

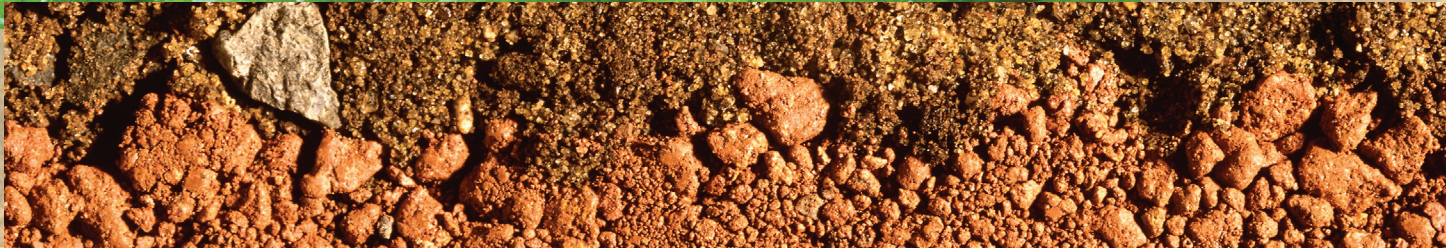
# Biennial Report

to the 82nd Legislature

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TEXAS  
COMMISSION ON  
ENVIRONMENTAL  
QUALITY



*Protecting Texas by Reducing and Preventing Pollution*







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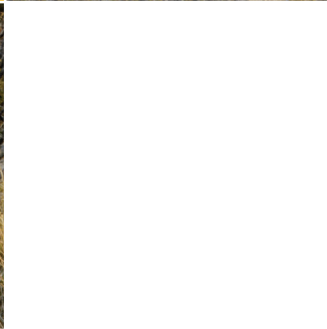
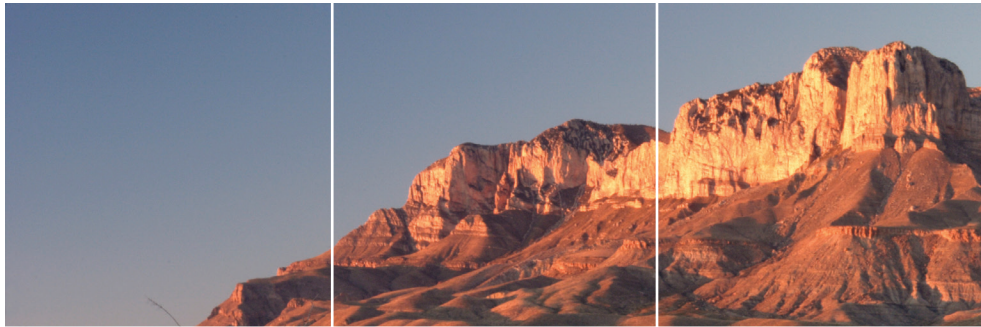
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# **Biennial Report** *to the 82nd Legislature*

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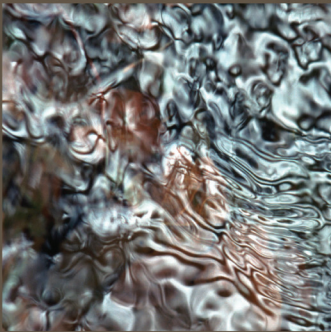


*Texas Commission on  
Environmental Quality*

# Agency Mission and Philosophy

## Mission

The Texas Commission on Environmental Quality strives to protect our state's human and natural resources consistent with sustainable economic development. Our goal is clean air, clean water, and the safe management of waste.



## Philosophy

To accomplish our mission, we

- Base decisions on the law, common sense, good science, and fiscal responsibility.
- Ensure that regulations are necessary, effective, and current.
- Apply regulations clearly and consistently.
- Ensure consistent, just, and timely enforcement when environmental laws are violated.
- Promote and foster voluntary compliance with environmental laws and provide flexibility in achieving environmental goals.
- Hire, develop, and retain a high-quality, diverse workforce.



# From the Commission



Texas is a great place to live and work, thanks to a wealth of natural resources that enhance our economy and provide an abundance of recreational opportunities. With projections showing the state's population to increase significantly in the coming decades, protecting these important natural resources, as well as protecting human health, can pose increasingly complex challenges for state leaders.

As this report demonstrates, addressing these challenges is a crucial job of the TCEQ. As one of the most comprehensive state environmental agencies in the nation, the TCEQ works with stakeholders, legislative resources, and the citizens of Texas to protect the state's environmental quality and the public health by ensuring clean air, clean water, and the safe management of waste.

Texas is a leader when it comes to protecting the environment, and has proven that growth is not incompatible with pollution prevention and reduction. Our desire for a healthy environment goes hand-in-hand with our expectation of a sound, vibrant economy—both of which we enjoy in Texas.

The state has been especially successful in reducing air pollution. For example, in the last eight years, ozone has been reduced by 22 percent across the state, and  $\text{NO}_x$ , a precursor to ozone formation, was reduced by 53 percent from 2000 to 2008. And although Texas has some of the most highly industrialized and populated areas in the nation, air quality in these and other areas of the state continues to improve and is comparable to or better than that of similar areas in other states.

New, more stringent federal air quality pollution standards, expected to take effect in fiscal 2011, also pose challenges by causing concern for areas of the state currently in attainment.

As an agency, we will meet the challenges that lie ahead. We will achieve our goals by continuing to incorporate the latest scientific methods and research with cutting-edge technology in order to strategically investigate, evaluate, and improve the environment. As Commissioners, we will continue to serve our beautiful state and continue to strive to make Texas a better place for all Texans!

A handwritten signature in white ink that reads "Bryan W. Shaw".

**Bryan W. Shaw, Ph.D.** | Chairman

A handwritten signature in white ink that reads "Buddy Garcia".

**Buddy Garcia** | Commissioner

A handwritten signature in white ink that reads "Carlos Rubinstein".

**Carlos Rubinstein** | Commissioner

# Protecting Texas by Reducing

## Report Status

Texas expect air that is safe to breathe, water that is free from contaminants, and a system of waste management that is efficient and well regulated.



The TCEQ's *Biennial Report to the Legislature* is published every December prior to a regular legislative session, as required by the Texas Water Code, Section 5.178. This submission to the 82nd Legislature contains other information and reports that are required by statute:

- Agency research efforts, page 31. This

information was last published in December 2008 in the *Biennial Report to the 81st Legislature* (SFR-057/08).

- Waste exchange results (RENEW), page 50. This information was last published in the *Biennial Report to the 81st Legislature*.
- Alternative-Fuel Fueling Facility Study,

page 54. This information is published for the first time.

- Assessment of complaints received, page 62. This report was last published in the *Biennial Report to the 81st Legislature*.
- Permit time-frame reduction process, page 70. This report was last published in the *Biennial Report to the 81st Legislature*.

Reports that were once issued as separate appendices to the *Biennial Report* are no longer required. Those covered the topics of used oil, pollution prevention, needs assessment for commercial management capacity of hazardous waste, and low-emission vehicles and alternative fuel use.



# and Preventing Pollution

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**A**s the state's lead environmental agency, the Texas Commission on Environmental Quality assumes the primary role in these areas.



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C H A P T E R 1

# Accomplishments and Innovations



*Pedernales Falls*

CHAPTER  
1

**T**exans are extremely proud of Texas. And they well should be. With a vigorous economy, a rich supply of natural resources, and a diverse population, the Lone Star State is worth bragging about.

Texans expect air that is safe to breathe, water that is free from contaminants, and a system of waste management that is efficient and well regulated. As the state’s lead environmental agency, the Texas Commission

on Environmental Quality assumes the primary role in these areas.

The TCEQ has created a wide range of initiatives, policies, and programs that help ensure the safety and purity of our state’s most fundamental natural resources. In doing so, the agency is recognized as an innovator and is often called upon to provide information on its programs to other states and other countries.

This chapter highlights some of the initiatives and projects undertaken by the TCEQ during the 2009 and 2010 fiscal years.

## **TCEQ Responds to Hurricane Ike, 2008**

Emergency management for TCEQ staff includes responding promptly to hurricane damage. As Hurricane Ike roared onto the Texas shoreline in September 2008, the TCEQ and other first re-

sponders were preparing to enter the devastated areas. In the aftermath, agency staff spent many weeks in the hardest-hit areas, evaluating environmental problems and helping to restore vital services.

On the evening of Sept. 12, as Hurricane Ike unleashed its fury on Galveston and nearby coastal communities, the TCEQ Emergency Response Strike Team—a select group of agency

personnel trained to deal with natural or man-made events that trigger an environmental crisis—packed supplies in preparation for storm duty. The 16 senior investigators assembled with hundreds of other state and federal responders at a former Air Force base in San Antonio, which served as the staging area for the state's unified response to one of the worst hurricanes to ever hit Texas.

The next morning, a convoy of 520 trucks and assorted vehicles left San Antonio and headed into what remained of the storm. The TCEQ Strike Team was assigned to the first quadrant of the convoy because the agency's mobile command post is a highly valued asset, having radio and satellite equipment capable of providing emergency communications to an area that has no other means of reaching the outside.

As the convoy made its way through flooded Houston and reached the causeway leading to Galveston Island, the landscape was littered with downed billboards and trees, random chunks of houses and buildings, and piles of beached boats.

Isolation and devastation awaited the Strike Team and their counterparts from the Texas Department of Public Safety, the Governor's Division of Emergency Management, the Environmental Protection Agency (EPA), and various military units. A 12-foot storm surge, combined with 110-mile-an-hour winds, had left a large number of the island's structures flooded or flattened.

With Galveston's streets under water, the TCEQ team operated for a few days out of the parking lot of Ball High School. At night, the pitch dark of

the evacuated city was punctuated by sporadic house fires. During the day, team members paired up with members of the EPA or the Texas National Guard's 6th Civil Support Team (CST) to conduct inspections across the area. Shortly after the hurricane passed, hundreds of additional TCEQ staff from TCEQ regional offices across the state joined the recovery effort.

In the wake of a major storm, the TCEQ has a number of major responsibilities. One of the first is to quickly ascertain whether hazardous chemicals have spilled from any industrial facilities or are leaking from containers or storage tanks swept from their original sites. These "orphan" containers are sometimes found miles from their home base. In fact, the Strike Team discovered a 12,000-gallon fuel tank in Galveston that had floated away from a small airport miles away.

Before approaching an orphan container, staff uses mobile monitors to test for leaking vapors. Once safety is assured, GPS coordinates are recorded for later pickup and proper disposal by a contractor.

Another primary duty is assessing the operational status of public drinking water facilities and wastewater treatment plants. After Ike, TCEQ staff in Austin and across the

state contacted hundreds of facilities to determine which ones had been left inoperable by the storm. Sites that could not be reached by phone were visited by TCEQ regional staff. The agency then assisted local operators in restoring service.

The TCEQ also tracks any boil water notices issued in communities where service has been interrupted or contaminants have been found in the water. Later, communities are notified when water becomes safe to use straight from the tap.

Storms can leave behind massive amounts of debris, so the TCEQ is also

### ***TCEQ Storm Duty***

The following is a summary of agency activities in the aftermath of Hurricane Ike in the 10-county area encompassing Houston, Galveston, and Beaumont.

- Contained and recovered more than 46,000 orphaned containers and tanks (5 gallons or more in size), with the assistance of TCEQ and EPA contractors.
- Assessed operational status and damage to almost 1,400 public water systems and over 700 wastewater treatment plants.
- Tracked over 1,200 boil water notices.
- Evaluated debris management at 175 temporary sites.
- Assessed damage at 13 refineries and 47 chemical facilities, all of which shut down operations before the storm.

In addition, the agency conducted air monitoring, sampled storm-surge residue and surface water, and evaluated potential emergencies resulting from oil and chemical releases. The agency's website was updated regularly with hurricane response and cleanup information.

responsible for providing authorizations for setting up temporary staging areas where the debris can be delivered and sorted. The Houston, Galveston, and Beaumont areas required 175 temporary sites. In order to help ensure FEMA reimbursement for local jurisdictions, it was the TCEQ's job to visit the sites regularly to assess whether debris was properly separated into trees and branches, material from damaged buildings, "white goods" like refrigerators and other appliances, and household hazardous waste.

### Agency Deals with Extended Drought, 2009

Large sections of the state experienced exceptional drought during 2009. These prolonged dry conditions put a strain on water supplies for all uses. During 2009, a total of 342 public water systems had placed water restrictions

on their customers; however, due to an increase in rainfall, this amount was reduced to 202 by the end of 2009.

The TCEQ took a number of actions to lessen the effects of the extended drought. Those included (1) curtailing temporary water use permits, (2) consulting with public water systems regarding specific needs and the implementation of drought contingency plans, (3) tracking the public drinking water systems with water use restrictions, and (4) tracking and managing water rights diversions of surface water.

The TCEQ also implemented a drought information hotline to answer questions from the public; expanded its Web pages to cover a wide range of drought-related topics; conducted weekly meetings for relevant agency programs to address concerns and provide updates, monitoring status, and forecasts; and targeted news releases in areas with curtailed water rights to

provide information and encourage conservation. It also participated with other state agencies on the Joint Information Council and Drought Preparedness Task Force.

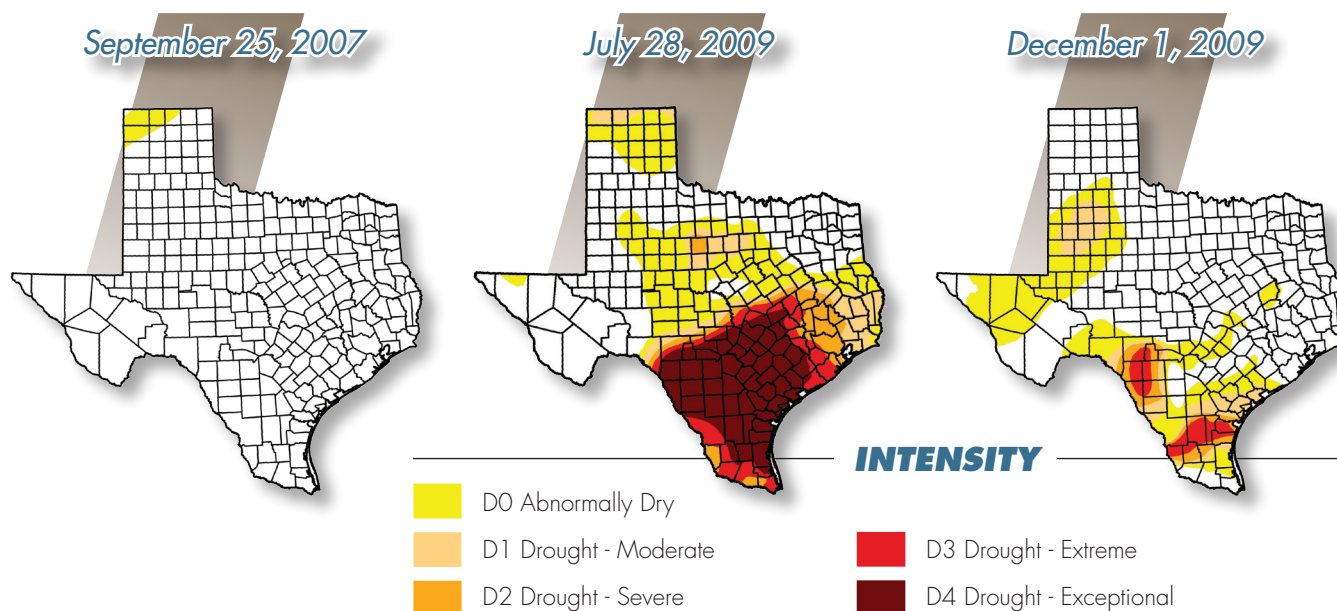
### TCEQ Joins in Border Flood Response, 2010

As torrential rains from Hurricane Alex and a tropical depression fell in South Texas and northern Mexico from late June through early July 2010, record flooding occurred along the Rio Grande. As the waters started to rise, the TCEQ responded quickly, performing essential duties to help control flooding and minimize damage to communities along the border.

As the liaison between the U.S. International Boundary and Water Commission (IBWC) and the Texas Division of Emergency Management, the TCEQ played an instrumental role in coordinating efforts to control the flooding.

## Rainfall and Drought Conditions

From September 2007 through December 2009





*Brown pelican, photo courtesy TPWD*

TCEQ staff acted as the “eyes and ears” of the IBWC by patrolling flood-gate levees saturated by the floodwater and notifying it of any cracks or other problems discovered along 160 miles of the Rio Grande from Falcon Dam downstream to Brownsville, and 270 miles of floodway levees in Hidalgo, Cameron, and Willacy counties. This allowed the IBWC to concentrate its efforts on immediately addressing any issues identified by the TCEQ. In addition, specialized teams of TCEQ employees conducted 75 water and wastewater inspections; three landfill inspections; and inspections of 2,799 lateral gate, levee, temporary pump, and other irrigation and flood-control features in the affected counties.

An unprecedented information flow from Mexican officials to Texas emergency management officials through the TCEQ and the IBWC, and the close coordination among all these response partners, will serve as a model for future disaster management efforts across border jurisdictions.

### **TCEQ’s Galveston Bay Estuary Program Receives Presidential Award**

In 2009, the TCEQ’s Galveston Bay Estuary Program, as part of the North Deer Island Protection Team, received the Coastal America Partnership Award, which is the only environmental award of its kind given by the president of the United States. It received this award for

its work protecting North Deer Island, the most important colonial waterbird rookery on the upper Texas coast.

The North Deer Island shoreline restoration project was a collaborative effort between federal, state, and local governments, as well as nongovernmental organizations and the private sector, to stabilize nearly two miles of shoreline that was once rapidly eroding. As a result of this effort, nesting and foraging sites for tens of thousands of waterbirds from 19 different species will be sustained for years to come. This restoration project was also instrumental in the brown pelican’s recovery in Galveston Bay.

The other members of the North Deer Island Protection Team are the Texas Parks and Wildlife Department, Audubon Texas, NRG Energy, the EPA’s Gulf of Mexico Program, EPA Region 6, the Houston Audubon Society, the Texas General Land Office, the U.S. Fish and Wildlife Service, and the Galveston Bay Foundation.

### **Permit Backlog Continues to Decline**

Since the inception of the Permit Time-Frame Reduction project in 2002, the TCEQ has made significant progress toward its goal of improving permitting efficiencies and reducing the backlog of permit applications. Most notably, the agency has reduced the overall backlog of uncontested permits—from 1,150 to 588—over the last eight years.

A backlog occurs when a permit exceeds its targeted “time frame,” the amount of time required to complete all the steps in processing the application.

Staff continues to build on this success through the Project Time-Frame Tracking Program. This initiative focuses not only on permits but also on nonpermitting functions such as reviews of water district bonds and water system plans and specifications.

For a full report, see Appendix B.

### **Office of Water Focuses on Water Quality and Quantity**

Texas is one of the fastest-growing states in the nation. And as the population climbs, the demand for water will increase. Ensuring a plentiful, clean water supply for the state’s growing population will be a major challenge for years to come.

To enhance the agency’s focus on the challenges facing Texas with respect to water quality and quantity, in late 2009 the TCEQ created the Office of Water, which brought together the divisions of Water Quality, Water Quality Planning, and Water Supply.

Consolidating the agency’s water monitoring, permitting, planning, and assessment functions into one office created one point of contact for questions regarding wastewater, groundwater, surface water, and water rights—thereby helping to give the agency one consistent voice in its communications with stakeholders and the public. Consolidation also maximized staff resources and knowledge by facilitating integrated solutions to the challenges facing Texas in the area of water resources.

The goals for the Office of Water include making balanced decisions based on sound science, proactively working with stakeholders to imple-



*Guadalupe River State Park, photo courtesy TxDOT*

ment programs, providing accurate and prompt communication, increasing the use of technology to help gain efficiencies, and working for the people of Texas on water issues.

### **World Bank Taps TCEQ for International Workshop**

The TCEQ was one of four water quality programs from around the world

invited by the World Bank in 2010 to speak at an international workshop in India. The workshop, “Global Experiences in River Clean-Up and Basin Management: Relevance for the Ganga,” brought experts from around the globe to New Delhi to share ideas and best practices with the country’s new National Ganga River Basin Authority, the organization formed to spearhead Ganga River conservation efforts.

The World Bank is helping to fund a variety of initiatives—including programs for infrastructure development, pollution control and conservation, and energy efficiency—designed to clean the Ganga (or Ganges) River. The massive river supports close to 400 million people in India alone.

L'Oreal Stepney, deputy director of the TCEQ's Office of Water, was one of those experts sponsored by the World Bank to speak at the workshop. There was also a representative from the San Antonio River Authority.

In addition to featuring the successes of the Texas Clean Rivers Program—which fosters partnerships among local and regional agencies (primarily river authorities, municipal water authorities, and councils of governments) for water quality monitoring and assessment and public outreach—Stepney's presentation discussed different techniques used by the TCEQ to improve water quality across the state, how technology is used to communicate and share information with stakeholders, and how the agency assures integrity and accountability in the regulatory process.

Workshop attendees included scientists, government officials, community leaders, and

academics, as well as World Bank representatives. The event included panel discussions and served as an opportunity for participants to share lessons learned and to gain potential new strategies for managing water resources. Attendees were especially interested in how the TCEQ develops partnerships and engages stakeholders in the decision-making process.

### TCEQ's Border Initiative Addresses Environmental Concerns

Texas shares a border with Mexico that stretches for 1,254 miles, from El Paso to Brownsville. The people living in communities on both sides of the Rio Grande have a long history of strong economic, cultural, and social ties that

unite the United States and Mexico in an enduring bond.

Texans have something else in common with their neighbors south of the border—a history of shared environmental concerns.

To address these concerns, in 2008 the TCEQ developed a comprehensive, cooperative effort to serve border residents. The goals and objectives of the TCEQ's Border Initiative are outlined in an action plan, which addresses air, water, waste, and other environmental concerns, such as emergency response.

The TCEQ has 83 full-time employees in Harlingen, Laredo, El Paso, and Austin working to ensure that efforts along the U.S.–Mexico border have a measurable environmental benefit to the region.



Because many environmental issues along the border are transboundary in nature, the TCEQ works with other U.S. and Mexican states, federal agencies in both countries, and binational organizations to accomplish mutual environmental protection goals.

Although these partnerships take different forms, many of the binational activities are pursued under the umbrella of the U.S.–Mexico Border 2012 Environmental Program, which was launched in 2003. The TCEQ is active at every level of this program—taking a broad perspective of borderwide concerns and “microviews” regarding issues specific to Texas and its four Mexican neighboring states of Tamaulipas, Nuevo León, Coahuila, and Chihuahua. Staff interacts with officials from the border cities in

those four states, with its counterpart agencies at the state level, and with the Mexican federal government.

The TCEQ has developed a particularly strong relationship with the state environmental agency of Nuevo León, promoting technical exchange and mutually beneficial cooperative work. In May of 2010, the TCEQ renewed its partnership with its counterpart in Nuevo León by signing a memorandum of cooperation between the two state agencies. Commissioner Buddy Garcia and Secretary Fernando Gutiérrez Moreno, of Nuevo León’s Ministry of Sustainable Development, signed the memorandum during the TCEQ’s annual Environmental Trade Fair and Conference. Later that month, Nuevo León Gov. Rodrigo Medina de la Cruz, who was in Austin

to meet with Gov. Rick Perry, met with Commissioner Garcia to discuss environmental issues and implementation of the newly signed memorandum.

As part of the Border Governors Conference, the TCEQ sits on the environment and water worktables with members of the nine other U.S. and Mexico border states. Commissioner Garcia represents the TCEQ on the Environment Worktable, and Commissioner Carlos Rubinstein represents the TCEQ on the Water Worktable.

Through these types of collaborative partnerships, the agency has accomplished a major goal of the Border Initiative, which is to increase cooperation and the exchange of knowledge, experience, and technology related to the environment along the border.

## TCEQ Border Initiative

Since its creation in 2008, the TCEQ’s Border Initiative has realized many successes. Here are just a few of the accomplishments for 2009 and 2010. For more accomplishments, visit [www.tceq.state.tx.us/goto/border](http://www.tceq.state.tx.us/goto/border).

- **Binational air quality monitoring.** The TCEQ was instrumental in ensuring that data reporting from air monitors in Ciudad Juárez continued after management of the monitors was transferred from the City of El Paso to the Ciudad Juárez Ecology Department.
- **Construction of water quality wetlands in the Texas Lower Rio Grande Valley.** The TCEQ Office of Water worked closely with the cities of La Feria, San Juan, and San Benito in

the Lower Rio Grande Valley to design and construct wetlands to manage storm water runoff and improve the water quality of area arroyos.

- **Deployment of continuous water quality monitors.** Five additional real-time surface water quality monitors were deployed in Texas along the Rio Grande to measure the upstream and downstream inflows. In June 2010, however, flooding from Hurricane Alex damaged or destroyed the five monitors. While these monitors were not operational at the end of fiscal 2010, the TCEQ plans to redeploy the sites.
- **Scrap tire management.** The TCEQ partnered with EPA Region 6 and the environmental agency for the state of

Nuevo León to conduct a binational workshop on municipal scrap tire management. In attendance were officials from the Mexican federal environmental agency, the acting deputy regional administrator for EPA Region 6, leaders of scrap tire programs from New Mexico and Texas, academics from both sides of the border, and representatives from six Texas cities and counties and seven Mexican cities.

- **Technical exchanges with Nuevo León.** In 2009, the TCEQ organized several technical exchanges and training events with its counterpart agency in Nuevo León. The two agencies worked together on environmental law enforcement and air quality issues,



## Access to TCEQ Information Expands

From its inception, the TCEQ has recognized that information systems are vital to its ability to accomplish its mission. The expansion of technology and online government offers greater efficiencies to companies, municipalities, and individuals conducting business with the agency. Toward this end, the TCEQ implemented a number of technological advances to internal and external applications and services in fiscal years 2009 and 2010. Following are samples of what was accomplished:

### ePermits

This automated system allows for not only the online submittal of applica-

tions, but also the issuance of authorizations and permits. The estimated time for filling out a form, paying the application fee, and printing the permit authorization is less than 30 minutes. A new feature added in 2009 makes it easier for the agency to add more applications. Permits for Concentrated Animal Feeding Operations were added in fiscal 2009, and an oil and gas permit by rule is expected to be available to the public by early 2011.

### ePay

This online payment system uses <[www.texas.gov](http://www.texas.gov)> to provide a secure environment for financial transactions. Users may pay a variety of fees and assessments with a credit card or electron-

ic check. The security of these transactions was further improved in fiscal 2010 when the processing of payment data was integrated entirely within the [texas.gov](http://texas.gov) infrastructure. Since becoming available in 2004, the system has handled about \$20.3 million in revenue associated with TCEQ fees and assessments, and has processed an average of 1,750 transactions per month.

### eLicense Renewal

With this service, renewing TCEQ individual occupational licenses and company registrations is easily accomplished online through [texas.gov](http://texas.gov) at <[www.tceq.state.tx.us/goto/renew](http://www.tceq.state.tx.us/goto/renew)>. Since its initiation in April 2006, to 2010, the portion of applications

# Accomplishments

including visible-emissions quantification, monitoring for particulate matter smaller than 2.5 microns, and calculating on-road vehicle emission inventories.

- **Dos Laredos Binational Emergency Preparedness Workshop and Exercise.** TCEQ personnel collaborated with 45 emergency response officials from local, state, and federal agencies from both countries in a knowledge-exchange workshop. The workshop included courses on the Incident Command System and a special exercise designed to enhance the ability of first responders at the local and state levels to respond to a hazardous-materials incident.
- **Clean School Bus grants.** The Texas Clean School Bus program awards

grants to Texas school districts and charter schools for the purchase and installation of technology to reduce diesel emissions and onboard exposure of schoolchildren and bus drivers to the emissions. During fiscal years 2009 and 2010, the program awarded more than \$1 million to improve onboard air quality for 389 buses in 17 border school districts. The majority of these funds came from the EPA.

- **Reintroduction of the Rio Grande silvery minnow.** The Rio Grande silvery minnow had disappeared from the river below El Paso. The TCEQ is a member of a stakeholder group chaired by the U.S. Fish and Wildlife Service to reintroduce the silvery minnow as an ex-

perimental, non-essential population in the Rio Grande. In 2008, 445,000 silvery minnow were reintroduced in the Big Bend reach of the Rio Grande, and another 509,000 the following year.

- **Participation on the Good Neighbor Environmental Board (GNEB).** A TCEQ staff person who represents the State of Texas on the GNEB worked to ensure the production of a transboundary air quality case study for the 13th annual GNEB report, *A Blueprint for Action on the U.S.–Mexico Border*. The report was released in Washington in June 2010, and was accepted on behalf of the president by Nancy Sutley, the chair of the Council on Environmental Quality.

renewed annually online increased from 6 to 81 percent.

Fiscal Year	Percentage of applications renewed online
2006	6%
2007	35%
2008	75%
2009	78%
2010	81%

### eReporting

The agency has been a leader in implementing electronic reporting of data from the regulated community for many years. Online reporting services allow regulated entities to electronically fulfill reporting requirements related to air emissions and maintenance events, industrial and hazardous waste, self-certification of underground petroleum storage tanks, annual air emissions inventory data, and laboratory test results from water samples. During fiscal 2009, NetDMR—a new online reporting system for wastewater Discharge Monitoring Reports (DMRs) for facilities covered under the Texas Pollutant Discharge Elimination System permit—came online. As of Sept. 17, 2010, 56 percent of those permittees eligible to use NetDMR had adopted its usage. Consequently, as of that date, a total of 49,472 records had been submitted using NetDMR.

### Public Website

In September 2009, the TCEQ website was migrated to a new content management system. The flexibility of the

new system allows for renovation of navigation and usability, as well as the continued process of making content accessible to visitors with disabilities.

Comments on proposed rules and pending permit applications can now be submitted through the website. The status of items pending before the Commission and any associated documents can be viewed on the website via the Commissioners' Integrated Database. In the future, the agency will introduce online viewing of comment letters, hearing requests, and public meeting requests made on pending permit applications.

### Central Registry

The agency integrated access to more of its permit information through its Central Registry system and added access points directly on the home page. Users can now access information about a permit stored in different databases through a single query.

### Geographic Information System Map Viewers

Online geographic information system (GIS) viewers allow TCEQ staff or the public to see what is going on environmentally or administratively at a particular location in Texas on a map. A GIS captures, stores, analyzes, and presents data that is linked to a geographic location. This data is stored as a collection of layers that can be linked together by a common locational component such as latitude and longitude, a postal ZIP code, census tract name, or road name. Data about a particular location on the earth's surface can be visualized in ways that reveal relation-

ships, patterns, and trends. Available GIS map viewers include air quality monitoring, water well reports, source water assessments, surface casings, dams, and water utilities.

### Computer-Based Testing

The TCEQ has engaged with 27 testing centers in Texas to provide computer-based testing (CBT) for the agency's occupational licensing examinations. Before CBT was available, either applicants had to travel to Austin or to a regional office, or agency personnel had to arrange for a remote testing site and travel there to administer the tests. Nine different types of occupational license tests are available through this service for customer service inspectors, landscape irrigators and technicians, municipal solid waste facility supervisors, wastewater treatment and collection system operators, and water treatment and distribution systems operators. CBT provides immediate exam-score results with options for e-mail notification.

### Data Exchanges with Other Units of Government

As a partner in the Environmental Protection Agency (EPA)–sponsored National Environmental Information Exchange Network, the TCEQ now shares environmental data efficiently and securely over the Internet through the Texas Integrated Data Exchange Node (TIDEN). Examples of information shared include Toxic Release Inventory (TRI) data in support of the Community Right-to-Know Act, hazardous waste generator data, and point source air emissions inventory data. The agency has also used TIDEN to exchange data

with county tax authorities in support of the Air Check Texas Drive a Clean Machine program, and there is a data interface with the Office of the Secretary of State to verify the identity of regulated entities that are registered corporations.

### Internal Systems

Upgrades designed to improve internal operations and agency services were implemented in the accounts receivable system and the water rights accounting and billing system. In addition, online systems now automate human resources, procurement, and financial management processes, greatly improving their efficiency.

### Agency Hosts International Toxicological Workshop

Toxicologists from as far away as the Netherlands and New Zealand travelled

to the TCEQ's headquarters in 2010 to attend "Beyond Science and Decisions: From Issue Identification to Dose-Response Assessment," an international workshop organized by the Alliance for Risk Assessment.

The workshop brought together representatives from academic, governmental, industrial, and nonprofit institutions to discuss a report, "Science and Decisions: Advancing Risk Assessment," which was published in 2008 by the National Academy of Sciences (NAS). The report is also known as the Silver Book, because of its silver cover.

Through a series of meetings and discussions led by panels of experts, attendees focused on biological and statistical issues related to dose-response assessment, which is the process used to determine the level at which a chemical will produce harmful health effects. Panelists discussed how

to determine safe levels of chemicals to prevent harmful health effects and how to apply the 2008 NAS recommendations to specific case studies.

The Toxicology Division helps the TCEQ evaluate the potential for chemicals to harm human health, interacts with stakeholders, drafts rules, and makes technical recommendations related to permitting, remediation, monitoring, and enforcement. Discussions such as the ones held in this workshop will ultimately result in research that will inform agencies that make regulatory decisions, including ones that do risk assessment.



*San Jacinto Monument,  
photo courtesy TxDOT*

CHAPTER 2 ●  
**Agency Activities**

CHAPTER  
**2**



*Texas border with Mexico along the Rio Grande*

The Texas Commission on Environmental Quality has a range of responsibilities as broad as the state itself, all keyed to various aspects of environmental protection.

This role of environmental oversight is conducted in the agency's Austin headquarters and in its 16 regional offices. Staff duties for some 2,900 employees cover a wide spectrum, from investigating an odor nuisance complaint in a

small Panhandle town to conducting fence-line air quality monitoring at a large petrochemical plant on the Gulf Coast. A typical workday will find employees conducting field investigations, evaluating permit applications, holding a pollution prevention seminar, and evaluating a Superfund site.

This chapter examines some of the major programs under way at the TCEQ to address the

agency's goals of protecting human health and the state's natural resources.

**Enforcement  
 Environmental  
 Compliance**

The TCEQ enforcement process begins when a violation is discovered during an inspection at the regulated entity's location, through a review of records at agency offices, or as a result of a complaint from the public that is subsequent-

ly verified as a violation. Enforcement actions may also be triggered after submission of citizen-collected evidence.

In a typical year, more than 100,000 investigations will be conducted statewide to assess compliance with environmental laws.

When environmental laws are violated, the agency has the authority in administrative cases to levy penalties up to the statutory maximum

per day, per violation. The statutory maximums range from \$500 to \$10,000. Civil judicial cases carry penalties of up to \$25,000 per day, per violation, in some programs.

In fiscal 2009, the TCEQ issued 1,756 administrative orders, which required payments of \$14.5 million in penalties and nearly \$6.4 million for Supplemental Environmental Projects, or SEPs (see next subsection).

In fiscal 2010, the TCEQ issued 1,640 administrative orders, which required payments of \$11.3 million in penalties and \$3.5 million for SEPs.

The TCEQ can also refer cases to the state Attorney General. In fiscal 2009, the AG’s office obtained 29 judicial orders in cases referred by the TCEQ or in which the TCEQ was a party. These orders

years, there has been a significant reduction in the number of cases considered backlogged. By the end of August 2010, only 61 cases were backlogged. Since the last biennium, there has been an 84 percent reduction in the number of cases backlogged.

Backlogged cases refer to administrative orders with pending initial settlement offers and where 180 days have passed since the most recent screening, or with proposed settlement offers, but have not been approved, and where 550 days have passed since the most recent screening.

While staff worked to reduce the backlog and process new cases, the average number of days from initiation of an enforcement action to completion (with an effective order) was 210 days.

stay in the agency, but instead go to general revenue.

An option under state law, however, gives violators a chance to direct some of the penalty dollars to local improvement projects. By negotiating an agreement to perform or support a Supplemental Environmental Project (SEP)—in return for an offset of the administrative penalty—the violator can do something beneficial for the community in which the environmental offense occurred. Such a project must reduce or prevent pollution, enhance the environment, or raise public awareness of environmental concerns.

In fiscal 2009, 282 enforcement cases concluded with violators directing a portion of their penalties—totaling more than \$6.3 million—to local

projects designed to improve air quality, water quality, or waste management. In fiscal 2010, there were 219 SEPs, for a total of almost \$3.6 million.

In both years, the number of participants was the highest since the SEP program began in 1991.

To increase participation, the agency has compiled a list of pre-approved SEPs, which consists of projects that have already received general approval from the Commission. The list includes nonprofits that sponsor activities such as cleaning up illegal dumpsites, providing first-time adequate water or sewer service for low-income families, retrofitting or replacing school buses with cleaner emission technologies, removing hazards from bays and beaches, and improving nesting conditions for colonial water birds. Many municipalities and governmental

## TCEQ Enforcement Orders

Fiscal Year	Number of Orders	Penalties Paid	Orders with SEPs	SEP Funds
2009	1,756	\$14.5 million	282	\$6.3 million
2010	1,640	\$11.3 million	219	\$3.6 million

resulted in \$11 million in civil penalties and another \$1.1 million for SEPs.

In fiscal 2010, the AG’s office obtained 27 judicial orders, which resulted in \$2.1 million in civil penalties and \$1.3 million directed to SEPs.

Other enforcement statistics can be found in the agency’s annual enforcement report, which is posted at <[www.tceq.state.tx.us/goto/enforcement](http://www.tceq.state.tx.us/goto/enforcement)>.

In response to stakeholder input, the TCEQ has made concerted efforts to continue to expedite the processing of enforcement cases. Over the last two

Orders that have been approved by the Commission and have become effective are on the agency’s website, as are pending orders that have not yet been presented to the commissioners.

### Supplemental Environmental Projects

When the TCEQ finds a violation of environmental laws, the agency and the regulated entity often enter into an administrative order, which regularly includes the assessment of a monetary penalty. The penalties collected do not

organizations are also listed with such projects as maintaining air quality networks and insulating homes for low-income households.

Regulated entities may draw up their own SEPs as long as the project is environmentally beneficial and the result of a settlement (not an activity already scheduled before the violation occurred). The SEP should go beyond what is already required by state and federal environmental laws, and it cannot be used to remediate the violation or any environmental harm caused by the violation, or to correct any illegal activity that led to the enforcement action.

### Compliance History

Since 2002, the agency has rated the compliance history of every owner or operator of a facility that is regulated under certain state environmental laws.

A uniform evaluation standard has been used to assign a rating to the 400,000 entities regulated by the TCEQ that are subject to the compliance history rules. The ratings take into consideration prior enforcement orders, court judgments, consent decrees, criminal convictions, and notices of violation, as well as investigation reports, notices, and disclosures submitted in accordance with the Texas Environmental, Health, and Safety Audit Privilege Act. Agency-approved Environmental Management Systems are also taken into account.

An entity’s classification comes into play when the agency considers matters regarding not only enforcement but also permit actions, the use of unannounced inspections, and participation in innovative programs.

Each September, regulated entities are classified or reclassified. (The ratings database can be found at <www11.tceq.state.tx.us/oce/ch>.) Ratings below 0.10 receive a classification of “high,” which means that those entities have an “above-average compliance record” with environmental regulations. Ratings from 0.10 to 45.00 merit “average,” for having “generally complied.” And ratings of 45.01 or more result in a “poor” classification, because these entities “performed below average.”

An “average by default” classification means there was no compliance information on that entity for the last five years.

those, 1,742 were classified as high- or significant-hazard.

While dam owners are ultimately responsible for the safety of the structures, the TCEQ’s Dam Safety Program has oversight of the construction, maintenance, and repair of dams.

In a May 2008 audit report, the State Auditor’s Office concluded that the TCEQ was not fulfilling its statutory mandate in dam safety—that it was failing to perform timely inspections of all high- and significant-hazard dams, or to ensure that the deficiencies identified in inspection reports were corrected. The report contained a number of recommenda-

tions to upgrade the program. The TCEQ Dam Safety Program has either corrected or is addressing the deficiencies.

Since the end of August 2008, the agency has added 21 new inspectors, for a total of 29 staff. Twelve of these were the result of funding approved by the Legislature. An additional 12 staff positions will be added in fiscal 2011.

The staff performs safety inspections of existing dams, reviews plans for dam construction and major rehabilitation work, makes periodic inspections of construction work, performs hydrologic and hydraulic studies, and approves emergency action plans (EAPs). In fiscal 2009, the program issued inspection reports on 526 dams; in fiscal 2010, it issued another 628 reports.

## Compliance History Designations

September 2010

Classifications are updated each September to reflect the previous five years.

Entity Classification	Number	Percent
High	14,902	8.35%
Average by default	144,012	80.67%
Average	17,982	10.07%
Poor	1,621	.91%
<b>TOTAL</b>	<b>178,517</b>	<b>100.00%</b>

### Dam Safety

New dam safety rules went into effect on Jan. 1, 2009. The new rules changed the definition of a dam, resulting in the reduction of the number of dams under the jurisdiction of the TCEQ Dam Safety Program. At the end of fiscal 2009, the number of state-regulated dams was 7,144; of those, 1,730 were classified as high- or significant-hazard. At the end of fiscal 2010, the number of state-regulated dams was 7,298; of

Over the last two years, staff have also been involved in a number of educational workshops around the state. This included 10 TCEQ dam owners workshops, attended by 668 dam owners, operators, and engineers; six rules workshops, attended by 433 dam owners and engineers; and five workshops sponsored by local soil and water conservation districts in North Texas, attended by 181 dam owners, property owners, representatives of oil and gas companies, and members of the public. In addition, the TCEQ's Dam Safety Program has published five guidelines for dam owners and engineers.

The new dam safety rules also require dam owners to have operation and maintenance plans and EAPs. Since January 2009, owners have submitted for review EAPs on 428 dams. The rule changes also allow the agency to increase its oversight of high- and significant-hazard dams.

### Accredited Laboratories

Since July 2008, the TCEQ has only accepted regulatory data from labs accredited according to standards set by the National Environmental Laboratory Accreditation Program (NELAP) or from labs that are exempt from accreditation, such as in-house labs. Laboratories were allowed a three-year phase-in, ending in mid-2008, to become accredited.

Leading up to the July 2008 deadline, the TCEQ conducted an outreach and educational program, which included workshops that drew more than 400 attendees. Program staff has continued the outreach and educational

program through the TCEQ's annual Environmental Trade Fair and presentations at conferences. In 2010, the TCEQ also co-hosted a workshop with the NELAC Institute, the EPA, and the Water Environment Association of Texas.

All labs accredited by the TCEQ are now held to the same quality control and quality assurance standards. The analytical data produced by these facilities is used in TCEQ decisions relating to permits, authorizations, compliance actions, enforcement actions, and corrective actions, as well as in characterizations and assessments of environmental processes or conditions.

TCEQ laboratory accreditations are recognized by other states using NELAP standards and by some states that do not operate accreditation programs of their own.

At the end of August 2010, the number of labs accredited by the TCEQ was 281, including the TCEQ's own air and water lab.

### Houston Laboratory

The TCEQ Houston Laboratory, which is accredited through the National Environmental Laboratory Accreditation Conference (NELAC), serves the agency's 16 regional field offices and the EPA's Region 6. Staff perform routine analyses that support the TCEQ and other environmental partners such as the Lower Neches Valley Authority.

The TCEQ's environmental programs—including air quality, water quality, and surface water quality monitoring—are supported through the analysis of air (for lead), water, wastewater, soil sediments, and

sludge samples. The lab also conducts analysis of samples for environmental investigations conducted by the TCEQ's Office of Compliance and Enforcement. The lab develops analytical procedures and performance measures for accuracy, precision, and timeliness, and maintains a robust system with a highly qualified staff of analytical chemists and biologists. In fiscal 2010, a microbiologist was hired to ensure the lab's ability to address analysis of microbiological samples and maintain its NELAC accreditation.

Standard wet chemistry analyses are conducted for parameters such as pH, oil and grease, phenols, solids, bacteria (*E. coli*), ammonia, cyanide, alkalinity, nitrate and nitrite, total phosphorous, total Kjeldahl nitrogen, chlorophyll a, chemical oxygen demand, total organic carbon, ortho phosphate, sulfides, and anions. Metals analyses are also conducted, including hexavalent chromium (in air and water), mercury (in water and solids), and selenium (in water and solids). The lab also assembles clean sampling kits for the collection of surface water quality monitoring samples.

### Complaints Received

The TCEQ receives hundreds of environmental complaints each year, mainly through its 16 regional offices. Staff investigates each complaint and makes a report available to the complainant and the public.

The agency is required by statute to prepare an annual compilation that includes analyses of complaints by environmental media (air, water, and waste), priority classification, region, Commission response, enforcement

action, and trends. The analysis also assesses the impact of changes in complaint-handling policies and procedures approved by the Commission.

An analysis of the complaints received in the last two years can be found in Appendix A.

### **Asarco Smelter Site, El Paso**

In 2005, Asarco and related entities filed for Chapter 11 bankruptcy protection in federal court in Corpus Christi. The TCEQ filed claims in the bankruptcy case pertaining to Asarco's environmental liabilities in Texas. One of the largest of these claims concerned Asarco's smelter property in El Paso.

Asarco is a mining, smelting, and refining company based in Tucson. Operations at its El Paso property began in 1887 in the form of a lead smelter and continued in various capacities for over a century, including the most recent operations as a copper smelter.

In February 2009, the state air permit for the copper smelter was voided by the TCEQ at Asarco's request. At that point, it became clear within the bankruptcy case that the site would no longer have active smelter operations.

A month later, the TCEQ, the EPA, and Asarco entered into a consent decree and settlement agreement in which Asarco's El Paso property, with about 458 acres, would be placed in an environmental custodial trust and Asarco would pay \$52 million into the trust to address contamination at the property. The bankruptcy court approved the consent decree and settlement in June 2009. However, due to competition among various entities for control of

Asarco through the bankruptcy process, the court did not confirm a plan of reorganization until November 2009.

The bankruptcy court confirmed the plan put forth by Americas Mining Corporation (controlled by Grupo México), which is the parent corporation of the debtor, Asarco. The confirmed plan implemented the consent decree and settlement agreement concerning the El Paso property. Thus, in December 2009, an environmental custodial trust was created and funded with \$52 million from the Asarco bankruptcy.

The trustee of the environmental custodial trust, Project Navigator (represented by Roberto Puga) was moving forward in August 2010 to address the remaining contamination at the property. The primary contaminants of concern at the site are arsenic, lead, and cadmium. Remediation will address the contaminants in both soil and groundwater.

The TCEQ continues to have a regulatory oversight role in the remediation of the property and is in frequent communication with the trustee concerning technical, legal, and financial issues.

## **Air Quality**

### **Recent Changes to Criteria Pollutant Standards**

The federal Clean Air Act requires the EPA to review the standard for each criteria pollutant every five years, to ensure that the standard provides the required level of health and environmental protection. Federal clean-air standards cover six air pollutants: ozone, particulate matter, carbon monoxide, lead, nitrogen oxides, and sulfur dioxide.

Over the years, attaining the ozone standard has been the biggest air quality challenge in Texas. Some of the state's largest metropolitan areas are designated as nonattainment, and stricter revisions have been proposed.

### **2010 Ozone Standard**

In August 2010, the EPA announced that it would delay finalization of a new primary and secondary ozone standard. The EPA was expected to set the new primary standard within the range of 0.060 to 0.070 parts per million (ppm), in the fall of 2010. The secondary standard—a cumulative, seasonal standard—was expected to be set within a range of 7 to 15 ppm-hours, and was to be finalized shortly after the primary standard. The revised primary and secondary standards are the result of the reconsideration of the ozone standard of 0.075 ppm, finalized by the EPA in March 2008 but not yet implemented. The 1997 8-hour ozone standard of 0.08 ppm remains in effect.

Preliminary data indicates a number of areas may monitor nonattainment of a reduced standard. Due dates for state recommendations regarding the

**G**round-level ozone, a component of smog, is not emitted directly into the air but forms through a reaction of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) in the presence of sunlight. The major sources of NO<sub>x</sub> and VOCs are industrial facilities, electric utilities, car and truck exhaust, gasoline vapors, and chemical solvents.



### Types of Sources

Emissions that affect air quality can be characterized by their sources.

**Point sources:** industrial facilities such as refineries and cement kilns

**Area sources:** industrial fuel use, surface coating, and painting

**On-road mobile sources:** cars and trucks

**Nonroad mobile sources:** construction equipment and engines such as locomotives

attainment status of areas for the 2010 primary standard will be identified when the standard is finalized, but will be no sooner than 120 days following promulgation of the new standard. The EPA’s schedule for final designations was unknown at the end of fiscal 2010.

The EPA’s options for the secondary standard’s designation process require recommendations for the secondary standard on the same schedule as for the primary standard (or may require them due by August 2011).

Revisions to the State Implementation Plan (SIP) for areas designated as nonattainment are due to the EPA in December 2013. These recommendations will be based on monitoring data over a three-year period. The EPA’s default approach has been to include the entire metropolitan statistical area.

In June and July of 2010, the TCEQ held public meetings across the state on the proposed lowered standard and asked for community comments. As the TCEQ develops proposals to deal with ozone issues, the revisions will be submitted to the EPA in the form of the

SIP, which is a blueprint for dealing with air quality issues at the local level.

### 2010 Sulfur Dioxide Standard

In June 2010, the EPA published a final rule strengthening the primary sulfur dioxide (SO<sub>2</sub>) standard. The rule sets a new 1-hour standard of 75 parts per billion (ppb), determined by a three-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations. The rule revokes the previous annual SO<sub>2</sub> standard of 0.03 ppm and the 24-hour standard of 0.14 ppm. The

new standard aims to better protect communities near coal-fired power plants, industrial boilers, petroleum refineries, metal processing plants, and diesel exhaust emissions. The rule became effective in August 2010.

No part of Texas is designated nonattainment for the previous SO<sub>2</sub> standards. However, air quality monitoring in Jefferson County indicates a design value of 80 ppb for 2007 through 2009.

Initial designations for the new standard will rely on refined dispersion modeling results, combined with 2008-through-2010 monitoring data. Areas with a violation indicated by monitor or model will be designated nonattainment. Areas with both monitored data and modeling results showing no

### 2010 Primary Ozone Design Values by Combined Metropolitan Statistical Area

Combined Metropolitan Statistical Area	Design Value, as of Sept. 14, 2010 (parts per billion)
Dallas—Fort Worth	86
Houston-Galveston-Brazoria	82
Austin—Round Rock	74
San Antonio	74
Beaumont—Port Arthur	73
Northeast Texas	72
El Paso	71
Corpus Christi	71
Waco	70
Victoria	66
Big Bend (Brewster County)	64
Lower Rio Grande Valley	63

Note: Design value describes the air quality status of a given geographic area relative to the federal clean-air standard. It is calculated from observed pollutant concentrations and is used as an indicator for the pollution level—in this case, for ozone.

violations will be designated attainment. All other areas will be designated unclassifiable. Final EPA designations are expected by June 2012.

States with areas designated nonattainment in 2012 have until February 2014 to submit SIP revisions that outline plans to attain the standard by August 2017. States must submit infrastructure SIP revisions by June 2013 for unclassified and attainment areas. An infrastructure SIP demonstrates how the state will provide for the implementation, maintenance, and enforcement of a new or revised standard.

As part of the final rulemaking for the 2010 SO<sub>2</sub> standard, new SO<sub>2</sub> monitors are required in Amarillo, Austin–Round Rock, Beaumont–Port Arthur, Dallas–Fort Worth–Arlington, Houston–Sugar Land–Baytown, Longview, and San Antonio. The monitors must be operational by Jan. 1, 2013.

### 2010 Nitrogen Dioxide Standard

In February 2010, the EPA strengthened the primary nitrogen dioxide (NO<sub>2</sub>) standard by establishing a new 1-hour NO<sub>2</sub> standard of 100 ppb. State designation recommendations are due to the EPA in January 2011. The new standard focuses on short-term exposures to NO<sub>2</sub>, which are generally greater near major roads. No area in Texas has monitored above the 100 ppb standard. The EPA retained the annual average NO<sub>2</sub> standard of 53 ppb, but changed the monitoring network requirements to capture both peak NO<sub>2</sub> concentra-

tions occurring near roadways and community-wide NO<sub>2</sub> concentrations. An estimated 126 new NO<sub>2</sub> monitoring sites will be placed near major roads in 102 urban areas nationwide. Approximately eight new monitoring sites are expected in Texas.

In January 2012, the EPA will designate most of the United States as unclassifiable because monitors near roads will not yet be in place. All new NO<sub>2</sub> monitors must begin operating no later than Jan. 1, 2013. The EPA intends to redesignate areas based on new monitoring data by 2016 or 2017, once the expanded network of NO<sub>2</sub> monitors is fully deployed and three years of air quality data have been collected. The attainment date for the 2010 NO<sub>2</sub> standard is early 2021 or 2022, or about five years after the date of nonattainment designations.

### 2008 Lead Standard

In 2008, the EPA revised the primary lead standard from 1.5 to 0.15 micrograms per cubic meter (µg/m<sup>3</sup>), measured in total suspended particulate matter. On June 14, 2010, the EPA proposed a nonattainment area of about 2.5 square miles surrounding the Exide Technologies battery recycling facility in Frisco (Collin County). The EPA's proposal would designate the rest of Texas as attainment/unclassifiable. Final designations will be effective in January

2011 for areas with sufficient monitoring data and in January 2012 for areas with source-oriented monitors installed in 2010. Attainment demonstration SIP revisions will be due to the EPA in June 2012 for areas designated nonattainment as of January 2011, and in June 2013 for areas designated nonattainment as of January 2012.

## Compliance Status by Area

### Houston-Galveston-Brazoria

Based on a 2009 modeling emissions inventory, mobile sources (on-road and nonroad) make up 55 percent of the nitrogen oxide (NO<sub>x</sub>) emissions for the eight-county nonattainment area in and around Houston. Point and area sources contribute the remaining



45 percent, based on a 2009 modeling emissions inventory. While the state has jurisdiction over point and area source emissions, it must rely on the federal government to reduce emissions from mobile sources.

This urban area is classified as severe nonattainment for the 1997 ozone standard, with an attainment date that is “as expeditious as practicable” but no later than June 15, 2019.

On March 10, 2010, the TCEQ adopted two revisions to the Texas SIP for the Houston-Galveston-Brazoria (HGB) ozone nonattainment area. The HGB attainment demonstration SIP revision demonstrates attainment of the 1997 8-hour ozone standard by the June 15, 2019, deadline. The three principal components of this SIP are (1) a photochemical modeling demonstration, (2) control strategy development, and (3) the stakeholder process.

Identifying control measures that are reasonable as well as technologically and economically feasible presents a challenge for the TCEQ, considering the magnitude of emission reductions already achieved under the 1990 1-hour ozone standard. Two of the main control strategies implemented in the area for the 1-hour ozone standard were an annual cap-and-trade program to reduce NO<sub>x</sub> emissions by an average of 80 percent from utility, industrial, commercial, and institutional combustion sources; and an annual cap-and-trade program to reduce emissions of highly reactive volatile organic compounds from process vents, flares, and cooling-tower heat exchange systems. Meeting the ozone standard in the Houston area is also complicated by unique meteorological conditions

along the Gulf Coast and the complex chemistry of ozone formation.

In response to public comments, the TCEQ will perform a 1997 8-hour ozone standard mid-course review and submit this review to the EPA with the 2010 ozone standard SIP revision, due in December 2013.

The HGB reasonable further progress SIP revision demonstrates an 18 percent emissions reduction between 2002 and 2008, and an average of 3 percent per year emissions reduction between 2008 and 2011, 2011 and 2014, and 2017 and 2018.

On July 1, 2010, the TCEQ’s executive director approved a concept memo to begin working on an HGB reasonably available control technology (RACT) update SIP revision. The purpose of this revision is to provide the EPA a RACT analysis update to include control techniques guidelines (CTG) not yet addressed in the March 2010 HGB attainment demonstration SIP revision for the 1997 8-hour ozone standard and to incorporate any CTG-related rulemaking considered for the HGB area. This SIP revision is tentatively scheduled for proposal in May 2011, with adoption in November 2011.

### ***Dallas–Fort Worth***

Based on a 2009 modeling emissions inventory, in the nine-county nonattainment area of Dallas–Fort Worth, about 74 percent of NO<sub>x</sub> emissions are emitted from on-road and nonroad mobile sources that remain under federal jurisdiction. However, the state has initiated substantial NO<sub>x</sub> reductions through regulation of point- and area-source emissions, which make up

the remaining 26 percent of NO<sub>x</sub> emission sources.

In the last two years, two additional revisions have been made to the initial 1997 8-hour ozone attainment demonstration SIP revision, which was approved by the EPA in January 2009. On March 10, 2010, the Commission adopted a revision that updated the area’s volatile organic compounds RACT, adopted new VOC regulations, and modified the contingency plan. On Aug. 25, 2010, the TCEQ adopted a revision to the DFW attainment demonstration to convert an environmental speed-limit control measure into a transportation control measure, allowing the North Central Texas Council of Governments to substitute the environmental speed-limit control measure with other transportation control measures, as long as all substitutes achieve the same reductions.

The DFW area is classified as moderate nonattainment for the 1997 ozone standard; however, the area did not attain the ozone standard by the June 15, 2010, deadline. As a result, the EPA is required to reclassify the area from moderate to serious with a new attainment deadline of June 15, 2013. Additionally, failure to attain the standard by the deadline requires implementation of an attainment demonstration’s contingency measures. In May 2010, the TCEQ implemented contingency measures in the area.

In 2011, the Commission will consider for adoption a new attainment demonstration SIP and reasonable further progress SIP for the 1997 8-hour ozone standard. This attainment demonstration SIP revision will use photochemical modeling to demonstrate that

the area will attain the 1997 8-hour ozone standard by June 15, 2013. The attainment demonstration will also show that the state has adopted all reasonably available control measures, required the implementation of all RACT, adopted any other controls needed to attain the standard, and adopted measures needed to provide an additional 3 percent reduction in emissions as a contingency measure if the area fails to attain the standard by the new deadline.

In addition, the state will demonstrate the area's compliance with all of the serious classification requirements, including an enhanced monitoring network, additional NO<sub>x</sub> and/or VOC emission reductions averaging 3 percent per year through 2012, an enhanced inspection and maintenance program, a clean-fuel fleet program, and transportation control measures. In June 2010, the TCEQ held a stakeholder meeting in Arlington to receive ideas from the public on control strategies for the new attainment demonstration.

**Lead Maintenance Plan for the 1978 Lead Standard.** After designating a portion of Collin County as a lead nonattainment area in 1991, the EPA approved the TCEQ's Collin County lead attainment SIP in 1994. The EPA then redesignated the Collin County nonattainment area to attainment and approved a 10-year maintenance plan, effective Dec. 13, 1999. Even though a new 0.15 µg/m<sup>3</sup> lead standard was implemented on Jan. 12, 2009, the previous 1.5 µg/m<sup>3</sup> standard remains in effect for Collin County until approximately January 2012. In August 2009, the Commission adopted a SIP revision for the second maintenance plan for

the 1978 lead standard, along with an agreed order with Exide Technologies in Frisco to make the second maintenance plan's contingency measures legally enforceable.

### **Beaumont–Port Arthur**

The four-county BPA area is classified as moderate nonattainment for the 1997 8-hour ozone standard. In December 2008, the TCEQ submitted to the EPA a request, along with a maintenance plan, to redesignate the BPA area to attainment of the 1997 8-hour ozone standard.

In May 2010, the EPA proposed approval of the 2008 redesignation request and maintenance plan SIP revision, including a determination that the BPA area has attained the 1997 8-hour ozone standard and has met all applicable 1997 8-hour ozone requirements and 1-hour anti-backsliding requirements for the purposes of redesignation. The EPA also proposed that the BPA area is meeting the 1-hour ozone standard.

### **El Paso**

After implementing air quality programs for 15 years, El Paso achieved major reductions in previously high levels of ozone, carbon monoxide (CO), and coarse particulate matter (PM<sub>10</sub>). The El Paso area is in attainment of the 1997 8-hour ozone standard, and the EPA in 2009 approved the El Paso ozone maintenance SIP revision.

In 2008, the area was redesignated attainment for the CO standard. In 2009, the EPA changed El Paso's status for the PM<sub>10</sub> (particulate matter equal to or less than 10 micrograms) to meet-

ing the standard. The TCEQ has been researching elements of a maintenance plan and a redesignation request for that standard.

### **Austin**

The Austin area is in attainment of the 1997 8-hour ozone standard. The Austin–Round Rock 8-Hour Ozone Flex Program Memorandum of Agreement was approved by the Commission in 2008 and by the EPA later the same year.

### **Corpus Christi**

The Corpus Christi area is in attainment of the 1997 8-hour ozone standard. The Corpus Christi 8-Hour Ozone Flex Program Memorandum of Agreement was approved by the Commission in 2007 and by the EPA later the same year.

### **Victoria**

The Victoria area is in attainment of the 1997 8-hour ozone standard. On July 28, 2010, the Commission adopted the Victoria County contingency plan SIP revision. This revision contains an amended contingency measures section to complete the 2007 Victoria maintenance plan SIP revision, as required by the EPA. The amended section provides a list of rules that the TCEQ may adopt and implement upon violation of the 1997 8-hour ozone standard.

### **Additional Areas**

The areas of Big Bend (Brewster County), Northeast Texas, San Antonio, and Waco are all in attainment of the 1997 8-hour ozone standard, but no applicable SIP or 8-hour ozone flex plans are in place.

## Evaluating Health Effects

The TCEQ relies on chemical-specific health and welfare protective values developed by its toxicologists to ensure that ambient concentrations of pollutants stay below levels of concern.

Before 2006, the same values were used for both air permitting and air monitoring, even though use of the same value did not account for the significant differences between the two programs, nor the differences in the types of health effect evaluations.

In 2006, new guidelines finalized the development of these values and defined a scientific process for deriving separate values for these two different uses. For values used in evaluating air permits for a single permittee, the health value derived to protect against non-cancer health effects is reduced by 70 percent to account for cumulative exposure. This additional reduction is not necessary for air monitoring data because air monitoring data represent emissions from multiple sources. However, because the new values were unfamiliar terms, the values derived for evaluating air monitoring data were often overlooked or misquoted.

In 2010, the TCEQ changed the terminology for evaluating data collected from ambient air monitors. A new term—air monitoring comparison values (AMCV)—refers to all the health- and welfare-based values used to evaluate air monitoring data, and Effects Screening Level (ESL) now refers only to the values used to review air permitting data.

The 2006 guidelines were subject to two rounds of public comment and an external scientific peer review by

world-renowned experts in human health risk assessment. The draft development support documents outlining the scientific procedures used to develop ESLs and AMCVs for individual chemicals are subject to a 90-day public comment period before the documents become final. In addition, the development support documents for some individual chemicals have undergone a technical review or independent external peer review by subject experts. Updated toxicity assessments were derived for 15 chemicals using this process in fiscal 2009 and fiscal 2010, and proposed development support documents for four chemicals were opened for public comment in fiscal 2010.

The toxicity assessments conducted by the agency have received widespread attention. In 2009, the Ontario Ministry of Environment deemed the TCEQ toxicity assessment for 1,3-butadiene as the most defensible assessment of health risk over the assessments made by the EPA and other states. In 2010, Texas became the only state to have its toxicity factors posted on the International Toxicity Assessments for Risk Assessment database. The EPA has recommended review of Texas' guideline levels to other states, and Texas has received compliments from the Agency for Toxic Substances and Disease Registry. Other countries now use Texas' values, including Australia, Israel, Taiwan, China, Austria, Belgium, Mexico, and the Netherlands.

## Air Pollutant Watch List

The TCEQ routinely reviews and conducts health effects evaluations of ambient air monitoring data from across



the state by comparing the data to its air monitoring comparison values (AMCVs).

When appropriate, agency toxicologists will recommend that a pollutant and the area of potential sources of the pollutant be added to the Air Pollutant Watch List. This occurs in the areas where long-term monitored concentrations of pollutants have been measured above the long-term AMCV, or where frequent monitored exceedances of the short-term AMCV occur.

In June 2009, this recommendation process was amended to include advanced notification of legislators whose districts lie in the proposed area. After a 30-day public comment period, the agency reevaluates all comments received and any additional monitoring information. Following a final notification to legislators, the pollutant and area will be placed on the Watch List.

An area's inclusion on the Watch List results in more stringent permitting of local industry, prioritized investigative efforts, increased efforts to work with industry to address air quality concerns through pollution control technology, and in some cases increased monitoring and notification.

Through increased awareness, air quality has significantly improved in six Watch List areas; in fact, nine pollutants were removed from the Watch List in the last two fiscal years. By the end of fiscal 2010, the Watch List included 16 pollutants and 11 areas of potential sources.

### Residential Exposure Studies

The TCEQ's Toxicology Division has been involved in numerous studies in-

vestigating human exposure to airborne toxic chemicals and the potential of these exposures to cause adverse health effects. These studies lead to a greater understanding of air pollution and more knowledgeable decision-making by the TCEQ. They are also a valuable way to address community concerns, since many of the study requests come from individuals. Three significant scientific research projects sponsored by the TCEQ were completed in fiscal 2010:

- An **ambient air study** addressed citizen concerns about possible exposure to VOCs and metals from cement kiln operations in Midlothian. The study found that, although the ambient air monitors could detect trace levels of pollutants likely from kiln operations, the concentrations of metals (particularly the carcinogen hexavalent chromium) were well below a level of health concern. The carcinogen hexavalent chromium represented a small percentage of the total chromium measured.
- The **Houston Exposure to Air Toxics Study** compared ambient air concentrations of target air toxics at outdoor stationary monitors to indoor air concentrations, concentrations outside residents' homes, and personal monitors worn by residents. The study found that personal exposure concentrations of target air toxics were higher than residential indoor and outdoor concentrations, meaning that participants' daily activities (commuting, using household cleaning and office supplies, etc.) contributed more to their personal air toxics exposure than did outdoor air.

- The **Houston Air Toxics Biomarkers of Exposure Study**

examined the utility of biomarker concentrations as an indication of ambient exposure to compounds of concern. The study compared concentrations of target air toxics from ambient air monitoring data and biomarkers in biological samples (i.e., blood and urine) for residents living near large point sources of the pollutants to concentrations for residents living away from point sources. The study found that concentrations in blood and urine were similar for the two areas, suggesting that the exposure to air pollutants is likely from other sources—such as automobile traffic, airports, railroad engines, construction, or household and lifestyle activities.

### Barnett Shale

As oil and gas production has rapidly expanded in the Barnett Shale area, some residents have expressed concern about the potential health effects of air emissions.

In response to these concerns, the TCEQ has made a substantial commitment of resources to air quality in the area, including increasing the number of air inspectors, shortening complaint investigation times, proposing revised authorizations for production equipment, performing focused enforcement and investigations in the area, installing stationary air monitoring equipment, and performing air quality tests.

In an effort to give residents information about local air quality, the TCEQ developed a website that contains air monitoring data from the

Barnett Shale region. The online Barnett Shale viewer—an interactive map that gives the public the ability to see the results of the hundreds of air samples taken—is available 24 hours a day and is updated with the most recent monitoring results and toxicological analysis as the agency collects air samples in the region. Visit <[www/tceq.state.tx.us/goto/barnettshale](http://www/tceq.state.tx.us/goto/barnettshale)>.

Under the authority of Title 30, Texas Administrative Code Subsection 101.10(b)(3), the TCEQ conducted a special emissions inventory to obtain information on and assess the 2009 annual emissions from oil and gas production leases in the Barnett Shale area formation, along with information from the midstream pipeline companies operating in the area.

In 2010, the TCEQ installed two state-of-the-art 24-hour fixed air monitors, in DISH and in the Eagle Mountain Lake area. Three more monitors will be installed in fiscal 2011—one in Flower Mound, one in Decatur, and another at a location yet to be determined in southeast Tarrant County. In September 2010, legislators directed the TCEQ to locate eight additional monitors in the Barnett Shale area.

The two fixed air monitors, as well as two monitors in Fort Worth and Dallas that have been operating for more than seven years, continue to show very low levels of benzene and other air toxics. The measurements from these monitors are posted within a few hours of analysis on the TCEQ website.

### **CAMR, CAIR, and Transport**

In 2005, the EPA issued new rules to significantly reduce emissions for new and existing electricity-generating units.

The Clean Air Mercury Rule (CAMR) was designed to permanently cap—for the first time—mercury emissions from new and existing coal-fired power plants. This rule promised to make the United States the first country to regulate mercury emissions from electricity-generating utilities. In 2006, the TCEQ approved rulemaking to implement the CAMR trading program for mercury.

The Clean Air Interstate Rule (CAIR) was intended to help nonattainment areas for ozone and fine particulate matter (PM<sub>2.5</sub>) control NO<sub>x</sub> and SO<sub>2</sub> emissions from new and existing electricity-generating utilities. In 2006, the TCEQ approved rulemaking to implement the CAIR trading program for NO<sub>x</sub> and SO<sub>2</sub> and incorporated the provisions of Texas House Bill 2481, passed in 2005, and Texas Senate Bill 1672, passed in 2007.

Both EPA programs were overturned in 2008. A federal appellate court vacated CAMR and, in a later decision, remanded CAIR.

On July 6, 2010, the EPA proposed a rule to replace CAIR. The Clean Air Transport Rule would require 31 states and the District of Columbia to reduce power plant emissions contributing to ozone and PM<sub>2.5</sub> in other states. The proposal aims to help eastern states meet federal Clean Air Act obligations regarding the interstate transport of air pollution for the 1997 ozone and PM<sub>2.5</sub> standards. The proposal would require reductions in NO<sub>x</sub> emissions crossing state lines for some areas, and reductions in annual SO<sub>2</sub> and NO<sub>x</sub> in some areas. To ensure emission reductions, the

EPA is proposing federal implementation plans for each of the states covered by the rule, although states may develop SIP revisions to replace the federal plan. The rule is expected to be finalized in 2011.

The EPA also intends to propose an additional rule in 2011 to address transport requirements for the 1997 ozone standard and perhaps transport requirements for the 2010 ozone standard.

### **Fuel Requirements**

In another strategy to lower levels of NO<sub>x</sub> and VOCs from mobile sources, either the TCEQ or the EPA has requirements in place to use various fuel mixtures in different parts of the state, as follows:

*Houston traffic*



- Reformulated gasoline year-round in the eight-county Houston-Galveston-Brazoria area and the four-county Dallas–Fort Worth area (a federal requirement).
- Low Reid vapor pressure gasoline from May 1 to October 1 in 95 counties in East and Central Texas.
- Low Reid vapor pressure gasoline from May 1 to September 15 in the three-county Beaumont–Port Arthur area (a federal requirement).
- Low Reid vapor pressure gasoline from May 1 to September 16 in El Paso County.
- Oxygenated gasoline from October 1 to March 31 in El Paso County (to lower carbon monoxide).
- Low-emission diesel fuel year-round in 110 counties in East and Central Texas, including Houston–Galveston, Dallas–Fort Worth, and Beaumont–Port Arthur.

The Texas Low Emission Diesel (TxLED) rule applies to diesel-fuel producers, importers, common carriers, distributors, transporters, bulk-terminal operators, and retailers. The goal is to lower the emissions of NO<sub>x</sub> and other pollutants from diesel-powered motor vehicles and nonroad equipment in the eastern portion of the state.

Diesel fuel produced for delivery and ultimate sale—for both highway and non-highway use—in the affected counties must contain less than 10 percent by volume of aromatic hydrocarbons and have a cetane number of 48 or greater. Compliance alternatives are allowed, such as TCEQ-approved alternative diesel-fuel formulations, California Air Resource Board–certified alternative diesel-fuel formulations, and TCEQ-approved alternative emission

reduction plans. Compliance for producers and importers was required on Oct. 31, 2005; for bulk plant distribution facilities, Dec. 15, 2005; for retail fuel dispensing outlets, wholesale bulk purchasers, and consumer facilities, Jan. 31, 2006.

In addition, the TxLED rule applies to marine distillate fuels used in the Houston-Galveston-Brazoria ozone nonattainment area. Compliance for producers and importers of marine distillate fuels was required on Oct. 1, 2007; for bulk plant distribution facilities, Nov. 15, 2007; and for retail fuel dispensing outlets, wholesale bulk purchasers, and consumer facilities, Jan. 1, 2008.

As of August 2010, 115 producers and importers had registered to supply TxLED to counties in East and Central Texas.

### Major Incentive Programs

The TCEQ has three important programs aimed at reducing emissions: the Texas Emissions Reduction Plan, Drive a Clean Machine, and the Texas Clean School Bus Program.

#### **The Texas Emissions Reduction Plan**

Established by the Texas Legislature in 2001, the Texas Emissions Reduction Plan (TERP) provides financial incentives to owners and operators of heavy-duty vehicles and equipment for projects that will lower NO<sub>x</sub> emissions. Because NO<sub>x</sub> is a leading contributor to the formation of ground-level ozone, lowering these emissions is key to achieving compliance with the federal Clean Air Act.

Providing grants for voluntary upgrades, the program has been focused largely in the ozone nonattainment areas of Dallas–Fort Worth and Houston-Galveston-Brazoria. Funding has also been awarded to projects in the Tyler-Longview-Marshall, San Antonio, Beaumont–Port Arthur, Austin, Corpus Christi, El Paso, and Victoria areas.

The success of the program in Texas has encouraged other states, as well as the federal government, to implement voluntary incentive programs targeted at mobile sources, modeling their programs after the TERP.

Since the program's debut in 2002, through August 2010, the program had awarded \$786 million for the upgrade or replacement of over 12,672 heavy-duty vehicles, locomotives, marine vessels, and pieces of equipment. Over the life of these projects, 158,072 tons of NO<sub>x</sub> will be reduced, which equals to 67.5 tons per day in 2011.

Additional programs were established under the TERP program by the Texas Legislature in 2009. The TCEQ expected to have grants awarded under each of these programs by early fiscal 2011.

- The **Texas Clean Fleet Program** was established to provide funding under the TERP for replacement of diesel vehicles with alternative-fuel or hybrid vehicles.
- The **New Technology Research and Development (NTRD) Program** was again placed under direct administration of the TCEQ. The NTRD Program provides grants to encourage research, development, and commercialization of technologies that reduce pollution from mobile sources.



- The **New Technology Implementation Grant (NTIG) Program**

was established to offset the incremental costs of reducing emissions of pollutants from facilities and other stationary sources in Texas.

TERP grants and activities during the last two years are detailed in a separate report, *Texas Emissions Reduction Plan (TERP) Biennial Report to the Texas Legislature* (RG-388).

### **Drive a Clean Machine**

The Drive a Clean Machine program was created in 2007 as part of the Low Income Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program (LIRAP) to remove older, polluting vehicles from Texas roads and replace them with newer, cleaner-running vehicles. Backed by a \$45 million annual appropriation, the Drive a Clean Machine program is available in the areas of Houston-Galveston-Brazoria, Dallas-Fort Worth, and Austin-Round Rock, all of which conduct annual inspections of vehicle emissions.

Driving a new car, or a qualifying used car, is much better for air quality than driving a vehicle that is 10 years old or older. Today's low-emission vehicles can be up to eight times cleaner than those produced a decade ago.

To retire a car or truck under this program, the vehicle must have failed an emissions inspection or be at least 10 years old, be registered in a participating county for the 12 months preceding the application, and have passed the Texas Department of Public Safety's "safety" or "safety and emissions" inspection within 15 months of the date of the application. In addition,

the vehicle owner's income may not exceed 300 percent of the federal poverty guidelines. In 2009 and 2010, a family of four could qualify with a maximum net income of \$66,150 per year.

Vouchers for up to \$3,500 for replacement vehicles are provided to eligible applicants and may be used at participating dealers to purchase eligible replacement vehicles. Replacement vehicles must meet federal Tier 2 Bin 5 clean-emissions standards, have a gross vehicle weight rating of less than 10,000 pounds, and have a total purchase cost of no more than \$25,000.

The Drive a Clean Machine program also offers assistance of up to \$600 for emissions-related repairs for vehicles that fail an emissions inspection.

From the program's debut in December 2007 through May 2010, approximately \$115 million was provided to qualifying vehicle owners in the Houston-Galveston-Brazoria, Dallas-Fort Worth, and Austin-Round Rock areas. This funding helped to retire or replace a total of 36,102 vehicles and to repair an additional 13,385 vehicles.

More information can be found at [www.driveacleanmachine.org](http://www.driveacleanmachine.org).

### **Texas Clean School Bus Program**

The Texas Clean School Bus Program provides grants for technologies that reduce diesel-exhaust emissions inside the cabin of a school bus. In addition to grant funding, the program offers educational materials to school districts on other ways to reduce emissions, such as idling reduction. As of August 2010, the Texas Clean School Bus Program had reimbursed approximately \$13.4 million in grants to 128 public school districts or charter schools to retrofit 5,000 school buses in Texas.

### **Environmental Research and Development**

The TCEQ supports cutting-edge scientific research into the causes of air pollution in Texas. The agency sponsored the Texas Air Quality Study (TexAQS) field campaign in 2000, and the TexAQS II from 2005 to 2006.



More recently, the TCEQ and the Texas Environmental Research Consortium supported a smaller field study known as the Study of Houston Atmospheric Radical Precursors (SHARP). The TCEQ has also directly funded a host of other air quality research projects.

Among the air quality topics studied by TCEQ-sponsored researchers during the 2009 and 2010 fiscal years are the following:

- Meteorological analyses of Houston during high- and low-ozone days to understand how weather differs on these two kinds of days and how weather affects ozone concentrations.
- Analyses of the transport of pollutants from city to city within the state, and from out of state into Texas.
- Detailed analyses of ozone production chemistry to develop more accurate simulations of the chemical processes that create and destroy ozone in Houston.
- Detailed modeling of local-scale meteorological processes, including the land-sea-bay breeze that frequently occurs in southeastern Texas during the summer.
- Sensitivity of modeled ozone to changes in emissions and chemical reaction rates to prioritize the state's efforts to improve the accuracy of ozone episode simulations.
- Estimates of industrial emissions (especially flares), shipping emissions, oil and gas production, and biogenic emissions based upon ambient measurements of pollutants in the air, and studies of emission factors and activity data.

The most important findings from these studies are summarized as follows:

- VOC emissions from flares at petrochemical facilities in the Houston area appear to be particularly large, especially for emergency flares that are used routinely as relatively low-flow process flares. Emissions from these flares can be 10 times greater than what has been reported in the emissions inventory. Flares can emit highly reactive alkenes and aldehydes; these classes of compounds are particularly conducive to ozone formation. Modeling studies show that these emissions can substantially increase ozone concentrations miles downwind of the emissions point. Results from the Houston field studies, and from additional flare studies funded by the TCEQ, can correct the emissions inventories and thus fully account for their impact upon local ozone formation.
- Chemical models of ozone simulate ozone formation imperfectly; insights from the Houston field studies should help scientists improve these simulations.
- Levels of regional background ozone—ozone that enters a city from outside and has not been affected by the city of interest—can have a substantial effect on the daily maximum ozone concentrations observed in both the Houston-Galveston-Brazoria and Dallas-Fort Worth nonattainment areas. High background ozone was known to be an issue in Dallas-Fort Worth, but its strong effect upon peak ozone in Houston was somewhat unexpected. In some cases, elevated regional background ozone originates outside of Texas, but sometimes ozone can be transported from one

major Texas city to another. Studies supported by the TCEQ have shown that a portion of the ozone observed in the state can be attributed to out-of-state emissions.

- Both local-scale and regional-scale weather patterns play important roles in causing ozone-conducive conditions. The land-sea breeze flow pattern in southeastern Texas and post-frontal stagnation contribute to high ozone in eastern Texas. An improved understanding of these meteorological processes will help the TCEQ simulate ozone episodes more accurately, and can help in predicting when they will occur.
- As a result of the field studies and other studies funded directly and indirectly by the TCEQ, a total of 67 air quality research papers have been published in the peer-reviewed scientific literature since the beginning of fiscal 2009. Texas-specific research has led to exceptional progress in reducing ozone levels in Houston, where the 8-hour ozone design value fell from 118 parts per billion in 1999 to 84 ppb in 2009.

Although solid progress has been made, the new air quality standards proposed by the EPA will be challenging to meet. Research conducted in fiscal years 2009 and 2010 will help the TCEQ build on that progress.

## **Water Quality**

### **Developing Surface Water Quality Standards**

#### ***Texas Surface Water Quality Standards***

Under the federal Clean Water Act, every three years the TCEQ is required



to review and, if appropriate, revise the Texas Surface Water Quality Standards. These standards provide the basis for establishing discharge limits in wastewater permits, setting instream water quality goals for Total Maximum Daily Loads (TMDLs), and providing criteria to assess instream attainment of water quality.

Water quality standards are set for major river basins, bays, and estuaries based on their specific uses: aquatic life, recreation, drinking water, fish consumption, and general use. The standards establish water quality criteria, such as temperature, pH, dissolved oxygen, salts, bacterial indicators for recreational suitability, and a number of toxic substances.

Revised water quality standards and standards implementation procedures were adopted during fiscal 2010 and forwarded to the EPA for review and approval. Major revisions include:

- Expanded categories for recreational uses and criteria, as well as more specific protocols to assign recreational uses.
- Retained the criterion of 126 *E. coli* per 100 milliliters in order to protect

swimming and other aquatic recreation in freshwater streams, rivers, and reservoirs.

- Revisions to toxic criteria to incorporate new data on toxicity effects and revisions to the basic requirements for toxicity effluent testing to address revised TCEQ and EPA procedures.
- Addition of new numerical nutrient criteria to protect numerous reservoirs from the excessive growth of aquatic vegetation related to nutrients.
- Numerous revisions and additions to the uses and criteria of individual water bodies to incorporate new data and the results of recent use-attainability analyses (UAAs).

### ***Use-Attainability Analyses (UAAs)***

The Water Quality Standards Program also coordinates and conducts use-attainability analyses to develop site-specific uses for aquatic life and recreation. A UAA is a scientific assessment of the physical, chemical, and biological characteristics of a water body. This assessment is often used to re-evaluate

designated or presumed uses when the existing standards might be inappropriate for water bodies that are listed as impaired or that are potentially affected by permitted actions. As a result of these UAAs, site-specific aquatic life uses or dissolved oxygen criteria were adopted in the current water quality standards revision for over 50 individual water bodies.

In 2009, the TCEQ developed new recreational UAA procedures to evaluate and more accurately assign different levels of water recreation activities, such as swimming and fishing. Over the past two years, more than 100 UAAs have been initiated to evaluate recreational uses of water bodies that have not been attaining their existing criteria for indicator bacteria.

### **The Clean Rivers Program**

The Texas Clean Rivers Program is a unique state-fee-funded water quality monitoring, assessment, and public outreach program. Fifteen regional water agencies (primarily river authorities) perform monitoring, assessment, and outreach activities. The program provides the opportunity to approach water quality issues within a watershed or river basin at the local and regional level through coordinated efforts among diverse organizations. Accomplishments include doubling the available water quality data for TCEQ water quality decision-making and increasing public awareness of water quality issues at the local level.

### **Water Quality Monitoring**

Water quality is monitored across the state in relation to human health

concerns, ecological conditions, and designated uses. The resulting data provide a basis for policies that promote the protection, restoration, and wise use of surface water in Texas.

### ***Coordinated Routine Monitoring***

Each spring, the TCEQ meets with various water quality organizations to coordinate their monitoring efforts for the upcoming fiscal year. The TCEQ prepares the guidance and reference materials, and the Texas Clean Rivers Program partners facilitate the local meetings. Information is used by the participants to select stations and parameters that will enhance overall water quality monitoring coverage, eliminate duplication of effort, and address basin priorities. The coordinated monitoring network, which is made up of about 1,800 active stations, is one of the most extensive in the country. Coordinating the monitoring among the various partners ensures that available resources are used as efficiently as possible and therefore maximizes available monitoring dollars.

### ***Continuous Water Quality Monitoring***

The TCEQ has developed—and continues to refine—a network of continuous water quality monitoring sites on priority water bodies. The agency maintains 65 to 70 sites in its Continuous Water Quality Monitoring Network (CWQMN). At these sites, instruments measure basic water quality conditions every 15 minutes.

CWQMN monitoring data may be used by the TCEQ or other organizations to make water resource manage-

ment decisions, target field investigations, evaluate the effectiveness of water quality management programs such as TMDL implementation plans and watershed protection plans, characterize existing conditions, evaluate spatial and temporal trends, and confirm water quality standards compliance. The data are transmitted to TCEQ computers and are posted at <[www.texaswaterdata.org](http://www.texaswaterdata.org)>.

The monitoring network is used daily to guide decisions on how to better protect certain segments of rivers or lakes, as seen by the following:

- **Brazos River Basin.** The TCEQ has seven continuous water quality monitors in the six-county area comprising much of the North Bosque-Leon watersheds, northwest of Waco. The monitors are part of the agency's Environmental Monitoring and Response System (EMRS). Several of the EMRS sites focus on
- **Lower Rio Grande.** During the 2009 and 2010 fiscal years, the TCEQ began expanding the existing CWQMN in the Lower Rio Grande Valley from two to eight stations. Three stations were deployed in fiscal 2009. Two additional stations

potential pollution sources from small geographic areas. The streambeds in these areas are normally dry and run only after significant rainstorms. By monitoring concentrations from areas above a monitor of just 1,000 to 1,500 acres—which have a limited number of potential sources for contamination—the agency can better monitor the runoff and target potential field investigations. Other EMRS sites evaluate larger watersheds that also provide alerts of elevated contaminants; however, targeting investigations may take additional effort (See “North Bosque Cleanup,” page 38.)



*Rio Grande*

were deployed in June 2010 when Hurricane Alex and subsequent flooding damaged or destroyed all existing CWQMN stations in the Lower Rio Grande Valley. The TCEQ plans to have all CWQMN stations in the Lower Rio Grande Valley operational by January 2011. These stations provide near real-time data to support Rio Grande watermaster decisions by monitoring water quality impacts from agricultural return flows from multiple sources in Texas and Mexico. These sites help the watermaster anticipate and lessen these water quality impacts.

Under an international treaty, both Texas and Mexico get annual allotments of water from the Rio Grande. Water taken by Mexico below the Falcon Dam eventually drains back to the Rio Grande upstream from the Anzalduas Dam, near Mission. The TCEQ continuously monitors the quality of reservoir water upstream of the dam near the El Morillo drain, where water draining off Mexican agricultural fields returns to the Rio Grande. These agricultural return flows sometimes have high concentrations of total dissolved solids (salts). When TCEQ monitors detect high saline levels, the agency requests that the International Boundary Water Commission (IBWC) release more water from the Falcon Reservoir to freshen the water in the Anzalduas Reservoir. If the IBWC confirms that Mexico failed to properly operate the drain to divert the salty return flows, the water released by the IBWC comes out of Mexico's allotment.

## Assessing Surface Water Data

Every two years, in even-numbered years, the TCEQ assesses water quality to determine which water bodies meet the surface water quality standards for their designated uses, such as contact recreation, support of aquatic life, or drinking water supply. The assessment is published on the TCEQ website and submitted to the EPA as the *Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d)*. The *Integrated Report* evaluates conditions during the assessment period and identifies the status of the state's surface waters in relation to the Texas Surface Water Quality Standards. The federal 303(d) List of Impaired Water Bodies identifies waters that do not regularly attain one or more of the standards and may require action by the agency to address the impairment. Data associated with 214 different water quality parameters are reviewed to conduct the assessment. These parameters include physical and chemical constituents, as well as biological communities.

Because of its large number of river miles, Texas can assess only a portion of its surface water bodies. The most important river segments and those considered at highest risk for pollution are assessed regularly. For the draft *2010 Integrated Report*, water quality data were evaluated from 4,320 sites on 1,214 water bodies.

## Restoring Water Quality

### Watershed Action Planning

Water quality planning programs in Texas are responding to the challenges of maintaining and improving water

quality by developing new approaches to addressing water quality issues in the state. Watershed Action Planning is an approach that emphasizes the role of partners and stakeholders, relies on sound technical information, and uses multiple tools to address varied circumstances. The goal is to implement an effective water quality planning strategy that optimizes the use of resources, has the involvement and support of stakeholders, and is accountable to Texans.

### Total Maximum Daily Load

The Total Maximum Daily Load (TMDL) Program is one of the agency's primary means of improving the quality of impaired surface waters. This program works closely with the Waste-water Permitting and Nonpoint Source programs, as well as other governmental agencies and regional stakeholders, during the development and implementation of TMDLs.

A TMDL is like a budget for pollution—it estimates the amount of a pollutant that a water body can assimilate daily and still remain clean enough to meet water quality standards. The budget, or load, is divided among the sources of pollution in the watershed. Then an implementation plan to reduce pollutant loads is developed.

A TMDL sets the target for reaching attainment. Fully restoring water quality is a long-term project that can take several years.

Since 1998, the TCEQ has been developing TMDLs to improve the quality of impaired water bodies on the 303(d) List, which identifies surface waters that do not meet one or more quality standards. In all, the program

has adopted 151 TMDLs for 91 water bodies in the state.

As of August 2010, the TMDL Program had restored water quality to attain standards for 28 impairments to surface waters. Overall, the program restored fishing uses, conditions for aquatic life, and proper salinity to 353 stream miles; made water suitable as a source of drinking water for 19,310 reservoir acres; and restored conditions for aquatic life in 12 estuary square miles.

From August 2008 to August 2010, the Commission adopted four TMDL reports (51 impairments) for the following projects: bacteria impairing the contact-recreation use in Buffalo and Whiteoak bayous and tributaries, Clear Creek and tributaries, and Greens Bayou and tributaries; and dissolved oxygen impairing the aquatic-life use in upper Oyster Creek.

**Bacteria TMDLs**

Bacteria from human and animal wastes can indicate the presence of disease-causing microorganisms that pose a threat to public health. People who swim or wade in waterways with high concentrations of bacteria risk contracting gastrointestinal illnesses. High bacteria concentrations can also affect the safety of oyster harvesting and consumption.

Of the 585 impairments listed for surface water segments in Texas, about half are for bacteria impairments to recreational water uses. About 52 percent of these recreational impairments have either TMDLs or use-attainability analyses under way, scheduled, or approved.

Much of the focus the last two years has been on addressing the bacterial

impairments in the Houston metropolitan area. By August 2010, the TCEQ adopted 35 TMDLs and proposed an additional 26 in this area, representing about 21 percent of the contact-recreation impairments.

For another 31 percent of bacteria impairments, the TMDL Program is developing TMDLs or the Water Quality Standards Program is coordinating the collection of additional data (recreational use-attainability analyses) to determine whether a revision to the standards is needed in lieu of a TMDL. The Texas State Soil and Water Conservation Board (TSSWCB) has responsibility for addressing water bodies affected by agriculture and silviculture.

The TCEQ’s TMDL Program is coordinating with the TSSWCB to develop TMDLs or watershed protection plans for bacteria impairments in areas where the primary sources are believed to be from agriculture or silviculture. The TCEQ proposed revisions of the water quality standards to the EPA in summer 2010. Some of the revisions are designed to evaluate and more accurately assign appropriate recreational uses of the state’s water bodies. If the recreational standard for a segment

There are a variety of ways the TCEQ can address water impairments. This particular example is for projects addressing bacteria impairments. Numbers are from the 2008 Integrated Report (303(d) List), which is updated every two years.

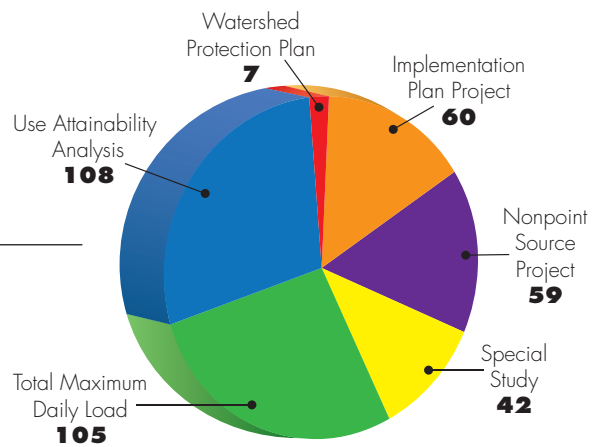
is changed due to these revisions, this could affect the scheduling of some bacteria TMDLs and the placement of segments on the 303(d) List.

**Mercury Impairments**

The draft 303(d) List for 2010 identifies 75 assessment units in 24 water bodies that are impaired due to mercury in fish tissue. Reducing the mercury concentrations in fish tissue is not readily accomplished through a standard TMDL process. Much of the mercury is airborne and can originate outside the state. Also, the physical and chemical processes that affect bioaccumulation of mercury in fish are not fully understood.

At the direction of the Commission, staff formed the Advisory Group on Mercury-Impaired Waters in 2008 to study how to best approach the state’s mercury impairments. The advisory group’s recommendations were

**Addressing Water Impairments: Projects for Bacteria**



presented to the Commission in August 2009. The information gathered and discussed by the group, as well as input received from group members, indicate that additional coordination and cooperation are needed to determine the most effective way to reduce mercury impairments in Texas. Information from outside of Texas indicates that most states are waiting before they pursue either a TMDL or an alternate strategy such as a comprehensive mercury reduction program.

The TCEQ will continue to participate in national air and water programs and initiatives related to mercury, and will urge the EPA to initiate international discussions on mercury-control options. The TCEQ will also continue to participate in the Gulf of Mexico Alliance and work with other Gulf states to address mercury impairments in Gulf Coast marine waters. In conjunction with recent revisions to the Texas Surface Water Quality Standards, the TCEQ adopted a mercury criterion of 0.7 parts per million (ppm) in fish.

### **Bay and Estuary Programs**

Plans for comprehensive conservation management of Galveston Bay and the Coastal Bend bays were established in the 1990s and included a broad-based group of stakeholders and bay user groups. These plans are implemented by two different organizations: the Galveston Bay Estuary Program (GBEP), which is a program of the TCEQ, and the Coastal Bend Bays and Estuaries Program (CBBEP), which is managed by a nonprofit entity established for that purpose. The TCEQ partially funds the CBBEP.

#### ***The Galveston Bay Estuary Program***

The GBEP provides ecosystem-based management that strives to balance economic and human needs with available natural resources in Galveston Bay and its watershed. Toward this goal, the program fosters cross-jurisdictional coordination among federal, state, and local agencies and groups, and cultivates diverse, public-private partnerships to implement projects and build public stewardship. The GBEP holds a “State of the Bay” symposium every two to three years, and is active in public outreach, giving presentations to civic groups, nonprofits, schools, and governmental organizations.

GBEP priorities include conserving wetlands and other valuable coastal habitats, addressing nonpoint sources of pollution, managing invasive species, and protecting public health by monitoring the safety of bay seafood.

Leveraging more than \$14 million in private, local, and federal partner contributions, the GBEP completed 29 projects in the last two years. Habitat conservation projects protected and restored 3,100 acres of wetlands and



*Photo courtesy TPWD*

other important coastal habitats, and controlled the Brazilian pepper tree and other invasive species on Galveston Island. The program also coordinated the development and implementation of stakeholder-based watershed protection plans to help address impaired and threatened water bodies, and provided financial and technical assistance to local groups for community-based marsh restoration, debris cleanups, and outreach and education.

In 2009, as part of a collaborative team of public and private partner organizations, the GBEP received the Coastal America Partnership Award—the only environmental award of its kind given by the president of the United States—for its efforts to protect the most important colonial water bird rookery on the upper Texas coast: North Deer Island. The GBEP initiated the nine-year project to stabilize the erosion that was destroying the island’s shoreline, endangering the habitat of many bird species, and threatening to diminish Galveston Bay’s commercial and recreational fishing industries, worth \$3 billion a year. The project also won the prestigious EPA Gulf of Mexico Program Gulf Guardian Partnership Award.

#### ***The Coastal Bend Bays and Estuaries Program***

During the 2009 and 2010 fiscal years, the CBBEP implemented 53 projects, including habitat restoration and protection in areas totaling 4,119 acres. Based in the Corpus Christi area, the CBBEP is a voluntary partnership effort working with industry, environmental groups, bay users, local governments, and resource managers to improve the

health of the bay system. In addition to receiving program funds from local governments, private industry, the TCEQ, and the EPA, the CBBEP seeks funding from private grants and other governmental agencies. In the last two years, the CBBEP secured more than \$3 million in additional funds to leverage TCEQ funding.

CBBEP priority issues—focusing on human uses, freshwater inflows, maritime commerce, habitat loss, water and sediment quality, and public education and outreach—are identified in the Coastal Bend Bays Plan. The CBBEP has recently become more active in water and sediment quality issues throughout the program areas. It is a goal of the CBBEP to address 303(d) List segments and bring them into compliance with state water quality standards.

Other areas of focus:

- **The need to maximize the ecological benefits of the limited amounts of freshwater reaching the estuary.** Efforts are under way to provide for the direct input of freshwater into the most important areas within the Nueces River delta. This area is critically important for the successful production of shrimp and fish. In addition, the CBBEP hopes to restore the function and productivity of thousands of acres of brackish marsh habitat.
- **Impaired water bodies and TMDLs in the Oso Creek and Oso Bay watershed.** An investigation of bacteria sources in the upper Oso Creek watershed is ongoing. A project to improve on-site sewage facilities in the Tierra Grande colonia has been completed. Twenty-one new or non-functioning facilities

were installed or replaced, respectively, and 10 systems were repaired.

- **Hypoxia.** A study of hypoxia, the oxygen depletion known to occur each summer in the southeast corner of Corpus Christi Bay, was performed to gain more information and to begin exploring the potential role of nutrients. It appears that salty water driven by prevailing winds into Corpus Christi Bay from the Laguna Madre and Oso Bay is the main cause of stratification, and that dissolved oxygen is quickly depleted from the bottom layer of water, leading to the hypoxia.

### Nonpoint Source Program

The Nonpoint Source (NPS) Program administers the provisions of Section 319 of the federal Clean Water Act to control urban and non-agricultural NPS pollution. Section 319 authorizes grant funding for states to develop projects and implement NPS management strategies. The TCEQ manages the NPS categorical grants to implement the goals identified in the Texas NPS Management Program. The management program must be approved by the TCEQ, the governor, and the EPA. The NPS Annual Report tracks the progress in meeting the long- and short-term goals of the management program.

The NPS Program annually applies for funding from the EPA. The award is split between the TCEQ, to address urban NPS pollution, and the TSSWCB, to address agriculture and silviculture NPS pollution. About \$4.5 million is awarded to the TCEQ each year from the federal government. The 319 grant provides federal funds for 60 percent

and requires a 40 percent non-federal match. In fiscal 2009, \$4 million was matched with \$2.7 million, for a total of \$6.7 million.

The TCEQ solicits applications to develop projects that contribute to the NPS Program's management plan. Usually 20 to 25 applications are received annually. Then the projects are reviewed and ranked. Because the number of projects funded depends on the amount of each contract, the number fluctuates from year to year. In fiscal 2009, 12 projects were selected, and seven projects were selected in fiscal 2010. There are limitations, however, on the types of projects funded. Half of the money awarded from the federal government must be used to fund the development and implementation of watershed protection plans and TMDL implementation plans.

The NPS Program also administers the provisions of Section 604(b) of the federal Clean Water Act. These funds are derived from State Revolving Fund appropriations under Title VI of the act. Using a legislatively mandated formula, money is passed through to the councils of governments for planning purposes. In fiscal 2010, the program applied for approximately \$300,000 in funding from the EPA.

### North Bosque Cleanup

The TCEQ is meeting most of its goals in the North Bosque River watershed as various cleanup strategies continue to be implemented.

High levels of nutrients have contributed to an overabundance of algae and other aquatic plants. Excessive growth of algae can lead to taste and



odor problems in drinking water and to low dissolved oxygen, which can kill fish. The primary targeted pollutant has been phosphorus, a nutrient found in animal waste and in discharges from wastewater treatment plants.

The North Bosque River empties into Lake Waco, which is the main source of drinking water for about 200,000 people in and around Waco. The upper half of the watershed is a hub of commercial dairy operations, with an estimated 55,000 dairy cows.

- In 2001, the TCEQ developed a TMDL project for each segment of the North Bosque River to ultimately lower phosphorus levels. An implementation plan, containing both regulatory and voluntary measures, led to the following course of action: Stephenville and Clifton upgraded their wastewater treatment plants, reducing the concentration of phosphorus in wastewater effluent that empties into the river.
- A compost program met its goal of removing at least half the solid cattle manure from dairy CAFOs (concentrated animal feeding operations, with 200 or more head of cattle). Incentives were offered for companies to turn cow manure into compost, which was then sold to landscapers. About 650,000 tons of dairy manure were collected from the North Bosque watershed from 2002 to 2006, when the incentives expired. Of that amount, 329,000 tons were exported in the form of compost, representing the removal of 740 tons of phosphorus. Composting facilities are still operating and removing manure from the watershed.

- The TCEQ's Environmental Monitoring Response System (EMRS), which performs continuous water quality monitoring, operates at seven locations in the watershed. The EMRS alerts regional staff when phosphorus concentrations rise to a designated level, requiring immediate investigation. The EMRS also targets "microwatersheds" so that investigators have smaller areas to check when alerts are issued. (See "Continuous Water Quality Monitoring," page 34.)
- The TCEQ boosted enforcement efforts to ensure compliance. The agency's Stephenville office conducts annual inspections of each CAFO and is available seven days a week to respond to pollution complaints.
- The TCEQ developed rules requiring individual permits for CAFOs in the watershed. These require comprehensive nutrient management plans, which range from feed management to land application of animal waste and include enhanced inspection, testing, and recordkeeping. Dairy CAFOs must have larger retention-control structures to capture rainfall from their production areas. The CAFOs also must satisfy certain education requirements to ensure that operators and staffers are trained in dairy waste management.

Meanwhile, the agency and its partners monitor water quality every two weeks to obtain information before and after pollution-reduction measures are put in place. Also, the TCEQ hired researchers to refine the TMDL models used to simulate conditions in the river. Results from the refined model are

considered to be virtually the same as the initial model. TCEQ staff interprets the re-analysis to indicate that no "mid-course correction" is needed, so current implementation efforts should continue as originally planned.

## **Edwards Aquifer Protection Program**

As a karst aquifer, the Edwards Aquifer is one of the most permeable and productive groundwater systems in the United States. The regulated portion of the aquifer crosses eight counties in south central Texas, serving as the primary source of drinking water for about 1.7 million people. This replenishable structure also supplies water for farming and ranching, manufacturing, steam electric power generation, mining, and recreation.

The aquifer's pure spring water also supports a unique ecosystem of aquatic life, including a number of threatened and endangered species.

Because of the unusual nature of the aquifer's geology and biology, and its role as a primary water source, the TCEQ requires a water pollution abatement plan for any regulated activity proposed within the recharge, contributing, or transition zones. Regulated activities include construction, clearing, excavation, or anything that alters the surface or possibly contaminates the aquifer and its surface streams. Best management practices must be used during and after construction to treat storm water in the regulated areas.

Each fiscal year, the TCEQ receives about 550 plans to be reviewed by staff located in the Austin and San Antonio regional offices. In 2006, the agency

goal for staff technical review of each aquifer protection plan was reduced from 90 to 60 days. Staff continue to meet this goal by requiring all plans to be administratively complete before staff begin reviewing the technical requirements. In addition to reviewing plans for development within the regulated areas, TCEQ staff conduct compliance investigations to ensure that best management practices are appropriately utilized and maintained. Additionally, staff conduct site assessments to ensure that aquifer recharge features are adequately identified for protection prior to the commencement of construction activities.

### Drinking Water Standards

For more than a decade, the EPA has been instituting major changes that



require public water systems to remove disease-causing microorganisms from surface waters, reduce arsenic and radionuclides from groundwater aquifers, and enact stricter controls regarding the chemical by-products created when chlorine is used to disinfect water. These new standards have been integrated into rules by the TCEQ and passed on to public water systems.

Of the 6,900 public water systems in Texas, about 4,700 are community water systems, mostly operated by cities. The remainder are non-community water systems—such as those at schools, churches, factories, businesses, rest stops, and state parks.

The number of public water systems meeting the state's drinking water standards totals 6,573. These systems serve about 96 percent of Texans.

All public water systems are required to monitor the levels of contaminants present in the treated water and to verify that each contaminant does not exceed its maximum contaminant level (MCL), action level (AL), or maximum residual disinfection level (MRDL) established by the EPA. Based on the EPA's risk assessments, the MCL, AL, or MRDL is the highest level at which a contaminant is considered acceptable in drinking water for the protection of public health.

In all, the EPA has set standards for 102 contaminants in the major categories of microorganisms, disinfection by-products, disinfectants, organic and inorganic chemicals,

and radionuclides. The microorganism that is of most importance is coliform bacteria, particularly fecal coliform. For Texas, the most common chemicals of concern are disinfection by-products, arsenic, fluoride, and nitrate.

The TCEQ continues to implement the requirements of the federal Long Term 2 Enhanced Surface Water Treatment Rule, which addresses Cryptosporidium removal and inactivation in surface water, and the Groundwater Rule, which addresses viruses in groundwater.

Additionally, the TCEQ is in the process of completing the initial evaluations of chemical levels in the distribution systems of all community and non-transient community water systems, which is required by the federal Stage 2 Disinfectants and Disinfection By-products Rule. Disinfection by-products are potentially carcinogenic chemicals that are formed when a disinfectant such as chlorine reacts with naturally occurring organic carbon. About 125 systems in Texas are out of compliance with the Stage 1 Disinfectants and Disinfection By-products Rule, and the TCEQ estimates that perhaps twice this number will have difficulty complying with the Stage 2 rule.

Federal rules also apply to arsenic, an element that dissolves from rocks into water supplies. Citing studies that link long-term arsenic exposure to cancer, the EPA established a standard of 10 parts per billion, which replaced the old standard of 50 ppb. About 115 water systems in Texas continue to have difficulty complying with the arsenic standard, which took effect in 2006.

The EPA has also established new rules that revise some of the

requirements for lead and copper in drinking water. The new federal rule is intended to address the issue of lead and copper, which can leach into drinking water from pipes or solder under corrosive conditions, and for which the EPA has identified potential adverse impacts to human health. Federal rules for lead and copper have been in place since 1991. The new revisions to the federal Lead and Copper Rule add changes related to monitoring locations and frequency, compliance calculations, consumer notification and public education, and pipe materials and corrosion-control strategies.

Implementing new regulations has been difficult and often costly, especially for smaller systems. The TCEQ has been proactive by alerting water systems to the new rules and their impact on water systems. The agency also manages an expense-reimbursement grant that reimburses costs for operator licenses and training at systems serving fewer than 3,300 people.

To deal with the new federal regulations, the TCEQ makes use of outsourcing. More than 41,000 water samples are analyzed each year just for chemical compliance. Most of the chemical samples are collected by contractors, then submitted to a certified laboratory. The analytical results are sent to the TCEQ and the public water systems.

The agency also hires university students to help with customer service and data review.

For educational purposes, the TCEQ holds a free annual symposium on public drinking water. The Austin conference draws about 700 attendees.

If a public system's drinking water has levels of contaminants that exceed

the regulatory MCLs or treatment technique requirements, the system must notify its customers. Community public water systems are required to provide consumers with an annual report on the quality of their drinking water.

These Consumer Confidence Reports (CCRs) offer basic information, such as the type and source of water used by the local system, and an update of the system's compliance status with drinking water regulations. The EPA has determined that failure to deliver any CCR is a significant instance of noncompliance, subject to fines and penalties.

If a public system fails to have its water tested or fails to report test results correctly to the TCEQ, this constitutes a monitoring or reporting violation. When a public water system has significant or repeated violations of state regulations, the case is referred to the TCEQ's enforcement program.

### Utility Services

Public water systems are required to submit engineering plans and specifications for new water systems or for improvements to existing systems. The plans must be reviewed by the TCEQ before construction can begin. In fiscal 2009, the agency performed compliance reviews of 1,606 engineering plans for public water systems. In fiscal 2010, the TCEQ completed 1,705 such compliance reviews.

Investor-owned utilities (IOUs) and water supply corporations (WSCs) are also required to obtain certificates of convenience and necessity (CCNs) before providing service. A CCN is a TCEQ authorization that allows a retail public utility to furnish retail water

or sewer utility service to a specified geographic area. IOUs must also have an approved tariff that includes a rate schedule, service rules, an extension policy, and a drought contingency plan.

The TCEQ has original jurisdiction over the rates and services of IOUs, and has appellate jurisdiction over the rates of WSCs, water districts, and out-of-city customers of municipally owned retail public utilities.

In fiscal 2009, the TCEQ completed 287 CCN-related application reviews and 125 rate-related application reviews. In fiscal 2010, the agency completed 230 CCN-related application reviews and 129 rate-related application reviews.

The agency strives to ensure that all water and sewer utility systems have the capability to operate successfully. The TCEQ contracts with the Texas Rural Water Association (TRWA) to assist utilities by providing them with financial, managerial, and technical expertise. Approximately 400 assignments for assistance to utilities were made through this contract in fiscal 2009, as were over 600 in fiscal 2010. The TCEQ also contracts with the Bureau of Economic Geology at the University of Texas to provide a higher level of assistance to certain water systems experiencing compliance problems.

To further maximize resources, the agency encourages water and sewer systems to consolidate regionally. The consolidation of two or more systems can lead to better utility service and lower rates. Toward this end, the TCEQ and the TRWA conducted about 23 regional consolidation assessments in fiscal 2009 and 17 in fiscal 2010.

In addition to contractor assistance, the TCEQ also certifies utilities as

regional providers. With this certification, utilities are eligible for tax-exempt status for utility-system construction and improvements. There have been 357 utilities certified as regional providers.

The TCEQ also has jurisdiction over the creation of, and bond reviews for, water districts—such as municipal utility districts, water control and improvement districts, and freshwater supply districts.

The agency reviews the creation of applications for general-law water districts and bond applications for water districts to fund water, sewer, and drainage projects. In fiscal 2009, the TCEQ reviewed about 205 major and 390 minor water district applications. In fiscal 2010, the agency reviewed approximately 225 major and 368 minor water district applications.

### **Storm Water Program**

The Texas Pollutant Discharge Elimination System (TPDES) was created in 1998 when the EPA transferred authority of the National Pollutant Discharge Elimination System for water quality permits in the state to Texas. This included storm water permits.

As the permitting authority, the TCEQ has renewed the federal permits as they expired and developed new storm water permits to conform to updated federal and state requirements. A permittee can obtain authorization for storm water discharges through an individual or general permit.

The TCEQ receives thousands of applications a year for coverage under TPDES storm water general permits. With the growing workload, the agency has applied ePermitting (see

“Access to TCEQ Information Expands,” in Chapter 1) to some of these permitting and reporting functions, and has outsourced the management of incoming paper Notices of Intent (NOIs), Notices of Termination (NOTs), and No Exposure Certifications (NECs).

Permits are issued under the categories of industrial, construction, and municipal.

### **Industry**

The multi-sector general permit, developed in 2001, regulates storm water discharges from industrial facilities. The permit groups similar industrial activities into sectors, with requirements specific to each of 29 sectors. Facilities must develop and implement a storm water pollution prevention plan, conduct regular monitoring, and use best management practices to reduce the discharge of pollutants in storm water. The permit also contains limitations for certain discharges—specific pollutants and concentrations that cannot be exceeded. The TCEQ receives about 140 NOIs and NOTs a month for industrial facilities. This general permit was renewed and amended in August 2006 and is in the process of being renewed and amended again. The revised permit will be issued in August 2011.

### **Construction**

The construction general permit was developed in 2003 for storm water runoff associated with construction activities, which includes clearing, grading, or excavating land at building projects such as homes, schools, roads, and businesses. The size of a construction project determines the level of

regulation. Construction disturbing five or more acres is labeled a “large” activity, while construction disturbing one to five acres is termed “small.”

Smaller projects are also regulated if they are a part of a larger common plan of development or sale that is more than one acre in size. Construction operators at large sites are required to apply for coverage under the general permit by filing an NOI. Operators at small sites must meet permit requirements but are not required to submit an NOI. The TCEQ receives about 450 NOIs and 350 NOTs a month for large construction activities. This general permit was re-issued in February 2008 and will expire in 2013. When the permit is renewed in 2013, it will incorporate the new effluent guidelines for construction activities, including a requirement to comply with turbidity effluent limits for sites that are over 10 acres in size.

### **Municipal**

The TCEQ also regulates discharges from municipal separate storm sewer systems, or MS4s. This category applies to a citywide system of ditches, curbs, gutters, and storm sewers that collect runoff. It also includes other publicly owned systems, such as drainage from state roadways.

The TCEQ is responsible for renewing previously issued individual federal permits for discharges from medium and large MS4s. These systems are operated by cities and other public entities, such as the Texas Department of Transportation, in areas in which the 1990 census recorded 100,000 people or more. Thirty-three municipalities and other public

## Storm Water Permits

Activity	Number Affected		Applications Received (monthly average)	
	FY 2009	FY 2010	FY 2009	FY 2010
Industrial (facilities)	11,847	12,732	123	121
Construction (large sites)	11,453	13,402	443	419
MS4s (public entities)	403*	462*	1**	3**

\* MS4s under general permit.  
 \*\*Most MS4 applications are processed during the issuance (FY 2007) or renewal (FY 2012) of the general permit. The numbers presented in this table are reflective of interim years, and do not reflect the workload associated with this program.

entities fall into this category. The TCEQ has issued 26 individual MS4 permits to medium and large MS4s. Some of these entities are permitted together under one permit.

In August 2007, the TCEQ issued a general permit regulating small MS4s (populations of less than 100,000 in 1990) in urbanized areas. This permit requires a regulated MS4 operator to develop and implement a storm water management program that includes minimum plan requirements for public education and public participation, as well as minimum control measures for illicit discharge detection and elimination, construction storm water runoff control, post-construction storm water management, and pollution prevention and good housekeeping. There are 462 small cities, districts, and other public entities that have submitted NOIs for authorization or waivers under this general permit.

### Water Availability

#### Water Rights

Water flowing in Texas creeks, rivers, lakes, and bays is state water. The right to use it may be acquired through ap-

propriation via the permitting processes established in state law.

Each permit application is reviewed by the TCEQ for administrative and technical requirements to evaluate the proposed project's likely impact on matters such as other water rights, fish and wildlife habitat, conservation, water availability, and public welfare.

In fiscal years 2009 and 2010, the agency processed 1,353 water-rights actions, including new permits and amendments, water supply contracts, and ownership transfers.

As more surface water rights are issued, available water supplies diminish. Because of this, some cities are turning to indirect reuse of water as a source of supply. With indirect reuse, a city takes effluent that has been discharged into a stream, re-diverts the wastewater, and reuses it for irrigation or some other purpose. This type of project requires a bed-and-banks permit.

In a related matter, the TCEQ has participated for several years in instream flow studies in select river basins. The data is used to improve the scientific basis for special conditions placed in water right permits to maintain instream uses and habitats. The

current focus is on the new, stakeholder-driven process to establish instream flow and freshwater inflow standards for each basin.

### Groundwater Management

Almost 60 percent of the water used in Texas comes from groundwater. The state's preferred method of managing this resource is through groundwater conservation districts (GCDs).

GCDs are authorized to adopt rules and permit water wells as part of their overall charge to manage and protect the groundwater in their jurisdiction by providing for conservation, recharge, and waste prevention. Most GCDs are created by special acts of the Legislature, but two other avenues exist: landowners may petition the TCEQ to create a GCD, or may petition an existing GCD to add property.

In fiscal years 2009 and 2010, Texas gained five GCDs—encompassing all or part of 14 counties. This raised the statewide total to 98 GCDs, covering all or part of 174 counties. Legislation passed in 2009 created two additional GCDs, subject to voter confirmation. Creation of one of those single-county GCDs was defeated by the voters in May 2010; the other was not presented to the voters during fiscal 2009 or 2010.

GCDs are created within priority groundwater management areas (PGMAs). The TCEQ orders a PGMA designation when an area is experiencing critical groundwater problems or is expected to do so within 25 years. These problems include shortages of surface water or groundwater, land subsidence resulting from groundwater

withdrawal, or contamination of groundwater supplies.

Once an area is designated a PGMA, landowners have two years to get a GCD created. Otherwise, the TCEQ is required to create a GCD or to recommend that the area be added to an existing district.

In October 2008, the TCEQ designated the Central Texas Trinity Aquifer PGMA for the counties of Bosque, Coryell, Hill, McLennan, and Somervell, and recommended that a regional GCD be created for the five-county area. Since then, all of the counties have created new GCDs or joined an existing one. Of note in this PGMA is that a special legislative act requires the Southern Trinity GCD in McLennan County to expand by one county before Sept. 1, 2011, or be dissolved by the TCEQ on that date.

In February 2009, the TCEQ designated the North-Central Texas Trinity and Woodbine Aquifers PGMA to include Collin, Cooke, Dallas, Denton, Ellis, Fannin, Grayson, Hood, Johnson, Montague, Parker, Tarrant, and Wise counties, and recommended an eight-county GCD for the counties without one. Dallas is the only county in the PGMA that has not established or joined a GCD; and a special legislative act that was passed in 2009 prohibits TCEQ action to establish a GCD in the PGMA prior to Sept. 1, 2011.

The TCEQ has also initiated GCD creation within the PGMA that were designated in 1990 under different statutory processes. In February 2010, the TCEQ issued an order recommending that all of the Dallam County PGMA be added to the North Plains GCD. An election to determine this addition is

scheduled for November 2010. The TCEQ executive director recommended in June 2010 that the agency create a new GCD for the Comal, Hays, and Travis county portions of the Hill Country PGMA. This administrative procedure—as well as the agency-initiated GCD creation process for Swisher County and parts of Briscoe, Midland, and Upton counties—are ongoing.

The TCEQ is responsible for enforcing adoption of a GCD management plan, as well as the approval and implementation of Groundwater Management Area (GMA) joint planning goals. The agency is actively monitoring and ensuring GCD compliance to meet management plan adoption and re-adoption requirements. The TCEQ dissolved one GCD in 2009 for violating these provisions.

In 2009, the Legislature directed the TCEQ to conduct a study of the characteristics and impacts on groundwater planning in the Carrizo-Wilcox Aquifer. Subsequent discussions with Senate members clarified that this study should be completed and available for use by the upcoming Legislature in 2011. In fiscal 2010, the TCEQ entered into a research contract with the University of Texas Bureau of Economic Geology to identify and involve Carrizo-Wilcox Aquifer groundwater managers, planners, and users; to collect and review a wide variety of groundwater management and planning data and information; and to develop datasets and conduct a series of analyses regarding current activities related to groundwater management and protection. The contract requires a final draft to be ready for the Legislature by Feb. 1, 2011, and a final report by June 30, 2011.

The Carrizo-Wilcox Aquifer study involved significant stakeholder input in fiscal 2010. During fiscal 2011, the study will seek to identify and understand the following: the quality and quantity of scientific information that has been used by groundwater conservation districts managing the aquifer, the compatibility of different management approaches in place for the aquifer, and stakeholders' leading groundwater management and protection issues and concerns.

## **Waste Management**

### **Low-Level Radioactive Waste Disposal**

The TCEQ has issued a license to Waste Control Specialists LLC (WCS) of Dallas, authorizing the operation of a low-level radioactive waste (LLRW) disposal facility in Andrews County. Prior to issuing the license, the TCEQ set in motion a series of application reviews and analyses to determine whether the planned facility meets the complex and stringent environmental, safety, and public health standards established by law and agency rules. Following completion of the technical review and a condemnation proceeding on remaining mineral interests, TCEQ Radioactive Material License R04100 was issued to WCS on Sept. 10, 2009. The license complies with all of the pertinent laws and agency rules, and requires the LLRW disposal facility to operate in a manner that is safe to the public, facility workers, and the environment.

The license authorizes the disposal of both compact and federal LLRW. LLRW generated in the Texas

LLRW Compact, which is composed of the states of Texas and Vermont, will be disposed in the compact waste disposal facility. A separate, adjacent facility will accept LLRW and mixed waste (waste that contains both a hazardous and a radioactive constituent) from federal facilities.

The types of wastes that will be disposed in the Texas “compact” facility generally include discarded paper, plastic, glass, and metals that have been contaminated by or contain radionuclides that meet the classification of LLRW under state and federal regulations. These wastes are commonly generated by nuclear power plants, diagnostic and therapeutic nuclear medical facilities, industry, universities, and state governments. Waste sent to the adjacent federal facility could include contaminated soil and debris from federal facilities engaged in nuclear weapons research and production, as well as more concentrated forms of mixed radioactive and hazardous wastes. Neither disposal facility is authorized to accept high-level radioactive wastes, such as spent nuclear fuel rods or weapons-grade plutonium.

By law, the TCEQ is charged with the responsibility of setting rates for

the disposal of LLRW at the “compact” facility. WCS submitted a waste disposal rate application to the TCEQ for review. After processing the WCS application, the TCEQ will recommend a rate that is “reasonable and necessary” to protect Texas and Vermont compact states’ businesses and services. LLRW compact generators will be able to contest this rate at the State Office of Administrative Hearings (SOAH). Upon completion of this process, the recommended rates will be adopted by TCEQ rule.

In accordance with the license, the agency was reviewing final construction documents at the end of fiscal 2010. WCS may not commence construction until written approval of the construction documents is provided by the TCEQ.

### **Radioactive By-product Material Disposal**

On May 29, 2008, the TCEQ issued a license to WCS for a by-product material disposal facility, also in Andrews County. By-product material that is authorized for disposal is defined as tailings or wastes produced by or resulting from the extraction or con-

centration of uranium or thorium from ore. Since that time, the licensee has constructed two cells of the disposal facility. WCS began construction of the by-product material disposal facility in the fall of 2008 and completed it in October 2009. Disposal of 3,776 waste canisters from the Fernald site—a closed U.S. Department of Energy uranium-processing facility in Ohio—began immediately and was completed before the end of 2009.

In accordance with a provision of its radioactive material license, WCS is currently limited to the disposal of only Fernald by-product material, and continues work to comply with license conditions that will help ensure the ongoing safe operation of the site. Principal among the license conditions is the requirement to monitor groundwater in the near-surface formation that could possibly impact waste in the facility or the performance of the engineered cap system after closure. The TCEQ is committed to monitoring WCS’s sampling results and facility operations to help ensure worker safety, public health and safety, and protection of the environment.



## Underground Injection Control of Radioactive Waste

At *in situ* uranium mining sites in South Texas, the TCEQ regulates disposal of by-product wastewater material generated on-site through the permitting of and enforcement activities on Class I injection wells under the agency's federally authorized Underground Injection Control (UIC) Program. Each uranium mining site has one or more permitted Class I UIC wells for disposal of by-product wastewater material that is generated on-site—consisting principally of excess water produced from the *in situ* mining and uranium recovery process, and groundwater produced in restoration activities of the mined aquifer to water quality consistent with pre-mining conditions. The subject mining projects with on-site permitted Class I UIC wells include Mesteña Uranium's Alta Mesa site; South Texas Mining Venture's La Palangana and Hobson sites; and Uranium Resources' Kingsville Dome, Rosita, and Vasquez sites.

## Superfund Program

Superfund is the name given to the federal program that enables state and federal environmental agencies to take care of properties contaminated by hazardous substances. Under the program, the EPA has the legal power and resources to clean up sites where contamination poses the greatest threat to human health and the environment.

Texas either takes the lead or supports the EPA in the cleanup of sites in the state that are on the National Priorities List (NPL), which is the EPA's ranking of the most serious Superfund sites.

In addition, Texas has a state Superfund program to deal with sites that are ineligible for the federal program. This program is the state's safety net for dealing with contaminated sites. The TCEQ uses state funds for cleanup operations at sites on the state Superfund registry if no responsible parties can or will perform the cleanup. The TCEQ also takes legal steps to recover the money spent.

After a site is proposed for the state Superfund program, the responsible party or the TCEQ proceeds with a remedial investigation, during which the agency collects information to determine the extent and nature of the contamination. A feasibility study follows to identify possible cleanup remedies. A public meeting is held locally to explain the proposed remedy and to take comments. After reviewing the public comments, the TCEQ selects a remedial action.

Projects entering the Superfund program are prioritized by risk, with the most hazardous placed at the top of the list. Locating the responsible parties and resolving legal matters, such as access to the site, consumes time and resources. It can take several years for sites to be fully investigated and cleaned up, though the TCEQ will expedite its response when necessary.

In fiscal 2009, Texas had a total of 108 sites in the state and federal Superfund programs, including additional sites proposed for the state Superfund registry in Brazoria County.

In fiscal 2010, three additional sites were proposed for the state and federal Superfund registries in Ector, Howard, and Kaufman counties. At the same time, one site in Brazoria County was

deleted from the state registry, leaving a total of 110 sites. Cleanup at two federal NPL sites and at three state registry sites was completed in 2010.

## Petroleum Storage Tanks

The contamination of groundwater and soil due to leaking petroleum storage tanks (PSTs) is an environmental problem known statewide. The TCEQ oversees PST cleanups and reimburses eligible parties that have met all statutory deadlines for reimbursement.

Since the program began in 1987, the TCEQ has received reports of more than 25,912 leaking PST sites—primarily at gasoline stations. Of these, cleanup had been completed at 23,031 sites by the end of fiscal 2009, and corrective action was under way at another 2,612 sites. By the end of fiscal 2010, cleanup had been completed at 23,637 sites and corrective action was under way at 2,275 sites.

Of the total reported PST releases, about one-third have affected groundwater.

Often, leaking PSTs are discovered when a tank owner or operator upgrades or removes tanks, when an adjacent property owner is affected, or when the tank leak-detection system signals a problem. Sometimes leaks are detected during construction or utility maintenance. Most tank systems that begin leaking do so because they have corroded, were installed incorrectly, or were damaged during construction or repairs. Contamination can also result from repeated spills when vehicles are overfilled with fuel.

Tank owners and operators are required to clean up releases from



leaking PSTs, beginning with a site assessment, which may include drilling monitoring wells and taking soil and groundwater samples. The TCEQ oversees the remediation until cleanup is completed.

The PST Remediation Fund has paid for the vast majority of PST cleanups, with expenditures topping \$1 billion. Revenue comes from a fee on the delivery of petroleum products removed from bulk storage facilities.

Under state law, leaking tanks discovered and reported after Dec. 23, 1998, are not covered under the remediation fund. These subsequent cleanups are paid for by the owners' environmental liability insurance or other financial assurance mechanisms, or from their own funds.

To avoid releases, tank owners and operators are required to prop-

erly operate and monitor their storage tank systems, install leak-detection equipment and corrosion protection, and take spill and overflow prevention measures. This applies to active and inactive PSTs.

The PST State Lead Program continues to clean up sites at which the responsible party is unknown, or is unwilling or financially unable to do the work. State and federal funds pay for the corrective actions. State statutes allow cost recovery from the current owner or any previous responsible owner.

The reimbursement program, which was extended in 2007, will not be available after Sept. 1, 2011.

Leading up to that sunset deadline, several milestones must be met for a responsible party to remain eligible. The agency requires implementation of

a corrective action plan or groundwater monitoring to demonstrate progress toward site closure. Eligible parties not completing all corrective actions by the deadline can apply to have their sites placed in the State Lead Program.

After the reimbursement program expires, the PST regulatory and State Lead programs will continue.

### Voluntary Cleanups

The Texas Voluntary Cleanup Program (VCP) provides incentives for pollution cleanup by releasing future property owners from liability once a piece of property is satisfactorily cleaned of contamination.

Since 1995, the program has provided regulatory oversight and guidance for more than 2,220 applicants and has issued more than 1,600 certificates of



completion for residential, commercial, and industrial properties.

In the last two years, the program received 127 applications and issued 213 certificates. Recipients of the certificates report that it helps with property sales, including land transactions that would not have otherwise occurred for fear of environmental liability.

Sites addressed under the Texas VCP range from the small, such as corner dry cleaners, to the large, such as the mixed-use development at the former Mueller Airport in Austin and the redevelopment of a former Montgomery Ward complex in Fort Worth.

The key is the liability release afforded to future property owners once the certificate is issued. The certificate insulates future owners from potential changes in environmental conditions, such as the discovery of previously unknown contamination or even future changes in cleanup levels. Most importantly, the certificate provides finality relating to environmental issues. If new contamination related to previous site activities were to be discovered, the former property owners would be sought to perform any required cleanup.

The VCP is funded by an initial \$1,000 application fee paid by each applicant. Costs beyond the initial fee are invoiced to the applicant on a monthly basis.

The TCEQ also implements the law providing liability protection to property owners whose land has been affected by contamination that migrated to their property from off-site.

The Innocent Owner/Operator Program relieves the eligible owner or operator from performing soil and groundwater investigation or cleanup

on their property. The “innocent owner certificate” is generally sought by landowners seeking to sell property.

The demonstration of innocence requires evidence of contamination on the property, verification that the contamination resulted from an off-site source, and confirmation that the applicant has not contributed to the contamination. Since 1997, the TCEQ has processed more than 600 of these applications and issued more than 400 certificates.

### Dry Cleaners

Since 2003, the TCEQ has been responsible for collecting fees for a remediation fund designed to help pay for the cleanup of contaminated dry cleaner sites. The fees come from the annual registration of facilities and drop stations, as well as from the sale of perchloroethylene and other dry cleaning solvents.



By the end of fiscal 2010, the agency had registered 1,455 dry cleaning facilities and 1,399 drop stations. In addition, there were 192 registered property owners and 26 distributors of dry cleaning solvents. Since 2004, approximately \$44 million was collected for the remediation fund.

The agency has received 211 applications for ranking. Of these, 181 were ranked and prioritized for corrective action. The ranking system determines scores for facilities based on factors that could affect human health or the environment.

Legislation in 2007 established registration requirements for property owners and preceding property owners who wish to claim benefits from the remediation fund, and authorized a lien against property owners and preceding property owners who fail to pay registration fees due during corrective action. In addition, the use of perchloroethylene is prohibited at sites where the agency has completed corrective action.

### Municipal Solid Waste Management

Texas has growing demands on its waste disposal facilities. That is why it is important to evaluate the statewide outlook for landfill capacity in the coming decades. The TCEQ's responsibility also involves working to reduce the overall amount of waste generated.

In fiscal 2009 (the most recent year with available data), Texans disposed of 31.3 million tons of municipal solid waste, a decrease of about 5.5 percent from the previous year. The per capita landfill disposal rate was about 6.9 pounds per day.

In fiscal 2009, Texas had 243 municipal solid waste landfills, including 207 that were open or newly permitted. Of that group, 190 were actively accepting waste. The smaller landfills—typically the arid exempt landfills—constituted about one-third of the landfills.

By the end of fiscal 2009, municipal solid waste capacity in the state stood overall at about 1.6 billion tons, representing nearly 50 years of disposal capacity. The resulting net increase from the statewide 2007 capacity was about 153.6 million tons (roughly 174.3 million cubic yards). More populous areas have been seeing a trend toward regional landfills serving larger areas. Less populous areas in West Texas continue to be served by small (less than 40 tons per day) arid exempt landfills that are operated by municipalities.

In an effort to facilitate regional and local solid waste planning initiatives,

such as addressing adequate landfill capacity, the TCEQ provides pass-through grants to each regional council of governments (COG). The planning initiatives are based on goals specified in each COG’s regional solid waste management plans, which are reviewed and approved by the TCEQ. Funding for the pass-through grants are provided through the municipal solid waste disposal fees paid to the state.

For the grant period of 2008 to 2009, grants totaling about \$14.7 million funded 466 local and regional solid waste projects. These projects included collection stations in underserved areas, reduce-reuse-or-recycle and organic waste management projects, education and outreach programs on responsible solid waste management, and programs to enforce laws against illegal dumping. Project priority is established using the regional plans, and each funded project must meet the goals and objectives identified in the COG’s regional solid waste management plans.

Regional solid waste grants and activities of the last two years are detailed in a separate report, *Regional Councils of Governments and the Municipal Solid Waste Grant Program, FY 2008–2009: Report to the Texas Legislature*, published in cooperation with the TCEQ by the 24 COGs and the Texas Association of Regional Councils.

## Environmental Assistance

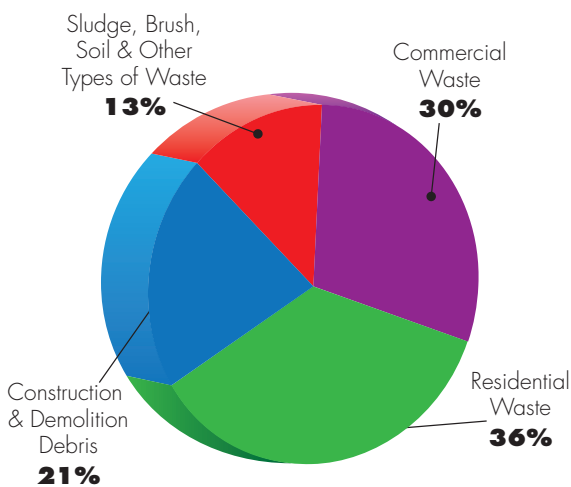
### Voluntary Programs

The TCEQ uses technical assistance, education, and pollution prevention programs to encourage actions that result in environmental improvements. In recent years, the Small Business and Environmental Assistance Division has taken many of these programs in a new direction to better focus on agency priorities and to be more closely aligned with agency regulatory systems.

TCEQ staff concentrated on offering site assistance visits, which help companies identify ways to reduce environmental risks and save money. In fiscal years 2009 and 2010, the agency provided direct compliance assistance to more than 12,000 small businesses and local governments; of those, over 900 received one-on-one assistance at their business or facility sites. Also, more than 450 small businesses and local governments took advantage of the Compliance Commitment Program. This program allows participants to undergo a site visit, during which a consultant contracted by the TCEQ uses a checklist to identify any environmental compliance problems. After the visit, the businesses and facilities receive a report detailing recommended actions they can take to resolve those problems. They must correct any deficiencies within six months to become eligible for a compliance commitment certificate.

More than a quarter of Compliance Commitment Program participants achieved full environmental compliance, according to the agency’s checklists. Upon successful completion of the program, these businesses receive

## Municipal Waste Disposal



In 2009, Texas had 190 landfills actively accepting waste, collecting a total of 31.3 tons for the year.

their certificate and a one-year exemption from routine investigations by the agency and local partners, such as the EPA and local environmental enforcement entities. Moreover, the program allows small businesses and local governments to achieve compliance voluntarily, confidentially, and without fear of enforcement. Site visits will not lead to an inspection or citation, unless there is an imminent threat to human health and the environment. Many times, participants find they can save money by improving the efficiency of their processes and reducing the time spent on paperwork.

In particular, the TCEQ directed compliance assistance to owners and operators of underground storage tanks. This followed the enactment of state and federal legislation on Jan. 1, 2009, and the many questions that arose over new rules for underground storage tanks. In fiscal 2010, the TCEQ hosted 13 workshops, which drew 955 participants, to help owners and operators of petroleum storage tanks understand compliance with the new rules. As a result of these workshops, in response to requests for confidential assessments of environmental compliance, staff conducted 76 site visits. Additionally, the TCEQ distributed more than 1,200 copies of a new compliance tool, *The PST Super Guide: A Comprehensive Guide to Compliance in Texas*, to workshop attendees, underground storage tank contractors, and agency staff. With the federal Energy Policy Act of 2005 requiring increased investigations of facilities, the TCEQ plans to continue offering the petroleum storage tank workshops throughout fiscal 2011

and to distribute the *Super Guide* at 12 locations across Texas.

Since September 2008, the agency has also conducted six workshops on the additional opportunities available to reduce emissions from upstream oil and gas operations. These workshops, which reached more than 1,300 attendees, offered strategies on how to improve efficiency, lower VOC emissions, and prevent pollution.

For larger entities, the TCEQ offered technical advice on innovative approaches for improving environmental performance, primarily through pollution-prevention planning, site assistance visits, and Clean Texas activities.

These efforts produced a number of achievements the last two years. Among them:

- Pollution-prevention planning helped reduce hazardous waste by almost 1.2 million tons and toxic chemicals by about 66,000 tons.
- A total of 95 site assistance visits were conducted. Participating sites reported a combined savings of more than \$31.2 million and an overall reduction of more than 32,000 tons in wastes or emissions.
- Environmental management systems have been implemented by 19 Clean Texas members. As a result of environmental improvements, Clean Texas members reported eliminating a total of 91,633 tons of emissions and waste, and saving more than \$10.9 million.

### **Renewing Old and Surplus Materials**

Texas established the Resource Exchange Network for Eliminating Waste

(RENEW) in 1988 to promote the reuse or recycling of industrial waste.

The materials-exchange network has assisted in the trading of millions of pounds of materials, including plastic, wood, and laboratory chemicals. These exchanges divert materials from landfills and help participants reduce waste disposal costs and receive money for their surplus materials.

In 2007, the EPA funded the expansion of RENEW as a resource for its Region 6, which includes Texas, Arkansas, Louisiana, Oklahoma, and New Mexico. Introducing the TCEQ's RENEW Web tool to Texas' neighbors broadened the reach of the waste exchange network. The expansion gives industries, businesses, and governmental entities throughout EPA Region 6 a central site for selling surplus materials, by-products, and wastes to users who will reclaim or reuse them.

Hosted by the Southwest Network for Zero Waste (a collaborative project of the EPA, the University of Texas at Arlington, and regional environmental agencies), RENEW is a free, easy-to-use service. Listings are grouped under "Materials Available" for anyone offering raw materials to other facilities, and "Materials Wanted" for anyone looking to find raw materials.

Through <[www.renewtx.org](http://www.renewtx.org)>, these entities list and promote information on materials-exchange opportunities at a national and regional level. The website also allows users to report on successful exchanges as a result of the program.

Over the life of RENEW, an estimated 514,000 tons of material has been exchanged, representing a total savings of more than \$27 million in disposal costs. In just the last two years,

## RENEW Transactions

Fiscal Year	Number of Exchanges	Materials Exchanged	Savings in Disposal Costs	Earnings from Sales
2009	12	11,600 tons	\$2.2 million	\$1.4 million
2010	20	11,858 tons	\$4.6 million	\$5.7 million
<b>TOTAL</b>	<b>32</b>	<b>23,458 tons</b>	<b>\$6.8 million</b>	<b>\$7.1 million</b>

a total of 23,458 tons of material was exchanged through RENEW.

Here are some recent RENEW exchanges:

- A coating manufacturer transferred more than 2,000 pounds of water-borne and solvent-based mill-end primer to be used as primer for metal. The manufacturer saved \$24,888 in disposal costs and earned revenues of \$9,200 by selling the material rather than disposing of it.
- A paint and varnish manufacturing plant transferred 3,080 pounds of off-spec shopcoat primer to another company that planned to use the paint. The plant earned \$6,930 in revenues and avoided \$2,000 in disposal costs.
- An inorganic chemical manufacturer sold 2.3 million pounds of sulfuric acid. If this material had been disposed of, it would have required treatment to neutralize the acid. Instead, the acid was sold to a company that reused it in ferrous-sulfate production. This resulted in a disposal-cost savings of \$1,500 and earned revenues of \$12,000 for the sale of the material.

Lake Amistad, photo courtesy TxDOT



Palo Duro Canyon, photo courtesy TxDOT



Cypress trees at Caddo Lake, photo courtesy TxDOT



CHAPTER 3

# Legislation From the 81st Session



Field of bluebonnets

CHAPTER  
**3**

During the regular legislative session in 2009, lawmakers considered more than 957 bills that had the potential to affect the Texas Commission on Environmental Quality. Of those, 235 bills were passed and signed into law (164 were utility or district-creation bills).

The new laws triggered a variety of activities at the TCEQ: new rules, operational or procedural changes,

revised guidance documents, or internal administrative actions.

Some of the newly enacted laws are summarized in this chapter.

### **SB 361: Emergency Preparedness**

In 2008, Hurricane Ike left approximately 2.4 million Texans along the coast without electricity, potable water, fuel, or sanitary services for weeks.

Concerns about the availability of drinking

water and effective wastewater treatment in the aftermath of a natural disaster such as Hurricane Ike prompted passage of SB 361. The law requires an affected utility to adopt an emergency preparedness plan, thereby demonstrating the ability to provide emergency operations of its water system during a power outage as soon as it is safe and practicable after a natural disaster.

An affected utility was defined as a retail public utility, exempt utility, or provider or conveyor of potable or raw water that furnishes water service to more than one customer in a county with a population of 3.3 million or more, or in a county with a population of 400,000 or more adjacent to a county with a population of 3.3 million or more. Based on the 2000 census, the requirements

apply only to water systems with customers in Harris County.

Those utilities were required to submit an emergency preparedness plan (EPP) to the TCEQ for review and approval by March 1, 2010, and to begin implementation of the plan by July. Financial waivers could be requested by systems able to demonstrate that implementation of an emergency preparedness plan would constitute a financial hardship for its customers.

The TCEQ developed a template to assist affected utilities in the development of their emergency preparedness plans and to provide financial, managerial, and technical assistance.

The agency adopted rules to address the bill's requirements in December 2009, and as of August 2010 had completed the review of 494 EPPs, and had granted 113 implementation deadline extension requests.

### **SB 1757: Pharmaceutical Disposal Study**

Increased attention is being given to the occurrence of pharmaceuticals in the environment, especially in drinking water sources. Items such as leftover or expired prescription drugs, over-the-counter drugs, and veterinary drugs are often disposed of by being dumped into the wastewater stream. Typical wastewater treatment does not completely remove these products, so this practice can eventually affect the quality of surface water and groundwater.

As a result, the TCEQ was directed to study and recommend ways that consumers, health-care providers, and others can dispose of unused pharmaceuticals other than through a wastewater system.

The TCEQ formed an interdisciplinary team to conduct a study addressing the objectives of the bill and to compile a legislative report, which was due by December 2010. The report describes the effects of current disposal practices on both public health and the environment, and analyzes the feasibility of implementing certain recommended disposal methods on a statewide basis.

The TCEQ team conducted extensive research through a number of information-gathering activities, as follows:

- Formed a pharmaceutical disposal advisory group of 210 participants from stakeholder categories outlined in the bill.
- Created online surveys to help identify how health-care providers, consumers, and others dispose of unused pharmaceuticals, as well as what factors influence their disposal decisions.
- Distributed surveys to 13 target groups involved in the handling and disposal of unused pharmaceuticals.
- Consulted with experts at leading educational institutions and other state and federal agencies.

The advisory group helped the TCEQ identify the various methods being used in Texas to dispose of unused pharmaceuticals, the amount and types of unused pharmaceuticals disposed of by each method, regional differences in disposal practices, and the factors driving those practices. The advisory group also looked at consumer and health-care industry desires for alternative disposal methods.

### **SB 1759: Addressing Fleet Vehicles**

#### **Texas Clean Fleet Program**

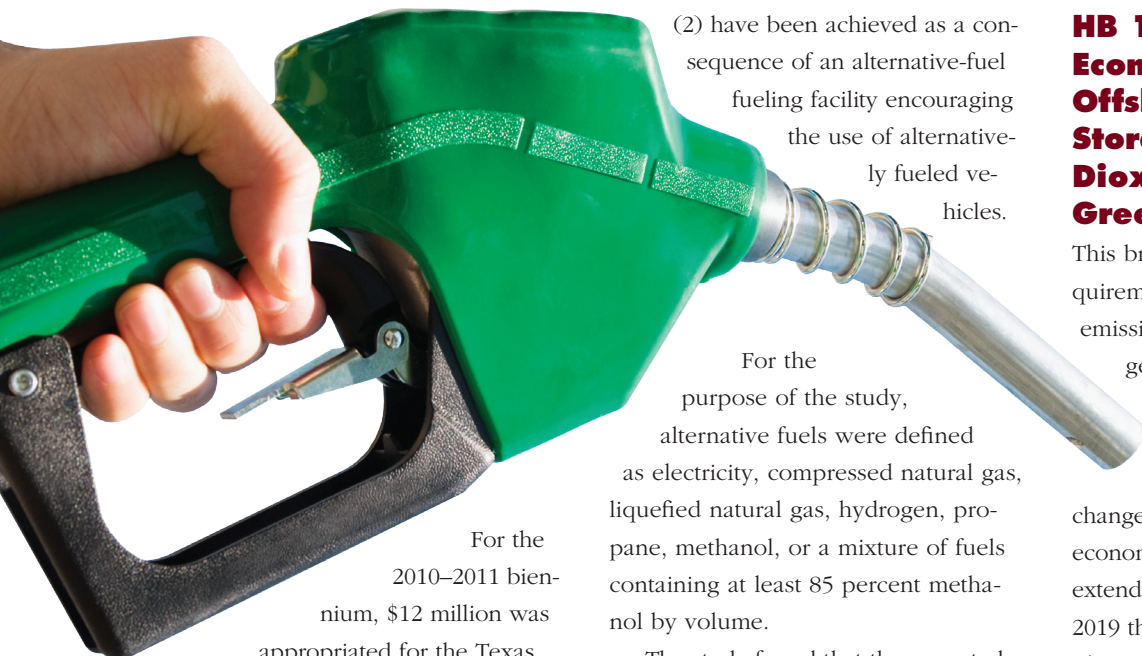
The Texas Clean Fleet Program was added to the package of incentives funded under the Texas Emissions Reduction Plan (TERP) and administered by the TCEQ.

Incentive programs under the TERP are designed to provide voluntary financial incentives to offset the costs associated with reducing emissions of nitrogen oxides (NO<sub>x</sub>) and other pollutants from high-emitting internal combustion engines and other sources. NO<sub>x</sub> is one of the primary pollutants leading to the formation of ground-level ozone.

To help reduce emissions of NO<sub>x</sub> and other pollutants, the Texas Clean Fleet Program encourages entities with a large fleet of diesel vehicles to replace those vehicles with alternative-fuel and hybrid vehicles. The program provides grant funding for entities that own and operate at least 100 vehicles in Texas, and will replace at least 25 diesel-powered vehicles under the grant.

The replacement vehicles must be powered by either an alternative-fuel or hybrid engine and must be certified to emit at least 25 percent less NO<sub>x</sub> than the vehicle being replaced. The alternative fuels included under this program are electricity, compressed natural gas, liquefied natural gas, hydrogen, propane, and a mixture of fuels containing at least 85 percent methanol.

The Texas Department of Transportation has estimated that there are 400,000 fleet vehicles in Texas, with more being added every year.



For the 2010–2011 biennium, \$12 million was appropriated for the Texas Clean Fleet Program. The TCEQ adopted rules on Feb. 24, 2010. Thirteen applications were received during the first grant application period, from April 23 to July 16, 2010. Awards were to be announced in the fall of 2010.

### Alternative-Fuel Fueling Facilities Study

The TCEQ was directed to conduct a study assessing the correlation between the installation of alternative-fuel fueling facilities in ozone nonattainment areas and the deployment of fleet vehicles that use alternative fuels. The study was also to determine the emission reductions that could be achieved by replacing a diesel-powered engine with an engine using alternative fuels.

In addition, the Legislature authorized the TCEQ to seek approval from the EPA for credit in the State Implementation Plan (SIP) for emission reductions that were determined by the study to (1) be directly attributable to an alternative-fuel fueling facility, and

(2) have been achieved as a consequence of an alternative-fuel fueling facility encouraging the use of alternatively fueled vehicles.

For the purpose of the study, alternative fuels were defined as electricity, compressed natural gas, liquefied natural gas, hydrogen, propane, methanol, or a mixture of fuels containing at least 85 percent methanol by volume.

The study found that the expected reductions in nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), carbon monoxide (CO), and volatile organic compound (VOC) emissions from the use of alternative fuels in motor vehicles have been diminishing significantly over time and will be near zero by 2018.

Recent changes in the federal exhaust emission standards require 2007 and newer light-duty and heavy-duty motor vehicle engines to meet the same criteria pollutant standards regardless of fuel type used (diesel, gasoline, natural gas, or propane). These changes were found to be the reason that the future use of alternative fuels will do little to reduce emissions from motor vehicles. Due to the lack of future emission reductions from alternative-fuel use shown by the study, the TCEQ did not seek the EPA's approval regarding the use of alternative fuels for SIP credit.

The full findings of the Alternative-Fuel Fueling Facilities Study can be found at <[www.tceq.state.tx.us/goto/airqualityresearch](http://www.tceq.state.tx.us/goto/airqualityresearch)>.

### HB 1796: Economic Incentives, Offshore Geologic Storage of Carbon Dioxide, and Greenhouse Gases

This broad-based law included requirements pertaining to voluntary emission reduction programs, offshore geologic storage of carbon dioxide, and greenhouse gas inventory and reporting.

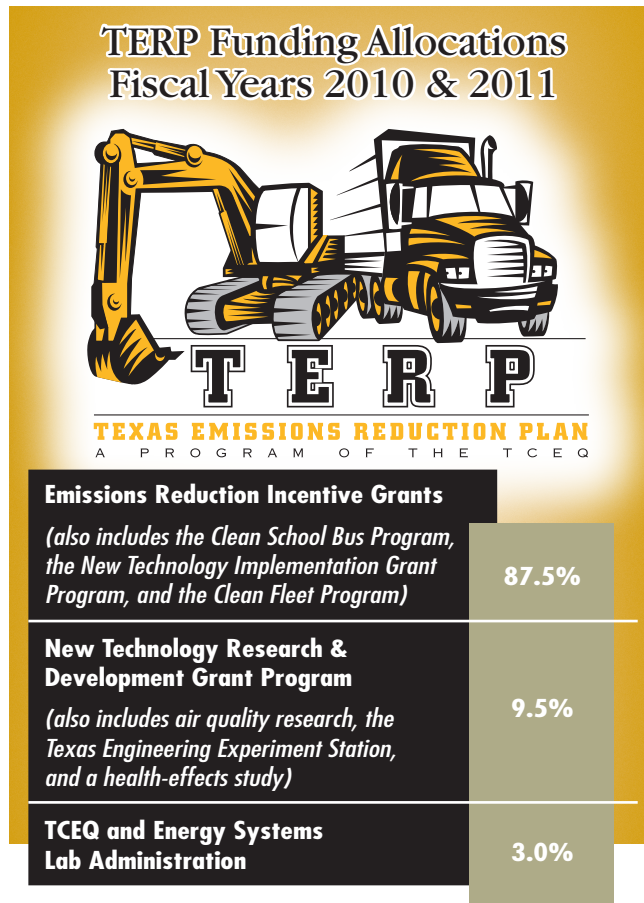
HB 1796 also made changes in some of the TCEQ's largest economic incentive programs, such as extending from August 2013 to August 2019 the expiration dates for the Texas Clean School Bus Program, the Texas Emissions Reduction Plan incentive programs, and TERP surcharges and fees. Other program changes are as follows:

- **Texas Emissions Reduction Plan (TERP).** Minor changes were made to the allocation of TERP revenue and to some of the eligibility requirements for certain types of equipment under the TERP Incentive Grants Program. The grants offset the costs of projects that reduce NO<sub>x</sub> emissions from high-emitting mobile diesel sources in certain counties. New TERP rules were adopted on Feb. 24, 2010, and new guidelines were approved on March 30. A new TERP Incentive Grants Program application period was open from May 25 to Aug. 13, 2010, during which 1,068 applications were received.
- **New Technology Implementation Grant (NTIG) Program.** While other TERP incentive programs target mobile emission



sources, the NTIG program provides financial incentives to the owner of a stationary facility to help fund emission reductions. The goal is to assist with the implementation of new technologies to reduce emissions of regulated pollutants from point sources. Eligible NTIG projects include advanced clean energy projects, new technology projects that reduce emissions of regulated pollutants from point sources and involve capital expenditures that exceed \$500 million, and electricity-storage projects related to renewable energy. For the 2010–2011 biennium, \$7.1 million was available to award under the program. The TCEQ adopted guidelines on June 25, 2010, and in late summer began taking applications for electricity-storage projects.

- New Technology Research and Development (NTRD) Grants.** Through the allocation of state-funded grants, the NTRD grant program provides financial incentives to encourage and support research, development, and commercialization of technologies that reduce pollution in Texas. The TCEQ is now responsible for the administration of this program. Previously, the NTRD was administered by a nonprofit organization in the Houston area, through a contract with the TCEQ. A total of \$14.8 million was budgeted for



the 2010–2011 biennium. The TCEQ adopted program guidelines on June 25, 2010. During the first grant application period of March 12 to April 6, 2010, 44 applications were received. Eight were awarded grants.

### Offshore Geologic Storage of Carbon Dioxide

HB 1796 laid the groundwork for Texas to develop an offshore carbon dioxide storage repository in state-owned submerged land. This initiative affects not only the TCEQ but also the General Land Office, the School Land Board, and the University of Texas Bureau of Economic Geology. As an important part of the overall effort, the TCEQ

was authorized to develop and adopt standards for monitoring, measuring, and verifying the permanent-storage status of an offshore repository, and to ensure that any standards adopted by the agency comply with EPA regulations. Meanwhile, UT's Bureau of Economic Geology, under contract to the General Land Office, was to conduct a study to identify potential locations for a repository. The School Land Board will make the final decision on suitable locations.

### Inventory of Voluntary Actions to Reduce Greenhouse Gases

The TCEQ was charged with establishing an inventory of voluntary actions taken by state agencies and businesses in Texas to reduce carbon dioxide emissions. The voluntary reductions must have been achieved between Sept. 1, 2001, and Dec. 31, 2009. Toward this end, the agency developed a voluntary actions registry, deployed a registry Web page, notified industry trade associations, and contacted some 2,000 individuals and organizations from the TCEQ's Point Source Emission Inventory. Program development activities were coordinated with the TCEQ's Point Source Emissions Inventory and Emissions Banking and Trading programs to take advantage of the available expertise. The deadline for submitting data was Sept. 1, 2010.



**Review of Federal Greenhouse Gas Reporting Requirements**

As directed, the TCEQ, the Railroad Commission of Texas, the Texas Department of Agriculture, and the Public Utility Commission of Texas all participated in a coordinated review of the Federal Mandatory Greenhouse Gas Reporting Rule. The EPA published most of the rule package on Oct. 30, 2009, and continued to issue proposals on different sectors.

As each proposal was issued, the TCEQ notified the other agencies. Staff from each agency intending to com-

ment developed draft comments, and a teleconference was held to discuss the comments and resolve any inconsistencies. Based on these drafts, the individual agencies issued their own comment letters, rather than developing a joint letter.

Comments were exchanged on proposals related to carbon sequestration, petroleum and natural gas, electronics manufacturing, fluorinated gas production, imports and exports of equipment pre-charged with fluorinated greenhouse gases (GHGs) or containing fluorinated GHGs in closed-cell foam, the use of electronic transmission and

distribution equipment, and the manufacture of electronic transmission and distribution equipment.

The federal rule requires applicable sources to report their greenhouse gas emissions directly to the EPA. No reporting is required of the TCEQ.

**HBs 3206 and 3544: Prop 2 Tax Exemption Program**

House Bills 3206 and 3544 amended the Texas Tax Code (TTC), Section 11.31, and added new requirements regarding the Commission’s use determinations for the Tax Relief for Pollution Control Property Program. The revised TTC

*West Texas prairie*

requires that the standards and methods used to make use determinations be applied uniformly to all applications. The Commission was also required to establish a permanent advisory committee to provide the TCEQ with advice on matters relating to property tax exemptions for pollution control property, and on the implementation of TTC 11.31. HB 3544 further amended TTC 11.31(d) to allow the agency to send the required appraisal district notices through electronic transmission rather than regular mail.

In order to implement requirements of HBs 3206 and 3544, the Commission has proposed rulemaking to amend

Title 30 Texas Administrative Code Chapter 17, Tax Relief for Property Used for Environmental Protection. The proposed rulemaking was approved by the Commission for publication and public comment on June 30, 2010, and was scheduled to be considered for adoption in November 2010. The proposed amendments would consolidate Tier III and IV applications, modify the cost-analysis procedure, and allow electronic transmittal of appraisal district notices.

As required by HBs 3206 and 3544, the Commission appointed the Tax Relief for Pollution Control Property Advisory Committee on Jan. 27, 2010.

At the end of August 2010, the advisory committee—composed of 13 representatives from industry, appraisal districts, taxing units, environmental groups, and members who are not representatives of any of those groups but have substantial technical expertise in pollution control technology and environmental engineering—had made recommendations regarding the proposed rulemaking to implement the changes required by HBs 3206 and 3544. It is anticipated that the committee will meet periodically to advise the TCEQ on issues related to the Tax Relief Program.

CHAPTER 4 ●  
**Agency Resources**



*Palo Duro Canyon,  
 Lighthouse Rock,  
 photo courtesy TPWD*

CHAPTER  
**4**

The Texas Commission on Environmental Quality has more than 2,900 full-time employees, with more than a quarter working outside of the Austin headquarters. The agency has 16 regional offices, as well as three special-project offices.

These field offices give the TCEQ a statewide presence, enabling staff to communicate firsthand with municipalities, businesses and industry,

and community groups in all quarters of Texas.

The TCEQ’s budgetary needs are based on the demands of state and federal laws concerned with protecting human health and the environment. Its operating budget totaled \$522.7 million in fiscal 2009 and \$539.1 million in fiscal 2010. Most of the annual revenue is generated by fees.

The TCEQ posts its quarterly expenditures at

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

The data is reported in broad categories, such as salaries, travel, utilities, and maintenance. The Web page also links to an expenditure database, called “Where the Money Goes,” on the state Comptroller’s website. These online postings are in response to the Legislature’s call for greater accountability in state government.

**Workforce**

The overall size of the TCEQ workforce remains fairly consistent. In fiscal 2009, the agency was authorized to have 2,935.3 full-time equivalent (FTE) positions, and the average number of FTEs utilized was 2,916.65. Similarly, in fiscal 2010, the authorized FTEs were 2,980.3, and TCEQ averaged a total of 2,943.

TCEQ staff is composed largely of

professionals trained in science, technology, engineering, computer science, and other related fields. In fiscal 2010, professionals represented 64.6 percent of the workforce; technical and administrative support staff made up 25.5 percent; and officials and administrators (managers) filled 9.9 percent of positions. This reflects almost no change in the composition of EEO job categories within the agency from fiscal 2008.

It is the TCEQ's policy to provide equal employment opportunities to all employees and qualified applicants, regardless of race, color, religion, national origin, sex, sexual orientation, age, disability, genetic information, veteran status, or other status protected by law.

The agency is committed to recruiting, selecting, and retaining a multi-

talented, culturally diverse workforce that is representative of the state's available labor force. In accordance with the Texas Labor Code, Chapter 21, all employees are provided training on equal employment practices to make them aware of state and federal employment laws and regulations.

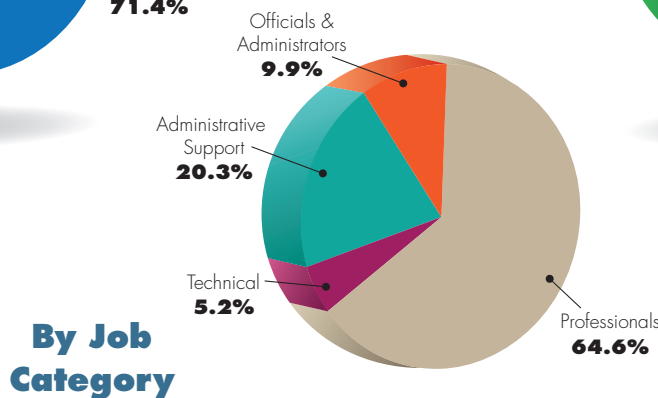
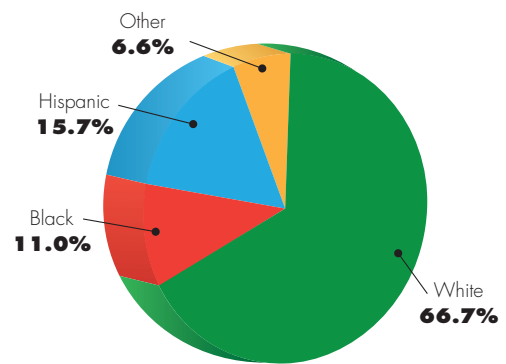
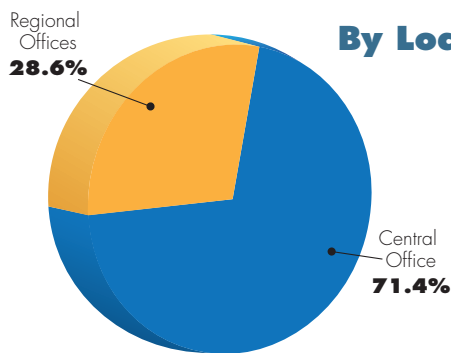
With regard to race and ethnicity, the agency workforce composition was almost 67 percent white, 15.7 percent Hispanic, nearly 11 percent black, and 6.6 percent other (including Asian, Pacific Islander, American Indian, and Alaskan Native). In terms of gender, women continue to be in the majority at the TCEQ, with a slight increase of 1.5 percent from fiscal 2008: female employees represented 51.6 percent; males, 48.4 percent.

Since 1999, the Legislature has required each state agency to analyze its workforce by ethnicity and gender. The TCEQ compares its workforce to the state civilian workforce using data provided by the Civil Rights Division of the Texas Workforce Commission (TWC). The TWC's report on equal employment opportunity hiring practices, which is published at the start of each legislative session, uses data sets based on the percentage of blacks, Hispanics, and females—by job category—within the civilian labor force in Texas.

At the end of fiscal 2010, the TCEQ exceeded the percentage of the available black workforce in the job category of administrative support. The agency's female workforce exceeded the available state civilian female labor

## TCEQ Workforce

As of August 31, 2010 (FTE cap of 2,980)



force in top management (officials and administrators/managers), as well as in administrative support.

The TCEQ continues its recruitment and retention efforts by emphasizing employee recognition, professional development, and workforce and succession planning. The agency also uses hiring programs, such as Express Hire at recruitment events and Transitions Hiring for entry-level positions. In addition, the agency recruits at colleges and universities and administers the Mickey Leland Environmental Internship Program with a focus on providing summer internship opportunities for minorities, women, and economically disadvantaged students pursuing environmental, engineering, science-related, and public administration careers at colleges and universities across the United States. Further, the TCEQ partners with Texas State University to offer environmental internships. This program is open to undergraduate and graduate students enrolled in any Texas university. See <[www.tceq.state.tx.us/goto/employment](http://www.tceq.state.tx.us/goto/employment)> for more information.

In the coming years, TCEQ officials anticipate several challenges as the agency strives to fulfill its mission and goals. In fiscal 2010, staff turnover was 8.21 percent. The agency's turnover continues to fall below the overall average for full- and part-time classified employees at state agencies. The TCEQ will continue its efforts to attract and retain a qualified and diverse workforce.

## Finances

In fiscal 2009, the agency's approved operating budget was \$522.7 million. Of that, \$461.5 million was appropriated from dedicated fee revenue,

\$42.2 million from federal funds, and \$10.4 million from general revenue. Other sources provided the remaining \$8.6 million.

In fiscal 2010, the approved operating budget totaled \$539.1 million. Of that, \$465.7 million was appropriated from dedicated fee revenue, \$50 million from federal funds, and \$15.6 million from general revenue. Other sources provided the remaining \$7.8 million.

As requested by state leadership in a letter dated Jan. 15, 2010, the TCEQ submitted a plan to reduce expenditures in the 2010–2011 biennium by 5 percent. The 2010 operating budget was reduced by \$36 million, including: \$400,000 from general revenue for data center consolidation; \$250,000 from the Clean Air Account for the Greenhouse Gas Registry; and from the Texas Emission Reduction Plan Account, a reduction of \$3.9 million in New Technology Research Development Grants, \$10 million in New Technology Incentive Grants, and \$21.5 million in Emission Reduction Incentive Grants.

Pass-through funds accounted for 54 percent of the agency's operating budget in fiscal 2009 and 53 percent in fiscal 2010. Pass-through funds are used primarily for grants, contracts, and reimbursements in the agency's programs for petroleum storage tanks, Superfund cleanups, and municipal solid waste. The water and air programs also pass dollars on to local and regional units of government, but the amounts are not as significant.

Funds other than pass-through are the monies devoted to agency day-to-day operations. Salaries accounted for about 31 percent of the operating budgets in both fiscal years. The remaining

operating funds were consumed by other expenses such as supplies, utilities, rent, travel, training, and capital.

**American Recovery and Reinvestment Act** (ARRA). The TCEQ received federal funding totaling \$27.5 million from the ARRA, to be spent as follows:

- The Leaking Underground Storage Tank Trust Fund received \$10.8 million to direct state petroleum storage tank contractors in performing site assessments and direct site work at leaking petroleum storage tank sites throughout the state.
- The 604(b) Water Quality Management Plan received \$1.8 million to support water quality management planning activities, including watershed planning efforts. Of the funds received, 40 percent are passed to regional planning organizations.
- The Clean Diesel Grant Program received \$1.7 million to support an ongoing effort to retrofit school buses with exhaust controls that reduce emissions of particulate matter.
- The Texas Emissions Reduction Plan (TERP) received \$13.2 million to support the TERP Rebate Grant Program.

For additional information about ARRA funding, visit <[www.tceq.state.tx.us/agency/arra/arra.html](http://www.tceq.state.tx.us/agency/arra/arra.html)>.

## Fees

The TCEQ collects more than 100 separate fees. Each of the following fees generated revenue in excess of \$25 million a year:

**Texas Emissions Reduction Plan** (\$155.5 million in FY 2009, \$147.6 million in FY 2010). Fees are assessed on the sale, registration, and

inspection of vehicles. The TERP draws from five separate fees, surcharges, and interest collected by the Texas Department of Public Safety (DPS) and the Comptroller of Public Accounts. In fiscal 2008, the TCEQ became the authorized manager of the account and handled the management and transfer of funds from the account.

**Petroleum product delivery fee** (\$28.2 million in FY 2009, \$28.5 million in FY 2010). The fee is assessed on the bulk delivery of petroleum products. It is collected by the state Comptroller and deposited to the Petroleum Storage Tank Remediation Account. The statutory set fee rate was reduced beginning in fiscal 2008 and is set to sunset in August of 2011.

**Air emissions fee** (\$32.7 million in FY 2009, \$29.7 million in FY 2010). The fee is authorized to recover the costs of developing and administering the Title V Operating Permit Program.

**Solid waste disposal fee** (\$39.6 million in FY 2009, \$41.3 million in FY 2010). The fee is assessed on the operators of municipal solid waste facilities for disposal of solid waste.

**Auto emission inspection, on-board diagnostic fee** (\$35.7 million in FY 2009, \$37.8 million in FY 2010). The fee provides funding for the Low-Income Repair Assistance Program (LIRAP) for counties that have opted into the program. The fee is collected by the DPS and deposited to the Clean Air Account.

**Motor vehicle safety inspection fee** (\$33.9 million in FY 2009, \$35.2 million in FY 2010). The fee is assessed per vehicle on the sale of state safety inspection stickers at inspection stations, auto dealers, and other service providers. The fee is collected by the DPS and deposited to the Clean Air Account.

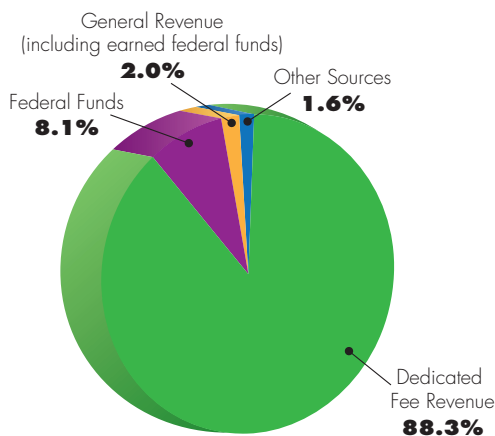
### Fee Revisions

As a result of state legislation passed in 2009, a number of minor changes were made to the TCEQ’s fees and funding structure, including the following:

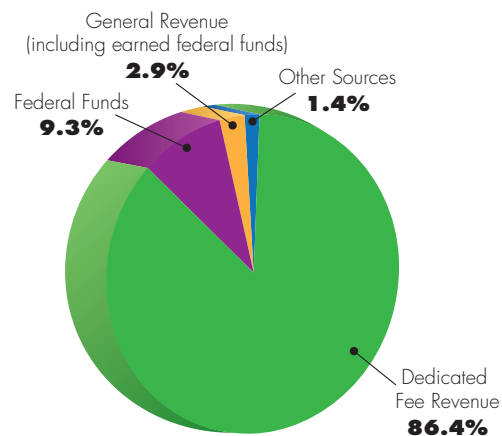
- HB 1433 increased the statutory cap for the annual water quality fee for wastewater discharge permit holders and water right users through permit or contract from \$75,000 to \$100,000 beginning Sept. 1, 2009. The cap can be increased in subsequent years based on the Consumer Price Index, up to a maximum of \$150,000.
- SB 2445 allowed for the expansion of areas covered by the prohibition against boat sewage disposal to include all inland waters of the state and coastal waters up to three nautical miles from shore. The expansion of the coverage area will result in increased revenue collection from the increase in fee payers.

## Annual Operating Budgets

**FY 2009: \$522.7 million**



**FY 2010: \$539.1 million**



A P P E N D I X A ●

# Assessment of Complaints Received



*Grotto in Westcave Preserve, photo courtesy Michael A. Murphy | TxDOT*

The Texas Commission on Environmental Quality receives thousands of complaints each year from Texans concerned about various environmental matters.

In these communications, the complainant relates a situation or event in which a possible environmental, health, or regulatory violation has occurred. Typically, complaints are submitted to the agency

by phone, e-mail, or letter, and then forwarded to one of its 16 regional offices for response. The agency maintains a 24-hour toll-free hotline (888-777-3186) for receiving such calls.

Legislation requires the TCEQ to review the complaints received each year, including analyses by the following categories:

- Region

- Environmental media (air, waste, and water)
- Priority classification
- Enforcement action
- Commission response
- Trends by complaint type

The agency is also required to assess the impact of any changes made in the Commission's complaint policy. This analysis is conducted and submitted in accordance with sections 5.1773 and 5.178 of the Texas Water Code.

## Complaint Data Collection and Reporting

After an environmental complaint is received by Field Operations, the data related to the initial complaint is recorded in the Consolidated Compliance and Enforcement Data System (CCEDS). If an investigation is warranted, regional managers assign the complaint to an investigator, who is responsible for

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investigating the complaint and entering all resulting data into the CCEDS. Review, approval, and closure of the investigation is performed by management and entered directly into the data system.

All of the data summarized in this chapter was extracted from the CCEDS. This report reflects activity that occurred in the agency’s 16 regions during fiscal 2009 (Sept. 1, 2008, to Aug. 31, 2009)

and fiscal 2010 (Sept. 1, 2009, to Aug. 31, 2010). The data is presented in a series of charts (Figures A-2 to A-9).

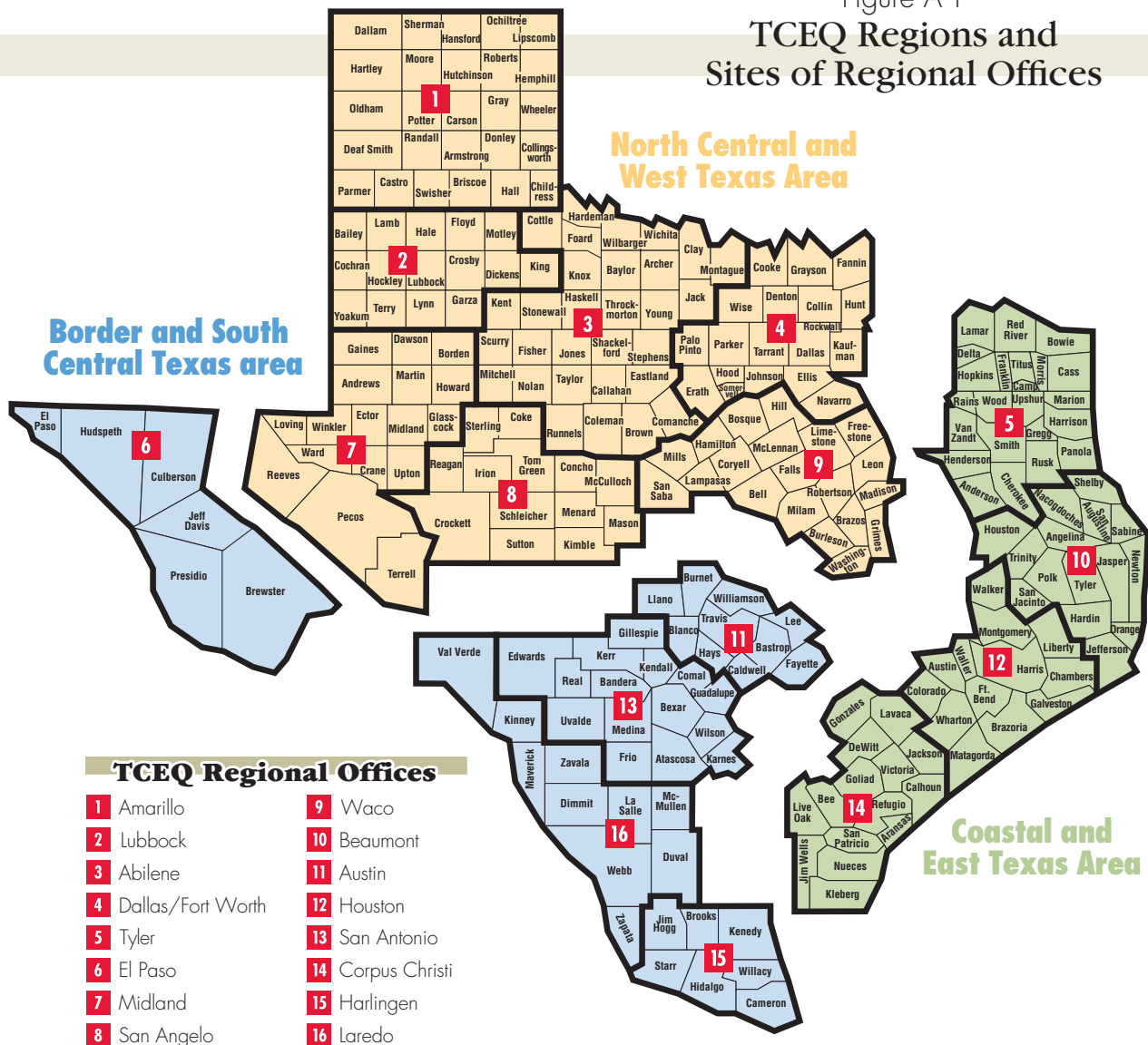
### Complaints by Region

In fiscal 2009, the TCEQ regions received a total of 6,793 complaints; in fiscal 2010, the total was 7,277. Figures A-2 and A-3 show the complaints received annually by each TCEQ region.

The data shows that the number of complaints received varies generally according to regional population. For example, 40 percent of all the complaints were received from the two largest metropolitan areas, Dallas–Fort Worth and Houston (22 percent and 18 percent, respectively).

The number of complaints received in the Dallas–Fort Worth region in previous years averaged about 20 percent.

Figure A-1  
TCEQ Regions and Sites of Regional Offices



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Figure A-2  
Complaints by Region  
FY 2009

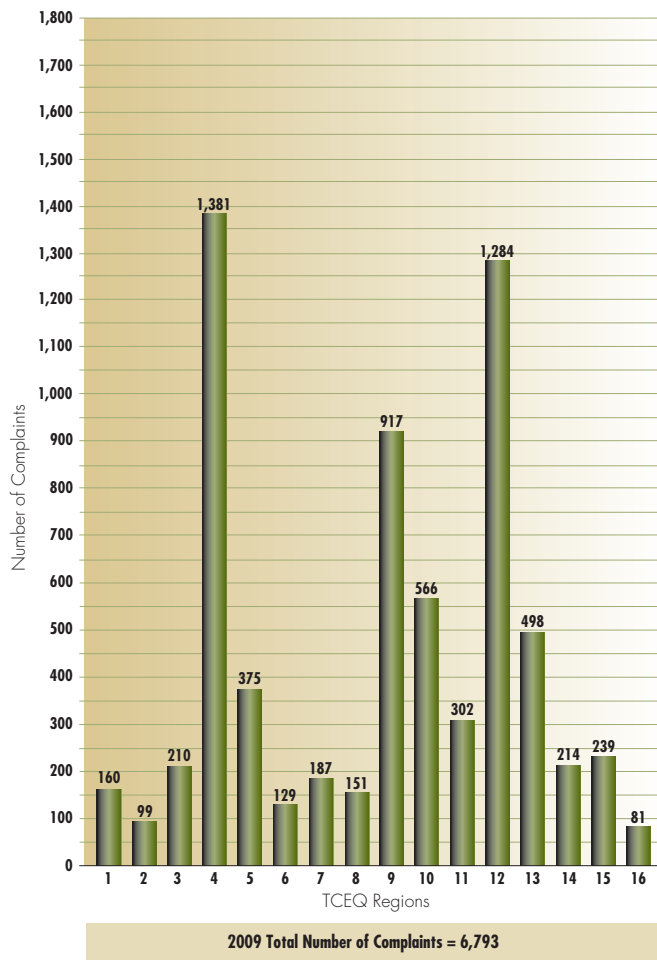
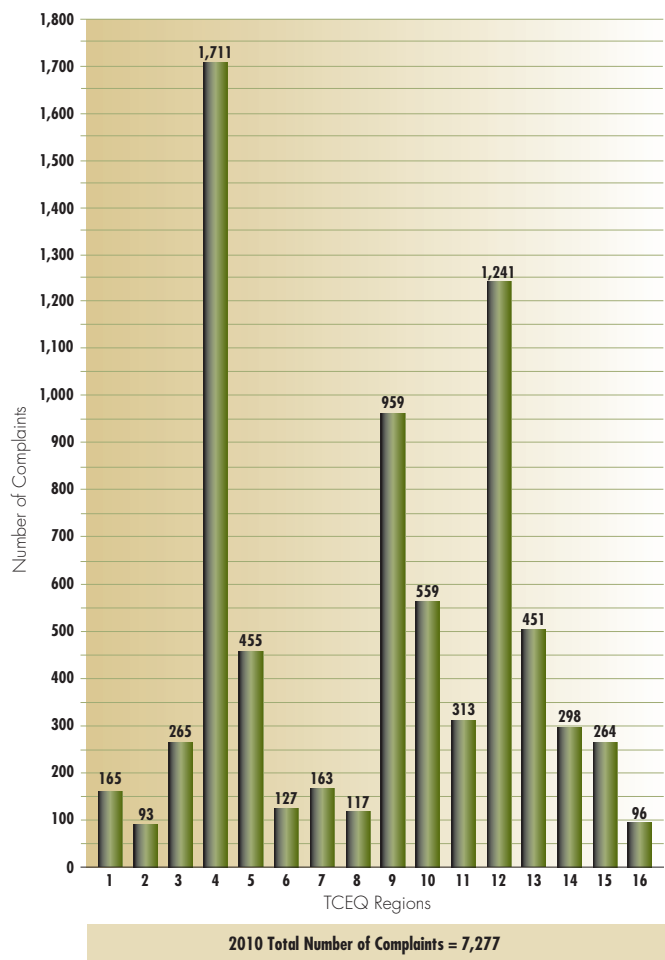


Figure A-3  
Complaints by Region  
FY 2010



The region's increase in complaint activity for FYs 2009 and 2010 may be attributed to heightened public awareness and concern about gas production activities in the 23-county Barnett Shale area. The total number of complaints received in the Dallas–Fort Worth region increased by 330—from 1,381 in fiscal 2009 to 1,711 in fiscal 2010. This represented 68 percent of the total increase in statewide complaints, which were up by 484 in fiscal 2010.

### Complaints Received by Environmental Media (Air, Waste, and Water)

Total complaints received can be analyzed by environmental media (air, waste, and water) on a statewide basis and by regions. By media, water complaints represent the largest number of complaints received, as seen in Figure A-4.

For years air complaints constituted the largest portion of total complaints

received statewide, beginning in fiscal 2003 with the TCEQ's first reporting of complaints received. But in FYs 2007 and 2008, the agency received more complaints related to water than air. This trend continued in FYs 2009 and 2010, despite the fact that complaints related to concerns about gas production in the Barnett Shale area have been primarily air complaints. The data reflects an apparent increase in the interest and concerns that Texans have

regarding their water quality and water resources. The disparity between the number of water complaints and air complaints was greater in FYs 2009 and 2010 than in previous years.

This trend is demonstrated in Figures A-5 and A-6, which show the distribution of complaints received by region and by media.

Water complaints in fiscal 2009 outnumbered air complaints in nine of the 16 regions; in fiscal 2010, in 11 regions. By comparison, water complaints in fiscal 2007 outnumbered air complaints in nine regions; and in fiscal 2008, in

10 regions. This represents a general upward trend from FYs 2005 and 2006.

Air complaints continued to be the leading category in the heavily populated and industrialized regions of Dallas–Fort Worth for FYs 2009 and 2010, and of Houston for 2010. Fiscal 2009 saw more water than air complaints in the Houston region for the first time since these data have been reported. Prior to fiscal 2006, air complaint investigations within the City of Houston were recorded in the CCEDS. However, in fiscal 2006, the City of Houston opted to discontinue its contract with the TCEQ

to conduct routine air quality investigations in its jurisdiction on behalf of the agency. As a result, air complaints of primarily local interest within the City of Houston have not been entered into the CCEDS, which could explain the significant reduction in air complaints in the Houston region.

### Complaints Received by Priority Level

Complaints received in regional offices are prioritized in the following categories, based on their relative threat to public health, safety, or the environment. Each priority level represents a prescribed response time. The priority levels are:

**Immediate response required.**

Response time is as soon as possible, but no later than 24 hours from receipt. This classification includes a new category established by the 81st Legislature of response within 18 hours for odor complaints involving certain types of poultry operations.

**Respond within one working day.** As soon as possible, but no later than one working day from receipt.

**Respond within five working days.** As soon as possible, but no later than five working days from receipt.

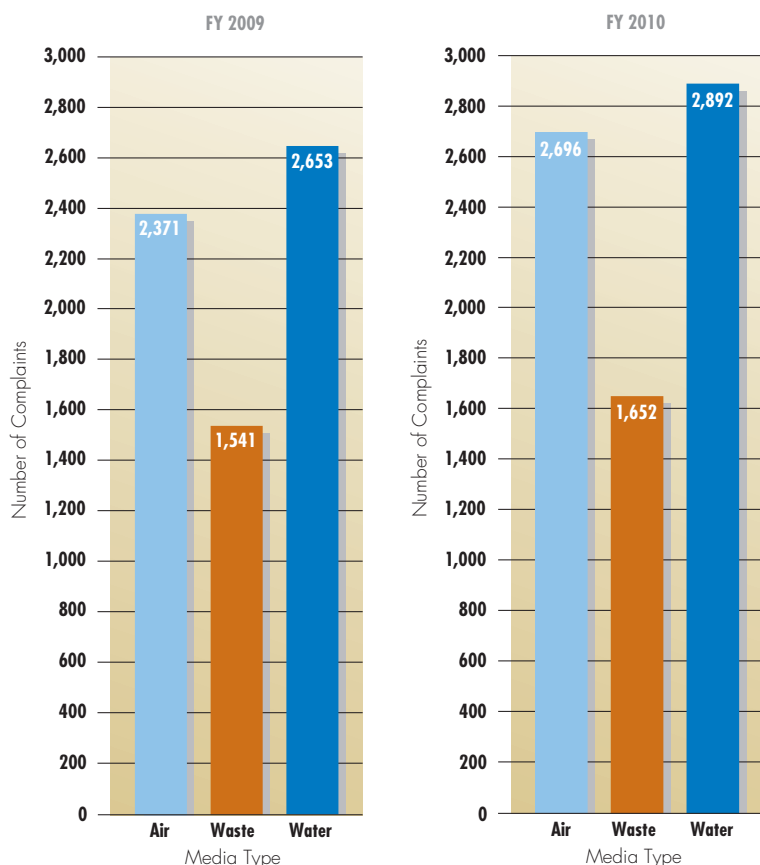
**Respond within 14 calendar days.** As soon as possible, but no later than 14 calendar days from receipt.

**Respond within 30 calendar days.** As soon as possible, but no later than 30 calendar days from receipt.

**Respond within 45 calendar days.** As soon as possible, but no later than 45 calendar days from receipt.

**Respond within 60 calendar days.** As soon as possible, but no later than 60 calendar days from receipt.

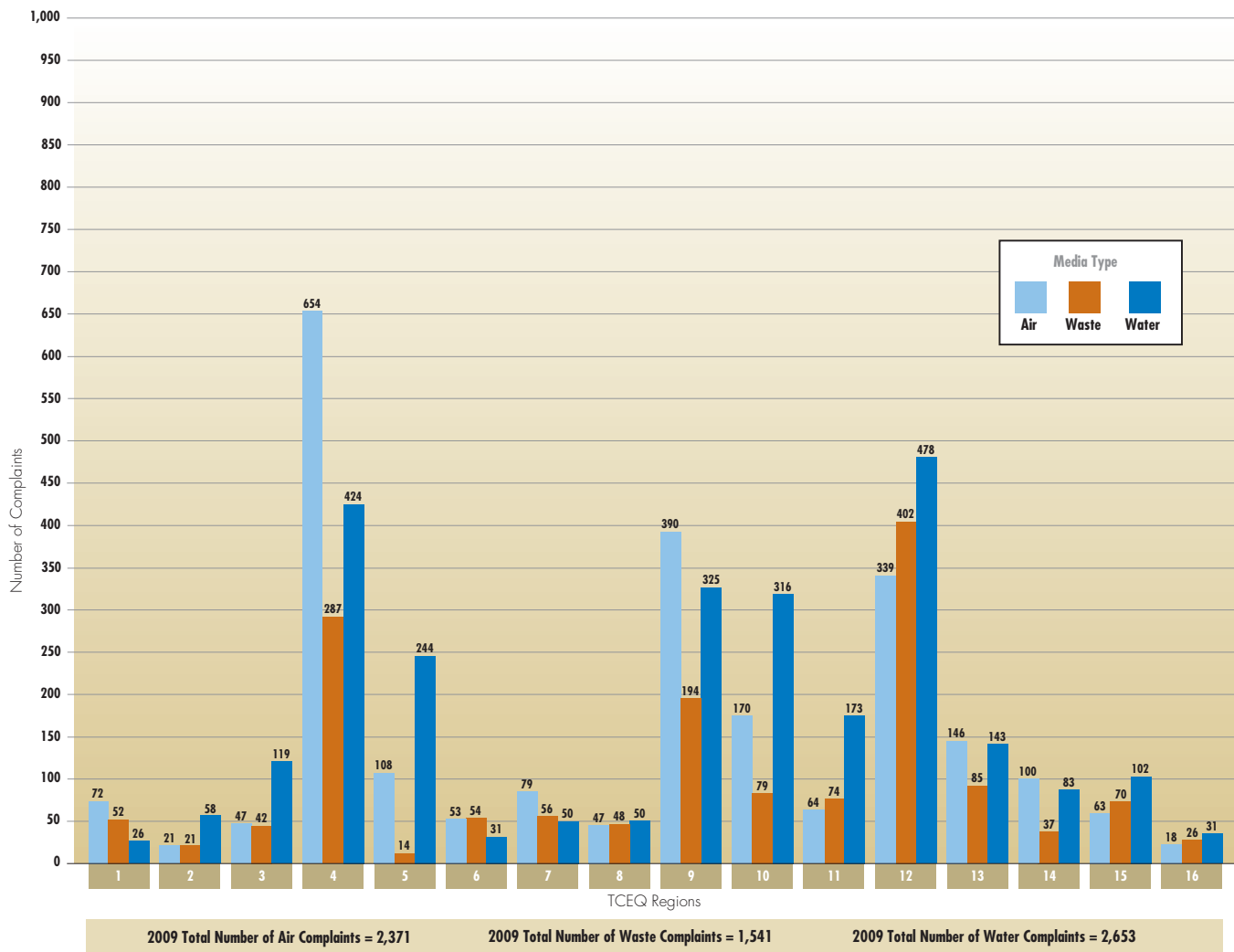
Figure A-4  
Complaints by Media Type, Statewide



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Figure A-5  
Complaints by Region & Media Type  
FY 2009



**Respond within 90 calendar days.** As soon as possible, but no later than 90 calendar days from receipt. This category was added in fiscal 2008 for use only with complaints related to the recycling of electronic components.

**Refer or do not respond.** This classification is for complaints that, due to jurisdictional issues, are referred to other entities for investigation, or for complaints that the TCEQ does not routinely

investigate but needs to track for special projects, as determined by management.

For this report, the distribution of complaints is shown by priority classification statewide (Figure A-7). Approximately 80 percent of the complaints received during the last two years were classified as requiring investigation in 30 calendar days or less.

**Other specified time frame.** This classification is for special projects

that occur as on-demand events. Response time is based on management's evaluation of the project and the overall staff workload.

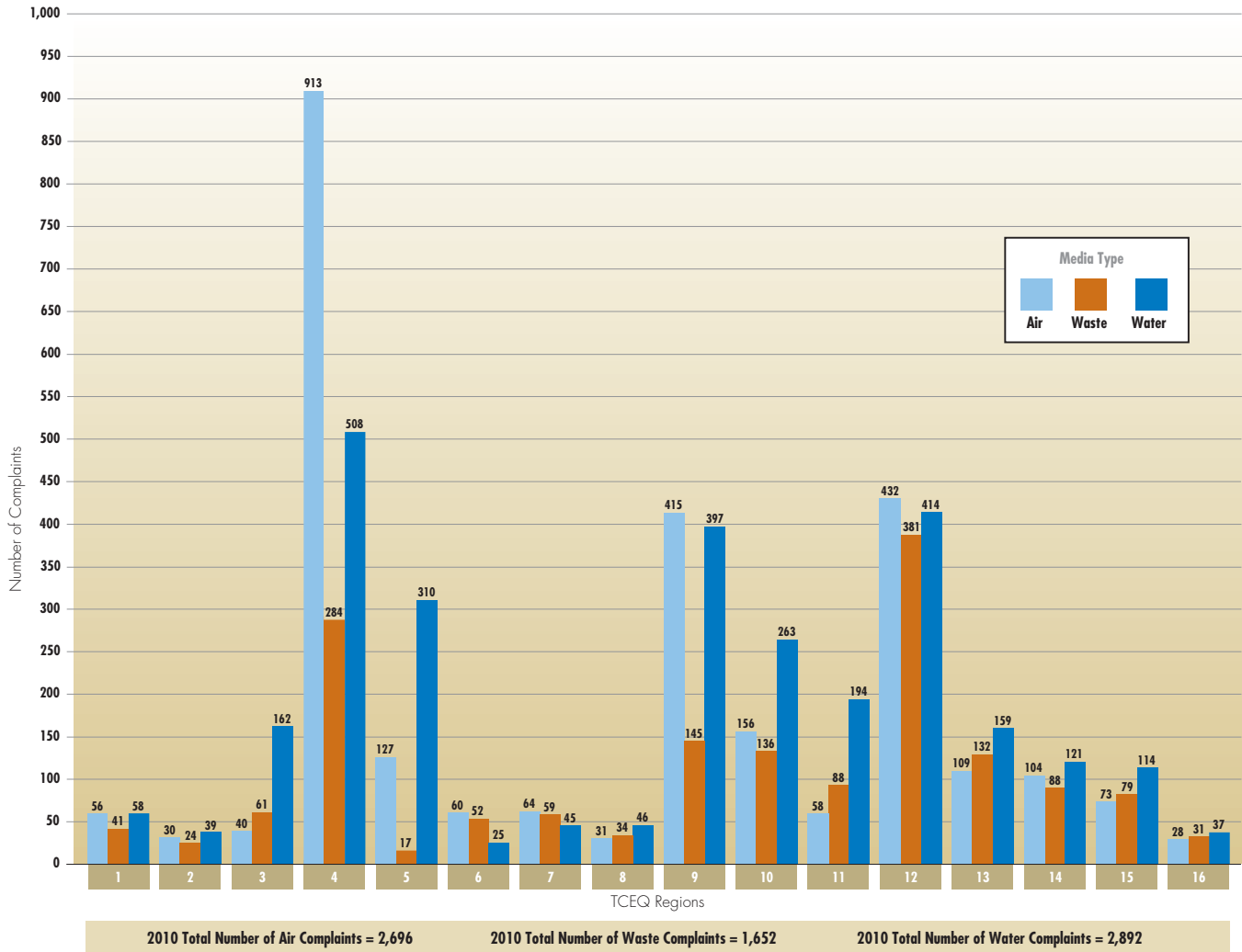
**Complaints that Trigger Enforcement Action**

All complaint investigations are conducted according to priority levels, as described above. Subsequent action depends on the outcome of the

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Figure A-6  
**Complaints by Region & Media Type**  
 FY 2010



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investigation. For about 75 percent of the complaints received, no specific enforcement action is necessary. But in some cases, the agency must take enforcement action in the form of a Notice of Violation (NOV) or a Notice of Enforcement (NOE).

Issuance of an NOV indicates that TCEQ rules have been violated, but that the violation is not considered serious enough to require an en-

forcement order and that the case is expected to be resolved quickly within a time frame specified by the investigating regional office.

An NOE is issued when a substantial violation of TCEQ rules has been documented and formal action is required. Often, an NOE leads to the assessment of administrative penalties.

In fiscal 2009, the agency issued 1,370 NOVs and 296 NOEs as a result

of complaint investigations; in fiscal 2010, the totals were 1,385 NOVs and 307 NOEs (Figure A-8).

Of the total complaints received, the percentage leading to NOVs and NOEs was slightly lower: 23.9 percent in FYs 2009-2010, compared to 25.7 percent in FYs 2007-2008. This was due, in part, to the level of citizen complaint activity in the Barnett Shale area. In such cases, citizen complaints

Figure A-7  
Complaints by  
Priority, Statewide

FY 2009		FY 2010	
Priority	Number of Complaints	Priority	Number of Complaints
Immediate	111	Immediate	421
1 day	229	1 day	337
5 days	200	5 days	194
14 days	1,183	14 days	1,201
30 days	4,032	30 days	3,959
45 days	80	45 days	24
60 days	79	60 days	85
Refer	1,154	Refer	1,189
Other	80	Other	257

Note: This is the only table that includes complaints received at the Austin headquarters; therefore, totals are higher.

related to certain events may result in a single enforcement action, or may not result in the issuance of an NOV or NOE at all if it is determined that no violations have occurred.

### Complaints Investigated by Program Type

Another analysis is by the type of investigation conducted to address each complaint—the program type. In the CCEDS, air complaints are not subdivided by program type, but waste and water media each have several subcategories of programs.

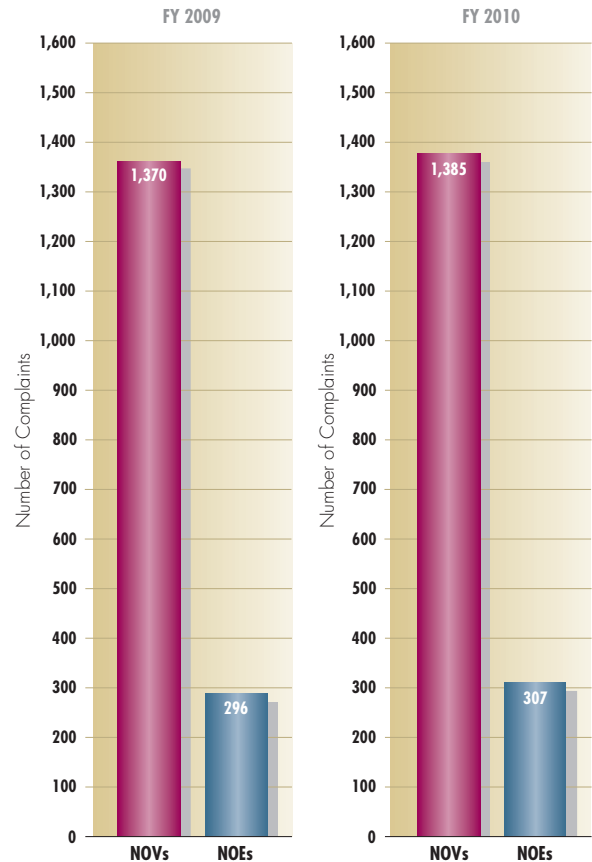
The waste program types are dry cleaners, emergency response, petroleum storage tanks (including Stage II vapor recovery), industrial and hazard-

ous waste, and municipal solid waste.

The water program types are animal feeding operations, the Edwards Aquifer in Central Texas, on-site sewage facilities, public water supply, water rights, and water quality. Water quality also comprises several program sub-types (sludge transporters, beneficial use, storm water, and municipal and industrial wastewater treatment, and pre-treatment); however, these sub-types are not listed separately in this analysis.

Figure A-9 shows the number of complaint investigations that were conducted in each program type. In fiscal 2009, there were 4,876 complaint

Figure A-8  
Complaints Resulting  
in NOVs & NOEs,  
Statewide



Note: Some complaints are assigned to more than one medium, and some are not assigned to any. Therefore, totals vary from total complaints received.

investigations conducted in response to the 6,793 complaints received. Another 1,154 complaints were prioritized for referral or no agency response (as indicated in Figure A-7). The remaining 763 complaints were investigated in conjunction with other complaints, which explains why there were fewer complaint investigations than complaints received.

In fiscal 2010, there were 4,910 investigations conducted in response

to 7,277 complaints received. Another 1,189 complaints were prioritized for referral or no response. The remaining 1,178 complaints were investigated in conjunction with other complaints. This differential is the result of having many complainants filing complaints about the same situation, resulting in only one complaint investigation, as in the case of many of the Barnett Shale area complaints.

In fiscal 2009, air complaint investigations represented 40 percent of the total complaint investigations; water complaint investigations, 36 percent; and waste investigations, 20 percent (the same percentages as in FYs 2007 and 2008). In fiscal 2010, air investigations were 40 percent of the total; water investigations, 37 percent; and waste investigations, 21 percent.

Typically, a small number of complaint investigations (about 4 percent in fiscal 2009, and 2 percent in fiscal 2010) do not fall under the specific program areas listed in this report.

Figure A-9

### Complaint Investigations by Program Type

Program Type	FY 2009	FY 2010
Animal Feeding Operations	83	66
Air Quality	1,969	1,952
Dry Cleaners	1	6
Edwards Aquifer	37	34
Emergency Response	9	16
Industrial/Hazardous Waste	220	174
Municipal Solid Waste	571	637
On-Site Sewage Facilities	205	225
Petroleum Storage Tanks	158	187
Public Water Supply	576	598
Water Quality	793	863
Water Rights	55	55
No Program Assigned	199	97
<b>Total</b>	<b>4,876</b>	<b>4,910</b>

### Conclusions

The complaint data for the fiscal years of 2009 and 2010 are generally typical of complaints received and investigated in previous years, with minor variations within some analysis categories.

The trend of an increasing percentage of complaints occurring in the water program continued. The increase seems to reflect greater interest among communities in water issues. This is likely

due to a combination of factors, including drought and continued growth in population and economic development in suburban areas where air quality may not be as significant a concern.

FYs 2009 and 2010 also saw an increase in complaints (primarily air related) in the North Central Texas Barnett Shale area—resulting in a slight increase in total complaints received, and a more significant increase in air complaints received in that region. In response to this public concern, the TCEQ has undertaken a significant effort to monitor and characterize emissions and air quality related to these gas production facilities, and to identify regulatory approaches to alleviating these concerns. (See “Barnett Shale,” page 28.)

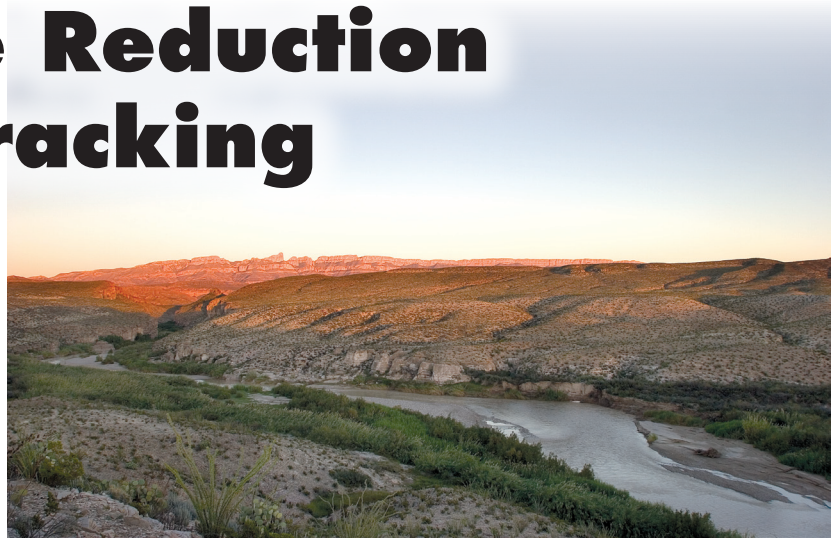
As in previous biennial reports, this reporting period shows that about 80 percent of the complaints received were classified as requiring investigation within 30 days of receipt.

Finally, the analysis of complaint investigations by program type reflects the fact that the TCEQ places a high priority on investigating citizen complaints. All complaints received are reviewed by management, prioritized according to potential impact on public health or the environment, and either investigated in accordance with the assigned priority, or, if not within the jurisdiction of this agency, referred to the appropriate entity.



A P P E N D I X B ●

# Permit Time-Frame Reduction and Tracking



Big Bend

The Texas Commission on Environmental Quality is charged with issuing permits and other authorizations for the control of air pollution, the management of hazardous and nonhazardous waste, the protection of water quality, and the safe operation of water and wastewater utilities.

The Texas Government Code, Section 2005.007, requires the TCEQ to report every two years on

its permit application system, showing the periods adopted for processing each type of permit issued and any changes enacted since the last report.

The biennial update also includes a statement of the minimum, maximum, and median time periods for processing each type of permit—from the date a request is received to the final permitting decision. Finally, the

report describes specific actions taken to simplify and improve the entire permitting process, including application and paperwork requirements.

## Permit Time-Frame Tracking

One of the agency's primary goals is to issue well-written permits that are protective of human health and the environment, and to do so in the most efficient manner

possible. Each year, the TCEQ receives more than 126,400 applications for various types of permits, licenses, registrations, and authorizations.

In 2002, the TCEQ implemented the Permit Time-Frame Reduction initiative to improve efficiencies in the permitting process and to reduce the permit “time frame”—the amount of time required to complete all the steps in the permitting process.



Figure B-1  
**Air Permits (Uncontested)**  
**Permit Time-Frame Reductions**  
 (as of September 1, 2010)

Application Type	Average Processing Time (days)	Total under Review	Target Maximum Processing Time	Number under Review Exceeding Target
<b>Priority 1</b>				
New source review (NSR) permit, new	325	108	240	47
NSR permit, amendment	319	433	270	253
NSR permit, new - federal timeline	437	2	330	2
NSR permit, amendment - federal timeline	679	5	330	3
Federal NSR (prevention of significant deterioration, nonattainment, 112g), new and major modification	650	30	330	16
Permit by rule	31	246	45	0
Standard permit (without notice), SB 1126, and relocation	61	62	45	0
Standard permit (with notice)	85	24	150	0
<b>Priority 2</b>				
Site operating permit (SOP), new	378	43	330	12
SOP, renewal	301	331	330	65
SOP, revision	223	189	330	14
NSR permit, alterations and other changes	121	116	120	44
NSR permit, renewal	309	105	270	20
General operating permit (GOP), new	67	5	120	0
GOP, renewal	648	10	210	0
GOP, revision	258	24	330	0

In 2007, the agency implemented the Project Time-Frame Tracking initiative, focusing not only on permit processing time frames, but also establishing time-frame goals. Since then, the agency has realized substantial progress, most notably reducing the permit backlog from 1,150 in 2002 to 588 at the end of fiscal 2010.

The TCEQ continued to build on that success with implementation of the following additional programs in the Project Time-Frame Tracking system in late fiscal 2008 and fiscal 2009:

- Uranium Recovery and By-Product Disposal
- Storage and Processing of Radioactive Waste

- Low-Level Radioactive Waste

For fiscal 2010, the performance time-frame goal in most program areas was to review 90 percent of all permit applications within the established time frames.

Two categories have been created for tracking the permit time frames:

**Priority 1.** These projects require agency action before applicants

Figure B-2  
**Waste Permits (Uncontested)**  
**Permit Time-Frame Reductions**  
 (as of September 1, 2010)

Application Type	Average Processing Time (days)	Total under Review	Target Maximum Processing Time	Number under Review Exceeding Target
<b>Priority 1</b>				
Industrial and hazardous waste (IHW), new permit	389	2	450	0
IHW permit, Class 3 modification	432	7	450	0
IHW permit, major amendment	277	0	450	0
IHW combustion permit, new	—	—	540	—
IHW combustion permit, Class 3 modification	—	—	540	—
IHW combustion permit, major amendment	—	—	540	—
Municipal solid waste (MSW) permit, new	407	9	360	1
Registered transfer stations	297	1	230	0
Registered gas recovery	92	0	230	0
<b>Priority 2</b>				
MSW permit, major amendment	269	12	360	5
IHW permit, renewal	476	37	450	9
IHW combustion permit, renewal	—	—	540	—
Registered liquid waste processors	141	4	230	1

**Definitions** (for Figures B-1 through B-5)

**Average Processing Time:** The average length of time it took to process the specified application type during the 12 months preceding the reported month.

**Total under Review:** The total number of applications received but not yet completed (issued, denied, returned, withdrawn, etc.).

**Target Maximum Processing Time:** The time-frame goal set by the agency for completing applications in each project type.

**Number under Review Exceeding Target:** The number of uncompleted applications that have a processing time in excess of the target maximum.

Figure B-3  
**Water Quality Permits (Uncontested)**  
**Permit Time-Frame Reductions**

(as of September 1, 2010)

Application Type	Average Processing Time (days)	Total under Review	Target Maximum Processing Time	Number under Review Exceeding Target
<b>Priority 1</b>				
Wastewater permit, new (major facility)	0	1	330	0
Wastewater permit, major amendment (major facility)	317	24	330	7
Wastewater permit, concentrated animal feeding operation (CAFO)/sludge, new (minor facility)	295	59	330	5
Wastewater permit, CAFO/sludge, major amendment (minor facility)	291	59	300	11
Sludge registration	118	4	270	0
<b>Priority 2</b>				
Wastewater permit, renewal (major facility)	265	88	330	7
Wastewater permit, CAFO/sludge, renewal (minor facility)	224	277	300	7

may begin operations. This category includes uncontested applications for new permits and for amendments to existing permits for new operations.

**Priority 2.** These projects allow permit applicants to continue operating while the agency processes the request. This category includes uncontested applications for renewals of existing permits and for amendments to existing permits that involve activities already permitted.

The agency also has established processing time-frame goals for each type of permit. These goals, or “target maximums,” vary by program area and by environmental media.

Figures B-1 through B-5 show the status of Priority 1 and Priority 2

projects at the end of fiscal 2010 in the following categories:

- air permits,
- waste permits,
- water quality permits,
- water supply permits,
- radioactive materials and uranium licensing, and
- underground injection control permits and authorizations.

Excluded from the data are projects that were contested or that involved significant review or approval outside of the TCEQ, such as at other agencies.

By the end of fiscal 2010, about 76 percent of all Priority 1 permits were issued within the agency’s time-frame goals, as were 85 percent of all Priority 2 permits.

The performance outcomes for 2010 were slightly below the goals due to the call-in for hundreds of maintenance, start-up, and shutdown air permit applications, and the complexity of these applications.

**Greater Efficiencies**

In recent years, the agency has identified a number of streamlining measures to improve efficiencies in the permitting process and to reduce paperwork requirements. Some of those measures are described on the next page.

**Expand online permitting options for applicants.** The TCEQ continues to create streamlined options for the e-permitting system, which allows applicants to apply for

Figure B-4  
**Water Supply Permits (Uncontested)**  
**Permit Time-Frame Reductions**

(as of September 1, 2010)

Application Type	Average Processing Time (days)	Total under Review	Target Maximum Processing Time	Number under Review Exceeding Target
<b>Priority 1</b>				
Water rights permit, new	218	41	300	16
Water rights permit, amendment with notice	304	29	300	15
Water rights permit, amendment without notice, Rio Grande watermaster area	123	13	180	0
Water rights permit, amendment without notice, outside Rio Grande watermaster area	176	1	180	0
Water district application, expedited bond	39	8	60	1
Water district application, regular bond	92	51	180	3
Water district expedited escrow releases and surplus fund requests	30	7	60	0
Water district application, regular, minor	68	47	120	1
Water district application, expedited creation	—	—	120	—
Water district application, regular creations and conversion	174	2	180	1
Certificate of convenience and necessity (CCN), new or amendment	243	39	180	6
CCN transfer	453	52	365	1
Water system engineering plan reviews	26	125	60	0
Exceptions	86	113	100	3
Alternative capacity requirements	59	21	90	0

a permit online and receive authorization within minutes. A new feature that went online in fiscal 2009 makes it easier for the agency to add more applications. The TCEQ also has fee incentives for applicants using the e-permitting system for two types of general permits—the construction storm water general permit and the concentrated animal feeding operations

(CAFO) general permit. Fee incentives for additional water quality and air permit by rule applications are planned.

**Expand the options for more standardized permitting through the use of general permits, standard permits, and permits by rule.** The continued use of these authorizations has significantly reduced the permit processing time frames by as

much as 300 days in certain instances. Agricultural standard permits, approved in March 2010, allow applicants to obtain authorization in 45 days. In comparison, a case-by-case agricultural permit takes an average of 165 days. Revisions to 30 TAC Chapters 305 and 335, approved in October 2009, allow eligible waste operators to obtain authorization through a standard

Figure B-5  
**Radioactive Materials (Uncontested)**  
**Permit Time-Frame Reductions**

(as of September 1, 2010)

Application Type	Average Processing Time (days)	Total under Review	Target Maximum Processing Time	Number under Review Exceeding Target
<b>Priority 1</b>				
Radioactive licenses for waste processing, waste disposal, and uranium recovery, initial issuance	1,022*	3	885	0
Low-level radioactive waste disposal license, initial issuance	1,649*	0	990	0
Underground injection control (UIC) permit, new	420	7	390	0
UIC permit, major amendment	388	6	390	0
<b>Priority 2</b>				
Radioactive licenses for waste processing, waste disposal, and uranium recovery, renewal	**	8	885	8
Radioactive licenses for waste processing, waste disposal, and uranium recovery, major amendment	**	1	885	1
Radioactive licenses for waste processing, waste disposal, and uranium recovery, minor amendment (with notice)	190	5	230	1
Low-level radioactive waste disposal license, renewal	**	0	990	0
Low-level radioactive waste disposal license, major amendment	310	0	990	0
Low-level radioactive waste disposal license, minor amendment (with notice)	**	1	230	1
UIC permit, renewal	385	10	390	1
UIC Class V authorization	62	22	60	0

\* The "average processing time" is based on those licenses issued by the TCEQ, which were under a set of legislative priorities as part of the SB 1604 transfer legislation. Due to these legislative priorities, other pending licensing actions and new actions coming in were mainly idle until statutory milestones were reached and those pending and new actions could be re-initiated.

\*\* Pending radioactive licensing actions were transferred from the Texas Department of State Health Services and not prioritized for immediate completion by SB 1604. Therefore, the licensing actions have not been completed and there is no "average processing time" for comparison.

permit in 120 days. The average time for a full permit is 450 days. The underground injection control general permit, issued in December 2009,

authorizes the use of Class I injection wells to dispose of nonhazardous brine from desalination operations or nonhazardous drinking water treat-

ment residuals. This should expedite the processing of authorizations.

**Develop an electronic payment system in coordination with**

**Texas.gov (formerly TexasOnline) website so that TCEQ customers can pay any invoiced fee and most permit application fees online.** During FYs 2009 and 2010, the agency’s ePay system processed about 41,400 fee payments and collected a total of \$9.6 million in fees. Modifications were made in March 2010 to incorporate TCEQ ePay and payment

information collected on the Texas.gov pages into a common checkout page. The changes also provided additional security and allowed for a more seamless integration between the TCEQ and the Texas.gov portal.

**Maintain an expedited permitting process for all economic development projects.** In addition to the standard permit processing

time-frame goals, the TCEQ maintains an expedited permitting process for economic development projects. TCEQ staff meets each week with the Governor’s Office of Economic Development and Tourism to prioritize economic development projects. During fiscal 2010, the TCEQ tracked and issued 25 permits for major economic development projects.



*The Texas border with Mexico*