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# Natural

# OUTLOOK

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



T A K E C A R E O F T E X A S



Y O U R H O W - T O G U I D E





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# Natural OUTLOOK

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Informing Texans about important natural resource issues*

## 1 Spotlight on the Border

Under Border 2012, cities, states, and federal governments on both sides of the U.S.-Mexico border are working on key environmental concerns. The binational program strives to bring understanding and insight to common problems and common solutions.

## 9 Gaining Traction on Scrap Tires

The accumulation of abandoned tires along the border has been an ongoing concern. Under Border 2012, U.S. governmental entities are sharing ideas and expertise to help Mexico manage the problem.

## 4 A New Chapter Begins

As the TCEQ's new commissioner, Buddy Garcia brings experience with border issues and natural resources to his appointed post.

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## 6 Do Your Part for Conservation

The TCEQ has launched a public education campaign to remind individual Texans that everyone has a role in environmental protection. As part of the "Take Care of Texas" initiative, the agency offers 25 tips on pollution prevention and energy-saving measures.



## 10 Celebrating Excellence

A dozen friends of the environment were chosen this year to receive the 2007 Texas Environmental Excellence Awards.

## on the back

## Get to Know the TCEQ Regions

Want to contact the TCEQ field office nearest your community? Here are some easy ways to find the closest agency representatives.

**COVER:** At home, in the yard, or behind the wheel— there are many practical measures that individuals can take to improve the environment. Many of these measures have the added benefit of long-term savings for the household budget.

# Spotlight on the Border

*Border 2012 environmental programs emphasize regional approach to problem solving*



For generations, communities on both sides of the U.S.-Mexico border have shared history, culture, and economic interests. But they also have a long list of environmental problems in common.

Border 2012, a partnership between the United States and Mexico, is working on a broad range of environmental challenges by using expertise and financial resources from both sides of the border to address air quality, water quality, land contamination, and related health problems.

Border 2012 is led by the U.S. Environmental Protection Agency (EPA) and its Mexican counterpart, the Secretariat of the Environment and Natural Resources, also known as SEMARNAT. All 10 U.S. and Mexican border states, including Texas, are full partners in this effort.

Various agencies in the two countries are not only studying environmental issues, but proposing solutions in which both are willing to participate. Several programs have been implemented, independently and jointly, to better protect public health and the environment in the border region.

Border 2012 came along at a time when Mexico was beginning to make major investments in its water and wastewater infrastructure along the border, according to Miguel Flores, director of the Water Quality Protection Division at EPA's regional offices in Dallas.

"Mexico has invested many millions of dollars, especially in the last few years, to improve conditions in municipalities

adjacent to the Texas portion of the border," says Flores, who points out that Nuevo Laredo, Matamoros, and Reynosa are all working to build large-scale treatment plants to ensure that wastewater will be properly treated rather than discharged into the Rio Grande.

Tapping into this momentum, Border 2012 is encouraging U.S. and Mexican border communities to form partnerships and undertake joint projects to address their common environmental problems. That way, says Flores, "we can provide support to the binational programs, which will benefit both sides of the border."

## Growing Demands

Every year brings increasing pressures along the international border, which spans about 1,950 miles from the Gulf Coast to the Pacific. The last two decades have witnessed explosive population growth and industrial expansion. Almost 12 million people occupy the region, residing primarily in 14 paired sister cities. An example is Laredo and its cross-border neighbor, Nuevo Laredo. Together, the two cities form a population center of more than 587,000.

Overall, the border population is expected to top 19 million by 2020.

The increase of people and maquiladoras has escalated the demands on natural resources. As a result, air and water quality have deteriorated in places, and some land areas have been

compromised by illegal dump sites or hazardous waste disposal. Such environmental degradation has affected the health of many border residents, aggravating respiratory disease or causing waterborne disease.

In 1983, the United States and Mexico signed the La Paz Agreement, pledging to work together on environmental and health concerns.

The ensuing programs emphasized borderwide coordination and planning of environmental programs. Work groups were organized to look at issues such as air quality and hazardous waste management and to coordinate the participation of federal, state, and local governments, as well as U.S. tribes.

Border 2012 debuted in 2003 as the new 10-year, binational program of the La Paz Agreement, but with much more focus on the regions, even subregions, so that local communities could better influence goals and priorities.

Flores explains: “This is more of a bottom-up approach, drawing from community participation and focusing on issues that are more relevant at the local level. Before, it was too top down.”

Under Border 2012, the 10 U.S. and Mexican states along the border are divided into four regional work groups. Each work group has U.S. and Mexican federal-level co-chairmen and U.S. and Mexican state-level co-chairmen.

Texas, with a southern boundary of 1,250 miles that tracks almost two-thirds of the entire international border, is a member of both the Texas-New Mexico-Chihuahua work group and the Texas-Tamaulipas-Nuevo León-Coahuila work group. Commissioner H.S. Buddy Garcia is a co-chairman of the four-state group.

The regional work groups are divided into binational task forces, which establish cross-border priorities related to water contamination, air pollution, and other environmental issues.

There are also borderwide work groups, which examine whether proposed federal policy changes on major issues, such as water pollution, would benefit the entire region.

The TCEQ—through its commissioners, regional offices, and Border Affairs staff—has been active in all aspects of Border 2012, such as helping to develop the original Border 2012 agreement that laid out goals and structure.

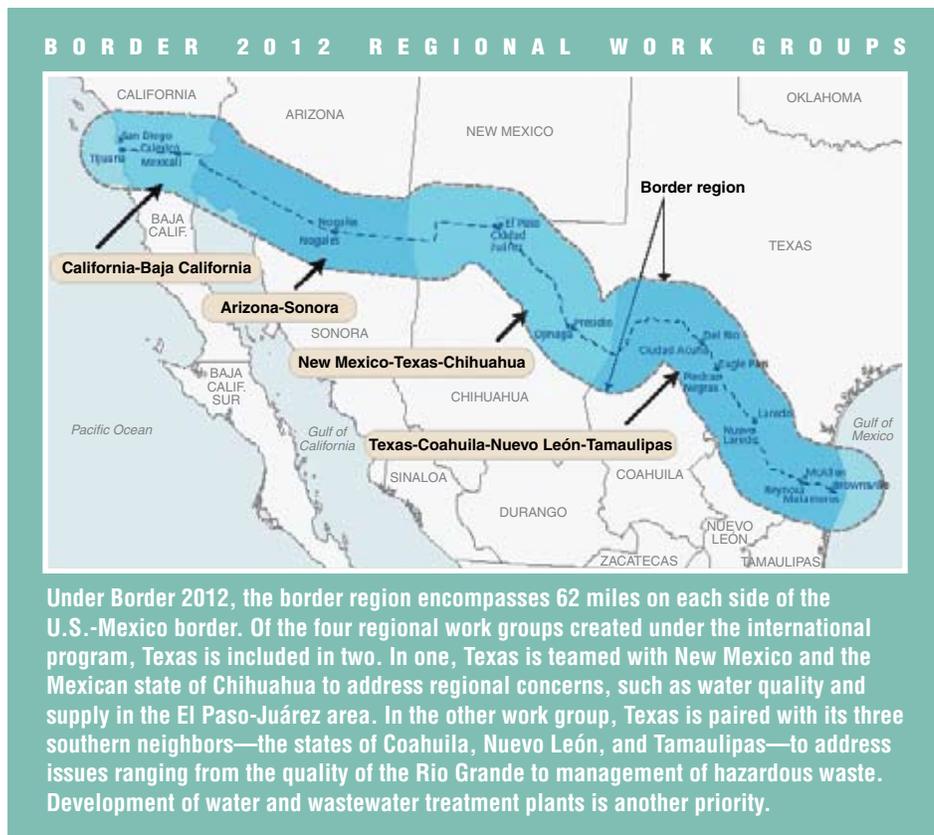
The Border Affairs team also works closely with EPA and SEMARNAT, as well as with state and local stakeholders, on various borderwide forums to examine possible solutions to a range of environmental problems. The TCEQ co-hosted a cross-border environmental management conference held earlier this year at the University of Texas at Austin, and staff helped plan the annual Border 2012

conference, held in San Antonio this spring.

### Local Projects Get Support

Border 2012 participants have committed to supporting consensus-driven efforts that have tangible binational environmental benefits. That has led to creation of numerous projects along the border. Some receive financial support from the North American Development Bank (NADBank), which provides large grants and loans, mostly for infrastructure related to drinking water supply and wastewater treatment. Other improvement projects—more than 100—have received Border 2012 grants, and some have proceeded solely with local funding.

The competitive Border 2012 grants, funded by EPA, have been issued in two rounds so far. In 2004,



EPA sent \$800,000 to projects on both sides of the U.S.-Mexico border, followed the next year by another \$800,000. A third round, proposed at \$1.4 million, is expected this year. Grants typically range from \$25,000 to \$100,000.

Some of the main categories addressed by Border 2012 are:

**Water.** Border 2012 has funded projects to assess surface water quality, protect shared waterways, gauge the effectiveness of wastewater treatment facilities, and train operators on water system upkeep and sanitation practices.

**Air.** Projects have supported initiatives such as the development of binational emissions inventories and monitoring networks. Border 2012 activities have targeted specific pollutant reductions from sources such as diesel engines, unpaved roads, and brick kilns.

**Land/Waste.** A variety of projects have been designed to properly dispose of hazardous waste, institute recycling and

waste reduction programs, and clean up scrap tire stockpiles (see article on scrap tires, page 9).

Other project categories address environmental health, emergency preparedness and response, compliance and enforcement, and environmental education.

In some cases, the local discussions generated by Border 2012 meetings have resulted in new programs funded by cities and counties. Nuevo Laredo, for one, took the initiative in 2005 to create five collection centers in various sectors of the city for residents to deliver hazardous materials once a month.

At the UT conference, Gustavo Pantoja, with the Nuevo Laredo Department of Ecology, told participants that his city's foray into the safe disposal or recycling of hazardous materials is a pioneering effort in Mexico to establish large-scale volunteer recycling.

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## Border 2012 Projects in Texas

Here are some Border 2012 projects in Texas that have been funded by the Environmental Protection Agency.

### Water Quality

**Texas A&M University, Frank Tejada Center; \$50,000.** To conduct operator training for a total of 118 employees at water-supply facilities in Nuevo Laredo, Reynosa, Tampico, and Matamoros, aiming to improve plant efficiencies and provide safer drinking water.

**University of Texas at Austin; \$45,000.**

To determine the effect of water and wastewater infrastructure projects financed by the North American Development Bank on the health of colonia residents and the surrounding environment.

**City of Brownsville; \$25,000.** To conduct nonpoint source pollution-prevention training for city staff and to make educational presentations at public schools.

### Air Quality

**Texas A&M-Kingsville; \$45,000.** To develop an environmental management system designed to reduce the air pollution that stems from annual crop burning by the sugarcane industry.

**Texas A&M-Kingsville; \$30,000.** To create a single binational database for information on emissions inventories in the border regions of Texas, Coahuila, Nuevo León, and Tamaulipas.

### Waste Management

**UT-Austin, LBJ School of Public Affairs; \$30,000.** To assess the volumes of used oil being recycled in the sister cities of El Paso and Juárez.

**Ysleta del Sur Pueblo, El Paso; \$25,000.**

To increase awareness among tribal members of Ysleta del Sur Pueblo on the risks of household hazardous waste and automotive chemicals.

### Environmental Health

**City of Laredo Health Department; \$70,000.** To screen 100 Laredo residents for evidence of toxic substances in urine and to exchange these health findings with public agencies on the other side of the border. Also, to pay 50 cents for each abandoned scrap tire turned in for proper disposal.

**FEMAP Foundation, El Paso; \$30,000.**

To help the Federación Mexicana de Asociaciones Privadas, a U.S.-based non-profit, create a transborder registry that provides comprehensive data on various diseases, such as asthma, and their relationship to environmental hazards.

**Texas A&M Health Science Center;**

**\$29,000.** To measure and reduce childhood exposure to pesticides in certain border colonias and to implement education projects aimed at reducing the risks.



# A New Chapter Begins

*Commissioner trades protocol for environmental regulation*

One of Buddy Garcia's roles as deputy secretary of state was to greet visiting dignitaries, even royalty. As Texas' No. 2 diplomat, he laid out the welcome mat for high-level officials arriving from England, Russia, Turkey, Panama, the Ukraine, and Saudi Arabia.

A year ago, he led a Texas trade delegation to Taiwan to explore economic development opportunities. Later in the year, he attended the inauguration of Mexican President Felipe Calderón.

Appointed by Gov. Rick Perry to serve as one of three policy-setting commissioners at the TCEQ, Garcia is now meeting with stakeholders, environmental groups, and subject matter experts on air quality, water quality and hazardous waste. Travel may not take him much farther than the agency's 16 regional offices around the state.

Admittedly, giving up the second-highest position at the Secretary of State's Office was difficult and even cost him some sleep. But Garcia, with his typical enthusiasm, says he welcomes the challenge of environmental protection and regulation and thinks he arrived at the TCEQ at the perfect time.

"In my life, I've never seen this much emphasis on environmental issues," he says. "Maybe that was long overdue, maybe there are plenty of problems that still need to be addressed. But this is an opportunity that has never been afforded to us before. We need to pursue all possible options to deal with the issues the world faces in regard to the environment."

Garcia is no stranger to the environment, particularly concerns associated with the U.S.-Mexico border. During 17 years at the state Capitol, he wore many hats. As a legislative aide, he worked closely with the Senate Natural Resources Committee and advised his boss, Sen. Eddie Lucio Jr. of Brownsville, on such matters. He eventually advanced to higher positions that would engage him in border commerce and environmental matters. At one point, Garcia participated in negotiations over a treaty dispute concerning Mexico's overdue water payments to the United States.

That professional background, combined with a boyhood love of the outdoors, gives Garcia what he views as a solid foundation for helping to set environmental policy for the state.

"My work has taught me that the environment knows no borders and we all need to work through these issues together," he says. "We are now presented with tremendous opportunities for change, such as investing in cleaner technologies. I find that the way you work with problems is to highlight the positives, and that gets things moving."

The 39-year-old brings a high level of energy to the Commission, as he has to all prior jobs, even waiting tables to pay college bills. Every summer, he could be found working at restaurants on South Padre Island and, during his off hours, hitting the waves as an avid surfer.

"I have loved all my jobs, and restaurant work was excellent career preparation," he recalls. "You had to be prepared, think on your feet, and solve problems quickly."

## In Brief

### H. S. Buddy Garcia

#### Education

Southwest Texas State University,  
BA in political science, May 1990

#### Career

State Sen. Eddie Lucio Jr., 1991-1999

Legislative aide

Committee clerk for the Senate

Subcommittee on Agriculture

Committee director and policy advisor

Chief legislative director

Lt. Gov. Rick Perry, 1999-2000

Special assistant and policy advisor

Gov. Rick Perry, 2000-2004

Special assistant for Texas-Mexico

border affairs

Senate liaison

Secretary of State, 2004-2007

Border Commerce Coordinator

Deputy Secretary of State

***“My work has taught me that the environment knows no borders and we all need to work through these issues together.”***

Growing up in Brownsville and making frequent forays to South Padre Island and the Laguna Madre also gave him exposure to the outdoors, which he loved so much that he considered becoming a game warden.

A lifelong athlete, Garcia is passing along his love of sports and the outdoors to his sons, ages 5 and 3. He and wife Meredith have been married since 1999. They met while both were working at the Capitol.

It was at the Capitol that Garcia obtained an entry-level job—working as an assistant sergeant-at-arms in the House of Representatives—after graduating from Southwest Texas State University (now Texas State University-San Marcos). Occasionally, he would stop by the office of his hometown senator, whom he had known as a student at Brownsville’s St. Joseph Academy, where Lucio’s daughter also attended.

At Garcia’s confirmation hearing before the Senate Nominations Committee, Lucio said he remembers the young man shyly inquiring about employment prospects in the early 1990s.

“When Buddy asked for a job, I quickly said ‘yes’ because I wanted to see what he was made of,” Lucio told fellow senators. “He quickly proved himself as hardworking and loyal. He’ll tackle any issue that you put before him.”

During more than nine years in the senator’s office, Garcia rose from legislative aide to chief legislative director. In 1999, then-Lt. Gov. Perry tapped him to be a special assistant assigned to issues related to South Texas, the Gulf

Coast, and the environment. Within a year, Garcia had moved to the Governor’s Office to serve as a liaison to the Senate, then as deputy legislative director.

In November 2004, Garcia was named deputy secretary of state, which placed him in the role of protocol officer as well as elections administrator. He also held the position of border commerce coordinator, working on trade matters with Mexico and Canada and on transportation and border-crossing issues, water and wastewater concerns, and electric sales from Texas to Mexico.

His ascent in state government occurred so rapidly that Garcia says he is amazed at his good fortune and how quickly the years have passed. He attributes his long list of achievements to

his upbringing. “Every day, I think about the people who raised me. That’s why I have the values I do, coming from a South Texas Catholic upbringing and having many friends. I’d even like to go back to live in Brownsville some day and have my kids go to the same schools that I attended.”

Garcia says he wants to repay the state for the success he has enjoyed: “As we pass through these positions, we need to ask ourselves: What will we do to distinguish ourselves? What will we have left for those who come along after us?”

Appointed to a term that extends through August 2011, Garcia says his goal is to leave behind a stronger, healthier environment for those who follow him. ✨



Family photo

**A popular vacation destination for the Garcia family is South Padre Island. Garcia and wife Meredith are joined on the beach by sons Reid, left, and Clark.**

# Do Your Part for Conserv

## *Discover that it pays to Take Care of Texas*

**W**ith so many programs addressing environmental concerns such as air quality, water quality, and waste disposal, the individual Texan might wonder: “What can I do?”

“A person might think there isn’t much he or she can do on a small scale to improve the environment, but the fact is there’s a lot that everyone can do,” says TCEQ Chairman Kathleen Hartnett White. “When more and more individuals become involved, pretty soon you’ve got a community-wide effort to save energy and minimize pollution.”

After all, Texas is a big state with lots of demands on its natural resources. The population is booming and many parts of the economy are rapidly expanding. All this growth generates more environmental challenges.

The TCEQ has a number of regulation and technical assistance programs that deal with municipalities, industry, and businesses. Agency rules are designed to ensure conformance with state and federal environmental laws.

But when it comes to families and individuals doing their part for the environment, “it’s mostly voluntary, a matter of personal responsibility,” says Commissioner Larry R. Soward.

White, Soward, and Commissioner H.S. Buddy Garcia are spearheading the TCEQ’s new campaign, Take Care of Texas, which calls on Texans to make a personal commitment to preserve the state’s diverse natural resources.

“Take Care of Texas will ask all Texans to take some simple steps that go a long way toward improving air and water quality, conserving water and energy, and keeping the state clean,” says Soward.

Most of these beneficial steps involve basic, routine activities. “Our recommendations touch on everyday decisions that we make at home, in the car, or out in the garden,” says Garcia. “Turning just a few old habits into new ones will not only save on household expenses but also reduce demands on the environment.”

Take Care of Texas recommendations range from small decisions, such as choosing light bulbs, to bigger ones, like selecting kitchen appliances.

Consumers may recognize the Energy Star label, which is a designation for household appliances that meet the efficiency guidelines established by the Environmental Protection

Agency and the Department of Energy. A refrigerator model with the Energy Star label will have high-efficiency compressors, improved insulation, and more precise temperature and defrost mechanisms.

These energy efficiencies not only help the household budget by lowering electricity consumption, they also reduce demands on the local power generator. Producing electricity is a major source of air emissions.

*Here are 25 suggestions for taking care of Texas.*



### **Around the House**

#### **Lights Out**

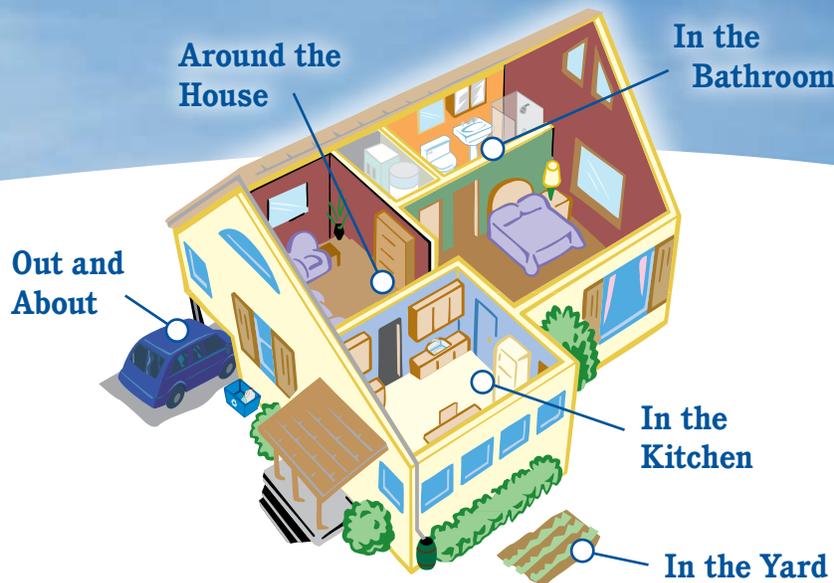
Turn off the lights when not needed to reduce energy consumption and

help reduce air emissions. Not using four 60-watt incandescent light bulbs for two hours a day saves about \$15 a year.

#### **Choose Compact Fluorescent Lights**

Compact fluorescent light bulbs use 67 percent less energy than incandescent bulbs and last up to 10 times longer—an average 6,000 hours per bulb.

# ation



### Adjust the Thermostat

To reduce cooling and heating costs, install a programmable air-conditioning thermostat, or adjust the thermostat for nighttime or for when no one is at home. In the summer, set the thermostat at 78 degrees or higher; in winter, at 68 degrees or lower.

### Weatherize

Using proper insulation and sealing off air leaks will help maintain a comfortable indoor temperature, while reducing energy consumption and saving money.

### Upgrade the AC and Heating Systems

Cooling and heating account for about 45 percent of annual home energy expenses in Texas. A properly sized Energy Star cooling and heating system will reduce home energy consumption and help improve air quality.



### In the Kitchen

#### Remember to Recycle

On average, each Texan generates about 7 pounds of garbage

every day. Recycling paper, metal, plastic, and other materials will

reduce waste, conserve energy, and preserve natural resources.

### Collect Food Scraps, Oil, and Grease

A clogged drain is a real nuisance. Clogged sewer lines can cause overflows that pollute nearby creeks and streams. Use strainers to catch food scraps, and collect cooking grease in a container. This will keep fats, oils, and grease from clogging the home's drain pipes or the city's sewer line.

### Cook Efficiently

Help reduce energy consumption by making sure that pots and pans are not smaller in diameter than the stove's burners. A 6-inch pot on an 8-inch burner wastes more than 40 percent of the burner's heat, as well as the energy required to produce that heat.

### Adjust the Fridge

Of all household appliances, refrigerators consume the most electricity, about 9 percent of an average home's energy consumption. To save money and energy, and improve air quality, set the refrigerator thermostat between 37 and 40 degrees. When buying a new refrigerator, consider an energy-efficient Energy Star model.

### Trade Up to Energy Star Appliances

Installing a more efficient dishwasher will reduce both water and energy consumption in any home. For example, an Energy Star dishwasher is about 25 percent more efficient than a conventional dishwasher, saving about 800 gallons of water per year.



### In the Bathroom

#### Find and Repair Leaks

A dripping faucet losing one drop per second wastes up to 1,660 gallons of water a year. If all households fixed just one leaky faucet, statewide water consumption would fall by 13 billion gallons a year.

### Install Low-Flow Showerheads and Faucet Aerators

The shower is the home's largest user of hot water, accounting for 37 percent of use. Installing a low-flow showerhead will lower water consumption by as much as 60 percent. Also, bathroom sink faucets account for more than 15 percent of indoor water use; installing aerators will halve the flow from each faucet.

### **Wash Full Loads, with Cold Water**

Washing full loads, as opposed to partial loads, of laundry can save an average household more than 3,400 gallons of water each year. Using cold water for laundry instead of hot or warm water can save more than \$30 annually.

### **Turn Down the Water Heater Thermostat**

The water heater represents the home's third largest energy expense. For maximum efficiency, choose an Energy Star water heater and set the thermostat to 120 degrees. Wrapping the tank with an insulating jacket will also reduce heat loss.

### **Invest in a Low-Flow Toilet**

Toilets are the main source of home water use—representing about 30 percent of residential indoor water consumption. Replacing an older toilet with a high-efficiency toilet that uses only 1.3 gallons of water per flush saves 4,000 gallons a year.



### **In the Yard**

#### **Choose Native Plants**

Plants that are native to Texas

typically require less watering, pesticides, fertilizers, and maintenance—saving the gardener time and money. The deep root systems of many native plants also increase the soil's capacity to store water and reduce runoff.

### **Compost Often**

Yard trimmings make up 20 percent of household waste. Instead of throwing them out with the garbage, recycle leaves and grass clippings by composting. Compost serves as a soil conditioner, which not only improves the garden but reduces water use.

### **Try an Electric Lawn Mower**

A gas-powered lawn mower emits 11 times more air pollution than a new car. Forty million lawn mowers in the U.S. consume 200 million gallons of gasoline a year.

### **Collect Rainwater**

Rainwater is a natural for watering the lawn, shrubs, and trees. Collecting rainwater for outdoor use during the peak summer months could save 1,300 gallons.

### **Landscape with a Strategy**

Planting deciduous trees on the south and west sides of the home and around the air conditioner will save energy by keeping the house shady and cool in the summer, while allowing in sunlight during the winter.



### **Out and About**

#### **Maintain the Car or Truck**

Proper maintenance of a vehicle—such as changing the oil, checking tire pressure, and replacing filters—will reduce emissions

and improve gas mileage up to 5 percent, which can save up to 35 cents per gallon of fuel.

### **Recycle Used Motor Oil**

When changing oil or other vehicle fluids at home, be sure to recycle the used fluids. And never pour used motor oil down a storm drain, because all drains ultimately lead to a stream, creek, or river. The used oil from one oil change could contaminate 1 million gallons of fresh water. Visit [www.cleanup.org](http://www.cleanup.org) to locate a local recycling center.

### **Drive Less**

Carpooling is another practice that reduces vehicle emissions, as does using public transit or combining errands. By ride-sharing every day, commuters can save up to \$3,000 a year on gas, insurance, parking, and wear and tear on their cars.

### **Heed the Speed**

Slowing down and avoiding aggressive driving improves fuel economy by 5 percent in town or up to 33 percent on the highway. Staying within the speed limit also helps to reduce vehicular emissions.

### **Buy a Cleaner Vehicle**

When shopping for a vehicle, consider one with a high fuel-economy rating. A fuel-efficient vehicle will reduce emissions and reduce fuel costs. In some areas, the TCEQ offers assistance for individuals who need to repair or replace older, polluting vehicles. ♻️

# Gaining Traction on Scrap Tires

## U.S. and Mexico work on disposal options

**W**aste tires have a direct bearing on health and safety issues along the border. Tire dumps are known to harbor disease-bearing mosquitoes and rodents, helping to advance the spread of West Nile virus and dengue fever. If tire mounds catch fire, they can burn for weeks, even months, causing serious air quality problems from dense smoke and noxious fumes. These fires generate large amounts of liquid waste that can contaminate the soil, as well as ground and surface waters.

The Border 2012 program has helped communities on both sides of the U.S.-Mexico border analyze environmental problems, such as waste tires, and evaluate potential solutions.

Millions of tires have been identified in massive landfills just south of the border from Texas to California. The largest accumulations near Texas are in Juárez, with an estimated 4 million tires; Matamoros, with 600,000; and Reynosa, with 300,000, according to EPA's current inventory.

Border 2012 has coordinated a campaign to clear out the largest stockpiles. In 2004, both countries began concerted clean-up efforts, with special focus on Juárez, Piedras Negras, Mexicali, and Tijuana. These joint endeavors, which involved local governments and the private sector, have properly disposed of almost 3 million scrap tires, EPA reports.

### Surplus Tires Accumulate

Disposing of scrap tires is not just a border problem. Hundreds of millions of surplus tires have piled up in communities throughout the U.S. and Mexico. Texas has had its own problems with stockpiles that amassed in a number of locations, though a state-funded effort has made substantial inroads. Since 2004, the volume of stockpiled scrap-tire material at previously

registered scrap-tire storage sites has been cut in half, down by about 19 million, according to the TCEQ. One of the main uses for scrap tires has been as "tire-derived" fuel, primarily in cement plants and paper mills.



The border region, however, has had particular difficulty in finding ways to dispose of scrap tires. In many areas, the markets for tire reuse are far from the border, making transportation costs prohibitive. Also, many tires discarded in the U.S. are still considered usable in Mexico. That is why large numbers of used tires end up south of the border, only to be used for a relatively short time and then abandoned.

In recent years, however, the opening of cement plants near the border has helped create a demand for tire-derived fuel. Cement kilns, when burning at high heat and using pollution controls, do not compromise air quality.

*continued on page 13*

## Spotlight on the Border *continued from page 3*

So far, the city has succeeded in collecting large volumes of waste, with about 70 percent coming from households and the remainder from businesses. For example, about 15,000 gallons of used oil and 31,600 pounds of filters were collected from July 2005 to March 2007. Residents and business owners also deposited used batteries, expired medicines, empty acid containers, paint waste, and photo developing chemicals.

Before the collection centers were open, according to Pantoja, much of the unwanted materials were dumped.

"This was an important first step that we took," Pantoja said through a Spanish-to-English interpreter. "We know that we need to invest more and more in the environment. Many of the city administrators have put their hands on their hearts and said, 'We have the responsibility to take care of this.'" 🌱



# Celebrating Excellence

## *Environmental awards recognize notable achievements*



The TCEQ has presented the 2007 Texas Environmental Excellence Awards. Twelve awards in a variety of categories were issued to environmental projects that have achieved superior results. Winners were honored at the agency's Environmental Trade Fair and Conference in May.

This year saw the creation of a new standing award, the Gregg A. Cooke Memorial Award for Exceptional Environmental Excellence, in honor of the former Region 6 director of the Environmental Protection Agency (EPA).

Cooke, who died last year at age 51, was known for his uncanny ability to address environmental challenges in a creative, yet practical way.

While leading the EPA regional office in Dallas from 1998 to 2003, he developed programs that not only were successful in Texas but became national models. After leaving EPA, he applied his knowledge and negotiating skills as an attorney and consultant, still active in the environmental field.

TCEQ commissioners said Cooke's exceptional dedication and tireless efforts on behalf of the environment led them to create a permanent award in his memory.

### ■ Individual ■ Cooke Memorial Award Sarah Metzger, Pasadena

Sarah Metzger, an engineering coordinator for the city of Pasadena, works tirelessly to promote environmental stewardship. Her passion is educating others, especially school children, about the coastal environment.

Metzger guides field trips and gives presentations on the importance of preserving the ecosystem. She also trains high school students to teach younger children about the environment. In 2006, she organized Pasadena's first environmental fair.

Metzger began an Adopt-a-Waterway program to give residents a sense of ownership as they work to improve water quality, and she wrote a pollution-prevention handbook for builders in the Galveston Bay area.

### ■ Individual Rick Norwood, Austin

When Rick Norwood, a retired programmer, began volunteering for the Nature Conservancy, he became involved in a joint database development project between the Conservancy and Fort Hood. The Army installation near Killeen collects monitoring data on endangered songbirds.

Norwood devoted hundreds of hours to analyzing individual databases to develop one all-encompassing

program called the Fort Hood Avian Management System. Using the same framework, he also developed another management database that organizes native-plant nursery information used by the Conservancy.

Today, significant populations of the endangered black-capped vireo and golden-cheeked warbler can be found at Fort Hood. Monitoring, management, and research have played a substantial role in the recovery of both species.

## ■ Agriculture

### Texas Agricultural Experiment Station, El Paso

The El Paso Research and Extension Center of Texas A&M's Texas Agricultural Experiment Station has advanced water quality monitoring by using lab analysis to pinpoint whether agricultural activities, wildlife, or people are responsible for particular bacteria found in specific watersheds. Using state-of-the-art DNA fingerprinting and antibiotic-resistance typing methods for *E. coli* bacteria, researchers have identified the bacterial sources affecting a number of water bodies, including those in the watersheds of Lake Waco, Belton Lake, Upper and Lower San Antonio River, Salado Creek, Leon River, and Peach Creek.

Lab results showed wildlife to be the leading source of *E. coli* in these samples, with cattle ranking second and human sewage third. Resource managers can now outline specific pollution-control strategies to reduce fecal pollution and ensure safe sources of drinking water.

The project also represents the first step in developing a statewide genetic library of *E. coli* bacteria associated with known sources.

## ■ Civic/Nonprofit

### Keep El Paso Beautiful

When the Keep El Paso Beautiful organization promoted its citywide beautification program, staff discovered that many residents who wanted to participate did not have the necessary implements.

In response, the program set up community tool shed "lending libraries" at fire stations across the city. The sheds, which are open to the public and operate on a check-out system, are stocked with shovels, brooms, bags, gloves, gardening tools, push mowers, and dry/wet vacuums. The city's Environmental Services Department offers free removal of debris for any project with more than 20 volunteers.

El Paso estimates that each shed contributes to the annual removal of 10 tons of trash and illegally dumped debris.

## ■ Education

### Victoria Independent School District

Educators agree that students learn better from hands-on experience. The Wetland Environmental Science Education Encounter (WE SEE) has made this kind of learning possible for thousands of students through a partnership between Victoria ISD and the local Invista manufacturing site.

WE SEE has a state-of-the-art education center in a 53-acre wetland area. The center includes a partially enclosed education building where students collect water samples and encounter the wetland and its flora and fauna.

The organization helps teachers with curriculum on science, nature, and environmental stewardship, including hands-on investigations, that correlates with elements from state standardized

tests. Topics include soil dynamics, microbiology, water chemistry, zoology, and entomology.

## ■ Government

### San Antonio River Basin Monitoring Network Partnership

Leaders from local government, business, and the San Antonio community have joined forces to create an innovative network of six water quality monitoring stations. Called the San Antonio River Basin Monitoring Network, this endeavor helps to immediately detect events that could threaten water quality. Since the fall of 2005, the program has provided real-time water quality data to scientists, regulators, and the public.

Equipment at each site measures a number of water quality conditions. The stations transmit hourly readings, which are posted online by the TCEQ and the U.S. Geological Survey. When established trigger conditions are exceeded, automated e-mail messages notify staff at several agencies.

One of the monitoring stations is hosted by the Witte Museum. As a natural science museum with a permanent educational exhibit on water quality, the Witte allows school groups to experience water quality testing.

## ■ Innovative Technology

### Leak Surveys Inc., Early

As a municipal gas system operator, Dave Furry and his crew had no choice but to walk an entire pipeline system—up to 45 miles—when checking for leaks.

Furry realized that if a camera could "see" the invisible natural gas leaks, it would save time and money. Over 12 years, he developed the Hawk Leak Detection System. This monitoring

device uses a cryogenically cooled infrared camera that shows leaking gas in real time. With the camera mounted on a helicopter, workers fly about 500 feet above pipelines to find leaks. Inspections that used to take months now can be done in weeks.

Businesses can also use the Hawk System to detect leaks of volatile organic compounds (VOCs) and reduce harmful emissions. The TCEQ uses this technology in its field monitoring.

### ■ Large Business, Non-Technical

#### Atlas Copco Drilling Solutions Inc., Garland

Atlas Copco Drilling Solutions demonstrates its commitment to the environment by investing in both technology and people. The drilling equipment manufacturer spent almost \$1 million on more efficient lighting and air-conditioning systems, which reduced electrical use by 25 percent.

Atlas Copco also installed a motion-detection system to control warehouse lighting, saving 2.4 million kilowatt-hours in one year.

As a manufacturer, the company tests its drill bits on huge blocks of granite, which creates waste material. The company found an end use for the material with an organization that repurposes the scrap for road base. A mulch manufacturer also reuses Atlas Copco's wooden crates and wood pallets, and cardboard is recycled into other



paper products. By recycling materials, Atlas Copco reduced its solid waste disposal by 65 percent.

After starting its own environmental management system (EMS), Atlas Copco partnered with the Texas Manufacturing Assistance Center to take the lead in promoting EMS to suppliers.

### ■ Large Business, Technical

#### 3M Co., Brownwood

Every five years, 3M challenges each one of its facilities to meet performance goals for reducing emissions, material waste, and toxic and hazardous wastes, as well as for improving energy efficiency.

3M Brownwood developed strategies to successfully meet or exceed each of the targets. The team reduced VOC emissions by 45 percent and waste per pound of product by 25 percent, and increased energy efficiency per pound of product by 20 percent.

In addition, an incentive program rewards employees who develop systems that reduce pollution. Since 2001, Brownwood employees started more than 140 pollution prevention projects, more than in any other 3M facility worldwide.

### ■ Small Business

#### Dan Fette Builders Inc., Denton

Dan Fette Builders and the Denton Affordable Housing Corp. developed Nevada Court, a three-acre subdivision

in Denton, in keeping with the concept that home construction should minimally affect the environment.

The 14 homes, which are affordably priced, incorporate a broad range of energy conservation measures, ranging from light-colored shingles and radiant barrier sheathing to hydronic heating systems. The homes have a hot water on-demand system, low-flow toilets and showerheads, and xeriscaping. Capture systems and cisterns store up to 1,600 gallons of rainwater to accommodate each property's irrigation needs.

Environmental benefits include lower energy demand, reduced water usage, and the recycling of construction waste. The Denton Affordable Housing Corp. predicts residents will consume less than half the electricity, natural gas, and water typically used by households in conventionally built homes of similar size.

### ■ Education, Special Award

#### Center for Environmental Resource, El Paso

The Healthy Home Environments program, administered by the Center for Environmental Resource Management at the University of Texas-El Paso has helped thousands of low-income colonia residents in El Paso, Sunland Park, N.M., and Ciudad Juárez, Mexico. These unincorporated subdivisions typically have little or no infrastructure.

HHE field workers teach families lacking potable water and sewage services to disinfect water, make use of waterless toilets, appropriately dispose of solid waste, and use less-toxic alternatives for household cleaning and insect control. Through a network of

seven community-based organizations, field workers have trained 3,700 families and distributed more than 25,000 educational materials.

Recently, 200 residents and community volunteers removed more than 30 tons of trash in clean-up events.

## ■ Youth

### Gulf of Mexico Foundation's Science and Spanish Club Network, Corpus Christi

These after-school clubs, which focus on protecting the Gulf of Mexico, bridge

the language barrier by conducting environmental science lessons, projects, and field trips in both English and Spanish.

The efforts began in 1995 when a group of schoolchildren from Mexico participated in a program to study the Gulf of Mexico. A few years later, that same group returned to Corpus Christi and, along with students from a local middle school, learned more about the coast. To communicate, facilitators and students found it easier to speak in both

Spanish and English, which inspired the creation of the Science and Spanish Club Network.

The network has expanded to other communities—from El Campo to Brownsville in Texas, and from Matamoros to Tampico in Mexico. Each club averages 15 to 25 members, who receive bilingual, science-based information about the Gulf and regional ecology. Club members participate in beach cleanups and explore their watershed through field trips. 🌿

## Gaining Traction on Scrap Tires *continued from page 9*

One such plant in Juárez took in 682,000 tires last year, helping to reduce a portion of that city's stockpile.

The sister cities of Eagle Pass and Piedras Negras, Coahuila, have worked out a joint plan to ship a significant number of their stockpiled tires to CEMEX, a Mexican manufacturer of cement and a supplier of ready-mix concrete. The company will use the tires as alternative fuel in its cement kilns in Monterrey.

Other border cities are trying different ways to address the problem.

In Brownsville, where the local landfill received 12,000 tires in 2006, the city operates equipment capable of shredding 1,200 tires an hour. The incoming tires are processed in this way and the shreds deposited in the landfill. The city has completed a pre-feasibility study on establishing a crumb rubber facility, which would grind the tires to small pieces and provide the rubber and steel to buyers. Brownsville officials are talking with their counterparts in Matamoros about a collaborative plan.

Laredo has several collection programs, such as the annual "Tire Round-up," which netted about 5,600 tires last year. Twice a year, the city also sponsors a household hazardous-waste collection, offering 50 cents per tire. This brought in about 2,200 scrap tires in 2006.

### Search for Solutions

Emily Pimentel, an EPA border program manager in California, said that while the U.S. began to address scrap tire problems in the 1990s, Mexico launched its broad-based efforts only in recent years.

Mexico's estimated stockpile of 1 billion to 2 billion tires places it "where the United States was 10 to 15 years ago," she says, noting that U.S. numbers have been reduced to between 250 million to 300 million.

Pimentel says that Mexico will likely benefit from the lessons learned on the U.S. side. For example, Border 2012 has provided information and technical assistance to SEMARNAT and the Mexican states. EPA has also helped with cleanups at several Mexican sites by funding demonstration projects, she adds.

She said that two sites in Mexicali, Baja California, which together held 1.6 million scrap tires, have been cleaned up, with the tires going to CEMEX plants in the Mexican states of Baja California and Sonora.

Meanwhile, local, state, and federal officials on both sides of the border continue to explore alternative uses for tires, such as in erosion control and as a component in paving and playground surfacing.

Border 2012 participants point out that new scrap tires, if not properly managed, will undoubtedly end up in stockpiles. That is why they emphasize the importance of finding cost-effective, productive solutions for dealing with tires as they are surplus.

With assistance from EPA, Mexico held a scrap-tire workshop in Monterrey last year. The United States and Mexico announced that they had signed the U.S.-Mexico Scrap Tire Integrated Management Initiative, in which both countries agree to encourage the development of markets for scrap tires, to clean up the largest tire piles along the border, and to increase educational outreach. 🌿

# Get to Know the TCEQ Regions

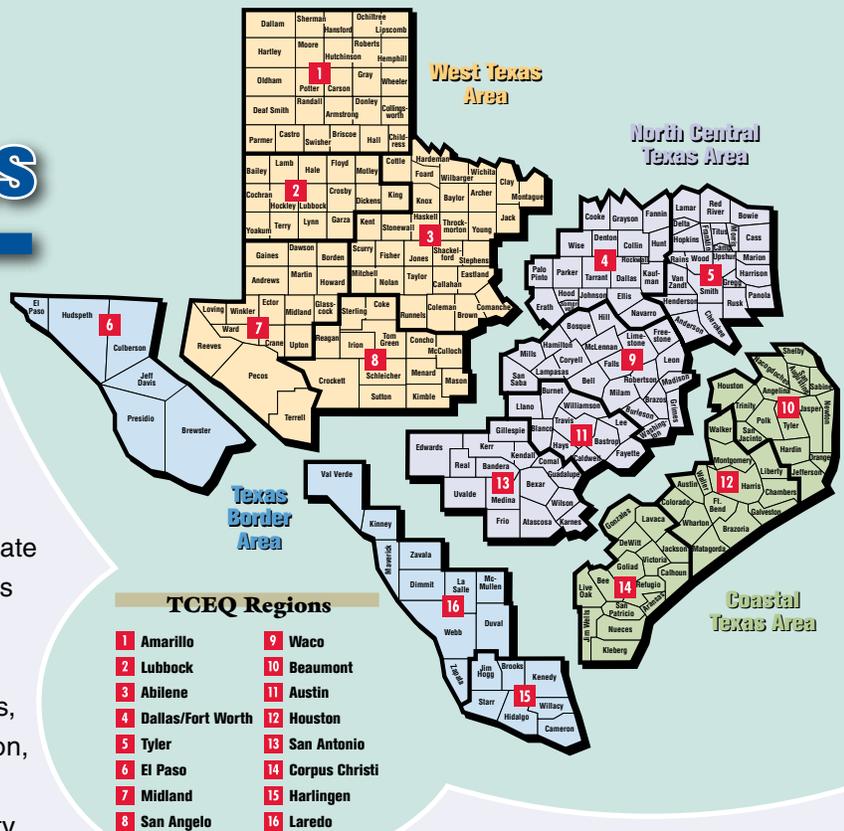
When Texans deal with a representative of the TCEQ, chances are it'll be an employee from one of the 16 regional offices. A field staff of about 770 work on the front lines of environmental enforcement, compliance, and technical assistance.

Employees in the regional offices are especially knowledgeable about their part of the state—from climate and geography to factors such as the leading industries and the status of water availability.

And while planning and oversight of agency programs take place at the agency's Austin headquarters, the regional offices handle much of the implementation, putting programs into action at the community level.

Field duties include monitoring air and water quality, investigating environmental complaints, conducting investigations at permitted and non-permitted facilities, and providing environmental education. The regional offices also offer technical assistance to small businesses and local governments.

To help the public identify the region in which they reside, the agency web site offers a quick reference: "Which TCEQ Region Is My County In?" at [www.tceq.state.tx.us/goto/region\\_county](http://www.tceq.state.tx.us/goto/region_county). The page lists all the



counties and their assigned regions, and it links to the agency's regional office directory.

Another handy tool is the TCEQ's 24-hour hotline for reporting an environmental complaint. Call toll-free 1-888-777-3186 to be routed to the nearest regional office or to leave a message after hours. Environmental complaints can also be submitted online at [www.tceq.state.tx.us/goto/report\\_complaint](http://www.tceq.state.tx.us/goto/report_complaint).

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