States, beginning November 19, 2009 in the State of Coahuila.

Additionally, the results of a project that was financed by EPA within the framework of the Border 2012 Program were presented. The project involved implementing an Epidemiological Syndromic Monitoring System, and the possibility of carrying out a follow-up study at sentinel units in several border cities was proposed.

The event had the support of the Colegio de la Frontera Norte (COLEF), the Border Environmental Cooperation Commission (BECC) and the Border 2012 partners: the United States Environmental Protection Agency (EPA), Mexico's Ministry for the Protection of the Environment and Natural Resources (SEMARNAT) and the Ministry of Health, through the Federal Commission for Protection Against Sanitation Risks (COFEPRIS).

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/enviro-health-meeting2009.html](http://www.epa.gov/border2012/success/nuevo-laredo/enviro-health-meeting2009.html)

### **Environmental Education, “The Foundation for Good Citizens”**

One of the objectives of Environmental Education is to contribute to the formation of citizens who are responsible, conscientious and concerned about the environment and environmental issues; who have the knowledge, skills, goodwill, motivation and sense of commitment that will allow them to work individually and collectively to address environmental problems and prevent their recurrence. For this reason, and as part of the actions headed by the Mayor of Matamoros, Engr. Erick Silva Santos, and Jorge Mora Salinde, Environmental Control Director, during their term of office in the city government, in coordination with EPA, BECC, TCEQ, SEMARNAT and State of Tamaulipas Department of Education, a series of programs focused on protecting the environment have been implemented. For example, the city recently concluded the 2008–2009 school year with a recycling program at 50 schools. As part of the project which began at the end of January 2009, the city provided 182 classroom presentations, 22 events connected to special environmental dates, containers, logistics and publicity that reached approximately 30,000 students. The city hired a company to collect plastics, cardboard, paper and aluminum cans and to transport these materials for their sale to another company. The city has been actively promoting environmental education in the city's schools. For the new 2009–2010 school year a call will again go out to double the number of participating schools.



**More than 30,000 students have participated in the environmental education presentations.**



## Goal 4: Improve Environmental Health

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**Conference at the Rosalinda Guerrero Daycare Center.**

### **Environmental Education Program in Nuevo Laredo**

One of the programs that this administration has implemented is an environmental education program with the goal of promoting values in our communities regarding the protection, conservation, and improvement of our environment and natural resources. We have endeavored to identify tools and information through educational centers, different media, institutions, business establishments, industries and the service sector and will foster citizen participation such that they feel they are a part of the program and share in the results and responsibilities entrusted to each of them. The tools can be workshops on environmental topics, bulletins, programs for environmental management and consulting, conferences, forums, and cooperation agreements. With the participation of students from all three levels of education, we aim to raise awareness and awaken an interest in the environmental issues that affect our city, ensuring the success of the program that has been implemented in our municipality.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/enviro-education.html](http://www.epa.gov/border2012/success/nuevo-laredo/enviro-education.html)



**Clean-up, "El Laguito" Ecological Park.**

### **Information Control – Citizen Environmental Units (CEU)**

The Citizen Environmental Unit (CEU) is based on community participation, where honorary inspectors from the Environmental Department of the City of Nuevo Laredo participated within each of the sectors. The mission of each CEU is to work together with municipal authorities in promoting an "environmental culture", ensuring that development is done in a sustainable manner, in compliance with environmental laws and regulations, to prevent environmental damage and protect our environment and natural resources. The CEU's are directly linked to our Community-Government, and work under a structure of sectors to avoid health problems. To date, 308 honorary inspectors from schools, local companies and the community are participating. The work the CEU's carry out is important for the protection of the environment and allows for control and follow-up activities in the inspection and monitoring of each sector. In this way, the CEU's participate in securing the ecological equilibrium of the City of Nuevo Laredo.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/control-de-informacion-uac.html](http://www.epa.gov/border2012/success/nuevo-laredo/control-de-informacion-uac.html)



**Clean-up, "Nueva Era" Canal, among the different activities under the "Limpiemos Nuestro Mexico" Program.**

### Cuidad Juárez, Chihuahua Training and Equipment Exchange Ceremony

One of the goals under the U.S.-Mexico Border 2012 Program is for both countries to jointly strengthen emergency preparedness and response capabilities along the U.S.-Mexico border. For the past two years, the U.S. Environmental Protection Agency (EPA), Mexico's Attorney General for Environmental Protection, (PROFEPA), U.S. Northern Command (NORTHCOM), and other state and federal agencies in partnership with the U.S.-Mexico Border Governors Emergency Management and Civil Protection worktable, have been working together to support and expand sustainable Mexican response capability to address HAZMAT incidents and to protect the health and environment of the U.S.-Mexico border communities.

Under this initiative, these agencies are working to train and equip first responders in the Mexican major sister-cities along the U.S.-Mexico Border. In 2009, five sister-cities received HAZMAT equipment. Cuidad Juárez, Chihuahua was one of two Region 6 cities selected.

On June 1–5, 2009, EPA Region 6 trained approximately 25 First Response personnel from Cuidad Juárez and Chihuahua State Civil Protection. Responders received a 40-hour Certified HAZMAT Technician Level Training Course that increased their knowledge on responding to HAZMAT incidents on a technician level. On June 5, 2009, as part of a groundbreaking first between the two federal governments, Cuidad Juárez first responders received a variety of hazardous materials response equipment (i.e. personal protective suits, multi-gas meters, etc.).

Both events were successful in highlighting inter-governmental cooperation. Due to EPA Region 6's key partnerships with local agencies such as the New Mexico Border Authority, U.S. Customs and Border Protection, TCEQ and others.

**Links to additional information:**

[www.epa.gov/emergencies/content/mexico\\_border.html#sister](http://www.epa.gov/emergencies/content/mexico_border.html#sister)

[www.epa.gov/border2012/success/tx-nm-chihuahua/cuidad-juarez-training-equip.html](http://www.epa.gov/border2012/success/tx-nm-chihuahua/cuidad-juarez-training-equip.html)

### Columbus, New Mexico – Palomas, Chihuahua Bi-National Exercise

The first Binational Emergency Exercise between the rural communities of Columbus, New Mexico and Palomas, Chihuahua took place on Wednesday, September 24, 2008. Under the Border 2012 Program Emergency Response Goal 5, the town of Columbus and Palomas officially signed a sister-city contingency plan in November 2004. Due to severely lacking resources (i.e. equipment and staff) in this region, both towns were unable to move forward in improving their emergency response mechanisms on a binational level.

PROFEPA and the EPA Region 6 El Paso Border Staff began working in July 2008 to coordinate the first binational emergency response exercise. Since both cities are not equipped with a HAZMAT team, it was decided that the scenario would simulate a release from a propane tank to help evaluate both town's capability to respond.

Over 30 Agencies and 450 representatives and community members participated in the exercise. Some key lessons learned and observations made from the exercise, includes the fact that both local fire departments need to develop MOUs with cities closest to them in their respective country



**First Responders Graduates of HAZMAT class June 5, 2009.**



**SCBA received by Border Sister Cities.**



**Photo of simulated chemical fumes being released from a propane tanker.**



**Photo of Columbus-Palomas Exercise.**

## Goal 5: Enhance Joint Readiness for Environmental Response

that is capable of responding to HAZMAT incidents. Next steps include conducting another exercise in 2009 and updating the existing Joint Contingency Plan.

**Links to additional information:**

[www.epa.gov/emergencies/content/mexico\\_border.html#sister](http://www.epa.gov/emergencies/content/mexico_border.html#sister)

[www.epa.gov/border2012/success/tx-nm-chihuahua/columbus-palamos-emergresp.html](http://www.epa.gov/border2012/success/tx-nm-chihuahua/columbus-palamos-emergresp.html)

### **El Paso, TX – Ciudad Juarez, Chih. – Sunland Park, NM – Ysleta del Sur Pueblo Sister City Plan Update**



**The Sister-City Plan incorporates the Ysleta del Sur Pueblo.**



**Ysleta del Sur Pueblo Governor, Frank Paiz, signs document celebrating sister-city plan update.**

In August 2009, the communities of El Paso, Texas – Municipality of Juarez, Chihuahua – Sunland Park, New Mexico updated their 2007, Memorandum of Understanding (MOU) on Cross Border Communications and Emergency Response Strategies: Binational Hazardous Materials Emergency Plan. The update to the plan incorporated the Ysleta del Sur Pueblo into the sister-city plan. It also marks the first agreement along the borders of New Mexico – Texas and their corresponding Mexican States, which officially incorporates a Native American Tribe into such an agreement. A celebratory signing event took place on September 9, 2009 at the Ysleta del Sur Pueblo Judicial Facilities. This Memorandum of Understanding between the Municipality of Juárez, Chihuahua, Mexico; the City of El Paso, Texas; the City of Sunland Park, New Mexico, and Ysleta Del Sur Pueblo is intended to reinforce the cooperation among the four jurisdictions to assist them in preventing and responding more effectively and efficiently to emergencies, as well as properly and timely notifying counterpart agencies in the event of an incident on either side of the international border.

The sister-city plan marks a critical element of Goal #5 under the U.S.-Mexico Border 2012 Program. This sister-city plan consists of the three major components:

- Creates a Tri-national Task Force to develop joint emergency preparedness strategies and a plan;
- Develop a Tri-national Emergency Communication & Notification Plan;
- Exchange of information on hazardous waste to identify threats to the region.

**Links to additional information:**

[www.epa.gov/emergencies/content/mexico\\_border.html#sister](http://www.epa.gov/emergencies/content/mexico_border.html#sister)

[www.epa.gov/border2012/success/tx-nm-chihuahua/el Paso-cuidad-juarez-sunland-ysleta.html](http://www.epa.gov/border2012/success/tx-nm-chihuahua/el Paso-cuidad-juarez-sunland-ysleta.html)

### **Historic HAZMAT Equipment Transfers across the Border Region**

#### **Increase sustainable border readiness for disasters and hazardous chemicals spills**

As part of a groundbreaking first between the U.S. and Mexican governments, personal protective suits, multi-gas meters, and related hazardous materials (HAZMAT) response equipment were transferred to Mexico under an innovative Border 2012 bi-national collaboration.

These equipment transfers and accompanying hazardous materials response training are part of a bi-national initiative involving the EPA, PROFEPA, NORTHCOM, the USAID, Mexico's Civil Protection Agency, and the U.S.-Mexico Border Governors Emergency Management and Civil Protection Worktable.

**Link to additional information:**

<http://www.epa.gov/usmexicoborder/features/hazmat>

### **2009 U.S.-Mexico Joint Response Team (JRT) Meeting, Sept. 1, South Padre Island, Texas**

The Office of Emergency Management's (OEM) National Planning and Preparedness Division (NPPD) along with EPA's Region 6, 9 in addition to OEM's Mexican counterparts, PROFEPA and Civil Protection, planned, organized and coordinated the 2009 JRT meeting, in South Padre Island, Texas on Tuesday, Sept. 1.

Annex II of the 1983 La Paz Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area established the U.S.-Mexico Joint Contingency Plan (JCP) to provide a bi-national coordination mechanism for protecting human health and the environment and responding to significant hazardous substances contingencies or emergencies that affect the inland border area between the U.S. and Mexico. The La Paz Agreement also established the JRT which has coordinating authorities for both Mexico and the U.S. For Mexico, the Co-chairs for the JCP and JRT are the Secretariat of Environment and Natural Resources (SEMARNAT) through the Office of the Deputy Attorney of Industrial Inspection of the Federal Attorney General for Environmental Protection (PROFEPA) and the General Coordinator for Civil Protection, Secretariat of Government (SEGOB).

The Office of Emergency Management (OEM) within the Office of Solid Waste and Emergency Response of the U.S. Environmental Protection Agency (EPA) is the coordinating authority for the U.S. The JRT includes representatives from U.S. and Mexican federal, state, and local agencies responsible for emergency prevention, preparedness, and response in the Border Region.

During the Sept. 1, 2009 meeting, the attendance included not only the above representatives, but also members of industry, representing some of the local border maquiladoras, with a total number of over 100 attendees. EPA's Region 6 and 9 participated with NPPD in the planning and logistics for this successful and well received meeting, along with OEM's Mexican counterparts, PROFEPA and Civil Protection. Some of the agenda topics included discussions of on-going initiatives, recent accomplishments and lessons learned, recent planning, capacity building, training, exercises as well as the upcoming priorities and projects for 2009–2010 to enhance cross-border collaborations, increase preparedness and risk reduction.

#### **Emergency Preparedness and Response Border-wide Workgroup Highlighted Accomplishments**

Some of the most recent accomplishments of the Emergency Preparedness and Response Border-wide Workgroup that were highlighted at the meeting included:

- Finalizing the revision of the U.S.-Mexico Joint Contingency Plan (JCP);
- Signing and implementing fifteen bi-national local emergency response Sister City Plans;
- Finalizing the Tri-national Emergency Preparedness Plan (Sister City #16) with the Tohono O'odham Tribe, Arizona and Mexico;
- Completing several high-profile hazardous materials tabletop and field exercises;
- Conducting workshops through EPA Region 9's Baja California Training Institute;
- Coordinating the EPA and NorthCom Memorandum of Agreements (MOAs) Knowledge Exchange Events;
- Working with vendors on addressing insurance issues, including coverage for federal government vehicles and U.S. first responders when crossing the Border;
- Establishing interagency coordination to facilitate Border crossings for federal responders and contractors and to provide more training and exchange of information.



**U.S. and Mexico's Border 2012 Emergency Preparedness and Response Co-Chairs.**



**General from the Departamento de Defensa de Mexico, Dana Tulis, Deputy Director for EPA OEM, Susan Reinert, State Dept. rep. for NorthCom and Vice Admiral for Mexico's Navy, Daniel Bozada Sanchez.**

## Goal 5: Enhance Joint Readiness for Environmental Response

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Some of the Border-wide Workgroup action items and initiatives that came out of the day-long JRT meeting included:

- Disseminate updated JCP in task force meetings and during training for binational exercises;
- Encourage sister cities to update local plans to be consistent with binational notification system of updated JCP;
- Finalize research on insurance coverage project: identify interested vendors via Blanket Purchase Agreement;
- Follow up with the City of El Paso insurance pilot project;
- Establish a criteria for future emergency response equipment distribution in sister cities with highest risk of chemical accidents/emergencies (EPA-NC MOU, PROFEPA & Protección Civil);
- Initiate public/private partnerships to initiate the establishment of an emergency training academy in Region VI and enhance Region IX's Baja CA training academy;
- Coordinate and prioritize equipment transfers to high risk areas;
- Coordinate with transportation sectors to better manage hazardous materials transfer cross the Border;
- Hold more tabletop exercises before the next JRT meeting, in an effort to increase communication on both sides of the Border and stay active;
- Add more hazardous materials training; and
- Review the need and viability of a bi-national center for emergency response.



**Signing Ceremony of McAllen/Reynosa Update Plan.**



**An EPA Border 2012 Grant supported the update of the plan.**

### **McAllen/Reynosa U.S.-MX Cross-Border Regional Contingency Plan Updated**

Through a \$50,000 Border 2012 Grant, in June 2009, the communities of McAllen, Texas and Reynosa, Tamaulipas updated their U.S.-MX Cross-Border Regional Contingency Plan originally signed in February 2000. The plan was expanded to include the communities of Mission, Pharr, Hidalgo, Edinburg, Weslaco and Donna, Texas and Rio Bravo, Tamaulipas. In addition to incorporating more communities, the plan updated contact/resource information and strategy for activation and emergency response, but more importantly, included public health emergencies and natural disasters. The grant included conducting a risk analysis, training and tabletop exercise, all utilized to update the plan. In January 2008, approximately 80 responders from Reynosa and Rio Bravo received technical HAZMAT training. A tabletop exercise was conducted on June 4, 2009.

**Link to additional information:**

[www.epa.gov/emergencies/content/mexico\\_border.html#sister](http://www.epa.gov/emergencies/content/mexico_border.html#sister)



## Increasing Environmental Management Systems Certifications and Measuring Environmental Improvements in Small and Medium Enterprises

During 2006 and 2007, the Border 2012 program funded 2 projects carried out by the Lexington Group promoting the implementation of Environmental Management Systems (EMS) among 31 Mexicali area companies. An initial EMS baseline analysis looked at 10 performance metrics in the areas of water use, energy consumption, waste and waste water generation, VOC use, and onsite solid waste recycling.

In 2008, a follow-up survey was conducted to evaluate the results of the EMS trainings. Of the original 31 firms participating in EMS training, 12 firms agreed to take part in the survey and submitted data for the audit. They represented the diverse industries that make-up the Mexicali economy, including paper manufacturing, chrome plating, chemical manufacturing and re-packaging, solid waste management, electronics components and wiring manufacturing, heating, air, and ventilation system installation, and metal stamping and manufacturing.

The 2008 follow-up survey showed that 7 of the 12 firms had very significant improvements in their environmental performance by the end of 2008 compared to their baseline analyses. Improvements ranged from 95% reduction of wastewater generation, 83% reduction in solid waste generation, 77% reduction in electricity use, and 50% reduction in water use. The common denominator among the high performing companies was substantial implementation of their EMS, and particularly, making progress towards achieving their EMS environmental objectives and targets.

Similarly, companies with little or no performance improvements had only modest or no EMS implementation following their participation in the EMS projects. Additional factors, however, including the economic downturn, company mergers, internal challenges, and changes in management also contributed to their poor EMS performances, also contributed to their lack of EMS performance.

A larger question that the survey wanted to look at was whether participating companies are moving toward sustainability of their EMSs through increased certifications. Of the 31 participating companies, 11 or 35% have achieved or will soon achieve EMS certification. Of these 11 companies, 2 have already certified their EMS to the ISO 14001 standard, 6 more are expecting certification in 2009 and 2010, and 3 plants will have their "self declaration" to conformance with ISO 14001 verified by independent entities.

## Radio Frequency Identification (RFID) for Tracking Hazardous Waste Shipments Across International Borders

In March 2009, EPA's Environmental Technology Verification (ETV) Program, through the Office of Research and Development (ORD) Advanced Monitoring Systems Center, conducted field testing of an RFID System (Radio Frequency Identification) at the Santa Teresa Port of Entry in Southern New Mexico. The RFID testing was conducted to test and analyze the use of this technology to track the shipment of hazardous waste material by individual drums. The RFID system operates by transmitting data using radio waves for communication between a tag and a reader, and ultimately to a database.



Participants at an EMS training.



Roadside reads of various RFID tags.

## Goal 6: Improve Environmental Compliance, Performance and Stewardship

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The final report of the verification testing will be available at the end of September 2009. If the RFID technology is successful, the hazardous materials industry has expressed an interest in voluntarily incorporating the system into their shipments, in order to ensure their materials reach the designated facility. The RFID technology has the potential for solving a major gap that EPA has in its ability to track imported hazardous waste shipments from either the northern or southern borders. Future uses of RFID technology:

- Provide end-to-end visibility of hazardous materials transportation and storage life cycle.
- Supply critical data to emergency responders.
- Confirm hazardous waste reaches the proper designated treatment storage or disposal (TSD) facility.
- Increase security of hazardous waste shipments.

**Link to additional information:**

[www.epa.gov/border2012/success/tx-nm-chihauhua/nm-rfid-id.html](http://www.epa.gov/border2012/success/tx-nm-chihauhua/nm-rfid-id.html)

### Inspection and Monitoring in Nuevo Laredo



**Inspection of business establishments.**

**GOAL:** To raise awareness in the community as to the benefits of having a city that offers quality of life; motivating community members to care for and preserve our environment, as well as to respond to citizen complaints within a time frame of no more than 24 hours.

**Inspection:** Inspect all of the different business establishments, as well as homes in general, seeking to ensure the correct management of the waste that is produced as a result of their activities. Dispose of the solid waste, waste that requires special handling, hazardous waste and bioinfectious waste.

**Monitoring:** Inspection visits to avoid damages to the environment, such as the mixing of substances on public streets, burns, dumping solid waste in unauthorized places.

**Inspection and Monitoring Department:** Protect the Environment of the Municipality of Nuevo Laredo, Tamaulipas, as well as the physical integrity of its inhabitants; thereby maintaining and improving quality of life for the community, through the enforcement of environmental laws and regulations.

**Response to Complaints:** Receive citizen complaints by phone at our offices through emergency lines and prepare reports for their immediate attention to correct environmental issues. An average of 120 reports are generated on a monthly basis.

**Lots with/without structures:** Identify and notify the owners of lots with/without structures that they must keep them clean and in good repair to avoid outbreaks of infectious diseases and the proliferation of vermin.

**Personnel and Equipment:** In order to meet our objectives, we have 27 inspectors in two shifts, as well as 10 motor vehicle units divided into 10 sectors that cover the entire city.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/inspection-vigilence.html](http://www.epa.gov/border2012/success/nuevo-laredo/inspection-vigilence.html)

### **The Nuevo Laredo, Tamaulipas Ordinance for the Protection of the Environment and Sustainable Development**

The Environment and Climate Change Office presented a project on the new Ordinance for the Protection of the Environment for the Municipality of Nuevo Laredo, based on the New Code for the Sustainable Development of the State of Tamaulipas and the federal General Law for Ecological Equilibrium and the Protection of the Environment.

This project was reviewed by personnel from this Office and Council members belonging to the City's Laws and Regulations Commission and the Environmental Commission, and received the support of the State's Environmental Agency for Sustainable Development.

#### **Citizen Consultation Forum**

On September 11, a Public Consultation Forum was held to present information on the Ordinance for the Protection of the Municipality's Environment.

Topics discussed in the forum were: the Environmental and Land Use Ordinance, Non-Hazardous Urban Solid Waste; Hazardous Waste and Waste requiring Special Handling; Service Provided by Municipal Trash Collectors, Preventing and Controlling Pollution, Inspection and Monitoring, Sanctions and Appeals for Reconsideration. One hundred and one persons attended, 5 proposals were presented in writing and 12 were presented orally.

In the coming month of October, the new ordinance will be presented before the city council by the commissions that have participated in the review and approval process.

After several modifications, the new Ordinance was published in the Official State Gazette on the 19th of August and went into effect on the day following its publication.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/new-enviro-law.html](http://www.epa.gov/border2012/success/nuevo-laredo/new-enviro-law.html)



**Citizens attended a public forum to discuss the new regulation.**



**Speakers present during Citizen Public Forum.**

## Toxics Releases Along the U.S. Mexico Border

The 2007 data on the toxic chemicals that were released to the air, water, and land in the U.S. states of the Border region was recently published. This data was collected from the Toxics Release Inventory (TRI) for those facilities in the U.S. states that are located within 100 kilometers of the U.S.-Mexico Border.

The TRI is an important part of a federal law called the Emergency Planning and Community Right to Know Act (EPCRA). EPCRA gives the public the right to know about toxic chemicals being released into the environment. The law requires facilities in certain industries, which manufacture, process, or use significant amounts of toxic chemicals, to report annually on their releases of these chemicals. The reports contain information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.

### At a Glance...

State (Reports from 2007)	Number of Facilities Reporting	Pounds of Toxic Chemicals Reported to the TRI	Percentage of State's Overall Emissions
California	76	6.4 million	12%
Arizona	73	7.3 million	8%
New Mexico	8	7.7 million	34%
Texas	24	1.4 million	0.6%

### Releases Across the Border Region

State (Reports from 2007)	Top Polluting Industry	Total Released (in pounds)	Percentage of Total Releases for State
California	Gold Mining	3,896,855	61%
Arizona	Copper & Nickel Mining	6,077,531	84%
New Mexico	Metal Mining	7,104,240	92%
Texas	Primary Metals	585,671	40%

### Largest Releases by Industry Type

To see the TRI factsheets for the Border area, see: [www.epa.gov/usmexicoborder/publications.html#toxic](http://www.epa.gov/usmexicoborder/publications.html#toxic)

For national information on data releases, see: [www.epa.gov/tri](http://www.epa.gov/tri)

# ADDITIONAL ARTICLES AND OTHER TOPICS

## ECO-VIDA Media and Community Partnership

In June 2009, EPA Region 6 launched the Eco Vida Program under the U.S.-Mexico Border 2012 Program, partnered with KVIA (ABC affiliate), KINT (Univision affiliate) and local stakeholders. Eco Vida is a program to promote bilingual environmental awareness and is designed specifically for television viewers and radio listeners in the El Paso, Texas, Las Cruces, New Mexico and Ciudad Juarez, Chihuahua, Mexico (Paso del Norte region).

Through a series of bilingual education programs (i.e. radio programs, televised environmental messages and web-based education material), available to residents on both sides of the border, Eco Vida has generated public understanding, support and a call for personal action that results in positive behavior changes. Paso del Norte citizens are learning about the pressing environmental challenges in their area, and Eco Vida has provided individuals with a better understanding and knowledge on how simple daily life-style changes can make big environmental differences in their community. So far, stories on illegal dumping, how to make your home more energy efficient, smart sprinklers, recycling, green gardening, greening your pool, kids and the environment, and water conservation tips have been featured by Eco Vida.

### Links to additional information:

[www.kvia.com](http://www.kvia.com)

[www.kint.com](http://www.kint.com)

[www.epa.gov/border2012/success/tx-nm-chihauhua/eco-vida.html](http://www.epa.gov/border2012/success/tx-nm-chihauhua/eco-vida.html)

### ECO-VIDA fan site on Facebook

[www.facebook.com/search/?q=ecovida&init=quick#/group.php?gid=115134359321](http://www.facebook.com/search/?q=ecovida&init=quick#/group.php?gid=115134359321)



**ECOVIDA Kickoff meeting on June 26, 2009.**

## Reynosa is Sustainable

From the beginning of Mayor Oscar Luebbert Gutierrez' administration in January 2008, Reynosa applied solutions that deserved the recognition of U.S. and Mexican environmental authorities. A notable event was the closure of three illegal dumps—Las Calabazas, Corrales and Las Anacuas—that impacted the environment, land and water due to their proximity to the Rio Grande.

Today, Las Calabazas is a transfer center that receives 35 tons of trash a day, which are transported to an authorized sanitary landfill; thereby addressing at its root, the problem of illegal dumps. It is worth mentioning that to this end, we developed an action plan which covered issues such as increasing the frequency of trash collection, eradicating hand pulled cart trash collection from the downtown area, 10 of which have modernized their services and now use motor vehicles; we cleaned up 238 urban lots that had been overgrown with weeds and trash, and we have detected 524 lots through geo-referencing for future cleanup efforts.

We also created a comprehensive program known as "Cleaning up our Neighborhood" based on an innovative model of citizen participation, which has been successful and has had a social impact that transcends generations, since it is the residents who work hand in hand with city government.

We also worked on the scrap tire problem and, together with SEMARNAT, implemented a temporary employment program that takes tires from low income neighborhoods and side roads to the collection center with the participation of CANACAR transporters. We were able to send 13,000 tires to CEMEX-Monterrey during the first semester, aside from 80,000 tires which were collected in 2008 and 38,000 which were collected under the Junk the Clunkers Program.



**Trash dumps: The challenge we must overcome.**



**Storing and collecting hazardous waste at authorized CAT centers.**





**Collected trash from hand pulled carts at the Calabazas transfer site.**

Since August of 2008, with the help of SEMARNAT, PROFEPA and US EPA, Reynosa began its Hazardous Waste Collection Program, collecting spent oil, used batteries and filters, among others items, at four temporary transfer and collection stations, where this waste is classified according to environmental regulations.

This is coming together with resources granted by the NADB, with the support of the Governor, who inaugurated in this city the Waste Water Treatment Plant (PTAR-1), which has a capacity of 1000 L per second and will help, with this capacity, to protect the environment and the Rio Grande basin. Progress on the other plant (PTAR-2), which has a capacity of 250 L per second, was also witnessed by Governor Hernandez Flores. Additionally, Mayor Luebbert reported, there is a project before the Tamaulipas Congress to increase the capacity of the PTAR-2 to 500 additional liters per second. The goal is to reach a capacity of 1750 L per second. PTR-2 would resolve the long-standing problem of having raw sewerage come up in the neighborhoods that surround La Escondida Lake. By the middle of the year 2010, Reynosa will be the first city in the entire country to have 100% sewerage coverage.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/reynosa-enviro-sustainability.html](http://www.epa.gov/border2012/success/nuevo-laredo/reynosa-enviro-sustainability.html)

## **Nuevo Leon Renews its Commitment to Protect the Environment in the Border Region**

Within the framework of the U.S.-Mexico Border 2012, Environmental Program, the federal SEMARNAT delegation in the State of Nuevo Leon carried out two workshops during 2008 and 2009 for the purpose of continuing to promote the program's main objective, which is to protect the environment and public health in the shared border region, in a way that is consistent with the principles of sustainable development.

The first workshop was organized in the month of September 2008 with maquiladoras in the State of Nuevo Leon for the implementation of the Comprehensive Hazardous Waste Tracking System (SIRREP) in coordination with the Hazardous Waste Tracking System Department, which is a part of the General Office for the Integral Management of Hazardous Materials and Activities (DGGIMAR). These other municipalities also participated in the workshop Abasolo, Agualeguas, Anáhuac, Cerralvo, China, Doctor González, Dr. Coss, General Bravo, Higuera, Lampazos de Naranjo, Los Ramones, Sabinas Hidalgo. The State of Nuevo Leon Maquiladora Industry, through the Nuevo Leon Maquiladora Association, A.C., received training to improve the control of the transborder movement of hazardous waste, in consideration of its installed capacity in the mentioned municipalities.

This training is of great importance, since, presently, the total number of companies that come before the Delegation in Nuevo Leon are using the SIRREP program to carry out these activities, legally controlling the trans-border movement that result from the return of hazardous waste, and identifying the way to appropriately handle this waste, at the same time that they strengthen the culture of environmental legality.

In other activities regarding sustainable water management, the Nuevo Leon Delegation participated in Participative Planning Workshops aimed at developing a Detailed Action Program for the "Emblematic Sustainable Water Use Project in Irrigation District 004—Don Martin," which is carried out by the Autonomous University of Chapingo, through the National Water Commission's (CONAGUA) Rio Bravo Basin Office. The workshops took place during the months of May, June and July 2009, and it is estimated that the Delegation's participation will have an important impact, since projects having to do with the sustainable management of water resources yield high social benefits, aside from offering an opportunity to link efforts and resources between the three levels of government, institutions and society.

It is worth mentioning that the project not only includes priority actions related to hydraulic resources, but also identifies reforestation needs, soil conservation, development and strengthening of inter-institutional ties, feasibility and impact of the construction project in the region, among others.

Technical personnel from the SEMARNAT Delegation in Nuevo Leon, CONAGUA, Monterrey's Department of Water and Sewerage, the Corporation for the Development of Agriculture and Livestock for the State of Nuevo Leon, the City of Anahuac's Mayor's Office, the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Management (SAGARPA), the National Natural Protected Areas Commission (CONANP) and the National Forestry Commission (CONAFOR) participated, and through Commissions will assist in improving the conservation and development of the natural resources in the Basin of Irrigation District Number 4.

The expected results are tied to a prioritization of the project's main activities, and required the intervention of the environmental authorities in order to rehabilitate the hydro-agricultural infrastructure, limit and order changes in land use, establish inter-institutional commitments, manage the use of forestry resources, orderly cutting of trees, reforestation and projects for land conservation, commercial forestry planting, regulate and manage forested areas, manage wildlife, improve water management, rehabilitate agricultural land, manage wildlife [sic], and the conservation of natural resources and the environment, pursuant to applicable federal environmental laws.

### Workshops in Nuevo Laredo

As part of the activities carried out by the Nuevo Laredo Environment and Climate Change Office, different workshops, and forums have been offered focusing mainly on informing the community on measures that must be adopted for the protection of the Environment.

Information has also been provided on the requirements that must be met in order to obtain the different legal tools that will allow them to carry out their activities in an environmentally safe manner. These workshops and forums have been offered in coordination with different government agencies, both federal and local, among them SEMARNAT, PROFEPA and COMAPA, and, as has already been mentioned, the main objective is and will continue to be protecting public health and preventing and mitigating contamination.

Some of the workshops offered have been: A Conference on Wind Energy presented by engineer Salvador Treviño Garza, who is the head of the State Environmental Agency. This conference offered information on the benefits of implementing wind energy as an alternative to electrical energy.

Workshops were also offered on the Comprehensive Hazardous Waste Tracking System, which was mainly offered to private sector companies that return their hazardous waste to the place of origin; a Regional Workshop on Hazardous Waste Management, and modifications on the Federal Annual Operations Report (COA); a Workshop on the Management of Scrap tires and another workshop that celebrated World Environment Day.

It is important to stress the participation of the different Chambers and Civil Associations, which enabled us to achieve the objectives and positive results that had been set for these workshops and conferences. All of them are of great importance due to the positive impact they have had on the environment and public health.



**Wind Energy Conference participants.**

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/enviro-workshops.html](http://www.epa.gov/border2012/success/nuevo-laredo/enviro-workshops.html)



**Reforestation, Elementary School Amalia Gonzalez Caballero.**

### **Reforestation in Nuevo Laredo, Tamaulipas**

Activities related to the Care and Management of our Forests are directly connected to the city of Nuevo Laredo, Tamaulipas, Parks and Gardens Department as well as to the community at large. Technical assistance will be offered by way of studies and findings to adequately manage our forests. Trees will be planted in Educational Centers, Recreational Parks and Housing Developments in an effort to create pleasant surroundings and we will try to involve students and citizens at large in the care and maintenance of trees that have been planted through a certificate of commitment whereby they agree to care for and manage the growth of these trees. To date, 35 educational centers, 2 housing developments and 2 recreational areas have benefited from this program with a total of 818 trees planted. This program includes the participation of municipal authorities and students and thereby creates a commitment to the care and protection of our flora.

**Link to additional information:**

[www.epa.gov/border2012/success/nuevo-laredo/tamaulipas-2009.html](http://www.epa.gov/border2012/success/nuevo-laredo/tamaulipas-2009.html)

### **Border Indicators Task Force Plans 2010 Report to Describe Border Conditions and Activities and to Identify Future Needs**

The Border Indicators Task Force is gearing up to develop an indicators report for 2010. The Border Indicators Task Force includes participants from the EPA headquarters and regions, SEMARNAT, state and local governments on both sides of the border, tribes, and regional stakeholders. Building on the State of the Border Region border indicators report released in 2007, the Task Force is working to revise and update indicators. It is also adding new indicators that reflect border priorities and activities that have emerged since the previous report. As the Task Force compiles data that looks back over the last several years, it is also looking forward to identify new needs for improving the environment and health in the border region. As Border 2012 stakeholders begin discussions about what kind of an agreement should be put in place beyond 2012, the Task Force plans to provide data that can inform future strategic planning.

**Link to additional information:**

[www.epa.gov/border2012/success/borderwide/indicators-taskforce-plans2010.html](http://www.epa.gov/border2012/success/borderwide/indicators-taskforce-plans2010.html)

## Acronyms

- SEMARNAT** – Secretary of Natural Resources and Environment
- SEDESOL** – Secretary of Social Development
- USGS** – United States Geological Survey
- NADB** – North American Development Bank
- BECC** – Border Environment Commission on Cooperation
- CNA** – National Meteorological Commission
- CONAGUA** – National Commission for Water
- INE** – National Ecology Institute
- GGEI** – Greenhouse Gas Emissions Inventories
- ICCT** – International Council for Clean Transportation
- CAT** – Centers for Waste Collection
- CEMEX** – Cement of Mexico
- CANACEM** – National Cement Organization
- BEIF** – Border Environment Infrastructure Fund
- PDAP** – Project Development Assistance Program
- TCEQ** – Texas Commission on Environmental Quality
- CARB** – California Air Resources Board
- NMED** – New Mexico Environment Department
- PROFEPA** – Federal Attorney General for Environmental Protection
- SAGARPA** – Secretary for Agriculture, Fisheries, Rural Development and Management
- COFEPRIS** – Federal Commission for Protection and Sanitation Risks
- HAZMAT** – Hazardous Material
- NPPD** – National Planning and Preparedness Division
- ISO** – International Standardization Organization
- CANACAR** – National Auto-transport Surveillance
- COMAPA** – Municipal Drinking and Wastewater Treatment Plant of Nuevo Laredo
- USNORTHCOM** – United States Northern Command