

Agency Highlights



During the 2011 and 2012 fiscal years, Texas was thrust into the national spotlight as a record-setting drought dealt a serious blow to most regions within our borders.

At the same time, the state found itself in the vanguard of a new wave of natural gas and oil production that could provide the United States with decades of safe, reliable energy.

Managing both of these developments presented many new challenges that required innovative management and careful prioritization of this agency's resources.

In addition, the Texas Commission on Environmental Quality continued to deal successfully with its core responsibilities—ensuring safe air quality and water quality for the state's 26 million residents, as well as safe, efficient management of waste.

The following summaries provide a closer look not only at these recent challenges but other ongoing agency programs that are conducted day in and day out by the dedicated employees of the TCEQ.

Legislature to TCEQ: Good to Go for 12 More Years

For the TCEQ, the highlight of the 82nd legislative session was concluding an intensive two-year review by the Sunset Advisory Commission and winning a vote of confidence from state lawmakers. With unanimous votes, both the House and Senate approved continuation of the agency to 2023.

Throughout the review process, TCEQ employees and upper management responded to almost 200 separate requests for information, participated in more than 60 meetings, and conferred extensively with Sunset staff. In

addition, agency personnel participated in hearings before Sunset Advisory commissioners, as well as House and Senate committees.

Implementing the Sunset Bill, House Bill 2694, required the agency to consider 11 separate rule packages, in addition to a number of non-rulemaking activities such as operational changes, revisions to guidance documents, and changes to agency Web pages.

As with most state agencies, the TCEQ saw reductions in 2011. The TCEQ's total appropriations for the 2012-2013 biennium was set at \$692 million, a cut of \$274 million—or 28 percent—from the previous biennium. This translated into budget cuts in the Texas Emissions Reduction Plan, low-income vehicle repair assistance (LIRAP/LIP), the Superfund and petroleum storage tanks programs, and grant programs for air quality planning and solid waste planning.

As for staffing, the agency's cap for full-time equivalent staff (FTEs) is 2,766.2, which reflects a reduction of 235 FTEs, or 8 percent, from the 2010-2011 biennium. However, nine FTEs in the Surface Casing Program were transferred to the Railroad Commission of Texas, and four FTEs were added to the Aggregate Production Program. The net was 2,761.2 FTEs for the 2012-2013 biennium.

The Sunset review and other associated legislative actions affected many agency programs. See Chapter 3 for an analysis of legislation and implementation.

Teamwork Helps Localities Prepare for Water Shortages

The drought that ravaged the state in 2011 was the most severe one-year drought in

Texas history. In as many as 15 instances, some water-rights holders in several water basins had to curtail diversion of water in favor of senior water rights holders. Even in East Texas, which is normally flush with rain, operators had to enact previously unused water restrictions in their drought contingency plans.

In mid-2011, Gov. Rick Perry issued an emergency disaster proclamation certifying that exceptional drought conditions posed a threat of imminent disaster in certain counties. This proclamation, which was later extended to most Texas counties, gave state regulators some leeway in enforcement to allow for expedited action in an emergency situation.

In the winter respite following the drought, the TCEQ and partner agencies recognized an opportunity to reach out to local water systems and learn more about what they had experienced. It was also a chance to provide customized state assistance so local operators could get the specific help they most needed.

A number of drought emergency management workshops were held the first quarter of 2012. The TCEQ was joined by the state's Division of Emergency Management, Department of Agriculture, and Texas Water Development Board in making staff available to confer with water utility operators.

The focus was planning ahead to avoid expensive emergency situations. In fact, at each workshop, TCEQ staff directly asked water system operators: "Do you have a plan to deal with a catastrophic outage? What will you do?"

At the first workshop in Nacogdoches, almost 100 people attended presentations by the partner agencies. Audience members responded with questions on a range of topics,

from long-range water planning to the proper timetable for drilling an emergency well.

Subsequent workshops were held in Kerrville, New Braunfels, Liberty, Midland, Lubbock, San Angelo, and Brownsville. In each case, meeting rooms were filled with participants eager to express concerns related to their specific region.

Agency representatives urged operators to review their drought contingency plans to determine whether the triggers for restricting water use still made sense in light of regional population growth and the brutal experience of the 2011 drought. Operators were challenged to identify in advance the well drillers, alternative sources of water, possible interconnections, and even licensed haulers that would be needed in an emergency.

While the state cannot make decisions for public water systems on how to supply water to customers, these workshops demonstrated that agencies can work in cooperation to suggest options and offer technical assistance before a catastrophe strikes.

In the Vanguard of an Oil and Gas Boom

In recent years, Texas found itself at the forefront of an energy bonanza. Widespread use of horizontal drilling and hydraulic fracturing (commonly called fracking) in shale fields made it possible to harvest huge amounts of natural gas and oil that were previously thought to be too expensive to produce.

For Texas, this energy boom produced billions of dollars of income and thousands of jobs.

While the regulation of oil and gas production in Texas falls primarily under the Railroad Commission of Texas, the TCEQ has had air emission regulations in place for parts of oil and gas facilities since the 1970s. The TCEQ continues to play an important role in these activities, primarily in the areas of air quality, surface water management and water quality, and waste management.

Increased oil and gas production has raised the issue of regulation at the federal level. The EPA issued new requirements for hydraulic fracturing and proposed other pending regulations for the natural gas production sector. The EPA's specific focus—

minimizing air emissions from hydraulically fractured natural gas wells—includes proposed requirements for flaring and green completions (a process that limits the escape of natural gas during hydraulic fracturing).

Barnett Shale. This geographic area encompasses more than 5,000 square miles in 24 counties in and around the Dallas-Fort Worth area. Since 2001, the area has produced more than 9 trillion cubic feet of natural gas. With development occurring in urban and rapidly developing suburban areas, some residents were concerned about potential air quality issues caused by oil and gas activities. In response, the TCEQ performed air quality studies, established state-of-the-art air monitoring, instituted new investigative procedures, and increased the number of local investigators. The agency installed seven automated gas-chromatograph monitors in the area and has plans for four more. No monitor has shown any chemical levels of concern.

Eagle Ford Shale. This rapidly developing oil and gas production area comprises 23 counties in South Texas, stretching from Bryan–College Station to Laredo. Most of the Eagle Ford production has taken place in sparsely populated areas and, in addition to natural gas, has yielded large quantities of oil and condensate. Concerns in Eagle Ford focus on water, production waste, and problems stemming from a rapidly expanding workforce.

As in the Barnett Shale, the TCEQ has conducted proactive outreach in the Eagle Ford Shale. Staff met with nine county judges in South Texas to learn more about local concerns. The agency held numerous workshops to brief local governments and other groups about the respective jurisdictions of the TCEQ and the Railroad Commission. The TCEQ also held a workshop to educate small producers on air authorization issues.

The more rural nature of the Eagle Ford Shale, as well as the information gained from the Barnett Shale monitoring, resulted in a different approach to evaluating air quality concerns and impacts. The TCEQ continues to evaluate potential air monitoring needs and resources to adequately address concerns regarding the impact of these operations on the overall air quality.

As for water use, the amount of water used in hydraulic fracturing is relatively small, compared to water uses in agriculture, manufacturing, and municipal water supplies, according to the Railroad Commission. Hydraulic fracturing and total mining water use represent less than 1 percent of statewide water consumption, although percentages can be larger in some localized areas.

Surface water, which is also used for oil and gas production activities in the Eagle Ford Shale, is regulated by the TCEQ through the state's water-rights system, which allows water to be used for mining purposes.

Groundwater, including that used for oil and gas production in South Texas, is regulated by local groundwater conservation districts.

The Texas Water Code requires the Texas Groundwater Protection Committee, which was established by the Legislature in 1989, to compile and publish a joint groundwater monitoring and contamination report that contains a description of each case of groundwater contamination documented during the previous calendar year. Despite thousands of documented cases of groundwater contamination, not one case has been attributed to hydraulic fracturing.

Another water source, reclaimed wastewater, is being examined for potential use in oil and gas production activities. The TCEQ has issued several authorizations allowing water to be used for this purpose.

As a result of the increased drilling activities, particularly in the Barnett Shale and Eagle Ford Shale areas, the TCEQ has seen a substantial increase in the amount of oil and gas waste being processed and disposed of at municipal solid waste landfills. To address this influx of waste, the TCEQ has worked closely with the Railroad Commission and the waste disposal industry to evaluate existing regulatory processes to ensure that permitting actions related to oil and gas waste disposal are as efficient as possible.

International Visitors Study TCEQ's Regulatory Role in Oil and Gas Drilling

In 2009, the massive Eagle Ford Shale area had a total of 67 producing gas wells.

Two years later, the number had grown to 368 wells.

The oil and gas production in these rich underground formations, as well as the extensive gas production in the Barnett Shale area in North Texas, caught the attention of other countries looking to increase their own energy independence.

The TCEQ has hosted delegations from 10 countries—Brazil, Canada, China, India, Japan, Jordan, Poland, Turkmenistan, Spain, and the United Kingdom—all seeking to learn about the environmental management of oil and gas drilling in shale formations.

Noting that the Barnett Shale region has about 6 million residents, the agency demonstrated to visitors that, through diligent monitoring and timely response to all complaints, urban gas production is possible.

In addition, the foreign guests were interested in the agency's efforts to address storage-tank emissions in the Barnett Shale region through the helicopter-mounted HAWK technology, which uses an infrared camera to detect hydrocarbon compounds. The visitors also noted the scale of monitoring conducted by the TCEQ, along with the number of stationary air quality monitors already installed or in the planning stages.

Such briefings were not limited to the TCEQ's Austin headquarters. Delegations from China, India, Jordan, and Poland also traveled to the Metroplex to hear presentations at the Dallas-Fort Worth regional office on monitoring, investigations, and rule-making.

Regional staff further explained the TCEQ's response time for complaints received in the Barnett Shale region, as well as periodic reconnaissance investigations.

Environmental Summits Highlight Leading Concerns

The TCEQ partnered with various communities to hold four Environmental Summits in fiscal 2012 to bring together community leaders and examine major environmental issues.

In El Paso, the summit drew about 400 people to hear keynote speaker U.S. Rep. Silvestre Reyes and attend breakout sessions

on a variety of environmental issues, such as the ongoing problem of illegal tire dumping. Also, middle school and high school students contributed ideas on the proper disposal of plastic bags and glass bottles.

At the Laredo summit, State Sen. Judith Zaffirini delivered opening remarks to a crowd of 230 guests, who also heard from Susan Ghertner, director of environmental affairs for H-E-B. Participants joined breakout sessions to discuss ideas for recycling and conservation.

In McAllen, TCEQ commissioners Carlos Rubinstein and Buddy Garcia, both from Brownsville, drew on personal experiences to discuss area issues with attendees. In his keynote address, Garcia focused on specific environmental issues on the border. In breakout sessions, 200 participants discussed local issues such as plastic waste bags, recycling, and water conservation.

At the summit in Schertz near San Antonio, which was the TCEQ's first environmental summit in Central Texas, drought was the overriding theme. Rubinstein told a crowd of more than 300 that "the drought we are experiencing is unlike any drought that any of us has ever seen. We know it is the worst one-year drought in Texas."

Rubinstein said communities have much to learn from the San Antonio area for the way local officials have effectively dealt with water problems. While the San Antonio Water System saw its customer base increase by 67 percent in the last 25 years, the utility still uses the same amount of water.

Emergency Response Moved to Regions

In preparation for the 2012 hurricane season, the TCEQ instituted a major change in its emergency management structure.

Looking to expand the experience and institutional knowledge of staff called on during emergency events, the agency assigned the emergency response function to all 16 regional offices. The move provides for more flexibility, especially in the case of multiple emergencies, and allows for better long-term planning.

The TCEQ already had a highly trained Emergency Response Strike Team based

in Austin, which has been on the scene of some of the state's worst natural disasters of the last decade—hurricanes, floods, and tornadoes. The team's role is to address environmental hazards and help restore vital public services.

The team, with its analytical and monitoring equipment and communications gear, also has responded to train derailments, industrial accidents, fires, and spills around the state, often working in tandem with local governments, state agencies, and federal organizations like the U.S. Coast Guard and the EPA.

The new regional Disaster Response Strike Teams report to the agency's regional directors and area directors, who decide on the makeup and size of each team. TCEQ regions with the largest populations have more team members, as do regions along the coast.

By having strike teams drawn from regional staff, all of the necessary disciplines can be called on to respond to any particular event. This includes staff trained in hazardous materials, as well as experts in wastewater, drinking water, waste and debris management, and other areas.

Another advantage to the regional structure is the ability to distribute the workload during any emergency lasting longer than a few days. With major flooding, for example, emergency response can last for several weeks.

Meanwhile, the Austin headquarters maintains a lead role in emergency management. An emergency management coordinator and three liaisons work closely with all the teams to ensure they receive proper training and certifications, conduct practice drills, and receive support during actual disasters.

The TCEQ Joins Border Crackdown on Tire Dumping

The accumulation of abandoned tires has been an ongoing concern in El Paso and other areas along the border with Mexico. Not only are these illegal dumps an eyesore, they also harbor mosquitoes and rodents and can affect local water use.

Texas Scrap Tire Usage and Landfill Disposal 2011

Close to 700 active irrigation and drainage canals in El Paso County have become prime spots for illegal tire disposal. For local irrigation districts, staying ahead of the flow of tires has been an almost constant battle.

That is why the TCEQ has partnered with the irrigation districts, the city and county of El Paso, and area law enforcement. In 2011, the TCEQ organized an educational initiative aimed at local businesses that deal in tires. These stores and facilities received letters detailing the scrap-tire rules.

The TCEQ also paired with the Texas Irrigation Council to develop strategies to address illegal tire dumping. The agency and irrigation districts worked to ensure that tire generators know their responsibilities under the law. Additionally, district input helped with investigations into illegal dumping.

The TCEQ oversees the collection, processing, storage, and recycling or disposal of scrap tires in the state. Scrap-tire transporters, processing facilities, storage sites, and end-use or disposal facilities must submit an annual report showing the number of scrap tires handled and the form of the tire (whole or cut, bales, or shreds). The agency can initiate enforcement when an annual report is not filed or the information is improperly reported.

El Paso is hardly alone when it comes to scrap-tire dumping. More than 24 million tires are discarded in Texas each year. In addition, an estimated 14.2 million tires reside in sites known to be in need of cleanup.

The agency has stepped up its efforts in the El Paso region with a dedicated investigator, who conducts reconnaissance along the canals to deter dumpers. The investigator screens complaints received by the regional office to determine which ones might lead to criminal enforcement. This includes not only the illegal dumping of tires, but also the dumping of municipal solid waste and other unauthorized discharges.

Several illegal-dumping investigations conducted by the TCEQ have been prosecuted by El Paso County. Fines have ranged from \$750 to \$4,000, and most penalties have included site cleanup, community service, and probation for the offender.

Three separate collection events held in Clint, a small town in El Paso County,

Category	2011 Consumption		
	Pounds	Scrap Tire Units*	Percentage of Total
End Uses			
Land Reclamation	170,082,720	7,559,232	23.3%
Tire-Derived Fuel	389,827,845	17,325,682	53.3%
Crumb Rubber	27,416,925	1,218,530	3.7%
Septic/Leachate Drainage	381,555	16,958	0.1%
Other End Uses	67,896,720	3,017,632	9.3%
End Uses Subtotal	655,605,765	29,138,034	89.7%
Landfill Disposal	75,373,988	3,349,955	10.3%
Total	730,979,753	32,487,989	100%

* Scrap Tire Unit. 1 STU = 22.5 pounds of scrap tire material.
This unit is used because scrap tire material can take many different forms.

resulted in hundreds of vehicles arriving as early as 4 a.m. to drop off an estimated 20,000 used tires at the collection facility—a number that far exceeded expectations. The free events were targeted at residents, not retailers.

Leaders in Risk Assessment

In 2012, the TCEQ hosted the fourth workshop in a series designed to enhance a framework of chemical risk assessment methods used by government and other scientific organizations to solve current risk management problems. Toxicologists from across the United States and Canada attended in person or via webcast. The workshop, "Beyond Science and Decisions," was organized by the Alliance for Risk Assessment.

Attendees discussed a number of case studies designed to highlight 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.

The TCEQ Toxicology Division presented a case study that incorporated how a chemical acts within the human body to predict the level of a chemical in air at which health effects would be expected. These effect levels will be important to illustrate to the

public, risk managers, and other TCEQ staff the interval between the level that is safe and the level that is unsafe when communicating air monitoring results from a specific project or statewide.

The TCEQ not only evaluates the potential for chemicals to harm human health, it also interacts with stakeholders, drafts rules, and makes technical recommendations related to permitting, remediation, monitoring, and enforcement. Case studies and discussions, such as those held in the workshop series, ultimately result in research that informs agencies making regulatory decisions. In view of the demand for public resources, risk assessment should be used to put risks into context to determine where to direct resources that do the most good.

Since a majority of EPA toxicity assessments are outdated and, as of late, of questionable quality, the TCEQ has also taken the initiative to develop scientifically sound, state-of-the-science guidelines and use these guidelines to develop its own toxicity factors. In fiscal 2012, the TCEQ published two peer-reviewed articles, with another article accepted for publication, in scientific journals. These peer-reviewed articles pertain to chemicals that have undergone the TCEQ's state-of-the-science process for developing toxicity values.

In Pursuit of Willful Polluters

Environmental crimes occur all across the state, sometimes in malicious ways that can harm human health and natural resources.

The investigations are usually lengthy and require a staff knowledgeable in illegal dumping, illegal transportation and disposal of hazardous waste, illegal discharge of waste and pollutants into state waters, violations of state rules for public drinking water, and fraud involving TCEQ programs. The investigators need experience in executing search warrants, conducting witness interviews, analyzing documentation and data, and writing investigative reports for prosecutors.

Such challenges are best met with a coordinated response. The Texas Environmental Enforcement Task Force is composed of representatives from the TCEQ, Texas Parks and Wildlife Department, Travis County District Attorney's Office, Attorney General's Office, General Land Office, Railroad Commission of Texas, and Governor's Office, as well as the EPA, FBI, and U.S. Attorney's Office.

The teamwork approach has proven to be effective. In a recent case related to financial fraud in the Texas Emissions Reduction Plan (TERP), the TCEQ obtained a state-led search warrant, and the AG's office conducted computer forensics. Texas Parks and Wildlife provided air surveil-

lance, laboratory support for environmental analyses, and game wardens to execute the search warrants. EPA's Criminal Investigation Division assisted with search warrants.

Since the task force was organized in 1991, successful cases have resulted in 353 convictions, prison sentences totaling 168 years, and probation terms of 761 years. Total fines come to \$91.7 million; restitution, \$7.5 million. (Restitution, such as the cost of remediation or money fraudulently obtained, is paid by the offender to the individual or entity that suffered financial losses.)

Cases of environmental crime can originate in the TCEQ's regional offices, enforcement division, and litigation division, as well as a dedicated program such as the TERP. Tips also come from the public.

The TCEQ's environmental crimes unit has nine investigators and two attorneys. Investigators are stationed not just in Austin but also in regional offices: Houston, Dallas-Fort Worth, Tyler, Corpus Christi, Beaumont, El Paso, and San Antonio. They follow up on leads and conduct field work, while the attorneys provide legal support and counsel regarding statutes, search-warrant affidavits, and grand-jury language, as well as ensuring that constitutional rights are not violated.

Since 1995, the TCEQ has also trained select local law-enforcement personnel who serve as an extension of the task force. More than 1,400 peace officers and

enforcement-related officers have attended specialized training to help them perform environmental enforcement at the local level.

The TCEQ's involvement in environmental crime cases does not end after a conviction. If remediation was needed but not obtained, the sites contaminated as a result of these crimes are restored at state expense.

Environmental crimes result from some action—or inaction—that damaged the environment. Typically the motive is monetary. Examples of recent cases are:

- A dumper of commercial solid waste did not want to pay to have the material disposed of properly.
- A company refused to upgrade a wastewater treatment facility and allowed illegal or unauthorized discharges.
- A company falsely reported to the TCEQ it had implemented upgrades to its emission controls at a painting operation.
- An individual provided false information to obtain a TERP grant, thereby applying for a financial incentive for which he knowingly did not qualify.